PARKS CANADA

PAVILIONS AND WASHROOM FACILITIES

COMPONENTS AND PROTOTYPES

March 2017

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COMPONENTS AND PROTOTYPES

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"On behalf of the people of Canada, we protect and present nationally significant examples of Canada's natural and cultural heritage, and foster public understanding, appreciation and enjoyment in ways that ensure the ecological and commemorative integrity of these places for present and future generations."

Parks Canada Mandate

Introduction

Pavilions[1] and washroom facilities[2] help to facilitate the visitor experience in Canada's National Parks and National Historic Sites. Many of these facilities were developed in the 60's and 70's and no longer meet current or future visitor needs and expectations. Looking to the future, Parks Canada is creating a new vision and standard for these facilities. The pavilions and washroom facilities that will be developed using this vision will be distinguished by a unified architectural style, character and content with opportunities for regional expressions of place.

The new vision for Parks Canada structures is intended to create a cohesive and consistent look between the pavilion and washroom facilities while relating to the regional location of the structure.

1. Pavilion – a covered space used for a variety of functions such as gathering, food preparation and shelter.

2. Washroom Facility – bathroom and shower modular components arranged to suit a variety of different visitor needs.

Purpose

This document presents a series of design principles and development guidelines that are intended to inform and direct detailed design. The document is divided into two separate sections, one for pavilions and one for washroom facilities. The character, materials and forms of the pavilions and washrooms are designed to be harmonious. The principles for site design and development, basic components and optional components are intended to guide design at a local level. Sample schematic designs are included as illustrations of the potential form and functions.

Process

In order to develop new principles and to meet the objectives of the study, Lombard North Group (1980) Ltd and Riddell Kurczaba Architecture approached the design process with the understanding that Parks Canada's knowledge and feedback would be invaluable in arriving at final guidelines that would be widely appealing, functional and act as prototypes for future development.

As such, the feedback components were integral to the design process and the design team involved Parks Canada in as many ways as possible to gain direction and input from a broad spectrum of Parks Canada's own resources. At each step, ideas and concepts were refined to adapt to the comments and responses provided.

Information for Your Design Team

Intended to serve as a guideline, this document presents concepts and images to provide direction for the detailed design of new facilities. This document is designed to be used by Parks Canada staff in collaboration with architects, landscape architects, planners, engineers and other consultants involved in the design of new facilities for Parks Canada. The design templates and modular components included are schematic and intended to depict program elements that would be finalized during detail design. The materials and equipment recommended imply intent but are not meant to be the final specification. The document does not specify mechanical, electrical or structural solutions which similarly must be finalized during detail design.

It should be understood that the design templates and modular components shown in this document are to be adapted to meet local needs and regulations. The guidelines are provided to inform future approaches and character of the structures, but each new facility will need to be designed and constructed by locally qualified and certified professionals. In addition, it must be emphasized that designers will need to review and incorporate:

- All standard Parks Canada regulations and guidelines for environmental protection, site evaluation and site development approvals including potable water supplies and treatment of effluent and waste water.
- Local building codes and regulations.

It is further presumed that:

- Washrooms facilities shown in this document are intended for locations where both potable water and waste treatment are available. Pit privies and non-serviced back country washroom facilities have not been addressed.

Vision Statement

Pavilions and washroom facilities are an invaluable space for attracting visitors to our parks. Modest, yet beautiful, architectural expressions will incite pride and anticipation to experience the featured setting.

To achieve these goals, the character, style and presentation of these buildings will:

Engage

A place of social interaction

Uses include – gathering, visiting, meetings, seminars, performances, reunions, parties, celebrations and dining.

To achieve this, facilities should be versatile and adaptive.

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Inspire

A place of contemplation

Uses include – a refuge to experience nature, a place of worship, a place to find renewal, a place of healing and a place to inspire the making and celebrating of significant life commitments such as weddings and other personal milestones.

To achieve this, the facility will connect users to awe inspiring settings.

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Motivate

A place of participation

Uses include – informing, training, education and discovery to encourage participation in the setting.

To achieve this, the facility should be a hub of information for the specific setting.

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Design Principles

To realize this vision for the future, both pavilions and washroom facilities need to be designed and developed to reflect the following principles:

Four Season Usage – The pavilions and washrooms, when practical, will be accessible year-round, making it possible to appreciate the setting even during the winter months.

30 Year Life Cycle – By using sustainable finishes and materials, the facilities will continue to look fresh in 30 years time.

Maintenance and Cleaning – Buildings must be easy to clean and maintain. Under normal wear and tear, there should be no requirement to paint or refresh the buildings. Vandalism resistant and durable materials are to be used.

Progressive Use of Technology – Technology should be incorporated in order to enhance the visitor experience. This could include passive solar features, active solar technologies in off-grid locations, communication and information systems, and heating systems.

Site Specific Integration – Taking into account local site context, buildings should be sited and oriented to connect visitors to the landscape.

Respecting Nature and History – The architecture may reflect the relevant historical character of specific sites. All facilities should adhere to the highest environmental standards.

Natural Materials – Through the use of natural materials such as wood and stone (where appropriate), the buildings will relate to the character of their surroundings. The chosen materials should be vandalism resistant and be from local sources.

Open/Transparent/Natural Light – The pavilions should be open to views and the surrounding environment.

Education and Communication – The pavilions are an opportunity for visitors to learn about nature and experience local amenities, while also being informed about current, relevant issues.

Modularity of Construction – Each structure must meet local needs and programming requirements but will be based on standardized dimensions and modular components that can be made on site or prefabricated. By using modular units and dimensions, the buildings can be expanded in size while remaining true to the architectural expression.

These design principles form the foundation for the preliminary design of the pavilions and washroom facilities. Detailed design of the structures will need to be further developed based on site specific requirements.

Table of Contents

Pavilions, by definition, are covered spaces that are intended to be used for a variety of different functions such as gathering, food preparation and shelter. The following section describes the specific site programming requirements, the main design components of the pavilions and the optional components that could potentially be incorporated into these facilities.

Pavilion Components

1.1 Introduction

Pavilions, by definition, are covered spaces that are intended to be used for a variety of different functions such as gathering, food preparation and shelter. The following section describes the specific site programming requirements, the main design components of the pavilions and the optional components that could potentially be incorporated into these facilities.

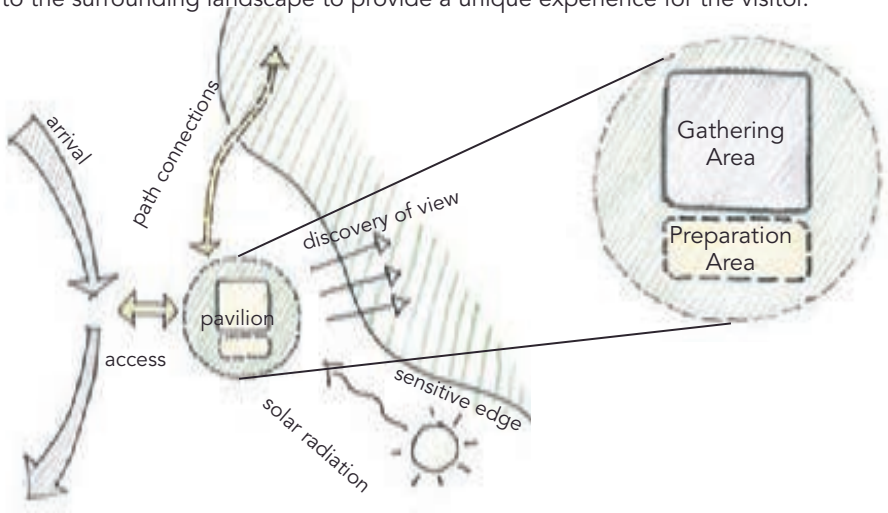
The "new vision" for Parks Canada's Pavilion structures will be shown in the following section. These enclosed structures are intended to have a similar basic design, material and character to the washroom facilities, which will be described in later chapters.

The pavilions are intended to have three main functional areas or zones:

Gathering Space – The primary function of the pavilion is a space for visitors to come together. As a multi-purpose space with movable furnishings, the interior and exterior spaces become adaptable for the visitors to use as they see fit. This creates a flexible space that complements the site while protecting visitors from the wind, sun, and rain.

Cooking /Preparation Area – This is an exterior space under the roof for food preparation and cooking with the option for fixed appliances such as a sink and/or BBQ.

Site Context and Landscape – The pavilion should be incorporated and integrated into the surrounding landscape to provide a unique experience for the visitor.



Schematic Plan of Programming Spaces

1.2 Context for Pavilions

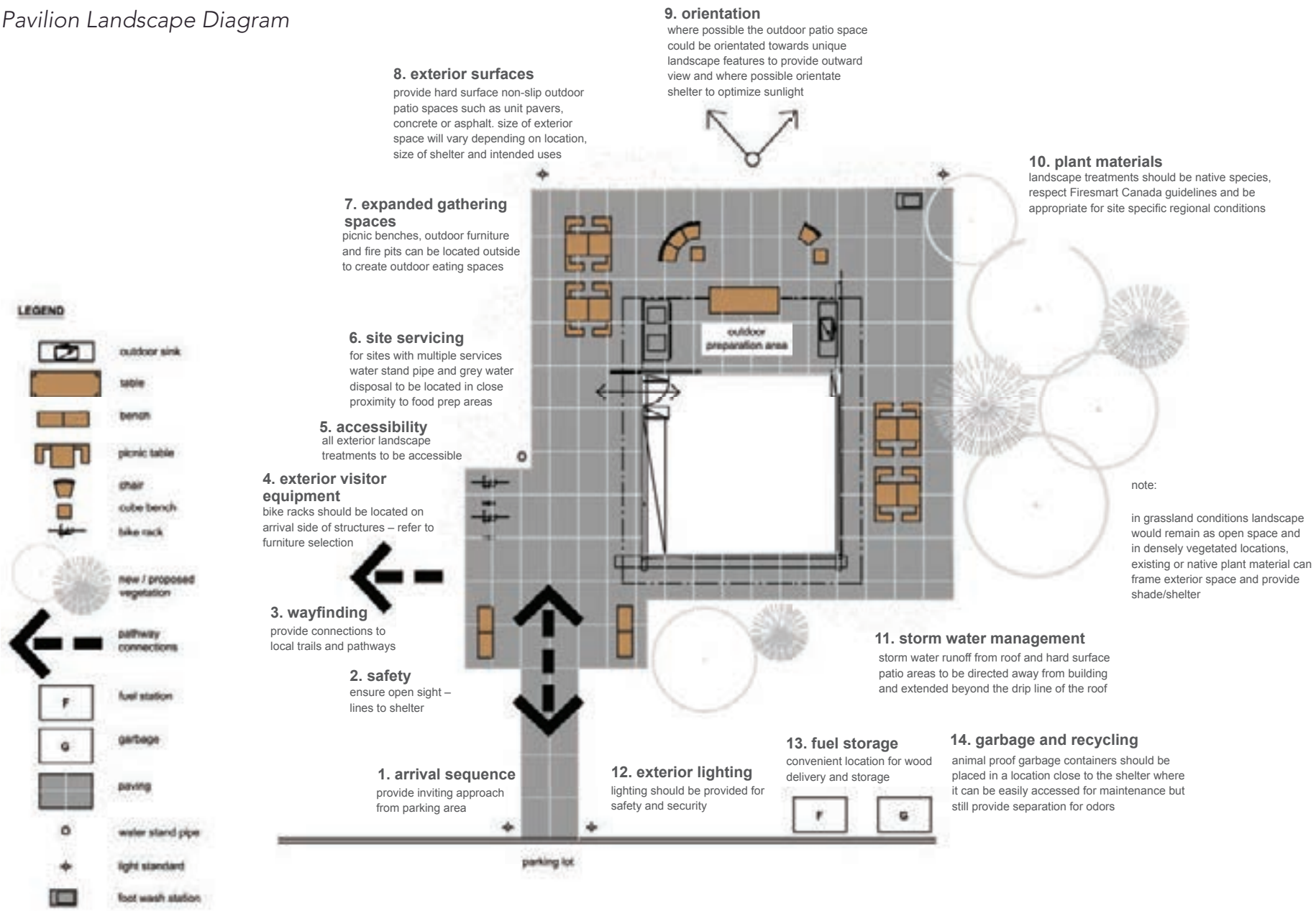
In addition to typical site planning principles that apply to all buildings, the context surrounding the pavilions, local needs and programming should inform the placement and orientation of the pavilions.

The size, location and amenities provided will need to be based on site specific considerations including terrain, number of visitors the site will receive, existing facilities in close proximity and programming needs. Geotechnical considerations must be included when deciding upon the optimal location and final foundation design.

There are a variety of key considerations for placing the pavilions on each site. These include:

- **Integration into the Surrounding Landscape:** Pavilions are intended to be incorporated into the landscape and not to detract from their setting in Parks Canada places.
- **Taking Advantage of the View**: Pavilions, where possible, should be directed towards a view, historical landmark or natural feature for the visitors to enjoy. Ideally, the exterior gathering spaces and the shelter would be orientated for the visitor to experience the landscape while using the facility.
- **Providing Universal Access (Pedestrian/ Bicycle/Vehicular/Wheelchair/ Stroller):** Pavilions should be centrally and conveniently located along trail and pathway routes in close proximity to destinations (beaches, rivers and landmarks) or other facilities (such as campgrounds and day use areas) to allow for ease of access and circulation.
- **Optimizing Micro-climate Benefits:** Ideally the pavilion should be positioned to optimize micro-climate opportunities. The building should protect from winds, provide shelter from the rain and heat in the summer and capture warmth from the sun in the winter.

Pavilion Landscape Diagram



Pavilion Landscape Diagram. Refer to content on the following page for detailed descriptions of each landscape design consideration

1.3 Landscape for Pavilions

Landscape elements that should be considered for pavilions will vary depending on regional conditions, location and programming needs. The elements on the following list should be considered but may not all be applicable to each site. The basic landscape design considerations for pavilions include:

1. Arrival Sequencing – As visitors approach the pavilions, the landscape needs to welcome them into the space and invite them to continue inside.

2. Safety – Sight-lines should be kept open to and around doors, pathways and exits. A clear view into the pavilion should be provided. Crime Prevention through Environment Design (CPTED) principles should be used as and where appropriate.

3. Wayfinding – Entrances and pedestrian routes should be easily discernible from the predominant direction people will be arriving (from the parking lot, for example).

4. Exterior Visitor Equipment – Equipment such as bike racks, snowshoe or ski storage racks should be located where they are observable but will not interfere with access to the building entrance. Pedestrian spaces should be planned and sized to ensure a safe path around all site furnishings and equipment. If provided, foot washing stations must be equipped with adequate plumbing and waste disposal features to accommodate the silts and sand.

5. Accessibility – Sites are to have barrier free accessibility for both access and use of the pavilion. Connectivity to adjacent accessible facilities and pathway system should be provided.

6. Site Servicing – Where potable water is available, a water stand pipe could be considered as an alternative to a sink at the exterior of the building. These water sources should be placed where they are easily visible and accessed. Gray water disposal would be required for all serviced locations. Refer to Parks Canada Standards for all gray water disposal requirements.

7. Expanded Gathering Spaces – Exterior gathering spaces should be located as extensions to the interior capacity and used to accommodate a wider variety of experiences.

8. Exterior Surfaces – Ground plane surfaces in and around the building and leading to the entrances should have non-slip finishes or textures. Pathways and plaza surfaces should be made flush with surrounding grades to eliminate trip hazards. Regionally available or distinctive materials can be considered, but they must be durable (such as asphalt, concrete and stone pavers) and not require an unreasonable amount of maintenance. Design and construction of subgrade preparation should respond to local conditions and reduce occurrence of root penetration and frost movement.

9. Orientation – Exterior seating, such as benches or picnic tables, should be provided in various locations around the building, but concentrated primarily where the view is best.

10. Plant Materials – New tree and shrub plantings should be native species and appropriate for the site specific regional conditions. Plantings should be arranged in organic groupings to imitate natural conditions. Non-native ornamental varieties and known wildlife attractants should be avoided. Plant materials could be used to guide pedestrian movements, frame views and provide protection from sun and wind. Landscaping should be designed according to Firesmart Canada Vegetation Management guidelines for wild fire risk reduction.

11. Storm Water Management – Natural drainage patterns of the site must be considered when deciding on the location of pavilions. Plaza spaces and sidewalks immediately adjacent to the building should be graded to provide comfortable, accessible, easy approaches to the building and to direct run off away from the structure. Grading for these spaces should not exceed two percent. When buildings are placed in areas with steeper slopes, the pathways leading to the building should not exceed local building code requirements for accessibility. Remote locations should be reviewed on a site by site basis, but ease of access should still be integral to the arrival areas. Storm water and roof drainage should be directed away from the building and walking paths on to soft landscape areas without ponding.

12. Exterior Lighting – Where feasible, lighting at pavilions should be provided for safety and security while remaining Dark Sky friendly. The lighting should be directed downward to minimize light shed beyond the building area. LED and solar lights should be considered where possible.

13. Fuel Storage – Where approved by Parks Canada Agency, fuel such as wood should be located in close proximity to the building, so visitors can easily haul fuel materials to the pavilions as needed. These storage areas should also be placed where they can be easily accessed by delivery/maintenance vehicles.

14. Garbage and Recycling – Animal proof garbage and recycle units should be visible from the parking lot or pathway. They should be placed so they are easily accessible from entrances and gathering nodes, but in locations that are typically downwind from those areas or far enough away that smells or animal conflicts can be avoided. All units should be placed where they can be easily accessed by garbage collection vehicles.

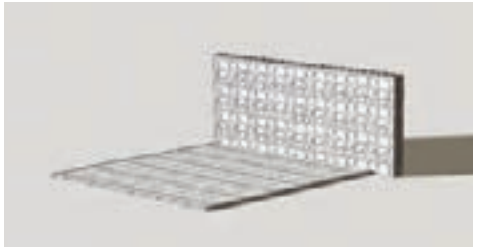
1.4 Pavilion Components

The pavilions are designed to be made up of a set of basic components including the mass wall, communication feature and roof structure.

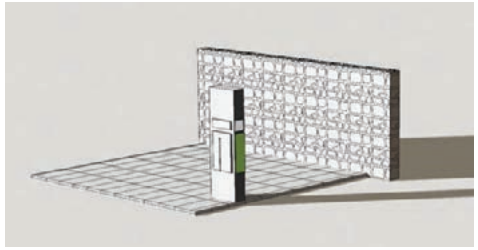
The basic components are included in all structures. Optional components such as the view wall, preparation components and sliding door can be incorporated into the pavilion structures based upon the visitor needs, site location and functional requirements of the facility.

The following pages describe each component in detail and outline the purpose of the individual components, materials suggestions, characteristics and the intended expression.

Basic Components



1.4.1 Mass Wall

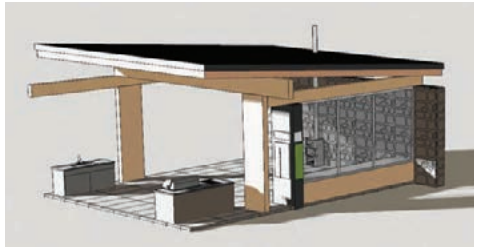


1.4.2 Communications Feature

1.4.3 Roof Structure

Optional Components

1.4.4 View Wall



1.4.5 Preparation Components

1.4.6 Seasonal Enclosure/Sliding Door

1.4.1 Mass Wall and Flooring (Basic)

Purpose

Main structural elements that define the interior space.

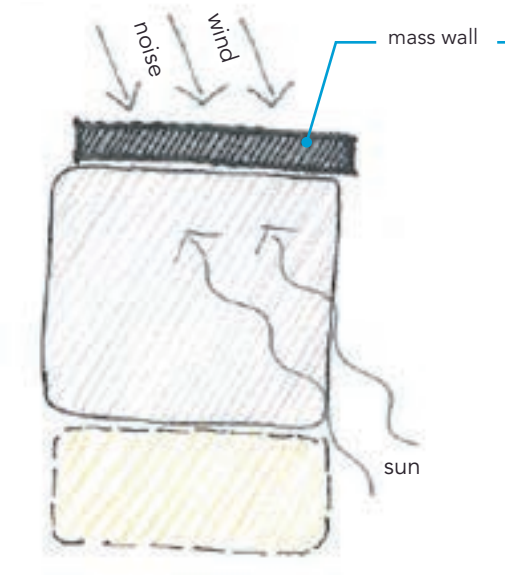
- Protect from wind and create a comfortable micro-climate. Thermal mass can be used in passive solar applications.
- Enhance the arrival sequence as a point of passage to the view.
- Shield from unpleasant site aspects to focus on the setting.
- Create a space where the setting will be discovered.

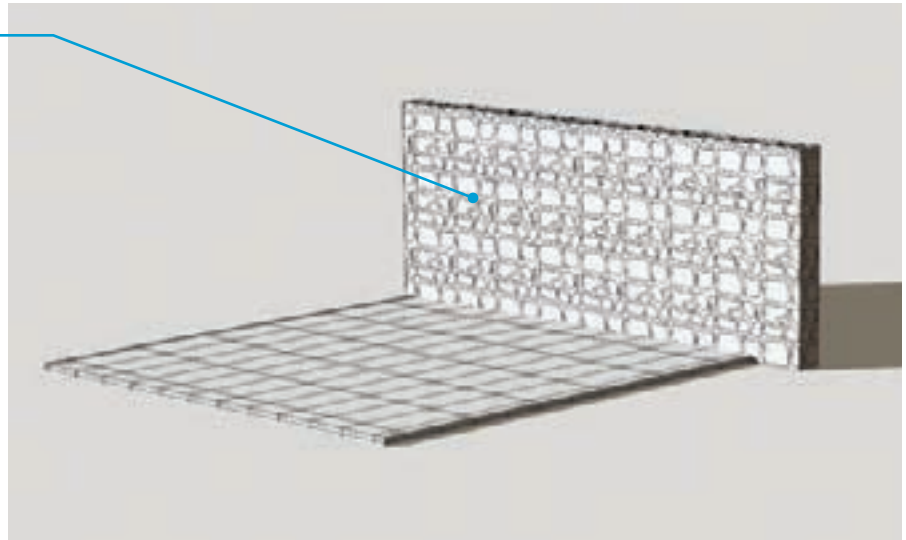
Materials and Design Considerations

- Local stone
- Heavy timber
- Distressed timber
- Rammed Earth
- Gabion basket
- Concrete
- Flooring materials should be durable, stain and slip resistant, be local in character, have natural finishes and textures, and be built to resist frost movement

Expression

- An organic extension of the site
- Reflects local craftsmanship and/or historical tradition
- An opportunity for artistic or interpretive creativity





Mass Wall and Flooring

1.4.2 Communications Feature (Basic)

Purpose

To display information for communication and education purposes.

- Digital displays are intended to be connected directly to Parks Canada Agency to update and disseminate information such as trail conditions, special events, wildlife information, etc.
- Display and control pavilion reservations.
- Traditional displays and message boards such as a notice board (3x4 cork board with Plexiglas cover) can also be incorporated. Approximate dimensions of communication feature are 2400mm to 3000mm (height) by 1200mm (wide) by 600mm (depth).

To distribute power.

- Provide power for public usage including line voltage where available and power for recharging electronics.
- Provide a few public lockable storage bins for powering and storing electronic devices.
- Provide power for pavilion lighting.
- Solar power is encouraged in remote areas where line voltage connections are not practical. This power is intended to provide a few hours only of evening lighting and power for electronics and as such does not need redundancy. Solar panels should be located discreetly on the roof.
- Emergency communications equipment and electronic display systems should be powered by separate batteries to ensure continuous service.

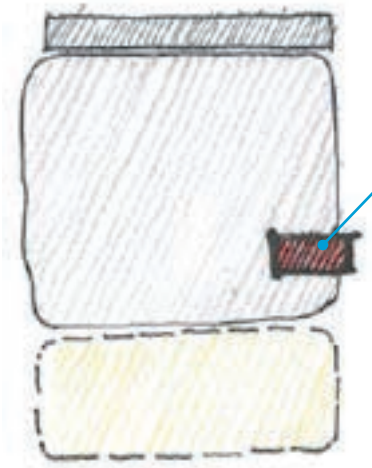
Materials and Design Considerations

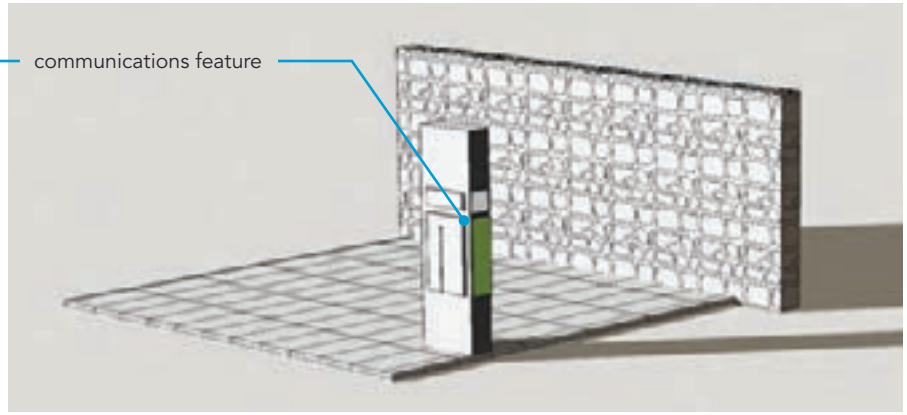
- Durable finishes on the cabinet (example: phenolic panels).
- Scalable to program needs.
- May also function as a structural column supporting the roof.

Expression

- To be built as a vertical cabinet or pylon and function as an identifier of Parks Canada Agency. The placement of the cabinet is flexible (should be located near the entrance when a man door is used), while the systems and sophistication of the cabinet will vary depending on location.

Communications Feature (Detail)





Communications Feature

1.4.3 Roof Structure (Basic)

Purpose

To create a protected space.

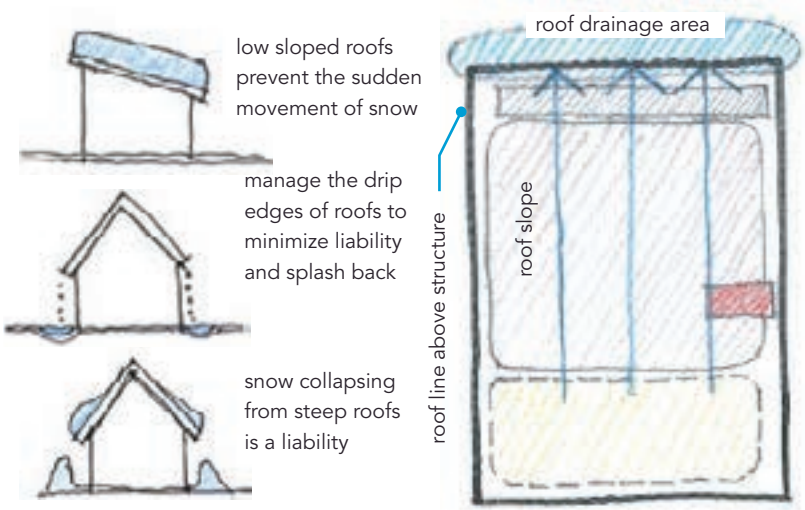
- Consolidate drainage from roofs to an unused side of the pavilion.
- Public access to the pavilion should not cross roof drainage edges.
- To minimize liability, the drainage side, or the side which naturally creates puddles, ice, and icicles, should become the non-entry side of the pavilion.
- Snow is to be retained on the roof, which should be designed to avoid sudden movements. Where snow is to be shed, it is to be on the non-entry side.

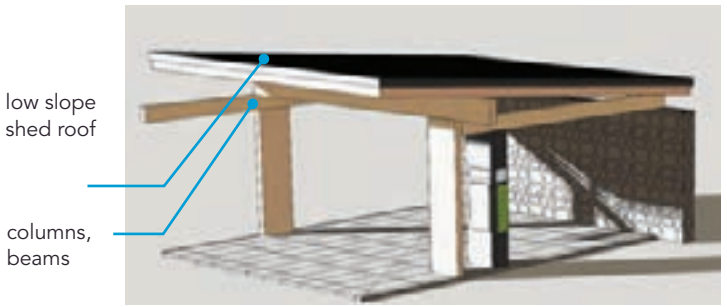
Materials and Design Considerations

- Low slope, single direction shed roofs respond most effectively to single side drainage, snow and water control issues. Recommended range of slope for roof is between 1:12 and 4:12. A minimum of 1:12 roof slope is needed to ensure natural drainage to a controlled side. 2:12 is an ideal slope for metal roofing which is the minimum warranty slope defined by the Canadian Roofing Contractors Association.
- Roof design must take into account snow loading.
- The use of materials with a long life-cycle is encouraged. Roof structures should normally be solid wood slabs. Joists or complicated trusses and rafters should be avoided. This design minimizes nesting and cleaning issues. This roof type can be achieved with ganged dimensional timbers or cross laminated timber.
- Drainage details from roofs should protect fascia and wood structure from water damage.
- Consideration for accumulation of debris on low slope roofs needs to be taken into account. A green roof on a low slope roof, which allows for leaf and other natural debris to become a part of the roof character, may be appropriate.
- Columns need to withstand heavy use. Solid timber and metal are appropriate. Wood columns should have proper maintenance free anchorage and proper clearance from grade to protect from moisture and physical damage at the base.
- Minimum overhang would be 600mm.

Expression

- A low slope contemporary roof, combined with wood slabs is a primary expression. This allows the roof to have a more open appearance. The exposed wood soffit should be finished to protect the quality of the natural wood appearance.
- The shape of the roof responds to view lines. The slope of the roof allows sun access, to create micro-climates, collect heat and provide shade depending on the season. In areas where traditional styles may be mandated, consideration should be given to address the drainage issues and building entry.
- Cantilevers and the roof over hangs can be used to expand usable areas around the pavilion and protect the vertical structures from water damage, drips and splashes.





Roof Lines and Structure

1.4.4 View Wall & Preparation Table (Optional)

Purpose

To connect the user to the setting.

- The optional view wall compliments the mass wall by providing additional protection, creating an all season view portal and allowing passive solar collection.
- When combined with sliding doors, the glass wall provides closures to the pavilion that are transparent connections to the setting.

Materials and Design Consideration

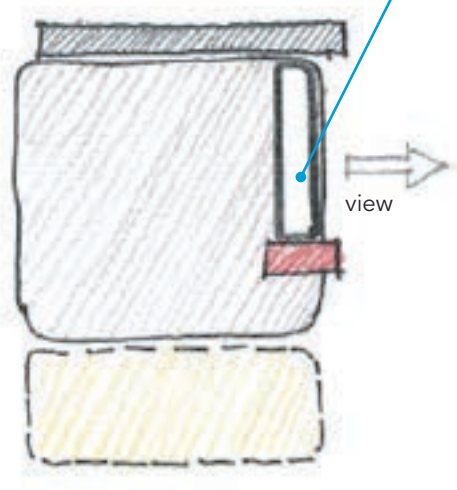
- The use of laminate safety glass should be minimized due to maintenance, cleaning, and breakage challenges. Consider translucent panels such as Krinklglas when visual transparency is not required.
- Glass should be placed in protected locations to mitigate breakage and cleaning requirements.
- The glass view wall is combined with the preparation table. When the glass is placed above the counter-top, a back splash should be provided on the counter to minimize soiling.
- May be combined with the communication feature with electrical outlets.
- Include bird strike window deterrents where appropriate.

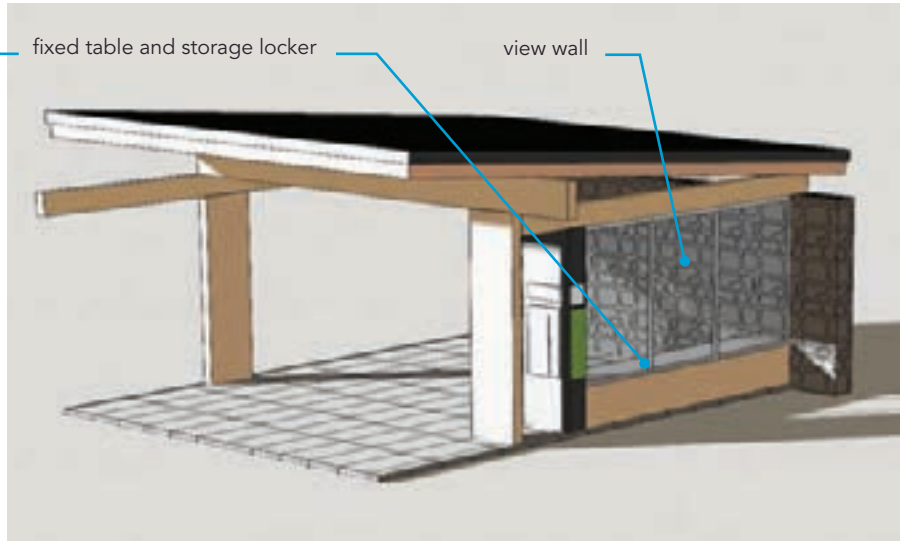
Fixed Table Materials

- The preparation table is a multipurpose surface.
- Storage shelves can be located under the preparation table.
- It is recommended that locks be supplied by visitors.
- Food storage is not recommended indoors.
- Materials should be commercial grade stainless steel to ensure a high performance surface.

Expression

- The pavilions are intended to be open and have visual transparency. Single pane laminated safety glass can be used with minimal detailing to enhance transparency where required or appropriate.





View Wall

1.4.5 Additional Preparation Components (Optional)

Purpose

Preparation areas will facilitate cooking and cleaning.

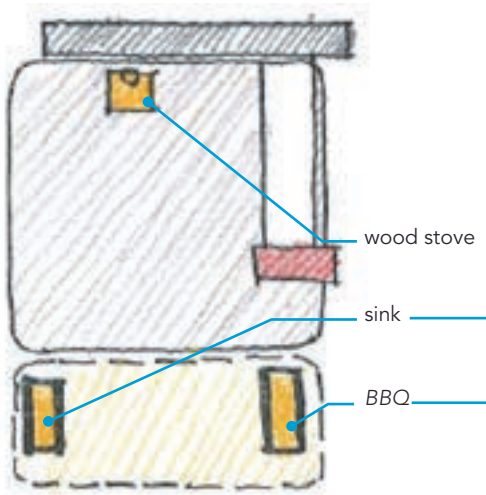
Materials and Design Consideration

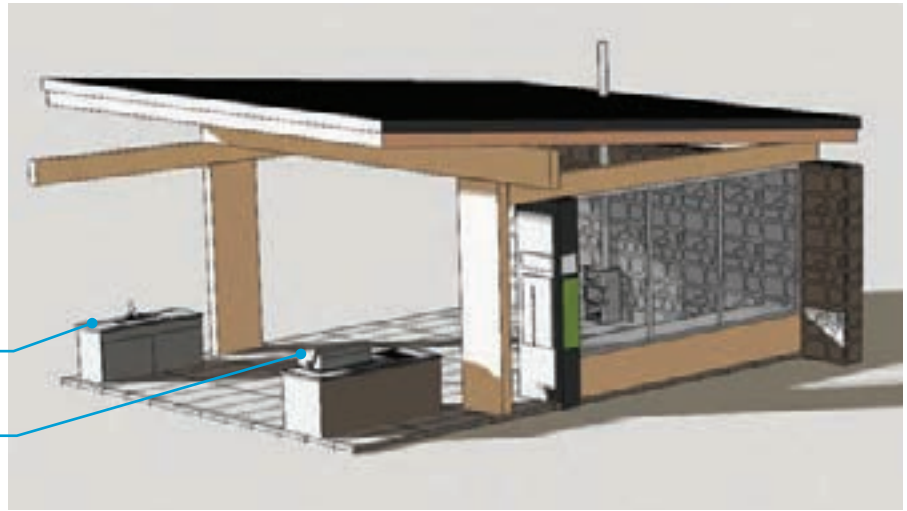
- BBQ – Permanent BBQ appliances are encouraged. They can be located under the extended roof overhang so cooking can take place without disruption to the interior gathering space. Fixtures must be easily winterized with enclosure lids, so the facility can be secured during the off season.
- BBQ, sinks and cook-top components should only be placed in locations were wildlife attractant concerns can be mitigated and cleanliness can be monitored by Parks staff.
- The cook-top below can be run on natural gas, propane or electricity and is designed for instant heat. This flexible solution is practical and can provide revenue streams for Parks Canada.
- Sink – Fixed sinks are encouraged where potable water and sewage facilities are available. The sink should be robust, unbreakable (especially by ice), and the heavy duty faucet must be easily winterized and withstand heavy use. A deep, single or double commercial grade stainless steel sink is recommended.
- Stove – A wood burning stove for heat may be included. This becomes especially useful where seasonal enclosure is provided. This could be achieved with air tight, log burning, space heating stoves. The stove should not be for cooking and should have a double wall so there are no exposed hot surfaces. The provision of heat would expand the season and use of the facility.
- The fuel storage should be made of durable materials.

Expression

- The appliances are to be integrated into a cabinet that is intended to blend in with the other finishes.

Cook-top (image sourced from wikimedia.org)





Preparation Area

1.4.6 Seasonal Enclosure/Sliding Door (Optional)

Purpose

Sliding doors, such as barn doors, allows visitors more options to choose how they will use the pavilion. The interior space can be fully open and connected to the exterior spaces and landscaping so that visitors can feel part of the landscape in fine weather, or it can be made private and sheltered in inclement weather. By partially or fully enclosing the pavilion, there are increased options for three and four season use, although it is not intended to be fully weather proof nor air tight.

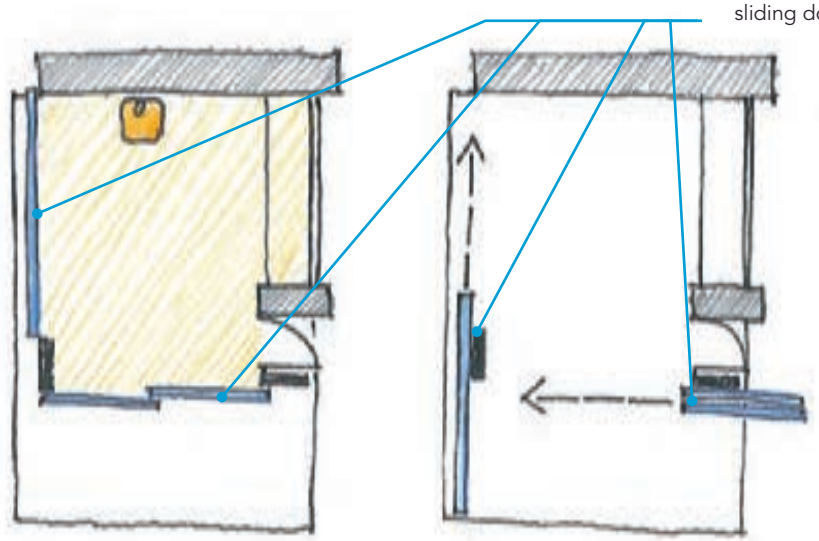
Materials and Design Consideration

- The beams on pavilions should be designed to accommodate sliding doors, either at the time of initial construction or for later installation.
- The structure is to be designed as an outdoor pavilion and not an internal space per the building code. These spaces would not be insulated or weather stripped.
- Hardware should secure the door at the track and the base, with the ability to secure the door in fixed positions. Dropbolts with above ground drop holes, should be visible in snow conditions. Hardware tracks should not collect debris. Hardware should achieve a secure connection between door panels and the support structure, such that the panel cannot be lifted or blown off. A guide along the ground or column base should prevent horizontal movement and rattling of the door in windy conditions. An example of such a product is Industrial Accuride. There can be no tracks on the ground.
- An individual hinged man door will need to be incorporated so the enclosed facility can be accessed when the sliding doors are closed.

Drop bolt

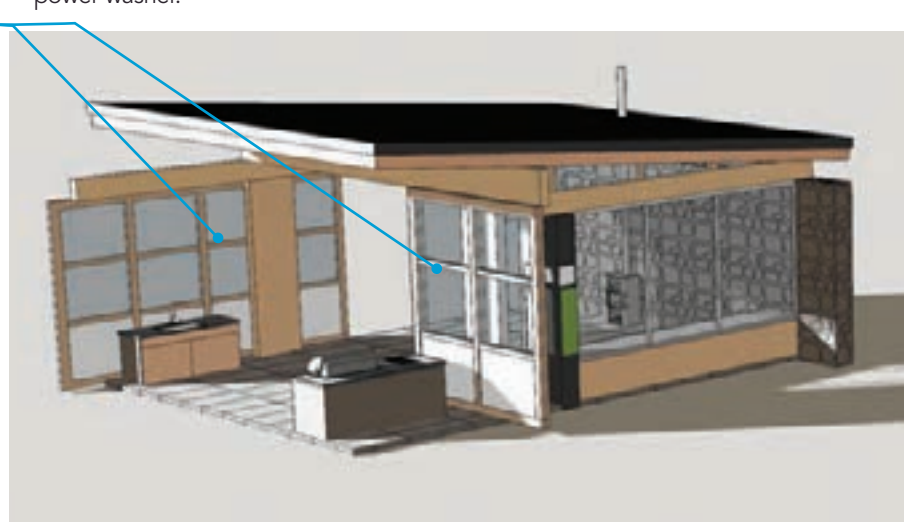
Expression

- Door frames may be of metal. The finish of the frame must not require repainting and should be designed to be resilient to all environmental conditions, such as rain, snow and ice.
- Translucent glazing is encouraged instead of solid panels. These provide an opportunity for artistic expression through the use of colour, pattern and texture. Lower door panels may be solid (phenolic) panels. Translucent panes should be unbreakable, be textured to mitigate damage and minimize the perception of needing cleaning. One quarter inch Krinklglas panels (transparent FRP) achieve these objectives. Texture helps to hide flaws and soiling, and could be cleaned using a power-washer.



Sliding Doors in Closed Position

Sliding Doors in Open Position



Sliding Doors

1.5 Furniture (Optional)

Purpose

Tables, benches and chairs are an integral part in preparing and serving food, whether in a buffet style or in a seated banquet arrangement. For ease of use, these furniture pieces should also be movable.

- Tables should be sized appropriately for universal accessibility.
- Furnishings may be fixed or movable but should allow for the flexible use of space.
- The anticipated programmed use of the pavilion impacts the furnishing selection.

Materials and Design Considerations

- The structure and legs may be rustic but the tabletop surface should be easily cleaned and durable. Phenolic panels and exterior grade solid surface products meet these criteria.
- Cast stone chairs over a wire frame have the potential to be a viable material solution. Individual cube seats and benches with storage compartments could also serve multiple functions.
- Furnishings should be bulky enough to discourage people from removing them from the shelter but still movable to accommodate flexible configurations. Solid blocks of timber or phenolic panel boxes could be built as mill-work storage devices. Natural finishes, the use of bright colors and a patina of natural aging could all be appropriate.
- Materials should be selected to withstand wear.

Note: the reader is advised that this section deals with the functionality of furniture and their place in the pavilion. Specific details for the furniture are part of a separate Parks Canada document.

Picnic Bench Options

Picnic Tables © Landscape Form

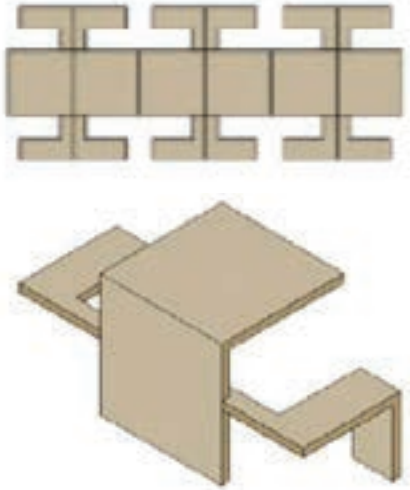
Expression

- Tables, chairs and benches are an opportunity for regional expression. Local craftsmen could be used for their fabrication.

Options

- Picnic tables are a time proven standard for picnic areas.
- Many appropriate pre-manufactured products exist in multiple finishes.
- Alternatively, the interlocking table shown below in the isometric is a flexible half table that can be combined for interesting combinations.

Image of cell phone charging lockers in Bruce Penninsula National Park that could also be included in the pavilions



Concept Isometric Sketch – Custom Module & Plan View Showing Docking

Chair and Bench Options

Sample of Wooden Table

This illustration shows a variety of configurations for tables using the suggested module size. Other configurations can be created to allow for a variety of seating arrangements.

LEGEND

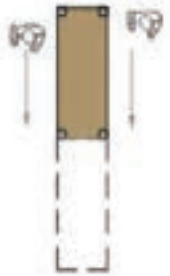
Table

Chair

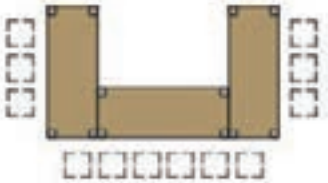
Picnic Table

Cube Bench

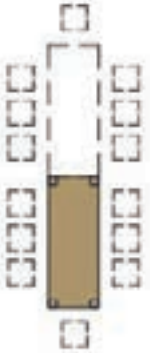
Bench



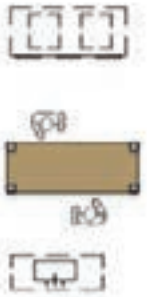
buffet – single or double



workshop/demonstration/talk



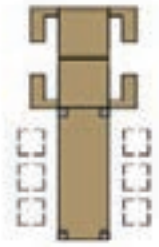
buffet – single or double



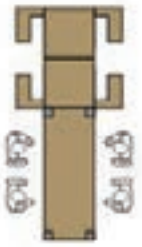
food preparation

Dimensions are consistent to provide more configuration options. This option shows connecting the large table to the picnic table.

The basic rectangular table size is a 180mm x 76mm module that accommodates 3 or 4 seats on either side. The tables can be moved and combined in a variety of ways.



banquet setting medium size



buffet and banquet

In this section three prototypes are presented to portray a small, medium and large pavilion configuration. The sizes are based on multiples of the basic program areas defined as the small pavilion. Larger units are created by adding modules to expand the length of the structure. In the medium and large pavilions, the longest side of the building and optional dividers open to the outside to allow multiple visitor groups to use the space.

Pavilion Prototypes

A medium pavilion is shown beside a small washroom facility.

2.1 Small Pavilion (approx. 60 sq.m. gross area)

This pavilion would serve small groups of 10-20 people. It functions as a single gathering area to accommodate a variety of uses. In this representation, the small pavilion is first shown with basic components and subsequently with optional components added.

Programme

Gathering Area: requires approximately 6 meters as the minimum clear dimension with space for fixed components and structure. This will provide a net area of 36 sq.m. of flexible interior space.

Preparation Area: can be flexible in size but typically it represents approximately one quarter of the gross area (15 sq.m.). The preparation area is typically covered by the roof but not located inside and may include fixed appliances.

Exterior Amenities and Function Areas: The size will be determined by the site and may include expansion of the floor surface area to perimeter areas, thus expanding the capacity of the pavilion. A minimum of 9 sq.m. is recommended at key entry areas to the pavilion.

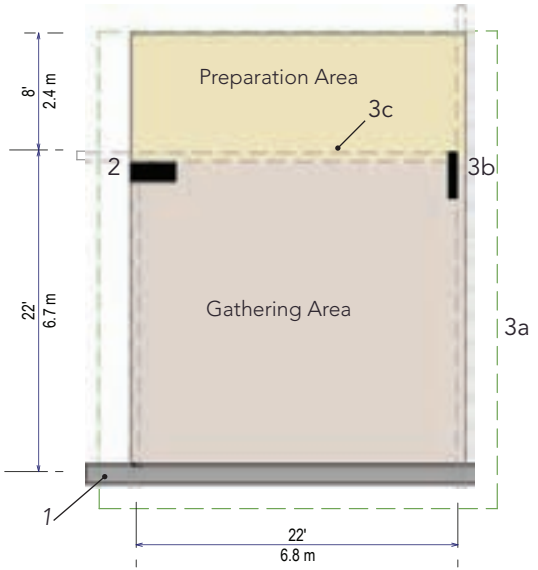
Functional development

Basic Components: Hard surface floor, roof, mass wall, communication wall, provision for garbage and storage.

Optional Components: Sliding doors, heat by wood stove, door, power, BBQ, sink, glass wall and serving table.

Usage Patterns: This facility is intended for small groups. A modular approach to the furniture components and expanded usable area outside allow for an increased number of visitors.

Small Pavilion with Basic Components and View Wall

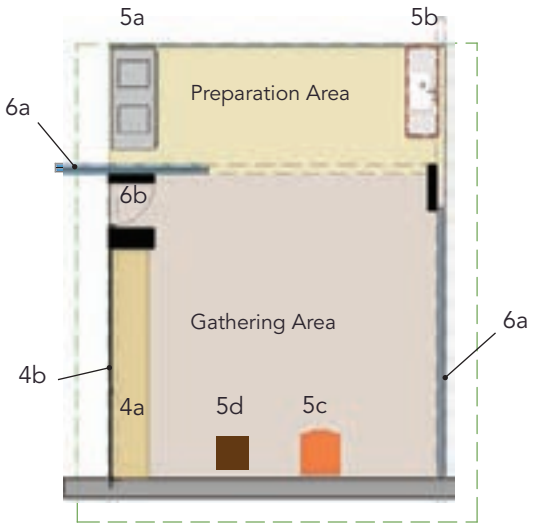


Floor Plan Small Pavilion with Basic Components

Scale: NTS

Basic Components	
1	Mass Wall
2	Communications Feature
3a	Roof
3b	Column
3c	Beam

Optional Components	
4a	Serving Table
4b	View Wall
5a	BBQ
5b	Sink
5c	Wood Stove
5d	Wood Storage
6a	Sliding Door
6b	Hinged Door

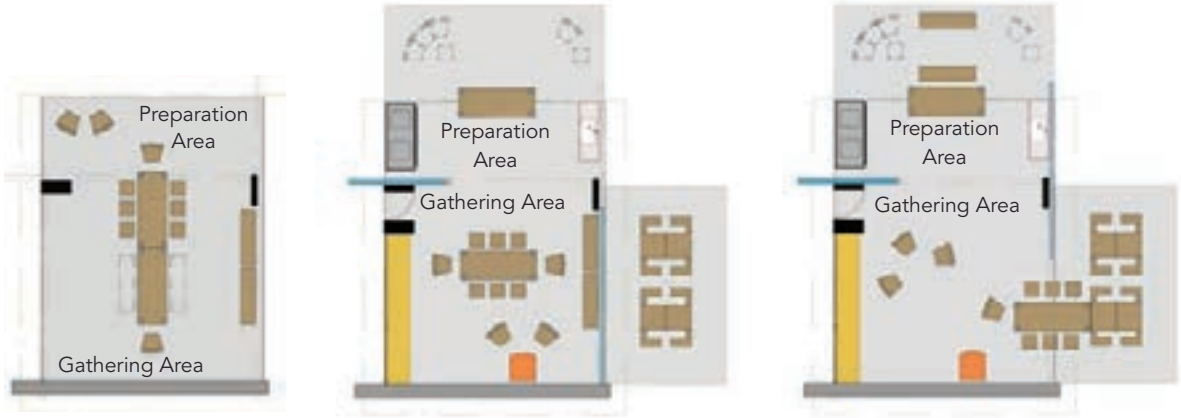


Floor Plan Small Pavilion with Optional Components
Scale: NTS

Furnishings

The furniture setting is comprised of movable modular components to create a banquet-type arrangement for eating, meeting or educational sessions.

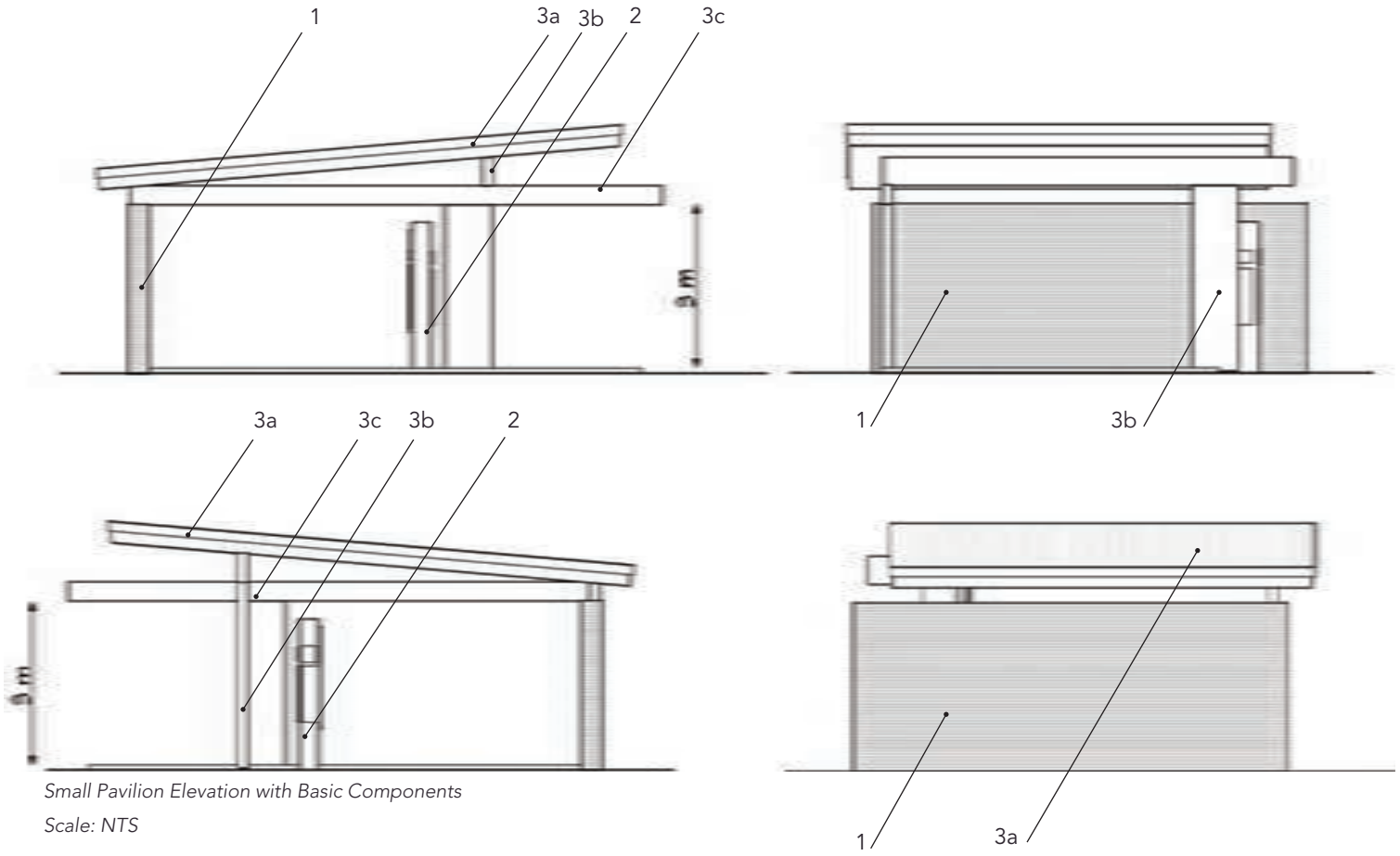
Each pavilion is intended to host a fixed inventory of furnishings that can be reconfigured for different events and uses.



Small Pavilion with a Variety of Furniture Layout Options

Small Pavilion with Some Optional Components

Small Pavilion Elevations with Basic Components



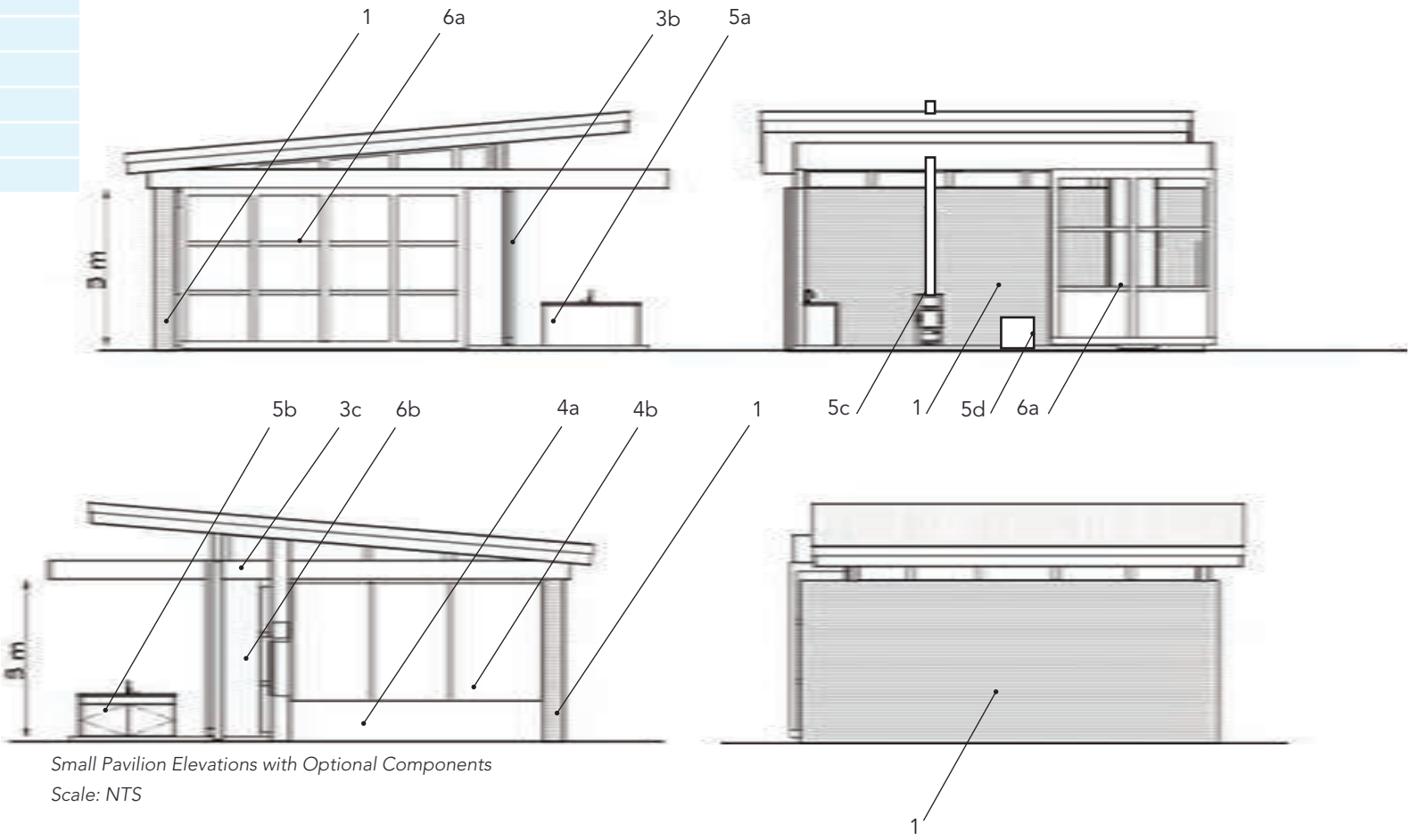
Small Pavilion Elevation with Basic Components

Scale: NTS

Basic Components	
1	Mass Wall
2	Communications Feature
3a	Roof
3b	Column
3c	Beam

Small Pavilion Elevations with Optional Components

Optional Components	
4a	Serving Table
4b	View Wall
5a	BBQ
5b	Sink
5c	Wood Stove
5d	Wood Storage
6a	Sliding Door
6b	Hinged Door



Small Pavilion Elevations with Optional Components
Scale: NTS

2.2 Medium Pavilion (approx. 120 sq.m. gross area)

This pavilion would serve medium sized groups of 20-40 people. It functions as a single gathering area to accommodate a variety of uses and functions. In this representation, the medium pavilion is first shown with basic components and subsequently with optional components added.

Programme

Gathering Area: requires approximately 6 meters width and 12 meters length as the minimum interior clear dimensions, plus space for fixed furnishings and structure. This will provide a net area of 72 sq.m. of flexible interior space. This space is approximately double the area of the small pavilion.

Preparation Area: can be flexible in size but typically it represents approximately one quarter of the gross area or 30 sq.m.

Exterior Amenities and Function Areas: The size will be determined by the site. It may include expansion of the floor surface area to perimeter areas, thus increasing the capacity of the pavilion. A minimum of 20 sq.m. is recommended at key entry areas to the pavilion.

Functional development

Basic Components: Hard surface floor, roof, mass wall, communication wall, provision for garbage and storage.

Optional Components: Sliding doors, heat by wood stove, wood storage, door, power, BBQ, Sink, foot wash, glass wall, and a serving table.

Usage Patterns: The space would be ideal for larger group functions, as well as booked events.

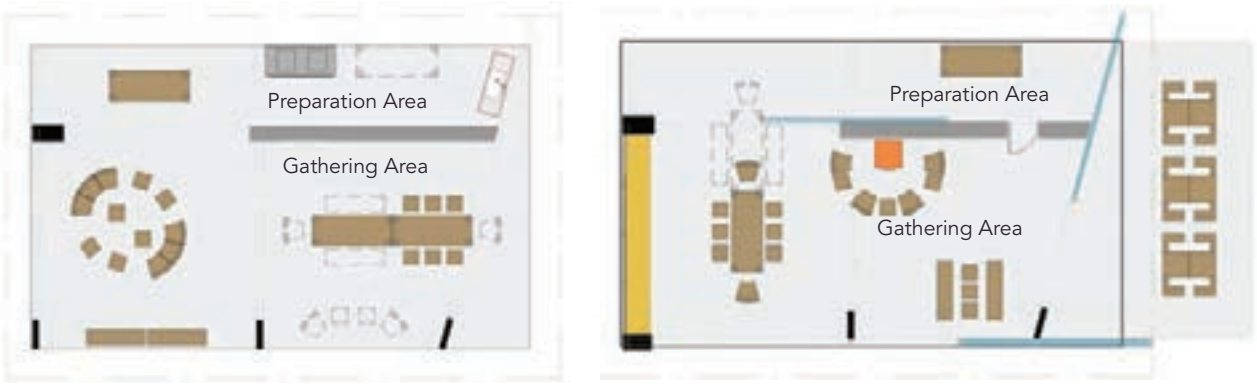
Medium Pavilion with Basic Components and View Wall

Furnishings

Each pavilion is intended to host an inventory of furnishings (tables, chairs, benches) that can be arranged to accommodate different events and uses.

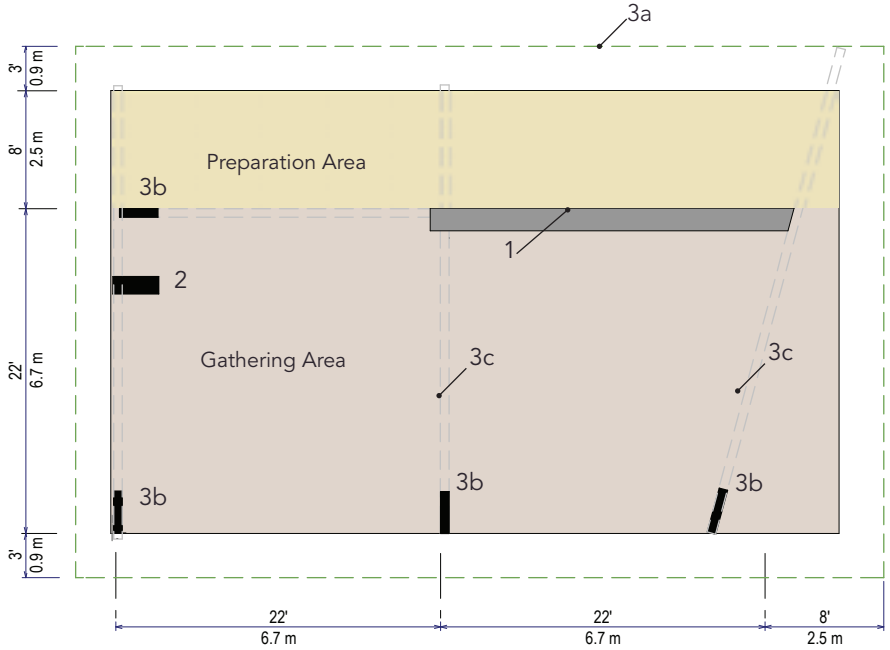
Modular components can create a banquet type arrangement for eating, meeting or educational sessions as well as a preparation area. It also allows the use of this facility by more than one group of visitors.

The examples shown here are intended to show not only flexibility but the ability for the usable area to expand from a closed protected core into the adjacent exterior space.



Medium Pavilion Furniture Options

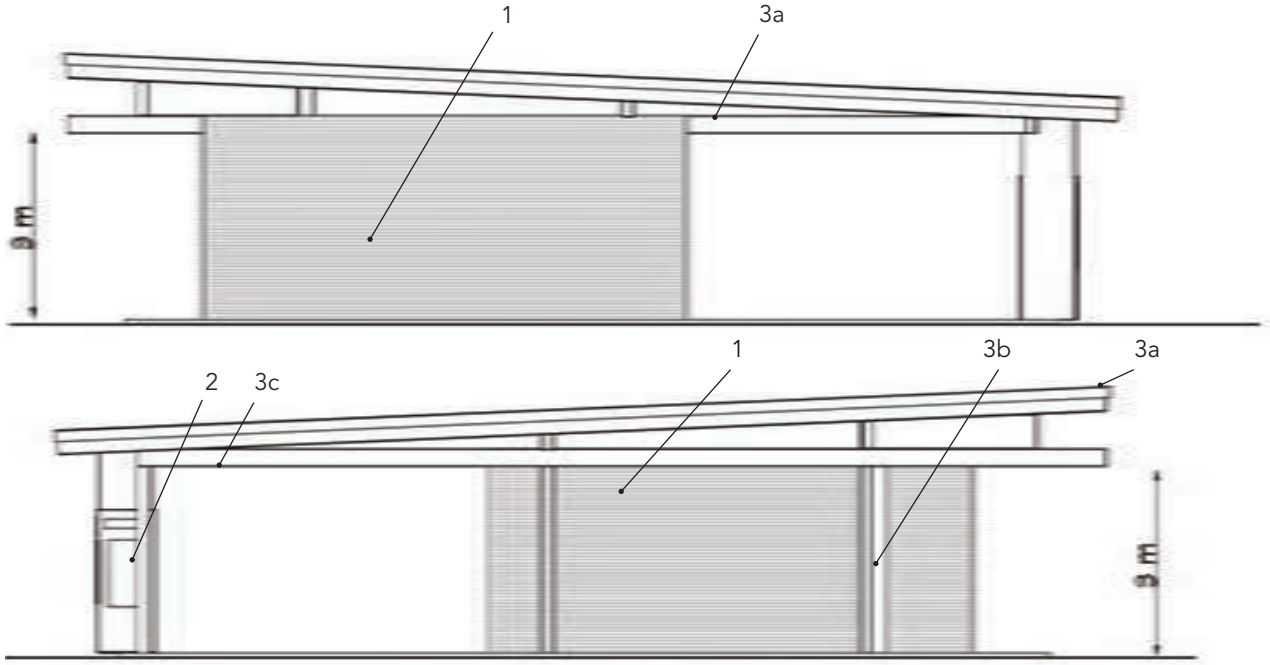
Basic Components	
1	Mass Wall
2	Communications Feature
3a	Roof
3b	Column
3c	Beams



Floor Plan of Medium Pavilion with Basic Components

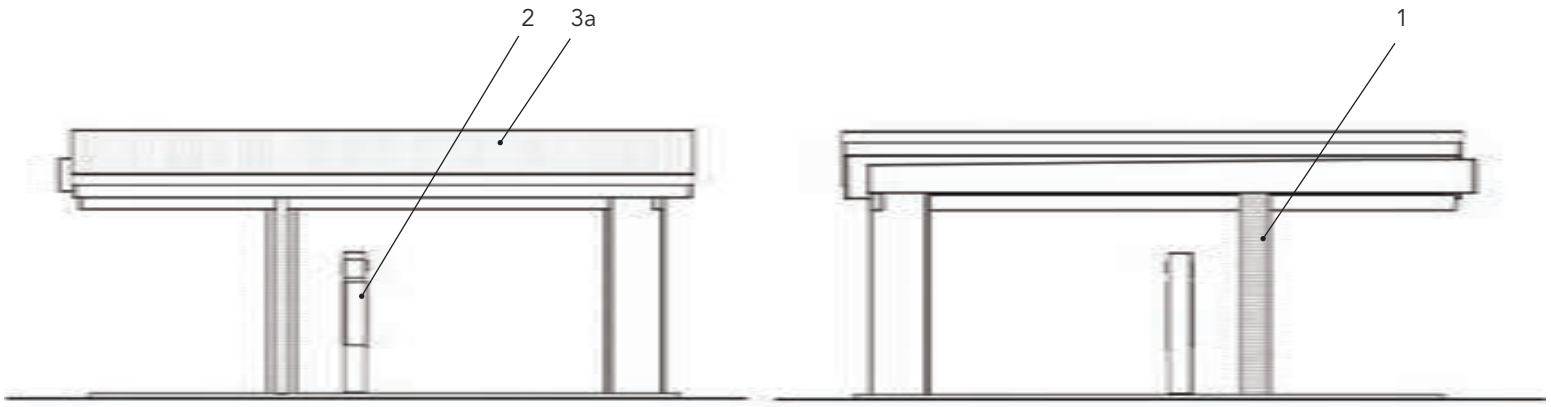
Scale: NTS

Basic Medium Pavilion Elevations and Rendering



Basic Medium Pavilion Elevations | Scale: NTS

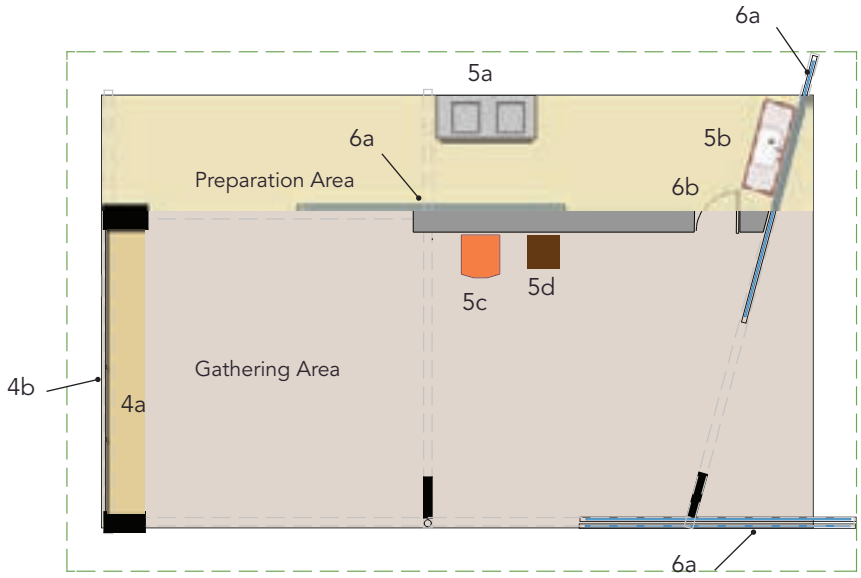
Medium Pavilion with Optional Components



Medium Pavilion Elevations

Basic Components	
1	Mass Wall
2	Communications Feature
3a	Roof
3b	Column
3c	Beam

Optional Components	
4a	Serving Table
4b	View Wall
5a	BBQ
5b	Sink
5c	Wood Stove
5d	Wood Storage
6a	Sliding Door
6b	Hinged Door



Floor Plan of Medium Pavilion with some Optional Components

2.3 Large Pavilion (approx. 180 sq.m. gross area)

This pavilion would serve large groups of 40-60 people. It functions as a single gathering area to accommodate a variety of uses and functions. The large pavilion is created combining three or more modules of the smaller pavilion footprints and can be expanded for specific site needs. In this representation, the large pavilion is first shown with basic components and subsequently with optional components added.

Programme

Gathering Area: requires approximately 6 meters width and 18 meters length as the minimum interior clear dimensions. Plus space for fixed furnishings and structure. This will provide a net area of 108 sq.m. of flexible interior space. This usable space is three times the size of the small pavilion. Consideration can be given to greater width than 6 meters when usage patterns need to service only a single user within the structure.

Preparation Area: can be flexible in size but typically it represents approximately one quarter of the gross area of 45 sq.m.

Exterior Amenities and Function Areas: The size will be determined by the site, and may include expansion of the floor surface area to perimeter areas, thus increasing the capacity of the pavilion. A minimum of 27sq.m. is recommended at key entry areas to the pavilion.

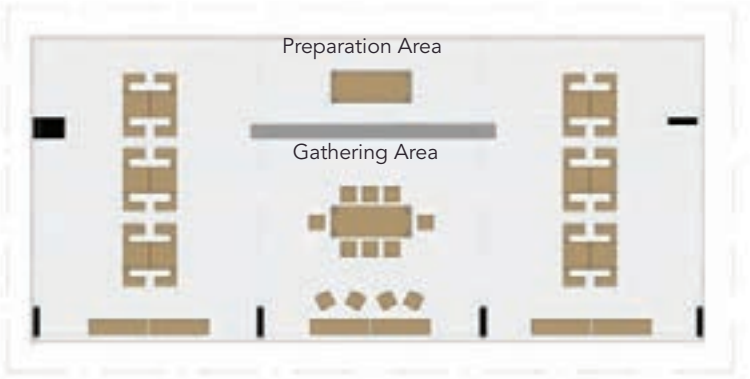
Functional Development

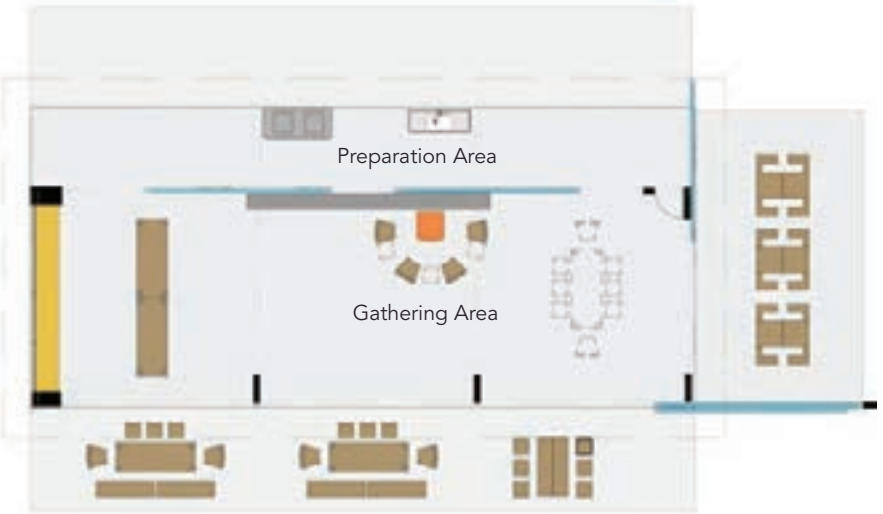
Basic Components: Hard surface floor, roof, mass wall, communication wall, provision for garbage and storage.

Optional Components: Sliding doors, heat by wood stove, door, power, BBQ, sink, foot wash, glass wall and serving table.

Usage Patterns: The large pavilion functions best with large groups, while the three bay layout can also create the perception of three separate group areas.

Large Pavilion with Basic Components





Large Pavilion Furniture Options

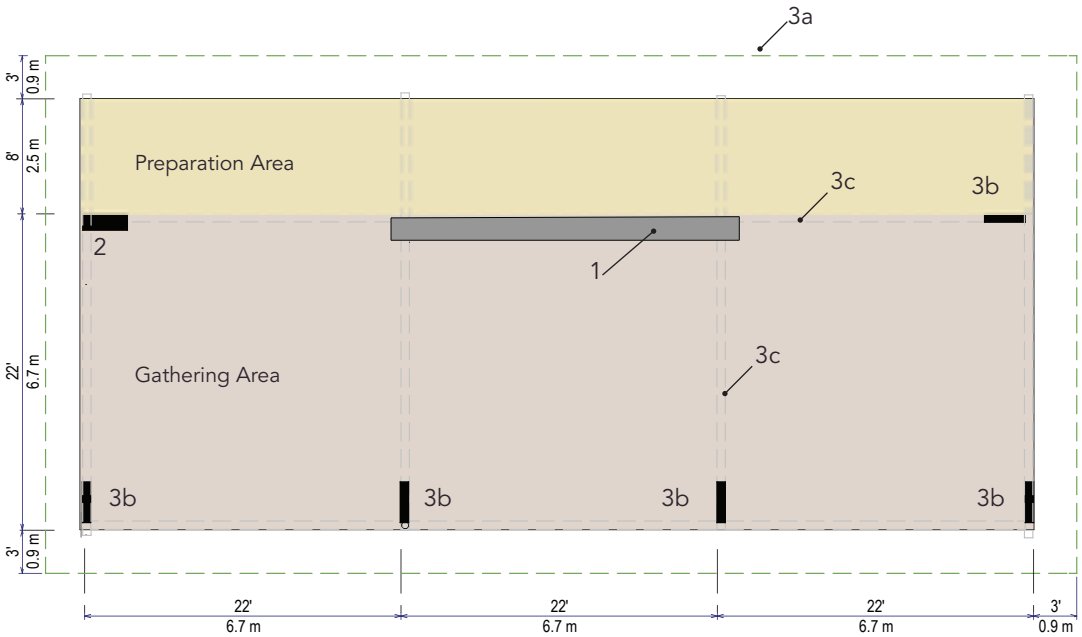
Furnishings

Each shelter is intended to host a fixed inventory of furnishings that can be interchanged for different events and uses.

The furniture setting uses the module components to create a banquet type arrangement for eating, meeting or educational sessions as well as a preparation area. It also allows the use of this facility by more than one group of visitors.

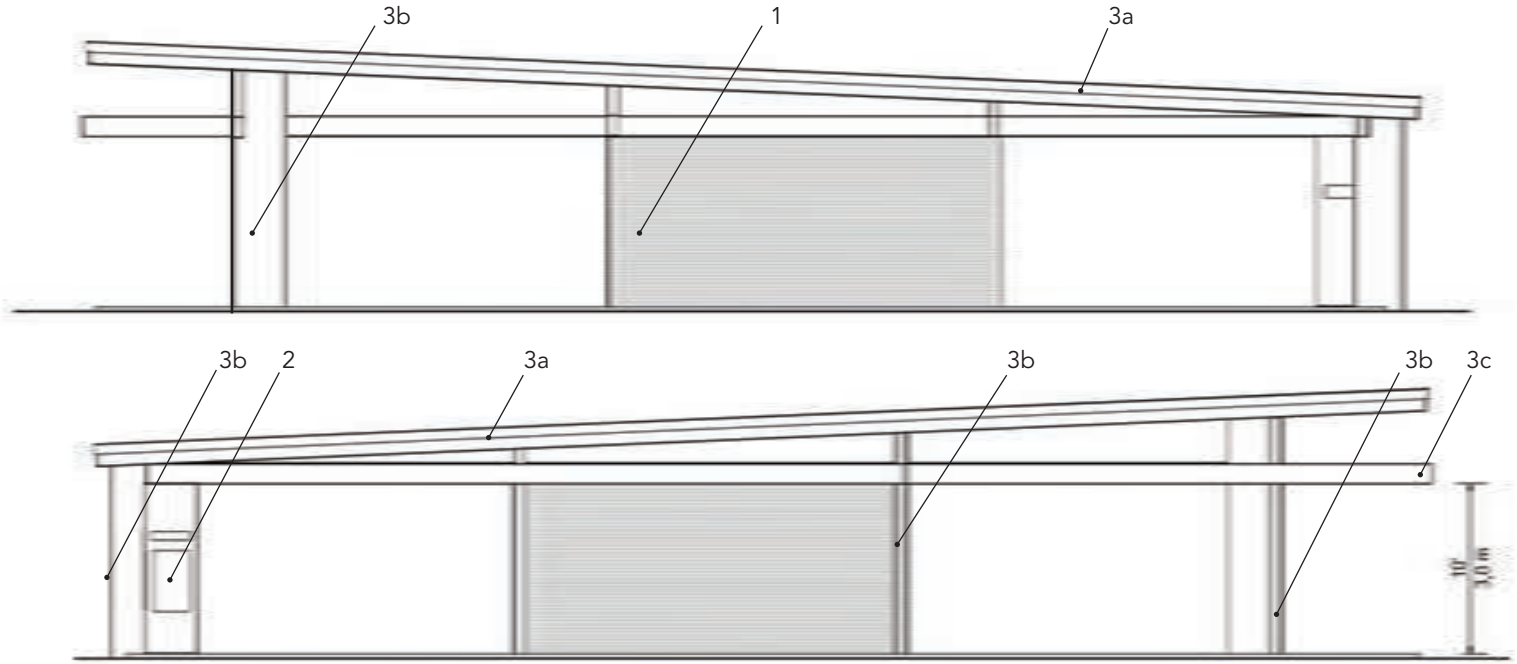
The examples shown here are intended to show not only flexibility but the ability for the usable area to expand from a closed protected core into the adjacent exterior space.

Basic Components	
1	Mass Wall
2	Communications Feature
3a	Roof
3b	Column
3c	Beam



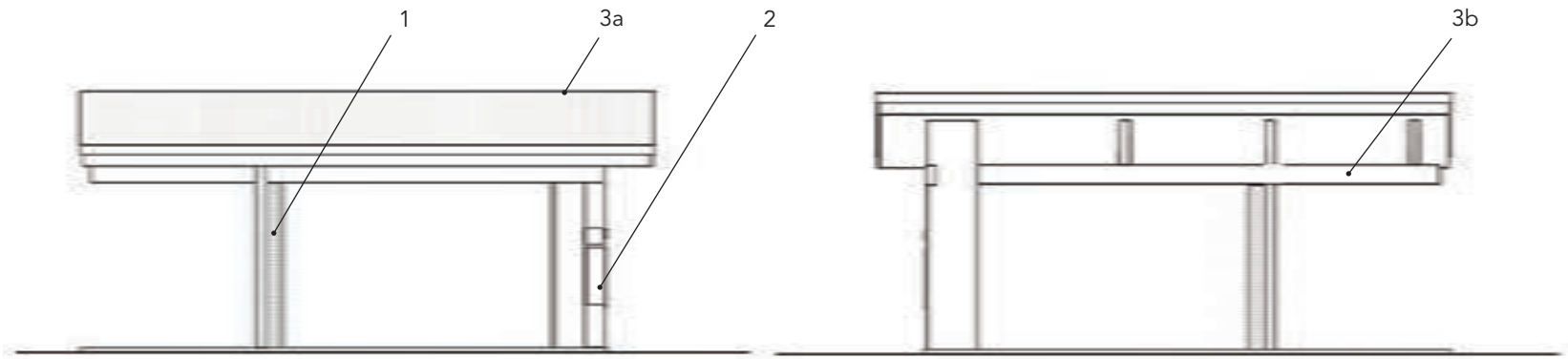
Floor Plan of Large Pavilion with Basic Components
Scale: NTS

Large Pavilion Elevations and Rendering



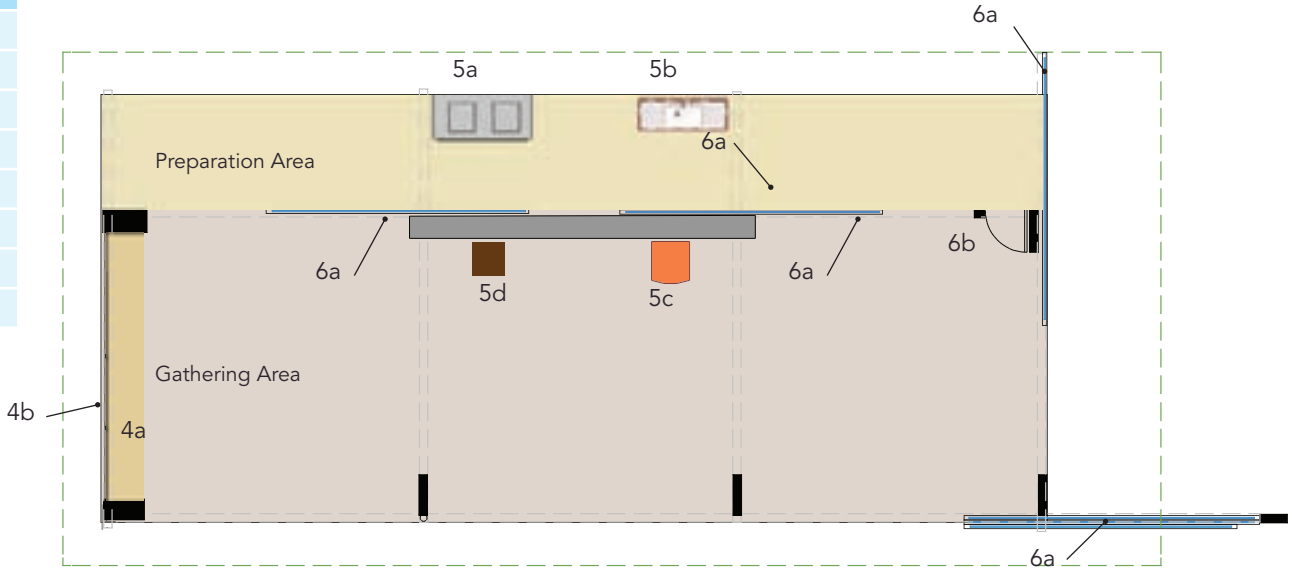
Large Pavilion Elevations with Basic Components

Large Pavilion with Optional Components



Basic Components	
1	Mass Wall
2	Communications Feature
3a	Roof
3b	Column
3c	Beam

Optional Components	
4a	Serving Table
4b	View Wall
5a	BBQ
5b	Sink
5c	Wood Stove
5d	Wood Storage
6a	Sliding Door
6b	Hinged Door



Floor Plan of Large Pavilion with Optional Components
Scale: NTS

Washrooms are primarily functional buildings but they inherently include a variety of activities. The following section describes the specific programming design components and a modular approach that can be used to develop these facilities.

Washroom Facility Components and Modules

The large washroom facility, intended for campground locations, is shown in context with a pavilion in the foreground. The image illustrates the similarity of the pavilion structure with the central entry portion of the washroom facility.

3.1 Introduction

Building upon the design elements expressed by the clean lines and simple structures of the Pavilions, Parks Canada's "new vision" for washroom facilities will be based upon a design approach that incorporates the same basic design elements, materials and character.

Material use and design character will maintain a common architectural theme while an increased emphasis on the use of modular components within the structure will allow the designer sufficient flexibility to respond directly to local programming needs.

This section explores basic programming considerations, important site context and landscape planning recommendations, and the key interior design and modular component elements that can be combined to create a washroom facility that will reflect user needs and site specific requirements.

About the "Modules"

The washroom facilities have been developed based on the principal of modularity that uses standardized dimensional units. This is to provide maximum flexibility for the designer. Individual components can be constructed as "modules" that can be arranged like a jigsaw puzzle or "Lego" blocks to meet the local programming needs, becoming a kit of parts for the washroom designer.

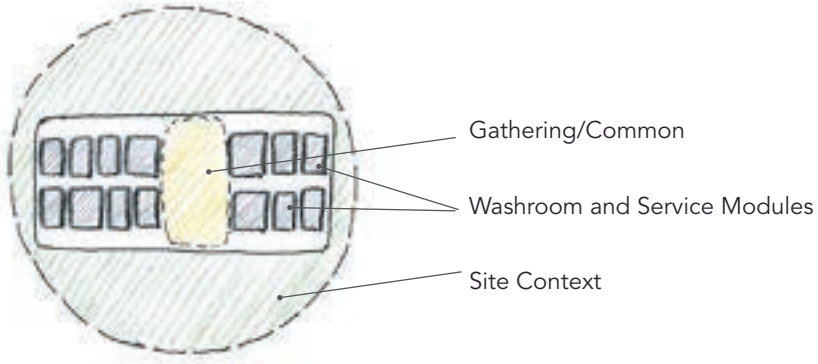
3.2 Programming Spaces

Washrooms, like the pavilion areas, are designed to have three main functional areas or zones:

Site Context and Landscape – The washroom facility should be incorporated and integrated with the surrounding landscape, road access, and campground site access.

Gathering / Common Space – In addition to the practical aspects of a washroom facility, a second meaningful opportunity of these buildings is to provide a common public space for communication, information and other services (such as laundry and vending machines) appropriate to the local setting.

Washroom and Service Modules – These facilities will be comprised of multiple individual toilets, showers, sink, barrier free and service modular units. Local programming needs will define the number and type of units required to meet the users' needs. The required modules will be organized inside the flexible building shell designed to match and reflect the architectural style of the pavilions.



Schematic Sketch of Programme Spaces for Washroom Facilities

3.3 Context for Washroom Facilities

Many of the site planning principles outlined in the pavilions section are also relevant to the washroom facilities.

In addition to typical site planning principles that apply to all buildings, the context surrounding the washroom facilities should be fundamental to the placement and orientation of the building structures.

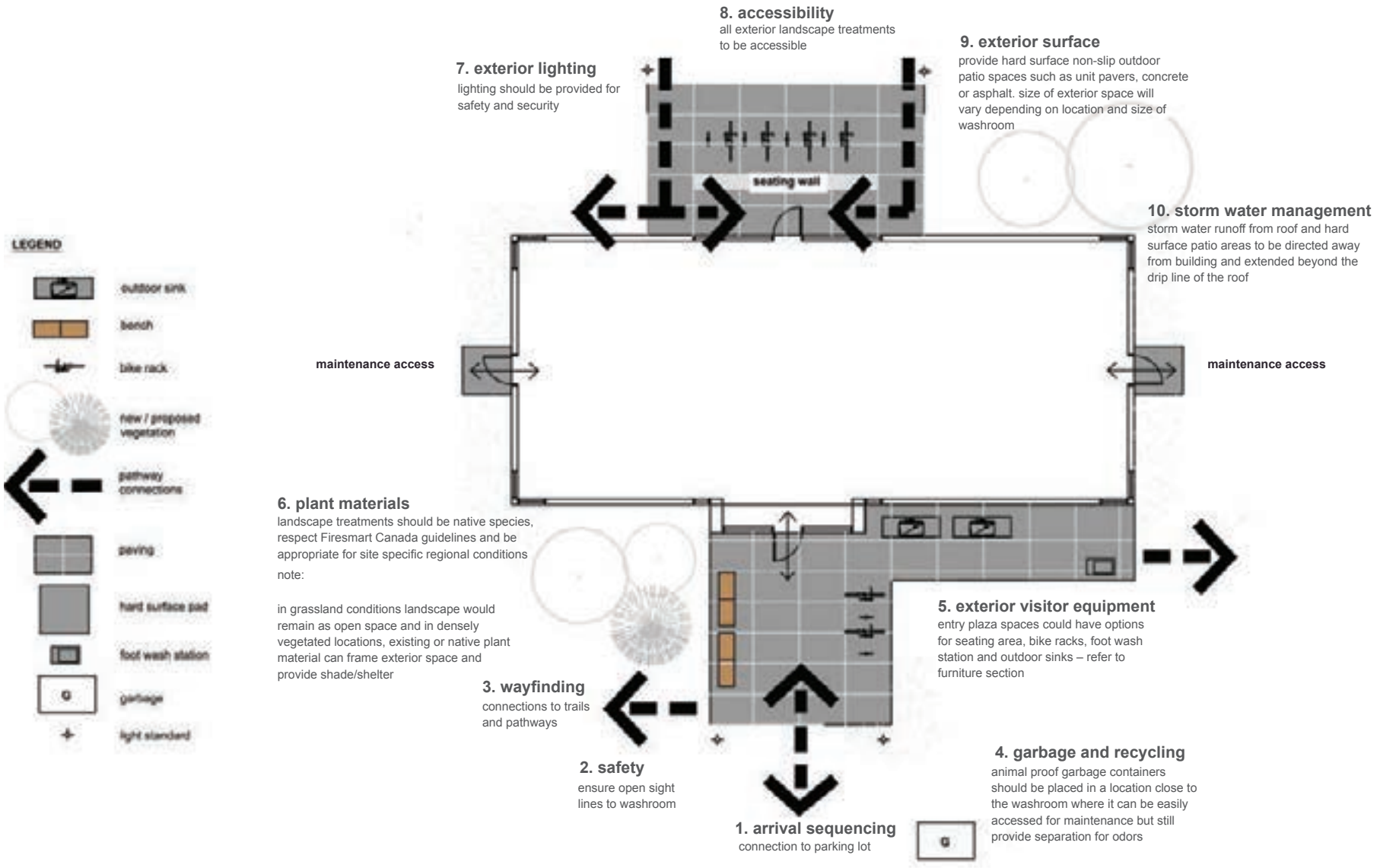
It is important to note that the exact placement and location of the washrooms will be dependent upon local needs and programming including site specific considerations such as terrain, number of visitors the site will receive and existing facilities in close proximity. Geotechnical considerations must also take place when deciding upon the optimal location and final foundation design for the washrooms.

Key considerations for placing the washrooms on each unique site include:

Providing Universal Access (Pedestrian/Bicycle/Vehicular/Wheelchair/Stroller): Washrooms should be centrally and conveniently located along roadways and pathway routes and in close proximity to destinations (beaches, rivers and landmarks) or other facilities (such as campgrounds and day use areas).

Integrating into the Surrounding Landscape: The washrooms are intended to be seamlessly blended and incorporated into the landscape. The washroom facilities should not detract from their setting in Parks Canada places.

Washroom Facility Landscape



Washroom Facility Landscape Diagram. Refer to content on the following page for detailed descriptions of each landscape design consideration

3.4 Landscape for Washroom Facilities

Landscape elements for washroom facilities will vary depending on regional conditions and location. Items on the following list represent general landscape elements that should be considered, but may not all be applicable to each site. Key considerations for the landscape, context and setting for the buildings should include:

1. Arrival Sequencing – As visitors approach the washroom, the landscape needs to direct them into the facility.

2. Safety – Sight-lines should be kept open to and around doors, pathways and exits. A clear view into the main area of the washroom facility should be provided. Crime Prevention through Environment Design (CPTED) principles should be used as and where appropriate.

3. Wayfinding – The washroom facility should be connected to pathways and trails from campgrounds and roadside facilities.

4. Garbage and Recycling – Animal proof garbage and recycle units should be visible from the parking lot or pathway. They should be placed so they are easily accessible from entrances and gathering nodes, but in locations that are typically downwind from those areas or far enough away that odors or animal conflicts can be avoided. All units should be placed where they can be easily accessed by garbage collection vehicles.

5. Exterior Visitor Equipment – Equipment, such as bike racks, should be located where they will not interfere with access to the building entrance. A pedestrian space should be planned and sized to ensure a path around the bikes when the racks are in use. In campgrounds and picnic areas, exterior sinks may be best located with washroom facilities rather than the pavilions. In locations that are in close proximity to beaches and rivers, a foot washing station should be considered. If provided, foot washing stations must be equipped with adequate plumbing and waste disposal features to accommodate the silts and sand.

6. Plant Materials – New tree, shrub and grass plantings should be native species and appropriate for the site specific regional conditions. Plantings should be arranged in organic groupings to imitate natural conditions. Non-native ornamental varieties and known wildlife attractants should be avoided. Plant materials could be used to guide pedestrian movements, frame views, provide sun and wind protection. Landscaping should be designed according to Firesmart Canada Vegetation Management guidelines for wild fire risk reduction.

7. Exterior Lighting – Lighting at washroom facilities should be provided for safety and security, while remaining Dark Sky friendly. The lighting should be directed downward to minimize light shed beyond the building area. LED and solar lights should be considered where possible.

8. Accessibility – Sites are to have barrier free accessibility for both access to and use of the facility. Connectivity to adjacent accessible facilities and pathway system should be provided.

9. Exterior Surfaces – Ground plane surfaces in and around the facility and leading to the entrances should have non-slip finishes or textures. Pathways and plaza surfaces should be made flush with surrounding grades to eliminate trip hazards. Regionally available or distinctive materials can be considered, but they must be durable (such as asphalt, concrete and stone pavers) and not require an unreasonable amount of maintenance. Design and construction of subgrade preparation should respond to local conditions and reduce occurrence of root penetration and frost movement.

10. Storm Water Management and Site Grading – Natural drainage patterns of the site must be considered when deciding on the location of washrooms. Plaza spaces and sidewalks immediately adjacent to the building should be graded to provide comfortable, accessible, easy approaches to the building and to direct run off away from the structure. Grading for these spaces should not exceed two percent. When buildings are placed in areas with steeper slopes, the pathways leading to the building should not exceed local building code requirements for accessibility. Remote locations should be reviewed on a site by site basis, but ease of access should still be integral to the arrival areas. Storm water should be directed onto soft landscape spaces.

3.5 Washroom Facility Components

Washroom facilities will include a number of basic components.

These include:

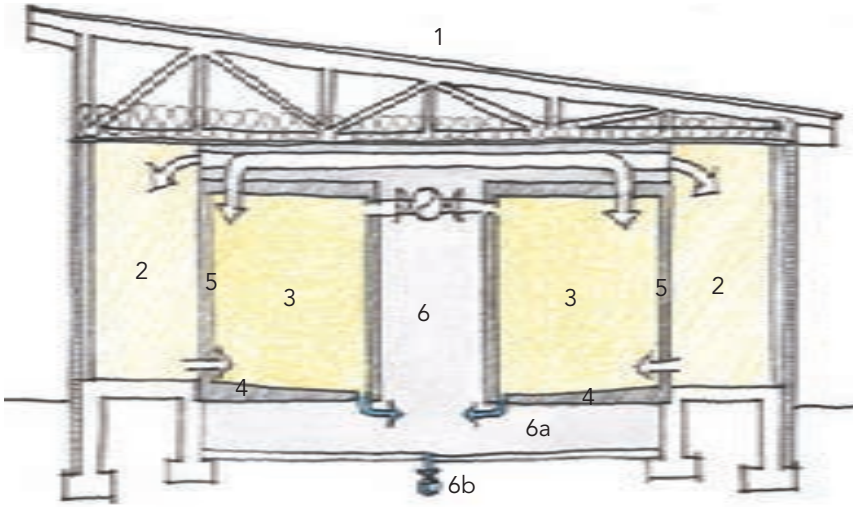
• A Building Shell, which is intended to have a similar appearance to the pavilion structure

• A Public Gathering / Common Space

• Washroom Modules

• A Mechanical Plenum Space

• Service Modules



Washroom Facility Components Diagram

The number, type and configuration of washroom modules required at the local level will determine the design of the other facility components such as the dimensions of the building shell, public gathering areas, mechanical plenum space and service modules.

The following pages describe the components in detail and outline the purpose of the individual components, materials suggestions, characteristics and the intended expression of each.

1. Base Building Shell *– Conventional construction of the building envelope to provide for space around the washroom modules. The building shall meet the National Energy Code.*

2. Public Areas *– Public areas around washroom modules serve as an entry point and common area. These areas are pressurized to ensure high air quality.*

3. *Modules*

Washroom Modules (sink, shower, barrier free shower, etc.) – Placed inside the base building shell.

Service Modules – Rated assembly modules for mechanical equipment and modules for janitorial equipment need to be sized per building requirements.

4. Floors *– The module floors will contain the following elements:*

- *a slope towards the trench drain*
- *large format floor tiles*
- *steel stud construction*

5. *Walls* *– The module walls will contain the following elements:*

- *steel stud construction*
- *a backer board*
- *large format porcelain tile*

6. Plenum Space *– The service space will be sized to accommodate service access and fresh air and return air ducts*

a) minimum 800 mm Crawl Space under modules to provide access
b) floor drains

3.5.1 Base Building Shell

Purpose

• To provide the architectural envelope within which all units are contained

Materials and Design Considerations

• Local stone

• Heavy timber

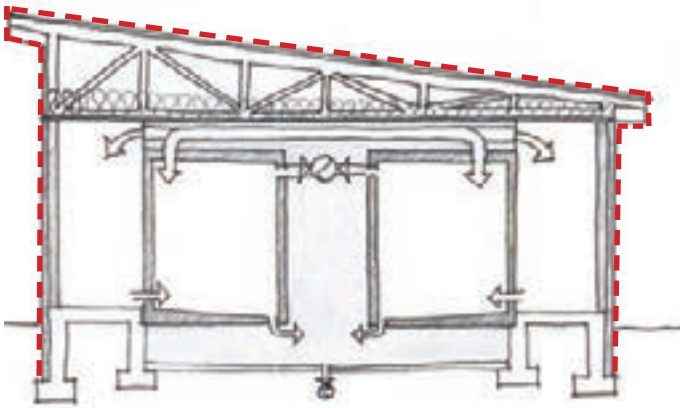
• Distressed timber

• Siding

• Windows

• Doors

• Concrete foundation



Washroom Facility Key Section showing Base Building Shell

Expression

• Dimensions and size will vary depending on number of modular units required

• Meet National Energy Code with high performance walls and mechanical systems.

• Style and construction of the base building should include an open vaulted wood slab roof and exterior finishes that follow the style and expression of pavilion structures.

• Interior finishes need to be suitable for wet environments.

• The exterior access or route to the plenum space must be easily accessible for maintenance staff who may need to bring tools, equipment or vehicles.

• Construction type can vary depending upon location.

• Corridors leading to the modules should ideally be 1.8 metres (6 feet) wide to provide comfortable access. Corridors with widths of less than 1.5 metres (5 feet) are discouraged.

• Windows should be considered at the end of the corridor to provide natural light and sight lines into the space from the exterior. However, some modules (such as the Men's Washroom Module) must be placed so that sight lines to the module from the common space or the exterior windows will not create privacy concerns.

• Emergency exit doors at the end of the corridor may be considered, if required by building code or site specific needs.

• Foundation design to be based on geotechnical and site specific design.

3.5.2 Public Gathering / Common Space

Purpose

• To provide comfortable waiting areas

• To provide areas for communications and public announcements or other common services

Materials and Design Considerations

• Public space must be durable and able to withstand high use

• Roof structures and beams to be similar to the pavilion

• Materials should be commercial grade

• Cabinets and mill-work should be phenolic panels for robust performance

• Communications feature can be located here

Expression

• To be high quality attractive spaces.

• Large windows should be provided into the public space. This provides two functions: (1) to provide views of the location, thereby tying the building to the area, and (2) to allow users to see into the space before entering.

• May include sinks for washing and cleaning. This allows plumbing to be consolidated at the washroom buildings rather than the pavilions.

• Exterior sinks: Greywater sinks may be located outside under the roof overhang for use by campers or picnickers. These should be large commercial kitchen style sinks with drainage racks, manufactured from commercial grade stainless steel. Since they are not intended for personal grooming, mirrors, soap dispensers and hand drying facilities would not be required.

• Interior sinks: Some sinks can be included in the interior public common space. These would be included to facilitate cleaning of camping equipment and personal belongings. In these situations, the sink areas should include large counter top areas of uniform material.

• Laundry: Washers and dryers can be included in this space.

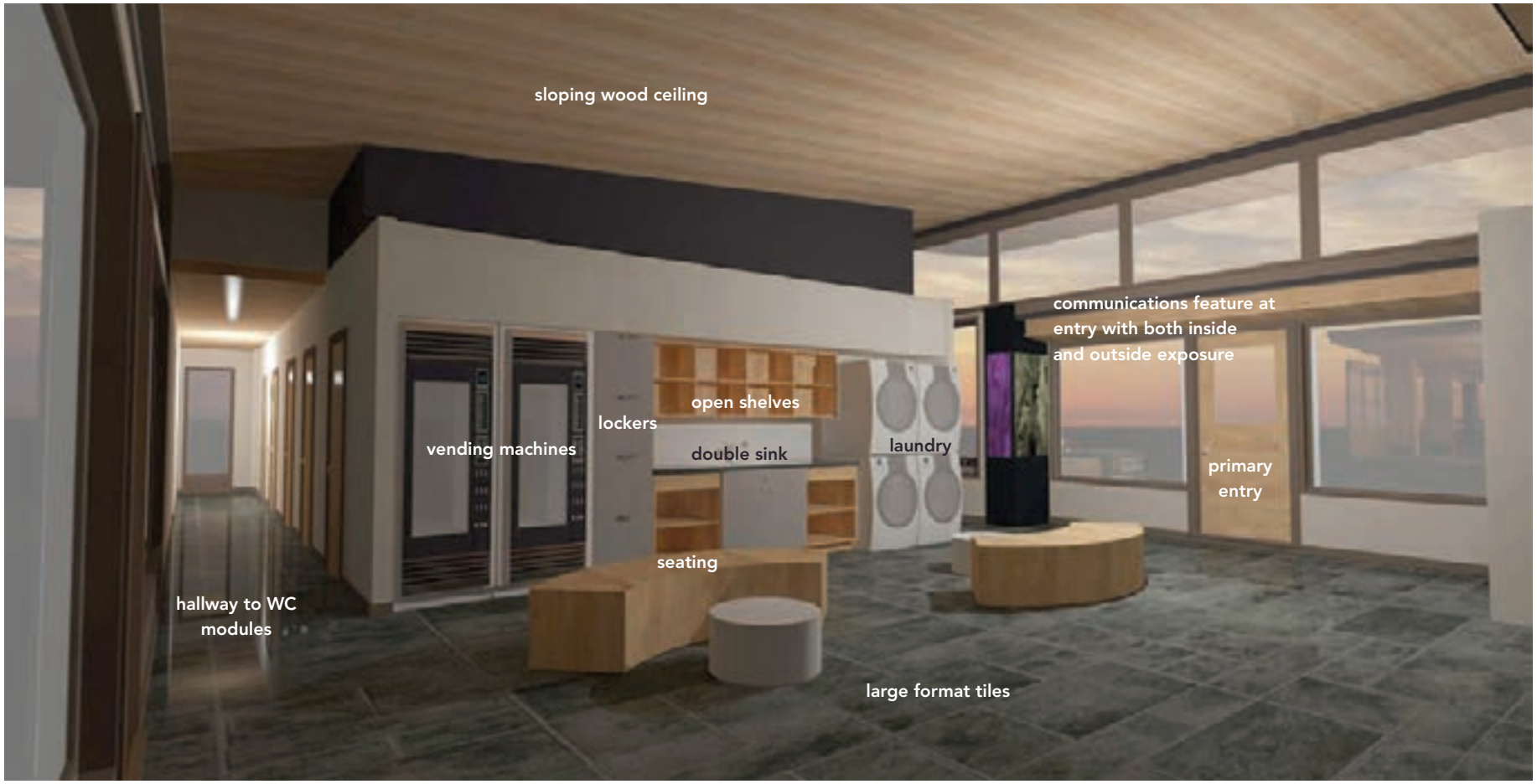
• Lockers: Phone charging lockers or other lockers may be appropriate for some locations. Food storage in these lockers should be discouraged. Lockers will require additional maintenance, and may not be appropriate for all locations. If necessary, storage cabinets for materials related to janitorial or other facility functions may be included.

• Vending machines maybe included.

• Seating may be included.

• The orientation and location of the communication feature should accommodate views from both inside and outside.

Public Gathering / Common Space



Perspective of the Interior Washroom Facility Public Space

3.5.3 Modules (General)

Purpose

• To provide the designer with flexibility and design variations to allow for site specific design solutions.

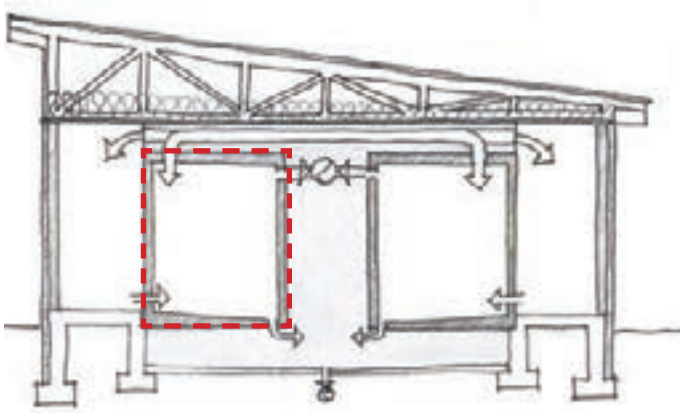
• To provide opportunities for alternate installation techniques, if appropriate. The modules can be built in two different ways, depending on needs or remoteness: (1) built on site in a conventional construction process or (2) built elsewhere and brought to site for installation.

Materials and Design Considerations

• The modules have been sized to meet minimum standards to achieve barrier free design and maximize flexibility.

• Materials and finishes should be selected for durability and ease of cleaning. The life-cycle for primary surfaces should be 30 plus years.

• The modules are to be serviced from the plenum wall or crawl space.

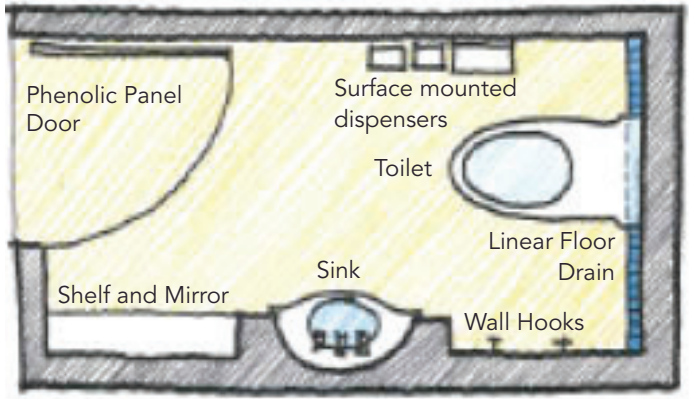


Washroom Facility Key Section showing location of Modules

Expression

• To allow for both traditional washroom layouts as well as flexible approaches for providing barrier free and gender neutral spaces.

• The number and type of washroom modules will dictate the overall size of the base building as well as the number and type of service modules.



Washroom Module 1A

Standard Components for Washroom Modules

- *Surface mounted dispensers to accommodate replacement without the need to rebuild the wall.*
- *Wall hooks*
- *Shelf and mirror feature and waste receptacle*
- *Wall hung toilet has all connections and electronics accessible from the service space.*
- *Unitized sink built into the wall (See Appendix B) This Unit combines sink, faucet, soap dispenser, and hand dryer in one unit. This can be replaced by a more traditional molded solid surface sink and counter with fixtures. This alternate will project further into the space but can be achieved.*
- *Linear floor drain at low end of floor.*
- *Doors can be phenolic panels to ensure long term performance.*

3.5.4 Washroom Modules

Purpose

• To provide a modular approach to facility design

• To allow flexibility and site specific solutions to washroom facility footprints

• To allow variations for traditional washroom layouts, accessibility and gender neutrality

Materials and Design Considerations

• Materials should be durable and able to withstand extremely high use and rigorous cleaning over many years. Any material that propagates mold should be avoided.

• Where plywood is required for strength and backing, pressure treated products that comply with Parks Canada guidelines should be used.

• All exposed materials in the module should be impervious and not require sealers. There should be limited exposed grout and no exposed sealant, especially in corners.

• The design should provide for full ventilation and access.

• Escutcheon plates etc. would be required to manage access to plumbing and key connection locations of the module not accessible from the crawl space.

• All plates and hardware to be stainless steel.

• Inside corner finishes require integrated 45 degree trim (such as Schluter) to mitigate the challenge of cleaning.

• Electronics in washroom modules must be designed to allow for spray down of the space.

• Power outlets are to meet code for wet environments.

• Steel stud wall construction with tile backer sheathing and/or plywood should be covered with large format porcelain panels or large format tiles.

• Flooring materials, where possible, should be monolithic or a limited number of tiles to minimize grout lines (See Dekton for an example for large format options).

• Lighting should be energy efficient (LED lighting where possible) and where feasible natural lighting should be encouraged.

• Lighting in modules should be water resistant with occupancy activated sensors, eliminating the need for switches.

Expression

• Walls should be light toned with a smooth surface that has some color variation to disguise wear and tear.

• The ceiling should utilize a panel system to allow for access to the mechanical space above.

• The floor is to be sloped (minimum 1%) in all module types, whether janitor or shower unit, to a standard trench drain along the length of the end wall.

• Trench drains should be accessible from the plenum or crawl space for ease of maintenance.

• Special provision for cleaning of drains must be developed in areas where large amounts of soil or sand are tracked.

• Fixtures (sinks, toilets, showers, hooks, etc.) will be defined by the programming needs of the facility.

3.5.5 Options and Approaches for Universal Design

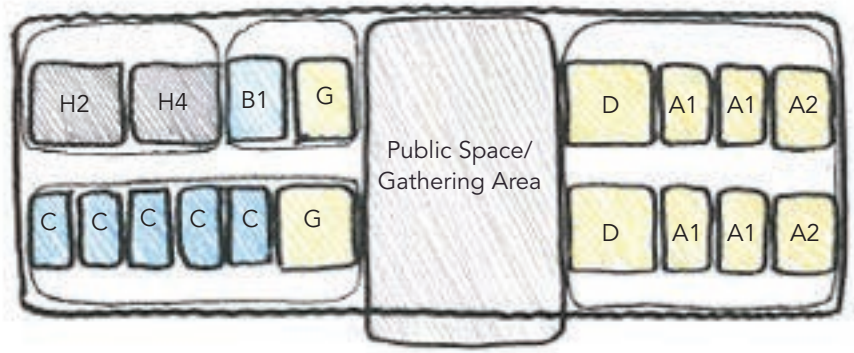
The modular approach for washroom design allows the designer flexibility to plan each specific facility along a spectrum from universally accessible to traditionally gendered with barrier free options. The chosen detail design approach may be partially dependent on whether the building is a new-built or being renovated and therefore limited by size or layout constraints. A variety of approaches are further explored in the washroom prototype section of this document.

Universal Facilities:

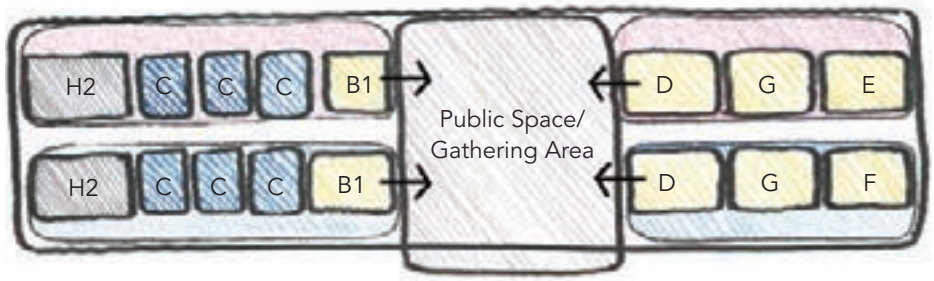
• These are considered universal, where all spaces are intended to be easy, usable and welcoming for everyone to use, regardless of gender identity or physical ability.

• All building layouts, including washroom and shower modules, should be gender neutral and barrier free.

Washroom Facility Modules	
Small Modules	
A1	Standard Washroom Module
A2	Standard Washroom Module with Urinal
C	Shower Module
H1	Small Janitor Module
Medium Modules	
B1	Barrier Free Shower Module
H2	Medium Janitor Module
Large Modules	
D	Barrier Free Washroom Module
E	Traditional Washroom Module
F	Men's Washroom Module
G	Sink Module
H3	Large Janitor Module
H4	Mechanical and Electrical Module
Extra Large Modules	
B2	Barrier Free Washroom Module with Shower



Sample Configuration for Inclusive Washroom Facility



Sample Configuration for Traditional Gendered Washroom Facility

Accessible Design Approaches:

Accessible Design Approaches:
1. Universal Facilities *(not pictured)*
Every module and public space is barrier free, gender neutral and family friendly.
2. Inclusive Facilities
Not all modules are barrier free, but the facility is gender neutral and family friendly with: universal barrier free toilet modules, barrier free shower modules, gender neutral shower modules, gender neutral toilet modules, gender neutral toilet/ urinal modules,sink modules and Janitor/Service Modules.
3. Traditional Gendered Facilities
Women's Corridor with: sink module, toilet module, and shower modules;
Men's Corridor with: sink module, toilet/ urinal module, shower modules;
Public Gathering Space with access to: barrier free toilet and shower modules
and Janitor/Service Modules.

Inclusive Facilities: Barrier Free, Gender Neutral and Family Friendly:

• While not fully universal, inclusive facilities provide options for welcoming a wide spectrum of visitors.

• Building layouts should be gender neutral with some barrier free modules. Consider welcoming family use by planning more gender neutral barrier free modules than the minimum needed to meet accessibility codes.

• Space and building configuration constraints may dictate a design where not every module is barrier free, but overall the building is able to welcome all visitors.

Traditional Gendered Facilities with Barrier Free Options:

• Where a facility is designed with traditional gender separation, gender neutral barrier free modules should be included that are accessed from the common space rather than through a gender specific corridor.

3.5.6 Service Modules (Janitorial and Mechanical/Electrical)

Purpose

• To provide modules for functional and maintenance aspects of the facility.

Materials and Design Considerations

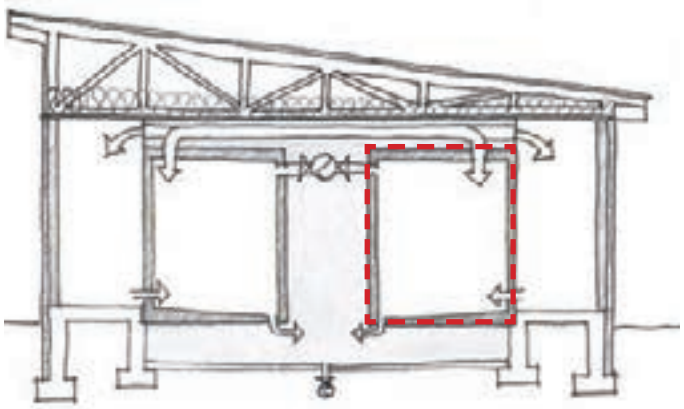
• Materials and fixtures will be as required to meet specific service needs.

• The number and configuration of service modules required will be determined by the size of the washroom facility and the number and type of modules selected.

Expression

• **Mechanical modules** – These modular units are to be designed to house mechanical and electrical facilities. The number and interior component needs will be subject to engineering criteria and should be designed to fit within three available modular sizes.

• **Janitor modules** – These modular units are to be designed to hold equipment and supplies for cleaning and maintenance of the facility.



Washroom Facility Key Section showing location of Service Modules

3.5.7 Plenum Space and Crawl Space

Purpose

• To provide a service zone for the plumbing, electrical and mechanical functions.

Materials and Design Considerations

• For maximum efficiency, modules should be considered in pairs on either side of plenum space.

• Plenum space is to be sized to meet engineering requirements of each facility design, but should not be less than 1.2 metres (4 feet) in width. This service zone of the building is to be sized to provide access to the rear of all modules. This allows maintenance and installation of plumbing, HVAC, and electronics.

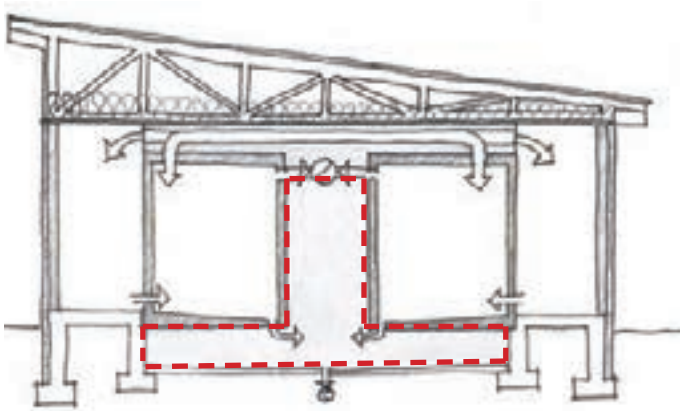
• The crawl space, designed to allow for access under the modules, has a minimum 800 mm clearance. This space continues under the public space to connect the two ends of the building.

• The modules will receive fresh air and ventilation in concert with the overall building system to ensure proper ventilation to the modules and high air quality in common public areas. Ventilation must be designed to ensure the crawl space is dry and properly exhausted.

• In locations where modules abut exterior walls, there would be a minimum air space with a double wall configuration based on local design standards.

Expression

• The plenum and crawl space floor is to be sloped to floor drains for easy cleaning and maintenance.



Washroom Facility Key Section showing location of Plenum and Crawl Space

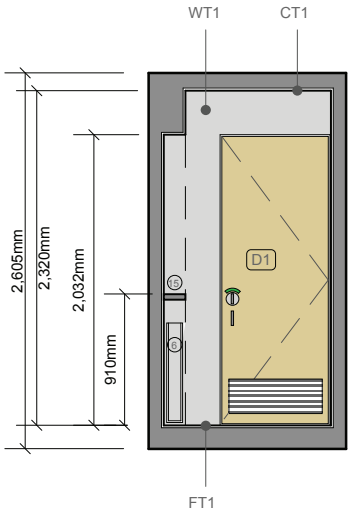
3.6 The Modules

The following section presents the various modular components that will be selected and combined by the designer during the design and development of each washroom facility.

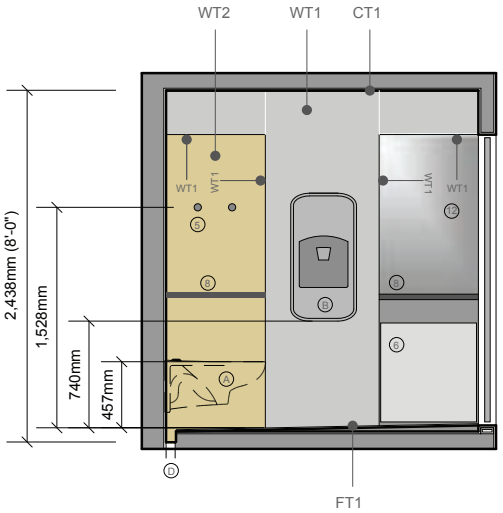
Washroom Facility Modules		
Category of Module	**Exterior Module Dimensions** (Dimensions are Approx.)	**Types of Modules in Each Category**
Small Modules	W: 1370mm (4’-6”) by L: 2440mm (8’-0”)	• Standard Washroom Module (A1) • Shower Module (C) • Small Janitor Module (H1)
Medium Modules	W: 1830mm (6’-0”) by L: 2440mm (8’-0”)	• Standard Washroom Module with Urinal and Toilet (A2) • Barrier Free Shower Module (D) • Medium Janitor Module (H2)
Large Modules	W: 2745mm (9’-0”) by L: 2440mm (8’-0”)	• Barrier Free Washroom Module (B1) • Traditional Washroom Module (E) • Men’s Washroom Module (F) • Sink Module (G) • Large Janitor Module (H3) • Mechanical and Electrical Module (H4)
Extra Large Modules	W: 4114mm (13’-6”) by L: 2440mm (8’-0”)	• Barrier Free Washroom Module with Shower (B2)
Note: All modules have a standard exterior height of 2605mm (8’-5”).		

Various sizing combinations of Washroom Facility Modules

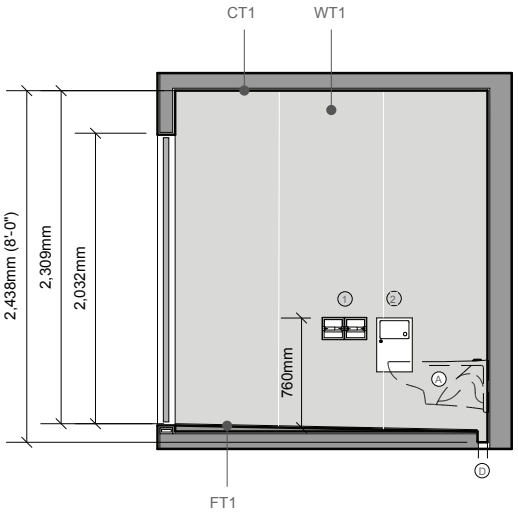
Washroom Module A1 (Elevations)



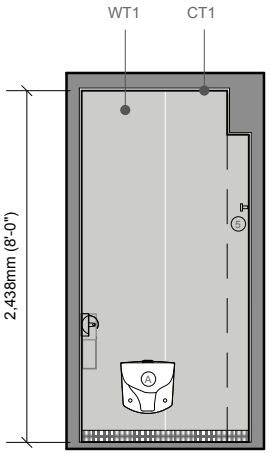
Elevation A: view of door from inside module



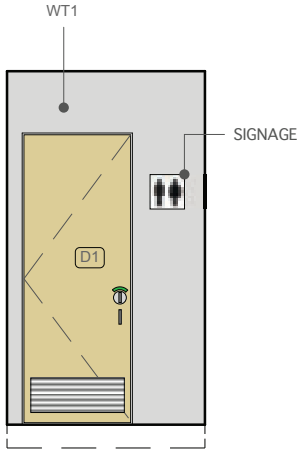
Elevation B: view of sink and mirror



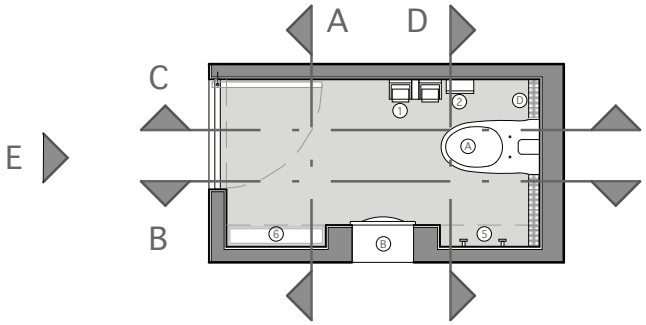
Elevation C: side view of toilet



Elevation D: view of toilet



Elevation E: view of door from hallway

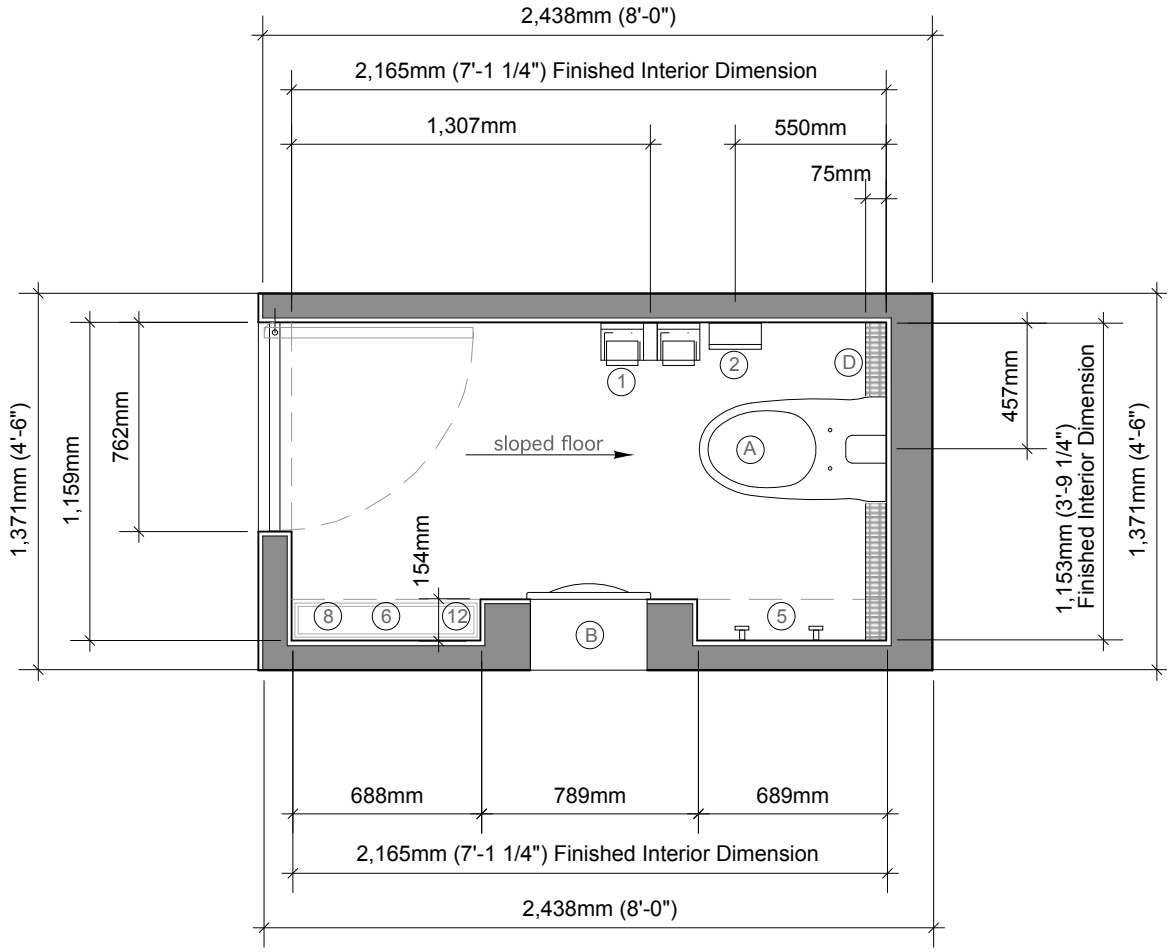


Finishes	
WT1-2	Large format porcelain
FT1	Large format floor tile
CT1	Phenolic ceiling panel
D1	Phenolic door panel
D2	Phenolic door panel barrier free door

Washroom Module Elevations

Scale: NTS
For additional information on drawing tags refer to chart Floor, Wall and Ceiling Finishes at end of section.

Standard Washroom Module A1



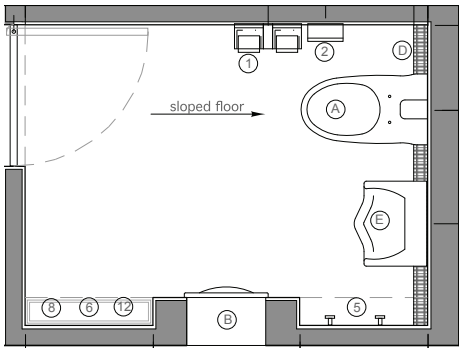
Scale: NTS

Washroom Module A2 (alternate with urinal and toilet)

This alternate module, with a urinal and toilet, makes this unit a practical standard where universal toilet options are needed.

The size of the module is 'medium' or 6 X 8ft.

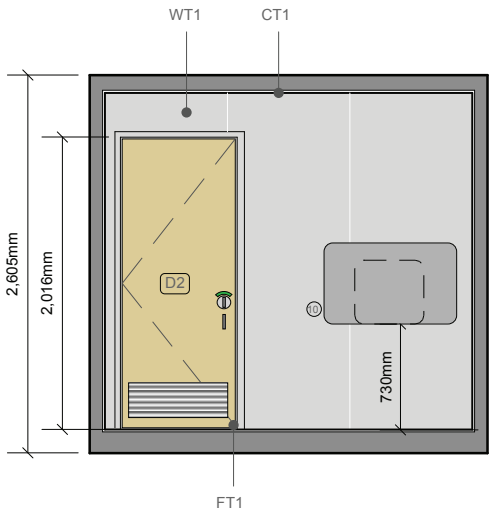
Note: Where fixtures are mounted on side walls, plumbing will lead to crawl space or plenum.



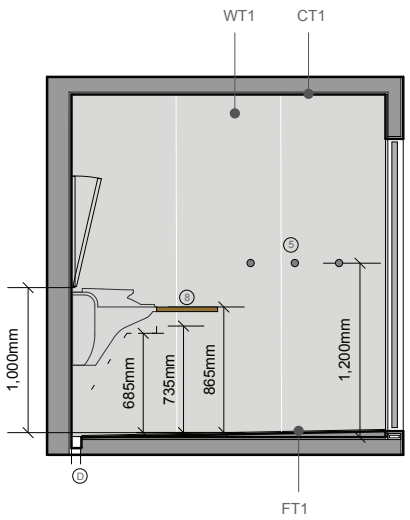
Plumbing Fixtures	
A	Wall hung toilet
B	Sink combo
C	Shower/controls N/A
D	Linear floor drain
E	Waterless urinal
F	Barrier free sink combo N/A
G	Vanity sink N/A

Bath Accessories	
1	Toilet paper dispenser
2	Sanitary disposal unit
3	Grab bars N/A
4	Shower soap dispenser N/A
5	Wall hooks
6	Waste receptacle
7	Bench N/A
8	Shelf
9	Folding shower seat N/A
10	Folding change table N/A
11	Shower curtain and rod N/A
12	Mirror

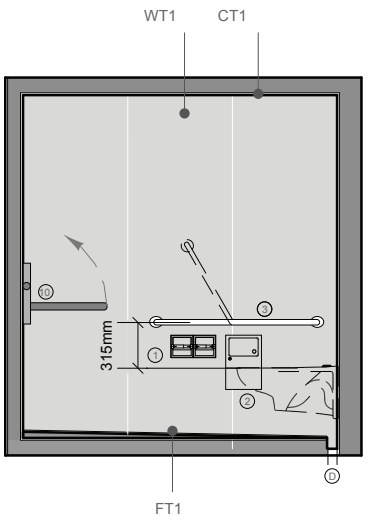
Barrier Free Washroom Modules B1 (Elevations)



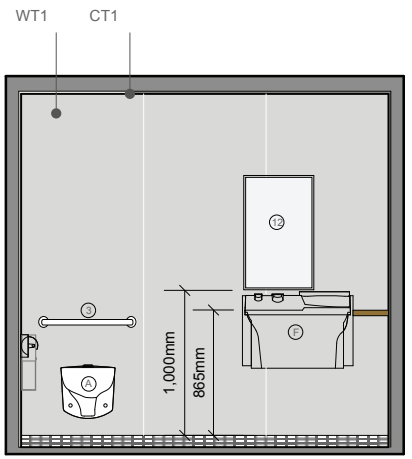
Elevation A: view of door from inside module



Elevation B: view of wall with shelf

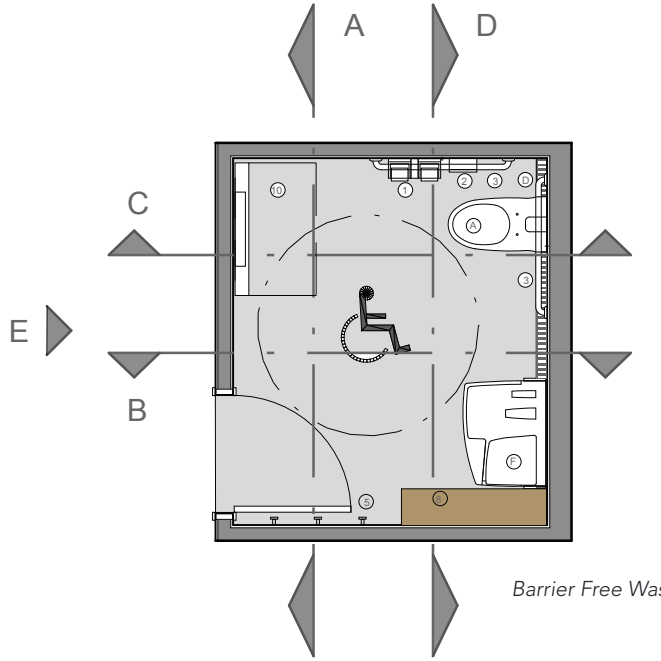


Elevation C: view of wall with change table and toilet



Elevation D: view of wall with toilet, sink and mirror

Elevation E: view of door from hallway



Barrier Free Washroom Floor plan

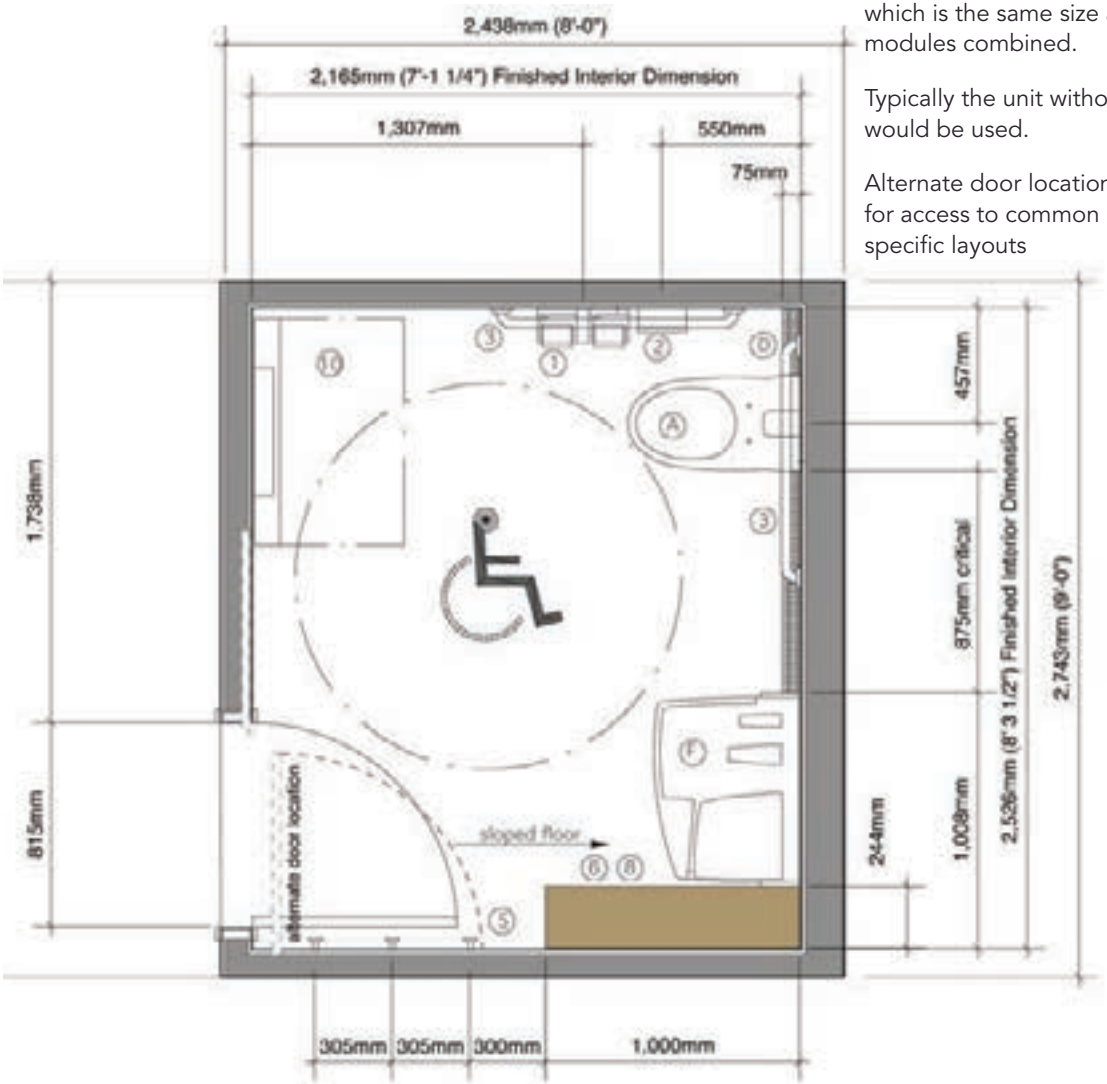
Finishes	
WT1-2	Large format porcelain
FT1	Large format floor tile
CT1	Phenolic ceiling panel
D1	Phenolic door panel
D2	Phenolic door panel barrier free door

Barrier Free Washroom Module Elevations

Scale: NTS

For additional information on drawing tags refer to chart Floor, Wall and Ceiling Finishes at end of section.

Barrier Free Washroom Module B1



Scale: NTS

Barrier Free Washroom Module with Shower B2

These modules are intended to be universally accessible and barrier free for all visitors, including people with disabilities and families.

The size of the module is 13'6"x 8", which is the same size as three small modules combined.

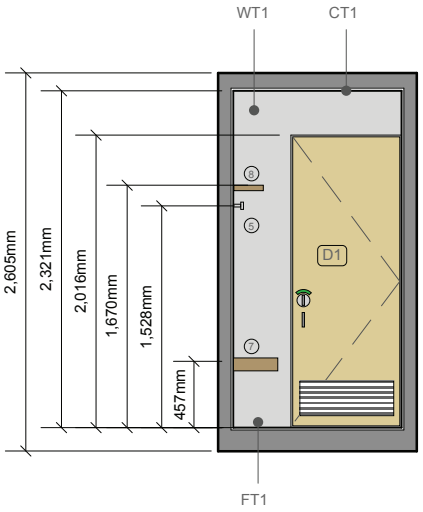
Typically the unit without the shower would be used.

Alternate door locations can be used for access to common areas for gender specific layouts

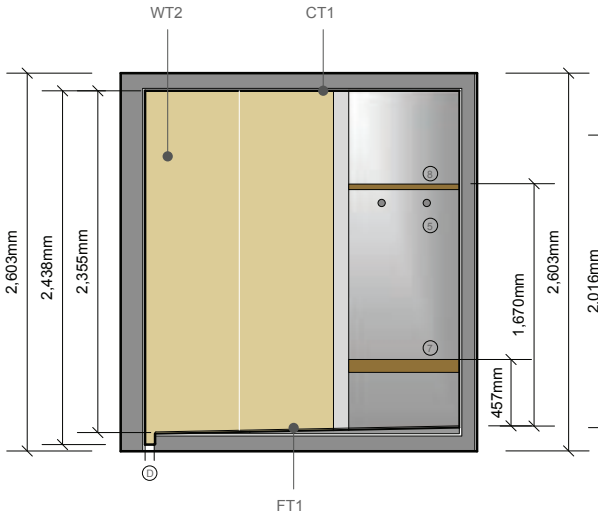
Plumbing Fixtures	
A	Wall hung toilet
B	Sink combo N/A
C	Shower/controls
D	Linear floor drain
E	Waterless urinal N/A
F	Barrier free sink combo
G	Vanity sink N/A

Bath Accessories	
1	Toilet paper dispenser
2	Sanitary disposal unit
3	Grab bars
4	Shower soap dispenser
5	Wall hooks
6	Waste receptacle
7	Bench / Adult changing table
8	Shelf
9	Folding shower seat
10	Folding change table
11	Shower curtain and rod N/A
12	Mirror

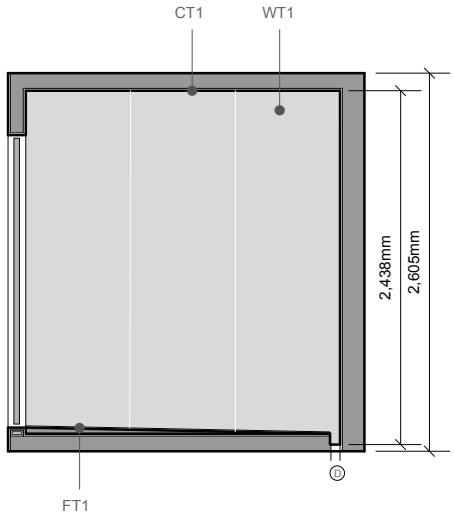
Shower Modules C (Elevations)



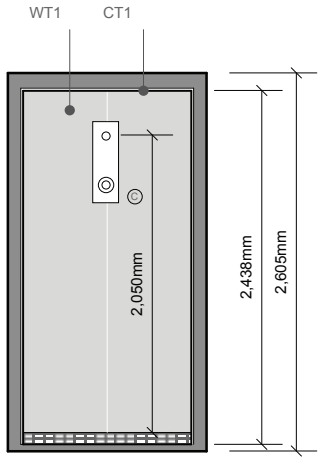
Elevation A: view of door from inside module



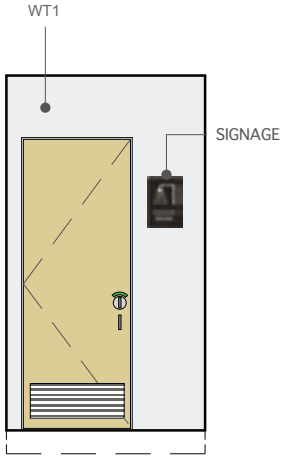
Elevation B: view of bench and shower



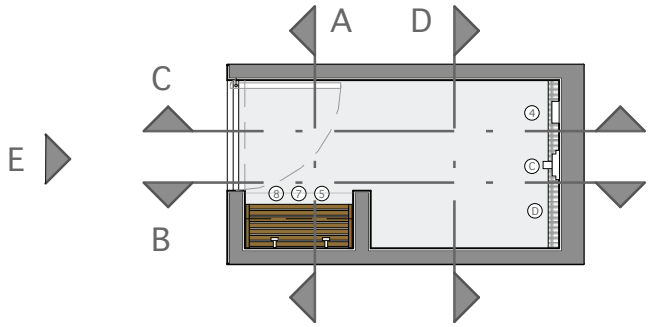
Elevation C: view of shower



Elevation D: view of shower



Elevation E: view of door from hallway



Basic Shower Module Floor Plan

Finishes	
WT1-2	Large format porcelain
FT1	Large format floor tile
CT1	Phenolic ceiling panel
D1	Phenolic door panel
D2	Phenolic door panel barrier free door

Shower Module Elevations

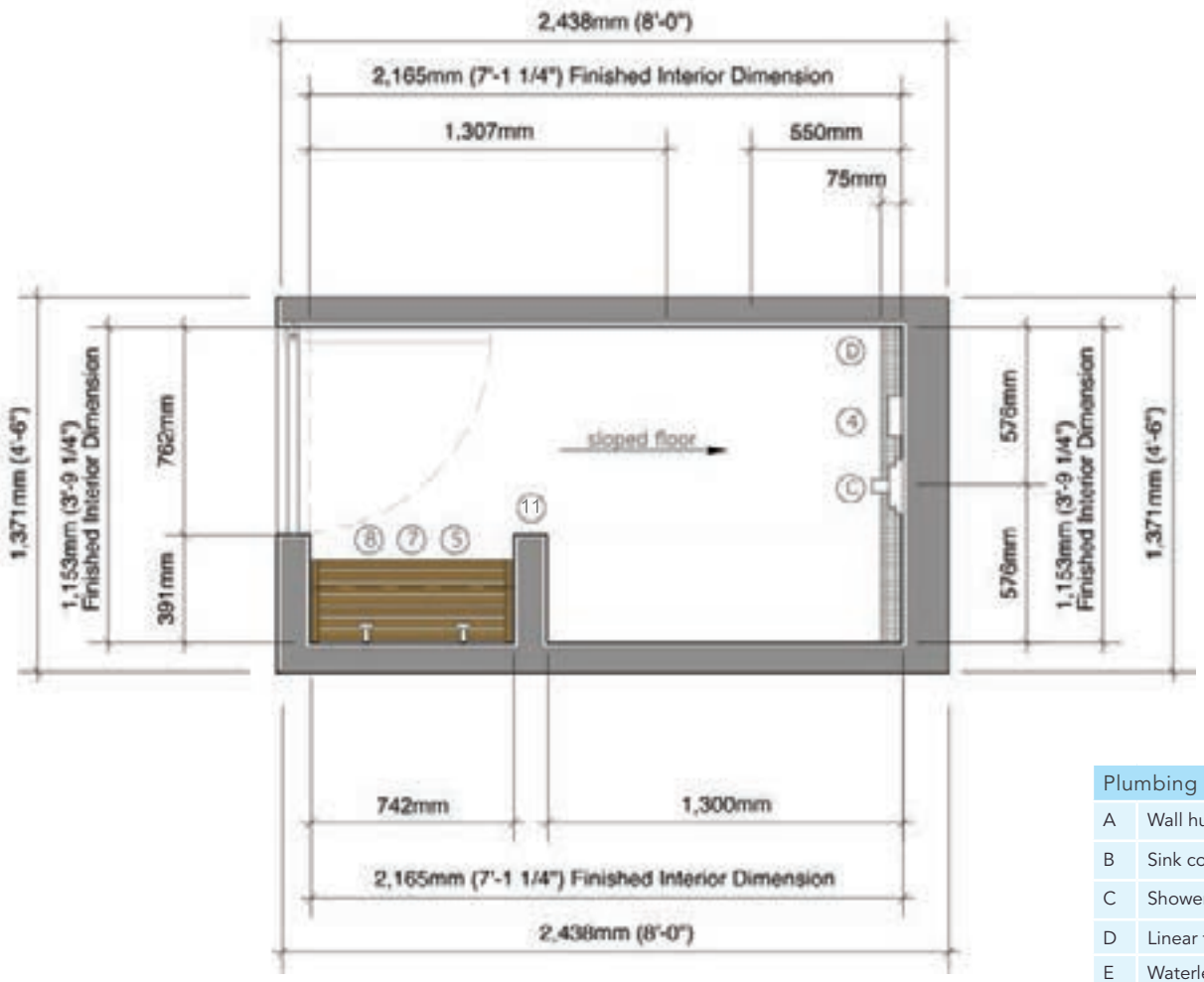
Scale: NTS

For additional information on drawing tags refer to chart Floor, Wall and Ceiling Finishes at end of section.

Shower Module C

This is a typical shower module.

The floor for the shower modules would be sloped at 1%.

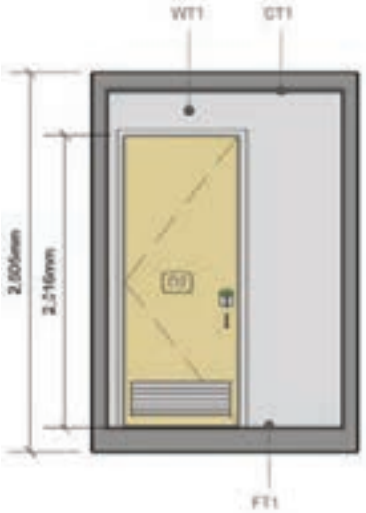


Scale: NTS

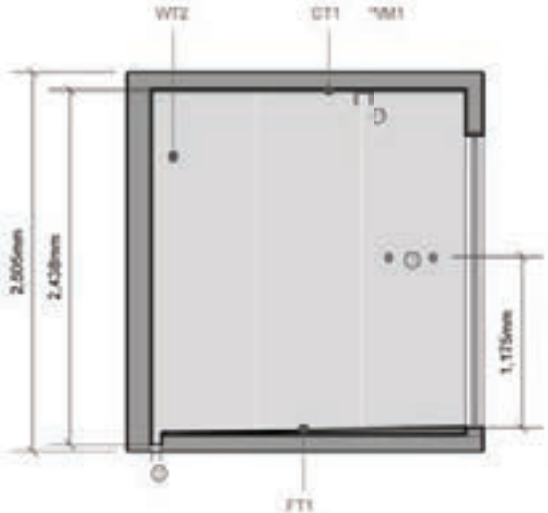
Plumbing Fixtures	
A	Wall hung toilet N/A
B	Sink combo N/A
C	Shower/controls
D	Linear floor drain
E	Waterless urinal N/A
F	Barrier free sink combo N/A
G	Vanity sink N/A

Bath Accessories	
1	Toilet paper dispenser N/A
2	Sanitary disposal unit N/A
3	Grab bars N/A
4	Shower soap dispenser
5	Wall hooks
6	Waste receptacle N/A
7	Bench
8	Shelf
9	Folding shower seat N/A
10	Folding change table N/A
11	Shower curtain and rod
12	Mirror N/A

Barrier Free Shower Module D (Elevations)

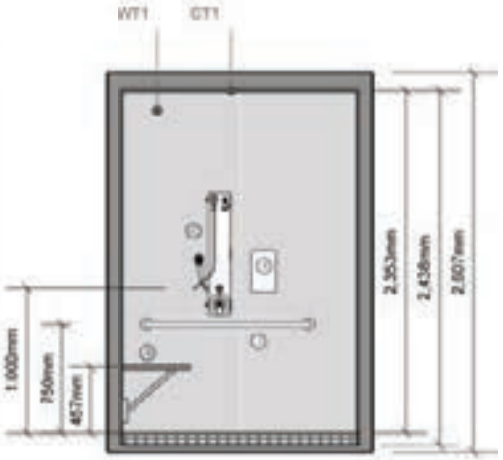


Elevation A: view of door from inside module



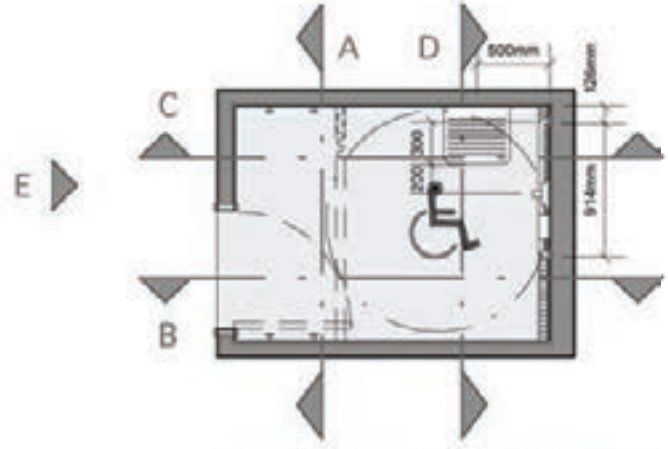
Elevation B: view of shower

Elevation C: view of shower and bench



Elevation D: view of shower and bench

Elevation E: view of door from hallway



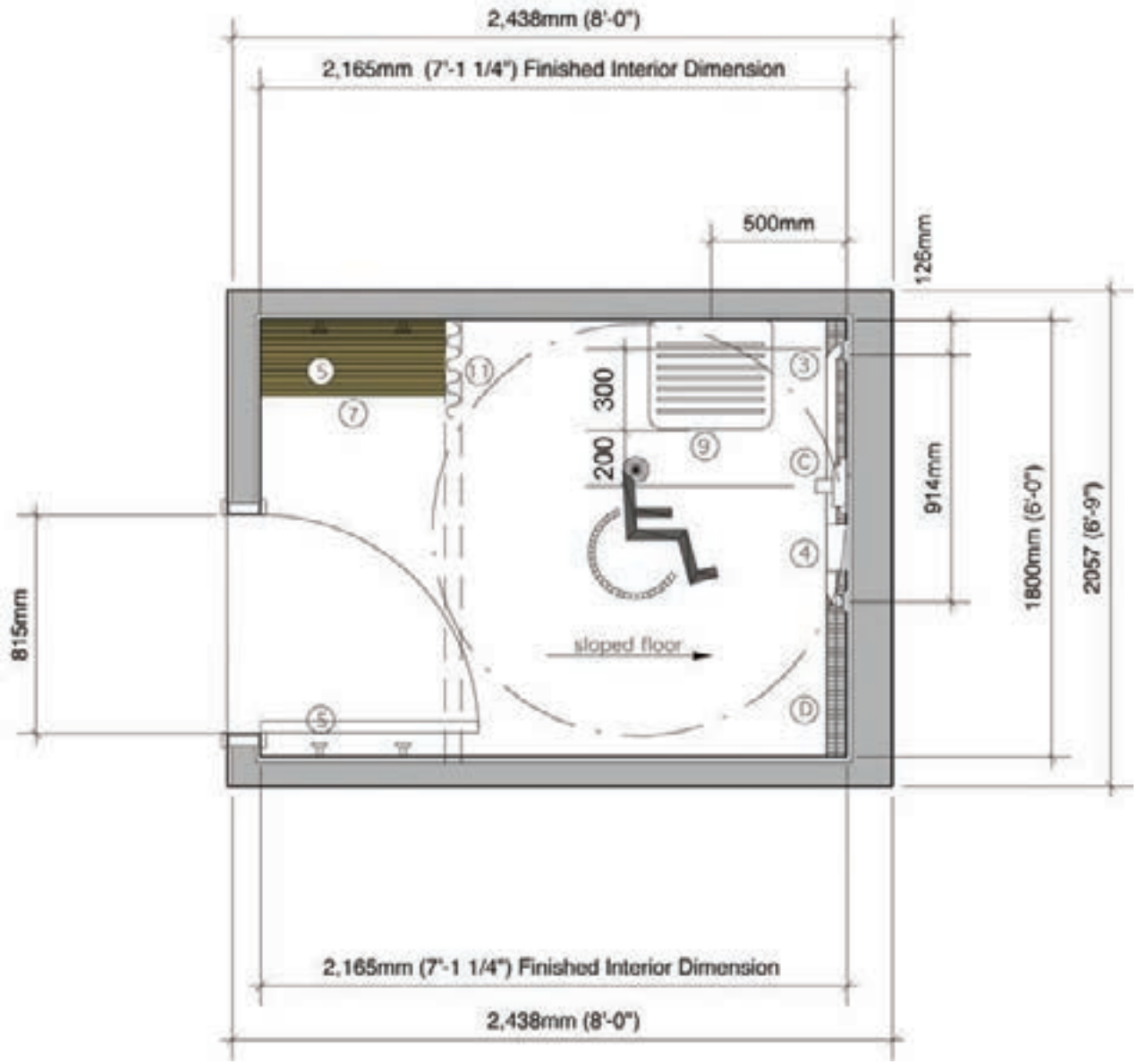
Barrier Free Shower Module Floor Plan

Finishes	
WT1-2	Large format porcelain
FT1	Large format floor tile
CT1	Phenolic ceiling panel
D1	Phenolic door panel
D2	Phenolic door panel barrier free door

Barrier Free Shower Module Elevations
Scale: NTS
For additional information on drawing tags refer to chart Floor, Wall and Ceiling Finishes at end of section.

Barrier Free Shower Module D Plan

This module serves as a barrier free shower for people with disabilities and families.



Scale: NTS

Plumbing Fixtures	
A	Wall hung toilet N/A
B	Sink combo N/A
C	Shower/controls
D	Linear floor drain
E	Waterless urinal N/A
F	Barrier free sink combo N/A
G	Vanity sink N/A

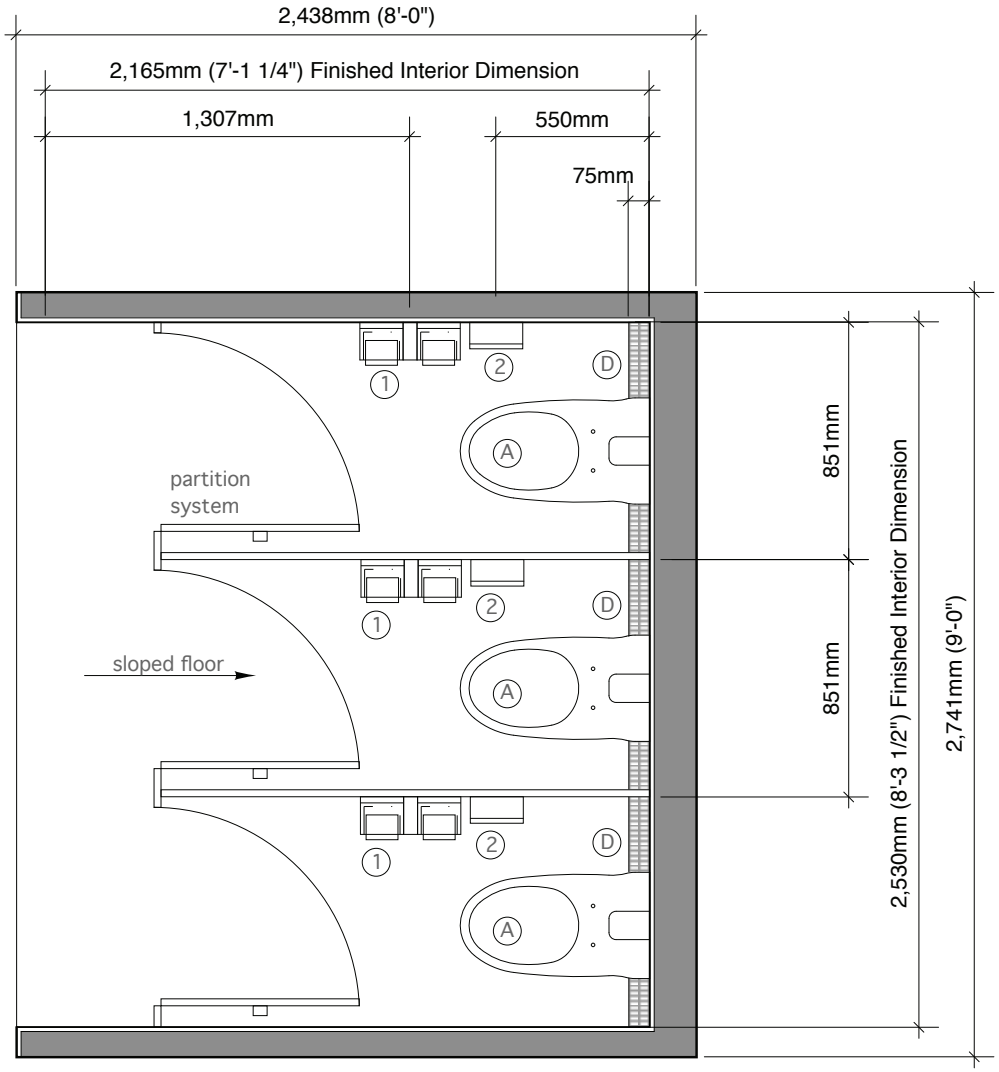
Bath Accessories	
1	Toilet paper dispenser N/A
2	Sanitary disposal unit N/A
3	Grab bars
4	Shower soap dispenser
5	Wall hooks
6	Waste receptacle N/A
7	Bench
8	Shelf N/A
9	Folding shower seat
10	Folding change table
11	Shower curtain and rod
12	Mirror N/A

Conventional Module – Traditional Gender Specific Application

Traditional Washroom Module E

This module, along with the men's version (Module F), is designed to be double the width of the basic washroom module. This allows for efficiencies and traditional washroom arrangements.

These conventional modules would need to be used in combination with sink modules.



Scale: NTS

Bath Accessories	
1	Toilet paper dispenser
2	Sanitary disposal unit
3	Grab bars N/A
4	Shower soap dispenser N/A
5	Wall hooks N/A
6	Waste receptacle N/A
7	Bench N/A
8	Shelf N/A
9	Folding shower seat N/A
10	Folding change table N/A
11	Shower curtain and rod N/A
12	Mirror N/A

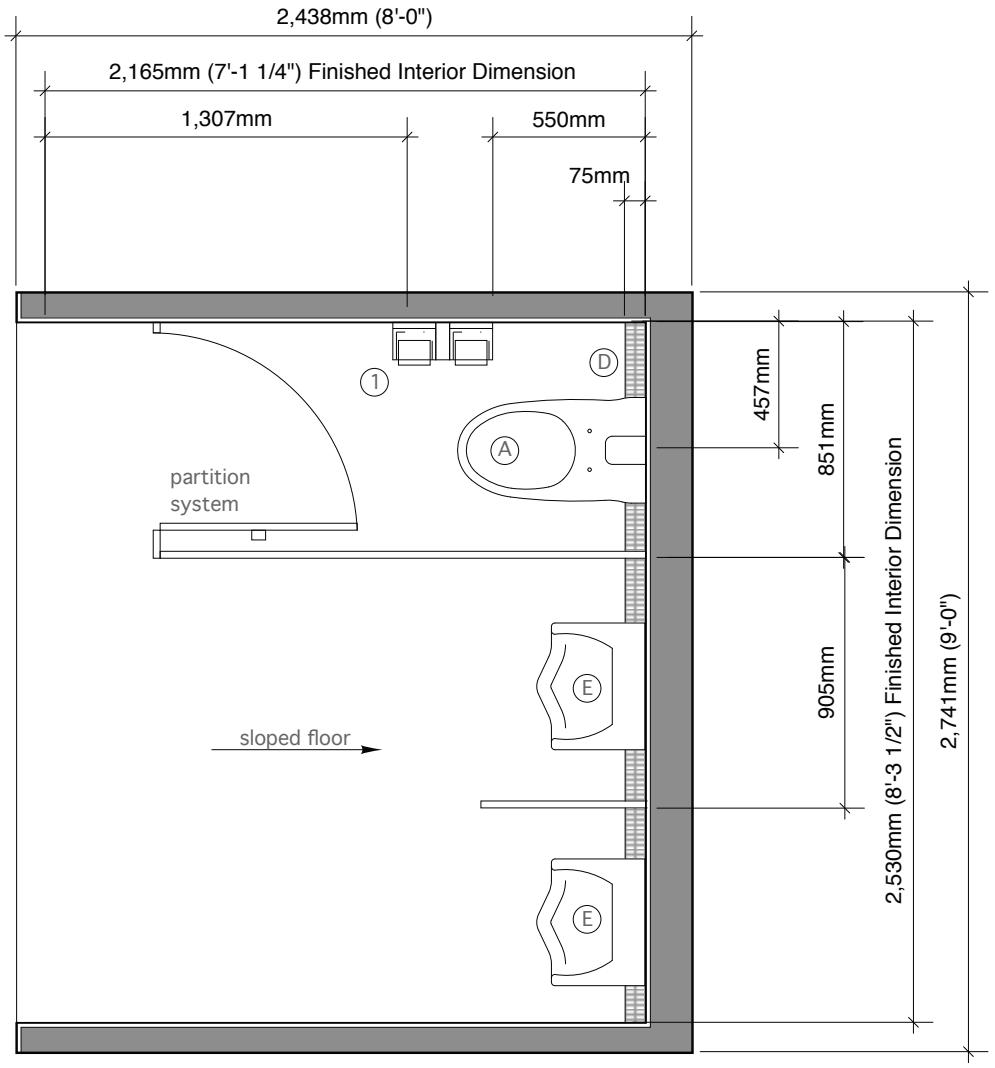
Plumbing Fixtures	
A	Wall hung toilet
B	Sink combo N/A
C	Shower/controls N/A
D	Linear floor drain
E	Waterless urinal N/A
F	Barrier free sink combo N/A
G	Vanity sink N/A

Men's Washroom Module F Plan

This module must be used in conjunction with a sink module. Location of the module needs to be considered to ensure there are no sight lines into module for privacy.

Bath Accessories	
1	Toilet paper dispenser
2	Sanitary disposal unit N/A
3	Grab bars N/A
4	Shower soap dispenser N/A
5	Wall hooks N/A
6	Waste receptacle N/A
7	Bench N/A
8	Shelf N/A
9	Folding shower seat N/A
10	Folding change table N/A
11	Shower curtain and rod N/A
12	Mirror N/A

Plumbing Fixtures	
A	Wall hung toilet
B	Sink combo N/A
C	Shower/controls N/A
D	Linear floor drain
E	Waterless urinal
F	Barrier free sink combo N/A
G	Vanity sink N/A

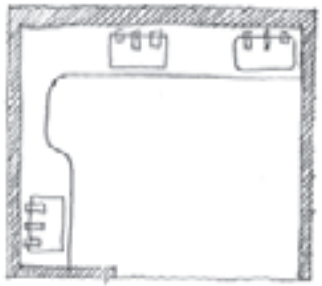


Scale: NTS

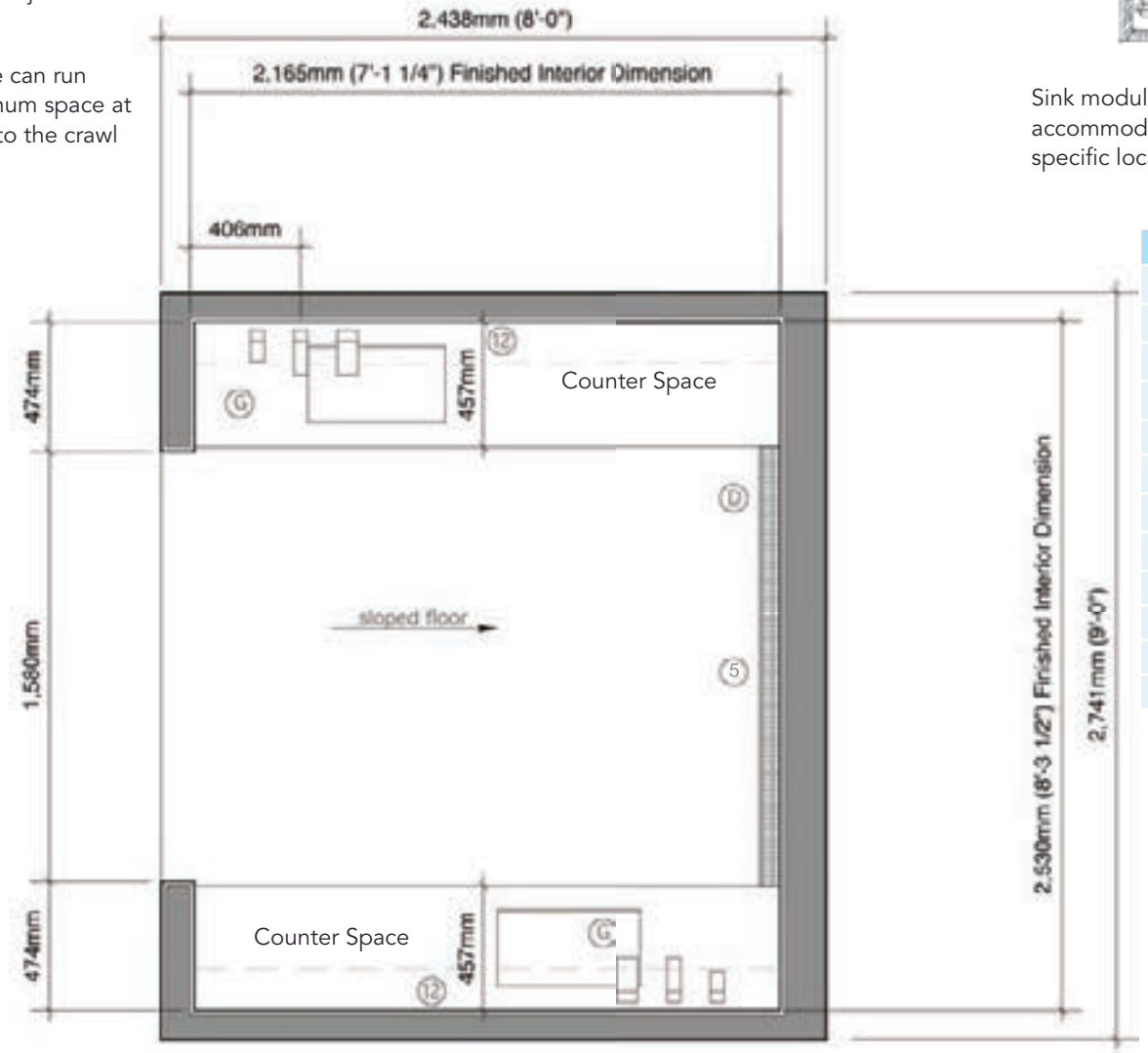
Sink Module G

This module is intended to be paired with men's and women's modules to provide sinks in a segregated area. The module has two staggered sinks with adjacent counter space.

Plumbing for the sink module can run under the counter to the plenum space at the end or go straight down to the crawl space under the sink.



Sink modules can also be designed to accommodate three sinks if required for a specific location.



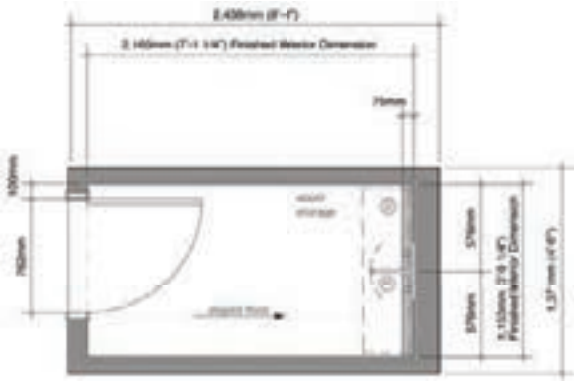
Scale: NTS

Bath Accessories	
1	Toilet paper dispenser N/A
2	Sanitary disposal unit N/A
3	Grab bars N/A
4	Shower soap dispenser N/A
5	Wall hooks
6	Waste receptacle N/A
7	Bench N/A
8	Shelf N/A
9	Folding shower seat N/A
10	Folding change table N/A
11	Shower curtain and rod N/A
12	Mirror

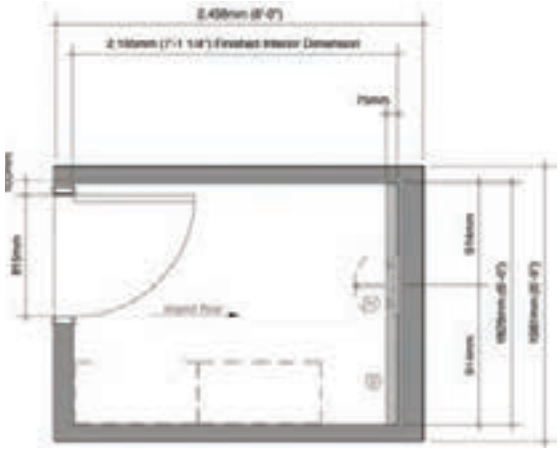
Plumbing Fixtures	
A	Wall hung toilet N/A
B	Sink combo N/A
C	Shower/controls N/A
D	Linear floor drain
E	Waterless urinal N/A
F	Barrier free sink combo N/A
G	Vanity sink

Service Modules

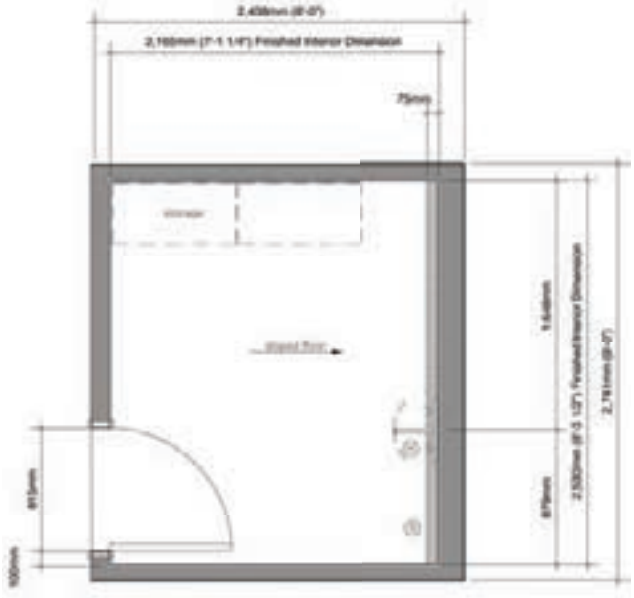
Small Janitor Module H1



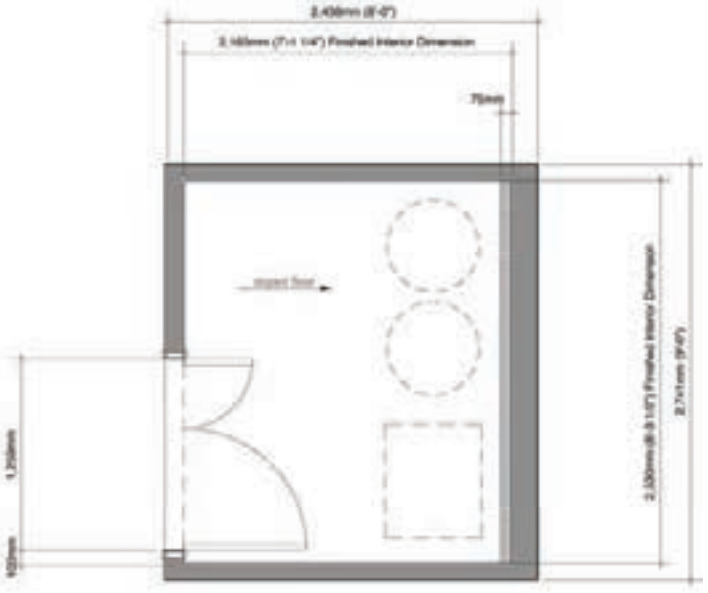
Medium Janitor Module H2



Large Janitor Module H3



Mechanical and Electrical Module H4 (Subject to technical requirements)



Scale: NTS

3.7 Schedules (Examples for reference only)

The following is a list of sample fixtures for various modules. The items are included as a reference only and are not intended to be a detailed specification or complete list of acceptable products or supplies.

Bathroom Accessory Schedule		
Key	**Description**	**Proposed Specification**
1	Toilet Paper Dispenser	Bobrick Double Roll Toilet Tissue Holder Code # B-2746 Aluminum with Satin Finish or equivalent
2	Sanitary Disposal Unit	Bobrick Sanitary Napkin Disposal Contura Series Code # B-270 Stainless Steel with Satin Finish or equivalent
3	Grab Bars	Bobrick (or equivalent) Straight Grab Bar 32mm diameter Stainless Steel with Snap Flange 600mm, 900mm or 1200mm
4	Soap Dispenser	Bobrick Surface Mounted Shower Soap Dispenser Contura Series 818615 or equivalent
5	Wall Hooks	Bobrick Surface Mounted Robe Hook Code B-76717 Stainless Steel Satin Finish or equivalent
6	Waste Receptacle	Bobrick Surface Mounted Waste Receptacle Code B-279 Stainless Steel Satin Finish or equivalent
7	Bench	Custom Hardwood Bench to suit dimensions shown on drawings
8	Shelf	Custom Hardwood Shelf to suit dimensions shown on drawings
9	Folding Shower Seat	Bobrick Solid Phenolic Folding Shower Seat Code B-5139 Laminate with Matte Finish Colour - Ivory or equivalent
10	Change Table	Bobrick – Koala Kare Code KB110-SSWM Stainless Steel with no Koala Kare Logo or equivalent
11	Shower Curtain and Hardware	Bobrick Shower Rod with concealed mounting, Shower Hooks and Shower Curtin Codes B-207 x 48, B-204-1, B-204-3 or equivalent
12	Mirror	6mm float glass mirror (custom as per Architectural Drawings) Recommended a security film to prevent shattering

Floor, Wall and Ceiling Finishes		
Symbol	**Specification**	**Remarks**
WT1 and WT2	Large Format Porcelain Tile	Neolith 3mm x 1000mm x 3000mm – utilize two neutral colours for contrast, each with subtle colour variation within the tile and smooth finish for ease of cleaning, avoid dark colours, rough surfaces like 'river washed', faux stone or faux wood textures
WM1	Mirror Finish Stainless Steel	Bobrick Unbreakable Stainless Steel Mirror Sized to order. Thickness is 19mm. Maximum size 1200mm x 1800mm
FT1	Large Format Floor Tile	Dekton by Cosentino Floor Panels Ultracompact composite. Large Format 3200mm x 1400mm in 8, 12 and 20mm thicknesses
CT1	Phenolic Sheet Panels	Phenolic Panels – 6-10mm thickness. Proposed Colour – Slate Grey
Door and Door Hardware Schedule		
D1	(2'-6" x 6'-8" x 1 ½") 762mm x 2032mm x 38mm Solid Core Door - Frameless	Invisible hinge – SOSS Model 460SS – or Hager Model 500 Pivot Vacant / Occupied Indicator door latch Schlage – B571
D2	(2'-6" x 6'-8" x 1 ½") 762mm x 2032mm x 38mm SCW – Std Door Frame	Standard Lockset – For Janitor Rooms Small
D3	(2'8" x 6'8" x 1 ½") 815mm x 2032mm x 38mm SCW – Std Door Frame	Privacy Set – For Barrier Free Rooms Vacant / Occupied Indicator door latch Schlage – B571
D4	(2'8" x 6'8" x 1 ½") 815mm x 2032mm x 38mm SCW – Std Door Frame	Privacy Set – For Barrier Free Rooms Vacant / Occupied Indicator door latch Schlage – B571

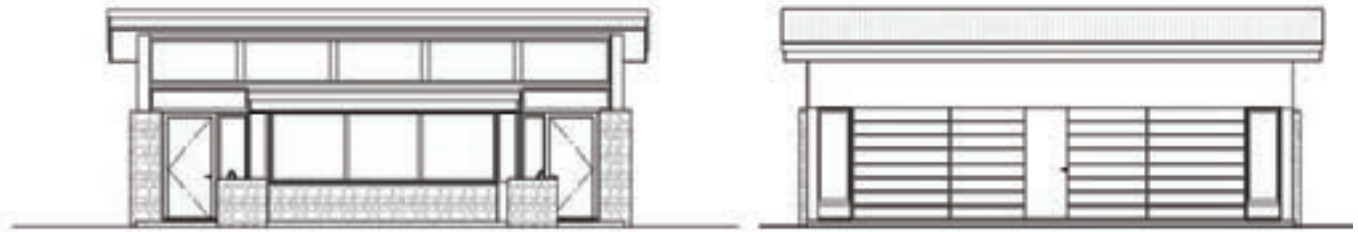
In this section three prototypes are presented to portray small, medium and large washroom configurations. The sizes are based on adding additional modules to the small prototype in various combinations based upon the site specific needs of the facility.

Washroom Facility Prototypes

The large washroom facility, intended for campground locations, is shown in context with a pavilion in the foreground. The image illustrates the similarity of the pavilion structure with the central entry portion of the washroom facility.

4.1 Small Washroom Facility Option (with 7 fixtures/modules)

+/- 101m² (1,087 sq. ft.)



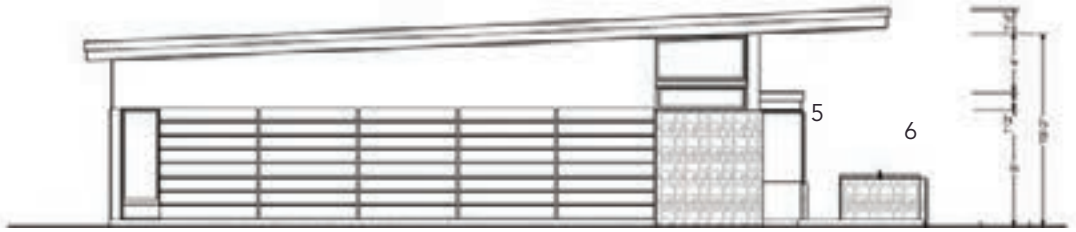
Front *Rear*

Small Washroom Facility Elevations

Small washroom facility shown with small pavilion in background to demonstrate possible building combinations

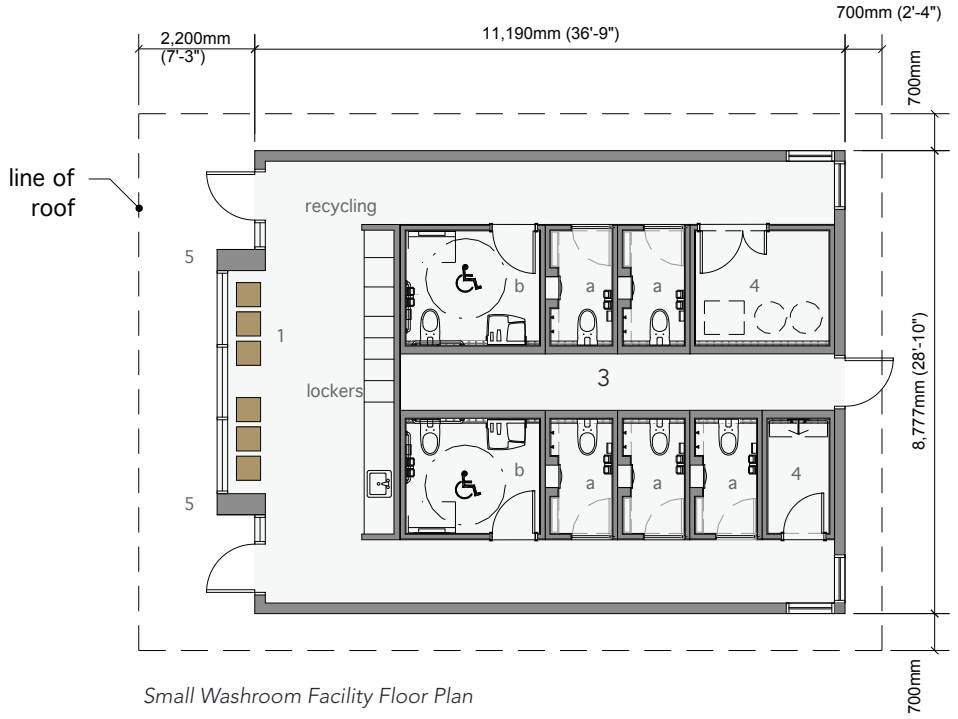
This sample combination of modules reflects an accessible approach with no designated gender categories.

An emergency access is not required based upon building codes for the interior layout depicted here. An egress door can be added in place of windows at the end of the hallways if required for specific locations.



Small Washroom Facility Elevation

Washroom Facility Areas	
1	Gathering area
2	Washroom modules (see modules)
3	Plenum space
4	Janitor, mechanical – H1, H2, H3, H4
5	Information feature
6	Exterior sink
a	Standard WC – A1, A2
b	Barrier free WC – B1
c	Shower – C
d	Barrier free shower – D
e	Women's WC – E
f	Men's WC – F
g	Sink room – G

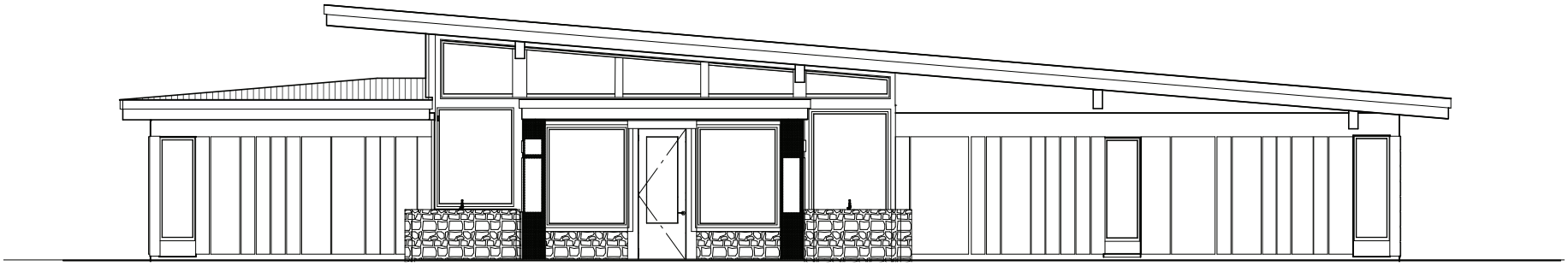


Small Washroom Facility Floor Plan

Scale: NTS

4.2 Medium Washroom Facility (with 5 showers, 8 fixtures and 4 additional sinks)

+/- 187 m² (2,012 sq. ft.)

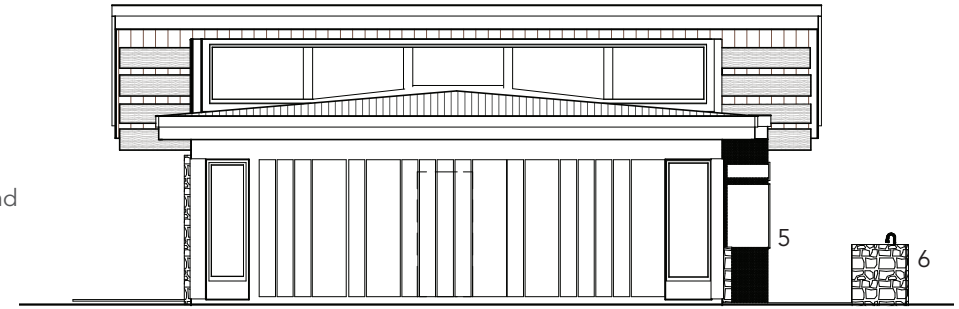


Medium Washroom Facility Front Elevation

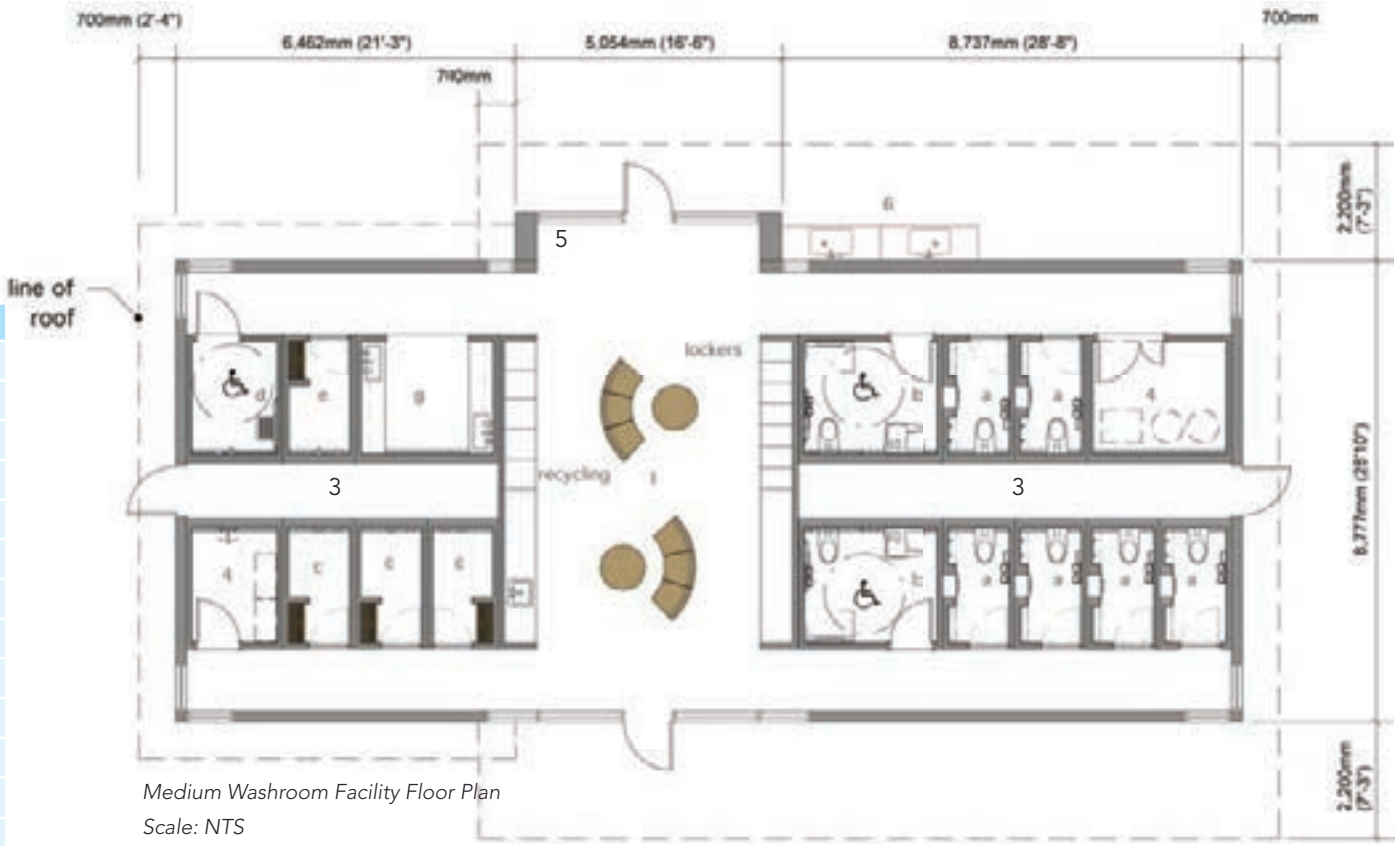
Medium Washroom Facility

This sample combination of modules builds on the small washroom facility option with the addition of showers. This facility is inclusive: it is gender neutral and has barrier free modules.

An emergency access is not required based upon building codes for the interior layout depicted here. An egress door can be added in place of windows at the end of the hallways if required for specific locations.



Medium Washroom Facility Side Elevation



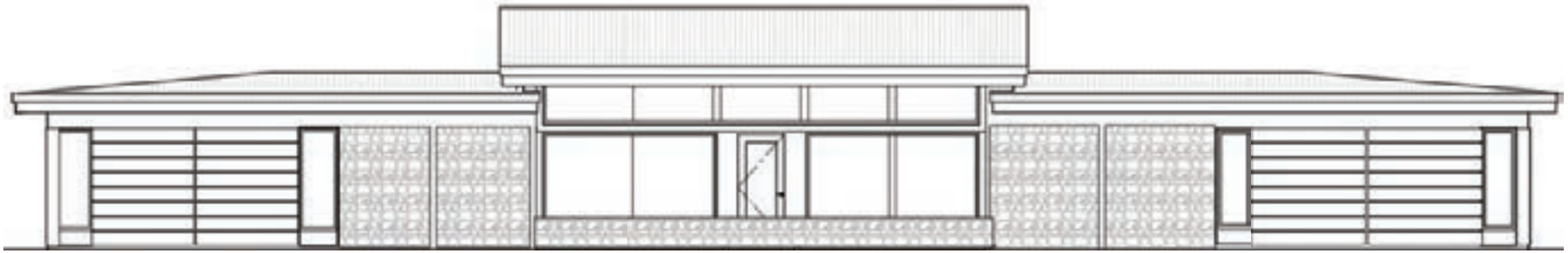
Medium Washroom Facility Floor Plan

Scale: NTS

Washroom Facility Areas	
1	Gathering area
2	Washroom modules (see modules)
3	Plenum space
4	Janitor, mechanical – H1, H2, H3, H4
5	Information feature
6	Exterior sink
a	Standard WC – A1, A2
b	Barrier free WC – B1
c	Shower – C
d	Barrier free shower – D
e	Women's WC – E
f	Men's WC – F
g	Sink room – G

4.3 Large Washroom Facility (with 10 showers, 12 fixtures and 16 additional sinks)

+/- 267m² (2,874 sq. ft.)



Large Washroom Facility Rear Elevation

Large Washroom Facility Front Elevation

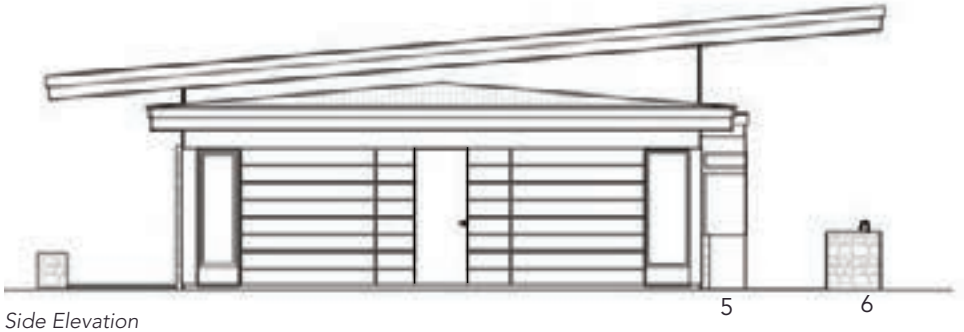
Large Washroom Facility

This sample combination of modules represents a traditional men's and women's washroom arrangement. The separation of showers from the washroom area allows all visitor access for greater efficiency.

An emergency access is not required based upon building codes for the interior layout depicted here. An egress door can be added in place of windows at the end of the hallways if required for specific locations.

Washroom Building Areas	
a	Standard WC – A1
b	Barrier free WC – B1
c	Shower – C
d	Barrier free shower – D
e	Women's WC – E
f	Men's WC – F
g	Sink room – G

Washroom Building Areas	
1	Gathering area
2	Washroom modules (see modules)
3	Plenum space
4	Janitor, mechanical H1, H2, H3, H4
5	Information feature
6	Exterior sink



Side Elevation

Large Washroom Facility Floor Plan
Scale: NTS

In this section several alternative design considerations are presented to portray differing expressions for roofs, nighttime and artful expressions.

Alternative Design Considerations

5.1 Alternative Roof Lines

Peaked Roof Expression

A low slope peaked roof is reminiscent of traditional roof styles. The use of timber slabs for the primary roof with the simplified structural appearance makes it similar to the standard base building type. The pavilion and washroom facilities are intended to have a similar roof expression. In pavilions that provide a seasonal enclosure, gable areas should be glazed.

Peaked Roof

Peaked Roof

Alternate Roof Expression – Butterfly Roof

Butterfly roofs open the building to the setting in an attractive manner and control roof drainage to localized positions. They are considered consistent with the shed roof expression. This roof form may not be ideal for certain locations where leaves and debris may collect along the roof form. Flat roofs are clean and simple and achieve most design objectives but the control of drainage to defined locations by scupper would be required. The accumulation of debris on flat roofs would be the same as for the butterfly roof.

Butterfly Roof

Butterfly Roof

5.2 Design for Night

A lit facility with efficient long lasting light sources can provide an inviting presence. With early sunsets at northern latitudes during fall, winter and spring, light can make these facilities more usable in evening hours. The combination of sliding doors and wood stoves can modify temperatures, making these facilities inviting to use at any time. Dark Sky criteria would be critical in the implementation. Low light illumination for security and subtle aesthetic purposes is encouraged when unoccupied. Limited task light and mood light should be provided for the visitors. This is encouraged in off grid areas with a limited solar installation. Where possible, LED and solar lights can also be considered for use.

Night views

5.3 Artful Expression

Artistic license should be encouraged with items such as the doors, mass wall, column details and furnishings. This opportunity to customize, where appropriate, allows local and regional expression. The images below are an example of colorful glazing and custom pattern.

Alternate options with coloured panels

The performance criteria of materials, products and fixtures for pavilion and washroom facilities are described in this section. The items are included as a reference and are not intended to be a detailed specification. Criteria for material selection are identified. Different products and fixtures are referenced with alternate material options.

Materials, Products & Fixtures

Materials, Products and Fixtures

This section discusses the materials, products and fixtures that would be suitable for use in the pavilion and washroom facilities. This is not a detailed specification. Application or use, type/representative manufacturer and key criteria for each material is described and intended only as a reference or guide for material selection. The products mentioned in this section are some of the options available at the time this guideline document was written. Final selection and product specification will be based upon specific local design considerations and products available to the designer.

Stone, Masonry and Wood

Use – The mass wall, flooring and cladding on washroom facilities

Type/representative manufacturer – Exposed structural metal members and mass heave timber or logs can also be used to achieve the purposes and intent for the mass wall.

Key Criteria

- Stone should follow traditional masonry styles
- Artificial stone is not appropriate
- Rustic expression would be the norm but smooth cut stone can be considered
- Options include gabion baskets, rammed earth, brick, block, cut stone, distressed timber and logs
- Local architectural motifs and artistic license may be considered

Starting top right: Stone, Sculptural Wall, Stone, Heavy Timber, Rammed Earth, Distressed Timber

Phenolic Panels –
(thick plastic laminate sheets) drawing tag – CT1

Use – Siding, bath module doors, cabinets, mill-work, wall panels, ceiling panels, furniture, sliding doors, benches, toilet partitions, information feature

Type/representative manufacturer – Trespa, Fundermax, Resin-infused paper composite products such as Richlite and other similar products that are Exterior Grade.

Key Criteria

- Select textured finishes to disguise damage and wear
- Artificial wood grain patterns are not encouraged
- Long life span, virtually indestructible and low maintenance
- Two-sided solid product available in different thicknesses
- Unlimited colors and expression options
- Available for outdoor applications

Translucent Panels

Use – For sliding doors as a practical replacement to glass

Type/representative manufacturer – For example Krinklglas is transparent (others may include FRP, Polycarbonate, 3-Form)

Key Criteria

- 1/4 inch Krinklglas is unbreakable, scratch resistant, non-yellowing, with a texture to disguise damage and dirt
- Numerous colours, thickness and textures with the ability to have custom patterns
- Cost effective
- Proven 50 year track record
- Designed for outdoor use

Phenolic Panels

Translucent Panels

Wood Slabs

Use – Roof deck structure

Type/representative manufacturer – Cross laminated timber or solid wood slabs of built up dimensional lumber

Key Criteria

- Provide for long spans and flexibility of cantilevers
- The underside of the wood slab should be featured and protected to ensure longevity. This aesthetic promotes a simple, light colored contemporary approach to the use of wood as an exposed wood slab.
- Solid wood slabs eliminate the problems of cavities or rafters that accommodate pests. Ease of cleaning and the perception that it is clean is fundamental to encouraging use of these facilities.

Cross Laminated Timber/Solid Wood Slabs for roof structure

Wood Panels /Siding

Use – Siding on pavilions and washroom facilities

Type/representative manufacturer – For example Prodema, Hardie Board

Key Criteria

- Retains natural varnished appearance
- Real grain provides an authentic feel. Wood panel products should not be artificial or faux wood.
- Long life cycle with no maintenance
- Withstands high use while retaining the natural appearance
- Flexibility of use and pattern

Wood Panels/Siding

Distressed Wood / Acetylated Wood

Use – Siding, frames for sliding doors

Type/representative manufacturer – Solid wood that performs untreated, preferably hard wood or cedar

Acetylated wood is a non-toxic process of soaking wood in an acetic anhydride (a vinegar type compound) to become moisture, insect and rot resistant. This makes the wood more dimensionally stable without being toxic, resulting in a long life span. Depending on the wood type, care should be taken when wood is exposed to high use. This product can be used structurally, as siding, or as frames for sliding doors.

Key Criteria

- Rustic natural wood appearance
- Distressed character can be achieved without requiring ongoing refinishing
- Dimensions of wood need to be sufficient to retain strength and shape after long exposure to sun and moisture and to withstand high use
- Aging and distressing adds to the character
- Place to avoid repeated exposure to water at grade
- Wood should be local and use treatments that are environmentally safe. Exotic tropical woods and other specially treated products from exotic locations are discouraged

Distressed Wood Siding

Heavy Timber

Use – Columns, beams and furniture

Type/representative manufacturer – Solid large timbers like logs, large dimension milled products and glue laminated timbers

Key Criteria

- Solid timbers are preferred in exposed areas for columns and beams
- Glue laminated timbers can be used where appropriately protected and designed for outdoor use
- Care should be taken to protect wood close to grade
- Distressed timbers and logs are also appropriate structural members

Solid Wood *Glue Laminated* *Distressed Wood*

Pavers

Use – Interior / Exterior paving of pavilions

Type/representative manufacturer – For example "TERRAZO" a 2 cm thick outdoor porcelain paver stone sizes at 2 x 2 ft. and 2 x 4 ft. Alternatives include concrete and stone.

Key Criteria

- Pavilion floors need to be impervious to staining by oils and chemicals
- Move with frost and easily repaired. This approach allows for corrections after frost movement
- Slip resistant, stamped or textured finish
- Long life cycle and ease of cleaning
- Placed on compacted fill and contained by a concrete perimeter foundation wall
- Alternatives include stone and concrete
- Where concrete is used, appropriate control joints need to be included and the surface sealed to resist stains and textured to reduce slipping hazards

Large Format Flooring Panels
drawing tag – FT1

Use – Flooring in washroom modules to control moisture and eliminate joints, counter tops

Type/representative manufacturer – For example Dekton® Sizes are 56" x 126"

Key Criteria

- Large format to minimize grout
- Perform in wet environments
- Slip resistant
- Long life cycle and ease of maintenance

Exterior Pavers and Pavers for Pavilion Floors

Large Format Flooring Panels

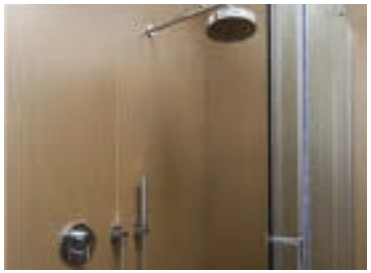
Porcelain Wall Tile
drawing tag – WT1 & WT2

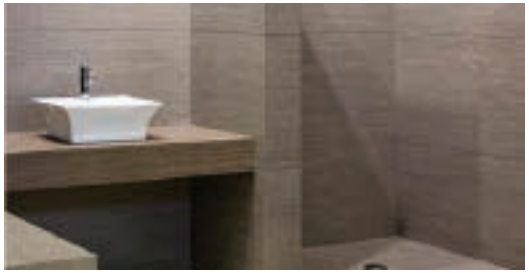
Use – Walls in washroom modules

Type/representative manufacturer – Large Format Porcelain Panels (for example Laminam or Neolith 1 m x 3 m Panels) – others available

Key Criteria

- Few grout lines
- Easy to maintain for long life
- Lots of choice of colour and texture to allow for aesthetic, artistic or thematic expression





Large Format Porcelain Wall Finishes

Metal

Use – Columns, beams, connections with wood timbers

Type/representative manufacturer – Exposed structural metal members such as HSS, Channel, Angle or W flang

Key Criteria

- Steel plates, expressive joints between wood structural members and as a base to wood columns is encouraged
- Structural steel sections can be used for columns and structural connections
- High-tech expressions combined with wood for a composite structure is encouraged
- Anodized, powder coated and other raw finishes that require no repainting

Metal Connections

Fixtures

Toilet
drawing tag – A

Use – Use in washroom modules

Type/representative manufacturer – For example Sloan – Royal 152-1.28 ESS TMO, ST-2469, EL-154

Key Criteria

- Wall hung
- Easy maintenance
- Concealed electronics from rear with true mechanical override

Sample of Toilet with Plumbing Fixture

Sink Combo
drawing tag – B

Use – Sink for standard washroom module (all-in-one unit with soap, water and hand dryer)

Type/representative manufacturer – For example Thrii Wallgate by Intersan

Key Criteria

- Three-in-one hand washer/dryer
- Could be cold water only for hand washing
- Hygienic and easily cleaned
- Compact-built in the wall

Sample of Sink Combo Unit

Shower Head and Controls
drawing tag – C

Use – Standard showers and barrier free showers

Type/representative manufacturer – For example Sloan – MCR-224, Sloan – MCR-183-A

Key Criteria

- Easy touch button
- Stainless Steel
- Metering Showers with programmed run times

Sample of Shower Head and Controls

Linear Floor Drain
drawing tag – D

Use – In all modules

Type/representative manufacturer – For example Schluter Kerdi Line or Jay R Smith MFG

Key Criteria

- Stainless steel
- Cleanable
- Vandal-proof grate

Sample of Linear Floor Drain

Plumbed Urinal (Optional)
drawing tag – E

Use – In men's washroom modules

Type/representative manufacturer – For example Sloan – 195-0.5 ESS TMO SL-SU-7009

Key Criteria

- Wall hung
- Easy maintenance
- Concealed electronics from rear with true mechanical override

Sample of Standard Urinal with Plumbing Fixture

Waterless Urinal (Standard)
drawing tag – E

Use – In men's washroom modules as alternate to standard urinals

Type/representative manufacturer – For example SF Environmental 15001

Key Criteria

- Odorless function
- Ease of cleaning
- Ease to maintain and low maintenance costs
- Material – sanitary Polycarbonate (impact and vandal resistant)
- Touchless operation – No additional sensor costs
- No sealant liquid that can be flushed out, for example SF Siphon with hydrostatic float
- For example the SF-Active Cleaner with Kalkex is biodegradable and pH-neutral
- Ecological sensitive product, operation & maintenance without any chemicals

Sample of Waterless Urinal

Sink Combo
drawing tag – F

Use – Barrier free module sink, with all-in-one soap, water and hand dryer

Type/representative manufacturer – For example Bradley Model AV30

Key Criteria

- Infrared, high speed, dual-sided hand dryer at each hand washing station
- Large capacity, top-fill, infrared soap dispenser, with low level indicator overfill protection
- Hygienic hands-free infrared, 0.38GPM (1.4 L-min) faucet
- Solid surface materials

Sample of Sink Combo

Standard Sink/Vanity/Faucets
drawing tag – G

Use – To be located in sink module or as a custom small sink to replace the prepackaged combination sinks.

Type/representative manufacturer – For example Sloan – DSG Sink Series

Key Criteria

- For example Durable Dupont Corian
- Flexible design to balance size of bowls vs counter top
- One piece

Sample of Standard Sink with Faucets

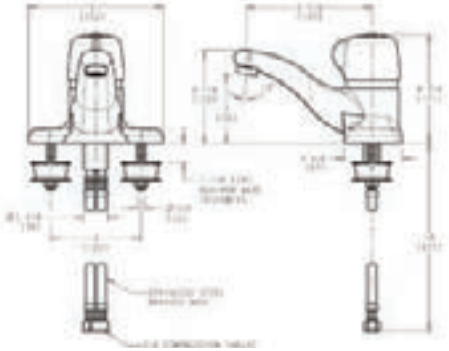
Faucet

Use – For use in sink modules

Type/representative manufacturer – For example Sloan –AER-DEC (ADA-82000-MOD) or manual faucet option Chicago Faucets (No. 3600-E2805AB)

Key Criteria

- Combined faucet and dryer on one deck
- Durable
- No water on floors



Sample of Faucet and Manual Faucet

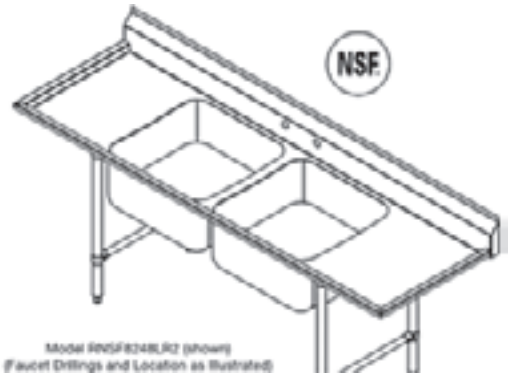
Outdoor Sink and Faucet

Use – Outdoor seasonal use at pavilions and washroom facilities

Type/representative manufacturer – For example Elkay double compartment scullery sink with manual faucet – 540-LD317ABCP Chicago Faucets

Key Criteria

- 16 gauge stainless steel
- Double and single basin options
- commercial strainer
- Vandal resistant



Sample of Outdoor Sink and Faucet

Low Flow Water Faucet

Use – Low flow water faucets would be used in roadside washrooms to eliminate the need for hot water and reduce water consumption. They could also be used in washroom modules with standard sinks or combination sinks.

Type/representative manufacturer – For example SF Environmental Eco Tap

Key Criteria

- 90% less water consumption
- 100% energy saving due to cold water
- No costs for heating
- No unpleasant feeling of coldness on skin due to a special spray technology
- Quick hand washing

Sample of Low Flow Water Faucet

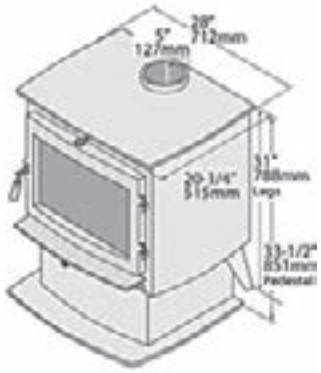
Air Tight Wood Stove

Use – Heating of the pavilions. Not for cooking.

Type/representative manufacturer – For example Lennox Country, Lopi Evergreen, Endeavor, Avalon

Key Criteria

- Steel construction – minimum 1/4 inch plate (not cast iron)
- Unibody stove construction
- Frame holding the glass tight
- Ceiling retainers and secondary combustion tubs (stainless steel)
- Large capacity ash tray on pedestal
- Safe to touch
- Slow burning of single log to minimize wood usage



Sample of Wood Stove