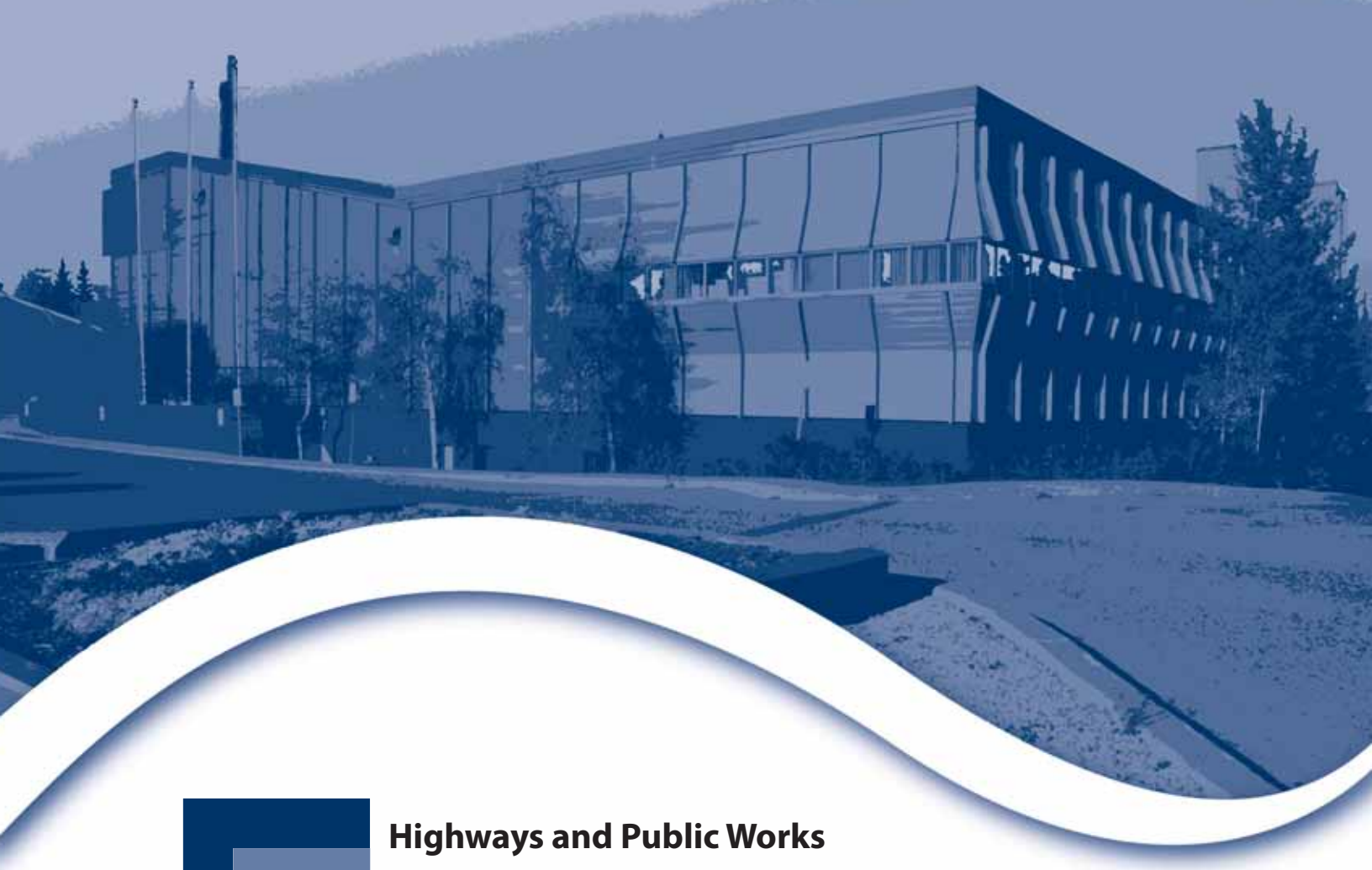

Highways and Public Works

Master Space Plan

Space Standards and Allocation Guidelines

Yukon
Highways and Public Works

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APPENDICES

PURPOSE

The Space Standards and Allocation Guidelines is an educational and instructional tool, which informs and guides the Government of Yukon's (GY) space management principles and procedures.

This document, to be used in conjunction with the General Administration Manual, provides space standards for the design of GY facilities and the necessary policies and procedures regarding GY allocation of furniture and equipment. Intended to be used as a living document, there are clearly identified mechanisms within the policy to ensure that the document maintains its relevancy and applicability to GY facilities over time.

The space standards are intended to reflect the priorities, philosophy, and mission of the GY. Space standards include the size of the space and the accommodation of the contents of the space as they relate to people, furniture, equipment, and to functional activity. Space needs will also be reflected by workflow and function, as well as, the quality of the space.

The Space Standard and Allocation Guidelines is applicable from the date of Management Board Implementation Approval for all new office accommodation, furniture, and equipment. Existing accommodations will be addressed over time as space is developed through future initiatives identified in implementation of the Master Space Plan.

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BACKGROUND

Following a review of the office space standards for GY in 1995, it was determined that with the exception of one functional department, the office space standards for GY facilities were up to date when measured against other jurisdictions' standards throughout Canada. It has since become evident that space allocation and furniture procurement standards and policies are no longer meeting current needs. This has resulted in numerous discrepancies in space allocation within and between GY programs and departments.

It is against this background that this document develops revitalized utilization and space standards for the GY accommodations with the framework for space standards and implementation established through a life-cycle cost management model, which is described in Section I: *Workplace Strategies*. The standards assist in future space-planning initiatives, by identifying needs, prioritizing projects, and providing a preliminary definition of required department areas.

This document provides practical assistance to GY planning and management staff with many of the aspects of space planning associated with acquiring or disposing of, leasing, designing or operating GY facilities.

This document is intended to be a stand-alone document providing information on space standards and policy. It is not intended to provide information around details of existing and future requirements for GY facilities, leased and owned, which are included in the Master Space Plan and future accommodation plans.

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DOCUMENT ORGANIZATION

This document is organized in the following order:

Section I: **Workplace Strategies**, which provides a review of strategies and principles related to successfully accommodating functions, services and staff.

Section II: **Space Standards** for use in evaluating departmental requests for space, modifications to existing space, or for space needs assessments.

Section III: **Allocation Guidelines** for use in understanding roles and responsibilities and the procedures to be followed as part of annual space management endeavours as well as department generated initiatives.

Appendix A: **Definition of Terms**, which provides definitions of all terminology and acronyms used throughout this document.

Appendix B: **Space Standards Review and Analysis,** which reviews space standards from various jurisdictions to identify trends and develops standards that are applicable to the GY context.

Appendix C: **Space Request Forms**, including the Work Request Form and the Statement of Requirements Form

Appendix D: **Project Review Criteria**

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DOCUMENT OBJECTIVES

The GY Space Standards and Allocation Guidelines is a comprehensive tool based on an in-depth review and analysis of currently accepted space standards across various jurisdictions (refer to Appendix B – Space Standards Review and Analysis). The initial objectives for the review and update of the current Management Board Directive #17/84 are as follows:

1. To clarify the GY's strategic goals and objectives in order to define a strategic context for the management and development of their facilities, both owned and leased, in the longer term planning horizon;

2. Based on a comparison with other jurisdictions, industry agencies and best practices, to modernize GY space standards to provide flexible space that is suited to working processes and functional needs, and incorporating trends in technology and records management;

3. To develop a mechanism for reviewing and updating the Space Standards and Allocation Guidelines to ensure its on-going suitability;

4. To obtain a more equitable distribution of physical resources between departments;

5. To establish a preliminary project size for new capital developments;

6. To develop a comprehensive tool that will help to guide future facility allocations by providing a structured business case-type format for all projects that prioritizes departmental needs, using criteria such as functional efficiency, accommodation of growth, flexibility, visibility, and access;

7. To be compatible with and supportive of the GY Climate Change Strategy;

8. To capture changes in staff FTE in a timely manner so that the impact on space planning will be well coordinated and responsive to space needs of each department;

9. To measure progress toward meeting desired space standards;

10. To meet project development goals within the established timelines;

11. To support the development and maintenance of an up-to-date facilities inventory system (FIS);

12. To identify physical and staffing movement through a centralized information system and space management

process that includes the maintenance of an updated computer-aided facility management (CAFM) system;

13. To provide transparency to clients regarding facility management;

14. To provide equitable distribution of space and quality of space, including an equitable process in responding to space requests;

15. To facilitate the prioritization of space needs in a methodical and justifiable manner;

16. To develop incentives for departments to provide information (to the Property Management Division (PMD)) that may have impacts on the efficiency and utilization of space, and, consequently, on compliance with GY's Space Standards and Allocation Guidelines;

17. To provide cost efficiency controls (control and quality assurance to ensure value for money);

18. To ensure that office accommodation, furnishings and equipment are provided to all departments of the GY on an equitable basis consistent with program needs and functional requirements; and

19. To ensure that accommodation and furnishings result in a working environment that promotes employee health and safety and that maximizes employee effectiveness and efficiency.

CORE PRINCIPLES FOR SPACE STANDARDS AND ALLOCATION GUIDELINES

Office, furniture and equipment are provided on an equitable basis consistent with program needs and functional requirements.

The following core principles are fundamental to the content and operation of the Space Standards and Allocation Guidelines.

Applicability

This document is relevant to and applicable to all GY facilities, and all space types, whether leased or owned buildings with the exception of the space listed below. The standards identified in this document will be phased into any current leasing agreement and implemented immediately within any new GY facilities, including the procurement and allocation of all furniture and equipment.

The Space Standards and Allocation Policy does not apply to:

- The Legislative Precinct Office, and the Courts and their attendant facilities; and
- Program specific space.

The space standards and allocation guidelines apply to all new office accommodation, furniture, and equipment. The standards and guidelines should only be applied to existing accommodation as part of an approved space renovation project.

Basic Criteria for Space:

The definition of space needs, and the design and development of GY facilities will be implemented in accordance with standards that are related to job and work function and not on status or hierarchy of positions.

Standards-Based Policy

The Space Standards and Allocation Policy is intended to be standards based, drawing on industry standards in their formation and application. The principle standard followed is the Building Owners and Managers Association (BOMA) for terminology.

The metric units of measurement will be used in all facility management and inventory systems.

All computer-aided design (CAD) documents are to be prepared in accordance with the defined standards described by the Business Process Redesign Project

Ongoing Review

The space standards need to be updated regularly, as both functions and technologies evolve, more space is needed, and so on. Spaces with specific requirements should be reviewed on an individual basis, following the same schedule for review as those spaces identified within the space standards.

Maximized Use of GY Personnel

The Space Standards and Allocation Guideline is intended to maximize the use of GY staff and in-house personnel in the implementation of annual Accommodation Plans updates and capital initiatives.

Trends In Space Design For Offices

1. Shift to open floor plans from enclosed offices, with low office system partitions and maximized transparency of perimeter walls;

2. Streamlining of technology, with smaller products that take up less floor space so that an 8-foot workspace can be reduced to a 6-foot space[1];

3. The rise of the "creative class" comprising employees who are engaged in more process and shared work rather than activities in isolation;

4. GY currently owns a significant inventory of office furniture and equipment of varying conditions, models, and quality. The ongoing use of this furniture, particularly in meeting current workspace criteria such as ergonomics, is given a standard for assessment to determine future procurement and allocation.

5. As identified in the Government of Canada's Green Office Building Plan, developing office space that is more environmentally friendly by incorporating the following features[2]:

    a. Compliance with sustainable development and pollution prevention principles;

    b. Adoption of resource efficient practices to minimize the consumption of energy, water and other resources; and,

    c. Incorporation of the 4Rs: Reduce, Reuse, Recycle and Renewable (i.e. building products, systems use and management).

[1] *Canadian Interiors. 'Spin and Substance'. September/October 2006. p. 45.*
[2] *PWGSC. The Environmentally Responsible Green Office at a Glance. March 2000.*

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The Space Standards and Allocation Guideline was guided by the contributions of the following individuals and committees:

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Angus Robertson, Deputy Minister, Energy, Mines and Resources
Janet Moodie, Deputy Minister and Cabinet Secretary, Executive Council Offices
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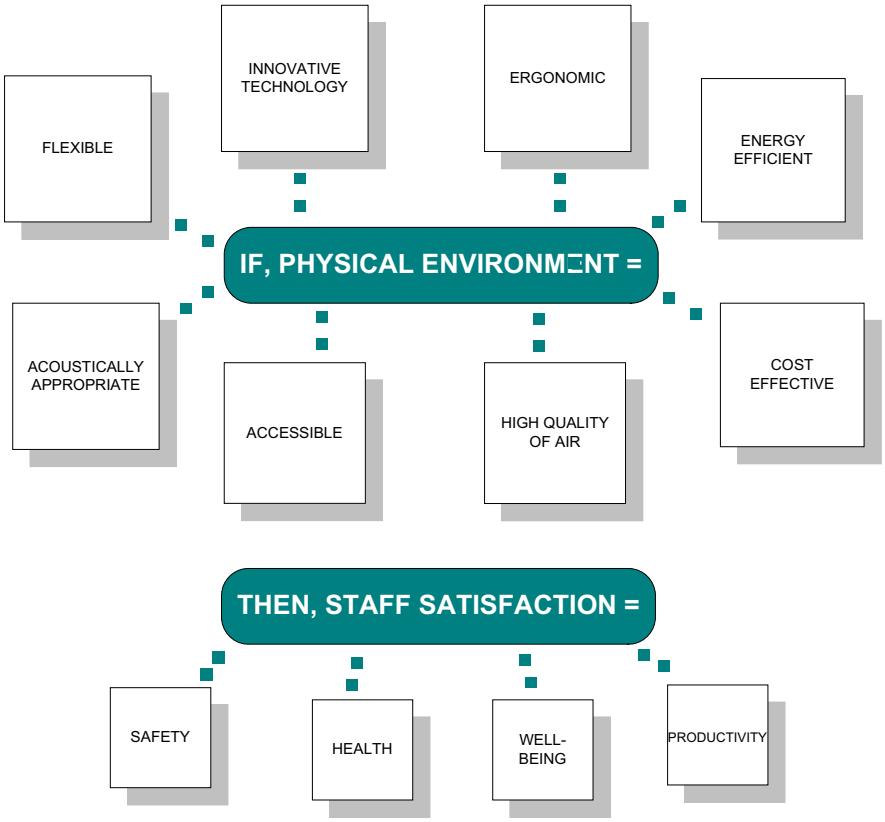
INTRODUCTION

Section I: Workplace Strategies provides strategies and principles related to the successful accommodation of functions, services and staff in the complete spectrum of office and other space types. In short, these strategies will apply wherever there is a physical environment that must support staff.

It includes the following subsections:

- Guiding Principles/Key Environmental Factors
- Framework for Space Standards
- Summary

The following diagram indicates the various components that comprise the physical environment and that lead to staff satisfaction.



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GUIDING PRINCIPLES / KEY ENVIRONMENTAL FACTORS

Guiding principles are critical to achieving and maintaining the space standards that reflect quality, equity, and sustainability. Workplace strategies contribute to increased attention, memory, reading comprehension, creativity, and logical thinking[1], which contribute to enhanced productivity.

GY workplace strategies are based on and consistent with the guiding principles of:

- Canada Green Building Council's Leadership in Energy and Environmental Design (LEED™);
- Energy Reduction;
- Cost Effectiveness; and
- Life-Cycle Costing.

The key building criteria and environmental factors that have an impact on staff productivity and workplace satisfaction are listed below and described in further detail in the following section:

- Acoustic Quality
- Indoor Air Quality
- Barrier Free/Universal Access
- Ergonomics
- Flexibility
- Lighting/Day-lighting

[1] *GSA. Innovative Workplace Strategies. 2003.*

GUIDING PRINCIPLES

LEED™

Leadership in Energy and Environmental Design (LEED™) provides a framework for creating sustainable buildings which includes guidelines for such development features as building commissioning, landscaping, indoor air quality, access to natural light, energy efficiency and thermal comfort, recycling systems, building materials, and water conservation.

Benefits of LEED™ include:

- Increases to productivity by as much as 10%—a 1% improvement in worker productivity is financially comparable to eliminating a company's entire energy bill;
- Reductions in absenteeism by as much as 45%;
- Lowering of utility costs by as much as 50%;
- Reductions of life cycle costs by at least 25%;
- Energy conservation;
- Increase in job satisfaction by as much as 24%;
- Environmental benefits, such as clean drinking water, fresh air, uncontaminated soil, and diverse, healthy ecosystems; and,
- Assists in communicating the benefits and importance of adequate ongoing facility maintenance.

Energy Reduction


Taken from the Yukon Government Website

Reducing energy consumption has become a dominant feature in most facility planning as governments and the public strive to create more sustainable buildings. Reducing the amount of energy that a building consumes is both beneficial for the environment, and cost effective.

The following principles and considerations assist in an overall decrease in energy consumption:

- Energy reduction considerations are not limited to electrical and fuel efficiencies, but should extend to water conservation and waste reduction;
- The environmental impact of building materials (embodied energy) should be considered;
- Deriving energy from natural sources such as geothermal, solar and wind should be considered;
- Newer computers and technology are more energy efficient, more portable and take up less space;
- Energy efficient lighting systems combined with motion detectors should be utilized; and,
- Envelope design and construction can greatly influence energy efficiency.

Passive solar design is a group of design strategies that assist with energy reduction by influencing the heating, cooling and day-lighting of a building[2]. Passive solar heating involves:

- The collection of solar energy through south-facing windows;
- The storage of energy in building materials with high heat capacity; and,
- Window specifications to allow higher solar heat gain coefficient in south glazing.

Cost-Effectiveness

Cost-effectiveness in a building is determined and influenced by the following:

- Original cost of the structure;
- Lifespan of the building;
- Operating and maintenance costs; and,
- Productivity of the users.

Cost-effectiveness considers the overall efficiency of a building and its occupants. Occupants that are efficiently accommodated

[2] *Whole Building Design Guide, 2007*

and organized result in financial savings from many factors, including reductions in overhead costs through a smaller area, increased staff productivity, and reduction in staff absenteeism.

Life cycle costing is necessary to determine the true cost-effectiveness of facility construction options through the lifespan of a building, including cost for ongoing maintenance, and of renovations.

Life Cycle Costing

Life cycle costing is the process of identifying the total cost of ownership (TCO) associated with a government owned or leased facility. TCO is a dollar amount per square metre (or square foot) value of a facility (refer to Appendix A for a complete definition). TCO takes into account the initial investment, the operating costs, and the end of life costs.

Operating costs include:

- Energy costs from HVAC, lighting, conveyance systems, electrical equipment, etc.
- Upkeep costs from cleaning and refinishing including labour
- Maintenance costs including repair and replacement of materials

When calculating operating costs it is important to consider[3]:

- Exterior wall construction and finishes
- Sun control devices
- Exterior windows
- Alternative roof systems
- Conveyance systems
- Interior wall systems
- Interior protective finishes

End of life costs include:

- Demolition and/or disposal of assets
- Salvage value of assets

Depending on the impact the facility has on the existing site, the end of life costs may be considerable, especially in circumstances where the disposal of assets requires significant environmental clean up.

[3] *Facilities Standards for the Public Buildings Service, US General Services Administration, Office of the Chief Architect, 2005.*

Utilizing Life Cycle Costing, when evaluating capital investment options, allows determination of the most cost effective option. Some of the benefits offered by Life Cycle Costing include:

- More accurate evaluation of competing options for building new facilities and renovations
- Holistic costing that enables evaluation of performance trade-offs in terms of the associated cost

KEY ENVIRONMENTAL FACTORS

Acoustic Quality

The layout and design of the workplace has an impact on the ability to control the sources of noise within a working environment. Acoustical conditions within a workplace are affected by the absorption, reflection and transmittal properties of the ceiling, the workstation size, and the height of the partitions.[4] It is important to consider the location and placement of all items in a workplace as this will affect the path that the sound will take.

"Broken concentration reduces peoples ability to make the creative leaps that distinguish merely acceptable solutions from the truly innovative."

- Workstation Design for Organizational Productivity, PWGSC.

Solutions to acoustical challenges within the workplace include taking such measures as:

- Providing a comfortable level of background noise and speech privacy;
- Blocking sound with absorbent surfaces (ceiling) and partitions; and,
- Providing a sound masking system.

Sound can be measured by frequency and decibel. The Speech Intelligibility Index (SII) should be higher in environments such as theatres and auditoriums where there are multiple sounds occurring at the same time with both high decibel and frequency, while quieter environments such as offices need lower SII values.

The acoustical properties of an office can play a positive role in reducing the amount of sound travel within the workplace by both blocking and reflecting sounds. The following table indicates the Sound Transmission Class (STC) and the Sound Absorption Average (SAA) ratings of physical elements in a workplace affect the attenuation of sound.

Physical Element:	Acoustical Properties:[5]
Exterior Walls	STC 50
Windows	STC 35
Ceiling	SAA > 0.90
Floors	STC 55 (carpeted)
Partition	SAA > 0.70
	STC 20

[4] *Workstation Design for Organizational Productivity. PWGSC, 2004 (pp. 19).*

[5] *Based on the Canadian Standards Association (2000).*

Indoor Air Quality

The importance of indoor air quality within the workplace is directly related to staff health, and has been linked to reduced work performance, and absenteeism. Poor air ventilation contributes to such health concerns as headaches, lethargy, nausea, dizziness, poor concentration, irritability and irritation of the eyes, nose, throat and skin.

Sick Building Syndrome

Methods of insuring good indoor air quality include[6]:

- Providing an adequate supply of outdoor air; a rate of 10 Litres per second (20 cubic feet per minute) is preferable;
- Do not exceed the air supply capacity of the ventilation system;
- Provide some individual control over temperature, air velocity and/or air direction;
- Clean and maintain the ventilation system and office space;
- Do not block airflow by blocking air diffusers or using very high partitions or dividers;
- Insulate windows and provide perimeter heating/cooling to avoid draughts; and,
- Avoid using furnishings and equipment that emit high levels of contaminants.

Common contaminants that are emitted by furnishings and equipment include[7]:

- Formaldehyde contained in particleboard, fiberboard, plywood and carpets;
- Brominated flame-retardants from computers and other electronics; and,
- Volatile Organic Compounds from photocopy/printing machines, paints and furnishings.

6 *PWGSC,* Workstation Design for Organizational Productivity. *2004 (pp. 19).*

7 Health Canada, Indoor Air Quality in Office Buildings: A Technical Guide*, 1995.*

Barrier Free/Universal Access


Taken from the Whole Building Design Guide

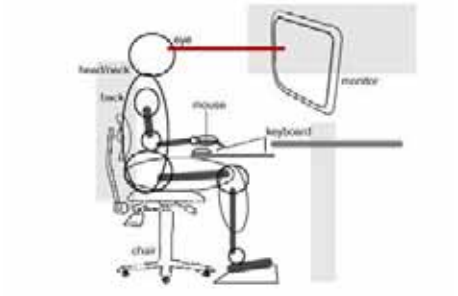
All GY leased and owned facilities must ensure that persons with physical disabilities can gain access to, and use, the facilities. Providing barrier free access means ensuring that all individuals have equal opportunity to use buildings and facilities; programs and services; employment opportunities and technology[8]. Barrier free access also ensures that all individuals have the same level of privacy, security and safety.

Barrier free/Universal Access needs to be an integral part of the whole life cycle of a facility (planning, programming, design, construction, operation and maintenance).

For additional resources related to universal access and barrier free-design refer to:

- Canadian Standards Association (CSA) CAN/CSA-B651-95, Barrier-Free Design.
- Real Property Accessibility Policy, which was designed to ensure barrier-free access to, and use of, Canadian government facilities, including requirements for parking spaces, power-operated doors, accessible washrooms, tactile signage, assistive listening systems, and many other building features that may impact people with disabilities.
- *Canadian Human Rights Act (CHRA),* which requires that the federal government accommodate the special needs of employees and service users, including persons with disabilities.

Ergonomics



Ergonomics is an important consideration when establishing workplace standards. Ergonomics is the science of designing the job to fit the work, rather than physically forcing the worker's body to fit the job. Adapting tasks, workstations, tools and equipment to fit the employee can help reduce physical stress on employee's bodies and eliminate many potentially serious, disabling work-related musculoskeletal disorders (MSDs).[9] As such, standards for workstations and offices should support the provision of modular stations and equipment that are ergonomically appropriate.

The workstation layout should provide chairs that:

- Can be adjusted to different heights, making it possible for employees of all sizes to rest their feet comfortably on the floor;
- Have 5-prong base for stability and which roll on wheels;

8 *Whole Building Design Guide, 2007*

9 *OSHA Ergonomics:* The Study of Work*, 2000.*

- Have adjustable back rests;
- Support the lower back (lumbar area);
- Have padded seats;
- Support the forearms with arm rests while allowing the elbows to remain near the waist; and,
- Have arm rests that are detachable.

Computer workstations should:

- Allow employees to keep their wrists nearly straight - without furniture edges digging into their wrists or forearms;
- Enable employees to see the screen clearly without leaning forward;
- Locate the monitor at eye level;
- Provide rounded edges on keyboard trays;
- Provide a monitor that can be adjusted up and down or side to side;
- Provide a keyboard tray that is wide enough to accommodate both keyboard and mouse at same level; and
- Provide sufficient leg space under keyboard tray as well as under desktop.

Flexibility

Flexible design principles include the development of spaces that are easy to modify to support changing occupants and occupancy; that are able to serve multiple uses with minimal renovation; that can accommodate changing placement of the technological infrastructure (e.g. that allow the relocation of computer stations easily) and that can accommodate future technologies. In short, flexibility results in spaces that are cost effective over the lifespan of the facility. The flexibility of the core building, along with the selection of materials that are high quality, and durable in those places that are not expected to be altered, will ensure that a building has a long and cost effective life.

The following principles and criteria can assist in maximizing flexibility:

- Office spaces should be planned as similarly as possible as specialized spaces are less flexible and may be more difficult to modify to accommodate future uses;
- Easily demountable partitions should separate office spaces, but with attention given to acoustic requirements;

- Changes in layout and function can be facilitated with casework that is fully modular and moveable, and flooring that is finished and continuous throughout the space;
- Building and technical services need to be able to evolve;
- Heating, lighting, power and communication systems should be distributed throughout the space in grid-fashion, allowing the easy rearrangement of the space; and,
- Electrical, mechanical and plumbing services distribution lines should be grouped and easily accessible for maintenance and change.

Lighting and Day-Lighting

Six-lamp T5HO luminaires replace metal halide luminaires one-for-one with improved energy efficiency and superior color rendering at this Costco warehouse. During daylight hours, skylights provide significant illumination allowing electric light to be curtailed as much as 80 to 90 percent on a bright day.

(Source: Integrated Lighting Concepts @ www.iesna.org, November 2006).

Within all workplace environments there are multiple issues related to lighting, whether it is access to natural light through a window, specific task lighting, or glare off computers. The absence and presence of light has significant affects on people's physical, psychological, and physiological health. Every lighting system should be tailored to the particular space and to the needs of those occupying that space. The need to incorporate an efficient lighting system into any workplace environment is to prevent employee discomfort, visual disability, or injury.

Features of good lighting will include:

- Reducing the negative effects of glare from ceiling lights and windows;
- Adequate task luminance and uniformity on task surfaces; and,
- Providing some individual lighting controls.

Access to natural daylight is important, especially during the winter months[10]. Even limited exposure to natural light will help with office productivity. The following principles should be considered when designing and organizing staff in work environments:

- Daylight is not as important for senior staff and other individuals who are more mobile in their work;
- Individuals who spend the most time at their workstations need access to daylight;
- Layout of space should be designed to maximize daylight for all individuals by not blocking window access with shelving, and by designing corridors and common areas with windows; and,

[10] *Office and Workspace Guidelines, Ontario Realty Corporation, 2006*

- It is important to prevent glare from windows onto workstations and task surfaces.

Lighting and day-lighting will have profound impacts on the energy efficiency and therefore, costs associated with a particular workplace environment. Within Canada, lighting power density and energy consumption is regulated by standards outlined within ASHRAE/IES 90.1 and the National Model Energy Code for Buildings

For additional lighting resources refer to:

- American National Standard Practice for Office Lighting; and,
- Illuminating Engineering Society of North America.

Staff Satisfaction, Health and Safety

Employee health and well-being has a significant impact on staff commitment, task performance, absenteeism, healthy interaction and overall workplace satisfaction. Positive moods and low stress levels are also contributing factors in staff satisfaction. Sustainable design strategies can be used to create a health-promoting workplace environment and improve the psychological and social well-being of staff.

In summary, daylight, window views, superior ventilation, lack of indoor air contamination, and a spatial design that encourages a heightened sense of place or the spirit of a shared community are all important aspects that will contribute to staff satisfaction.

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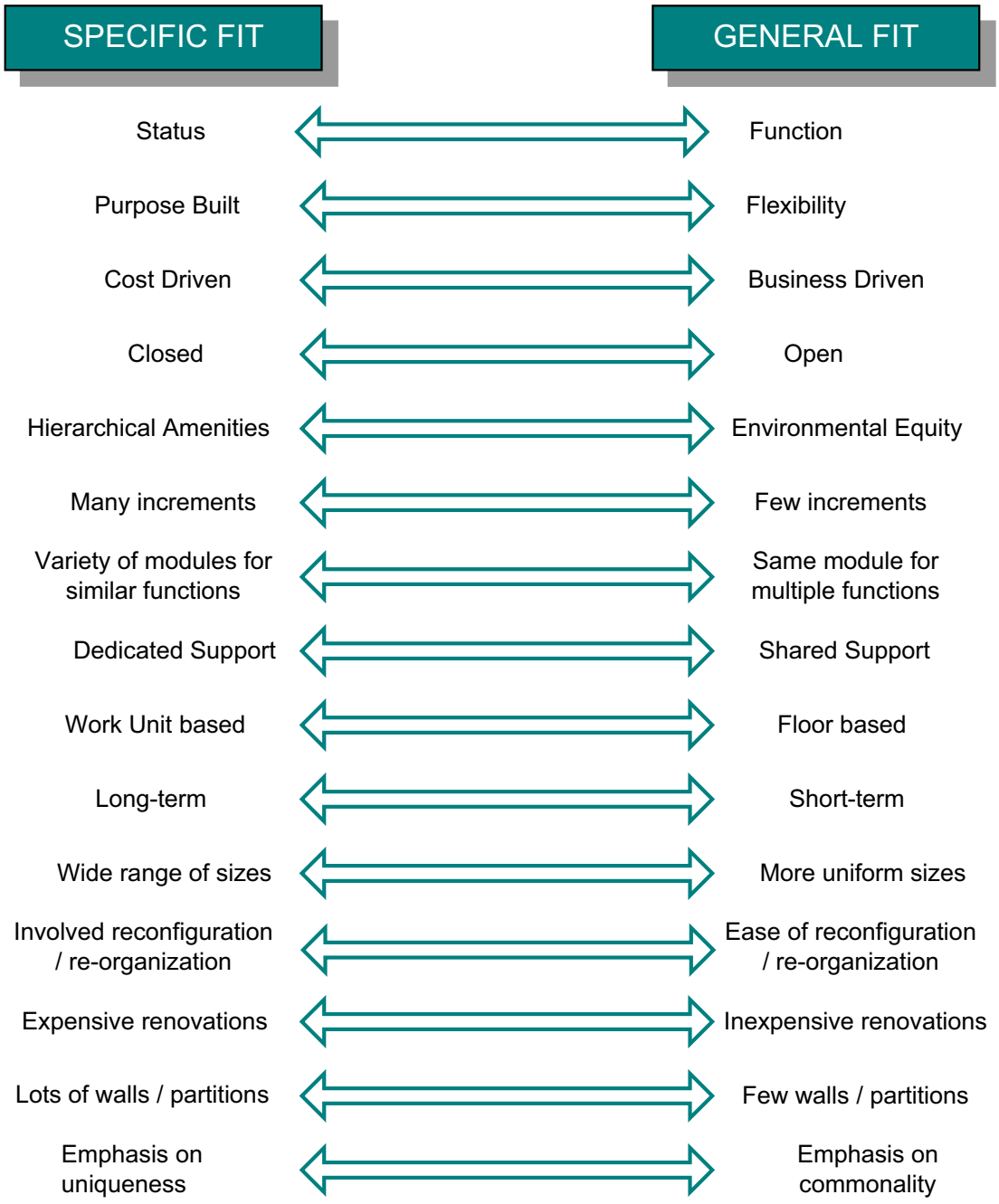
FRAMEWORK FOR SPACE STANDARDS

As identified in the previous section, LEED™ was a central principle in guiding the development of GY's space standards. In the table below, all of the space drivers identified under general fit are supportive of LEED principles and represent current trends in space planning and design which have largely provided the framework for which the GY space standards are based. All of the space drivers identified under Specific Fit are representative of archaic standards in use under the old GY guidelines.



Function

Increasingly, workstation and office allocations are based on function-based requirements rather than based on the status of staff members. This approach results in the provision of work environments that are conducive to work requirements and typically results in more efficient use of space.

This approach recognizes the importance of context specific work environments that are based on function and the tasks to be performed. A "one size fits all" standard may be challenged by the unique characteristics of different staff members and work units, in which case context specific considerations will be made and approved by the Deputy Ministers' Space Committee.

Flexibility

The workplace configuration adapts to typical organizational and work process changes but also can be readily reconstructed to accommodate major functional changes.

Versatility in the utilization of workstations can be achieved by maintaining typical sizes and configurations wherever possible and minimizing the number of workstation and office types. With the exception of special purpose space types, all workspaces should accommodate growth and change as functions shift through time.

Versatility in the utilization of the overall workplace environment is to be achieved by:

- Centralization of most shared support services;
- Consolidation of modular general office space; and,
- Segregation of special purpose and highly serviced space, including spaces with unique servicing requirements.

The term **'open-plan office'** refers to an office space divided into relatively small cubicles/workstations by partitions (also known as dividers, screens or panels) and modular furniture. The arrangement of furniture is flexible and the number of partitions per cubicle may vary from zero (bullpen-type) to four (cubicle). There are not full-height walls and doors separating occupants. This design was originally created to make better use of space and enhance the flow of information.

In highly technical areas, large, open blocks of space with wide structural bays and minimum column area on each floor should be provided to allow for:

- Maximum horizontal relationships between components and work units;
- Development of a common module for multiple functions;
- Efficient intra-component clustering of spaces; and,
- Maximum flexibility for technical or functional renovation, and/or future conversion to other uses.

All new buildings should be designed for potential future growth, vertically and/or horizontally, but especially in areas where the need for expansion has been specifically highlighted.

61% of North American office workers have open-plan offices.

- IFMA

Open Plan Office

There is a general shift in national and international design practice toward open plan office space from enclosed/private offices. This recognizes the shift in the nature of work environments toward a more collaborative and group task oriented space rather than individual task based.

The open office modules will influence the flow of information and communication patterns within the workplace, enhancing opportunities for increased productivity and innovation due to social interaction, increased visual access to the majority of work areas, and reduced distances between workstations. The open office concept truly acknowledges the value of informal communication between staff members. The space standards promote open office space except where function justifies the need for an enclosed office.

Environmental Equity

There is an increased awareness that all staff members are important to the successful operation of a work unit. Office standards are able to reflect this through increased environmental equity. Among the factors to be considered is access to natural light and views, amount of space required to fulfill tasks, visual privacy and acoustic considerations.

Shared Support Space

Increasingly, support space requirements are pooled to create work-unit or floor-based support centres, where files, meeting space, and other needed resources are shared among a number of individuals. This increases utilization of the supporting resources as well as increases overall flexibility of the space.

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SUMMARY

In following the above workplace strategies, GY facilities will be:

- Designed to meet the functional needs of users by accommodating tasks to be undertaken without compromising individual access to privacy, daylight, outside views, and aesthetics;
- Housed in a healthy environment with access to air, light, and water, and free of harmful contaminants and excessive noise;
- Flexible in regards to thermal, lighting, acoustic, and furniture systems to meet personal and team comfort levels;
- Supported by heating, ventilating, and air cooling, lighting, power, security, and telecommunications systems and ventilating equipment; and,
- Recognizable through a unique GY image and identity, to encourage a sense of place and community, as well as pride, purpose, and commitment to the workplace.

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INTRODUCTION

The Space Standards section of this document includes the following subsections:

- Basic Principles, which identifies the guiding principles that have driven the content and format of the Space Standards;
- Terminology and Definitions, which defines key terms used in or relating to the Space Standards; and
- Space Standards, which documents the principles that will be used for allocating space within the GY-controlled facilities.

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BASIC PRINCIPLES

The following basic principles are essential in the development and application of Space Standards. They are listed below:

1. Office accommodation shall be provided to create a working environment that promotes employee health and safety and maximizes workplace effectiveness and efficiency.

2. Office accommodation should be allocated equitably, with employees performing similar tasks with similar functional requirements allocated similar workstations or offices.

3. Office accommodation should be responsive to the functional requirements of each staff member, while recognizing that this must be done in a cost effective manner.

4. The provision of office accommodation for employees with special needs will be provided in accordance with the *National Building Code*.

5. Open office space shall be provided except where function justifies an enclosed office.

6. The provision of Support Space (e.g. interview rooms, reception areas, meeting rooms, etc.) shall be recognized in the planning of office space and will be customized to the individual needs of each work unit. For example, increased numbers of small meeting rooms may be required where there are fewer enclosed offices.

7. Staff in open workstations will generally be located close to the perimeter of the building with access to views and natural light, with offices generally located away from windows.

8. As much as possible, accommodation and space standards will be based on modules or multiples of modules to provide increased flexibility.

9. Support Space will be shared on a floor-by-floor basis wherever possible, while ensuring confidentiality and security of information.

10. The provision of Special Purpose Space (e.g. laboratories, resources centres, etc.) shall be determined where possible, through the collection of space sensitive workload drivers, at the Accommodation Plan stage, and by identifying the actual requirements of the Special Purpose Space in the detailed programming phase.

11. All public areas (e.g. interview rooms, reception areas, meeting rooms, etc.) will be designed to provide barrier free

and disabled access in accordance with the *National Building Code*.

TERMINOLOGY AND DEFINITIONS

The following terms are used throughout the Space Standards and Allocation Guidelines document. Definitions are provided here for clarity in reading and interpreting this document.

1. **Client Department** – any department, board, agency, commission or crown corporation (as defined in the *Financial Administration Act*) supplied with space or requesting space and furniture from Highways & Public Works.

2. **Baseline Office Space** – the combination of Basic Office Space and Support Space; Baseline Office Space is equivalent to the office macro-allocation.

3. **Basic Office Space** – the workstation and office space allocated to employees. It includes an adequate area for furniture and internal circulation within the workstation and access to support areas.

4. **Building Grossing Factors** - is the space occupied by columns, perimeter projections for heat convectors, etc. Generally speaking, these factors have no effect on office allocation. However, there may be isolated instances where building factors have a significant effect on the efficient use of a given floor area (e.g. the location of a column may result in a considerable amount of surrounding space being rendered almost unusable).

   The amount of usable space adversely affected by Building Grossing Factors must be determined by examination of the office space concerned. In the assessment of Building Grossing Factors, Property Management Division will ensure that the space meets the Occupational Health and Safety Act and Regulations pertaining to office accommodation.

5. **Circulation** – is the space dedicated to pedestrian movement between and within groups of offices, workstations and support areas. A typical allowance of 30 - 35% per person is generally attainable in an office situation.

   Circulation Allocations vary depending on factors such as the shapes of the overall space, and the structural grid to the offices and workstations module.

6. **Expansion** – future space needs of a Client Department over a specified period of time and included in the total usable area allocated to the Client Department.

7. **Function-Based (Office and Workstation) Classification** – a group of position classifications whose job responsibilities dictate comparable space, furniture, and equipment requirements.

8. **Macro-Allocation** – is an area per person factor that is used to calculate Baseline Office Space allocations.

9. **Office and Workstation** – is the space provided for individual employees and their associated furniture. Six increments of offices and workstations have been provided based as typical office furniture arrangements. This approach results in the allocation of office space based on function within a manageable number of "standardized" workstation types.

10. **Special Purpose Space** – is space that does not support typical office activities (i.e. not included in Baseline Office Space that is required to meet the functional and service requirements of the Client Department and it is not directly related to the support of the staff complement occupying the office space). Computer centres, public reception areas, laboratories, play therapy rooms, warehouses, and libraries are a few examples.

11. **Support Space** – is space over and above that designated as Basic Office Space (workstations proper) including provision for circulation and areas such as storage, meeting/interview rooms, staff break areas, coat storage, areas for group equipment, and non-public service reception.

12. **Useable Area** – For the purposes of detailed programming of a Client Department work unit/component (as defined in Appendix A), the total useable office area consists of five basic parts:

    (i) Office and Workstations

    (ii) Support Space

    (iii) Circulation

    (iv) Special Purpose Space

    (v) Building Factors

SPACE STANDARDS

The following space standards have been recommended for the Government of Yukon (GY) based on a review of other jurisdictions, general accommodation trends, and the overall goals and strategies of the GY. They have been tested in two GY pilot departments to compare them with the current Directive and to confirm implications for overall space requirements.

The standards include a macro-allocation, standards for offices and workstations, and standards for support and special purpose spaces.

Macro-Allocation Standard

A macro-allocation standard of 18.0 net square metres per Full Time Equivalent (FTE) position is approved for Baseline Office Space.

The macro-allocation includes:

(i) Offices and workstations

(ii) Support space

(iii) Circulation internal to the Baseline Office Space

The macro-allocation is not based on the FTE allocation for seasonal, student and contractors and does not provide space for these workers who may, on occasion, be located within the work unit. A workstation, designated as Occasional, has been defined for these staff, and is included as Special Purpose Space.

The macro-allocation has two purposes:

1. Calculation of overall Baseline Office Space on a work unit basis, using the formula:

   Macro-allocation standard X number of FTE staff

2. Preliminary testing of space utilization by each work unit or group of units, using the formula:

   Current inventory of Baseline Office Space
   ÷ number of FTE staff

The outcome of the first calculation is compared with the outcome of the second calculation to identify whether there is a shortfall or overage of space.

Office and Workstation Space Allocations

The following chart identifies the office and workstation classification system that form part of the office and workstation allocations for the GY and will be used for more detailed functional programming of office space.

Functional Classification: The number that appears in this column is a classification number. Each staff position classification should be assigned a Functional Classification number, based on the noted role and descriptions, which identify the amount of space that should be allocated to the position.

Basic Office/Workstation Standard: These are the space allocation sizes to be used to plan office space. The office/workstation standard refers strictly to the workstation area and includes adequate area for the required furniture plus internal circulation within the space. For the purpose of planning new accommodation, the following listing outlines the positions assigned to the various Functional Classifications.

Enclosed Office/Open Workstation: Except where function justifies an enclosed office, open office space will be provided for employees of those government departments, agencies, etc. to which the Space Standards and Allocation Guidelines applies.

The following office and workstation allocations are approved for the GY:

Functional Classification	Representative Positions	Basic Office/ Workstation Standard	Enclosed/ Open	Role
1	Executive Management: includes Deputy Ministers and equivalent Order-in-Council appointments to boards, agencies, commissions, or crown corporations	22.4 m^2	Enclosed	This workstation primarily accommodates executive officers who are responsible for overall planning, administration, leadership and motivation in the execution of the mandate of the department. The activities (functions) conducted at this workstation include: • General paperwork • Computer-based work • Telephone conversations • Across-the-desk (formal and informal) meetings with staff and visitors

Functional Classification	Representative Positions	Basic Office/ Workstation Standard	Enclosed/ Open	Role
2	Senior Management: includes Assistant Deputy Ministers, Directors and equivalent Heads and Managers of agencies, commissions or crown corporations	16.8 m^2	Enclosed or Open	This workstation primarily accommodates senior managers responsible for planning, administration, leadership and motivation in the execution of specific programs within a department. The activities (functions) conducted at this workstation include: • General paperwork • Computer-based work • Telephone conversations • Across-the-desk meetings with staff and visitors
3	Middle Management: includes section heads, program supervisory staff, senior professionals and middle managers	11.2 m^2	Open or Enclosed	This workstation primarily accommodates individuals responsible for assisting senior managers by overseeing and evaluating junior staff and support staff as well as developing, analyzing and evaluating policies and procedures within their department. The activities (functions) conducted at this workstation include: • General paperwork • Computer-based work • Telephone conversations • Discussions with staff and clients
4	Supervisory/ Professional: includes professionals, counsellors, engineers, policy analysts, researchers, etc.	8.4 m^2	Open	This workstation primarily accommodates supervisors responsible for developing, evaluating, analyzing and assembling information and overseeing activities of support staff. The activities (functions) conducted at this workstation include: • General paperwork • Computer-based work • Telephone conversations • Discussions with clients

Functional Classification	Representative Positions	Basic Office/ Workstation Standard	Enclosed/ Open	Role
5	Technical: includes inspectors, technicians, draftspersons and other specialized staff	8.4 m^2	Open	This workstation primarily accommodates staff responsible for developing, evaluating, analyzing and assembling information and large documents. The activities (functions) conducted at this workstation include: • General paperwork • Computer-based work (large and multiple monitors) • Telephone conversations • Working with large documents, such as maps, building plans and other graphic documents
6	Administrative Support: includes all clerical staff, clerks, administrative assistants and equivalent staff	6.3 m^2	Open	This workstation primarily accommodates staff performing stenographic, secretarial, clerical, reception and other support services. The activities (functions) conducted at this workstation include: • Filing, collating, cataloguing paperwork • Computer-based work • Telephone conversations
7	Occasional: includes students, contractors and temporary staff. This space will be calculated as Special Purpose Space and is not part of the Macro-Allocation factor.	4.2 m^2	Open	This workstation primarily accommodates temporary or part-time staff performing a variety of tasks. The activities (functions) conducted at this workstation include: • General paperwork • Computer-based work • Telephone conversations

Special Purpose Space

Special Purpose Space is defined as space supporting the unique functions of a work unit, and including public service desks, and atypical storage and meeting room requirements, as well as unique spaces such as wet labs, archival areas, warehouses, and so on.

The following table identifies standards for special purpose space.

Special Purpose Space	Area	Notes/Comments
Office-Based Space		
Library Bookcase	0.96 m^2	Assumes 232mm (3 feet) wide, 305 mm depth and 1067mm aisles; generally accommodates approximately 125 books/equivalent volumes; requires 150 lbs per square foot floor load capacity
Free-Standing Lateral Filing Cabinet	1.4 m^2	
Free-Standing Vertical Filing Cabinet	0.8 m^2	
Compact Shelving	0.35 m^2	Generally accommodates 125 books or equivalent volumes; requires 300 lbs per square foot floor load capacity
Map Cabinet	4.5 m^2	
Secure Records 1	4.0 m^2	0 – 4800 files on 4 drawer cabinet
Secure Records 2	6.0 m^2	4,801 – 9,000 files on 3 to 5-shelf bays
Secure Records 3	7.4 m^2	9,001 – 10,800 files on 6 shelving bays
Secure Records 4	11.1 m^2	10,801 – 18,800 files on 7 to 10 shelving bays
Secure Records 5	14.8 m^2	18,801 – 25,200 files on 11 to 14 shelving bays
Secure Records 6	18.5 m^2	25,201 – 32,400 files on 15 to 18 shelving bays
Photocopier	4.8 m^2	Standard cabinet
Locker, Typical	0.5 m^2	Full height or 2 half-height
Locker, Large	0.7 m^2	Full height, extra deep
Staff Washroom	3.7 m^2	Wheelchair accessible
First Aid Room		As per GY code
Public Space		
Waiting, Seated	2.0 – 2.4 m^2 per person	
Queuing Area	0.84 to 0.9 m^2 per person	
Public Service Counter	1.5 m^2 per position + 1.0 m^2 for counter space	Does not include workstation at counter
Public Service Counter with Workstation	8.5 m^2 per position	
Interview Room	9.5 m^2	
Display Area 1	0.84 m^2 per unit	Wall mounted rack
Display Area 2	1.89 m^2 per unit	Free-standing rack

Special Purpose Space	Area	Notes/Comments
Staff Support Areas		
Training Rooms, Computer	3.4 m^2 per station	Add 10% support factor
Conference Room	2.4 m^2 per station	To 60 m^2; add 5% support factor
Tiered Room	1.75 m^2 per station	Continuous bench and movable seats; add 5% support factor
Fitness Room	0.3 m^2 per person	
Laboratories		
Wet Laboratory	24.3 m^2 per module per 2 Principal Investigators	Requires approximately 60% additional space for support functions
Dry Laboratory	48.0 m^2 per Principal Investigator	Does not include offices
Airplane Facilities		
Helicopter Hangar	As required	Hangar also requires vestibule, office, workshop, washroom and storage
Fixed-Wing Aircraft Hangar	As required	Hangar also requires vestibule, general office, 2 private offices, washrooms, receiving/shipping, workshop, heated storage
Garage/Warehouse		
Garage	31.5 per bay	
Warehouse	As required	Based on linear feet of storage and storage format, e.g., pallet-based, industrial shelving, forklift access requirements, high head, etc.
Recycling Area	As required	
Maintenance/Workshops/Technical Space		
Workshops	As required	Based on equipment needs and layout requirements
Technician Work Area	17.9 m^2	One person; may vary depending on equipment needs and layout requirements
Technician Work Area 2	24.6 m^2	Two people; may vary depending on equipment needs and layout requirements
Technician Work Area 3	46.9 m^2	Three to four people; may vary depending on equipment needs and layout requirements
Technician Work Area 4	74.8 m^2	5 to 6 people; may vary depending on equipment needs and layout requirements

INTRODUCTION

This section provides the overall framework for the GY space allocation and facilities planning system. The Allocation Guidelines includes the following subsections:

- Objectives of Allocation Guidelines
- General Description of Allocation Planning Procedures
- Client Department Initiated Project Procedures
- Project Review Criteria
- Business Case Procedures
- Functional Programming Procedures
- Ongoing-Review of Space Standards

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OBJECTIVES FOR ALLOCATION GUIDELINES

The objectives of the Allocation Guidelines are:

1. To ensure that accommodation and furnishings are provided to all departments of the GY on an equitable basis, consistent with program and service needs and the functional requirements of staff, and which includes an equitable process that responds to and prioritizes space needs and requests in a methodical and justifiable manner;

2. To ensure that accommodation and furnishings are provided in a manner that will create a working environment that is conducive to the promotion of employee health and safety and the maximization of employee effectiveness and efficiency;

3. To ensure that accommodation is provided in a sustainable manner that is compatible with and supportive of the GY Climate Change Strategy, limiting the cost of renovation, and reducing the Total Cost of Ownership or occupancy of leased space;

4. To ensure that accommodation and furnishings are provided in the most effective and economical manner and to provide quality controls assurance;

5. To ensure that Yukon labour and materials are maximized in the provision of furniture, equipment and accommodation;

6. To develop and maintain an up-to-date facilities inventory system and to identify physical and staffing movement through a centralized information system and space management process, including but not limited to the maintenance of an updated computer-aided facility management (CAFM) system;

7. To capture changing needs of Client Departments in a timely manner so that the impact on space planning will be well coordinated and responsive to the needs of the Client Departments;

8. To develop a comprehensive tool that will help to guide future facility allocations by providing a structured business case-type format for all projects that prioritizes GY and departmental needs, using criteria such as functional efficiency, accommodation of growth, flexibility, visibility, and access.

9. To measure progress toward meeting desired space standards; and,

10. To develop a mechanism for periodic reviewing and updating the Allocation Guidelines to ensure its on-going suitability.

GENERAL DESCRIPTION OF ACCOMMODATION PLANNING PROCEDURES

Introduction

The Department of Highways and Public Works / Property Management Division is required to identify the space needs of departments and include these requirements in a Five-Year Accommodation Plan with Annual Accommodation Plan updates. The planning process provides a framework to supply accommodation for the GY, and the associated budget requirements.

The objectives of the planning process are:

a. To develop long term (Five Year) Accommodation Plans and strategies to ensure there is a balance between supply and demand.

b. To assess the GY's accommodation needs annually by developing overall needs projections based on department identified growth or reductions, with the Five-Year Accommodation Plans serving as a guideline for short and medium-term accommodation decisions; and,

c. To assess the long-term availability of GY-owned and private sector accommodation.

The planning process involves communication with:

a. Client departments, to develop staffing forecasts, identify needs around Special Purpose Space, and maintain inventory information;

b. Finance, to report the results of Client Department staffing forecasts; and,

c. The Deputy Ministers' Space Committee to ensure that the accommodation planning process is meeting the overall policy objectives of the GY.

Responsibilities

Highways and Public Works / Property Management Division

Property Management Division will:

a. Carry out effective accommodation planning for GY Client Departments by:

   (i) Maintaining an **accurate inventory of space** used by each work unit/component within each Client Department, including Baseline Office Space and Special Purpose Space;

   (ii) Developing and implementing **Five-Year Accommodation Plans** to maximize the utilization of

existing facilities and recommending the acquisition of additional facilities (by lease, purchase, or construction) to meet future accommodation needs; and,

(iii) Ensuring that space allocations for Client Departments are consistent with established space standards and allocation guidelines, are appropriate to the program needs of the departments, and are consistent with the GY's Five-Year Accommodation Plan.

b. Consult with Client Departments to achieve mutual agreement on selection of facility, Special Purpose Space allocation, and adjacency and accommodation priorities;

c. Develop budget estimates for proposed capital and renovation projects; and,

d. Complete all required documentation or assisting with required documentation, including any requirements for business cases, functional programs, tenant improvements and leasing.

Procedures

Space Inventory Development and Update

Property Management Division will develop and maintain an inventory of all GY-controlled space, including space in owned and leased facilities. The inventory will include a database of the following information that is connected to building floor plans. The database will include the following:

- Building Name and Number
- Building Address
- Building Ownership – Is the property owned or leased?
- Building Level
- Room Number
- Occupancy, by department and work unit
- Baseline Office Area
- Special Purpose Space Area

Property Management Division will conduct a Facilities Audit of Client Department space, reviewing the occupancy of approximately 20% of all GY-controlled space annually, to complete an as-built inventory review cycle every five years and will update inventory database and drawings based on the findings of the audit.

As capital projects are completed, the inventory information will be updated to reflect the occupancy of the new or renovated space.

Property Management Division will liaise with Information and Communication Technology (ICT), who will identify office moves, when Client Departments request changes to voice/data connections, to assist in maintaining the up-to-date inventory information.

Five-Year Accommodation Plan Development

At the outset of the project and each year thereafter, Property Management Division will forward a request to all Client Departments for submission of their accommodation needs for the next fiscal year and for four subsequent years.

The submissions from the Client Departments will provide the following information for current (year 1) and the five-year planning horizon:

a. **Organizational groupings** – work units or functional components based on the divisions of responsibility (i.e. branch, section, work unit/component) particularly where this has changed from previous years;

b. **Current and Future Staffing** – staffing numbers by position for the current year and each of the next five years in Full Time Equivalents;

c. **Functional Adjacencies** – important functional adjacencies of each work unit or functional component to other work units/functional components;

d. **Qualitative Space Analysis** – identification of deficiencies in existing workspace, in terms of environmental quality (i.e. not related to amount of space or location of space);

e. **Special Purpose Space** – identification of space requirements for non-office space along with the justification for/drivers of the space. The justification should take the form of workloads such as files to be accommodated, training session per year, linear feet of storage, etc. These should be developed in discussion with Property Management Division and maintained for historical record and future space planning purposes.

On the basis of the information provided by the Client Departments, Property Management Division will prepare an estimate of future space needs, using the macro-allocation and the requirements for Special Purpose Space identified in the Space Standards.

Property Management Division will review the allocation requirements and compare these to existing space inventories. If sufficient deviation is found between the space needs and the existing inventory (plus or minus 15% or 50 net square metres), Property Management Division will review these estimates with Client Departments in order to verify the projections and compile supporting documentation.

There may be reasons for variation, including:

- Existing office sizes do not correspond to space standards;
- Small size of the work unit/component reduces applicability of standards; and,
- Basic layout of space results in a higher gross-up/circulation factor than anticipated by the macro-allocation.

For the purposes of estimating and analyzing Special Purpose Space requirements, where possible, a space sensitive workload will be generated and applied using the GY standards for Special Purpose Space that are included in Section II: Space Standards.

Using cost estimates (based on existing market rentals) developed by Property Management Division, budget requirements will be estimated for the upcoming fiscal year and for each year of the Five-Year Accommodation Plans as well as for each Client Department-initiated request that has been documented and verified.

Annual Accommodation Plan Finalization and Approval

When all accommodation projects have been documented and verified, Property Management Division will develop an Annual Accommodation Plan, which will outline:

a. GY Client Department moves and developments planned for each fiscal year;
b. The priority of each GY Client Department move or development vis-à-vis identified criteria;
c. Cost of each move or development; and,
d. How the move fits into the GY Five-Year Accommodation Plan.

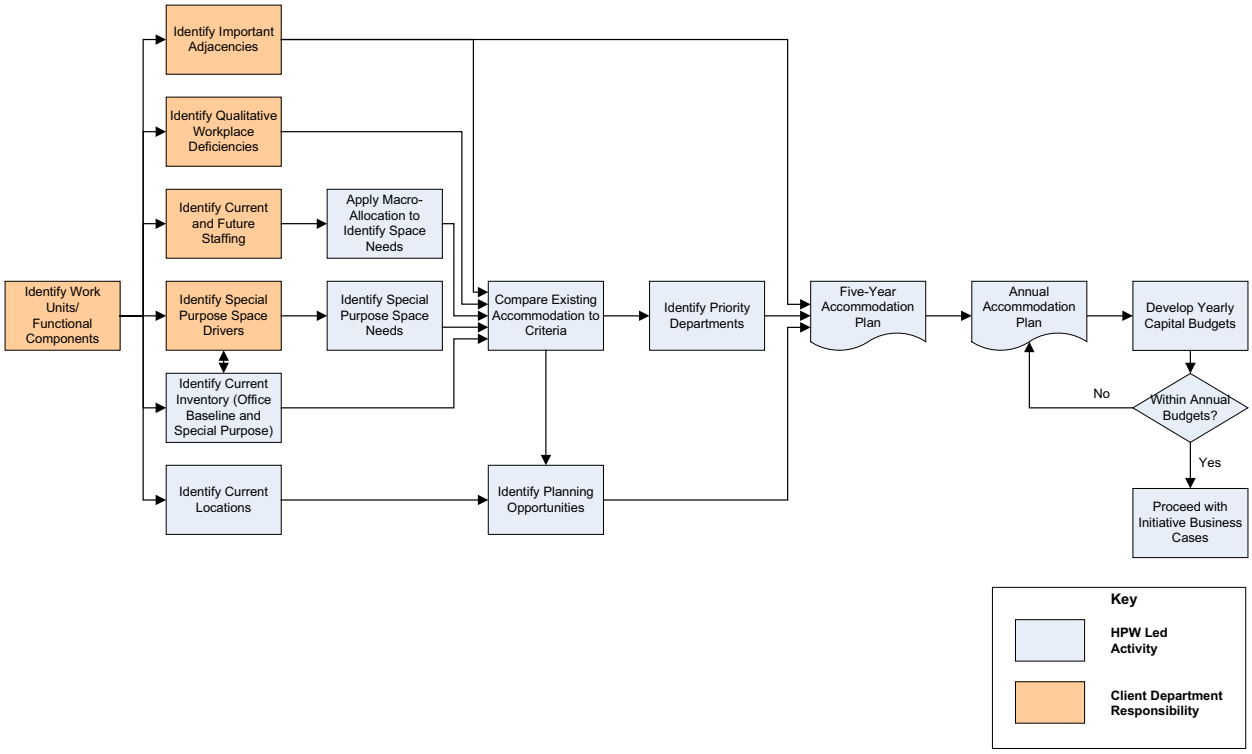
The Annual Accommodation Plans will be reviewed by the DMSC and referred to Management Board with the Committee's recommendations.

The decision by Management Board will determine whether the schedule of accommodation needs will be included in the estimates for the new fiscal year.

Approval of the estimates by the Legislature will provide the authority for Property Management Division to initiate the action required to provide Client Departments with additional accommodation.

The following chart illustrates the various tasks and responsibilities leading up to the development of the Five-Year Accommodation Plan and the Annual Accommodation Plan.

Figure 1: Basic Workflows for Developing Accommodation Plans



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CLIENT DEPARTMENT-INITIATED PROJECT PROCEDURES

Client Departments may initiate projects outside of the ongoing Accommodation Plan cycle if there are unique or extenuating circumstances, such as a political directive or to take advantage of an unforeseen opportunity. For projects that are initiated by a Client Department, a **Work Request** and **Statement of Requirements** must be completed, with Work Requests required for all projects, and a Statement of Requirements for more complex projects (greater than or equal to $50,000) requiring more complex rationalization.

A **Work Request** provides the documentation of a preliminary scope, schedule and budget for the project. If the anticipated budget is less than $50,000, a Project Charter/Simplified Business Case will be developed; Property Management Division will then apply the prioritization criteria to see whether the project ranking is high enough to proceed. If approved, a Project Manager will be assigned, who will develop a project budget and move the project into programming, design and construction if needed.

For complex projects with an anticipated budget equal to or more than $50,000, the development process will follow **General Administration Manual Directive 2.17**. A Business Case will be developed, which will be submitted and reviewed by the Manager Planning & Realty Services. From there, a Project Manager will be assigned, a Project Charter will be developed and the project will proceed into the required approval process. The Client Department will complete a **Statement of Requirements** to enable the Realty & Planning Services Section to develop a Preliminary Scope, Schedule and Budget for the Project.

All projects with budgets of $50,000 or more will be prioritized by the Property Management Division and recommended to the Deputy Ministers Space Committee for final ranking determination. Depending on ranking, each project will then be taken through the required approval process, at the appropriate financial signing and **Implementation Approval Authority** level, and move into design and construction. **Any Project with a budget of $1,000,000 or more will require Management Board authorization of the Implementation Phase.**

PROJECT REVIEW CRITERIA

In order to prioritize capital projects, a set of Project Review Criteria will be used to assess each project, with each criterion given a ranking. Project prioritization will be based on the scores achieved by the projects.

While Property Management Division will rank projects less than $50,000 against the Project Review Criteria, Client Departments will be able review the scores and appeal a ranking to the Deputy Ministers' Space Committee, which must give reasons for its ruling.

While DMSC will rank all projects greater than or equal to $50,000 against the Project Review Criteria, Client Departments will be able to review the scores and appeal a ranking to Management Board.

Every five years, the Project Review Criteria should be assessed to ensure they meet the objectives for the Space Standards and Allocation Guidelines and the strategic directions of the GY.

The Project Review Criteria are provided as *Appendix C: Project Review Criteria*.

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FUNCTIONAL PROGRAMMING PROCEDURES

The particular space needs of a Client Department work unit/component must be defined before Property Management Division can proceed with a functional program or the functional layout of space. In developing the Functional Program, Property Management Division will confirm the overall project scope based on the Macro-Allocation and assumptions around Special Purpose Space. This will be used as a parameter for the project, within which it must be developed.

Within that parameter, the following should be considered:

Office Accommodation – General-purpose office accommodation will be provided on the basis of the Functional Classification of the various positions while recognizing that this must be done in the most cost-effective manner, with consideration given to flexibility, reconfigurability and total cost of ownership.

The Client Departments will review the Functional Classification and confirm the appropriateness of the Functional Classification by staff position.

In order to respond to all of the functional requirements of a position, it is recognized that ample access to meeting and quiet rooms on a shared basis must be provided so that private meetings and confidential conversations can be conducted, as required.

In situations where a group of positions deals with confidential documents on a continuing basis, and where confidential discussions are necessary in an open work area, provision will be made for controlled access and a restricted work zone for employees only, if requested by the Client Department.

In accordance with the preceding principles, **enclosed offices** will be provided to staff within Functional Classifications 3 through 5 within the following guidelines:

Recognition of Managerial Function

For Middle Management classifications (Functional Classification 3), an exemption will be required on a case-by-case basis to be eligible for an enclosed office.

For field offices only, the senior position in charge of the departmental office will be eligible for an enclosed office.

Exemption for Functional Criteria

Enclosed office space will be provided to those positions that demonstrate a requirement for confidential meeting space on a continual basis. This requires that the staff position be providing

a direct service to clients. For example, a Social Worker who continually interviews clients in strict confidence exhibits the type of work activity that warrants an enclosed office. However, due to the overall impact on space, more flexible alternatives that rely on shared meeting space should be considered and explored.

The functional criterion for enclosed office space may not be applied when the department agrees to occupy space on an "as is" basis.

Procedures for Requesting Exemptions from Functional Classification Assumptions

Client Departments may request an exemption from the Functional Classification system by completing a request, in writing, for an enclosed office designation for a specific position or a group of Functional Classification positions that are not included in the exemptions outlined above. This request is to be directed to Property Management Division - Manager Planning & Realty Services.

In the situation where the request refers to a single position, the Client Department should outline how the work activity of the position fits into the specific functional criteria that are utilized to define eligibility for an enclosed office space, by completing the required form.

Property Management Division will review the request in consultation with the Client Department, and make a decision respecting the request. If the request is not granted, the Client Department will be advised and may appeal the decision to the Deputy Ministers' Space Committee.

Support Space – Support Space should be defined individually for each work unit/component, in conjunction with other work units/components who may be sharing the support space due to co-location on a floor. The overall area for offices, workstations and support space (Baseline Office Space) when multiplied by the circulation factor should not exceed the macro allocation identified in the Space Standards.

Special Purpose Space – For Special Purpose Space, for which standards are not provided in the Space Standards section, the identification of actual requirements for non-standards supported facilities will be determined by Property Management Division in consultation with the Client Department. Where possible, the Client Department will provide Property Management Division with appropriate data on similar facilities from other jurisdictions that operate such Special Purpose Space (benchmarks) or other applicable standards.

Building Grossing Factors – As noted, building factors include items such as the space occupied by columns, perimeter projections necessitated by construction of the building. Often these factors affect the usable area of space and will have a real impact as Work Units/Functional Components are moved within existing facilities.

Property Management Division will determine the effect of building factors on the efficient use of a given facility and will make any necessary adjustments to the amount of space allocated when the design layout is being completed.

Review with Client Department

Following the development of the Functional Program document, Property Management Division staff will review the information with the Client Department. The overall Functional Program must be within the parameters for space originally established and must be signed off by Client Department representatives before proceeding to design.

Ongoing Review of Space Standards

As part of a policy of ongoing accountability and improvement, every five years, a review should be conducted of Client Departments to assess the appropriateness of the existing Space Standards. The assessment should be conducted using Work Units that most closely align with the space standards. The review should confirm the number of workstation increments, the size of offices and workstations for each Functional Classification, and appropriateness of the macro-allocation.

For Special Purpose Space, Property Management Division should provide additional standards as they are developed for new projects and initiatives and proven to work successfully.

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Appendix A: Definitions of BOMA Terms

DEFINITIONS OF BOMA TERMS

OFFICE BASELINE SPACE[1] = Enclosed offices, workstations and support space.

SUPPORT SPACE = Space required to conduct typical office functions such as file storage, break areas, printing stations, meeting rooms, stationary stores, photocopying, faxing.

SPECIAL PURPOSE SPACE = Space required for the unique operations of a work unit or component.

OFFICE SPACE = OFFICE BASELINE SPACE + SUPPORT SPACE + SPECIAL PURPOSE SPACE

USEABLE AREA **= OFFICE AREA + FLOOR COMMON AREAS**

BASIC RENTABLE AREA = USEABLE AREA + FLOOR COMMON AREA

RENTABLE AREA = USEABLE AREA + FLOOR COMMON AREA + BUILDING COMMON AREA

FLOOR COMMON AREA INCLUDES:

- Corridor
- Elevator lobbies
- Washrooms
- Janitor closets
- Telecommunications
- Utility Closets

BUILDING COMMON AREA includes:

- Ground floor lobbies
- Public corridors
- Concierge areas
- Fully enclosed mechanical or equipment rooms

MAJOR VERTICAL PENETRATION includes:

- Stairs
- Elevator shafts
- Flues
- Pipe shafts
- Vertical ducts (not included in U, BR or R areas)

(GY MACRO-SPACE ALLOCATION STANDARD[2] x # OF STAFF) + SPECIAL PURPOSE SPACE = FUTURE FUNCTIONAL COMPONENT AREA

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1 *Term developed by GY which allows specialty space to be adequately accounted for in developing macro-allocation standards.*

2 *The Macro-Space Allocation Standard is based on Office Baseline Space divided by the # of staff.*

Appendix B: Space Standards Review and Analysis

Yukon
Government

Space Standards Review and Analysis

Prepared by Resource Planning Group Inc.
and FSC Architects and Engineers

Prepared for Government of Yukon
Property Management Agency

February 2007

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INTRODUCTION

Current space standards within the Government of Yukon are reflected in Management Board Directive #17/84. In consultation with the Property Management Agency (PMA), the Assistant Deputy Minister of Highways and Public Works participates on the Deputy Ministers Space Committee (DMSC) which serves to review the allocation of funding for the acquisition of appropriate accommodation, furniture, furnishing and equipment.

In a thorough review of over nine other jurisdictions throughout Canada, the current GY space standards as identified in Directive #17/84, were compared to see how GY "measured up" to current office and special purpose space standards.

It was determined that given the current space demands on GY facilities, that the current MBD#17/84 be updated to reflect higher levels of sustainability and efficiency.

MAJOR ISSUES AND FACTORS

In reviewing the space standards that have been produced by different organizations within the government facility management sector, three key issues and factors influencing the development of the standards were identified.

1. **Definitions and measurements of space**

The majority of documentation around space standards uses the rentable and useable BOMA measurement to describe the way in which space is being utilized within a building or on a floor. For physical planning purposes, the only measure of space that needs to be considered is the useable allotment of space within a building or on a floor. This review, therefore, focuses primarily on useable measurements of space. Furthermore, as GY has indicated a preference to utilize metrics over imperial, this review has meant converting square feet to square metres, using the 0.929 conversion factor. The majority of space standards are still reflected in imperial.

2. **Varying job classifications**

In the space standards that were reviewed as part of this study, the workstation types varied in number with some jurisdictions providing only four classifications, while others provided up to eight different workstation types or job classifications to delineate between space standards. Due to this variety in classifications, some assumptions were made to place all categories of space standards into the most appropriate job classification or workstation type by using six workstation types. These are:

- Executive management
- Senior management
- Middle management
- Supervisory/professional
- Technical; and
- Administrative support

Where space standards for touchdown or occasional workstation types were provided, then these were also included in the review.

3. Support vs. special purpose space

Many of the standards reviewed distinguish between support and special purpose space. Support space can be defined as the spaces, outside of webstations and offices, required to support typical office functions. They typically will include file storage, photocopying and document production space, short-term stores, meeting space and space associated with staff breaks.

(0640/SpaceStandards.doc)

KEY CONSIDERATIONS IN THE REVIEW OF SPACE STANDARDS

After identifying the major issues and factors associated with conducting a standards review and analysis through different jurisdictions and institutions, a key frame of reference needed to be developed so that the standards could be understood and be comparable between the standards. The following reviews reflect certain adaptations to language, measurement translations, etc., as were required to make appropriate comparisons. For example, all useable square feet was converted to square meters.

The primary frame of reference throughout this document, and in all of the analysis, is the BOMA Standard. This standard is used by building owners, facility managers, leasing professionals, tenants, appraisers, architects, planners and others to compute office area using an agreed-upon, standard method of measurement. The "Standard Method for Measuring Floor Area in Office Buildings" is published by BOMA International (The Building Owners and Managers Association) and is approved by ANSI (The American National Standards Institute).

BOMA Standards (v.1996) measure buildings on a building-wide basis. It acknowledges the need to recognize Building Common Areas (areas common to all of the tenants in a building). Due to the inclusion of Building Common Area, a building measured according to BOMA 1996 almost always yields higher Rentable Areas than the same building measured according to BOMA 1980. (Refer to Appendix A for definitions of BOMA terms.)

A macro space allocation system has been used to determine space needs for typical office functions. We have used the term “Office-Baseline space” to describe a per staff allocation of space that includes enclosed offices, workstations and the support space required for typical office activities.

The formula to calculate the current **MACRO-SPACE ALLOCATION** per person is **OFFICE BASELINE SPACE** ÷ NUMBER OF STAFF (in FTEs).

Macro-space allocation is not accurate when applied to space that includes special purpose space such as public service counters, waiting rooms etc. In space where special purpose space exists, it is necessary to distinguish between the office baseline space and the special purpose space.

In determining the existing macro-space allocation for GY, some units included special purpose space embedded within the areas measurement. These are identified in the table below with a * symbol.

(0640/SpaceStandards.doc)

STANDARDS REVIEW

This section of the report examines other space standards in different jurisdictions in Canada, and the United States. The criteria used in evaluating the identified space standards were:

- Space drivers: Function (macro-allocation) vs. status
- Open office vs. closed office environments
- Directive (inclusive)
- Qualitative descriptions of space
- Storage needs specified
- Special purpose space identified
- Furniture standards provided
- Inclusion of integrated workplace strategies
- Units of measurement
- Diagrams/illustrations included
- Forms and templates included
- Technical standards

Alberta Infrastructure
Date: 2000

Alberta Infrastructure uses the **macro-space standard** methodology to allocate space. This methodology acknowledges the need for multiple workstation types which are then used to determine the area requirements for an identified work group that performs similar tasks.

Alberta Infrastructures' macro-space standards are based on the following six workstation types and sizes:

- Executive Management
- Senior Management
- Middle Management
- Supervisory/Professional
- Technical & Regulatory
- Administrative Support

A LOOK INSIDE

Alberta Health and Wellness is accommodated within a multi floor facility and this department accommodates its staff within universal open area screened workstations. Very few of its staff are allotted enclosed office spaces, and this concept provides flexible 'pick-up-and-go' movement of staff and reorganization of workgroups.

The global macro-space standard is 21.8m^2 which includes individual workspace, support space for files, equipment, etc., common area space for meeting rooms, coats, copy areas, etc. and circulation space for corridors. Less circulation and support space is assigned per administrative support workstation than would be assigned to a management workstation. This standard is based on space allocations which combine consideration for both job function and job status.

Limitations: Specialized functions must be assessed separately and this would include functions that would not be located within a standard office, such as large conference rooms, reception spaces needed to receive a notable number of visitors, library collections that are administered by dedicated staff, dedicated spaces needed for specialized storage, etc.

2000 Revision of Standards: The space Standard for Administrative Support workstations was increased by 1.5 m², which acknowledged that this has evolved into a professional a multi-task position. The standards were revised also to include a category for the workstation consisting of systems furniture versus their previous standard that incorporated freestanding furniture and movable screens for open area workstations. This category includes a range of areas that are based upon systems furniture manufacturers' standard component dimensions.

City of Edmonton
Date: 1995

The City of Edmonton uses the **macro-space standard** methodology to allocate space. This methodology acknowledges the need for multiple workstation types which are then used to determine the area requirements for an identified work group that performs similar tasks.

When the City revised their space standards in 1995 they decided to reduce the number of workstations to four standard types including two that would accommodate different levels of management. Therefore, the macro-space standards for the City of Edmonton are based on the following four different workstation types and sizes which accommodate different tasks:

- Senior Management
- Middle Management (Supervisory)
- Professional and Technical
- Technical and Administrative Support

A LOOK INSIDE

The City of Edmonton estimates that only 15% of their workstations are accommodated in enclosed private offices.

The global macro-space standard is 18.5m^2 which includes individual workspace, support area space for files, equipment, etc., common area space for meeting rooms, coats, copy areas, etc. and circulation space for corridors. This standard is based on function not status, and acknowledges that in today's work force all office workers are professional.

Limitations: Support space is determined by assessing the users' current use of support space and determining whether the are is to be increased or reduced in area. This is a detailed and often lengthy process that does not allow the planner to compare the work groups requirements with a standard.

Though the City uses standard furniture systems, they are owned and purchased by each department. When departments move to facility vacated by another workgroup, generally a 'trade' is negotiated; however, they acknowledge that ownership of systems furniture by a central agency, would be less cumbersome.

Goal: Clients want consistency and the City grapples with how to create equity that will address their client's concerns and provide efficient and functional use of their real estate.

Trends: The City estimates that 15% of their workstations are accommodated in enclosed private offices.

Simplifying their workstation standards has provided them with greater flexibility and has resulted in reduced relocation costs. The City establishes their churn rate at 30% to 40% per year and their vision is to create a 'box-move' reorganization concept that will reduce renovation and move budgets.

Support Space Trends: Other trends noted include the disappearance of the free-standing file cabinet, that are now relegated to individual workstations. Shared workgroup files now are end-tab and stored on shelving that may be open, open mobile sliding or closed mobile-rotating. There are now less printer stations as workgroups begin to use 'workcenters' that provide copying, printing, scanning, and faxing services at one location. Larger floor-central equipment and coffee rooms are located on each floor.

The City has not seen an increase in the 'hoteling' concept of work, but has installed some 'bullpen' open area workstation configurations that allow for meeting/project spaces within the workstation configurations.

Province of British Columbia – Government Office Space Standards (GOSS)
Date: 2001

This set of space standards applies to upgrading, changing or the new development of government office accommodation. These standards do not address special purpose space such as warehouse or institutional space types. Any deviations in following the standards is solely at the discretion of the Deputy Minister.

These standards are identified by the following "space type" and size:

- Space Type A – Open Workstation – ($4.5m^2$)
- Space Type B – Open Area – ($6.5m^2$)
- Space Type C – Open – ($9.3m^2$)
- Space Type D – Enclosed Area – ($11.15m^2$)
- Space Type E – Enclosed Area – ($13.9m^2$)
- Space Type F – Enclosed Area – ($22.5m^2$)

What makes these space standards unique from the other standards presented in this analysis is the inclusion of a functional space requirement matrix and a classification system used to identify various types of support space. The functional space requirement matrix identifies a list of all possible staffed

government positions and associates that position with a standard space assignment. The support space associated with the office space is separated into five types:

Dedicated Support Space
Group Support Space
Floor Common Support Space
Building Common Support Space
Remote Support Space

The GOSS supports the development *of Integrated Workplace Strategies* which improve workplace productivity and reduce the costs associated with space accommodation.

IFMA Research Report #23 - Project Management Benchmarks
Date: 1995

The International Facility Management Association surveys their membership and has publish several reports that identify industry standards related to facility management including space planning.

The reported macro-allocation median for State or Provincial users was 24m^2. Average areas are reported for seven types of workstations included within the state and provincial users. The categories and space sizes of workstations are identified as:

A LOOK INSIDE

IFMA estimated that office space per person decreased by 14% between 1997 and 2002 as a consequence of open plan design in offices.

- Executive Management – (21.5m^2)
- Senior Management – (19.4m^2)
- Middle Management – (18.8m^2)
- Senior Professional – (12.6m^2)
- Professional Technical – (9.7m^2)
- Senior Clerical – (8.9m^2)
- General Clerical – (6.8m^2)

These reported standards did not vary greatly from federal institutions, but with the exception of the Executive Management category, the state and provincial standards were in excess of corresponding standards used by private institutions included in such areas as the banking, investment, and the utility industries.

The study indicates that more than half of the respondent applied documented space standards, and almost all respondents identified that “they follow consistent practices in allocating space.”

The report gathered information on standards that apply to support space and recorded the amount of space that was used for specific support functions such as meeting, copying and printing spaces. Among the institutions covered in this study, the average amount of space for non-dedicated or occasional workstations was 7.9m^2. This is surprisingly high given the

space standards for the same workstation type from other space standard documents.

Ontario Realty Corporation (ORC)
Date: 2006

The Ontario Realty Corporation, (ORC) the provincial government's real property arm recently revised their space standards by creating four "patterns of work", which identify jobs based on their function, not status. The four patterns of work and their allocated space size include:

- Individual Process Work (13.9m^2)
- Individual Concentrated Work (16.7m^2)

- Group Process Work (15.8m^2)
- Transactional Knowledge Work (10.7m^2)

A LOOK INSIDE

The ORC is currently implementing a comprehensive, multi-year Provincial Accommodation Strategy to identify $50 million in savings throughout the government's real estate portfolio by 2007-2008 . A key component of this strategy is a thorough review of all realty assets at the community level (35 communities). It examines capital investment requirements and portfolio optimization strategies that match real estate with ministry accommodation requirements. The Accommodation Strategy focuses on reducing occupancy cost, reducing space, reducing operating and capital costs through disposition, and reducing energy costs.

Each pattern of work is associated with functional criteria to determine the type of workstation required. The functional criteria is identified by the following:

- Task type – single to multiple
- Storage requirements – minimal/low/moderate/high
- Privacy requirements – low/moderate/high/confidential
- Level of interaction – none /general/ high
- Material Reference and Layout Requirements – unidentified/identified
- Type of use – short term/multiple user

The global macro-space standard is 17m^2 which includes individual workspace, support area space for files, equipment, common area space for meeting rooms, coats, copy areas, and circulation space for corridors.

Limitations: The space standard does not apply to Special Purpose Area such as (but not limited to) public service counters, conference room suites, auditoriums, large computer rooms, courtrooms, and laboratories.

RCMP Standards
Date: March 2006

The global macro-space standard is for office accommodation is 16m^2 which does not include special purpose space.

Includes internal circulation needs. Needs primarily determined by furniture and equipment needs.

All standards are to conform to the standards of quality as defined by the Government of Canada Fit-Up Standards.

Time spent in office space considered in space allocated.

Province of Saskatchewan
Date:

The global macro-space standard is 23m^2 per person which includes workstation allocation that includes six functional levels in addition to Ministers and Corporation Presidents' offices.

Trends: The Province is spending more on systems furniture so that space flexibility can be increased; however, as their accommodation within owned and leased facilities is relatively long term and their work organization is stable, they have not experienced a high churn rate.

Limitations: Departments own their systems furniture and this, at times, is problematic. The Province is moving toward central ownership of furniture.

Federal Government of Canada
Date: 2005

Less than 200 USF/person (includes individual workspace, support area space for files, equipment, etc., common area space for meeting rooms, coats, copy areas, etc. and circulation space for corridors. The Federal Government has six workstation standards including four types of private enclosed offices. Open area workstations use systems furniture and are relatively smaller than those of other institutional users:

- Executive Management (ADM): 28m^2
- Senior Management (Director): 23m^2
- Middle Management (Director): 18.5m^2
- Senior Departmental Representative: 14m^2
- Professional – Technical: 7.4m^2
- Technical – Administrative Support: 6 m^2

Limitations: It is a slow process to recapture existing space and convert its usage to meet their new standards; however, facility planners find that the guidelines assist the process that will provide flexibility and reduce accommodation costs.
Does not include office space for contract workers.

Additional Space Standards for Consideration

In the process of reviewing space standards from various organizations and jurisdictions across Canada, some interesting and illustrative space standards from other countries were also assessed.

NOTE: The spaces highlighted in purple represent enclosed offices while the green highlights represent open office space.

US Space Standards	Space per person (1994)	Space per person (1997)	Change
Upper Management	26.9 m^2	26.0 m^2	-0.9 m^2
Senior Management	18.6 m^2	17.9 m^2	-0.7 m^2
Middle Management	14.0 m^2	13.2 m^2	-0.8 m^2
Senior Professional	10.7 m^2	10.6 m^2	-0.1 m^2
Technical/Professional	8.4 m^2	8.6 m^2	+0.2 m^2
Senior Clerical	7.5 m^2	7.8 m^2	+0.3 m^2
General Clerical	6.4 m^2	6.8 m^2	+0.4 m^2

UK Space Standards	Office Size
Senior Manager/Director	20-30 m^2
Manager	15-20 m^2
Manager/Professional	10-15 m^2
Professional	9 m^2
Secretarial/Administration	9 m^2
Clerical	7-9 m^2
Dealer	6-9 m^2

European Macro-Space Standards	Average Space per person
Central London	16.8 m^2
Frankfurt	25.5 m^2
Amsterdam	24.0 m^2
Brussels	24.0 m^2

STANDARDS REVIEW SUMMARY

The following table is a summary of the standards information that was gathered from eleven different jurisdictions. From the information that was available, we made some assumptions to categorize each set up standards within the same number of function-based groups.

Table 1: Comparison of Office Space Standards

STANDARD (m^2)	Year	EXECUTIVE MANAGEMENT	SENIOR MANAGEMENT	MIDDLE MANAGEMENT	SUPERVISORY/ PROFESSIONAL	TECHNICAL	ADMIN SUPPORT	OCCASIONAL	MACRO
Ontario Realty Corporation	2006		11.1	8.0	5.2	5.2	3.9		17
PWGSC	2005	28.0	18.5-23.0	18.5		5.9 to 7.4		4.5	16
Federal Government of Canada	2005	28.0	23.0	18.5	14.0	7.4	5.9		16
GSA	2003								18.5
IFMA	2002	21.5	19.4	13.8	9.7 to 12.6	9.7	7.3 to 8.9		
GOSS (BC)	2001	22.5	13.9	11.2	9.3	6.5	4.5		
Province of Alberta	2000	27.0	18.0	15.0	12.0	9.0	8.0		
Northwest Territories	1998	22.5	22.5	13.9	9.3	9.3	6.5	4.5	
City of Edmonton	1995		17.65	13.5	13.5	10.7	7.0		18.5
Province of Saskatchewan	1995								23
Province of Manitoba	1993		10.2	10.2	8.3 to 9.3	8.3	6.3	3.7	
Government of Yukon	1984	25.0	18.0	12.0	9.0	9.0	6.0		
Average		24.4	17.5	12.8	9.9	7.9	6.2	4.2	18.2
Recommended GY Standard	**2007**	**22.4**	**16.8**	**11.2**	**8.4**	**8.4**	**7.0**	**4.5**	**18**
		Enclosed Office	Open Office	Enclosed/Open Office					

(0640/SpaceStandards.doc)

FINDINGS

In reviewing all of the space standards identified above, the following major trends and issues became apparent as significant findings in the discussion of space standards, for offices, support space and special purpose space.

As seen in the table above the existing GY Space Standards are the oldest set of standards currently being applied in Canada. This table illustrates no particularly significant discrepancies in GY space standards, yet what is clearly indicated is the marked decrease in space standards generally over time. The largest range in space standards for a particular function-based group was seen in senior management with a difference of 12.8m^2. The smallest range in space standards for a particular function-based group was in the technical, administrative and executive management groups indicated a slight consensus across the different space standards that the amount of space needed to perform tasks in those areas is presumed to be relatively the same with only a slight variable between 4.8m^2 and 5.5m^2. Standards for office space sizes have decreased over time.

Open Office - There is a shift toward open office space modules from enclosed/private offices.

Macro-Allocation - There has been a shift from utilization rates to a measurement of space per person (macro-allocation).

Function vs. Status - Move from rank to function based space allocation.

US Macro-Space Standard for the government is 18.5m^2 compared to 23.0m^2 in the private sector. That represents a 4.5m^2 difference, the equivalent of a complete touchdown workstation.

Standards Monitoring and Space Management - It is not necessarily the strictness in the standards that will make them effective, but the discipline by which they are enforced. The facility management system should be maintained and up to date to avoid misuse, non-use or overuse of space.

Perception - Perception that government space need only meet bare minimum requirements – responsibility to tax payers.

Flexibility - Minimizing the range of space standards increases flexibility.

Building Inventory - Space accommodation in old buildings is challenging.

Work Culture - GY not equal to large corporate culture, rather smaller units, more decentralized.

Context Specific - One size fits all standard may be challenged by unique character of different work units.

Benchmarking space utilization between work units may provide helpful insights on future planning.

(0640/SpaceStandards.doc)

Incentives - Need to provide incentives to work units to better manage space rather than appropriate, appropriate, appropriate!

Support Space – the amount of space required is generally based on the number of people using the space; the amount of support space may remains consistent even if the number of people using it may decrease.

RECOMMENDATIONS

Subsequent to the review of space standards from other jurisdictions, the following recommendations are suggested for the development of GY space standards.

1. Need an improved reporting structure to ensure that departments report reduced space needs.

2. "High level" GY documents should address and support workplace strategies and LEED™ mission while also including space/property management principles.

3. Capital assets must be tied to the strategic goals of Government of Yukon.

4. Space management objectives should be established as part of work unit performance plans.

5. In the next five years, a minimum shift of 15% from enclosed offices to open offices should occur.

6. Space standards for offices should correlate to systems furniture.

Special Purpose Space

In using BOMA for its wealth in measurement standards, BOMA does not provide any resources for the development of special purpose space. It is possible as indicated below to establish space parameters for special purpose space in order to understand the breadth of space that might be required to perform a particular special purpose function. The following chart identifies some examples, pulled from the reviewed space standards discussed above:

Table 2: Special Purpose Space Standards

SPECIAL PURPOSE SPACE	SOURCE	AREA
Visitor Waiting	GOSS	0.46 to 0.9m^2 per visitor
Building Maintenance/Workshops	GOSS	11.15m^2 - 20.9m^2
Information Centres	GOSS	Defined by program requirements
Goods Delivery/Dispatch	GOSS	13.9m^2
Building Recycle Rooms	GOSS	11.15m^2
Janitor Rooms	GOSS	Incl. in mark up to rentable
Conference Centre	GOSS	2.5Um^2 for 10 people
Fixed-Wing Aircraft Hangar	RCMP	840m^2 includes vestibule, general office, 2 private offices, washrooms, receiving/shipping, mechanical room, workshop, heated storage, and hangar (675m^2)
Helicopter Hangar	RCMP	217m^2 includes vestibule, office workshop, washroom, storage, hangar(115m2) and mezzanine
Garage - Workshop/Warehouse	RCMP	72.54m^2
Garage Bay	RCMP	31.5m^2
Interview Room	RCMP	9.5m^2
Locker Rooms	RCMP	5.6m^2 per 8 lockers including WC
Per locker	RCMP	0.7m^2
Secure Records Room	RCMP	4.0m^2 per 0 to 4,800 files on four drawer cabinet 6.0m^2 per 4,801 to 9,000 files on 3-5 shelving bays 7.4m^2 per 9,001 to 10,800 on 6 shelving bays 11.1m^2 per 10,801 to 18,000 files on 7-10 shelving bays 14.8m^2 per 18,801 to 25,200 files on 11-14 shelving bays 18.5m^2 per 25,201 to 32,400 files on 15-18 shelving bays
Cold Storage Room	RCMP	14.0m^2 for 7 members, 0.7m^2 for 7+
Breathtesting Room	RCMP	10m^2
First Aid Room	RCMP	15m^2
Machine Room	RCMP	17.8m^2
Technician Work Area	RCMP	17.9 m^2 for 1 24.6m^2 for 2 46.9m^2 for 3-4 74.8m^2 for 5-6

Appendix C: Space Management Forms & Templates

To: All Directors – Finance and Admin.
All Departmental Space Space Representatives

From: Pat Hogan, Director, Space Planning & Development,
Property Management Division

Re: ANNUAL CALL - DEPARTMENTAL OFFICE SPACE PLAN

As most of you are aware, the Master Space Strategy (MSS) has been completed and PMD is preparing to roll out the 5-year space plan based on the findings and the projects identified in the MSP. A requirement of the MSP is that Departments provide PMD with the information necessary to assess changing office space needs, including updated staffing and other office space needs.

Please find attached the following documents for your review and update:

- your **department's 5-year office space plan**, for information;

- a FTE and head count (HC) listing, by component, with projections for the next 5 years (**Table A** attached). Please review and update the information to reflect any changes in staffing levels which may impact on office space needs for your department. Please indicate all changes to the FTE information in **Bold** text in Table A. Note that all anticipated staffing should be confirmed with your departmental Deputy Minister and should correspond with approved program budgets.

  The information provided in Table A will be used to calculate overall office space requirements (base office space (BOS)) using a macro allocation formula. This includes space for workstations, offices, office support space such as general file storage, and meeting rooms required for typical office operations.

- **Table B** (attached) is to be used to identify space for new programs as well as other non-office space or other requirements (ie. special purpose space, consolidation needs, etc.) including a brief description of the space needed or the space issue needing attention;

- a **Client Space Request Form** (see attached for reference – form available on-line) should be submitted to PMD by the client department for space requests needing immediate attention throughout the year.

Once your departmental information is received and reviewed at PMD, a determination will be made through discussions with your departmental representatives, as to whether any project should be added to the 5-year space plan. The 5-year space plan will then be presented to the Deputy Minister Space Committed for review/approval and ranked (similar to capital development project ranking system). Once approved, the need to prepare a Project Approval Document (PAD) and incorporate it with the Capital planning cycle (in the case of new construction of tenant improvements needed to your space) or to identify resources in the O&M budget cycle (in the event of increased lease costs) will be determined. Discussions about this will take place with your department prior to the Capital and O&M budget calls put out by the Department of Finance.

This is the first year for this call for space planning information and we want to work with you to ensure that your space needs are 1 – clearly identified, and 2 – documented in a consistent and effective manner via the current funding cycles in place.

Attach. Departmental Office Space Plan

Table A – FTE Information for H&PW

Table B – Other Space issues

Client Space Request Form

Table B

Highways and Public Works

Other space needs
(special purpose space, consolidation, re-org., adjacencies, etc.)

WHITEHORSE

Building	Component	Space Issue	Timeline	Notes/comments

COMMUNITIES

YG - Office Space Project Summary
($000)

Dept.	Location	Project detail	'2009/10		'2010/11		'2011/12		'2012/13		'2013/14		'2014/15	
			O&M	Capital	O&M	Capital	O&M	Capital	O&M	Capital	O&M	Capital	O&M	Capital
Yukon Leg. Ass.	Whse													
ECO	Whse													
CS	Whse	consolidate Community Dev.												
		relocate Whse public library		0		0	500		420		420		420	
		new EMS station		800		4000		4000						
		new IA base at Whse airport						400		3000		1000		
		locate new space for Protective Services Admin. Staff	70		70		70		70		70		70	
Economic Dev.	Whse	Consolidation into one facility - 10 year lease	0	0	0	0	8	125	200	0	200	0	200	0
Education														
EMR	Whse	Consolidate Yukon Geological Survey				5		90						
Environment														
Finance														
H&SS	Whse	leased space on Hospital Road - long term			5		350		350		350			
		Demolition of #2 and #4 Hosp. Rd.						600						
		New construction - Hosp. Road						500		4000		3000		
H&PW	Whse	Tenant improvements within MAB to accommodate Finance/PSC/ECO						500						
	Teslin	consolidation of space - long term lease					#REF!		#REF!		#REF!		#REF!	
	Whse	consolidation of PMD - 113 Industrial Rd.		100		1000								
	Faro	consolidate YG space in one new location					#REF!		#REF!		#REF!		#REF!	
	Ross River	construction of combined services bldg				#REF!		#REF!						
	Carmacks	long term lease for space for H&SS, CS, etc.												
Justice	Whse	Tenant improvements within Law Centre				150		300						
PSC	Whse	consolidation of SDB - Hougen's Centre												
T&C														

Table A

Highways & Public Works

COMMUNITIES	O/L	Component	Existing '2009/10 FTE	Existing '2009/10 HC	Planning Years '2010/11 FTE	Planning Years '2010/11 HC	'2011/12 FTE	'2011/12 HC	'2012/13 FTE	'2012/13 HC	'2013/14 FTE	'2013/14 HC	'2014/15 FTE	'2014/15 HC	Current BOS	Allocation as per macro (sq, meters)	Difference (+/-)
Dawson City (2554)	O	HPW-27 PMD - FM & Reg. Serv.	8	8	8	8	8	8	8	8	8	8	8	8		144	
'(2599)	O	HPW-33 TMB - Maintenance & P	2	2	2	2	2	2	2	2	2	2	2	2		36	
Haines Junction (3444)	O	HPW-44 - Aviation Br. Fin. and Admin.	11	11	11	11	11	11	11	11	11	11	11	11		198	
'(3448)	O	HPW-27 PMD - FM & Reg. Serv	4	4	4	4	4	4	4	4	4	4	4	4		72	
Watson Lake (4850)	O	HPW-44 Aviation Br.	1	1	1	1	1	1	1	1	1	1	1	1		18	
'(4821)	O	HPW-31 TSB (weigh scale)	7	7	7	7	7	7	7	7	7	7	7	7		126	
'(4845)	O	HPW27 PMD - FM & Reg. Serv.	6	6	6	6	6	6	6	6	6	6	6	6		108	
Teslin																	
Faro																	
Mayo																	
Old Crow																	

CLIENT SPACE REQUEST FORM

CLIENT DEPARTMENT:	Branch:
Program:	Current Location:

REQUEST FOR:

- ☐ additional new space
- ☐ new layout (re-configuring of existing space)
- ☐ space review/analysis
- ☐ other_____

REASON FOR REQUEST (check all applicable boxes):

- ☐ increased FTE
- ☐ MB approval (attached Extract of MB Minutes)
- ☐ pending MB approval
- ☐ program expansion
- ☐ other details_____

SPACE NEEDED

- ☐ permanent
- ☐ temporary (# of months/years)_____

Space identified in 5 year office space plan ☐ Yes ☐ No

Space Needed By _____

Detail of Space Request:

Approved by Deputy Minister or Designate	Date

Client Department Contact:

Name	Title	Location	Telephone

FOR HIGHWAYS AND PUBLIC WORKS – PROPERTY MANAGEMENT USE ONLY

Date Received by Property Management: Date:	Received By:
☐ Work Request Generated ☐ Acknowledge Receipt with Client	
Review Completed by Property Management Date	Reviewed by Space Allocation Committee (if necessary) Date
Referred to Management Board (if necessary) Date	Management Board Decision Date Meeting No:
Client Advised ☐	Action Initiated ☐
Date:	Date:

STAFFING DETAILS RELATED TO SPACE REQUEST

NAME	TITLE	POSITION #	CLASSIFICATION	INDETERMINATE/ TERM/OTHER*

***OTHER INCLUDES CASUAL, AUXILIARY ON CALL, STEP STUDENTS, SEASONAL WORKERS**

BUSINESS CASE TEMPLATES

Two business case templates are included for use in the development and assessment of projects, depending on their size, associated risk and complexity. They include:

- Outline Business Case Template, which provides indicative assumptions to support the preferred option and procurement strategy. This would be used where there are precedent project examples of which this is typical and where risk is identified as low.
- Detailed Business Case Template, which provides detailed analysis of large and complex projects. The Detailed Business Case may be developed in two stages:
  - Preliminary Business Case (or Strategic Outline Case) to describe anticipated project and confirm strategic fit and business need, i.e., the first sections of the Detailed Business Case Template only. Typically, this should be no more than four or five pages. This would be submitted to the Department to ensure that it meets with overall support.
  - Full Business Case, which includes all validated assumptions to support the investment decision. This may be of variable length depending on the scale and complexitity of the project and would be used in projects that for which precedents are not available or where there is innovation in terms of service delivery, procurement or there is an unusual and critical objective.

    Where relevant, reference class forecasting should be used to support assumptions around service delivery, schedule and cost associated with a project.

Each template identifies the various sections that should be included in the business case, the content of each section, and the party responsible for completing the information. A glossary is provided at the end of this section.

OUTLINE BUSINESS CASE TEMPLATE

Section	Content	Lead Responsibility	
		Department	Highways & Public Works
Executive Summary	**Summary** • Brief summary of business case highlights **Recommendations** • Service delivery option • Procurement option and procurement strategy **Decisions Required** • Approval of funding request and to commence procurement		
PART A: PLAN FOR FUTURE SERVICE DELIVERY			
1. Introduction and Background	**General Introduction** • Introduction to Department/Work Unit • Objectives and mandate		
2. Project Objectives	**Outcomes expected as a result of the project** • Vision statements and guiding principles • Include specific and measurable project objectives		
3. Need/ Opportunity for Investment	**Rationale for Project/Description of Challenge** • Overview of the need and why now • Key benefits • Key risks • Critical success factors • Main stakeholders and commitment		
4. Strategic Fit	**Alignment with Government's and Departments strategic objectives** • Fit with strategic plans and goals of Government and Department		
PART B: ANALYSIS OF SERVICE DELIVERY OPTIONS			

5. Alternative Options for Achieving Identified Need and Preferred Approach	**Description of options under consideration**
	• For each option, description should include:
	  ○ A general description of the option
	  ○ Program and service assumptions
	  ○ Context and rationale for the option
	  ○ Specific issues, such as the need to acquire property, secure environmental approvals, etc.
	  ○ Implications of option for service delivery, financial strategy, risk management		

Section	Content	Lead Responsibility	
		Department	Highways & Public Works
	• Identification of Preferred Option:		
6. Analysis and Recommendation	**Presentation of high level comparative analysis of options and identifies the short listed options, including:** • Multi-Criteria Analysis (MCA) that includes both qualitative and quantitative analysis of the benefits and impacts of each option and evaluation of fit with project objectives • Strategic Risk Assessment, to identify risks for each option • Financial Assessment, including capital and operating cost estimates, opportunities for efficiencies, leveraging existing assets or generating commercial opportunities as well as the development of a Net Present Value (NPV) of each option • Identification of the preferred option		
PART C: ANALYSIS OF PROCUREMENT OPTIONS AND FUNDING			
7. Procurement Objectives	**Identify key procurement objectives** • Critical and General Objectives such as schedule • Any other objectives, which may relate to overall project objectives		

8. Procurement Options Described and Analyzed	**Identify and describe procurement options to be considered**
	Analysis of procurement options for preferred service delivery option only
	• Multi-Criteria Analysis with detailed qualitative analysis, including:
	  ○ benefits and impacts of each procurement option
	  ○ opportunity to integrate capital and operating objectives
	  ○ opportunity for cost effective transfer of risk
	  ○ schedule
	  ○ legal
	• Quantified risk assessment, including probability and impact of occurrence
	• Financial Assessment, including as applicable:
	  ○ Modelling assumptions
	  ○ Construction
	  ○ Maintenance/Life cycle		

Section	Content	Lead Responsibility	
		Department	Highways & Public Works
	○ Equipment ○ Operating costs ○ Capital offsets, if any ○ Transaction costs ○ Sensitivity analysis		
9. Funding Analysis/ Affordability	**Funding analysis, including consideration of accounting and financial statement impacts** • Accounting analysis ○ Expected accounting treatment ○ Impact of debt on department's and governments balance sheet • Annual affordability ○ Sources of funding, including funding from leveraged assets, commercial activities, charitable contributions • One off project related costs • Procurement budget		
PART D: IMPLEMENTATION AND ACHIEVABILITY			
10. Procurement Implementation Plan	**Implementation Plan for project including:** • High-level plan for achieving desired outcome, including governance structure, schedule and milestones, identified project director/manager and procurement budget		

DETAILED BUSINESS CASE TEMPLATE

Section	Content	Lead Responsibility	
		Department	Highways & Public Works
Executive Summary	**Summary** • Summarization of business case highlights **Recommendations** • Service delivery option • Procurement option and procurement strategy **Decisions Required** • Approval to commence procurement • Approval of funding request		
PART A: PLANNING FUTURE SERVICE DELIVERY			
1. Introduction and Background	**General Introduction** • Introduction to Department/Work Unit • Background to project, such as government directives, previous proposals, planning work completed to date • High level project objectives and mandate		

2. Need/ Opportunity for Investment	**Rationale for Project/Description of Challenge**
	• Overview of current programs/services and need for improvement
	• Assessment of future needs
	  ○ Status of existing infrastructure
	  ○ Demand for new programs/ services
	  ○ Anticipated growth
	  ○ Opportunities associated with project		

3. Project Objectives	**Outcomes expected as a result of the project** • Vision statements and guiding principles • Include specific and measurable project objectives		

4. Alternative Models for Providing Services and Preferred Approach	**Planning for future growth or changes in service delivery**
	• Potential models for providing programs/ services in the future
	  ○ Is an infrastructure/facilities based solution required?
	  ○ Can existing facilities be expanded or renovated?
	  ○ Is a new facility required and, if so, why?		

Section	Content	Lead Responsibility	
		Department	Highways & Public Works
	• Preferred program/service delivery model		
PART B: ANALYSIS OF SERVICE DELIVERY OPTIONS			
5. Project Scope	**Description of confirmed project scope that will meet service delivery need** • Description of the confirmed project parameters, including schedule and preliminary capital and/or leasing and operating cost estimates		
6. Contextual Assessment	**Identify current and future demands to support project need** **Identify current trends in other departments, or jurisdictions**		
7. Strategic Alignment	**Alignment with Government's and Departments strategic objectives** • Identify strategic plans and goals of Government • Fit with strategic plans and goals of Department		

8. Options Considered	**Description of options under consideration**
	• For each option, description should include:
	  ○ A general description of the option
	  ○ Program and service assumptions
	  ○ Context and rationale for the option
	  ○ Specific issues, such as the need to acquire property, secure environmental approvals, etc.
	  ○ Implications of option for service delivery, financial strategy, risk management		

9. Analysis and Recommendation	**Presentation of high level comparative analysis of options and identifies the short listed options, including:** • Multi-Criteria Analysis (MCA) that includes both qualitative and quantitative analysis of the benefits and impacts of each option and evaluation of fit with project objectives • Strategic Risk Assessment, to identify risks for each option • Financial Assessment, including capital and operating cost estimates, opportunities for efficiencies, leveraging existing assets or generating commercial opportunities as well as the development		

Section	Content	Lead Responsibility	
		Department	Highways & Public Works
	of a Net Present Value (NPV) of each option • Identification of the preferred option		
PART C: ANALYSIS OF PROCUREMENT OPTIONS AND FUNDING			
10. Procurement Objectives	**Identify key procurement objectives** • Critical Objectives such as schedule • General objectives such as competition, transparency • Any other objectives, which may relate to overall project objectives		
11. Procurement Options	**Identify and describe procurement options to be considered**		

12. Analysis and Recommen-dation	**Analysis of procurement options for preferred service delivery option only**
	• Multi-Criteria Analysis with detailed qualitative analysis including:
	  ○ benefits and impacts of each procurement option
	  ○ opportunity to integrate capital and operating objectives
	  ○ opportunity for cost effective transfer of risk
	  ○ schedule
	  ○ legal
	• Comprehensive quantified risk assessment, including probability of occurrence
	• Financial Assessment, including as applicable:
	  ○ Modelling assumptions
	  ○ Construction costs
	  ○ Maintenance/Life cycle costs
	  ○ Equipment costs
	  ○ Operating costs
	  ○ Capital offsets, if any
	  ○ Transaction costs
	  ○ Sensitivity analysis		

13. Funding Analysis/ Affordability	**Funding analysis, including consideration of accounting and financial statement impacts**
	• Accounting analysis
	  ○ Expected accounting treatment
	  ○ Impact of debt on department's and governments balance sheet
	• Annual affordability
	  ○ Sources of funding, including		

Section	Content	Lead Responsibility	
		Department	Highways & Public Works
	funding from leveraged assets, commercial activities, charitable contributions • One off project related costs • Procurement budget		
PART D: ACHIEVABILITY AND IMPLEMENTATION			
14. Procurement Implementation Plan	**Implementation Plan for project including:** • Governance Structure • Schedule, with milestones • Procurement budget		
15. Benchmark Projects	**Identify projects that are similar in structure that have been successful**		

Glossary

Multi-Criteria Assessment: A common technique used to compare both unvalued costs and benefits using a weighting and scoring methodology. The basic approach to weighting and scoring involves assigning weights to criteria, and then scoring options in terms of how well they perform against those weighted criteria. The weighted scores are then summed, and these sums can be used to rank options.

Reference Class Forecasting: Prediction of the outcome of a planned action based on actual outcomes in a reference class of similar actions to that being forecast.

Sensitivity Analysis: Investigation into how projected performance varies along with changes in the key assumptions on which the projections are based.

Transaction Costs: Costs incurred when buying or selling assets, such as commissions.

Appendix D: Project Review Criteria

PRIORITIZATION TOOL

The following Space Need Prioritization Tool was developed to assess the relative ranking of space needs that have been identified through the Departmental Spatial Programming process. The criteria include A Priorities, identified by the framed box. If a project scores as an A Priority, it will supersede other rated projects. Other criteria relate to a project's consistency with government platforms, and existing deficiencies related to functional success, the well-being of staff and the public, and environmental and financial concerns. The Prioritization Tool for Capital Projects is based on the criteria listed.

CRITERIA	3 A Priorities	2	1	0	-1
Public Health & Safety	Project needed to alleviate serious health or safety hazard in existing space	Project needed to alleviate potential health or safety hazard in existing space	Project could improve of health or safety condition	There are no health or safety concerns	
External and/or Competitive Demands	Project is required by law, regulation, or court mandate	Project is required by agreement with other jurisdiction, or has demonstrated strong demand of the external community	Project has visible support of the external community	Project is not externally required, and has no external support	
Program/Service Requirements	Capital Budget "A Base" Funded or project is required for a new or restructured program or service	Project greatly assists base funded program or service	Project is helpful for a new or restructured program or service	Project is not required to support new or restructured program or service	

CRITERIA	3 A Priorities	2	1	0	-1
Protection of Facilities and Building Systems	Project is critical to save structural integrity of existing facility or repair significant structural or system deterioration	Project will repair systems important to facility operations	Project improves facility systems reliability	Project has no impact on facilities or systems	
Consistent with Government platform, Current Business Plan and Business Continuity Plan Goals and Objectives	Project is considered a high priority for implementation within the Government platform, the current department Business Plan and Business Continuity Plan	Project is included in approved, formal plans or provides essential support for Government platform, the current department Business Plan and Business Continuity Plan goals and objectives	Project supports approved Government platform, plans and goals/objectives	Project is somewhat helpful for Government platform, Business Plan, Business Continuity Plan to meet approved plans and goals/ objectives	
Functional Program Need	Project is required to address serious overcrowding or extremely low utilization of space	Project is required to address moderate overcrowding or moderately low utilization of space	Project is required to address some overcrowding or lower than expected utilization of space	Project is not required to address overcrowding or underutilization of space	
Location	Project is required to address locational dysfunctions that have a severe impact on quality of service and/or operational efficiency	Project is required to address locational dysfunctions that have a moderate impact on quality of service and/or operational efficiency	Project is required to address locational dysfunctions that have some impact on quality of service and/or operational efficiency	Project has no effect on quality of service delivery and/or operational efficiency	

CRITERIA	3 A Priorities	2	1	0	-1
Quality of Space/Work Environment	Project is required to significantly improve workplace quality or productivity	Project is required to provide a moderate improvement to workplace quality or productivity	Project is required to provide some improvement to workplace quality or productivity	The quality of staff space is not affected by the project	
Universal Access	Project is required to address major deficiencies in universal access, including lack of wheelchair accessible parking	Project is required to address moderate deficiencies in universal access, including adequate parking	Project is required to address some deficiencies in universal access	Project has no effect on access or is not applicable	
Environmental Impact	Project is required to reduce current greenhouse gas or pollution emissions which are major or inordinately high	Project is required to reduce current levels of greenhouse gas or pollution emissions which are moderately high	Project has some positive impact on the environment	Project has no environmental impact	Project is expected to have a negative environmental impact
Financial Impact	Project is required due to high cost/expense of current facilities	Project is required due to moderately high cost/ expense of current facilities	Project is required due to slightly higher than normal or market rate cost/expense of current facilities	Project is not expected to have an impact on budget	Project is expected to have a negative impact on budget