



9.3 MULTIPLE-FAMILY GUIDELINES

The following guidelines apply to all multiple-family residential developments in addition to the General Guidelines for all development permits (Section 9.2) outlined previously in this document.

The intent is to carefully integrate new housing development into existing neighbourhoods.

9.3.1 CIRCULATION SYSTEM

The intent is to provide clear, convenient vehicular access to each multiple-family residential complex, with safe and separate pedestrian circulation within the development.

9.3.1.A Vehicular Access

- a) The main vehicle access should be to a collector road, rather than to an arterial road;
- b) Driveway access to arterials or entry roads is discouraged. Access for vehicles to certain arterial roads will be restricted to right-in/right-out only;
- c) Access driveways should be combined wherever possible and limited to 4m (13.1 ft.) in width on local roads and 5m (16.4 ft.) in width on section line roads.

9.3.1.B Fire Access

- a) Fire lanes should conform to the City's Building Bylaw and be designed to meet the needs of the City's Fire Department. They should be similar in design to other access routes and, wherever possible, combined with pathways and other routes. Decorative forms of paving should be used both for aesthetic reasons and to distinguish them from common asphalt-paved vehicular access routes. Where they intersect or are combined with pedestrian pathways, distinctive paving should be used to highlight the dual function.

9.3.1.C Pedestrian Circulation

- a) Pedestrian circulation should be provided for all major areas of the site. Pedestrian access should be designed to be accessible to disabled persons;

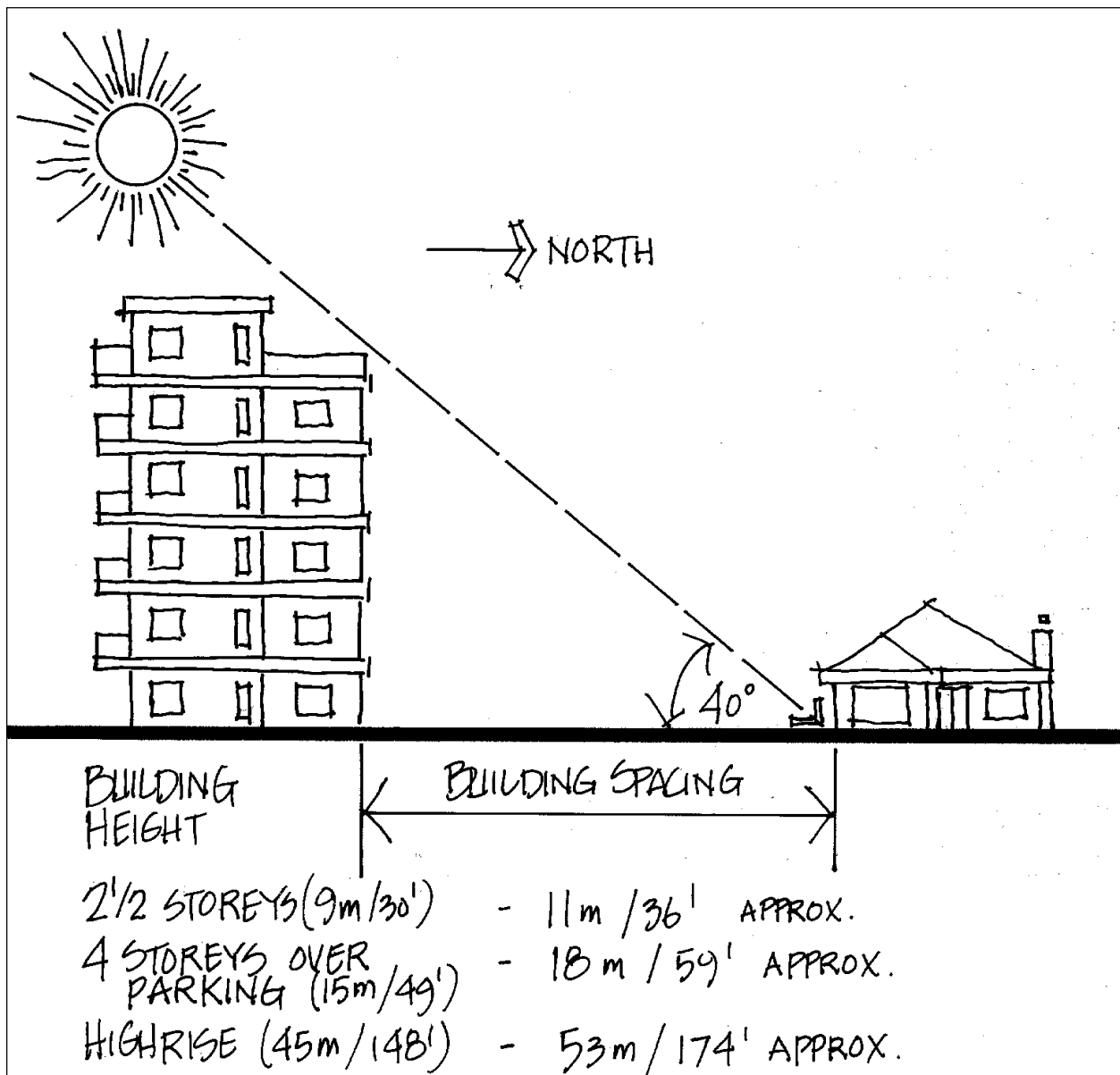


- b) Consider designing the circulation system to encourage children's play throughout a development:
 - Make the system safe for bicycles and tricycles. Drop curbs at road crossings; create traffic calming devices; vary the paving;
 - Explore the possibilities of reclaiming hard surfaces as play areas;
 - Accommodate play on internal roads through a design that avoids conflict between cars and people, e.g. a basketball hoop in a dead-end roadway;
 - Indicate shared uses of roadways through devices such as changes in road surface, variation in road width, and signage. Clear delineation of edges and surfaces is important.

9.3.2 BUILDING SCALE & FORM

Sunlight access

- a) Ensure that a minimum of 75% of dwellings AND their private open spaces in each development receive direct sunlight every day of the year;
- b) To ensure sunlight access to residences, the minimum north-south spacing between adjacent buildings should be determined by the vertical angle of the sun at solar noon at the equinoxes.



Sketch of sunlight access guidelines for residences

9.3.2.A Neighbourhood Organization

- a) Organize residential developments into identifiable "neighbourhoods";
- b) Each neighbourhood should contain no more than 250 multiple-family dwelling units; be no more than 300m (984.3 ft.) at its widest point; and have distinct boundaries, such as green spaces or an arterial road;



- c) The neighbourhood should not be penetrated by arterial roads;
- d) Neighbourhoods should include a variety of unit types and unit treatments to encourage diversity and sustainable communities;

Defensible Clusters

- e) Multiple-family projects should be designed in small defensible clusters of less than 25 units to give the inhabitants a sense of privacy and community and to allow residents to identify their own territory according to principles of defensible space;

High-Rise & Mid-Rise Apartment Towers

- f) Towers should ideally contain less than 100 units per building;
- g) Buildings with more than 100 units should group units around separate entrances and lobbies. The maximum number of units sharing an entrance should be 100 apartments;

Low-Rise Apartment Buildings (Low-Rise)

- h) Apartment buildings should contain less than 75 units;
- i) The maximum number of units sharing a common lobby should be 75 households or less;
- j) Units should be organized into small groups to a maximum of 10 units per group (i.e. 10 units per floor) to enable residents to easily identify their unit group;

Townhouses

- k) Row townhouses should typically be designed in clusters of 25 units or less, clearly defined on all sides by publicly-accessible open spaces or a combination of publicly-accessible open space and roadways. Where townhouses are stacked, the number of units in a cluster may be increased;
- l) The maximum number of townhouse units in a row should be six. The number of units in a row may be increased to eight if adjacent rows are separated by broader open areas developed to improve circulation and enhance the landscape.

9.3.2.B Scale & Form of Development

- a) New multiple-family residential buildings should be designed to maintain a residential character and be compatible with adjacent uses;



- b) Multiple-family units situated near single-family side yards should be particularly sensitive to issues of privacy/overlook over adjacent properties. Consideration should be given to greater setbacks above the ground floor, special landscaping measures, and/or orienting living areas away from neighbours;
- c) Buildings should have an apparent length of less than 70m (229.7 ft.) and a maximum building width of 45m (147.6 ft.).
- d) Building facades should be broken up into smaller components. Where buildings are over 20m (65.6 ft.) wide, special measures should be used to reinforce a rhythm and scale that gives the appearance of individual units along the street; e.g., recess the building every 8m (26.2 ft.), with recesses that measure 2m (6.6 ft.) in width and 2m (6.6 ft.) in depth, and landscape the spaces within or in front of the recesses;

Spaces Between Buildings

- e) Buildings should relate to the height and spacing of adjacent buildings and allow people to make use of the ground between buildings;
- f) The size of spaces between buildings should be determined by designing for an identified use which enhances the amenity and enjoyment of residents;

Tower Massing

- g) Towers should be designed to minimize shadowing, view, and privacy impacts;
- h) Residential towers should have "slim" profiles and compact floor plates. Tower floor plates above an elevation of approximately 21m (68.9 ft.) from grade should be limited to a maximum size of approximately 600m² (6458.6 ft²) gross;
- i) Towers should incorporate low-rise "podium" buildings of a scale and character in keeping with the local area;
- j) Towers should be set back at least 4.5m (14.8 ft.) from the face of low-rise "podium" buildings;
- k) Where appropriate, mid-rise terracing between towers and low-rise "podium" buildings are encouraged;
- l) A distance of at least 24m (78.7 ft.) should be maintained between towers;



- m) Staggered spacing of towers and units is recommended to maximize primary private views past neighbouring high-rise developments and to avoid overlook from one tower to another;

Apartment Building Massing

- n) Apartment buildings should be designed to break down the massing and present a residential scale to the street;
- o) Establish for apartment development a maximum transitional height gradient of no more than 45° to all property lines. These gradients may be varied provided privacy, sunlight, view and human scale criteria are met;
- p) Provide a side yard height step-back where apartments are adjacent to townhouse or single-family dwellings. Also provide height step-backs at street corners, in the form of lower i.e. one- or two-storey, building elements;

Townhouse Massing

- q) Townhouses should be compatible in scale and form with the surrounding area;
- r) Where possible, provide a transition between townhouse units and single-family homes by building duplexes (structures with no more than two attached units together) along property lines as buffer zones. A space of at least 3m (9.8 ft.) should separate each duplex structure along the street;
- s) Establish for townhouse development a maximum transitional height gradient of no more than 26° to all property lines. This gradient may be varied provided privacy, sunlight, view, and human scale criteria are met;
- t) The gradient may be varied to allow 3-storey townhouses provided the townhouses are ground-oriented and set back a minimum 3m (9.8 ft.) from a public street;
- u) Chimneys, dormers, gables, and similar elements may project into the gradient provided they do not exceed one-half of the roof line. They should also result in an improved design;
- v) End units should be one-storey in height where possible;
- w) Individual unit designs should be varied to avoid significant repetition either within a row or between adjacent rows of units;
- x) Stagger units along main internal roads;

Building Scale

- y) The apparent scale of multiple-family development should be reduced through architectural design and detailing;



- z) Vary the design to include more than one building form on each site sharing common architectural elements, especially for developments of 100 or more units;
- aa) Establish residential scale through articulation of the building facade, e.g. projections, recesses, solids and voids; and by including house-like elements, such as chimneys and multi-paned windows;
- bb) Break up the apparent length of individual buildings by expressing larger buildings as a series of smaller buildings, or as identifiable parts of a grander scheme; for example, smaller components that express strong unit identity with direct grade access;
- cc) Reduce the apparent height of buildings with architectural treatment that promotes recognition of individual storeys and avoids the appearance of sheer blank walls. Some treatment might include (but is not limited to):
 - Giving each building or portion of building a distinct top, middle, and base;
 - Use of trim, more intense colour accents, secondary roof elements, building recesses;
 - Stepped building forms emphasizing lowered height on ends with fronts;
- dd) Consider the use of roofs as key elements to help "break up" multiple-family buildings so they may adopt a form, scale, and rhythm sympathetic to single-family neighbours;
- ee) Large projecting balconies are discouraged along streetfronts, as they emphasize building bulk. Recessed balconies will be permitted in some areas;
- ff) Avoid the appearance of a solid wall of buildings by varying street edge treatment through use of strategically placed open spaces with intensely clustered plantings, staggered or varied building setbacks, and other techniques.



9.3.3 PEDESTRIAN-ORIENTED STREETSCAPES

The intent is to give prominence to the pedestrian realm as a major element of neighbourhood theme and character.

- a) Use internal roadways to maximize the sense of open space and enhance pedestrian character. Where possible, vehicle and pedestrian access should be either specifically marked or separated from each other and appropriately located;
- b) Visually enhance pedestrian linkages and create a sense of arrival through the use of arrival plazas, special plantings, and benches at intersections.

9.3.3.A Pedestrian Pathways

- a) To avoid duplication, pathways should be combined with fire lanes wherever possible;
- b) Pedestrian access through developments should be a minimum of 6m (19.6 ft.) wide and should:
 - Include a paved walkway, minimum 2m (6.5 ft) wide, with the distance between adjacent building faces being at least 6m (19.6 ft.);
 - Have a maximum length of 70m (229.7 ft.) (as measured between public streets or open spaces), except where the space between adjacent building faces is less than 9m (29.5 ft.), in which case the maximum walkway length should be 15m (49.2 ft.) between open spaces;
- c) Pathways should be treated with decorative surfaces and landscaped with small-scale plant materials, shrubs, and trees. Where possible, existing vegetation should be preserved along these pathways;
- d) All paths should be open to the sky;
- e) Maximize visibility and animation along pathways by orienting windows, entries, and balconies on adjacent buildings towards paths;
- f) Ensure that pathways are well-lit, visible from the street, and clearly marked, with entrances embellished by ornamental planters, trees, or prominent architectural components;



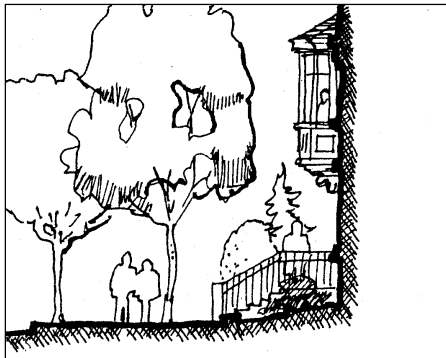
- g) Linear walkways should have focal areas in the form of arrival plazas and entry courts, and should also be, in themselves, a series of events and places for the public and residents to experience.

9.3.3.B Transition Zones

- a) A transition zone of a minimum width of 3m (9.8 ft.) should be provided between the sidewalk and a building entrance;
- b) A transition zone of a minimum width of 2m (6.6 ft.) should be provided between public sidewalks and entrances and/or private parking lots;
- c) Transition zones, e.g. grade-change porches, landscaping, picket fences, or similar devices, may project into building setbacks.

9.3.3.C Streetscapes

- a) Streetscapes should animate the street and provide a high level of pedestrian interest along their public edges;
- b) Along section-line roads, provide exterior staircases up to the first habitable level wherever appropriate. Exterior stairs should be designed to be integrated into the overall architectural and/or landscape concept of the development. At least one staircase on each site should lead directly to the street level;
- c) At the common entry to multiple-family residential buildings, provide public seating and clear, pedestrian-oriented signage. Art at building entries is encouraged;
- d) Lower-density developments, such as townhouses, should feature individual front doors to grade-level residential units along all publicly-accessible walkways and streets, with individual paths leading from the public sidewalk or pedestrian walkway to front doors. The front doors of the units should be accessible and visible from the public sidewalk, and should not be hidden by vegetation;
- e) Employ features such as front stairs, stoops, gateways, porches, and weather protection to enhance the residential quality of unit and building entries, the visibility of such entries, a comfortable architectural rhythm along the street, and a human scale;
- f) Grade-level units should be no more than 2m (6.6 ft.) above the grade of adjacent public sidewalks and walkways;



Provide exterior staircases to the first habitable level



- g) Create an attractive street frontage, using windows and doors to help animate the building facade and promote a more human-scale character. Windows and doors should be oriented streetward.

9.3.3.D Yards

- a) "Public" yards adjacent to streets, lanes, public walkways, and pathways should be designed to be open and inviting, and allow good visibility from adjacent public areas to building entries;
- b) Define the street edge through landscaping with layers of planting, low walls, hedges, or changes in grade along the property line;
- c) Yards should be raised no more than 1.2m (3.9 ft.) above adjacent public sidewalks;
- d) Where yards abut public spaces, landscaped terraces no greater than 0.6m (2 ft.) high and at least 0.6m (2 ft.) deep should be used to reach the new grade;

Fences

- e) Fences or walls on public road frontages should be limited in height and length and should be supplemented with landscaping;
- f) Fences or walls should be no more than 24m (78.7 ft.) long without a break or jog;
- g) Fences should be a maximum of 1.2m (3.9 ft.) high when located within 2m (6.6 ft.) of the street;
- h) Landscaping on the street side of fences should be plants of low maintenance varieties and should be maintained by the adjacent property owner. Hearty shrubs, groundcover, and trees are recommended.

9.3.4 ROOFSCAPE

A variety of overall roof heights and forms should be employed to give interest and residential scale to the building forms.

Roof Form & Elements

- a) Sculpt and terrace upper floors in buildings over 4 storeys in height to reduce mass, create a transition in height, and maximize views;



- b) Reduce apparent height of buildings and establish a pedestrian scale along walkways, semi-private open space, and main vehicular entrances through the use of secondary roofs or trellises over entries, patios, and other openings at lower levels;
- c) Consider pitched roofs to express a traditional residential character;
- d) Decorative elements close to the roof should emphasize and complement the roof pitch visible from the street;
- e) Mechanical equipment must be concealed from view, and antennae, radio-wave receiving and transmitting devices, vents, and similar obtrusive equipment should be situated where least visible from public areas;
- f) Skylights should be designed to minimize interruption of the roof line;

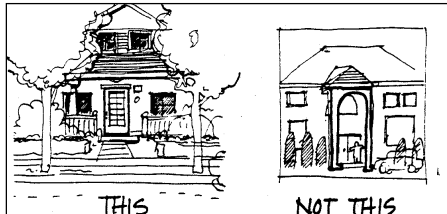
Roofs for High-Rise Residential Developments

- g) Vents, mechanical rooms, mechanical equipment, and elevator penthouses should be integrated into architectural roof treatments, or screened with materials and finishes compatible with the overall building design;
- h) Open upper decks of parking garages should be landscaped;
- i) Rooftops should be landscaped and made accessible to residents as usable common (and private) outdoor space, particularly on roofs of low-rise “podium” buildings. For mixed uses, where alternative public open spaces are limited, accessible lower-level roof decks should also be developed to provide open space for non-residential tenants, or the public.

9.3.5 ENTRANCES, STAIRS & PORCHES

The intent is to establish clear and appropriate connections and relationships between private residences and the public realm.

- a) Entrances to buildings and complexes should front public streets and be directly accessible from sidewalks or other public areas with minimal changes in grade. The entrances should be designed to be highly visible from the street and clearly addressed with large numbers;
- b) Access from the street should be convenient and safe. Provide good lighting and good surveillance between elevators/ lobby/ street, and audio-visual door signal/intercom;



Residential entries should be visible from the sidewalk, at grade, and be part of a single-storey element

- c) Residential entries should be distinct from other entries and lobbies and identifiable through the use of landscape and architectural features;
- d) Convenient indoor waiting areas and outdoor pedestrian weather protection should be provided at building entrances;
- e) Entrances should be designed to accommodate easy access by people with disabilities;
- f) New developments should promote the provision of individual grade-level entries to residential units wherever possible, with intimate courtyards, landscape features, and/or special weather protection at common building entries;
- g) Architectural treatment of unit entrances should reinforce proximity to grade level and avoid two-storey features;
- h) Enhance the livability of dwellings and the vitality of parkways and linear walkways by providing secondary entrances, doorways, gates, and garden entries to ground-level units lining pedestrian routes;
- i) Porches are encouraged. Porches and covered stairs should be at least 2.5m (8.2 ft.) deep to allow for usability, and should incorporate prominent main entries. Design porches to be integrated into the facade, rather than appearing "tacked on".

9.3.5.A Entrances to Apartment Buildings

- a) Entrances to apartment buildings should be located on a public street wherever possible;
- b) Individual buildings in apartment complexes should have a clearly visible street address and direct access to their own parking areas;
- c) The main entrance should be in a prominent location to enable a motorist to easily identify a multiple-family complex and the driveway at the same time;
- d) Entrances for apartment complexes or sites with long driveways should be accessible by a distinct and separate pedestrian sidewalk that is clearly visible from the public street;
- e) Apartments with the main pedestrian entrance located on the street may have the front setback reduced to 5m (16.4 ft.) provided there is sufficient transition space between the sidewalk and the entrance.



9.3.5.B Entrances to Townhouse Units

- a) Entrances to townhouses should enhance the pedestrian-scale character of the area by strengthening a unit's connection with public streets and internal roadways and by masking the appearance of garage doors;
- b) Townhouses fronting on residential streets should have their main pedestrian entrances on the street side;
- c) Townhouses adjacent to public roads and trails should have their main front doors visible and accessible from that road or trail, using stairs and new grading, if required, to do so. Direct access for each unit should also be provided to the internal pedestrian and view corridors;
- d) The main entrances should emulate the front entrance of single-family homes;
- e) Incorporate human-scale elements (windows, doors, roof elements, trellises, etc.) into the building façade visible from the street;
- f) Where townhouses are designed with the end wall adjacent to the public street, the pedestrian entry for the end unit should be designed to also face the street;
- g) Discourage situations where the main entrances to units are adjacent to, or on the same façade as garage doors.

9.3.5.C Garage Doors

- a) The presence of garage doors along roadways should be minimized in order to enhance the pedestrian experience;
- b) Reduce the visual impact of garages along internal roads and driveways by interrupting garage doors with covered secondary pedestrian entrances i.e. back doors;
- c) Ensure that the garage door encompasses no more than 60% of the building width as seen from the internal road;
- d) Where front doors to townhouse units are situated on the same façade as garage doors, the garage doors should be recessed a minimum of .6 m (2 ft.) from the front door entry area, and adequate space should be provided in association with the entry to allow for substantial landscaping including features such as trees, trellises, seating, stoops, decorative paving, hedges, and ornamental fences and gates;
- e) The width and height of garage doors should be a maximum of 4.9m (16 ft.) x 2.1m (7 ft.) respectively;



- f) Separate the individual garages with landscaped areas, including trees with a minimum caliper of 102mm (4 in.) measured 1.5m (5 ft.) above grade, and/or with the careful siting of the residential portions of the buildings;
- g) Incorporate decorative architectural treatments that are complementary to unit finishes, such as windows, on and above garage doors;
- h) Where buildings have front and rear elevations, and parking can be provided exclusively from the rear, ensure that:
 - No more than two garage doors are placed in a row without interrupting with a portion of the building or side yard equal to the width of one garage door;
 - No building block has more than six garage parking entrances;

However, where both front entry and vehicular access must be provided on the same façade, ensure that:

- For 50% of the units, no more than one garage door is placed in a row where units are attached without interrupting with an amount of building or side yard equal to the width of one garage door;
 - No building block has more than four garage parking entrances;
- i) Where driveways or garages are on the same street frontage as the pedestrian entrance, the unit should be designed so that:
 - Sufficient space is available for access to front doors;
 - The garage doors are set back a minimum of 0.6m (2 ft.) from the façade of the unit;
 - Single garages and tandem parking are used rather than double carports.

9.3.6 WINDOWS & SKYLIGHTS

The intent is to maximize light into units and to express the residential character of the neighbourhood through appropriately scaled and proportioned windows.

- a) Windows onto main living spaces should have a minimum clear space of 9m (29.5 ft.);
- b) Orient windows to the south in order to maximize solar gain;



- c) Consider the use of various forms of projections, such as bay windows, as a device to maximize sunlight and views, and to provide interesting unit articulation and improved interior light;
- d) Locate windows to focus views, to maximize light penetration into units, and to minimize opportunities to look into units from other units or from paths and open spaces around buildings;
- e) Traditional window treatment should be used where visible from the street. Skylights, plastic bubble windows, tinted glaze, and other non-traditional windows should not be used in prominent locations on buildings that are visible from the street;
- f) Windows should be openable, of residential scale, and should add to the sense of neighbourliness and safety and security by providing visual interest and surveillance;
- g) The openable part of a window should be located a minimum of 0.6m (2 ft.) above a floor as a safety precaution for small children;
- h) Windows, used singly or in combination, should be transparent at eye-level and should be clear-glazed (untinted) to reinforce the sense of surveillance over the street;
- i) In family-oriented developments, consider providing windows closer to the floor to enhance observation of areas close to the building;
- j) Consider the use of skylights as a means to access light within a vocabulary of pitched roof forms, except where aircraft noise is of concern (see item 9.3.14.B);

9.3.7 MATERIALS

- a) Exterior cladding materials and detailing should be carefully considered to counteract the effects of the rainy west coast climate of Richmond. Stucco should be treated to prevent discolouration and particular care should be taken in detailing of north-facing facades;
- b) A variety of complementary materials and colours is encouraged for visual interest;
- c) Ensure the façades of the buildings are visually interesting through a sufficient level of surface detail;
- d) Select roofing materials that are suitable for the level of articulation desired in the roof forms;



- e) In family-oriented developments, consider providing a washable floor in at least one eating space.

9.3.8 LANDSCAPING

Residential sites should be landscaped with attractive landscaping, screening, and surface treatment, to enhance the natural beauty of Richmond. The main purposes of screening and landscaping is to improve the livability of multiple-family residential areas, and to provide adequate separation between uses.

9.3.8.A Preservation of Existing Natural Features

- a) Wherever possible, existing trees, water bodies and shorelines should be retained;
- b) Special attention should be paid to the preservation of mature trees. Any hard-surface area, including building footprint and driveways, should be planned and designed to maximize retention of existing woodlots or specimen trees. Existing mature trees and vegetation corridors should be retained and incorporated, wherever possible, into the design of external streetscapes and internal private landscapes;
- c) Special efforts should be made to retain mature trees by adjusting retaining walls to accommodate trees.

9.3.8.B Public Open Space

Building Setbacks

- a) Along high-density residential streets, building setbacks are encouraged to provide for "display gardens" and semi-private entry transition areas;
- b) Where the adjacent neighbourhood is a single-family neighbourhood, front yard landscaping features should be used to create a sense of transition between neighbourhoods that face each other across a street. Appropriate features might include (but would not be limited to): roofed pedestrian entry portals; trellises; and small entry courts edged with ornamental trees, shrubs, and plants;

Trees

- c) Plant trees along all street frontages at a spacing of approximately 7.6m (24.9 ft.) on centre to form an avenue of trees. The spacing between trees may vary according to the species;



- d) Major internal roadways should be lined with landscaped boulevards and street trees planted at a maximum of 9m (29.5 ft.) on centre. Pedestrian-oriented lighting should be included along the internal roadways;
- e) Trees may be planted in pairs at entranceways to define a gateway;
- f) Landscape all pedestrian paths with trees and other plant materials;

Landscape Treatments

- g) Create visual focal points by providing landscaped areas at the curves of internal roads and at the "dead-ends" of development sites. Allow for future pedestrian access to adjacent development areas within the landscaped areas;
- h) Consider using mounds of earth or berms to contain or screen an area and to create visual and textured interest in otherwise flat terrain;
- i) Use landscaped trellises to conceal garages and visitor parking stalls;
- j) Vines or other cover should be planted to soften retaining walls;
- k) Soften hard surfaces through the use of landscaping, trellises, and tree planting;

Surface Treatment

- l) Show variety and change of use through variations in the colour and texture of materials for patios, walkways, and roadways. Use changes in paving materials near entrances to walkways and children's play areas;
- m) Use a variety of decorative surface treatments, e.g. stamped concrete grey pavers, to soften the visual impact of driveways;
- n) Consider using materials that support children's play throughout a development, e.g. rubber tiles instead of concrete pavers, walkways for chalk drawings, etc.;

Signage

- o) Signage should have a pedestrian scale and orientation. Back-lit acrylic signs or permanent, free-standing commercial signage will not be permitted.

9.3.8.C Semi-Private Open Spaces

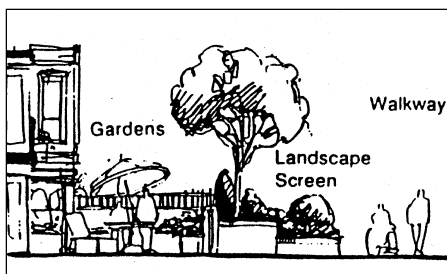
- a) Provide convenient, safe, and accessible semi-private open spaces for the common use of all building/ complex occupants;



- b) Semi-private open spaces should be clearly defined from public spaces for the exclusive use of building/complex occupants through the use of changes in grade, low walls or fences, planting, or siting within the confines of the building;
- c) Spaces should be situated and designed to maximize resident access, surveillance, and enjoyment;
- d) Provide landscaping with substantial trees, planting, and features appropriate to a range of ages and interests, including families with children;
- e) Illuminate spaces with low-level lighting that provides light and security for semi-private space, but does not produce glare into the adjacent residential buildings;
- f) Semi-private open spaces for family-oriented housing should be equipped with children’s play apparatus and benches. Locate equipment and seating to take advantage of sun and natural shelter from the weather;
- g) Spaces should be designed to ensure barrier-free access;
- h) Ground surfaces should be paved with a mixture of hard-surfaced and natural landscaping.

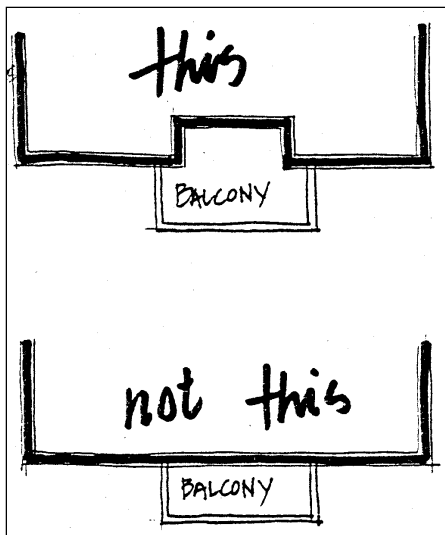
9.3.8.D Private Open Space

- a) Public and private outdoor space should be clearly defined to enhance both the privacy of residences and the pedestrian experience;
- b) Provide landscaping, terracing, screening, low-level hedges, and/or garden walls between private ground-oriented outdoor spaces and the public realm;
- c) Separate private outdoor spaces from the semi-private open spaces. Use changes in grade and/or landscaping to ensure the privacy of an individual unit’s open space without the use of high fences;
- d) Private outdoor spaces should be separated from the private outdoor spaces of other units for privacy purposes. Private outdoor spaces in family-oriented developments should be “enclosed”, i.e. fenced, for the security of small children and pets;
- e) Where a change in grade no greater than 1.5m (4.9 ft.) occurs between the outdoor space of a unit and the level of a street or public access it faces, "front stair" connections should be provided between the two outdoor spaces;
- f) Articulate building edges to define private balconies and patios that become a natural extension to the residential unit;





- g) Where a residential front yard provides a unit's only private open space, ensure that this space is usable/practical while also enhancing the streetscape. Changes in grade/terracing should be used in combination with hedges, trees, shrubs, open lattice screens, and low fences to provide an area of privacy near the unit while still providing an open, inviting public edge;
- h) Residential front yards should not be used for parking;
- i) Undersides of balconies and porches that are visible from a street or public walkway should be covered by soffits or exterior finishes to provide a finished appearance to public view;
- j) In cases where townhouses may unavoidably have rear (private) yards facing major arterials, provide a form of screening along arterial frontage which is attractive and enhances the character of the area;
- k) Consider the importance and the safety of small household pets by ensuring that a gap no larger than 5cm (2 in.) is provided between the ground and the base of a fence. All fences should have gates that provide direct access to semi-private and public areas;



Balcony & Outdoor Space Sizes

- l) Ensure a substantial depth of balconies, patios, and gardens to create usable and livable outdoor spaces;
- m) Apartment units should have a private outdoor space of 6m² (64.6 ft²) in area and 2m (6.6 ft.) in depth, with larger-than-minimum spaces strongly encouraged;

An area of shelter and privacy should be provided within each private outdoor space. It is suggested that half of the minimum required outdoor space be recessed behind the building face;

- n) Townhouse units should have a minimum private outdoor space of 37m² (398.3 ft²) in area and 9m (29.5 ft.) in depth;

The depth may be reduced to 5.3m (17.2 ft.) where adequate privacy screening is provided;

The minimum area may be reduced for ground-oriented townhouses with a 3m (9.8 ft.) setback and an entry transition from the street. However, this is not recommended where the private outdoor space abuts a public street;



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Balcony & Outdoor Space in Aircraft Noise Sensitive Development

- o) Private balcony space in aircraft noise sensitive development should mitigate the impact of aircraft noise by appropriate siting and/or by using appropriate noise mitigation techniques and architectural treatment (e.g., enclosed balconies) that do not result in the balcony being indoor living space;
- p) Private open space (e.g., patios, decks) in aircraft noise sensitive development should mitigate the impact of aircraft noise by appropriate siting and/or by using appropriate noise mitigation techniques and architectural treatment (e.g., canopies, fences, landscaping) that do not result in the area being indoor living space.

Bylaw 7591
2003/12/15

9.3.9 AMENITY SPACE

The intent is to provide common amenities to be shared by all households in each multi-family development project of three or more units. Indoor and Outdoor amenity space should be provided as outlined in the following chart.

Number of Dwelling Units	Indoor Amenity Space Required	Outdoor Amenity Space Required
0 – 3 units	None	None
4 – 19 units	<ul style="list-style-type: none"> • Indoor amenity space of a minimum of 70m², <u>or</u> • Payment of cash-in-lieu • Note: exempt where the average unit size exceeds 148m² 	<ul style="list-style-type: none"> • Outdoor amenity space of 6.0m² per unit • Outdoor space should be designed to facilitate children’s play
20 – 39 units	<ul style="list-style-type: none"> • Indoor amenity space of a minimum of 70m², <u>or</u> • Payment of cash-in-lieu • Note: exempt where the average unit size exceeds 148m² 	<ul style="list-style-type: none"> • Outdoor amenity space of 6.0m² per unit • Outdoor space should be designed to facilitate children’s play and 3.0m² per unit should be designed as a children’s play area
40 units or more	<ul style="list-style-type: none"> • Indoor amenity space of a minimum of 100m², <u>or</u> • Payment of cash-in-lieu • Note: exempt where the average unit size exceeds 148m² 	<ul style="list-style-type: none"> • Outdoor amenity space of 6.0m² per unit • Outdoor space should be designed to facilitate children’s play and 3.0m² per unit should be designed as a children’s play area • The maximum play area size is 600m²



Bylaw 7591
2003/12/15

9.3.9.A Indoor Amenity Space

- a) Indoor amenity space requirements as shown on the above chart, are:
 - 70m² (753.5 ft²) for developments of less than 40 units; and
 - 100m² (1,076 ft²) for developments of 40 units or more;
- b) Where unit sizes exceed 148m² (1,593 ft²), the development is exempt from providing indoor amenity space;
- c) Cash in lieu of providing indoor amenity space, at an amount to be determined by Council Policy, may be provided;
- d) The amenity space shall include a multi-purpose facility designed to accommodate a variety of activities such as parties, children's play, and meetings (e.g. involving 40% of the development's estimated adult population);
- e) In larger, family-oriented developments, special emphasis should be placed on the design of indoor amenity space and associated outdoor areas in order that they may provide opportunities for licensed childcare use (should such a need be recognized) without compromising tenant needs;
- f) Indoor amenity spaces should be located on the south face of buildings and should be linked directly to outdoor amenities and to public walkways wherever possible.

9.3.9.B Outdoor Amenity Space

- a) The outdoor amenity space requirement, as shown on the above chart, is 6.0m² per unit;
- b) Outdoor space should be designed to facilitate children's play and for development of 20 units or more 3.0m² per unit should be designed as a children's play area;
- c) The maximum play area size is 600m²;

Location

- d) Amenity areas should be consolidated in one compact area. Linear or scattered configurations are generally not as successful in meeting residents' needs. Locate multi-use space where it is convenient for the largest number of people;



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- e) Locate open space, whenever possible, adjacent to open space on a neighbouring multiple-family site, particularly where two multiple-family sites are intended to have a public walkway along their common property line.

Siting and design of these open spaces should be complementary, and should encourage common use by residents of both sites.

No fence or barrier shall be erected between the open spaces, though changes in grade may be used to better define public versus semi-public areas;

- f) Locate the outdoor amenity area to take advantage of sunlight and of natural shelter from inclement weather;
- g) Ensure that surveillance of the area is provided from adjacent units and that the area has barrier-free access;
- h) Outdoor amenity spaces and play areas should not be located near parking areas or garbage/recycling storage areas;

Play Areas

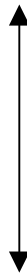
- i) For multiple-family developments under 20 units in size, outdoor space should be designed to facilitate children’s play. For developments over 20 units in size, children’s play space should be provided at a ratio of 3m² (32.3 ft²) per unit. The maximum suggested size for a children’s play area is 600m² (6,458.5 ft²);
- j) Locate children’s play apparatuses and benches within the open space along with other urban design features such as gardens, fountains, arbours, and art;
- k) Outdoor fenced play areas should be located, where possible, adjacent to indoor spaces on the south side of the buildings, in a sunny location protected from easterly wind. Opportunities for passive adult surveillance should be provided, such as seating nearby and/or arrangement of windows and viewing decks that permit observation of children at play;
- l) For further details regarding play spaces, refer to the City of Richmond document "Child Friendly Housing in Richmond";

Surface Treatment

- m) Provide a mixture of hard-surfaced and natural landscaping in the outdoor amenity area;



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Aircraft Noise Sensitive Development Outdoor Amenity Space

- n) Outdoor amenity space in aircraft noise sensitive development should mitigate the impact of aircraft noise by appropriate siting and/or replacing outdoor amenity space with an equivalent area of additional indoor amenity space designed to facilitate children’s play, senior’s enjoyment, or other appropriate passive recreational use.

9.3.10 PARKING

Parking in multi-family residential developments should be designed to minimize the impact of the automobile on the landscape. The parking should be safe, attractive, and easily accessible to residents and visitors.

9.3.10.A Resident Parking

- a) Resident parking should not be visible from the street;

Parking for Apartment Buildings

- b) In apartment complexes, parking should be located in parking structures or in covered parking lots, with clearly marked entrances, and generally screened from public view;
- c) Parking should be covered and concealed with densely-planted earth berms;
- d) Retaining walls are encouraged as part of the earth-berming scheme. Where retaining walls are used they should be softened through the planting of vines or other cover;
- e) Apartment parking may have gates, but visitor parking areas must be accessible at all times;

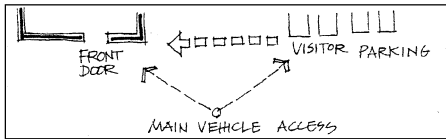
Parking for Townhouses

- f) On townhouse sites, parking should be incorporated within buildings in locked, defensible garages, or placed behind buildings in small, defensible open parking lots and screened from view from the road;
- g) Screening should be a minimum of 2m (6.6 ft.) in length times 1.5m (4.9 ft.) in height landscape planting or trellis strips;
- h) Where parking is located within the dwelling unit, façades fronting streets, lanes, public walkways, and neighbourhood parks should not present a parking garage or a blank wall to the public realm;
- i) Habitable spaces should be provided at grade adjacent to pedestrian paths and/or the public realm;



- j) Where the ground floors of units are not intended as habitable space, yards should be raised to enhance relationships between the first living level and the public realm and to discourage conversion of ground floor space to other uses;
- k) Townhouse projects should not have vehicle gates.

9.3.10.B Visitor Parking



Visitor parking forms a triangle with the front door and the main vehicle access

- a) Visitor parking should be in public view and easily accessible near the main entry;
- b) Visitor parking should be positioned in a triangular arrangement so the main vehicle access, the visitor parking, and the main front door are all in one area;
- c) Visitor parking should be clearly indicated by pavement markings or signs;
- d) Use special landscape measures, such as trellises, to conceal garages and visitor parking stalls from surrounding private, semi-private and public areas.

9.3.10.C Surface Parking

- a) Parking lots that are visible should be small, preferably with less than nine cars per group;
- b) Parking lots should have landscaping between each block of four parking spaces;
- c) Parking lots should be visible from several units to facilitate recognition between neighbours, to allow surveillance from windows, and to permit use as an informal children's play area;
- d) Pedestrian access should be clearly separated from driveways and parked vehicles. A minimum 1m (3.3 ft.) wide sidewalk should link the main front door, the public street, and the parking area;
- e) Children's formal play areas should be separated from parking lots;
- f) All parking areas should be provided with adequate curbs to retain vehicles within the parking area and to ensure that sidewalks, landscaped areas, and buildings are separated from parked vehicles;
- g) Measurement of parking spaces may allow for a 0.6m (2 ft.) overhang, provided adequate curbs are installed, and provided that adjacent sidewalks have 1m (3.3 ft.) clear width.



9.3.10.D Parking Structures

- a) Parking structures or covered parking lots should be locked and controlled by resident access keys;
- b) Safety measures such as provision of daylight, good nighttime lighting levels, walls painted in light reflective colours, and stairwells open to public view should be incorporated into the design of large covered parking lots;
- c) Secure residential parking separate from public parking;
- d) Entrances to parking structures should be recessed and/or softened by planting.

9.3.10.E Surface Treatment

- a) Minimize the surface area of blacktop parking and access driveways through alternate paving treatments;
- b) Vary paving treatments through the use of decorative paving materials at driveway entrances;
- c) Design "roll-over" curbs to allow for access into driveways and garages.

9.3.11 LIGHTING

- a) On-site lighting should be designed to provide for safe use of building entrances and pedestrian walkways after dark. Night-time lighting should be low-level and located to avoid glare into residential units.

9.3.12 SERVICES

All residential developments should provide garbage, recycling, mail, and other services for the convenience of the residents.

9.3.12.A Garbage & Recycling

- a) There should be a minimum of one garbage container per complex;
- b) General guideline is one container for every 15 to 20 units;
- c) Recycling should be provided at a minimum of one facility for each 10 residential units, with a minimum of 3 carts per depot area (3 bins for 3 material types);
- d) Residential developments of less than 12 units may utilize the City of Richmond collection services (individual cans and blue boxes);



- e) Refer to "Waste Management Guidelines for Multiple-Family Residential and Mixed-Use Buildings" for additional requirements and details;

Recycling & Garbage Storage

- f) Erect a gated and covered structure to contain residents' garbage and recycling materials;

Garbage Storage Area

- g) The design of this structure should complement the design of the units in the project;
- h) The enclosure should be in a central location that is easily accessible to all residents but away from pedestrian accesses and children's play areas;
- i) Landscape screening of this structure should be provided. The area should be easily accessible for collection purposes and should provide adequate manoeuvring space for 13.7m (45 ft.) long garbage trucks;

Recycling Storage Areas

- j) A covered recycling area, 2.4m (7.9 ft.) by 3.5m (11.5 ft.) in size for each 30 units, should also be provided near garbage areas;

The area should be adjacent to the garbage area, well lit, sprinklered, separated from the remainder of the building by a one-hour fire separation, and wheelchair accessible.

If located outdoors, the area should be screened from public view;

- k) Consider providing a composting facility to generate materials that can be used for landscape maintenance or to allow for garden plots on the site.

9.3.12.B Mail Delivery

- a) Provide a covered mail box in a central location that is easily accessible to all residents. The design of this structure should be to Canada Post standards and be compatible with the design of the units in the project.

9.3.12.C Loading & Delivery Areas

- a) Loading space for moving vans, service vehicles, deliveries, and passenger pick-up or drop-off should be provided for all complexes containing more than 50 units.

9.3.12.D Storage

- a) Provide adequate area for storage within dwelling units, particularly for family-oriented developments.



9.3.13 SECURITY

- a) Developments shall be designed to make all exterior public or semi-public spaces visible and defensible, so that residents can control their own surroundings;
- b) Fenestration in façades facing the internal roadways and open spaces should be carefully arranged to provide for internal unit privacy, yet convey a perception of "eyes on the street", enhancing safety and security for residents;
- c) Provide photo cell lights for all entries and garage doors to common parking structures and motion-detector lights for all areas hidden from view such as patio doors. 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;
- d) Where structured parking is provided, gate tenant parking apart from that for visitors and consider incorporating gates on visitor parking areas;
- e) Pre-wire buildings for alarm systems and install phone jacks in all bedrooms. Consider incorporating TV monitors with multi-unit or individual unit enter-phones and "panic stations" in all residential units and shared parking areas.

9.3.14 ACOUSTICS

The intent is to minimize the impacts of aircraft noise and traffic noise to residential developments.

- a) Provide acoustic separation between dwelling units, particularly in family-oriented developments. Control sound transmission passively through unit design, e.g. avoid placing bedrooms of one unit adjoining the living room of the neighbouring unit; avoid hard-surfaced floor areas such as kitchens over bedrooms or other quiet rooms.

9.3.14.A Traffic Noise

- a) Traffic noise should be screened from residential units in order to maintain an acceptable ambient sound level of 35 dB for indoor spaces and 55 dB for outdoor private space;
- b) Where private outdoor space is adjacent to arterial roads, buildings should be set back 12m from the arterial, and other noise mitigating measures should be utilized, such as fencing, berming, and landscaping; OR provide special mitigation measures as determined by a registered professional trained in acoustics;



- c) Traffic noise for residential units facing major streets/arterials can also be mitigated by:
 - Careful site layout;
 - Orienting private outdoor spaces away from noisy streets;
 - Orienting the front entry and public part of the dwelling toward the street and locating quiet rooms such as bedrooms away from the street;
 - Recessing balconies and facing them with solid balustrades;
 - Finishing soffits with material which absorbs or baffles sound waves;
 - Providing extra insulation for walls of buildings adjacent to traffic;
 - Triple-glazing windows to reduce noise infiltration;
 - Using enclosed balconies or sunrooms facing the street as a buffer between living areas and the traffic.

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2004/11/23



9.3.14.B Aircraft Noise

- a) All Development Permit applications in areas identified in the Aircraft Noise Sensitive Development Map (see Section 5.4 Noise Management) shall require evidence in the form of a report and recommendations prepared by a person trained in acoustics and current techniques of noise measurement, demonstrating that the noise level in those portions of the dwelling units listed below shall not exceed the noise level set out in the corresponding right-hand column. The noise level utilized is an A-weighted 24-hour equivalent (leq) sound level and will be defined simply as noise level in decibels;

Portions of Dwelling Units (Decibels)	Noise Levels
Bedrooms	35
Living, dining, recreation rooms	40
Kitchen, bathrooms, hallways, utility rooms	45

- b) Skylights are discouraged in homes located within the area identified in the Aircraft Noise Sensitive Development Map;
- c) In addition to the above, a trained professional is to assist in the design of the private patios and balconies to minimize the noise levels with recommendations for building material selection and space planning.

9.3.15 UNIVERSALLY ACCESSIBLE HOUSING UNITS

The intent is to ensure that all people, including persons with disabilities, have opportunities and choices for housing in residential developments.

- a) Universally accessible residential designed units are encouraged in all multiple-family residential development.