Colwood Parking Bylaw Update

WORKING PAPER NO.3

Strategic Directions

November 27, 2020

URBAN SYSTEMS

Submitted to

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November 27, 2020

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File no. 003181.0010.01

Summary

The City of Colwood has identified the need to update its off-street parking regulations to better align with established City policies and ensure appropriate parking provisions in future development. This is particularly important given the on-going rate of growth in Colwood and to ensure that the parking associated with each new development reflects the community's vision.

This document (Working Paper no.3) is the third of three working papers being developed as part of the process of reviewing off-street parking regulations. It provides an overview of the preliminary recommendations for the new off-street parking regulations and parking variance policy. Directions in this document have been established based on the technical analysis and best practices review contained in Working Paper no.1, as well as feedback from Colwood residents and stakeholders described in Working Paper no.2.

Vehicle Parking Supply

A new approach to parking requirements is being recommended to better align with the City's over-arching policy objectives related to compact development patterns, complete communities and encouraging a shift to active and sustainable transportation modes.

The recommended approach to establishing off-street parking supply requirements includes the following key components:

1. A new system of minimum and maximum parking supply requirements that gives greater certainty in the parking supply that will accompany each land use and protects against excessive parking supply, particularly in locations where it may be especially detrimental to compact development and urban design objectives.
2. A clear differentiation in parking supply requirements between identified urban areas and the remainder of the municipality, where the required supply in areas of higher density, mixed land uses and access to public transit would typically be 20-30% less than in other areas.
3. Encouragement and support for development that aligns with City objectives, such as opportunities for enhanced facility design and funds for active transportation infrastructure where minimum or maximum supply requirements are exceeded.

A detailed minimum parking supply rate table has been developed that includes updated land use designations and parking supply rates that better reflect actual parking needs. This is achieved through data collection and analysis of local parking demand (summarized in Working Paper no.1) and comparison to parking supply rates in representative communities. A standardized expression of parking supply rates is identified to afford better understanding of requirements and greater certainty for both the City and development community.

A cash in-lieu of parking policy is identified as an opportunity to provide flexibility to applicants where the minimum parking supply requirement cannot be met or there is a desire for reduced parking supply, while allowing the City to build funds to support walking, cycling and public transit infrastructure.

Parking Variance Policy

An important component that will result from this process is a Parking Variance Policy that clarifies the key criteria that the City will consider in evaluating a parking variance request. The key components to the variance policy identified in this document include the following:

- Housing Diversity – In Multi-Family Residential uses where market rental apartment or affordable housing arrangements are anticipated to result in reduced parking demand over what is otherwise expected.
- Transportation Demand Management (TDM) – Provision of targeted programs / strategies that result in reduced parking demand, including carshare, public transit, bikeshare, and bicycle facilities beyond what is required in the Bylaw.
- Transit Access – Where access to public transit service beyond what is accounted for in the Bylaw is anticipated to lead to reduced parking demand.
- Shared Parking – Where it can be demonstrated that the land uses of a particular site exhibit complementary parking demand characteristics and the overall site parking need can be satisfied by fewer parking spaces due to sharing.
- Facility Design - Enhanced parking facility provision aligned with City policy objectives, either the provision of structured parking in-place of surface facilities and/or enhanced surface parking lot design to include pedestrian facilities, landscape/trees, stormwater management provisions, or other enhancements beyond what is required in the Bylaw.

A technical study prepared by a qualified transportation professional is recommended to accompany any variance request that demonstrates how the proposal meets the identified criteria, the impact of each on reducing parking needs, and that the proposed parking supply is appropriate.

Vehicle Parking Design

Opportunities for enhanced off-street parking facility design have been identified in pursuit of facilities with improved efficiency and functionality, as well as better pedestrian conditions and improved environmental performance. Key recommendations include the following:

- Additional parking space width where adjacent a vertical obstruction (i.e., wall, column)
- Options for "tandem" parking arrangements in Single-Family Residential uses where a secondary suite is present and in Townhouse uses
- Requirements for landscape and street trees in larger parking facilities
- Requirements for a dedication pedestrian walkway in larger parking facilities

Beyond requiring enhanced parking facility design, opportunities for structured parking in place of surface parking, greater landscape / tree provision, stormwater management facilities and enhanced urban design have been identified where applicants are seeking to exceed maximum parking supply rates.

Specialty Vehicle Parking

Accessible parking requirements are given specific consideration to ensure they meet local needs and reflect emerging best practices. Appropriate accessible parking supply and design provisions are identified through distinct requirements for "limited mobility" and "assisted mobility" parking spaces that respond to the spatial and proximity needs of different accessible parking user groups. Standardized signs and pavement markings are recommended to ensure circulation spaces remain clear, and for easy space identification and to promote standardization throughout the community. The identified requirements are above-and-beyond requirement previously contained in the B.C. Building Code and are a better reflection of accessible parking needs locally.

Electric vehicle (EV) charging requirements have been identified that would require all parking spaces in residential uses to include an "energized" outlet capable of providing EV charging, as well as varying levels of energized outlet provision among commercial and institutional land uses. This will ensure "future proofing" in by ensuring the requisite electrical provisions are in place for when EV charging stations are installed. Standardized signage and pavement markings are also recommended to aid in stall identification. This approach generally reflects the CRD recommendations for application in the region and responds to the desire within Colwood to support expanded use of electric vehicles.

Bicycle + Mobility Scooter Parking

Updated bicycle parking supply and design requirements have been identified to improve on requirements in the City's current *Land Use Bylaw*. This includes updated minimum bicycle parking supply requirements for all residential, commercial, industrial and institutional land uses that better reflect current needs and are expressed in a way that is more easily understood and regulated. Requirements for short- and long-term bicycle parking have been expressed distinct from one another to ensure appropriate provision of each.

New bicycle parking design requirements have been identified that ensure short- and long-term bicycle parking facilities are safe and functional. This includes identifying required dimensions for parking spaces, circulation aisles and access doors, as well as distance / access to the building access. Specific recommendations are made for access to wall outlets for electric bicycle ("E-Bike") charging and a requirement for over-sized bicycle parking spaces intended for cargo bicycle, bicycle with trailers, and other larger bicycles.

Recognizing the current challenge with mobility scooter storage and the aging population likely leading to an increase in their use, specific requirements for the supply and design of dedicated mobility scooter parking have been identified. The focus of mobility scooter provisions is in Group Home / Congregate Housing and Hospital uses, but basic requirements are also recommended for most commercial and public / assembly uses.

Cycling end-of-trip facilities have been identified to support commuter cyclists by ensuring appropriate access to showers, change and locker facilities where long-term bicycle parking is provided (excludes residential uses). If included in the *Off-Street Parking Regulations Bylaw,* these facilities will be of significant benefit to commuter cyclist – particularly those travelling over longer distances – and would position Colwood as a leading community in requiring cycling end-of-trip facilities.

Contents

1.0 Overview

The City of Colwood ("the City") is undertaking a comprehensive review of off-street parking regulations as an opportunity to pursue strategic directions around land use and built form, multi-modal transportation and parking management. Modernized, up-to-date regulations will better reflect City policies and result in a more defensible development approvals process by City staff and Council, greater certainty among the development community, and parking supply rates and facility design requirements that better align with the City's strategic objectives. The end result will be greater assurance that future development includes desired parking and alternative transportation provisions.

The following will be the key project outcomes:

1. A new *Off-Street Parking Regulations Bylaw* that regulates the supply, design and location of vehicular parking, bicycle parking and related transportation provisions associated with new development.
2. A *Parking Variance Policy* that clarifies the conditions that may support a variance from the new off-street parking regulations, including items such as location, access to transportation options and transportation demand management (TDM).

Research, technical analysis, and community engagement activities are being undertaken to better understand parking needs in Colwood and to support the final regulations. These activities are being documented in a series of "working papers" developed over the course of the project, as follows:

- **Local Understanding + Best Practices**, Working Paper no.1

  Working Paper no.1 provides a general overview of the City's current policy objectives related to transportation and parking, as well as current off-street parking requirements and how they compare to other communities. Consideration is given to best practices related to bicycle parking, accessible parking, electric vehicle (EV) charging and transportation demand management (TDM).

- **"What We Heard" Engagement Summary**, Working Paper no.2

  Working Paper no.2 is a summary of the public and stakeholder engagement activities undertaken to understand parking needs in Colwood and to test new policy and regulation options.

- **Strategic Directions**, Working Paper no.3

  Working Paper no.3 (this document) is a summary of the key directions and recommendations that will guide the development of the *Off-Street Parking Regulations Bylaw* and *Parking Variance Policy* based on the community engagement and technical analysis summarized in the initial working papers.

2.0 Vehicle Parking

The following section identifies recommended parking regulations for conventional vehicles, including required parking supply rates and conditions where specific supply rates are recommended, as well as design requirements and supporting regulations. Recommendations to specialty vehicle types, such as accessible parking and commercial loading, are contained in ***Section 3.0***.

2.1 Parking Supply

The City's existing *Land Use Bylaw* contains minimum parking supply rates for a number of key land uses. These rates ensure that at least the specified amount of parking is supplied, with no upper limit on how much parking may be provided. Current regulations include a number of land uses that are out-of-date (either uses that are infrequently applied or newer uses missing) and with certain rates that are difficult to calculate and/or regulate.

The following section includes a recommended approach to parking supply requirements that reflects the City's established policies and parking supply rates that result in the "right" amount of parking. Of importance, this includes consideration for the parking needs of different locations throughout Colwood, the parking demand characteristics of different land uses, and opportunities to more effectively meet parking needs while limiting the cost and negative impacts of excessive parking provision.

The importance of parking, and particularly parking supply rates, is considered in detail in *Working Paper no.1*. The focus of this following section is on a recommended approach and parking supply rates to be included in the forthcoming *Off-Street Parking Regulations Bylaw*.

2.1.1 Land Use Designations

The City's current parking regulations specify (common in other communities) that where a land use is not specifically identified with a minimum parking supply rate, the requirements for the most similar use are to be applied. This allows the number of land designations to be limited only to those needed to ensure appropriate parking provision.

One key objective is aligning the land use designations in the new *Off-Street Parking Regulations Bylaw* with designations contained in the *Land Use Bylaw*. This ensures consistency across bylaws in how land uses are being regulated, as well as allows for cross-referencing of land use definitions between bylaw documents. It is acknowledged that the City may update the *Land Use Bylaw* in future and that land use designations in the off-street parking regulations may also require change in future.

Land use designations recommended to be included in the *Off-Street Parking Regulations Bylaw* are included in **Table 1** in the following section. A spreadsheet tracking changes the proposed changes in parking supply rates for land uses currently contained in the Land Use Bylaw is included in **Appendix A**.

2.1.2 Minimum Parking Supply Rates

Minimum parking supply rates are established to ensure that sufficient parking supply accompanies new development. As was described in Working Paper no.1, there is a balance to be struck between ensuring the parking needs of a particular use or site are met while protecting against excessive parking provision that results in a poor use of available land and facilitates vehicle travel over active transportation options.

One of the key tools created to better manage parking supply and to reduce the overall negative impacts of parking lot development is a two-tiered approach to defining minimum parking supply rates. This two-tiered approach provides lower minimum parking requirements in areas of Colwood defined as "Urban Centres."

Compared to previous off-street parking regulations, minimum parking supply rates are intended to be legible, responsive to Colwood's vision and planning policy, and informed by current conditions, research, and recognized best practice. The process undertaken to develop minimum parking supply rates is detailed below.

Supply Rates

Minimum supply rates have been recommended for each of the land use designations identified above in ***Section 2.1.1*** and in **Appendix A**. Existing rates have been reviewed and where they do not align with key criteria, a recommended new minimum supply rate has been identified. Refer to **Table 1**. The criteria considered in reviewing minimum supply rates include the following:

- City policies with respect to land use / development, sustainable transportation, and parking management.
- Demonstrated parking needs, as determined through the review of vehicle ownership / parking demand described in Working Paper no.1.
- Reference to best practices and minimum parking supply rates in representative communities.
- Shifting trends in parking demands including increasing demand for electric vehicle parking.

Informing minimum parking supply rates based on these criteria ensures that parking requirements in Colwood are grounded in current conditions and policy and are more closely aligned to supply rates in adjacent and similar-sized communities.

Urban Centre Parking Requirements

Two minimum parking supply rates have been developed (as shown in **Table 1**), one that provides the minimum parking supply rates across Colwood and a reduced minimum parking supply rate established for areas of the City that are identified as urban nodes and / or Transit Growth Areas within the OCP. These areas are outlined in **Figure 1**. The Urban Centres are an amalgamation of the Colwood Corners, Mixed-Use Employment Centre, and Seaside Village designations identified in the OCP, with additional reduced parking areas within a 200-metre radius of Neighbourhood Centres and corridors identified as Transit Growth Areas.

This two-tiered approach to applying minimum parking standards is designed to incentivize the sustainable development of urban nodes along proposed transit corridors and convenient access to a variety of commercial amenities. Dual parking requirements balance parking demand between these nodes and surrounding areas that will continue to require regular use of single-occupancy vehicles. This is intended to reduce single-occupancy vehicle dependency in areas well serviced by transit, as well as limit the overall amount of parking in these locations to promote quality urban design and people focused spaces. This approach supports a number of key OCP objectives including reducing greenhouse gas emissions and incentivizing higher density development.

Unit of Measure

Where possible, units of measurement used to express parking requirements are to:

1. Be based on land use measures (i.e., floor area or units), rather than those that are not easily measured or may change over time (i.e., employees, washing machines).
2. Be expressed as a standardized unit of measurement (i.e., spaces per unit).

This approach contributes to the legibility of off-street parking requirements by ensuring that parking supply rate units are clear and consistent.

Land Use Organization

The minimum parking supply rates table contained in the bylaw is to be separated into land use sub-sections for enhanced legibility and to allow for requirements to apply to broad land use classes (i.e., residential). The following sub-sections are to be included:

- Residential
- Commercial
- Industrial
- Institutional, Cultural + Recreational

The recommended minimum parking supply rates are identified in **Table 1**. A maximum parking supply is also recommended that prevents against excessive parking supply in defined areas of Colwood, as described in ***Section 2.1.4***.

FIGURE 1. URBAN CENTRE AREAS ELIGIBLE FOR REDUCED PARKING REQUIREMENTS

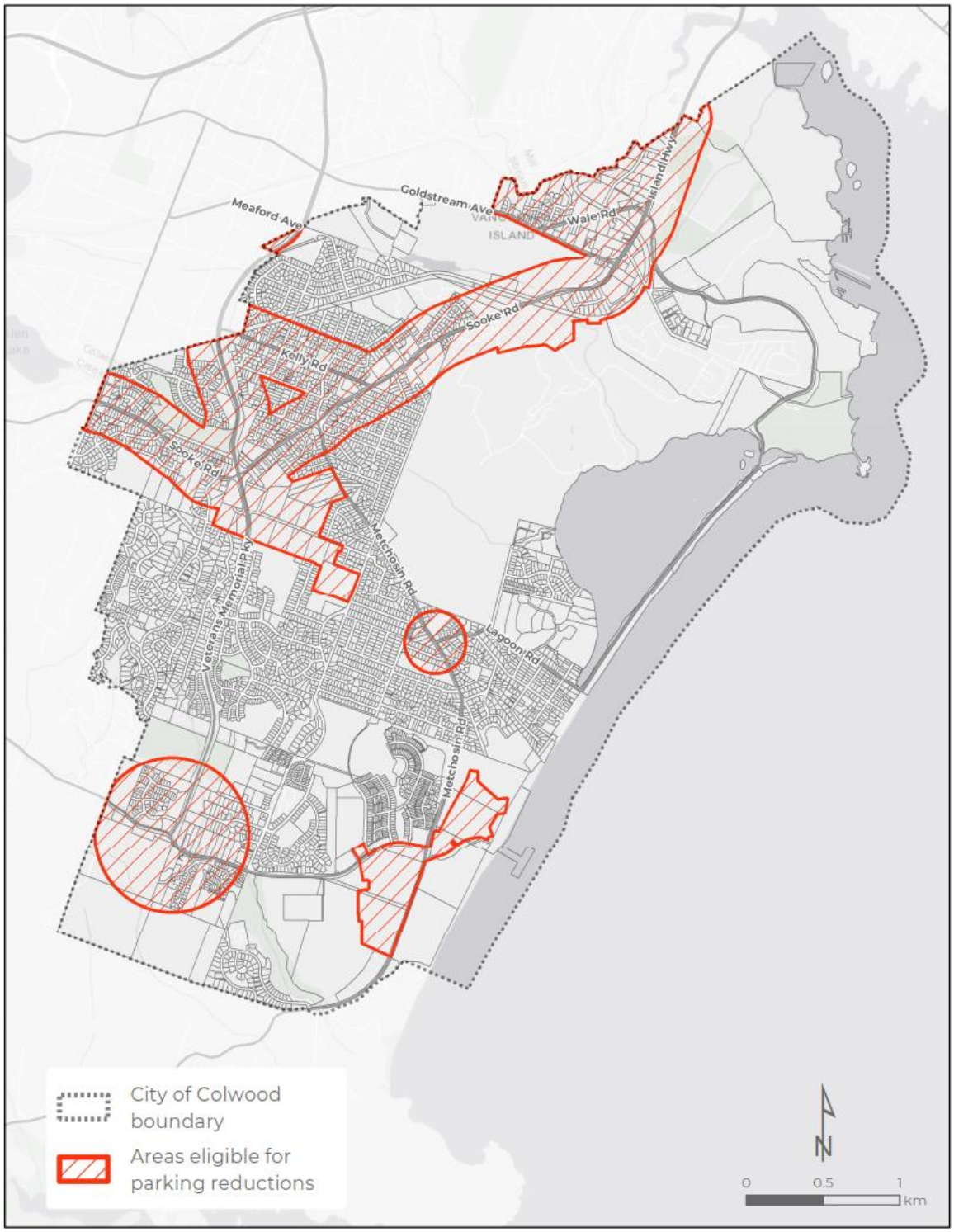


TABLE 1. RECOMMENDED MINIMUM PARKING SUPPLY RATES

Use	Parking Requirement		Minimum Energized Spaces
	General	Urban Centre	
Residential			
Residential, One-family Dwelling	2 per dwelling unit		100%
Secondary Suite	1 per dwelling unit		100%
Duplex	2 per dwelling unit		100%
Attached Housing (including Triplex, Rowhouse and Townhouse)	2 per dwelling unit	1.5 per dwelling unit	100%
Residential, Multi-Family (Apartments)	1.0 per bachelor dwelling unit	0.8 per bachelor dwelling unit	100%
	1.25 per one-bedroom dwelling unit	1.0 per one-bedroom dwelling unit	
	1.6 per two-bedroom dwelling unit	1.3 per two-bedroom dwelling unit	
	2.0 spaces per dwelling unit greater than two bedrooms	1.5 spaces per dwelling unit greater than two bedrooms	
Congregate Housing and Group Home Use	0.25 per dwelling unit		5%
Commercial			
Animal Hospital	1 per 20m^2 of gross floor area		0
Automotive Sales and Repairs	1 per 35m^2 of gross floor area		10%
Bank	1 per 20m^2 of gross floor area	1 per 25m^2 of gross floor area	10%
Boat Sales and Repairs	1 per 40m^2 of gross floor area		10%
Building Material Supply	1 space per 80m^2 of gross floor area		10%
Furniture and Appliance Sales	1 space per 80m^2 of gross floor area		10%

Use	Parking Requirement		Minimum Energized Spaces
	General	Urban Centre	
Gasoline Service Station and Car Wash	1 per 30m² of gross floor area	1 per 35m² of gross floor area	20%
Hotel, Motel, Bed and Breakfast, and Other Short-Term Accommodation	1 per rental room		10%
Live / Work Studio or Home Occupation	1 per business in addition to the requirement for residential parking	N/A	10%
Nurseries and Greenhouses	1 per 35m² of gross floor area used for retail use		0
Offices	1 per 35 m² of gross floor area	1 per 45 m² of gross floor area	10%
Offices, Medical	1 per 20m² of gross floor area	1 per 25m² of gross floor area	10%
Personal Service	1 per 20m² of gross floor area	1 per 25m² of gross floor area	10%
Public House and Brewhouse	1 space per 10m² of gross floor area used for Assembly, plus 1 space per 100m² of brewery uses	1 space per 15m² of gross floor area used for Assembly, plus 1 space per 100m² of brewery uses	10%
Restaurant (including coffee shop, bakery)	1 per 10m² of gross floor area	1 per 15m² of gross floor area	10%
Restaurant, Drive-in Business	1 per 20m² of gross floor area		10%
Retail Store, Supermarkets, Liquor and Other Retail Personal Uses	Less than 400m² of gross leasable floor area - 1 per 30m²	Less than 400m² of gross leasable floor area - 1 per 36m²	10%
	400m² to 4,000m² of gross leasable floor area - 1 per 35m²	400m² to 4,000m² of gross leasable floor area - 1 per 42m²	
	Greater than 4,000m² of gross leasable floor area - 1 per 40m²	Greater than 4,000m² of gross leasable floor area - 1 per 48m²	
Shopping Centre	1 per 25m² of gross leasable floor area	1 per 30m² of gross leasable floor area	10%
Industrial			
Agriculture	1 per 100m² of gross floor area of facility, plant, or warehouse uses		0
Brewery / Distillery	1 per 100m² of gross floor area		0

Use	Parking Requirement		Minimum Energized Spaces
	General	Urban Centre	
Manufacturing and Industrial Uses	1 per 100m^2 of gross floor area		0
Warehouse, Storage and Mini-Storage	1 per 180m^2 of gross floor area		0
Institutional, Cultural + Recreational			
Arts and Cultural Facility (including museums and art galleries)	1 per 50m^2 of gross floor area		5%
Assembly Use (including convention centres, banquet halls, theatres, funeral parlours, community centres, and stadiums or arenas)	1 per 15m^2 of gross floor area		5%
Church	1 per 12m^2 of gross floor area used for Assembly		5%
Day Care Centre	1 per 50m^2 of gross floor area		10%
Golf Course	4 per golf hole		10%
Golf Practice Range	1 space per range tee		10%
Hospital	1 per 50m^2 of gross floor area		10%
Post-Secondary Institution (University or College)	1 per 70m^2 of gross floor area		5%
Recreational Facility (including gymnasiums, commercial recreational facilities and similar uses)	1 per 20m^2 of gross floor area		5%
Scientific or Technological Research Facility	1 per 20m^2 of gross floor area		5%
School, Elementary and Middle	1 per 120m^2 of gross floor area		5%
School, Secondary	1 per 80m^2 of gross floor area		5%

The proposed land uses identified in **Table 1** includes uses that are not currently included in the *Land Use Bylaw* and will require definitions in the *Off-Street Parking Regulations Bylaw*, as follows:

- Arts and Cultural Facility
- Assembly Use
- Brewery / Distillery
- Day Care Centre
- Furniture and Appliance Sales
- Recreational Facility

2.1.3 Maximum Parking Supply

In order to promote the efficient use of land and reduce overall dependency on single-occupancy vehicle travel a maximum parking supply threshold is proposed within the "Urban Centre" area identified in **Figure 1**. This would aim to encourage parking for uses that are in excess of the minimum parking requirements to compensate for the impacts on land use by providing superfluous parking in a format that allows for quality design and efficient land use.

The need to for a parking maximum is explicitly mentioned in the *Official Community Plan, Policy 8.2.6.3* which states a desire to ensure oversupply does not occur and employ parking maximums to reduce surface parking lots and supply over time as part of facilitating mode shift (i.e., more travel by walking, cycling and public transit).

To meet the objectives provided by the *Official Community Plan*, maximum parking supply requirements are recommended to be employed in Colwood to ensure parking regulation achieves the following:

- Providing clear direction on the acceptable range of parking supply provision in Colwood based on land use and urban design objectives expressed in the OCP to ensure flexibility in off-street parking regulation while preventing parking oversupply.
- Limiting the excessive proliferation of surface parking lots, particularly outside of areas designated as Urban Centres.
- Encouraging the creation of parking structures for larger developments within Urban Centres.
- Ensuring that excess parking supply in Colwood is held to higher standards of urban design, including requiring parking structures for excess parking within Urban Centres and the use of enhanced landscaping, screening, permeable paving, and pedestrian movement within parking areas outside Urban Centres.

Two regulations are recommended to establish parking maximums, each addressing ensuring appropriate parking provision specific to locations within and outside the identified Urban Centre area:

1. Parking supply in "Urban Centres" may exceed the minimum requirements in **Table 1** by up to 10% after which point any additional parking supply in excess of the minimum, including the initial 10% in excess of the minimum requirements, shall be provided either as structured or underground parking. Should parking supply exceed 50% of the minimum requirements, the entire parking supply shall be contained within a parking structure.
2. In areas outside of the "Urban Centres" parking supply may exceed the minimum requirements in **Table 1** by up to 30%. However, upon exceeding 10% of the minimum parking requirement, the entire parking area shall include the following design enhancements:
    - Landscape: 10% of the total parking facility area is to be soft landscape and include trees; and
    - Permeable Surface: The parking facility is to be surfaced with a durable permeable material.

The parking maximum recommended above may result in certain development types being discouraged, particularly those typically seeking greater parking supplies. The City should monitor application of this requirement over time to ensure it continues to meet the City's objective of managing parking supply and not deterring desirable development.

2.1.4 Parking Variance Policy

Parking variances commonly arise in the development process due to unforeseen challenges related to site design and development. Though parking variances are often a necessary tool needed to support development, it is important that they are done consistently and in a manner that does not create parking challenges for the end users of a development and/or negatively impact the surrounding neighbourhood. Therefore, the following section provides some key considerations for how and when parking variance should be applied.

In the application of parking variances, it is important to consider the City's current planning policies and direction provided in the OCP, Land Use Bylaw and other policy documents. Parking variances, when provided, should be supported by factors that are understood to result in a reduced parking supply needs from what might otherwise be expected, which may include reduced vehicle ownership due to access to transit or active transportation, more efficient use of parking supply due to "sharing" or other facility characteristics that align with key City policy objectives such as encouraging structure parking and/or enhanced surface parking design. The full list of factors is provided below.

Further, it is recommended that the City require a technical study prepared by a qualified transportation professional to City staff's satisfaction accompany a variance request to demonstrate how the proposal meets identified criteria, the impact of each on reducing parking needs, and that the proposed parking supply is appropriate.

Housing Diversity

Multi-family residential uses include a broad variety of housing types, including strata-owned condominiums, market rental apartments, and supportive and affordable housing forms. Rental and affordable housing sites in communities on the Westshore and elsewhere on Vancouver Island have been shown to have reduced parking demand as compared to strata-owned condominium sites. While the minimum parking supply rate identified in Table 1 applies to all Multi-Family Residential uses, it is recommended that the anticipated reduction in parking demand may be used as justification for a parking variance where market rental apartment or affordable housing uses are proposed. A technical study should be required that clearly identifies the type of rental or affordable housing being proposed, how the arrangement is guaranteed into perpetuity, and the extent of the reduction in parking demand that is anticipated.

Beyond more accurately reflecting actual parking needs, the parking reduction helps support the City's goals of increasing housing diversity, including rental, and improving housing affordability.

Transportation Demand Management (TDM)

Transportation demand management (TDM) refers to programs and strategies that seek to influence individual travel behaviour, including encouraging more people to walk, bicycle and use public transit. The successful application of TDM helps address the City's objectives of reducing vehicle dependence and encouraging active and sustainable travel modes.

It is recommended that TDM is used to support a parking variance where it can be justified in a technical study that a TDM measure(s) will result in reduced parking demand. TDM opportunities include:

- Carshare: Provision of a carshare vehicle, a reserved parking space for a carshare vehicle, memberships in a carshare service and/or financial subsidies toward carshare use;
- Transit: Contributions toward transit infrastructure upgrades and/or provision of financial subsidies toward public transit use;
- Bikeshare: Provision of a bikeshare service and/or financial subsidies toward bikeshare use;
- Bicycle Facilities: Provision of bicycle parking, electric bicycle charging and/or end-of-trip cycling facilities above-and-beyond those required in the Off-Street Parking Regulations where additional facilities are warranted; and
- Other: Other TDM opportunities that are anticipated to result is a measurable reduction in parking demand.

The technical study must identify how the proposed TDM measures will be secured in perpetuity and the applicant work with the City toward any legal or binding arrangements that are required.

The Off-Street Parking Regulations are recommended to include requirements for bicycle parking, electric bicycle charging and end-of-trip cycling facilities (i.e., showers, change areas). These items may be used as justification for a parking variance only where they are proposed above-and-beyond the requirements of the Regulations and the technical study demonstrates a need for additional facilities.

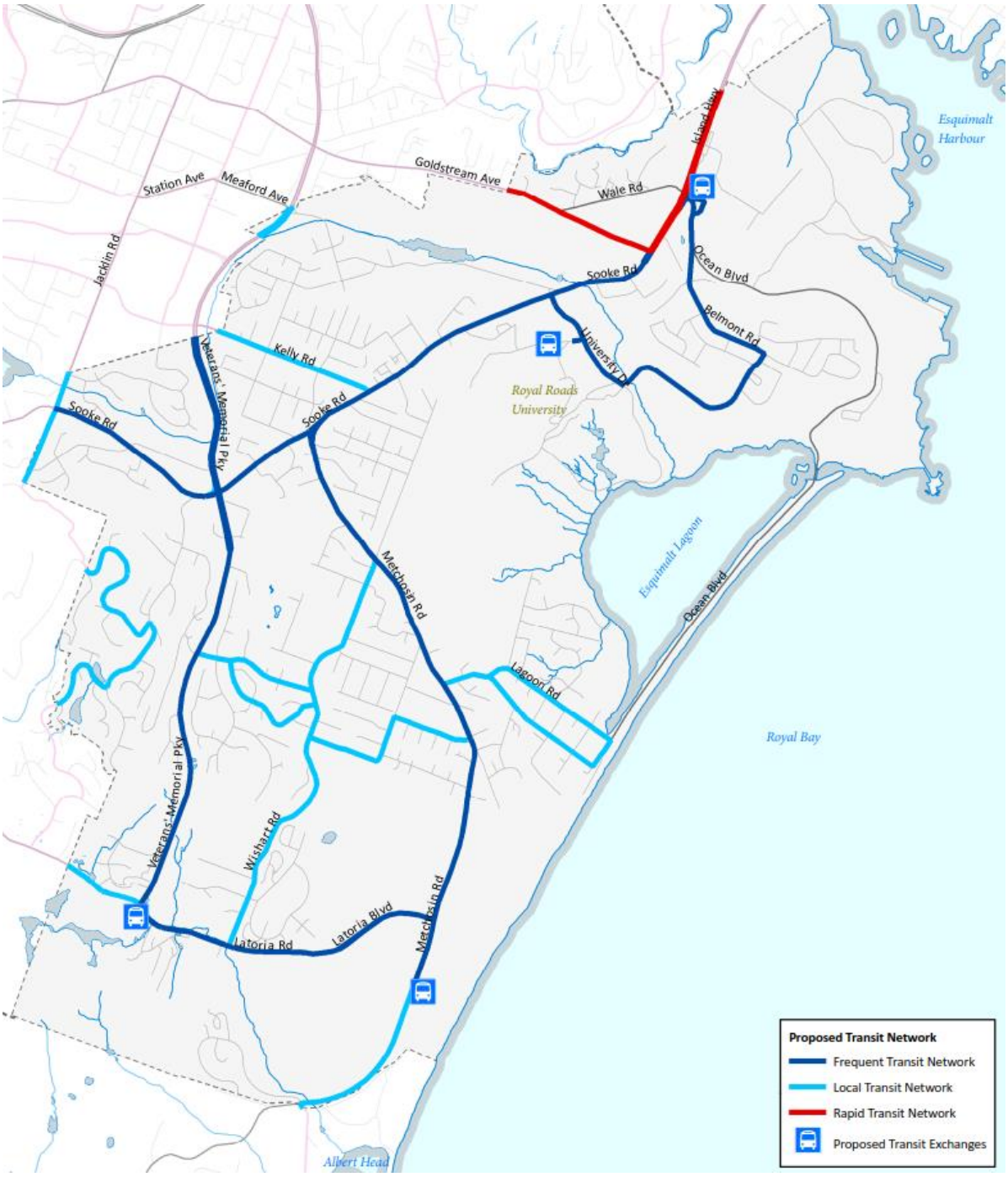
Transit Access

Access to public transit service may be used as justification for a parking variance where the presence of transit is anticipated to result in a measurable decrease in parking demand due to increased transit use.

Ultimately a technical study should justify the reduction in parking demand due to transit proximity, considering both a distance within which individuals are willing to walk to transit and are therefore within proximity of transit services, as well as the type and level of transit service that is currently offered and planned in future. It is suggested that Rapid Transit Network (RTN) and Frequent Transit Network (FTN) corridors identified by the City and BC Transit are where frequent and reliable service will be offered, and where nearby land uses are most likely to result in reduced parking demand. Refer to **Figure 2**.

Area's within the City's Transit Growth Area are being recommended for reduced parking supply requirements per the "Urban Centres" discussion in ***Section 2.1.2*** above, and should not be considered for further reductions due to proximity to transit.

FIGURE 2. PROPOSED TRANSIT NETWORK[1]



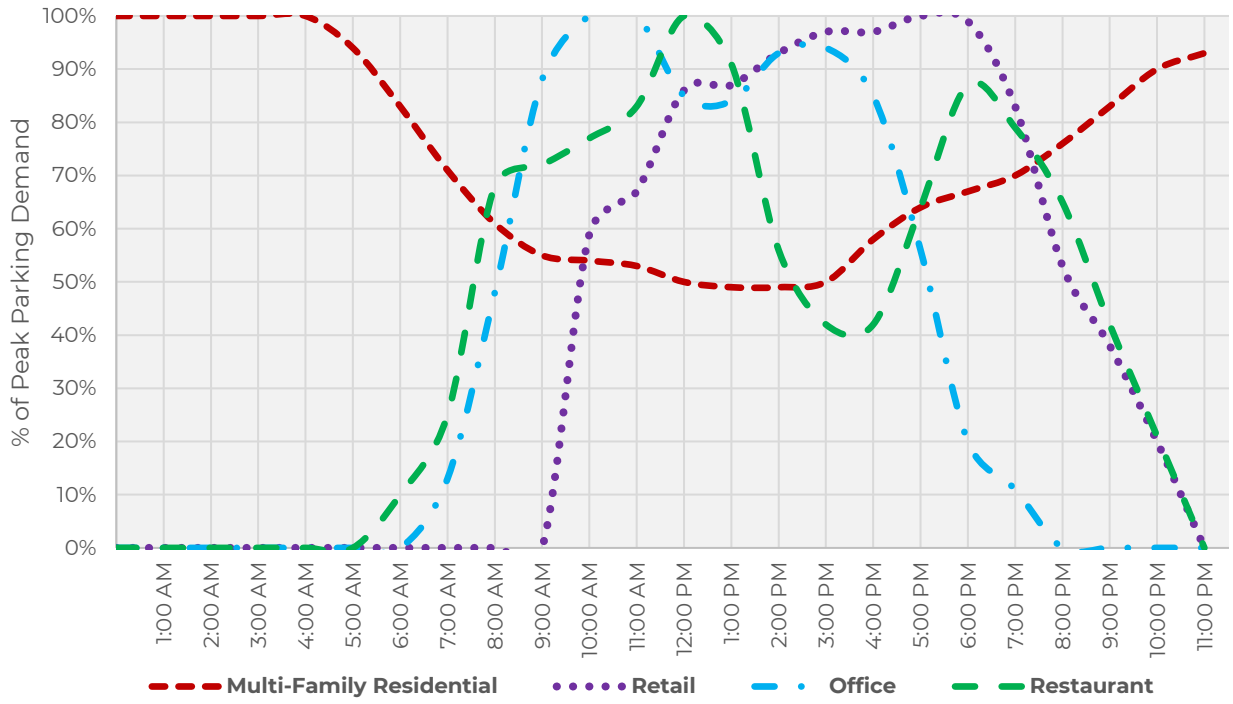
[1] City of Colwood, Official Community Plan, August 2019, Figure 12, page 71.
Accessed online at: www.colwood.ca/city-hall/plans-reports/official-community-plan

Shared Parking

Shared parking refers to a scenario where two or more land uses in close proximity share a supply of parking spaces in order to reduce the overall parking supply for the site or area. The concept is successful where parking demand for different uses exhibits complementary demand patterns with peak demand experienced at different times of day. For example, an office building and multi-family residential are complementary land uses because office parking demand is typically highest during weekday working hours while residential demand is highest weekday evenings and weekends when office demand is low. Refer to **Figure 3**. Parking must remain unreserved (i.e., available for all users) for shared parking to work well.

Shared parking may be used as justification for a parking variance where a technical study demonstrates that the land uses exhibit complementary parking demand patterns and identifies a means of ensuring parking spaces remain unreserved. The reduction in parking needs resulting from shared parking should be quantified in the technical study specific to the land uses being proposed. Shared parking considerations included in the Off-Street Parking Bylaw (i.e., commercial and visitor uses) are not to be included as part of the variance.

FIGURE 3. TIME-OF-DAY PARKING DEMAND FOR KEY LAND USES[2]



[2] Time-of-day demand figures based on Institute of Transportation Engineers (ITE) *Parking Generation*, 4th Edition.

Structured Parking

The City is actively seeking to encourage structured parking (both above and below ground) in place of surface lots to support more efficient use of available land, support higher densities in defined areas and enhance urban design through reduced surface parking. Structured parking is supported in the OCP specifically for lands within Major Centres. The capital cost of parking structures, however, makes them prohibitively expensive for many types of development and not something that can reasonably be required in the Off-Street Parking Regulations.

In recognition of the additional investment required to construct structured parking and incentivize structured facilities in place of surface parking, it is suggested that the City include the provision of structured parking as an opportunity to reduce parking supply by up to 10% of the total requirement where at least 75% of the parking supply is provided as structured parking (either above or below ground).

Facility Design

Parking facility design as discussed in ***Section 2.3*** (below), is a defining feature of the community's character and achieving key urban design objectives, as well as creating a safe, comfortable parking facility user experience. This includes not only the experience of parking and maneuvering a vehicle, but also the walking experience between a parked vehicle and building entrance and the environmental performance of the facility. The design of parking facilities can be altered to improve safety, reduce stormwater run-off, and support quality urban design; all of which are supported by the City's OCP. Examples are provided in **Figure 4**.

Therefore, it is suggested enhanced parking faciality design that goes beyond the minimum requirements to create a more people- and environmentally-friendly space could support additional reductions to the minimum parking supply requirements. The magnitude of the parking supply reduction should be proportionate to the level of enhanced design being proposed, as rationalized through the supporting technical study.

FIGURE 4. EXAMPLES OF ENHANCED PARKING FACILITY DESIGN

Stormwater management provisions at the foot of the parking space allowing for slower rainwater transport and natural infiltration prior to entering the stormwater system

Permeable surface treatment allowing stormwater to infiltrate the sub-surface and contribute less overall run-off to the municipal stormwater system

2.1.5 Cash In-Lieu of Parking

The Local Government Act (LGA) permits British Columbia municipalities to establish regulation allowing a prospective developer to pay cash in-lieu of required parking spaces. Cash in-lieu of parking is at the land developer's discretion and is typically pursued where private off-street parking is not needed or is difficult to accommodate on-site due to physical or other constraints. Per the LGA, all monies received must be placed in a reserve fund for the purposes of providing:

a. New and existing off-street parking spaces, or

b. Transportation infrastructure that supports walking, bicycling, public transit, or other alternative forms of transportation.

Currently, the City does is not planning to develop municipal structured public parking facilities. However many sidewalk and bike lane projects are in the process of being implemented. Therefore, cash in-lieu funds to build an active transportation reserve fund to support investments in pedestrian, cycling and transit infrastructure are proposed. This aligns with City policies targeting increases in active transportation and would help cover the costs of associated capital projects. The City could address the option of directing cash in-lieu of parking contributions to a municipal parking facility in the future if it was determined this was warranted.

The recommended cost to the applicant is $12,000 per parking space. This rate is consistent with the rates in View Royal and Langford as well as other comparable sized communities with cash in-lieu regulations in-place such as Sidney, Oak Bay and Comox. Costs in this range were chosen to provide flexibility to the development industry where the provision of parking is problematic and to help generate funds for active transportation and public transit infrastructure in high priority locations in Colwood. This rate may be revised in future if deemed to be too high and resulting in limited uptake or too low and proving too attractive to applicants seeking to "buy" their way out of supplying parking.

A maximum of no more than 50% of the minimum parking supply requirement is recommended to be replaced through cash in-lieu of parking to ensure a basic parking provision and to protect against acute issues of spillover parking. It is also recommended that the cash in-lieu option is limited only to sites within the identified Urban Centre areas.

In addition to establishing the cash in-lieu regulation, the City must establish a reserve fund to be used to receive and account for monies received in-lieu of parking. The City is required to report annually on reserve fund contributions, expenditures, balance, and projected timeline for future projects to be funded.

2.2 Parking Facility Design

2.2.1 Facility Dimensions

Parking Space + Aisle Dimensions

The City's current parking space dimensions 2.6m wide and 5.8m long with a 7.6m aisle width. These dimensions are generally aligned with required dimensions found in other communities, although a drive aisle width of 7.0m is more commonly found.

Feedback from community and stakeholder engagement activities indicated that many residents find parking spaces in Colwood to be small. For example, parking design (or parking space size) was cited in the community survey as the most important component of the new parking regulations. Conversely, the City has established OCP policies seeking to limit parking oversupply (8.2.6.3).and minimize impervious surfaces (12.2.3.1).

It is therefore recommended that the current parking space dimensions remain in-place. This avoids the potential for non-compliance among existing parking facilities that may be brought forward as part of future development applications.

Where changes are recommended is in how the required dimensions are expressed to ensure they are more readily understood. It is recommended that the parking space and aisle width table is altered to include common language and to correspond to a diagram that acts as a legend in visually communicating what each dimension refers to. The updated table is included in **Table 2**. A supporting visual similar to the diagram shown in **Figure 5** is also recommended to help with interpretation of the dimensions contained in **Table 2**.

Additional Parking Space Width

A vehicle accessing a parking space will commonly swing beyond the physical width of the parking space in order to centre the vehicle within the parking space. This is typically facilitated by added parking space width (i.e., a vehicle is commonly 1.7-1.9m wide and the parking space 2.6m). Where a vertical obstruction is present that prevents a vehicle from swinging into adjacent areas, additional parking space width should be provided to accommodate the vehicle swing within the parking space.

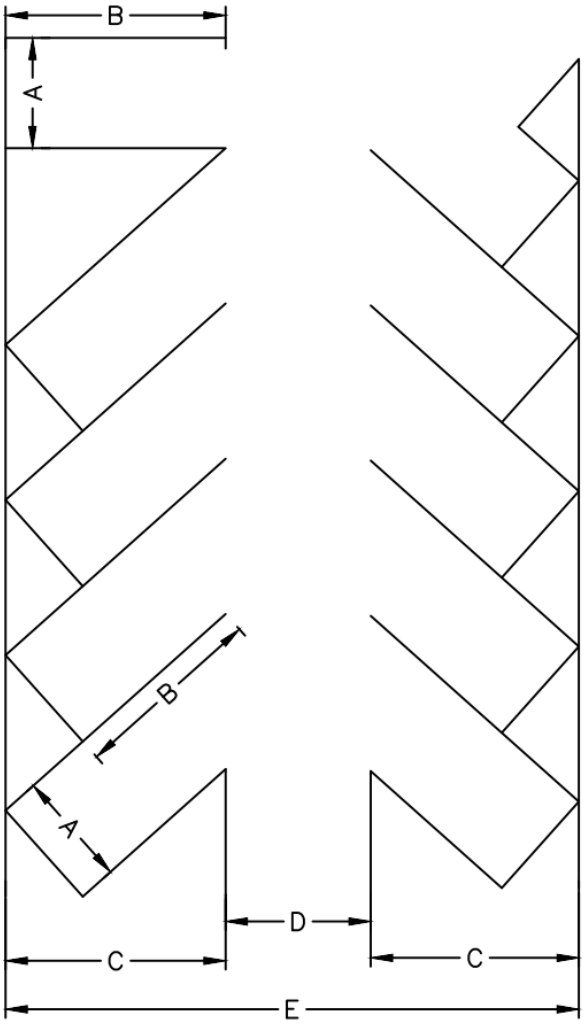
The City's regulations do not currently require added width in this situation. The following is recommended for the new off-street parking regulations:

1. Parking spaces must be an additional 0.3m wider where they abut an obstruction on one side; and
2. Parking spaces must be an additional 0.6m wider where they abut an obstruction on both sides.

TABLE 2. VEHICLE PARKING SPACE + AISLE DIMENSIONS

Parking Angle	Parking Space / Aisle Dimensions				
	Width (A)	Length (B)	Depth to Curb (C)	Aisle Width (D)	Total Module (E)
0°	2.6m	7.0m	2.6m	3.7m	8.9m
30°	2.6m	5.8m	5.2m	3.7m	14.1m
45°	2.6m	5.8m	5.9m	4.1m	15.9m
60°	2.6m	5.8m	6.3m	5.6m	18.2m
90°	2.6m	5.8m	5.8m	7.6m	19.2m

FIGURE 5. VEHICLE PARKING SPACE + AISLE DIMENSIONS



Small Car Parking

The City currently allows for 30% of the total required parking supply to be small car spaces, with a reduced parking space depth from 5.8m to 4.5m. Both the City's supply and dimensions related to small car parking are generally consistent with regulations in other local jurisdictions, including Langford, View Royal, Saanich, Sidney and Nanaimo.

Vehicle dimensions were reviewed for each vehicle class to determine those vehicle classes that are accommodated within the City's identified small car dimensions. Refer to **Table 3**. The results suggest that all Micro, Sub-Compact and Compact Cars, as well as Compact SUVs are accommodated within the City's small car parking space dimensions.

It is also recommended that the off-street parking regulations require that small car parking spaces are marked "SMALL CAR" so they are clearly designated for that use. This requirement is common in other communities.

TABLE 3. TYPICAL VEHICLE DIMENSIONS, BY VEHICLE CLASS[3]

Vehicle Class	Length	Width
Micro Car (e.g., SmartCar)	2.7m	1.6m
Sub-Compact Car (e.g., Honda Fit)	3.9m	1.7m
Compact Car (e.g., Nissan Leaf)	4.5m	1.8m
Mid-Sized / Large Car (e.g., Toyota Camry)	4.9m	1.8m
Compact SUV (e.g., Toyota RAV-4)	4.6m	1.8m
Mid-Sized / Large SUV (e.g., Nissan Pathfinder)	4.9m	1.9m
Minivan (e.g., Honda Odyssey)	5.2m	1.9m
Small Pick-Up Truck (e.g., Toyota Tacoma)	5.1m	1.8m
Mid-Sized / Large Pick-Up Truck (e.g., Ford F-150)	5.8m	2.0m

Specialty Vehicles

Parking space dimensions for accessible parking and loading spaces are considered in ***Section 3.0***.

[3] Vehicle dimensions are intended to generally represent vehicles in each vehicle class based on dimensions for a common vehicle model within each class

2.2.2 Access + Layout

Drive Aisles

Drive aisles are to be no less than 7.6m wide, per recommendations in **Table 2** above. This width is established both to allow two-way vehicle travel, but also to facilitate vehicles maneuvering in/out of perpendicular (90-degree) parking spaces.

Reduced drive aisle widths may be appropriate where a drive aisle only facilitates one-way circulation.

Access

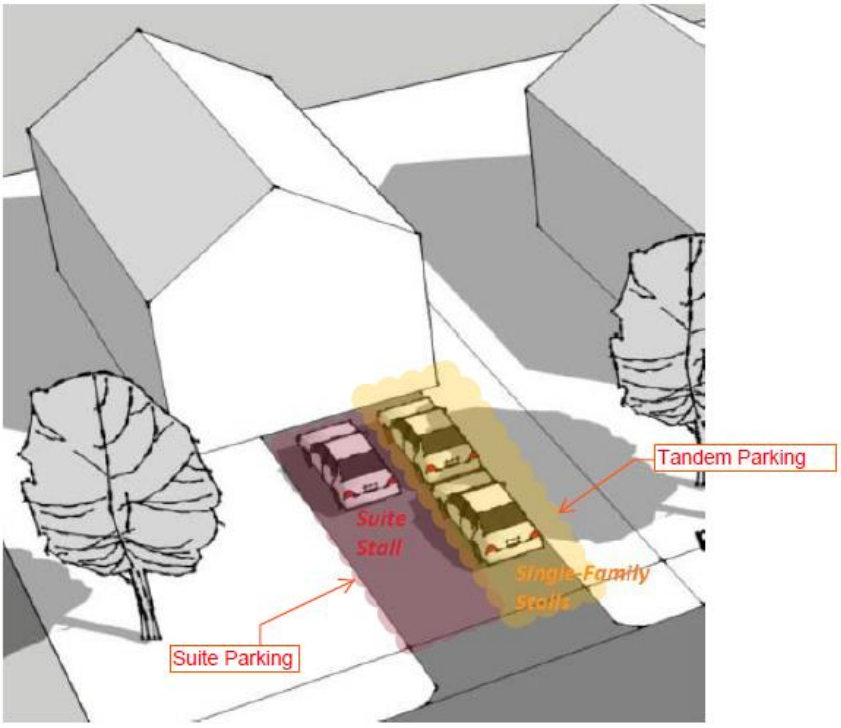
Requirements are to be established to ensure that each parking space has unobstructed access. This may be achieved by each parking space having direct access to an adjacent drive aisle or driveway.

The requirement for unobstructed access should not be applied to Townhouse uses, where one of the required parking spaces may be provided without unobstructed access (i.e., in a tandem arrangement). This configuration requires that the two vehicles parked in tandem belong to individuals in the same household to allow for coordination of parked vehicles in order to be successful. The tandem arrangement reduces the overall quantity of land dedicated to driveway/access to parking spaces, allows for narrower overall lot sizes and helps address the City's objectives of increasing housing options and flexibility.

Tandem arrangements are currently enabled for Single-Family Residential uses. Where a secondary suite is permitted the parking for the suite should not be situated in tandem with the Single-Family Residential uses; rather, the parking space for the suite shall have unobstructed access but the two spaces associated with the single-family dwelling may be located in tandem with one another. This arrangement is illustrated in **Figure 6**.

The tandem arrangement specifically encourages the provision of secondary suites (*OCP Policy 9.2.1.3*). Importantly, this also allows for a narrower driveway access, thereby allowing for a greater supply of on-street parking where provided.

FIGURE 6. SAMPLE TANDEM PARKING ARRANGEMENT FOR A SINGLE-FAMILY HOME WITH SECONDARY SUITE



Setback / Buffer

Where a surface parking facility is located adjacent to a street, it should include a soft landscaped area with a minimum width of 1.0m between the parking facility and the street boundary. This ensures that an appropriate transition is provided by the public right-of-way and private lands, as well as visual screening of surface parking facilities. Consideration and/or regulatory language may be required to ensure motorist sightlines at driveways are maintained.

2.2.3 Amenity + Design

Surface

All off-street parking areas should be hard surfaced to ensure a level surface that is durable, dust-free and suitable for multi-modal travel (including pedestrian travel). Suitable materials include asphalt, concrete, concrete, pavers, or other permeable material that provides a durable surface. Parking areas in the side or rear area of a lot in an Industrial Zone may be excluded from the requirement for hard surface.

The City is actively seeking to minimize the volume of stormwater run-off and minimize impervious surfaces (OCP policy 12.2.3.1). Consistent with this objective, as well as a desire to avoid excessive off-street parking supply, it is recommended that where parking is provided in excess of the minimum parking supply requirement that the parking facility is surfaced with a durable permeable material (discussed in Section 2.1 above).

Landscape

Where 30 or more parking spaces are required and parking is provided in a surface parking facility, a minimum of 5% of the parking area should be soft landscaped and include trees. This will help prevent against expansive paved parking facilities and align with OCP policies specifically targeting increase urban tree canopy (11.2.3.1). Further the requirement for added landscape space in surface parking facilities may help encourage structured parking in-place of surface parking.

Pedestrian Circulation

Where 30 or more parking spaces are required and parking is provided in a surface parking facility, a pedestrian walkway providing direct access to the primary building entrance should be provided. Requirements should ensure that the walkway meets the City's standards for pathway design and meet full accessible design criteria including provision of curb ramps at transition between the parking surface and sidewalk level. This will ensure a dedicated walking facility is provided through larger surface parking facilities consistency with OCP policies in support of improving "walkability" (8.2.2.5, 8.2.2.6) and creating an accessible public realm (8.2.2.9, 8.2.2.10).

Parking facilities should be designed in such a way that no parked vehicle may encroach into adjacent walkways. This ensures that vehicles are positioned where intended and that walkaway remaining clear for pedestrian activities. There are two opportunities to ensure this is achieved that should be included in off-street parking regulations:

1. A buffer space (preferably landscaped) between the parking space and walkway, or
2. A curb stop placed 0.9m from the end of the parking space that physically prevents a vehicle from extending beyond the parking space.

3.0 Specialty Vehicle Parking

The following section identifies recommended parking regulations for specialty vehicle types, specifically accessible parking, commercial vehicles / trucks, residential visitors and electric vehicles.

3.1 Accessible Parking

Dedicated accessible parking spaces are required throughout Colwood to ensure individuals with physical, sensory and cognitive challenges are able to access parking that is located and designed to specifically meet their needs. The appropriate supply and design accessible parking is integral to creating a complete community that can be accessed by all residents. Results from the community survey indicated that Colwood residents view accessible parking as one of the most important component of the *Off-Street Parking Regulations Bylaw*.

3.1.1 Accessible Parking Supply

Minimum Supply, General Land Uses

The recommended minimum supply requirements for accessible parking spaces are identified in **Table 4**. Consideration is given in subsequent sections to the supply of accessible (i.e., limited mobility) versus van accessible spaces.

TABLE 4. RECOMMENDED ACCESSIBLE PARKING SUPPLY REQUIREMENTS

Total Parking Supply Required	Accessible Parking Supply Required
0 – 10 spaces	0 spaces
11 – 50 spaces	1 space
51 – 100 spaces	2 spaces
101 – 150 spaces	3 spaces
151+ spaces	One additional accessible parking space for each additional 50 total parking spaces required

The following is an overview of how the recommended supply requirements compare to past requirements, best practices and other communities:

- The recommended supply requirement exceeds the City's current rate where the first space is not required until 25 conventional spaces are required, where the first space is required once 11 conventional spaces are required under the proposed change.
- The recommended supply requirement exceeds the past BC Building Code requirement by approximately double (the previous BC Building Code requirement was: *where more than 50 parking spaces are provided, parking spaces for persons with disabilities shall be provided in the ratio of 1 for every 100 or part thereof*).
- The recommended supply requirement balances the desire for increased accessible parking provision expressed by local accessibility-focused organizations, as well as concerns expressed by the development industry over low utilization of accessible parking spaces particularly in multi-family residential uses.
- The recommended supply requirement is approximately inline with requirements in communities such as Richmond, Surrey, Kelowna and Central Saanich, all acknowledged as leaders with BC. The recommended requirement exceeds those in comparable communities such as Saanich, Nanaimo, North Vancouver (City) and Coquitlam.

Minimum Supply, Specialty Land Uses

The accessible parking supply requirements identified above should not be applied to land uses that generate demand for accessible parking that is generally above-and-beyond what is experienced with most land uses. These include Group Home and Congregate Housing (i.e., seniors housing, care facilities) and Hospital uses.

For each the land uses identified above, specific accessible parking supply requirements above-and-beyond the basic requirements are recommended, as identified in **Table 5**. These rates are to be used in place of the supply rates identified in **Table 1** (i.e., not in addition to).

TABLE 5. RECOMMENDED ACCESSIBLE PARKING SUPPLY FOR SPECIFIC LAND USES

Land Use	Accessible Parking Supply Required
Group Home and Congregate Housing	15% of all required parking spaces
Hospital	5% of all required parking spaces

Minimum Supply, by Space Type

As was introduced in Working Paper no.1 (Local Understanding + Best Practices), a current best practice included in the American with Disabilities Act (ADA) and proposed to be coming forward in forthcoming Canadian Standards Association (CSA) standards updates, as well as in certain leading BC municipalities (i.e., Richmond, Surrey), is to consider accessible parking as two distinct types. Each type caters to the spatial and proximity requirements of different accessible parking user groups, as follows:

1. Limited Mobility – This user group experiences challenges with limited vision, strength or dexterity that requires they park as close as possible to their end destination. This user group benefits from a clear circulation aisle adjacent the parking space but does not need a parking space that is wider than a conventional parking space. Spaces for this user group are simply referred to as "Accessible" or "Limited Mobility".

2. Assisted Mobility – This user group relies on a wheeled mobility device, such as a wheelchair (manual or motorized) or mobility scooter. They require a wider parking space to allow for maneuvering a mobility device in/out of a vehicle, but do not necessarily require close proximity to their end destination as they are capable of wheeling themselves over distance. A circulation space between parking space and destination that is safe and free of physical barriers is important. Spaces for this user group are referred to as "Van Accessible" or "Assisted Mobility".

The recommended distribution of the required accessible parking spaces among the two space types is identified in **Table 6**. The design requirements for each space type are described in ***Section 3.1.2***.

TABLE 6. RECOMMENDED ACCESSIBLE + VAN ACCESSIBLE PARKING SUPPLY

Required Accessible Spaces	Space Type	
	Accessible	Van Accessible
1st space	Meets the requirements of both space types	
2nd space	X	
3rd space	X	
4th space	X	
5th space	X	
6th space	X	
7th space		X
8th space and any additional spaces	X	

3.1.2 Accessible Parking Design + Layout

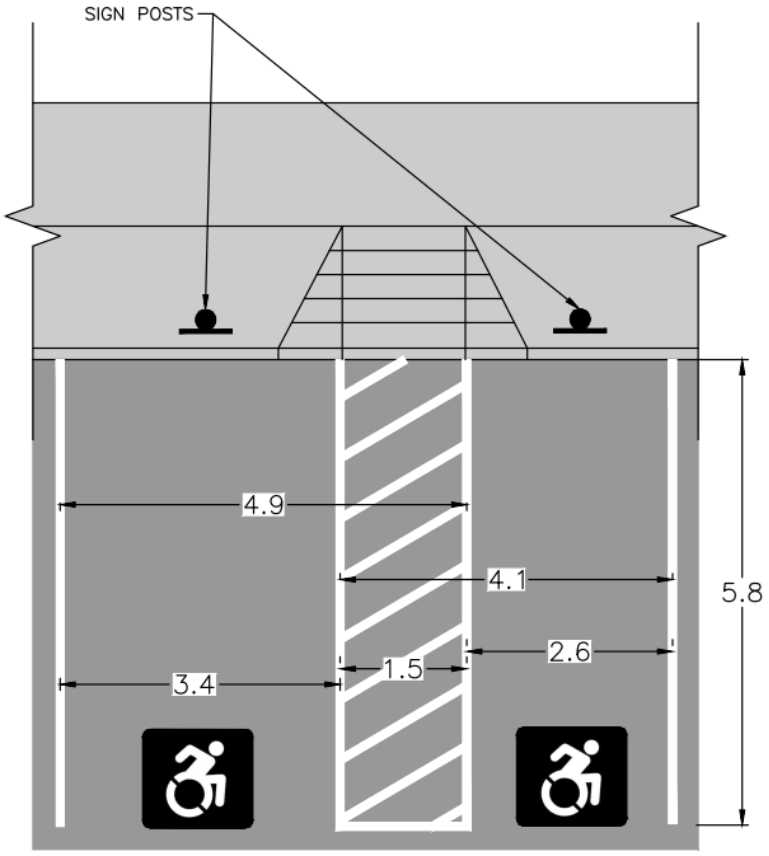
Dimensions + Layout

- Accessible parking spaces are to be the parking space(s) located closest to an accessible building or site access point.
- The recommended width for accessible parking spaces is 4.1 m. This includes 2.6 m for the vehicle consistent with the City's requirement for conventional vehicles, plus an additional 1.5m for the adjacent access aisle.
- The recommended width for accessible van parking spaces is 4.9 m. This includes 3.4 m for the vehicle to allow for transfer space, plus an additional 1.5 m for the adjacent access aisle.
- Two adjacent accessible parking spaces may share a single access aisle. This applies to both accessible and van accessible spaces (either independently or in combination).
- Any accessible parking space that abuts a vertical obstruction (i.e., structural column, fence) should include additional width to allow door opening. An additional 0.3 m is to be provided where a vertical obstruction exists on one side and an additional 0.6 m where a vertical obstruction is present on both sides, consistent with recommended spacing adjacent conventional vehicle spaces identified previously.

Circulation + Access

- An access aisle of a minimum of 1.5 m wide is to be provided adjacent to all accessible parking spaces. The access aisle is to be marked with a diagonal hatched pavement marking. A diagram similar to that in **Figure 7** is recommended to help clarify.
- Accessible parking spaces, adjacent drive aisles and key circulation corridors should be level, with a maximum 5% slope in any direction. Curb ramps are to be used where needed to facilitate circulation between the parking surface level and sidewalk or walkway level.

FIGURE 7. ACCESSIBLE PARKING DESIGN REQUIREMENTS



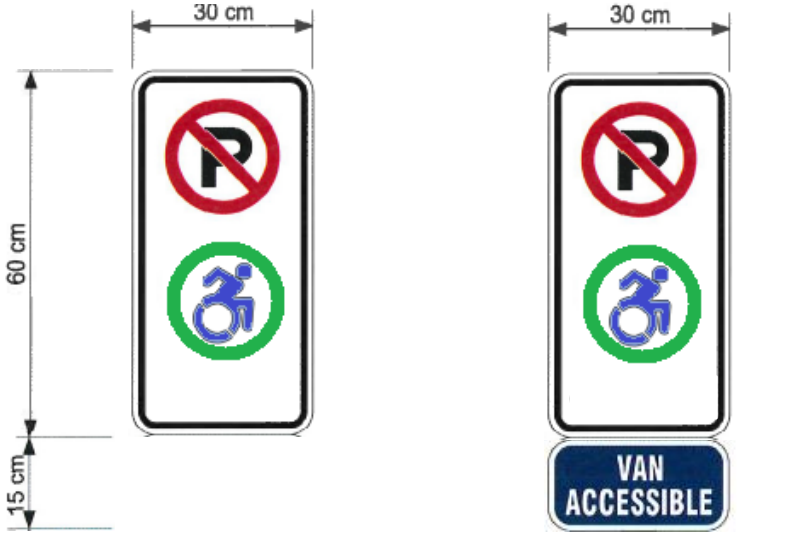
3.1.3 Accessible Parking Space Identification

Identification of accessible parking spaces helps to ensure only individuals with an accessible parking placard occupy such spaces. The *Off-Street Parking Regulations Bylaw* should include a basic requirement for identification (i.e., sign, pavement marking), with the additional details below provided as part of design guidelines developed by the City.

Signage

- Accessible parking spaces should be marked with a visible sign at the end of the space identifying its intended use by individuals displaying an accessible parking placard. The recommended sign and dimensions are shown in **Figure 8**.
- Signs associated with van accessible spaces are to include the blue tab sign identifying the space as "Van Accessible", as shown in **Figure 8**.
- Signs are to be mounted with the vertical centreline at 1,500 mm in height.
- The recommended identification signs shown below use the new International Symbol of Access, now considered a best practice. As an alternative, the City may choose to use the standardized sign recommended by the B.C. Ministry of Transportation and Infrastructure for consistency with most other communities[4].

FIGURE 8. RECOMMENDED ACCESSIBLE PARKING IDENTIFICATION SIGN + DIMENSIONS



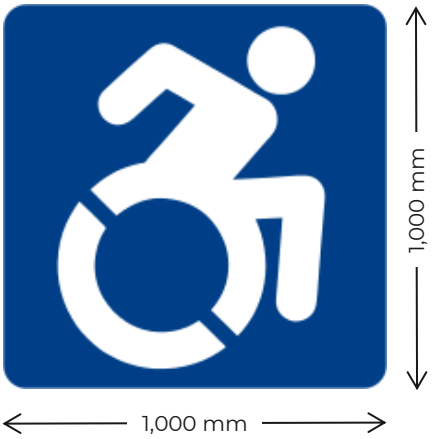
Accessible Spaces **Van Accessible Spaces**

[4] Refer to the B.C. Ministry of Transportation and Infrastructure, *Manual of Standardized Traffic Signs and Pavement Markings*, September 2000 (Sign P-103, Section 2, Page 2.42).
Available online at: www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines

Pavement Marking

- The pavement marking should have a blue background with the new International Symbol of Access in white for high tonal contrast, as shown in **Figure 9**.
- Pavement markings are to be square with dimensions of not less than 1,000 mm on both sides.
- The curb directly adjacent an accessible parking space should be painted blue the length of the parking space. The curb stop (if provided) should also be painted blue.

FIGURE 9. RECOMMENDED ACCESSIBLE PARKING SPACE PAVEMENT MARKING



3.2 Commercial Loading

Commercial loading refers to the space necessary for large commercial vehicles (i.e., trucks) to deliver materials or supplies to a site. The following section considers appropriate commercial vehicle loading supply, design and layout requirements.

3.2.1 Supply

The City's current requirements for the provision of loading spaces is relatively consistent with requirements found in most other communities. There was no indication through the background research and the community engagement activities completed for this assignment that the current supply rates were inappropriate. As a result, limited changes are recommended to the current supply requirements.

The recommended loading space supply requirements are included in **Table 7**. These are largely consistent with the City's current requirements, but with updated land uses for consistency with references in the vehicle parking and bicycle parking recommendations, as well as minor updates for improved clarity.

TABLE 7. RECOMMENDED LOADING SPACE SUPPLY REQUIREMENTS

Use	Building Floor Area	Required Number of Off-Street Loading Spaces
Retail, Shopping Centre, and Industrial uses	300m^2 to 500m^2	1
	500m^2 to 2,500m^2	2
	Each additional 2,500m^2	+1
Office, Hospital, School, Post-Secondary Institution, Assembly Use, Place of Public Assembly, or similar use	3,000m^2 to 6,000m^2	1
	Each additional 3,000m^2	+1

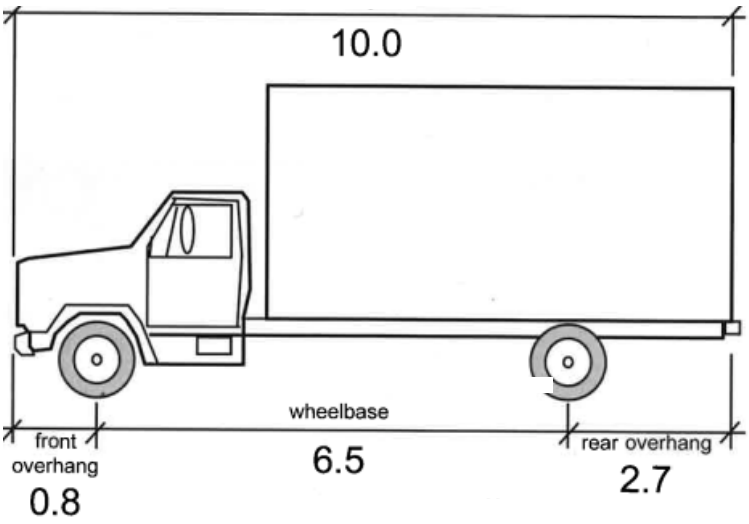
3.2.2 Dimensions

The commercial loading space dimensions currently required in the City are as follows:

> *Every loading space shall be of adequate size and with adequate access thereto, to accommodate the types of vehicles which will be loading and unloading, but in no case shall the space be less than 30 m² in area or less than 2.5 m in width or with less than 4 m of overhead clearance.*

Standardized vehicle dimensions are identified by the Transportation Association of Canada for 11 specific vehicle classes. A Medium Single-Unit (MSU) truck (shown in **Figure 10**) is recommended to best represent the truck type typically seeking loading space in Colwood, which includes dimensions of 10m (long) and 2.6m (wide). It is recommended that the City's required loading space dimensions are increased to 10m long and 3m wide to reflect the MSU. This generally aligns with the dimensions required in other communities.

FIGURE 10. MEDIUM SINGLE-UNIT TRUCK DIMENSIONS[5]



It should be noted that the length of larger semi-trailer trucks will not be accommodated with the loading space dimensions identified above (semi-trailers are commonly 15-20m). The City should continue to encourage appropriate loading facilities for semi-trailers associated with sites / land uses where they are anticipated.

[5] Images adapted from Transportation Association of Canada, *Geometric Design Guide for Canadian Roads*, Section 2.4 – Design Vehicles

3.2.3 Access + Location

The City currently requires that access to loading spaces is arranged so that turning movements do not interference with traffic on the adjoining road(s). It is recommended this requirement remain in-place to ensure truck activities remain entirely on-site and do not impede traffic on adjacent roadways. In addition, a requirement should be put in-place that ensures loading spaces do not encroach into on-site parking spaces, driveway aisles or pedestrian pathways.

The City also currently requires that all loading spaces are located on the site so that materials loaded / unloaded can be easily collected or distributed within the site from or to all tenants or occupants. While desirable, this is a regulation that cannot easily be enforced and is recommended to be removed.

3.3 Visitor Parking

Visitor parking is an essential component of parking supply in multi-family residential and mixed-use development. The City's current regulations do not explicitly require visitor parking, instead including an overall requirement for Multi-Family Residential uses and leaving it flexible as to whether spaces are allocated for visitor use.

Results from the community survey completed as part of this review indicated that residents often experience challenges finding available visitor parking. This may partially be attributed to the lack of a specific requirement.

Consistent with most other communities, it is recommended that a specific visitor parking requirement is established for Multi-Family Residential and Attached Residential uses. Recommended minimum supply rates are identified in **Table 8** and are based on available visitor parking utilization data and rates found in other communities. The intent is that the visitor parking requirement is above-and-beyond the general requirement for parking for Multi-Family Residential and Attached Housing uses identified in **Table 1** above.

Commercial parking supply may reasonably be shared with residential visitors due to their complementary time-of-day parking demand patterns. This shared parking provision will minimize parking oversupply while ensuring parking needs are met. It is recommended that the Off-Street Parking Regulations contain a regulation that permits the requirement for visitor parking to be waived where at least 25% of the site's parking requirement is attributed to one or more of the following uses – Building Material Supply, Financial Institution, Furniture and Appliance Sales, Offices, Offices Medical, Personal Service, Retail or Shopping Centre. Visitor parking may not be considered for further parking reduction through a parking variance, as clarified in ***Section 2.1.4***.

Further, all visitor parking spaces are to be clearly identified with pavement marking "VISITOR" to clearly designate such spaces for that use.

TABLE 8. RECOMMENDED MINIMUM VISITOR PARKING SUPPLY RATES

Use	Required Visitor Parking
Attached Housing (including Rowhouse and Townhouse)	0.1 per dwelling unit
Residential, Multi-Family (Apartments)	0.2 per dwelling unit

3.4 Electric Vehicle Charging

As outlined in Working Paper no.1, electric vehicle (EV) uptake has increased significantly in Colwood and throughout the Capital Region over the past few years. This growth is set to continue thanks to declining costs, incentives, and the BC Zero-Emission Vehicles (ZEV) Act. The City can anticipate market changes associated with the ZEV Act and encourage a shift to cleaner technology by adding EV charging provisions in the Off-Street Parking Regulations, consistent with directions established in the OCP (*Policy 8.2.6 (6)*).

There is also noted interest from Colwood residents, stakeholders and City Council to consider these provisions. On June 22, 2020, Colwood City Council received correspondence from the Citizens' Environment Network in Colwood (CENIC) calling for the establishment of EV off-street parking standards and requesting 100% EV parking in new residential properties (especially multi-family) to ensure consistency with the ZEV Act and Victoria Electric Vehicle Association (VEVA) recommendations. Council directed staff to develop options for implementing this proposal.

Supporting Guidelines

Capital Region Local Government Electric Vehicle (EV) + Electric Bicycle (E-Bike) Infrastructure Planning Guide (2018)

This resource document for local governments was developed by the Capital Regional District to guide various aspects of EV charging infrastructure. This guide will hereinafter be referred to as the **CRD Guide**.

Residential Electric Vehicle Charging: A Guide for Local Governments (2018)
This comprehensive resource is intended for use by local governments across BC and was procured by the City of Richmond and prepared by C2MP, the Fraser Basin Council, and AES Engineering. This guide will hereinafter be referred to as the **Provincial Guide**.

The City of Richmond also released another publication prepared by AES Engineering, Hamilton & Company, C2MP, and the Fraser Basin Council titled "Electric Vehicle Charging Infrastructure in Shared Parking Areas." Content from this document is also referenced throughout this document.

3.4.1 Definitions

EV charging provisions will be a new addition to the City's development regulations and, as such, new definitions will be required. The following is to be included:

- EV Energy Management System (EVEMS): Means a system to control EVSE electrical loads, comprised of monitor(s), communications equipment, controller(s), timer(s) and other applicable devices.
- Electric Vehicle (EV): Means a vehicle that uses electricity for propulsion, and that can use an external source of electricity to charge the vehicle's batteries.
- Energized EV Outlet: Means a connected point in an electrical wiring installation at which sufficient current may be taken to supply Electric Vehicle Supply Equipment.
- EV Supply Equipment (EVSE): Means a complete assembly consisting of conductors, connectors, devices, apparatus, and fittings installed specifically for the purpose of power transfer and information exchange between a branch electric circuit and an electric vehicle.
- Energized Space: Means a vehicle parking space that is equipped with an Energized EV Outlet and, where required under Table 7.1, Electric Vehicle Supply Equipment.

There are generally three different levels of EV charging receptacles, each with specific characteristics and suitability for different charging applications. The following should be outlined in the Off-Street Parking Regulations, with further details provided in **Table 9**.

- Level 1 Charger (L1): A Level 1 charger uses a standard house plug (120V) and can be used for overnight charging at home or all-day charging at work. When charging cars overnight (8–10 hours), Level 1 chargers can fully recharge most PHEVs and "top up" a BEV from a typical work commute.
- Level 2 Charger (L2): Means a Level 2 electric vehicle charging level as defined by SAE International's J1772 standard, and may include variable rate charging that is controlled by an EVEMS.
- Level 3 Charger (L3) or Direct Current Fast Charger (DCFC): A Level 3 charger or DCFC can provide about an 80% charge in half an hour. Direct current fast charging is currently (based on today's technology and costs) not considered suitable for residential installations due to the high cost of equipment, installation, and power requirements. Not all electric vehicles can plug into a DCFC charger.

TABLE 9. OVERVIEW OF EV CHARGING STATION TYPES[6]

	Level 1 AC, 120V	**Level 2** AC, 240V	**Level 3** DC fast charge
Type	Level 1 charging stations utilize household outlets that provide 120V of AC power to the vehicle. This type of charger is least expensive and typically involves little to no infrastructure, but is the slowest of the three charging types.	Level 2 charging stations provide a higher amount of AC power to the vehicle and require their own circuit (similar to larger household appliances). These are the most common form of public charging station and installation costs are significantly less than Level 3 charging stations.	Level 3 charging stations provide the fastest charging option, although installation costs are significantly higher than other charging station types. These stations appeal to EVs needing a "top up" during long distance trips that approach or exceed battery range.
Cost (approx.)	$500 (retrofit)	$2,500 - $15,000 + Installation cost	$75,000+ Installation cost
Key Stats	3-8 km per hour of charge time 8-12 hrs for a full charge	18-45 km per hour of charge time 4-6 hrs for a full charge	90-150 km per hour of charge time 0.5-1 hrs for a full charge
Common Uses	Charging at home (overnight) or at work (all day)	Charging at home or at work, or for charging "on the go" (parking lots)	Charging "on the go", commonly longer distance trips

[6] Capital Region Local Government Electric Vehicle (EV) + Electric Bicycle (E-Bike) Infrastructure Planning Guide – Appendix A (2018)

3.4.2 Policy Decisions

The following policies should be considered for the inclusion of electric vehicle charging requirement in the *Off-Street Parking Regulations Bylaw*.

EV Readiness vs. EVSE Requirements

Working Paper no.1 outlined two common EV readiness approaches, each with their own advantages and disadvantages[7]:

1. Energized (EV Ready)

   All infrastructure required for EV charging, *other than the actual EVSE*, is provided, including all electrical equipment (metering, transformers, sub-panels as needed), cabling and associated raceways, and connections (energized outlets).

   This approach is less expensive for developers and builders in the interim. It also helps to future-proof the parking facility, minimizing the cost of retrofits and allowing for the future installation of EV charging stations when demand dictates. However, it requires the EV owner (or in some cases the strata) to purchase the EVSE themselves. While this is an added cost, it is far less expensive that retrofitting parking facilities in future to accommodate EV charging.

2. EVSE Installed

   All the infrastructure required for charging an EV is at the parking space (i.e., EVSE). This option is easier for EV users, potentially helping to entice new users and enable a quicker shift to sustainable vehicles. However. It is also more expensive to install during development. This option may also be less future-proof because electric vehicle infrastructure and the EV market continue to evolve. Replacing old technology could ultimately result in higher retrofit costs.

It is important to consider what the right level of infrastructure is now that will support future needs. The CRD Guide recommends going with energized (EV-Ready) requirements, and a survey of the CRD development/builder industry found strong support for EV-ready regulations. However, given that 100% of new vehicles sales will be limited to EV in 20 years, it is recommended that the City consider a combination of options 1 and 2, with EVSE requirements for select land use contexts and energized EV outlets for others. A full option evaluation is provided in **Table 10**, below.

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[7] The Provincial Guide also lays out a third option, partial electric vehicle supply equipment ("pre-serviced low" or "pre-serviced high"), which involves only partially installing the required electrical infrastructure. This was excluded from consideration; while inexpensive at the time of development, it ends up being more costly overall because additional electrical infrastructure must be added at a later date and the partial infrastructure cannot be verified to function at the time of electrical inspection because it is not energized.

Extent of Coverage

BC communities have varying requirements for EV parking (from 0% to 100%), as outlined in Appendix C of Working Paper no. 1. The majority (over 90%) of EV users charge their vehicle at home or at work. However, EV charging needs vary based on location, and adequate coverage is needed to provide convenience to existing EV users and entice new ones. A complete charging network comprises chargers at home, work, shopping and recreation, other publicly accessible locations, and along highway corridors.

Local governments need to decide what proportion of parking should be energized, and whether to go with percentages or list EV spots based on units. As outlined in the Provincial Guide, several local governments in BC that began with percentage-based requirements (e.g. 20%) have updated their requirements such that either all residential stalls have an energized outlet or one parking stall per residential unit is energized. This shows a reaction to the rapid growth of the EV market reflects a trend towards greater requirements.

According to the Provincial Guide, the choice between all stalls versus one stall for each residential unit depends in part on the parking requirements for a particular land use, stating that if the parking requirements per unit are significantly greater than one, then one EV-ready stall per unit may be preferable to every stall being EV-ready. However, this document was authored prior to the ZEV Act, which will increase the number and proportion of EVs on the road.

Option Evaluation

The Provincial Guide suggests evaluation criteria for determining which EV charging policy options are most suitable for a municipal bylaw. The following evaluation criteria are adapted from that report:

- **Minimize Upfront Costs**: Allows developers to design for EVEMS, which can significantly reduce upfront capital costs.
- **Minimize Retrofit Costs**: Enables retrofits and minimizes cost/complexity. Depending on the parking stall location and available electrical supply/infrastructure, retrofit costs can be prohibitive.
- **Simple for Strata**: Clear management and administration for strata boards. Under the Strata Act, parking stall allocation and ownership is complex (see ***Section 3.4.4***).
- **Simple for City**: Clear administration, inspection, and approval for local government, with a streamlined development process from the government's perspective (including plan checking, permitting, and inspections).
- **Equitable for Residents**: Ensure fair / equitable access for residents (initial, long-term).
- **Future-Proof**: Maximizes future choices.

Table 10 below indicates how well each option meets the criteria.

TABLE 10. RESIDENTIAL EV CHARGING – POLICY OPTIONS EVALUATION[8]

Option	Minimize Upfront Costs	Minimize Retrofit Costs	Simple for Strata	Simple for City	Equitable for Residents	Future-Proof
Energized (EVSE Ready) – percentage of stalls (e.g. 20%)						
Energized (EVSE Ready) – all stalls						
EVSE Installed – all stalls						

Electric Vehicle Energy Management System (EVEMS)

Another consideration is whether to require an EVEMS[9]. EVEMS may require operational costs or network fees, but it can significantly reduce the capital costs required to install multiple EVSE. It can be used in any situation with shared parking, such as multi-unit residential buildings, single-family homes with multiple parking spaces, or office settings. The ability to distribute available power to all connected charge points is ideal not only for multiple charging points, but also in the case of future expansion of additional EVSE.

The CRD Guide recommends including a provision allowing the use of EVEMS. Some bylaws, like the City of Surrey Zoning Bylaw, simply provide the option for installing a dedicated circuit or EVEMS. Saanich gets more specific, outlining land uses where EVEMS are permitted or prohibited. In Saanich, EVEMS are prohibited in all cultural and recreational uses and in commercial areas other than offices. They are permitted (but not required) in residential, industrial, office, and most institutional uses (excluding medical, dental, real estate, funeral homes, and churches).

Various circuit breaker ratings have a maximum number of EVSE that can be connected per circuit. This information can be set out in an EV parking requirement, as Saanich has done. Additional technical information may be outlined in a technical bulletin.

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[8] Adapted from Residential Electric Vehicle Charging: A Guide for Local Governments (AES Engineering Ltd., 2018)

[9] The Provincial Guide and its companion document, Electric Vehicle Charging Infrastructure in Shared Parking Areas, contains technical details about the different configurations of EVSE, including circuit sharing and load management technologies.

3.4.3 Supply Rates

Recommended EV charging infrastructure requirements are summarized below in **Table 11**. This includes the recommended number of minimum energized parking spaces by land use, as well as the level of charging that is to be required. Reference is made to where Level 2 charging (L2) versus Level 2 charging with EVEMS (L2M) is appropriate.

It is recommended that these EV requirements are placed directly in the minimum parking supply table for consistency and convenience, rather than as an additional supply table in the Bylaw, as has been shown in ***Section 2.1.2***, **Table 1** above.

TABLE 11. SUMMARY OF RECOMMENDED EV CHARGING REQUIREMENTS*

Use	EV Charging Infrastructure Requirements		
	EV Ready (Minimum Energized Spaces)	**Minimum Charging Level**	**EV Installed** (Minimum EVSE)
Residential			
Single Family / Duplex	100% OR 1 space	L2M	0
Multi-Family Residential / Attached Dwelling	100%		
Group Home and Congregate Care, Supportive Housing	5%		
Visitor Parking	25%		
Commercial			
Office	10%	L2M	0
Service station	20%	L2	
All other commercial (with exceptions)	10%		
Industrial			
	N/A	N/A	0
Institutional, Cultural + Recreational			
Hospital	10%	L2M	0
School	5%		
All other Institutional, Cultural + Recreational uses	5-10%	L2	
General			
Where one or more accessible parking spaces are required, at least 50% of the accessible parking spaces shall feature Level 2 Charging (or higher)			

* See **Table 1** in ***Section 2.1.2*** for detailed rates

As an alternative, the City may elect to require a minimum number of EVSE units in key land uses. While not common in other communities, the approach taken recently by the District of Saanich was to require a specified number of EVSE units for land uses that attract commuters (i.e., commercial and educational uses) or assembly / special events uses that attract a large number of individuals. Saanich does not have EVSE requirements for residential uses, but has included requirements for EVEMS provision to limit the overall building electrical capacity needs.

The City may also consider scheduled review and updates to the EV requirements contained in the Off-Street Parking Regulations Bylaw to consider and test the need for EVSE requirements as charging infrastructure technology advances and the demand for charging increases in future.

3.4.4 Strata Environments

While not reflected directly in parking requlations, it is worth understanding the extent to which strata rules and regulations have implications for the ownership, installation, costs, and use of EV charging equipment. Land ownership on strata properties falls under one of three classifications: strata lot, limited common property, or common property, each with unique considerations for EVSE in parking spaces.[10]

Exclusive Use (i.e. private parking stalls):

- **Strata Lot:** The strata lot owner also owns the individual parking space(s), but the ability to install EVSE and use strata electricity to charge an EV may depend on strata bylaws and require approval from the board.
- **Limited Common Property:** The strata may undertake installation and the cost of extending the electrical conduit throughout the parking structure, while owners may choose to hook up an energized EV outlet or EVSE at their designated parking space. This ensures that future residents pay approximately the same amount to access charging in their parking stalls as current residents.

For exclusive use, PlugInBC suggests that if the EVSE unit can easily be removed with minimal damage to the common property, the EV user will own the EVSE and can remove it whenever they want, and shall remove it upon sale of the strata lot. If the EVSE cannot easily be removed, the strata can be the owner, and it would be passed on the next strata lot owner.

[10] Adapted from PlugInBC (https://pluginbc.ca/charging/murb-and-workplace-charging/#strata_templates)

Common Property:

EVSE may be installed in common/guest parking areas so that any resident can access them. As a shared amenity, the strata would cover installation, cost, and ongoing maintenance, which could be recouped by a charging fee. Users may be required to sign a user agreement that could include terms such as a time limit (e.g. "No EV User will park a vehicle in an EV Stall for any period greater than 4 consecutive hours or 4 hours in any given 12 hour period.")

It is recommended that in buildings with shared parking areas, all EV electrical infrastructure should be separately metered from the common areas so that building owners, stratas, and BC Hydro can distinguish between common area electrical usage and EV charging electrical usage. The implementation of EVEMS can have additional implications for management and maintenance that should be clearly laid out in a strata rule or bylaw.

Strata Bylaws

Developers can enter a covenant under section 219 of *the Land Title Act* that would require the owner of the land to keep the EVSE in operation. They can also include EV provisions in strata bylaws providing the rights and responsibilities of an owner, occupant, or tenant to install and use EVSE, as well as laying out maintenance and management responsibilities for strata corporations.

Sample strata bylaws related to the management of EV charging equipment in exclusive stalls and common property, as well as a sample EV charging user agreement, are available at pluginbc.ca and in the Provincial Guide.

Saanich's Technical Bulletin[11] recommends the following minimum strata bylaw provisions:

- The party (strata or dwelling unit owner) responsible for electric vehicle supply equipment purchase and installation is clearly delineated, and appropriate permissions and procedures outlined to ensure accessibility to energized outlets for the purposes of EV charging.
- The electric vehicle supply equipment ownership is defined. Consideration should be given to how the parking space, electrical infrastructure, and supply equipment are defined as common property, fixtures, or chattels.
- Billing rules and procedures are established.
- Designation that where an electric vehicle energy management system is implemented, the electric vehicle supply equipment must be compatible with that electric vehicle energy management system.

[11] https://www.saanich.ca/assets/Community/Documents/Planning/sustainability/Saanich-EV-Requirements-Technical-Bulletin.pdf

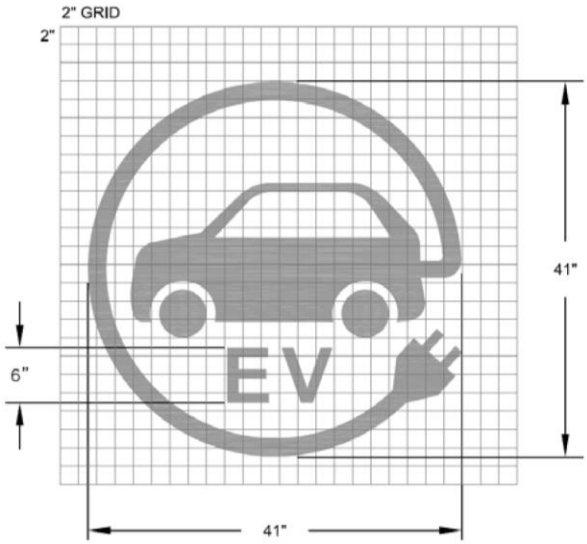
3.4.5 Additional Considerations

EV Charging Signage & Pavement Markings

In addition to infrastructure requirements, the CRD Guide recommends requiring that the EV outlet is clearly labelled to deter other non-EV users from parking there and to increase the visibility of EV charging opportunities. This is most applicable in shared EV charging spaces. The City of North Vancouver is an example of a municipality that requires all EV stalls to be labelled.

Signs and pavement markings should be required for all parking spaces where an EV charging station is required, excluding spaces associated with residential land uses. The recommended EV charging space sign and pavement marking recommended for application through the CRD are shown in **Figure 11**. While different signs have been used in other communities, the sign and pavement markings recommended by the CRD are standardized at the Provincial level and their application in Colwood would help create consistency throughout the Capital Region.

FIGURE 11. RECOMMENDED ELECTRIC VEHICLE CHARGING SIGN + PAVEMENT MARKING



Technical Bulletin

In addition to EV charging regulations in the Bylaw, the City may consider creating a technical bulletin listing performance standards and other technical matters. This would help to inform homeowners, EV users, land developers, designers and builders of the new EV charging requirements. The technical bulletin could include information on:

- Code compliance
- Energized outlet specifications
- Circuit amperage for EVSE
- Load switching
- Information on EVEMS
- Separate metering
- User fees
- Building permit application requirements
- Advice on managing EV charging in stratas
- Other technical information

4.0 Bicycle Parking

As outlined in Working Paper no. 1, providing ample, high-quality short- and long-term bicycle parking is key to enabling and encouraging sustainable transportation. The supply, design, and placement of bicycle parking, as well as the provision of additional end-of-trip facilities, all contribute to the safety, convenience, and functionality of bicycle parking. The following changes and additions are recommended in the Off-Street Parking Regulations.

4.1 Bicycle Parking Supply

Definitions

Consider renaming Class 1 and Class 2 to Short-Term and Long-Term Bicycle Parking for clarity. The definitions should refer to the intended function and users of the bicycle parking rather than including design details. Suggested definitions are as follows:

- Short-Term Bicycle Parking: means a bicycle space primarily designed to provide short-term parking for persons who are not residents or employees of the building.
- Long-Term Bicycle Parking: means a bicycle space primarily designed to provide long-term parking for employees or residents of the building.

The following definition should also be included:

- Bicycle Parking Space: means an area of land or building used for Short-Term or Long-Term Bicycle Parking.

Supply Rates

It is recommended that bicycle parking supply be expressed in distinct requirements for Short-Term and Long-Term bicycle parking, rather than percentage based. Furthermore, like the motor vehicle parking requirements, bicycle parking requirements should be based on permanent and enforceable units of measurement such as floor area or units rather than the number of people (students, employees, etc.), spectator seats, or other variables that are subject to change.

The recommended minimum bicycle parking supply rates are shown in **Table 12**.

TABLE 12. RECOMMENDED MINIMUM BICYCLE + SCOOTER PARKING SUPPLY RATES

Use	Required Bicycle Spaces		Required Mobility Scooter Spaces
	Long-Term	Short-Term	
Residential			
One-Family Dwelling, Secondary Suite and Duplex	N/A		N/A
Attached Housing	1.0 per dwelling unit	6 spaces per building	N/A
Residential, Multi-Family (Apartments)	1.0 per dwelling unit < 60 m^2 1.25 per dwelling unit > 60 m^2	6 spaces per building	N/A
Congregate Housing and Group Home Use	0.1 per dwelling unit	6 spaces per building	0.3 per dwelling unit
Commercial			
Hotel, Motel	1 per each 15 rooms	6 spaces per building	1 space per building
Bed and Breakfast	N/A	2 spaces per building	N/A
Offices, Retail Store, Restaurant, Shopping Centre, Personal Service	1 per 250m^2 GFA	6 spaces per building	1 space per building
Shopping Centre	1 per each 250m^2 GFA for the first 5,000m^2, and 1 per each 500m^2 of GFA for any additional area	6 spaces per building	1 space per building
Industrial			
All Industrial	1 per 1,000m^2 GFA	6 spaces per building	N/A
Institutional, Cultural + Recreational			
Assembly Uses	1 per 250m^2 GFA	1 per 100m^2 GFA	2 spaces per building
Church	N/A	6 spaces per building	2 spaces per building
Civic Uses	1 per 250m^2 GFA	1 per 200m^2 GFA	2 spaces per building
Hospital	1 per 500m^2 GFA	6 spaces at each public building entrance	2 spaces at each public building entrance
School	1 per 1,600m^2 GFA	1 per 125m^2 GFA	N/A
Post-secondary institution (University or college)	1 per 500m^2 GFA	1 per 100m^2 GFA	N/A
Recreational Facilities	1 per 400m^2 GFA	1 per 100m^2 GFA	N/A

4.2 E-Bike Charging

It is recommended that Colwood follow the guidance from the *B.C. Active Transportation Design Guide* (BCAT), the *CRD Guide*, and several municipalities by including e-bike charging requirements in the *Off-Street Parking Regulations Bylaw*. The following requirements are recommended:

- 10% of all Short-Term Bicycle Parking spaces should have access to an electrified 110v outlet; and
- 50% of all Long-Term Bicycle Parking spaces should have access to an electrified 110v outlet.

For each of the above, "access" is to be defined as being located no more than 2m from a standards 110V wall outlet. Consideration should also be given to requiring that signage is installed so that bicycle parking spaces intended for e-bikes are prioritized for this use.

The recommended regulations are not onerous in that they only require that a portion of the bicycle parking spaces that are already required have access to a 110V wall outlet. These outlets are typically in all buildings, requiring only that they are placed in such a way that they may be accessed by e-bikes.

4.3 Bicycle Parking Design

An off-street parking bylaw should contain sufficient requirements for bicycle parking design to ensure that the fundamental parameters are required and included in all bicycle parking applications, while not being so prescriptive that the failure to meet detailed requirements results in variances. The following sections identify those bicycle parking design features that are recommended for inclusion in the off-street parking requirements. Some of what is recommended is already in-place in the City's regulations, with consideration given to the latest best practices.

Other items are recommended to be removed from the City's regulations as they represent design guidance that is not regulatory in nature and is better suited to a supporting guidelines document. This is primarily the material contained in the *Land Use Bylaw, Section 2.2.12*.

4.3.1 Key Terminology

The following definitions will be required in the bylaw to support the recommended regulations relating to bicycle parking design:

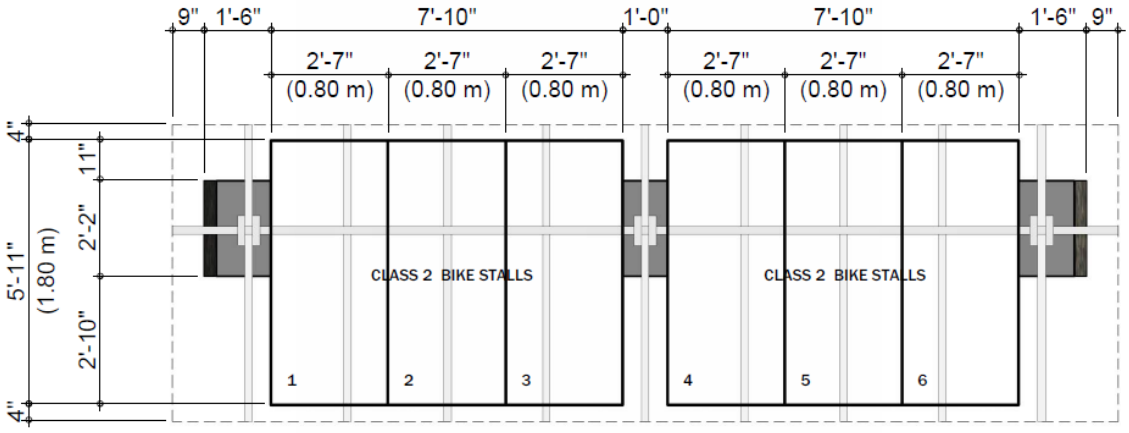
- Bicycle Rack: means a rack that is constructed of sturdy, theft-resistant material and securely anchored to the floor, ground, or wall. A bicycle rack supports the bicycle frame above the centre of gravity and enables the bicycle frame and front wheel to be locked to the rack with a U-style lock.
- Bicycle Room: means a portion of a floor with solid opaque walls for Long-Term Bicycle Parking Use.
- Bicycle Compound: means a portion of a floor without solid opaque walls for Long-Term Bicycle Parking Use
- Bicycle Locker: means a fully enclosed space that is limited to one Long-Term Bicycle Parking space.

4.3.2 Location + Access

Short-Term:

- All short-term bicycle parking spaces shall be located within 15 m from the primary building entrance and accessible to visitors or the public.
- Short-term bicycle parking shall be located at the surface level, physically separated from vehicle parking facilities, and not interfere with pedestrian travel.
- 100% of the first 12 short-term bicycle parking spaces and 50% of all remaining spaces shall include overheard shelter with a vertical clearance of not less than 2.1 m to protect bicycles from weather.
- Not less than 10% of all short-term bicycle parking spaces shall have access to an electrified 110v outlet (per ***Section 4.2***).

FIGURE 12. BIKE SHELTER EXAMPLES



Long-Term:

- Long-term bicycle parking shall be located in a dedicated, fully enclosed, and weather-protected facility with controlled access.
- Long-term bicycle parking shall be located at surface level or at the first level of vehicle parking.
- Long-term bicycle parking shall be accessed directly from surface level or by elevator from a primary entrance. If accessed by a stairwell only, the stairwell must include a ramp for bicycles.
- Not less than 50% of all long-term bicycle parking spaces should have access to an electrified 110v outlet (per *Section 4.2*).

4.3.3 Dimensions + Layout

The recommended dimensions and layout of bicycle parking spaces are generally consistent with the City's current requirements and guidelines, although with some changes to reflect best practices described in the *BC Active Transportation Design Guide*.

Ground Anchored vs. Vertical Racks

Up to 30% of the required supply of long-term bicycle parking may be provided in a vertical configuration. Vertical configurations require less depth and result in less overall space required, but limiting them to no more than 30% of the total bicycle parking provision ensures that individuals with heavier bicycles and/or who are physically unable to use vertical bicycle parking have sufficient ground anchored bicycle parking available to them. Examples of both arrangements are shown in **Figure 13**.

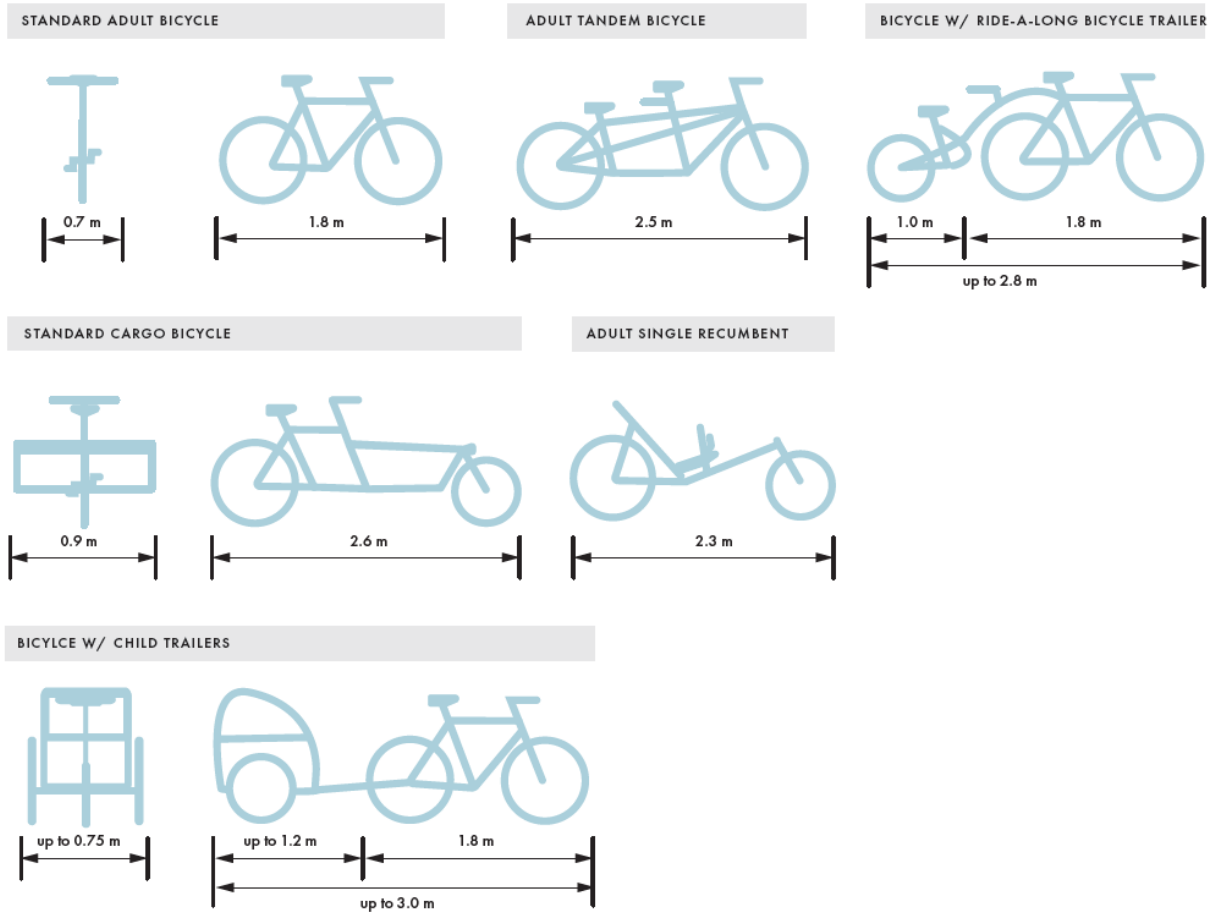
FIGURE 13. SAMPLE PHOTO SHOWING BOTH VERTICAL AND HORIZONTAL BIKE PARKING ARRANAGEMENTS

Oversized Bicycle Parking Spaces

As outlined in *Working Paper no. 1*, accommodating larger, non-standard bicycles such as cargo bikes, bicycles with trailers, recumbent bicycles, and other larger bicycles. Three specific regulations are recommended to ensure appropriate accommodation for oversized bicycles:

1. Oversized bicycle parking space should have minimum dimensions of 3.0 m long and 0.9 m wide. Typical dimensions for oversized bicycles are identified in **Figure 14** for reference.
2. Not less than 10% of the required long- and short-term bicycle parking supply should be designed as oversized bicycle parking spaces.
3. All oversized bicycle parking spaces should be provided as ground anchored racks. Oversized bicycles tend to be too long and too heavy for vertical racks.
4. A minimum of 50% of required oversized bicycle parking spaces should have access to an electrified 110v outlet.

FIGURE 14. TYPICAL DIMENSIONS FOR VARIOUS BICYCLE SIZES[12]



[12] British Columbia Active Transportation Design Guide, Figure B-11

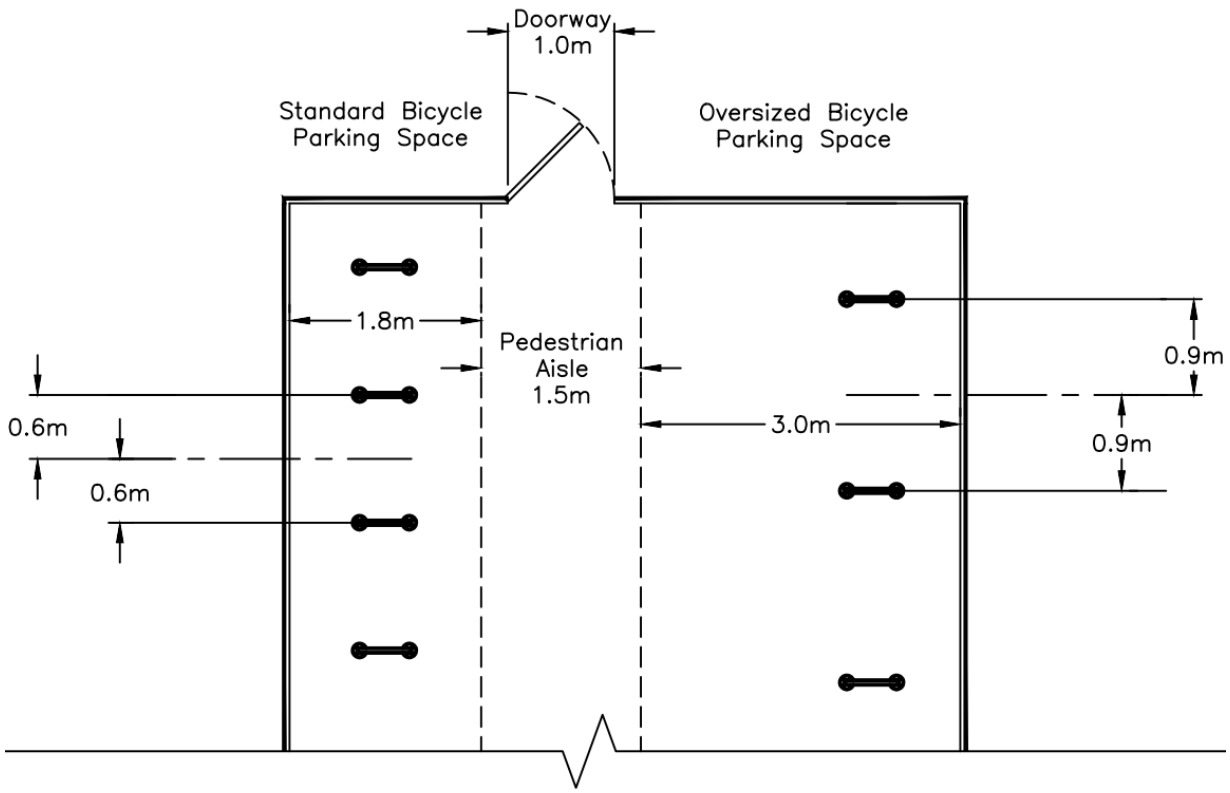
Recommended Bicycle Parking Space Dimensions + Layout

The recommended bicycle parking space dimensions are identified in **Table 13**. Example layouts are demonstrated in **Figure 15**.

TABLE 13. RECOMMENDED BICYCLE PARKING SPACE DIMENSIONS

	Minimum Dimensions		
	Width	**Depth**	**Overheard Clearance**
Ground Anchored Rack (standard)	0.6 m	1.8 m	2.1 m
Ground Anchored Rack (oversized)	0.9 m	3.0 m	
Wall Mounted Vertical Rack	0.6 m	1.2 m	
Access Aisle	1.5 m		
Access Door	1.0 m		

FIGURE 15. RECOMMENDED BICYCLE PARKING DESIGN REQUIREMENTS



4.3.4 Mobility Scooter Considerations

The current Bylaw does not provide mobility scooter parking requirements, nor does it establish design standards for mobility scooter parking. For select land uses where an increased rate of mobility scooter use is anticipated, it is recommended that a minimum supply of scooter parking spaces is required. The following is recommended for the Off-Street Parking Regulations.

Definition

The following definition will be required in the Bylaw to support regulations relating to mobility scooter parking:

- Mobility Scooter: means a power operated mobility aid similar to a wheelchair but configured with a flat area for the feet and handlebars for steering.

Mobility Scooter Parking Requirements

Parking regulations in some communities allow the substitution of required long-term bicycle parking spaces for mobility scooter parking in specific contexts. However, it is recommended that the City consider mobility scooter parking requirements independent of bicycle parking requirements to ensure appropriate scooter parking, rather than leave the provision at the discretion of the applicant (potentially leading to insufficient scooter parking and an over-supply of long-term bicycle parking),

Refer to **Table 12** for a summary of recommended mobility scooter parking requirements.

Mobility Scooter Parking Layout + Design

The following requirement are recommended for the location and design of mobility scooter parking areas:

- Mobility scooter spaces should be located adjacent to the entrance of the building and must not impede pedestrian access to the building or sidewalk
- Mobility scooter spaces should be no less that 1.0 m wide and 1.5 m long
- Mobility scooter spaces should be secured and located within 2.0 m of a 110V outlet for charging

4.4 Cycling End-of-Trip Facilities

End-of-trip facilities include any amenity provided that makes cycling easier, more convenient, and more comfortable. As outlined in *Working Paper no.1*, basic end-of-trip amenities typically include:

- Change rooms
- Storage lockers
- Showers
- Water closets
- Sink / wash basin
- Bicycle repair equipment (tools, tire pump, workbench, or stand)
- Other amenities: bulletin boards, multi-modal trip information (e.g. maps and bus timetables), towel service, seating lounges, etc.)

Access to a water closet, wash basin and shower is recommended for key land uses that attract commuters, offering facilities that allow bicycle commuters to transition from cycling to business attire at their place of employment. Bicycle repair equipment is also recommended at similar commute land uses, as well as in multi-family residential buildings.

Definitions

The following definitions will be required in the bylaw to support the recommended regulations relating to cycling end-of-trip facilities:

- Water Closet: means a toilet and associated privacy provisions.
- Wash Basin: means a sink for washing hands and face, and a facility for grooming consisting of a countertop, mirror and electrical outlet.
- Shower: means an individual shower stall for bathing.
- Bicycle Repair Set: means a set of equipment used for bicycle maintenance and repair consisting of a basic bicycle repair tools, a bicycle pump, and a bicycle stand.
- Clothing Locker: means a locker that is a minimum of 45 cm in depth, 30 cm in width, and a) 90 cm in height with respect to no more than 50% of the lockers and b) 180 cm in height with respect to at least 50% of the lockers.

Supply Requirements

The recommended requirements for end-of-trip facilities are identified in **Table 14**.

Where end-of-trip facilities provided on-site as part of an employee fitness centre meet or exceed the requirements of **Table 14** and are accessible to cyclists before and after work shifts, no additional end-of-trip facilities are required.

TABLE 14. RECOMMENDED MINIMUM END-OF-TRIP FACILITY REQUIREMENTS

Required Number of Long-Term Bicycle Parking Spaces	End-of-Trip Amenity				
	Water Closet	Wash Basin	Shower	Bicycle Repair Set	Clothing Locker
Residential, Hotel					
Residential, Multi-Family	0	0	0	1	0
Hotel, Motel	0	0	0	1	0
All Other Uses					
5 or less	0	0	0	0	1.25 times the number of required Long-Term Bicycle Parking spaces
6-10	0	1	1	1	
11-20	0	2	2	1	
21-30	0	3	3	1	
31-40	2	4	4	2	
For each additional 30 or part thereof	2 additional	2 additional	2 additional	1 additional	

End-of-Trip Facility Requirements

- Cycling End-of-Trip Facilities shall be provided in a common area (i.e., unsecured) and be located no more than 50 m from the Long-Term Bicycle Parking area.

5.0 Future Action Items

A number of action items have been identified throughout this Working Paper that will not specifically be addressed through the new Off-Street Parking Regulations Bylaw or the associated Parking Variance Policy. The City may choose to pursue the following action items as part of the on-going process of updating development regulations and improving parking demand management.

- Align Land Use Designations - Consider updating land use designation identified in the Off-Street Parking Regulations Bylaw as the Land Use Bylaw is updated to ensure alignment between the two documents.
- Parking Study TOR - Develop a standardized terms of reference (TOR) for parking studies to ensure that the City provides applicants and their transportation consultants with clear expectations for technical studies supporting variance applications.
- Bicycle Parking Guidelines - Detailed bicycle parking design guidelines that would supplement the bicycle parking design requirements contained in the Off-Street Parking Regulations Bylaw, providing a greater level of detail and guidance / options for how to provide effective, function bicycle parking facilities.
- Sign and Pavement Marking Guidelines - Guidelines for sign and pavement markings associated with both accessible parking spaces and electric vehicle parking areas, with reference to the material contained in this Working Paper.
- TDM Primer - Consider undertaking a review of possible transportation demand management (TDM) opportunities in Colwood and developing a primer document to clarify those options that the City is most supportive of and to help guide land developers toward pursuing TDM opportunities supported by the City.
- Review Parking Maximums - Specific review of parking maximums to ensure it has not deterred desired development.
- City-Wide Strategy - Consider undertaking a broader City-wide parking and transportation strategy that assesses parking development regulations such as cash in-lieu and parking maximums, and how they might relate to the management and provision of public parking and transportation infrastructure. This includes clarifying the City's intent with cash in-lieu monies collected. Consideration is also to be given to how parking and parking management approaches may help support the City's long-term sustainable transportation goals.

Appendix A.

Summary of Current vs. Recommended Parking Supply Rates

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Residential			
Residential, One-Family Dwelling	2 per dwelling unit		2 per dwelling unit
Secondary Suite	1 per dwelling unit		1 per every 2 bedrooms
Duplex	2 per dwelling unit		--
Attached Housing (including Triplex, Rowhouse and Townhouse)	2 per dwelling unit	1.5 per dwelling unit	1.5 per dwelling unit plus 1 for each 100 m^2 of building floor area exceeding 60 m^2 times the number of dwelling units
Residential, Multi-Family (Apartments)	1.0 per bachelor dwelling unit	0.8 per bachelor dwelling unit	
	1.25 per one-bedroom dwelling unit	1.0 per one-bedroom dwelling unit	
	1.6 per two-bedroom dwelling unit	1.3 per two-bedroom dwelling unit	
	2.0 spaces per dwelling unit greater than two bedrooms	1.5 spaces per dwelling unit greater than two bedrooms	
Congregate Housing and Group Home Use	0.25 per dwelling unit		Where a property is developed at 0.5 per dwelling unit, plus more than 70 units per hectare, 1 per support staff (maximum number of staff on any shift), plus .25 per dwelling unit for visitors Where a property is developed at 0.5 per dwelling unit, plus less than 70 units per hectare, 1 per support staff (maximum number of staff on any shift)

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Commercial			
Animal Hospital	1 per 20m^2 of gross floor area		1 per 2 employees plus 3 per veterinarian
Auction (Indoor)	Per Retail Store land use (1 per 30m^2 to 1 per 48m^2)		1 per 10 m2 of auction floor
Automotive Sales and Repair	1 per 35m^2 of gross floor area		Auto sales and repair: 1 per 70 m^2 of sales floor plus 1 per service bay plus 1 per 2 employees Tire repair: 1 per 2 employees plus 1 per bay
Bank	1 per 20m^2 of gross floor area	1 per 25m^2 of gross floor area	1 per 20 m2 of gross floor area
Boat Sales and Repair	1 per 40m^2 of gross floor area		1 per 3 employees plus 1 per 100 m^2 of covered sales and storage
Bowling Alley or Billiard Hall	Per Recreational Facility land use (1 per 20m^2 of gross floor area)		3 per alley or table
Boarder & Lodger	Per Hotel, Motel, Bed and Breakfast land use (1 per rental room)		--
Building Material supply	1 space per 80m^2 of gross floor area		1 per 2 employees plus 1 per 200 m^2 of covered sales and storage
Catering Establishment	Per Retail Store land use (1 per 30m^2 to 1 per 48m^2)		--
Car Wash	Per Automotive Sales and Repair land use (1 per 35m^2 of gross floor area)		--
Dance and Fitness Studios / Gyms	Per Recreational Facility land use (1 per 20m^2 of gross floor area)		--
Furniture and Appliance Sales	1 space per 80m^2 of gross floor area		-- (would otherwise be required per Retail (Including supermarkets, liquor and other retail personal uses, except neighbourhood grocery)
Gymnasium	Per Recreational Facility land use (1 per 20m^2 of gross floor area)		--
Gasoline Service Station	1 per 30m^2 of gross floor area	1 per 35m^2 of gross floor area	1 per 2 employees on duty plus 2 per service bay

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Grocery, Neighbourhood	Per Retail Store land use (1 per 30m^2 to 1 per 40m^2)	Per Retail Store land use (1 per 36m^2 to 1 per 48m^2)	1 per 15 m^2 of gross floor area of retail portion of building or 4, whichever is greater
Hotel, Motel, Bed and Breakfast, and Other Short-Term Accommodation	1 per rental room		Hotel: 1 per 2 rooms plus 1 per 3 seats in bar, restaurant and other food and drink dispensing facilities Motel: a) Number of units less than the 1.1 per unit plus 1 per 3 seats in restaurant, etc. number of seats in restaurant b) number of units more than the 0.9 per unit plus 1 per 3 seats in restaurant, etc. number of seats in restaurant
Health Salon	Per Personal Service land use (1 per 20m^2 of gross floor area)	Per Personal Service land use (1 per 25m^2 of gross floor area)	1 per 15 m^2 of gross floor area
Live / Work Studio or Home Occupation	1 per business in addition to the requirement for residential parking	N/A	-- (typically 1 per employee, plus 1 per customer, in addition to the residential parking requirement)
Home Occupation – Office Use Only (no customers / employees on-site)	0 in addition to the requirement for residential parking	N/A	0 in addition to the requirement for residential parking
Home Occupation – Day Care	2 plus 1 per employee in addition to the requirement for residential parking		2 plus 1 per employee in addition to the requirement for residential parking
Ice Cream Stand	Per Retail Store land use (1 per 30m^2 to 1 per 40m^2)	Per Retail Store land use (1 per 36m^2 to 1 per 48m^2)	7 per sales clerk
Intensive Agriculture	Per Agriculture land use (1 per 100m^2 of gross floor area of facility, plant, or warehouse uses)		--
Laboratory	Per Scientific or Technological Research Facility land use (1 per 20m^2 of gross floor area)		1 per employee

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Laundry and Dry Cleaning	Per Personal Service land use (1 per 20m^2 of gross floor area)	Per Personal Service land use (1 per 25m^2 of gross floor area)	1 per 2 employees counted as total of 2 shifts
Motel	1 per rental room		If units are less than number of seats in restaurant: • 1.1 per unit plus 1 per 3 seats in restaurant, etc. If units are more than number of seats in restaurant • 0.9 per unit plus 1 per 3 seats in restaurant, etc.
Nurseries and Greenhouses	1 per 35m^2 of gross floor area used for retail use		1 per 15 m^2 of gross floor area retail sales building
Offices	1 per 35 m^2 of gross floor area	1 per 45 m^2 of gross floor area	Offices, multi-tenant: 1 per 30 m^2 of gross floor area Offices, single-tenant: 1 per 35 m^2 of gross floor area
Offices, Medical	1 per 20m^2 of gross floor area	1 per 25m^2 of gross floor area	5 per doctor or dentist
Personal Service (including hairdressers, spas and salons, tattoo parlours, pet grooming, laundry)	1 per 20m^2 of gross floor area	1 per 25m^2 of gross floor area	Health salon: 1 per 15 m^2 of gross floor area Laundromat: 1 per washing machine Laundry and dry cleaning: 1 per 2 employees counted as total of 2 shifts
Public House and Brewhouse	1 space per 10m^2 of gross floor area used for Assembly, plus 1 space per 100m^2 of brewery uses	1 space per 15m^2 of gross floor area used for Assembly, plus 1 space per 100m^2 of brewery uses	-- (would otherwise be required per Restaurant, Coffee Shop and Manufacturing uses)
Pet Daycare	Per Animal Hospital land use (1 per 20m^2 of gross floor area)		--
Restaurant (including coffee shop, bakery, and drive-thru uses)	1 per 10m^2 of gross floor area	1 per 15m^2 of gross floor area	Restaurant, coffee shop: 1 per 3 seats Restaurant, drive-in only: 15
Restaurant, Drive-In Business	1 per 20m^2 of gross floor area		

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Retail Store (including Supermarkets, Liquor and Other Retail Personal Uses, except Neighbourhood Grocery)	Less than 400m^2 of gross leasable floor area – 1 per 30m^2	Less than 400m^2 of gross leasable floor area – 1 per 36m^2	0.75 per 10 m^2 of gross floor area (i.e., 1 space per 13.3 m^2)
	400m^2 to 4,000m^2 of gross leasable area – 1 per 35m^2	400m^2 to 4,000m^2 of gross leasable floor area – 1 per 42m^2	
	Greater than 4,000m^2 of gross leasable floor area – 1 per 40m^2	Greater than 4,000m^2 of gross leasable floor area – 1 per 48m^2	
Shopping Centre	1 per 25m^2 of gross leasable floor area	1 per 30m^2 of gross leasable floor area	Shopping Centre, Community: 5.5 per 100 m^2 of gross leasable area Shopping Centre, Major: 1 per 100 m^2 of gross leasable area up to 46,500 m^2 gross leasable area; then for the area over 46,500 m2 at the rate of 4.3 per 100 m^2 Shopping Centre, Neighbourhood: 6.5 per 100 m^2 of gross leasable area
Supermarket and Liquor Store	1 per 35m^2 of gross floor area	1 per 42m^2 of gross floor area	0.75 per 10 m^2 of gross floor area (i.e., 1 space per 13.3 m^2)
Studios (Including artist, photography, kitchen, technologist, and media)	At the discretion of the Director of Development Services (likely Manufacturing land use - 1 per 100m^2 of gross floor area)		--
Taxi Stand	At the discretion of the Director of Development Services		1 per taxi plus 1 per office employee
Television, Radio Studios	At the discretion of the Director of Development Services (likely Technological Research Facility – 1 per 20m^2 of gross floor area)		1 per 2 employees counted as total of 2 shifts
Vegetables or other produce stand	Per Agriculture land use (1 per 100m^2 of gross floor area of facility, plant, or warehouse uses)		4 per sales clerk

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Industrial			
Agriculture	1 per 100m^2 of gross floor area of facility, plant, or warehouse uses		--
Brewery / Distillery	1 per 100m^2 of gross floor area		--
Bus Depot	At the discretion of the Director of Development Services		1 per 20 m^2 waiting room plus 1 per 2 employees counted as total of 2 shifts
Contractor's Yard	Per Building Material Supply land use (1 space per 80m^2 of gross floor area)		1 per 2 employees
Concrete Batch Plant	Per Manufacturing and Industrial Uses land use (1 per 100m^2 of gross floor area)		--
Correctional Facility or Penitentiary	At the discretion of the Director of Development Services		1 per 2 employees counted as total of 2 shifts.
Gravel Processing	Per Manufacturing and Industrial Uses land use (1 per 100m^2 of gross floor area)		--
Manufacturing and industrial uses	1 per 100m^2 of gross floor area		1 per 2 employees counted as total of 2 shifts
Mini / Personal Storage	Per Warehouse, Storage and Mini-Storage land use (1 per 180m2 of gross floor area)		--
Mining & Quarrying	Per Manufacturing and Industrial Uses land use (1 per 100m^2 of gross floor area)		--
Petroleum Tank Farm	Per Manufacturing and Industrial Uses land use (1 per 100m^2 of gross floor area)		1 per employee, excluding office staff, plus 5
Printing & Publishing	Per Manufacturing and Industrial Uses land use (1 per 100m^2 of gross floor area)		--
Tool, Small Equipment & Appliance Repair	At the discretion of the Director of Development Services (likely Building Material Supply – 1 per 80m^2 of gross floor area		--
Trade Contractor Establishment	At the discretion of the Director of Development Services (likely Building Material Supply – 1 per 80m^2 of gross floor area		--
Unenclosed Storage	Per Warehouse, Storage and Mini-Storage land use (1 per 180m^2 of gross floor area)		--
Warehouse and Storage	1 per 180m^2 of gross floor area		1 per 2 employees counted as total of 2 shifts

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Institutional, Cultural + Recreational			
Arts and Cultural Facility (including museums and art galleries)	1 per 50m^2 of gross floor area		Cultural facility: 1 per 40 m^2 of gross floor area Tourist attraction: 1 per 4 persons capacity Bowling alley or billiard hall: 3 per alley or table
Assembly Use (including convention centres, banquet halls, theatres, funeral parlours, community centres, and stadiums or arenas)	1 per 15m^2 of gross floor area		Community centre: 1 per 20 m^2 of gross floor area Funeral parlour: 1 per 4 seats Stadium: 1 per 3 seats Theatre, drive-in: 1 / 2 staff Theatre, not drive-in: 1 / 4 seats
Ambulance Headquarters	At the discretion of the Director of Development Services		--
Automatic telephone exchange building	At the discretion of the Director of Development Services		--
Art Galleries	Per Arts and Cultural Facility land use (1 per 50m^2 of gross floor area)		--
Acute-care facilities	Per Hospital land use (1 per 50m^2 of gross floor area)		--
Auditorium	Per Assembly Use land use (1 per 15m^2 of gross floor area)		--
Banquet Hall	Per Assembly Use land use (1 per 15m^2 of gross floor area)		--
Campsite	At the discretion of the Director of Development Services		1 per space plus 3
Church	1 per 12m^2 of gross floor area used for Assembly		1 per 4 seats
Community Centre	Per Assembly Use land use (1 per 15m^2 of gross floor area)		1 per 20 m^2 of gross floor area
Court of Law	At the discretion of the Director of Development Services		--
Cultural Facility	Per Arts and Cultural Facility land use (1 per 50m^2 of gross floor area)		1 per 40 m2 of gross floor area
Day Care Centre	1 per 50m^2 of gross floor area		--
Funeral Parlour	Per Assembly Use land use (1 per 15m^2 of gross floor area)		1 per 4 seats in chapel
Golf Course	4 per golf hole		9 holes = 75 spaces 18 holes = 150 spaces
Golf Driving Range	1 space per range tee		1 per tee plus 1 per 2 employees

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Hospital	1 per 50m^2 of gross floor area		1 per 3 beds
Library	Per Arts and Cultural Facility land use (1 per 50m^2 of gross floor area)		--
Machinery Sales	At the discretion of the Director of Development Services (likely Automotive Sales – 1 per 35m^2 of gross floor area)		1 per 2 employees plus 1 per 100 m2 of sales floor
Manufacturing and Industrial Uses	1 per 100m^2 of gross floor area		1 per 2 employees counted as total of 2 shifts
Museum	Per Arts and Cultural Facility land use (1 per 50m^2 of gross floor area)		--
Marina	At the discretion of the Director of Development Services		--
Nursing Home	Per Congregate Housing and Group Home Use land use (0.25 per dwelling unit)		--
Post-secondary institution (University or college)	1 per 75m^2 of gross floor area		College: 1 per employee plus 1 per 5 students
Police Station	At the discretion of the Director of Development Services		1 per 2 employees counted as total of 2 shifts
Recreational facility (including commercial recreational facilities, and similar uses)	1 per 20m^2 of gross floor area		--
Riding Academy	At the discretion of the Director of Development Services		--
Scientific or Technological Research Facility	1 per 20m^2 of gross floor area		--
Skating Rink	Per Recreational Facility land use (1 per 20m^2 of gross floor area)		--
Stadium	Per Assembly Use land use (1 per 15m^2 of gross floor area)		1 per 3 seats
School, Elementary and Middle	1 per 120m^2 of gross floor area		1 per employee plus 2
School, Secondary	1 per 80m^2 of gross floor area		1 per employee plus 1 per 10 students
School, Boarding	Per School, Secondary land use (1 per 80m^2 of gross floor area)		--
Tourist Attraction	At the discretion of the Director of Development Services		1 per 4 persons capacity
Transit Exchange	At the discretion of the Director of Development Services		--

Use	Recommended Requirement		Current Requirement
	General	Urban Centre	
Theatre	Per Assembly Use land use (1 per 15m^2 of gross floor area)		Theatre, drive-in: 1 per 2 employees Theatre, not drive-in: 1 per 4 seats

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