

## Section 6

### Off-street Bicycle Space Regulations

#### 6.1 Number of Bicycle Spaces

##### 6.1.1 General Requirements

Unless otherwise provided in Schedule C or a CD-1 By-law, in all districts, the number of spaces required for the off-street parking of bicycles shall be calculated according to section 6.2.

##### 6.1.2 Bicycle Space Requirement Exemptions

The required number of off-street bicycle spaces need not be provided where any additions, alterations or changes of use to a building existing on October 17, 1995 would, in total, result in an increase of less than 10 percent of the number of spaces required before the additions, alterations or change in use.

##### 6.1.3 Uses Not Listed

If a use is not listed in the tables, the number of bicycle spaces shall be calculated on the basis of a similar use as determined by the Director of Planning.

##### 6.1.4 Multiple-Use Developments

For the purposes of this section uses with the same formula for determining required bicycle spaces shall be considered to be of the same class. If a development contains parking for more than one use as listed in section 6.2, the total number of bicycle spaces shall be the sum of the bicycle spaces required for the various classes of uses calculated separately and, unless otherwise permitted by the Director of Planning, in consultation with the City Engineer, taking into account the time-varying demand of uses, a bicycle space required for one use shall be deemed not to meet the requirement for any other use in that development.

##### 6.1.5 Floor Area Calculation

Where gross floor area is used to calculate the number of required bicycle spaces, it shall be calculated in the same manner as the floor space ratio of the applicable district schedule or official development plan.

##### 6.1.6 Rounding of Fractional Numbers

Where the calculation of total required bicycle spaces results in a fractional number, the nearest whole number shall be taken, unless specified otherwise in section 6.2. A fraction of one-half shall be rounded up to the next whole number.

#### 6.2 Table of Number of Required Off-Street Bicycle Spaces

Bicycle spaces shall be required for any buildings classified in column 1 in accordance with the corresponding standards listed in column 2.

	Column 1 Building Classification	Column 2 Required Bicycle Spaces	
		Class A	Class B
<b>6.2.1</b>	<b>Dwelling</b>		
6.2.1.1	Dwelling Uses, including live-work use, except as provided for in sections 6.2.1.2, 6.2.1.3, 6.2.1.4, 6.2.1.5 and 6.2.1.6.	No Requirement.	No Requirement.
6.2.1.2	Multiple Dwelling, Infill Multiple Dwelling, or three or more dwelling units in a Mixed-Use Residential Building, including live-work, except as provided for in sections 6.2.1.3, 6.2.1.4 and 6.2.1.5.	<p>A minimum of 1.5 spaces for every dwelling unit under 65 m<sup>2</sup>.</p> <p>A minimum of 2.5 spaces for every dwelling unit over 65 m<sup>2</sup> and under 105 m<sup>2</sup>.</p> <p>A minimum of 3 spaces for every dwelling unit over 105 m<sup>2</sup>.</p> <p>No requirement in an R1 district.</p>	<p>A minimum of 2 spaces for any development containing at least 20 dwelling units, and one additional space for every additional 20 dwelling units.</p> <p>No requirement in an R1 district.</p>
6.2.1.3	Three or more dwelling units designated solely for seniors citizens housing.	A minimum of 0.75 spaces for every dwelling unit, except that where designated spaces are provided for the purpose of parking mobility scooters, these designated spaces may form part of the required minimum.	A minimum of 2 spaces for any development containing at least 20 dwelling units, and one additional space for every additional 20 dwelling units.
6.2.1.4	Shelter rate units.	A minimum of 0.75 spaces for every unit designed for single room accommodation or similar use, and according to the standard in Section 6.2.1.2 for all other units, except that where dwelling units have explicitly been designed to adequately accommodate bicycles, the Director of Planning may reduce this requirement.	A minimum of 2 spaces for any development containing at least 20 dwelling units, and one additional space for every additional 20 dwelling units.
6.2.1.5	Seniors Supportive or Independent Living Housing.	A minimum of 0.10 spaces for every residential unit.	A minimum of 2 spaces for any development containing at least 20 dwelling units, and one additional space for every additional 20 dwelling units.
<b>6.2.2</b>	<b>Institutional</b>		

	<b>Column 1 Building Classification</b>	<b>Column 2 Required Bicycle Spaces</b>	
		<b>Class A</b>	<b>Class B</b>
6.2.2.1	Community Care or Assisted Living Facility – Class B; Group Residence; Detoxification Centre.	A minimum of 1 space for every 100 beds.	No requirement.
6.2.2.2	Hospital or other similar use.	A minimum of 1 space for every 17 employees on a maximum work shift.	A minimum of 6 spaces at each public entrance.
6.2.2.3	School - Elementary or Secondary; School - University or College.	A minimum of 1 space for every 17 employees and for secondary schools, universities or colleges, 0.4 space for every 10 students on a maximum attendance period.	A minimum of 0.6 space for every 10 students on a maximum attendance period except that elementary schools shall provide a minimum of 1 space for every 20 students.
6.2.2.4	Church, chapel, place of worship, or similar place of assembly.	No requirement.	A minimum of 6 spaces.
6.2.2.5	Ambulance Station; Social Service Centre; Community Care Facility – Class A.	No requirement.	No requirement.
6.2.2.6	Child Day Care Facility.	A minimum of 1 space for every 17 employees.	A minimum of 1 space for every 6 full-time equivalent child care spaces.
<b>6.2.3</b>	<b>Cultural &amp; Recreational</b>		
6.2.3.1	Community centre, hall, club, bingo hall, activity centre or similar place of assembly; Casino - Class 1; Library, gallery, museum or aquarium.	A minimum of 1 space for each 500 square metres of floor area used for assembly purposes.	A minimum of 6 spaces for any portion of each 1,500 square metres of floor area used for assembly purposes.
6.2.3.2	Theatre, auditorium, stadium, arena, or similar place with spectator facilities.	No requirement.	A minimum of 6 spaces for any portion of each 300 person seating capacity.
6.2.3.3	Fitness centre.	A minimum of 1 space for each 250 square metres of gross floor area.	A minimum of 6 spaces for any portion of each 500 square metres of gross floor area.
6.2.3.4	Billiard hall; Arcade; Bowling Alley; Curling Rink.	No requirement.	A minimum of 6 spaces for any portion of each 40 tables, games, alleys or ice sheets.

	Column 1 Building Classification	Column 2 Required Bicycle Spaces	
		Class A	Class B
6.2.3.5	Artist Studio, without residential component (See section 6.2.1.2 for requirement for Residential Unit associated with and forming an integral part of an artist studio).	No requirement.	No requirement.
<b>6.2.4</b>	<b>Office</b>		
6.2.4.1	Office Uses	A minimum of one space for each 170 square metres of gross floor area.	A minimum of 6 spaces for any development containing a minimum of 2,000 square metres of gross floor area.
<b>6.2.5</b>	<b>Retail &amp; Service</b>		
6.2.5.1	Retail and Service Uses, except as provided for in sections 6.2.5.2 and 6.2.5.3.	A minimum of one space for each 340 square metres of gross floor area.	A minimum of 6 spaces for any development containing a minimum of 1,000 square metres of gross floor area.
6.2.5.2	Hotel.	A minimum of 1 space for every 30 dwelling, housekeeping or sleeping units, or any combination thereof.	A minimum of 6 spaces for any development containing a minimum of 75 dwelling, housekeeping or sleeping units, or any combination thereof.
6.2.5.3	Bed & Breakfast Accommodation; Funeral Home; Wedding Chapel.	No requirement.	No requirement.
<b>6.2.6</b>	<b>Manufacturing, Transportation &amp; Storage, Utility &amp; Communication Uses, Wholesale</b>		
6.2.6.1	Manufacturing Uses; Transportation and Storage uses; Utility and Communication Uses; Wholesale Uses.	A minimum of 1 space for each 1,000 square metres of gross floor area in the building or 1 space for every 17 employees on a maximum work shift, whichever is the greater.	No requirement.
<b>6.2.7</b>	<b>Parking</b>		
6.2.7.1	Parking Uses.	As determined by the Director of Planning in consultation with the City Engineer.	As determined by the Director of Planning in consultation with the City Engineer.
<b>6.2.8</b>	<b>Agricultural</b>		
6.2.8.1	Agricultural Uses.	No requirement.	No requirement.

### **6.3 Class A Bicycle Spaces**

#### **6.3.1 Application**

The requirements of this section 6.3 apply where Class A bicycle spaces are required, and Class A bicycle spaces shall be in compliance with section 6.3.

#### **6.3.2 Bicycle Room Requirement**

All required Class A bicycle spaces shall be provided in a separate bicycle room located within a building, except that

- (a) the spaces can be in a building which provides parking for motor vehicles for one particular residential unit only, instead of in a bicycle room, or
- (b) the spaces can be provided in a building in an expanded metal mesh compound which complies with sections 6.3.14, 6.3.15, and 6.3.16 instead of in a bicycle room, or
- (c) the spaces can be provided in a building or private parking area in numbered bicycle lockers which comply with sections 6.3.17, 6.3.18 and 6.3.19 instead of in a bicycle room.

#### **6.3.3 Bicycle Room Security**

The bicycle room shall have solid opaque walls, and all solid interior walls shall be painted. All of the interior of the bicycle room shall be visible from the entry door. A motion-activated security light enclosed in a tamper-proof housing shall be provided in each room.

#### **6.3.4 Bicycle Room Doors**

Entry doors to the bicycle room shall be a minimum of 75 centimetres in width. Both door and frame shall be constructed of steel. The door shall be hinged on the inside unless hinges are tamper-proof, and shall have a security window constructed of a laminate of tempered glass and polycarbonate in a steel frame for permanent visual access, except that residential developments do not require such security windows. The entry door shall have a separate lock and key or programmed entry system, and the locks shall be high security in nature.

#### **6.3.5 Bicycle Room Size**

The bicycle room shall be designed to accommodate a maximum of 40 bicycles, except that:

- (a) this number can be increased to 120 if the room is compartmentalized using expanded metal mesh (see 6.3.14.) with lockable industrial-grade doors into enclosures containing a maximum of 40 bicycles; and
- (b) this number does not include bicycle lockers.

#### **6.3.6 Bicycle Room, Compound, or Locker Access**

The bicycle room, compound, or lockers shall be located no lower than the first complete parking level below grade and shall have direct access to outside, except that a location more than one level below grade may be permitted where an elevator designed to accommodate the loading and unloading of at least two bicycles is provided, offering direct, convenient access to the outside. There shall be no stairs on the access route, except that the Director of Planning may allow stairs provided a wheel ramp of a minimum width of 150 millimetres is provided without cutting into the stair tread. Where an elevator is provided to access bicycle parking, a distinct call button for that elevator shall be provided on all levels with bicycle parking and all levels that provide access to the outside. Where an elevator is provided to access bicycle parking for residential uses, it shall not also be normally used for the loading or unloading of goods, for move in or move out activity associated with residential uses, or other activities which may significantly reduce accessibility to the elevator for people with bicycles.

6.3.7 Bicycle Room, Compound, or Locker Lighting

Lighting in the bicycle room, compound, or locker area shall provide vertical illumination at floor level of a minimum level of 160 lux, with true colour and a uniformity ratio of at most 3:1.

6.3.8 Bicycle Room, Compound, or Locker Supervision

The entry door to a bicycle room or bicycle compound, or bicycle lockers, shall be within sight of building or parking security, where such exists, an elevator, or an entrance.

6.3.9 Bicycle Space Size

All required Class A bicycle spaces shall have a minimum vertical clearance of 1.9 metres, shall be a minimum of 0.6 metres in width and shall be:

- (a) a minimum of 1.8 metres in length if the bicycles are to be placed horizontally; or
- (b) a minimum of 1.0 metres in length if the bicycles are to be placed vertically,

except that a minimum of 5% of the spaces must be oversized spaces of 2.4 metres in length and 0.9 metres in width, and may not be vertical or stacked spaces.

6.3.10 Bicycle Space Access

Except for the portion of the aisle directly in front of each oversized space as referred to in section 6.3.9, which shall be a minimum width of 1.5 metres, all required Class A bicycle spaces shall be independently accessible by means of an aisle of a minimum width of 1.2 metres, except that the Director of Planning, in consultation with the City Engineer, may permit a lesser width, to an absolute minimum of 0.9 metre, where the bicycle spaces served are provided more than the minimum required width. All access shall have a minimum vertical clearance of 1.9 metres. All doors on the route from Class A bicycle parking spaces to the outside shall be fitted with automatic door openers.

6.3.11 Bicycle Rack and Bicycle Locker Requirement

All required Class A bicycle spaces shall require a bicycle rack with individually numbered spaces or a numbered bicycle locker.

6.3.12 Bicycle Rack Design and Security

Class A bicycle space racks shall be constructed of sturdy theft-resistant material and shall have secure theft-resistant anchoring to the floor or ground. The bicycle rack shall support the bicycle frame above the centre of gravity and shall enable the bicycle frame and front wheel to be locked with a U-style lock.

6.3.13 Vertical and Stacked Bicycle Spaces

Vertical bicycle space racks shall support the bicycle without the bicycle being suspended on the wheels. No more than 30% of the required Class A bicycle spaces may be vertical, and in total, no more than 60% of the required Class A bicycle spaces may be vertical and stacked. Stacked bicycle spaces shall be designed to provide access without the need to lift the bicycle entirely off of the ground, and must provide convenient access. Where the Director of Planning accepts equipment proposed for providing stacked bicycle spaces, the dimensions required in 6.3.9 may be reduced for those spaces, and the dimensions required in 6.3.10 may be increased.

6.3.13A Minimum Number of bicycle lockers

At least 10% of the Class A bicycle spaces must be bicycle lockers.

#### 6.3.14 Bicycle Compound Security

The bicycle compound shall extend from floor to ceiling, and have expanded metal mesh and door with a non-reflective coating. The walls and door shall be reinforced by full-height solid steel bars 13 millimetres minimum diameter or square section, spaced no more than 150 millimetres apart, and welded one to another by at least two crossbars no more than 1,200 millimetres apart, or constructed to provide equivalent or greater security. Supports shall be attached to floor and ceiling with tamper-proof or concealed boltheads or nuts. Industrial grade chain-link shall be No. 7 gauge or heavier.

#### 6.3.15 Bicycle Compound Doors

Entry doors to the bicycle compound shall comply with section 6.3.4., except that no window is required, and the door may be constructed of expanded metal mesh. The lockset or programmable entry shall be placed in a steel plate box welded to the door structure. The supporting post shall be detailed to receive the striker plate. The doorway shall be detailed to prevent access to the latch from lockside with boltcutters.

#### 6.3.16 Bicycle Compound Size

The bicycle compound shall be designed to accommodate a maximum of 40 bicycles.

#### 6.3.17 Bicycle Locker Location

Bicycle lockers shall be located in a private parking area, parking garage, bicycle room, bicycle compound, or as provided for in section 6.3.2.(a).

#### 6.3.18 Bicycle Locker Design and Security

Bicycle lockers shall be constructed of solid, opaque, and theft-resistant material with a lockable door which opens to the full width and height of the locker. Bicycle locker edges shall be secured with no exposed fittings or connectors. Bicycle lockers shall be weather-proof if located where exposed to the elements.

#### 6.3.19 Bicycle Locker Size

Bicycle lockers shall be designed to accommodate a maximum of 1 bicycle, and the minimum inside dimensions of a bicycle locker shall be

- (a) 0.6 metre in width at the door end,
- (b) 0.2 metre in width at the end opposite to the door,
- (c) 1.8 metres in length, and
- (d) 1.2 metres in height.

#### 6.3.20 Conversions in existing buildings

Owners of existing buildings may convert motor vehicle parking spaces to Class A bicycle spaces, at the ratio of 1 motor vehicle parking space to 5 bicycle spaces, to the extent necessary to provide the number of bicycle spaces required under this By-law.

#### 6.3.21 Electrical outlets

Each two Class A bicycle spaces must have an electrical outlet.

#### 6.3.22 Bicycle Maintenance Facilities

If 100 or more Class A bicycle parking spaces are required, then a bicycle maintenance facility shall be provided. The facility shall be provided in a designated, secure area within the building with sufficient work space, and provide the following features: a bicycle stand, a bicycle pump, wrenches, a chain tool, tire levers, hex keys / Allen wrenches, torx keys, screwdrivers, and spoke wrenches.

## **6.4 Class B Bicycle Spaces**

### **6.4.1 Application**

The regulations of this section 6.4 apply where Class B bicycle spaces are required, and Class B bicycle spaces shall be in compliance with section 6.4.

### **6.4.2 Bicycle Rack Requirement and Space Size**

All required Class B bicycle spaces shall be provided in racks which provide a minimum width of 0.6 metre for each bicycle, except as provided for in section 6.4.6.

### **6.4.3 Bicycle Space Access**

All required Class B bicycle spaces shall be independently accessible by means of an aisle with a minimum width of 1.2 metres which is separate from pedestrian access. There shall be unrestricted access behind the space of a minimum length of 0.5 metre. All doors on the route from Class B bicycle parking spaces to the outside shall be fitted with automatic door openers.

### **6.4.4 Bicycle Rack Design and Security**

Class B bicycle space racks shall be constructed of sturdy theft-resistant material and shall have secure theft-resistant anchoring to the floor or ground. The bicycle rack shall support the bicycle frame above the centre of gravity and shall enable the bicycle frame and front wheel to be locked to the rack with a U-style lock.

### **6.4.5 Bicycle Rack Location**

Class B bicycle space racks shall be provided in a convenient, well-lit location that provides visual surveillance by occupants of the building the racks are intended to serve. If the racks are not readily visible to visitors to a site, directional signage to the racks shall be provided.

### **6.4.6 Bicycle Lockers**

Bicycle lockers can be provided for required Class B bicycle spaces instead of bicycle racks, provided the lockers are numbered and are in compliance with sections 6.3.18 and 6.3.19.

## **6.5 End of Trip Facilities**

6.5.1 Where Class A bicycle spaces are required for a non-dwelling use, a minimum number of clothing lockers equal to 1.4 times the minimum number of required Class A spaces shall be provided, and shall be a minimum of 45 centimetres in depth, 30 centimetres in width and 90 centimetres in height with respect to no more than 50% of the lockers and 180 cm in height with respect to at least 50% of the lockers.

6.5.2 Where Class A bicycle spaces are required for a non-dwelling use, water closets, wash basins, showers and grooming stations shall be provided in accordance with sections 6.5.4 and 6.5.5.

6.5.3 Despite the provisions of section 6.5.2, additional water closets, wash basins, showers and grooming stations are not required if on-site facilities are provided as part of an employee fitness centre, provided these facilities meet or exceed the requirements of sections 6.5.4 and 6.5.5, are accessible to employees before and after their work shifts, and are located conveniently in relation to employee Class A bicycle spaces.



6.5.4 The number of water closets, wash basins and showers required by section 6.5.2 shall conform to Table 6.5A for Office and Retail and Service uses, and shall conform to Table 6.5B for all other uses.

**Table 6.5A**

Use	Minimum Number of Fixtures		
	Water Closets	Wash Basins	Showers
Office	1 water closet for every 10 Class A bicycle spaces up to 50 spaces and one for every 20 spaces above 50	1 wash basin for any development requiring between 5 and 10 Class A bicycle parking spaces, plus one for every additional 20 spaces up to 50 spaces and one for every 40 spaces above 50	1 shower for every 10 Class A bicycle spaces up to 50 spaces and one for every 20 spaces above 50
Retail and Service Uses	1 water closet for every 10 Class A bicycle spaces up to 50 spaces and one for every 20 spaces above 50	1 wash basin for any development requiring between 5 and 10 Class A bicycle parking spaces, plus one for every additional 20 spaces up to 50 spaces and one for every 40 spaces above 50	1 shower for any development requiring between 5 and 10 Class A bicycle spaces, plus one for every 40 spaces above 10

<b>Table 6.5B Bicycle End of Trip Facilities Forming part of 6.5.4</b>			
<b>Required Number of Class A Bicycle Spaces</b>	<b>Minimum Number of Fixtures</b>		
	<b>Water Closets</b>	<b>Wash Basins</b>	<b>Showers</b>
0-3	0	0	0
4-29	2	2	2
30-64	4	2	4
65-94	6	4	6
95-129	8	4	8
130-159	10	6	10
160-194	12	6	12
Over 194	12 plus 2 for each additional 30 bicycle spaces or part thereof	6 plus 2 for each additional 30 bicycle spaces or part thereof	12 plus 2 for each additional 30 bicycle spaces or part thereof

6.5.5 There shall be no less than 1 grooming station for each shower provided, and each station shall be:

- (a) separate from the wash basin;
- (b) equipped with a mirror and an electrical outlet; and
- (c) equipped with a counter top with a minimum width of 600 mm and a minimum depth of 250 mm.