



9.2 GENERAL GUIDELINES

The following General Guidelines apply to all developments that require a Development Permit. These guidelines are supplemented by the additional guidelines for specific land uses outlined in subsequent sections.

9.2.1 VIEWS

The intent is to maintain views wherever possible; public off-site views as well as private on-site views should be carefully considered in the site design of every development.

- a) Views to the river and distant views to the North Shore Mountains and Mount Baker shall be preserved and enhanced through view corridors, the terracing of building forms, and the creation of public places;
- b) Siting of buildings should accommodate, wherever possible, “near views” of parks, natural and landscaped areas both on and off site, as well as special views, such as of the mountains or waterfront;
- c) Views should be shared between developments. Buildings should be massed to preserve views through and past the site. The design of the development itself should also create a good view for other developments;
- d) Minimize the local environmental effects of new development, in particular view blockage and sunshadow.

9.2.2 PUBLIC REALM / PEDESTRIAN AMENITY

The intent is to create a high-quality, vibrant, and pedestrian-friendly public realm.

9.2.2.A Sunlight Penetration

- a) The heights, massing, and siting of new development should not detract from the availability of sunlight to the public realm and private open spaces in general, and to parks and important pedestrian streets and open spaces in particular;
- b) On any park, significant open space, or pedestrian linkage, adequate sunlight penetration should be provided to allow for its full public use and, wherever possible, year-round outdoor activity;



- c) On semi-private open spaces, both at-grade and above, maximize sunlight penetration/exposure during high-use periods of the day between March 21 and September 21 as follows:
 - Between 10 a.m. to 2 p.m. for non-residential uses;
 - All day, but especially from 10 a.m. to 2 p.m., and 4 p.m. to early evening, for residential use.

9.2.2.B Weather Protection

*Bylaw 8381
2009/09/14*



Rain & Sun Protection

- a) Weather protection is strongly promoted where:
 - Retail uses are encouraged at grade;
 - Common entries to multiple-family residential buildings front a public sidewalk or open space;
- b) Types of weather protection encouraged are awnings, canopies, and, under special circumstances, arcades;
- c) The design should also ensure good daylighting to protected areas through their proportion of height to depths, and special measures, such as glass roof panels;
- d) Weather protection considered to be permanent structures may not extend into public street right-of-ways;
- e) Typically canopies should be a minimum of 1.8m (5.9 ft.) clear deep and 2.7m (9 ft.) clear high;

*Bylaw 8381
2009/09/14*



Wind Protection

- f) New development should seek to protect pedestrians in general, and high activity pedestrian areas in particular, from the negative effects of the prevailing easterly wind, local wind conditions, and site-generated wind conditions.
 - Design sites, buildings, and associated landscaped areas to minimize wind induced by buildings, and its impact on both the public and private realms.
 - Provide areas of calm and wind mitigating measures to enhance enjoyment of the outdoors, and to extend the seasonal duration of outdoor activities, including socializing, shopping, and dining.

9.2.2.C Placement of Services

- a) Situate community notice boards, public seating, and other furnishings to take best advantage of views, sun, shade, and informal day-to-day meeting places for pedestrians;
- b) Underground utility wires wherever possible, and conceal related equipment so as to not impact the appearance or use of pedestrian areas.

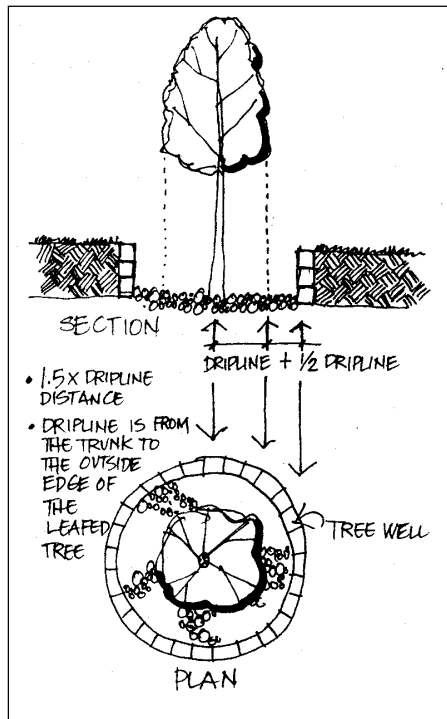


9.2.3 LANDSCAPING

The intent is to reinforce and enhance the image of the City of Richmond as the Garden City through preservation of mature vegetation and through inclusion of abundant landscaping in all developments.

9.2.3.A Tree Preservation

- a) Take special efforts to preserve trees and mature vegetation;
- b) Prior to the design of a project, a detailed survey indicating the location and condition of existing trees and vegetation on a site should be conducted and provided to the City as part of the development process;
- c) A Landscape Architect and Arborist should be retained to determine which trees are suitable for retention. For survey requirements refer to the City of Richmond Bulletins *Tree Survey Guidelines for Rezoning, Subdivision and Non-ESA Related Development Permit Applications* and *Protection of Existing Trees During Construction*;
- d) Plan open spaces and walkways with landscaping first, then group buildings around the spaces. Special efforts should be made to retain trees identified on the Significant Tree Inventory;
- e) To reinforce the image of a well-established landscape, developers are encouraged to retain and incorporate mature trees and landscaping into the development area. Where this is not possible, trees should be relocated. Whenever a major tree is removed, the replacement ratio is 2:1. Replacement trees should have a minimum caliper of 15cm (5.9 in.) in diameter at breast height (dbh);
- f) Landscape drawings shall include the following information:
 - The location of all protective tree fencing;
 - A grading plan or cross section showing finished grade;
 - A drainage plan for the site;
- g) Prior to the issuance of any permits (demolition, development, building), a fence shall be placed outside of the drip-line of retained trees which may be affected by the project. The fences shall be snow-fence or equivalent solid fence material. The tree protection fence shall be clearly signed "Tree Retention Area - Keep Out" using either flagging tape or custom-made signs;

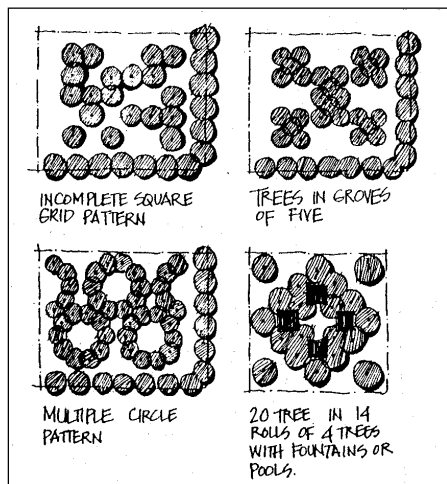


Tree wells

- h) Provide tree wells and/or creative grading of the ground away from vegetation to facilitate retention of existing trees and woodlot/hedgerow vegetation. Where tree wells are to be constructed, the wells should be a minimum distance of 1.5 times the distance from the trunk of the tree to the drip line;
- i) Pruning, root pruning, and all work within 1.5 times the existing trees' drip-line shall be supervised by an Arborist;
- j) No excavation, storage of materials, parking, preloading, or filling shall occur within the drip-line of the trees being preserved.

9.2.3.B Open Space

- a) Maximize the amount of landscaped areas on a site and minimize the amount of impervious surfaces to increase the natural absorption of storm water. Developments should strive to achieve a minimum of 25% of the site as soft landscaping, including plant materials;
- b) Where possible, the landscape should provide for or enhance wildlife habitat. Include species that will attract birds (which in turn enhance both biodiversity and create pleasant soundscapes);
- c) A diversity of tree species is encouraged to increase the survival ratio of new landscaping. Indigenous or native species should be chosen whenever possible. Avoid tree species which would have difficulty surviving or be difficult to maintain in urban areas;
- d) Cluster trees to create "outdoor rooms" or to divide yards into smaller, more intimate areas for people to gather in while typically avoiding a heavily partitioned character;
- e) Public seating should be provided where walkways intersect public streets and areas of high activity; (see 9.2.8 Universal Design Principles);
- f) In general, plazas and forecourts should consist of these elements:
 - A widened hard surface;
 - Decorative light standards;
 - Fixed benches and/or other seating;
 - A distinct pattern, form or change in colour of paving;
 - Bollards preventing non-essential vehicular access;
 - Accent planting;
 - Bicycle racks in close proximity;
 - Garbage receptacles;
 - Areas for public art.



Examples of trees clustered to create "Outdoor Rooms"

Adapted from Arnold, Henry E. 1980. *Trees in Urban Design*



9.2.3.C City Boulevards

- a) Applicants shall protect trees on City property, boulevards, or adjacent sites. Trees on City boulevards are not to be removed or damaged under any circumstances;
- b) Ditches adjacent to a property may not be covered, altered, or filled-in other than as authorized by an approved Ditch Crossing Application from the City of Richmond Public Works Division;
- c) After completion of construction, City boulevards should be graded to suit existing drainage and landscaped with topsoil and grass or other materials to suit site-specific City objectives;
- d) Under no circumstances can City boulevards be developed for parking purposes.

9.2.4 CIRCULATION & PARKING

The intent is to provide safe and efficient circulation for automobiles without compromising the pedestrian environment or the livability of developments.

9.2.4.A Access & Circulation

- a) Restrictions for automobile access may apply on certain arterial roads and near intersections;

Emergency Vehicle Access

- b) Access provision should be made for emergency vehicles, moving vans, and service vehicles. Wherever possible, use cross-access agreements to combine and share emergency vehicle access roads between developments;

Lanes

- c) New development should retain or expand existing lanes and, where appropriate, create new lanes to facilitate service functions;
- d) Where service lanes cannot be introduced, service functions should be internalized within the site in off-street locations;

Access

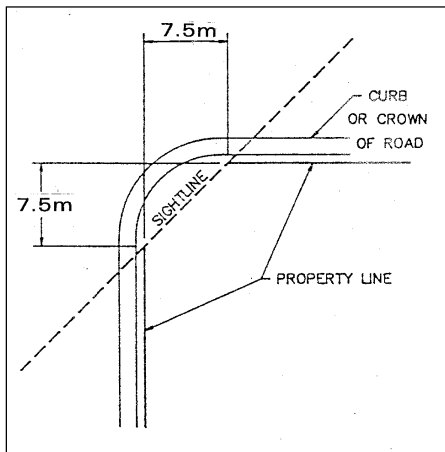
- e) Access to off-street parking areas should typically be provided from a lane or a minor street at the rear of a site to allow the fronting street to be developed for pedestrian activities and/or an expanded public realm;



- f) Minimize the typical width and frequency of driveway crossings of sidewalks. Where crossings are needed, use measures to ensure that such crossings do not inconvenience or endanger pedestrians or the mobility impaired, and do not limit the provision of street trees, landscaping, or furnishings in appropriate locations;
- g) Driveways that cross pedestrian routes should be consolidated to reduce disruption to pedestrian movement, to maintain pedestrian safety on sidewalks, to reduce duplication of vehicular routes, and to provide for more coherent vehicular circulation;
- h) Adjacent developments are strongly encouraged to combine and share access driveways to minimize automobile crossings of sidewalks. Integration of driving aisles, pedestrian sidewalks, or walkways between adjacent sites is also desirable;
- i) Automobile and service entrances should be consolidated and integrated into the facade design to reduce vehicular crossings of pedestrian routes and limit the impact of these elements on building appearance;

Sightlines

- j) Corner visibility for drivers shall be maintained by providing a 7.5m by 7.5m (24.6 ft. x 24.6 ft.) triangular area with no obstructions to the line of vision above 0.9m (3.6 ft.). The sightline will be measured from the intersection of the property lines adjoining the streets and bounded by the property lines and a line connecting the 7.5m by 7.5m (24.6 ft. x 24.6 ft.) distance.



9.2.4.B Parking

- a) New development should minimize the visual impact of parking lots and structures, and attempt to improve the impact of existing lots and structures;

Parking Structures

- b) Multi-level parking structures should not front public streets at grade;
- c) Where possible, all garage structures and parking should be located to the rear or beneath buildings, with vehicular access from lanes. Where lane access is not possible, access should be from streets via narrow driveways;



- d) Parking control equipment, e.g. ticket dispensers and card readers, should be located a sufficient distance from the public street to prevent parking queues extending onto the street. Similarly, a minimum distance of one car length, and preferably two car lengths, should be provided between an exit gate and the street edge to accommodate cars waiting to enter the traffic stream;
- e) In the case of above-grade parking, provide non-parking uses or special facade treatments along street frontages to enhance the building's appearance, animation, and character. On non-street-fronting facades, walls of parking structures should be concealed with sloped, landscaped berms and massed landscaping;
- f) Rooftop parking structures should be treated to reduce the visual impact as seen from above. For example, they may be landscaped with trees and overhead planting;
- g) Unfinished ceilings, lights, pipes, etc. should not be visible from a public street or sidewalk;
- h) Interior lighting levels (natural or artificial) should be inviting and not radiate a glare or unduly distort the colour of people, cars, signs, and other graphics;
- i) Pedestrian routes within and to/from parking facilities must be clearly delineated, logical in terms of directness, and easy to remember;
- j) For sites with little or no surface parking, the ground-level parking areas in a parking structure should have sufficient height clearance to accommodate most light trucks and passenger vans;

Surface Parking

- k) Where surface parking is provided, it should typically be situated to the rear of buildings and screened from public streets;
- l) Where provided behind buildings, it should be screened from adjacent properties with a minimum of 2m (6.6 ft.) wide x 1.5m (4.9 ft.) high landscape planting or trellis strips. Trees should also be planted at a minimum ratio of one tree for every four parking stalls;
- m) In cases where surface parking may be situated between a building and the adjacent public street:
 - Provide a covered walkway between the building and the adjacent public street;
 - Provide a minimum of 1 tree for every 2 parking spaces situated on-site between the building setback line and the adjacent public street;



- Provide special paving and landscaping measures to further enhance the pedestrian movement;
- n) Provide landscaping, fencing, and other appropriate treatments for surface parking lots in order to improve the appearance of lots along public streets and contribute to the continuity of the street edge without compromising the safety and security of the public inside the lot and on public street;
- o) Parking lots should be partitioned into areas no larger than 0.25ha (0.6 ac.). Areas should be defined at the boundaries by drive aisles, sidewalks, trees, and landscaping;
- p) Non-residential developments with large or multiple-surface parking areas should provide a direct pedestrian pathway system through the parking area to provide convenient and safe pedestrian access between building entrances, parked cars, and sidewalks of adjoining streets; The pathway system should incorporate landscaping with trees and benches, overhead weather protection, and distinct paving where appropriate. It should also be wide enough for wheelchairs / scooters and should include a tactile strip for the visually impaired;
- q) Where pedestrians must cross service roads or access roads to reach parking areas, crosswalks should be clearly designated by means of pavement markings, signs, flashing lights, or even traffic signals, if warranted;
- r) Provide curb-cuts or curb let-downs in appropriate locations to facilitate convenient and direct access from the parking space(s) to the building(s) for people with disabilities. Pedestrian movement should be designed to avoid any obstruction by parked vehicles;
- s) Minimize the surface area of blacktop parking by using alternate treatments and by complementing the asphalt with a variety of paving materials such as concrete, decorative pavers, etc.;
- t) Consider the use of shallow concrete gutters or swales with rolled edges between parking spaces and driving aisles as an alternative treatment for surface drainage.

9.2.4.C Parking Reduction Opportunities

- a) New development should seek to limit parking needs through sharing of parking facilities and coordination with off-site opportunities;



- b) Projects with a mix of uses should seek to reduce parking needs where the varied parking demand for proximate uses allows joint use of a single parking facility. Shared-use opportunities may be possible between non-residential uses and residential visitor demand, or between mixes of non-residential uses;
- c) Residential projects with a high percentage of small units and good access to transit and public services should seek to limit the number of parking spaces provided to reflect the more limited parking demand of such development;
- d) Where a development proposal features reduced parking standards, the proponents shall identify potential "spill-over" impacts on the neighbouring area and possible mitigation measures.

9.2.4.D Bicycle Parking

- a) Bicycle parking should be provided to the following minimum standards:
 - Class 1, long-term secured parking: 0.27 spaces per each 100m² (1,076.4 ft²) of gross leasable area;
 - Class 2, short term parking: 0.27 spaces per each 100m² (1,076.4 ft²) of gross leasable area;
- b) CLASS 1 Parking:

Secured, long-term bicycle parking shall be provided for the use of residential use and non-residential tenants in the form of waterproof bicycle lockers, or bicycle rooms complete with bicycle racks.

 - Parking facilities shall: be at-grade, have uniform 160 lux (min.) lighting which yields true colours; and, be within sight of building entry, elevator, and/or security;
 - Bicycle rooms shall provide: lockable door(s) with window(s); tamper-proof, motion-activated security lighting; and unobstructed view of each room from its entry; and, facilities for no more than 20 bicycles per room (enabling owners to identify one another);
 - Bicycle lockers shall: be constructed of solid, opaque, weather-proof and theft-resistant material, with no exposed fittings or connectors; have lockable doors which open to the full height and width of each locker; be grouped together; not be located at the head of parking spaces; and, have clear minimum dimensions of –

Length	1.80 m (5.91 ft.)
End Width at Door	0.60 m (1.97 ft.)
End Width Opposite Door	0.22 m (0.72 ft.)
Height	1.20 m (3.94 ft.)



- c) Unsecured, short-term bicycle parking shall be provided for visitors in the form of bicycle racks located within 15m (49.2 ft.) of a principal building entry:
 - Parking shall be situated in well-lit locations, clearly visible from principal building entries and/or public roads;
 - Bicycle racks shall be made of sturdy, theft-resistant material, securely anchored to the floor or ground;
 - Bicycle racks shall be designed to support the bicycle frame, not the wheels, and allow both the frame and the front wheel to be locked to the rack with a U-style lock;
- d) Bicycle storage areas integrated into parking structures should be located close to elevators and access points;
- e) Large-scale non-residential projects are encouraged to provide end-of-trip facilities, such as showers and lockers, within the development, for the convenience of employees.

9.2.5 BUILDING SCALE & FORM

The intent is to ensure that buildings are appropriate to their context and contribute to the overall quality of the streetscape. Building design should be compatible with the surrounding physical environment, land use, and the character, scale, and form of buildings on the same site and on neighbouring sites. The exterior design and finish of buildings and structures should also be compatible with existing heritage buildings on the same site or neighbouring sites.

9.2.5.A Form of Development

- a) Street-fronting development that creates an edge to the street is encouraged to help define streets and public spaces;
- b) In mixed-use areas adjacent to retail/restaurant/community uses and adjacent to town squares, the preferred building height at street edge is no more than four storeys. Setbacks as identified in zoning regulations or area plans should be designed as extensions of the public realm;
- c) In high-density residential areas, a building height of no more than four storeys is recommended at the street edge. Setbacks should be landscaped to provide semi-private and transition areas to the residential development. Where gaps between buildings or street-fronting courtyards occur, the buildings shall be joined visually by "bridging" elements e.g. gateways, decorative fencing, terraces, pergolas, etc.;



- d) In medium-density residential areas, a lower height of no more than three storeys at street edge, with more frequent interruptions and use of "bridging" elements to reinforce a consistent setback line, is recommended;
- e) In low-density residential areas, setbacks with consistent building heights, regular small gaps between buildings, building forms which are strongly oriented to the street or public space, and special landscape features and structures are recommended;
- f) Where a building exceeds 15.2m (50 ft.) in height, the building facade projecting above the lower-level street wall should be recessed a minimum of 2m (6.6 ft.);

Corner Sites

- g) Corner sites should be designed to bring visual prominence to the corner and to provide an edge to the intersection;
- h) Buildings are encouraged to be located at or close to the corner, wherever possible, to provide a built-form definition to the street. The design and shape of the buildings should enhance their potential use as reference points or landmarks;
- i) When buildings are not located at the corner, the building(s) should define the open space which is part of the corner; and a landscaped area with special features appropriate to the context e.g. flag poles, ornamental trees, seating area, "decorative" paving, architectural structures such as pergolas, etc., should be provided;
- j) Consider orienting building components, such as main lobbies, principal entrances, entrance plazas, active interior spaces, and windows or glazing, towards the corner;

Entrances

- k) Entrances should animate the street, provide separate and distinct identities for businesses and residents, and reinforce a scale and rhythm to the street complementary to local uses, pedestrian activities, street tree planting, and landscaping;

Roofs

- l) Roofscapes should be punctuated by special features that enhance the skyline and provide local landmarks;
- m) Towers should conceal roof-top mechanical equipment, either within their upper floors or within structures, consistent in form, material, and detailing with the tower and its base building;



- n) Lower-level roofs should typically be either sloped (20° minimum) or developed as usable, landscaped open space e.g. terraces or roof-decks;
- o) Parking structure roofs should be either concealed with non-parking development or developed as usable, landscaped open space.

9.2.5.B Noise Mitigation

- a) New development should ensure that sensitive indoor and outdoor uses are buffered or removed from the noise impacts of aircraft and vehicular traffic through design and construction measures;
- b) Developments in areas identified in the Aircraft Noise Sensitive Development Map (see Section 5.4 Noise Management) may require a report from an acoustical consultant and special noise mitigation measures to mitigate aircraft noise;
- c) Locate building ventilation systems to minimize noise and exhaust in pedestrian areas, residential units, and outdoor spaces.

Bylaw 7794
2004/11/23



Bylaw 8381
2009/09/14



9.2.5.C Tower Massing

- a) Towers should be designed to minimize shadowing, view, and privacy impacts; provide for a comfortable transition with adjacent streets and development; conceal on-site parking through:
 - i) "Slim" profiles and compact floor plates, especially in residential areas where it is preferable that floor plates above an elevation of approximately 21.0m (68.9 ft.) from grade be limited to a maximum size of approximately 600m² (6,458.6 ft²) gross;
 - ii) Low-rise "podium" buildings of a scale and character in keeping with the local area;
 - iii) Tower setbacks of at least 4.5m (14.8 ft.) from the face of low-rise "podium" buildings;
 - iv) Where appropriate, mid-rise terracing between towers and low-rise "podium" buildings;
 - v) Spacing of at least 24.0m (78.7 ft.) between towers;
 - vi) Staggered spacing of towers and units such that primary private views are directed past neighbouring high-rise developments.



9.2.6 SAFETY & SECURITY

The intent is to minimize opportunities for crime and to promote a sense of security through the design of the built environment.

9.2.6.A Defensible Space

- a) Encourage "territoriality", leading people to naturally "defend" not only their private spaces, but semi-private and public spaces also;
- b) Distinguish public and semi-public spaces from private spaces. Design symbolic barriers through building siting and design; landscape, e.g. changes in paving, vegetation, or grade; and/or architectural features, e.g. low wall, bollards, raised planters, rather than by continuous solid fences or walls;
- c) Provide separate lobbies and circulation between residential and non-residential uses;
- d) Design spaces within developments that encourage people to congregate by including such features as fountains, seating, or playgrounds.

9.2.6.B Surveillance

- a) Provide "surveillance" opportunities, allowing people to easily view what is happening around them during the course of everyday activities;
- b) Cluster residential units, shared tenant facilities, and semi-private areas to encourage neighbour-to-neighbour surveillance without impairing necessary privacy;
- c) Design landscapes and circulation routes to allow clear, unobstructed views of surrounding areas, e.g. make elevator lobbies clearly visible and easily accessible from the public street;
- d) Eliminate entrapment spots, and incorporate barriers that permit visual access without loss of privacy, e.g. glazing in lobby doors and stairs-wells;
- e) Encourage "eyes on the street" with windows, front doors, and activity generators, e.g. playgrounds and seating;
- f) Group common facilities or areas so that each facility or area will be automatically monitored by the constant presence of users of other facilities or areas;
- g) Ensure that windows and doors remain visible from the street and are not hidden by vegetation, etc.;



- h) To ensure safety and security, provide sightlines through any cluster of tall growing vegetation by selective and judicious pruning of shrubs or multi-stemmed trees and by keeping all other understorey to a maximum of 1.2m (3.9 ft.) in height.

9.2.6.C Safety Measures for Parking Areas

- a) Design exits and interior spaces within any below- or above-grade parking structures to ensure maximum visibility within the parking area. Avoid hidden spaces or alcoves;
- b) Use glassed stairwells, elevators, and "open" ramping systems to enhance visibility and aesthetics;
- c) Provide adequate lighting to enhance security. Avoid "dark distant corners" in parking areas. Pedestrian entrances to buildings and designated pedestrian routes should be highlighted with additional secondary lighting fixtures;
- d) Consider using electronic security devices and monitoring systems as a supplement to natural surveillance opportunities to increase safety in parking structures and parking areas;
- e) Walls and ceilings of parking structures should be painted white to enhance or reflect light;
- f) Pay particular attention to the design and operation of parking facilities, both surface and multi-level, to ensure their convenient and safe use. For example, locate parking control personnel within visual range of the entire parking area, wherever possible;
- g) Pedestrian and vehicular access gates should be mechanically or manually controlled, or be within effective visual range of security/parking personnel;
- h) Secure residential parking separate from public parking;
- i) Do not locate employee parking in remote areas of parking lots, behind blank walls, or within service or loading areas.

9.2.6.D Lighting

- a) Provide effective lighting of buildings, open spaces, streets, parking areas/structures, and pedestrian circulation routes for the purpose of discouraging crime, reducing the fear of crime, and preventing accidents;
- b) Lighting should be located and designed to ensure that all areas are well lit. Avoid glare and reduce shadows;



- c) In isolated areas, provide good lighting and public telephones to enable people to call for assistance;
- d) Light open spaces, pedestrian and vehicular circulation routes, parking lots, and building entries to provide security, safety, and convenient access without producing glare into adjacent properties and sensitive uses;
- e) Lighting along pedestrian pathways should be at a scale appropriate for pedestrians while providing optimum visibility;
- f) Illuminate entry points, and set light levels to provide for a comfortable transition between neighbouring locations;
- g) Provide vandal-resistant light fixtures that are easy to maintain and operate;
- h) Provide photo cell lights for all entries and garage doors to common parking structures and motion-detector lights for all areas hidden from view. Motion detectors should be mounted in a tamper-proof manner or in a vandal resistant location typically more than 3 m (9.8 ft.) above the adjacent floor or grade;
- i) Lighting levels throughout all parking structures should exceed 10 foot candles.

9.2.7 REFUSE, RECYCLING, & SERVICE AREAS

- a) Refuse/recycling areas, shipping, loading or utility areas, satellite dishes, and other similar structures, such as outdoor vents, mechanical equipment, or transformers should be located out of view from streets;
- b) Garbage and recycling bins must be easily accessible, contained within roofed/walled enclosures, and screened from public view;
- c) The design of the enclosure of outdoor refuse/recycling areas and the screening of other areas should be coordinated with the overall design of the development.

9.2.8 UNIVERSAL DESIGN PRINCIPLES

The intent is to ensure that the design of a development enables all people, including people with disabilities, to have full and unrestricted access to every part of a project.

9.2.8.A Site Circulation

- a) All parking spaces allocated for people with disabilities should be located as close as possible to the main entrance to a building;



- b) Ensure that access for the mobility impaired (including people with baby strollers) is provided via at least one path of travel, with a minimum clear width of 1.5m (4.9 ft.) to the major portion of any open space, any building lobby accessible to the open space, and any use that may be present on, or adjacent to, open space;
- c) All pedestrian routes will be fully accessible to the disabled community. Pedestrian pathways should also include, wherever possible, a linear textured band of roughened surface for the visually impaired to follow. The band should be appropriately located towards the middle of a pathway and should be designed to avoid potential conflicts with seating areas or plant materials at edges of walkways;
- d) Building and site design features which segregate circulation/ areas/ uses for people with disabilities from typical public usage are discouraged, except where required due to reasons of safety or significant space limitations. For example, ramps are discouraged in favour of more gentle grade changes and alternate design approaches;
- e) Ramps, when required, should be:
 - 1:12 maximum slope;
 - 0.9m (3 ft.) maximum length;
 - Single level only, with slip-resistant surfaces;
- f) Walkways should have a maximum slope of 1:20 and minimum width of 1.2m (4 ft.).

9.2.8.B Site Design

- a) Site designs should seek to integrate features that accommodate persons of varying ability levels;
- b) Drinking fountains should be a maximum of 0.76m (2.5 ft.) high and allow for both hand and foot operation to accommodate wheelchair users and companion animals;
- c) Seating in public areas should provide for:
 - Minimum seat depth of 40cm (15.7 in.) without backrests, or minimum seat depth of 35cm (13.8 in.) where backrests at least 30cm (11.8 in.) high are provided;
 - Features designed to allow a wheelchair to sit alongside fixed seating or, where tables are provided, to allow a wheelchair to pull up to each table;
 - Minimum of 5% of all seating in public areas to be provided with backrests.



9.2.8.C Building Design

- a) Building designs shall incorporate features which address the functional needs of persons with disabilities, including those who are mobility, visually, and hearing impaired and have reduced manual dexterity or strength;
- b) Building entries should be:
 - Clearly addressed with large numbers visible from the street;
 - Directly accessed from the street without stairs;
 - Provided with level areas measuring at least 1.5m x 1.5m (4.9 ft. x 4.9 ft.) both inside and outside doorways;
 - Provided with weather protection, exterior lighting, and power-assisted door openers;
- c) New development should accommodate the functional needs of residents of all ages and abilities:
 - All outdoor and indoor common areas should be wheelchair accessible, and incorporate measures for those with low vision;
 - At least one elevator in each building should be able to accommodate a prone stretcher;
 - Manoeuvring spaces in kitchens, bathrooms, bedrooms, and hallways should accommodate wheelchairs;
 - All doorways, including those within units and those accessing private outdoor areas, should permit easy wheelchair use;
 - Floor surfaces should be slip-resistant and non-glare;
 - All locks, latches, handles, closers, and controls should be easy to read, reach, grasp, and use;
 - Counters, cupboards, sinks, tubs, and showers should be well lit and easy to use;
 - Additional electrical/electronic features, such as phone jacks and electrical outlets, should be provided to allow the use of remote controls, computers, and security devices;
- d) All rooftop areas intended for use (i.e. recreational) by building occupants or others should be designed and landscaped to ensure universal accessibility.



9.2.9 PUBLIC ART

The intent is to promote and facilitate the integration of public art throughout Richmond that expresses the ideas of artists and the community. Initiatives shall be consistent with the "Richmond Public Art Program, Policy Plan, and Implementation Actions", which defines a framework for creating opportunities to participate in the design, look, and feel of Richmond.

- a) Development should support the public art program by either:
 - Contributing to Richmond's Public Art Reserve; or
 - Providing public artwork which meets the terms of the "Richmond Public Art Program, Policy Plan, and Implementation Actions", either on-site or at a location acceptable to the City;
- b) Regardless of whether a development provides public art on-site, public art locations should be secured which benefit from:
 - Visibility for pedestrians and/or motorists;
 - Proximity to high pedestrian activity areas, e.g. active retail areas, transit stops (especially those serving high ridership routes), places of public gathering, public open spaces, and recognized pedestrian routes;
 - Opportunities to expand on existing or future public artworks as part of an existing or proposed multi-artwork concept;
 - Places of special heritage or community significance;
- c) The "Richmond Public Art Program, Policy Plan, and Implementation Actions" should be referred to for guidance on public art budget calculations and criteria.



9.2.10 FLOODPROOFING

The purpose of these guidelines is to ensure that floodproofing of buildings is carried out in a manner which is consistent with the form and character of the community.

- a) All buildings must meet a minimum habitable floor elevation established either by bylaw or restrictive covenant. Where there is a significant difference between the minimum required elevation and the surrounding natural grade, the method chosen to achieve that minimum elevation becomes important in terms of the form and character of the development. The elevations of habitable floors can be raised either by setting them on non-habitable basements or posts, or by raising the ground level through the use of fill material. The method chosen should be the one that optimizes the relationship between the new construction and the surrounding existing development and land grading;
- b) Natural grade should be maintained wherever practicable. In some cases, where filling is necessary, it shall be accomplished by matching the grade on adjacent properties, or by changing grade at a slope not to exceed 6:1. Tall retaining walls or steep terraces are to be avoided;
- c) Construction or landfill should be carried out in a manner that is sympathetic to the generally residential character of an area. Precautions should be taken to avoid drainage problems, differential settlement, unsafe slopes, or unsightly edges to adjacent properties.

9.2.11 ADJACENT USES (EDGE CONDITIONS)

The intent is to accommodate and encourage development while minimizing the impacts of new developments on adjacent land uses and on the overall environment of the City.

- a) Where multiple-family residential sites lie adjacent to an ESA or park, these landscapes should be “extended” into and through the multiple-family parcels, especially along walkways, pathways, semi-public open spaces, and public areas. In addition, dense planting of indigenous plant material (with appropriate soil and irrigation conditions) should be provided to screen any fences on or adjacent to the ESA from the view of residents;



*Bylaw 7768
2004/08/23*



- b) The purpose of the Agricultural Land Reserve (ALR) buffer is to achieve public safety, and to minimize agricultural-urban land use conflicts and complaints. For all developments immediately adjacent to sites designated within the ALR (i.e. no intervening road), a landscaped buffer of approximately 15 m (49.2 ft.) wide, or of an alternate width deemed appropriate and acceptable, should be provided between the development and the agricultural land. Landscaping should reinforce the character of agricultural lands, including large-scale trees, and a combination of shrubs and ground cover;
- c) The purpose of the Agricultural Land Reserve (ALR) buffer is to achieve public safety, and to minimize agricultural-urban land use conflicts and complaints. All development across a road from sites designated as ALR should provide a minimum 5 m (16.4 ft.) landscaped strip, or an alternate width that is deemed appropriate and acceptable, as measured from the back of curb, or, in the case of an unopened road, from the property line abutting the road right-of-way. Landscaping should reinforce the character of agricultural lands, including large-scale trees, a combination of shrubs and ground cover, and, where appropriate, a sidewalk;
- d) Where a landscaped buffer is provided on sites near agricultural lands, the design of the development should protect the landscaped buffer from potential impacts related to on-site activities, e.g. drainage;
- e) Design new non-residential development to mitigate the impact of traffic, noise, lighting, and other environmental conditions on adjacent residential areas;

*Bylaw 8381
2009/09/14*



- f) Interior sidewalls, created as a result of construction/redevelopment phasing, should be designed to complement the overall appearance of development, and should not appear temporary or unfinished.