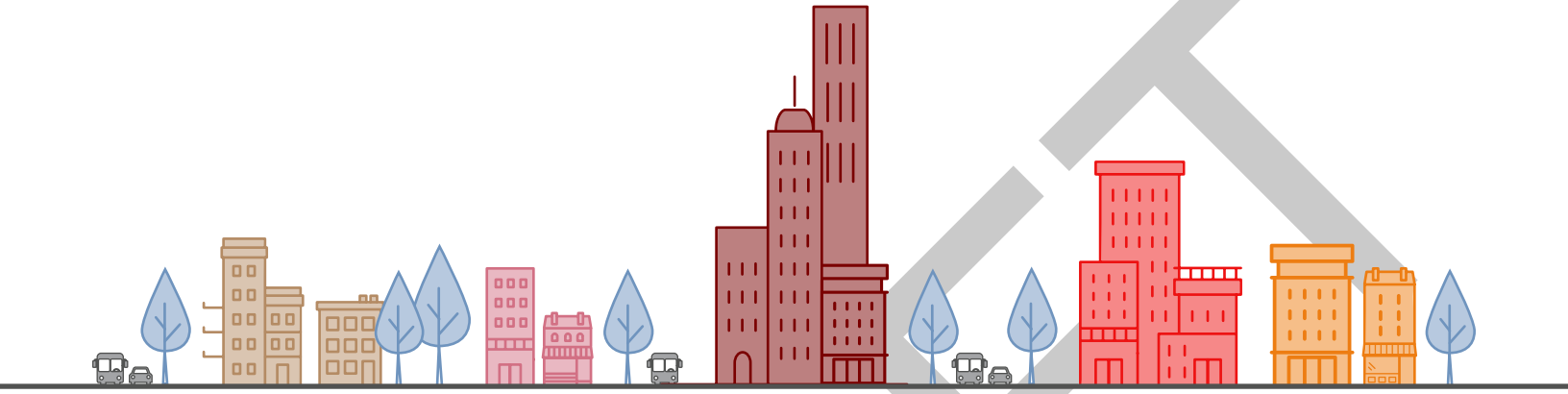
ATTACHMENT B



FORM & CHARACTER DEVELOPMENT PERMIT GUIDELINES

CITY OF NANAIMO

NOVEMBER 19, 2024

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1. INTRODUCTION

1.1 Introduction

The Form and Character Development Permit Guidelines for the City of Nanaimo have been prepared to serve as a foundational framework to guide new developments in Nanaimo as per the vision laid out in City Plan - Nanaimo Reimagined and the Zoning Bylaw.

City Plan - Nanaimo Reimagined establishes Development Permit Areas (DPAs) to achieve its goals and policies. The Development Permit Area 8 (DPA8) goals focus on the form and chracter of development, with an emphasis on creating sustainable growth and high quality urban design.

The Zoning Bylaw establishes the permitted use of land within the City as well as form, density, height, setbacks, lot coverage, and lot size. The Zoning Bylaw specifically addresses form and character within Development Permit Area 8. Multiple DPAs may apply to a proposed development, but these guidelines pertain only to DPA8 Form and Character for commercial, industrial, multi-family residential, and mixed-use development. The guidelines are also intended to promote energy and water conservation as well as the reduction of greenhouse gas emissions in these types of developments

Building on existing policies the intent of these guidelines is not to impose a singe design style, but rather to encourage creative and diverse design solutions that align with the broader community vision and to create a vibrant urban fabric that reflects the values and aspirations of the community.

1.2 How to use this Document

The Form and Character Development Permit Guidelines outlined in this document apply to various land use designations across the City of Nanaimo. It is important to note that these are not intended to restrict the possibilities of diverse design outcomes. Instead, the guidelines are intended to provide a clear understanding of design expectations, allowing for innovation within each development application. These guidelines should be read along with other polices and bylaws such as City Plan, Zoning Bylaw and the Off-Street Parking Bylaw.

The Form and Character Development Permit Guidelines are organized in the following manner:

Section 2: General Design Guidelines – The General Design Guidelines will apply to all commercial, industrial, multi-family residential, and mixed-use development. The rest of the guidelines are organized based on the future land use designations defined in Section D4 of City Plan. The specific design guidelines under each land use designation highlight unique considerations for development in that designation

See Figure 1 for a summary diagram of the document structure.

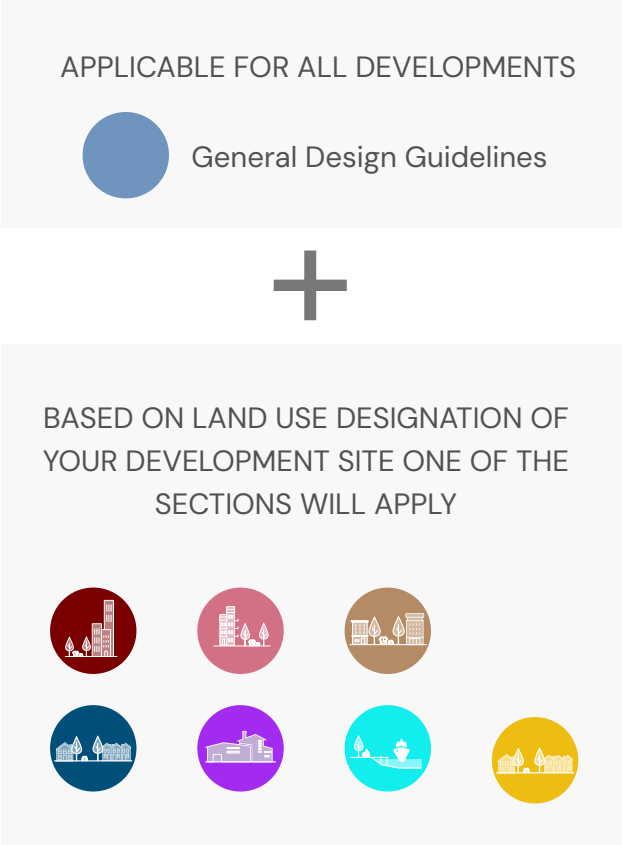


Figure 1: Application of Design Guidelines

Section 3 to 9: Land Use Specific Guidelines – The rest of the guidelines are organized based on Future Land Use Designations defined in Section D4 of City Plan. The Future Land Use Designations guide how and where the City of Nanaimo will focus on creating places for living, working, and experiencing the city. The Future Land Use Designations are comprised of a mix of land uses, with varying forms and functions, that work together to create complete and equitable areas. Hence, the specific design guidelines organized under Land Use Designations would add-on unique considerations for development in that designation.

The guidelines that apply to each Land Use Designation are organized within three themes (See Figure 2). The themes are structured in order of urban design priorities, going from big to small and encouraging the creation of new developments that create a positive impact for their surroundings. The structure is as follows –

i. Site Planning, Access, and Parking

ii. Street Interface, Building Scale and Form, Architectural Design and Materiality

iii. Landscape Design, Amenities, and Utilities

Section 10: Glossary – A glossary is included at the back of the document to provide additional clarity on frequently used terms.

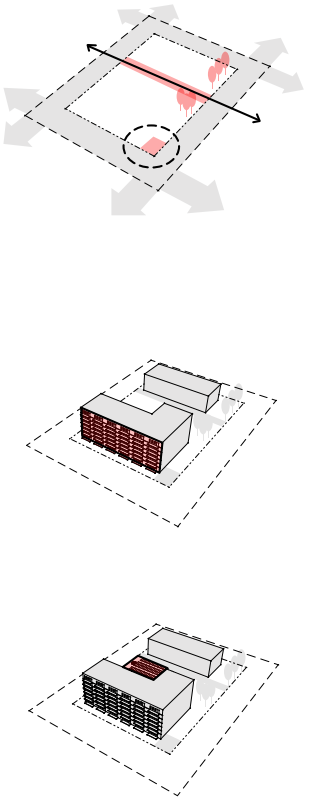


Figure 2: Organization of guidelines within themes for each Land use Designation

1.3 Design Goals and Variances

The Form and Character Development Permit Guidelines outlined in this document help to bring to life the vision for the City of Nanaimo as set out in the five goal areas identified in City Plan. These goal areas guide future developments and inform "why" certain design choices are more important. The five goals are:

A GREEN NANAIMO:
RESILIENT& REGENERATIVE ECOSYSTEMS

A Green Nanaimo – New development should promote energy efficiency, provide climate adaptation, enhance natural landscapes and conserve water.

A CONNECTED NANAIMO:
EQUITABLE ACCESS & MOBILITY

A Connected Nanaimo – New development should be designed with pedestrian friendly frontages, offer permeable site connections, have active street edges, and other measures that support access for all.

A HEALTHY NANAIMO:
COMMUNITY WELLBEING & LIVABILITY

A Healthy Nanaimo – New developments are to promote an active lifestyle, mental well-being, and social connection. This includes shared amenity spaces, natural surveillance of the public realm, privacy for individuals, and a broad range of housing forms.

AN EMPOWERED NANAIMO:
RECONCILIATION, REPRESENTATION & INCLUSION

An Empowered Nanaimo – New developments should aim to create spaces that are welcoming for all, that celebrate local culture and identities, including publically visible art, and ensure accessibility.

A PROSPEROUS NANAIMO:
THRIVING & RESILIENT ECONOMY

A Prosperous Nanaimo – New developments should implement placemaking strategies, and provide unique and flexible spaces that can respond to changing needs.

The City will consider variances to Zoning Bylaw requirements as part of a development permit application when the proposed variance allows for a form and character guideline to be achieved

2. GENERAL DESIGN GUIDELINES

General Design Guidelines

Below is a summary of the General Design Guidelines. Section 2 provides further rationale and details of the following guidelines.

CLIMATE ADAPTATION

- Optimize building orientation for solar access and shading.
- Encourage simple massing for an effective thermal envelope.
- Manage thermal bridging caused by balconies.
- Optimize fenestration for passive heat gains, natural light and ventilation.
- Employ shading devices to reduce solar heat gains.
- Use low-embodied emission and high-performance materials.
- Accommodate on-site renewable energy capture.

STREET INTERFACE AND CONNECTIVITY

- Design continuous and transparent streetwalls.
- Create fine-grained rhythm along street frontages.
- Integrate mechanical, electrical, and plumbing systems with building design.

SITE PLANNING

- Create appropriate transitions between public and private realm.
- Create permeable developments that encourage walking and create landscape plans that focus on pedestrian circulation.
- Design accessible spaces in open areas.
- Integrate public art in site design.

LANDSCAPE DESIGN AND AMENITIES

- Preserve natural features and habitats.
- Support urban tree canopy and natural areas.
- Integrate developments with natural topography.
- Create multi-functional landscape elements.
- Achieve favourable microclimate outcomes.
- Design green and active rooftops.
- Design for healthy watersheds and reduce stormwater runoff to improve water quality.

PLANTING SPECIES AND MATERIALS

- Utilize diverse species and recycled materials.
- Place plantings using 'Right Plant, Right Place' principles.

EXTERIOR LIGHTING

- Optimize lighting to complement building façade and street relationship.
- Ensure adequate lighting in common areas to create a greater sense of welcome.
- Implement Dark Sky Compliant lighting to reduce light pollution.

APPLYING CPTED PRINCIPLES

- Design for natural surveillance to deter crime.
- Ensure open spaces are designed for diverse uses.

ACCESS AND PARKING

- Locate vehicle access, loading and garbage collection at rear of site.
- Reduce the visual impact of Surface Parking.
- Design for convenient and safe cycling.
- Private roads and multi-use paths.
- Design screening to improve street interface.
- Private roads and multi-use paths.
- Design screening to improve street interface.
- Design for a Positive Street interface.

BIRD FRIENDLY DEVELOPMENTS

- Increase visibility of glass to reduce bird collisions, dampen reflections, and reduce dangers of attractants and entrapment.

2.1 Climate Adaptation

Optimize building orientation for solar access and shading

Rationale

Optimized orientation of buildings improves solar access and heating in the coolers months and reduces the possibility of excessive light and heat during the warmer months, improving year-round comfort and energy needs.

Guidelines

2.1.1 Orient the longest face of the building towards the south, when possible. This allows developments to take advantage of natural light and maximize solar gains. (See Figure 3)

2.1.2 Consider impact of shading onto adjacent buildings and land uses when deciding building orientation.

Simple massing for effective thermal envelope

Rationale

Complex junctions in articulation of built form lead to increased possibility of heat loss through the building envelope thus reducing energy performance.

Guidelines

2.1.3 Design buildings with simple massing and limited articulation to reduce complex junctions and corners that lead to heat loss. (See Figure 4)

2.1.4 Consider opportunities for articulation beyond the building thermal envelope using elements like windows, shading devices, and balconies. Alternatively, change in colour or texture can emphasize modest changes in plan or elevation.

2.1.5 To ensure developments integrate positively within their context, strategic articulation should be incorporated to reduce the visual impact and create a stronger relationship with the street. This includes strategies like responding to curvature of the street or introducing upper level setbacks.

Manage thermal bridging caused by balconies

Rationale

Balconies contribute to liveability as they provide private outdoor living spaces but they can have significant impact on energy performance by causing heat loss through thermal bridging, based on how they're designed. It is essential to balance the useability of balconies with their potential impact on thermal performance.

Guidelines

2.1.6 Consider strategies to reduce the thermal bridging potential of balconies. These include:

i. Exterior Supported Balconies that are detached from the main structure, reducing direct thermal transfer;

ii. Bolt-on Balconies that connect minimally to the building's structure to limit heat flow;

iii. Structural Thermal Breaks at connection points to prevent heat loss and improve energy efficiency.

2.1.7 Incorporate balconies as functional shading elements. Deeper balconies should be designed to provide adequate shade for glazed wall areas, preventing overheating during warmer months and enhancing energy performance.

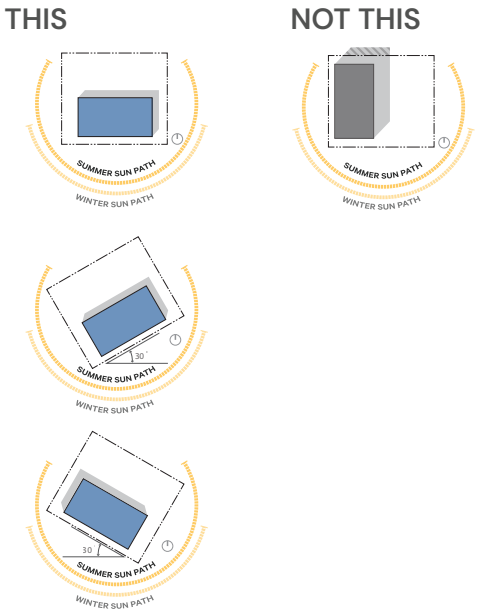


Figure 3: Building orientation to take advantage of natural light and maximize solar gain.

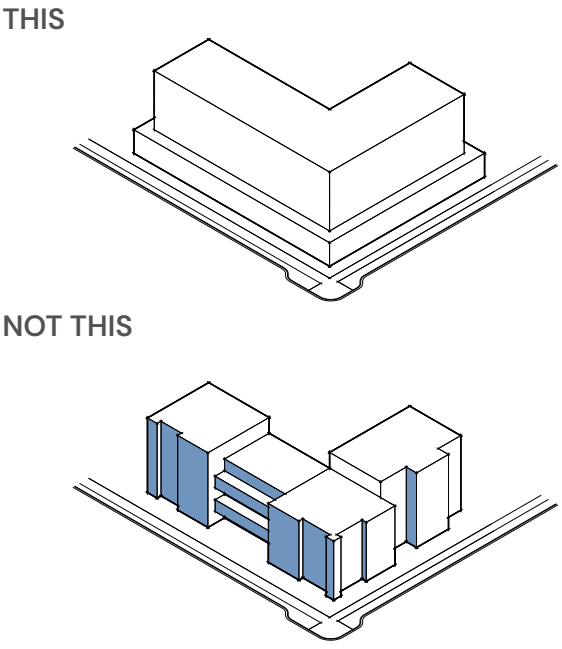


Figure 4: Simple Massing

Optimize fenestration for passive heat gains, natural light and ventilation

Rationale

Windows offer lower thermal resistance compared to insulated walls, in turn leading to reduced building envelope performance.

Guidelines

2.1.8 Designers are encouraged to target a maximum window-to-wall (WWR) ratio of 40% on upper floors and higher transparency at-grade. (See figure 5)

2.1.9 Designers should also consider the orientation of windows, and the resulting impact on daylighting and passive heat gains. Abundant glazing on south and west facing windows is encouraged to maximize solar heat gains in cooler months. Minimize north facing windows which have the least potential for solar heat gains during cooler months.

2.1.10 Operable windows shall be provided in each interior space for natural ventilation and to help reduce mechanical heating and cooling requirements.

Employ shading devices to reduce solar heat gains

Rationale

Shading devices like overhangs, louvers, and brise-soleils block direct sunlight from entering the building, particularly during peak sun hours. (See Figure 6) This reduces the amount of heat gain, lowering the need for air conditioning and cutting energy costs.

Guidelines

2.1.11 Solar Shading Devices should be integrated on west and south facing facades to reduce glare and solar heat gain.

2.1.12 Shading devices should be designed as a seamless part of the building's architecture, avoiding the appearance of being tacked-on or retrofitted. Their form and materials should enhance the overall aesthetic of the building while maintaining functionality.

2.1.13 Consider using color, texture, and patterning in the shading device design to add visual appeal from the street.

2.1.14 Utilize deciduous trees for seasonal shading needs so as to reduce overheating in warmer months

Use low-embodied emission and high-performance materials

Rationale

The choice of building materials significantly contributes to the carbon footprint of buildings, both in terms of embodied carbon and operational carbon.

Guidelines

2.1.15 Use materials with high energy efficiency and performance ratings for building exteriors. These materials should minimize energy use and enhance the building's thermal performance, contributing to long-term sustainability and reduced operational emissions.

2.1.16 Select materials that actively reduce carbon in the atmosphere by sequestering carbon during their lifecycle. These materials, such as certain types of wood, bio-based products, and innovative concrete, contribute to lowering the overall carbon footprint of the building.

2.1.17 Include locally sourced materials where possible to reduce transportation related emissions, support the local economy, and ensure that materials are suited to the local climate and conditions.

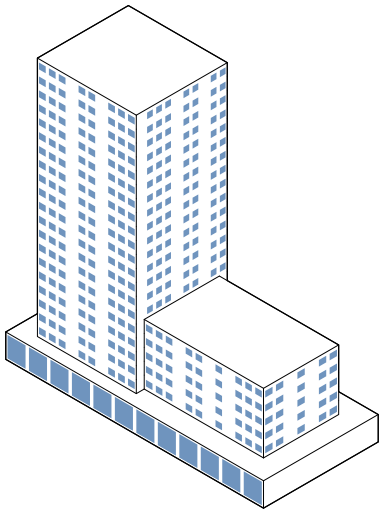


Figure 5: Maximize window to wall ratio with higher transparency at grade."

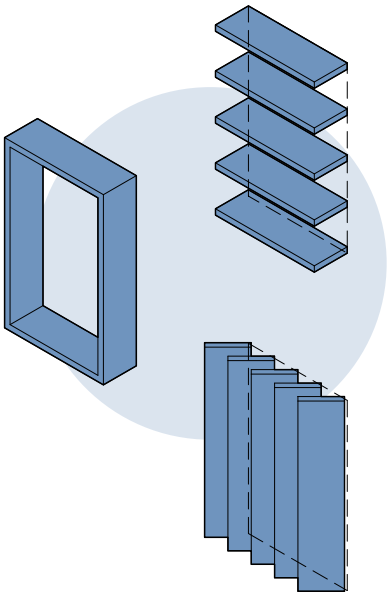


Figure 6: Use solar shading devices to minimize unwanted solar heat gains and glare inside units

Accommodate on-site renewable energy capture

Rationale

By integrating some key design strategies, buildings can more easily incorporate on-site renewable energy capture and solar energy systems, both during construction and for future upgrades. This approach supports long-term sustainability and climate adaptation goals.

Guidelines

2.1.18 Renewable energy systems, such as solar panels, wind turbines, or geothermal installations, should be integrated into the architectural design from the early stages of development to ensure aesthetic compatibility and optimize efficiency.

2.1.19 Roofs and other building surfaces should be designed and oriented to optimize the placement of solar energy collection devices, particularly south-facing and unobstructed areas. Consider roof slopes between 15° and 40° to maximize solar exposure, especially for photo-voltaic (PV) panels or solar thermal systems.

2.1.20 Electrical rough-ins for future solar installations should be incorporated into the building design. At a minimum, electrical conduit should be pre-installed to facilitate post-construction solar panel installation, reducing future retrofitting costs. Designate space for energy storage systems, such as battery storage, to complement solar energy capture and ensure efficient energy use on-site.

2.1.21 For sloped roofs where solar energy systems are planned, consider using standing seam metal roof assemblies. These roofing systems provide secure, long-lasting surfaces that can easily accommodate solar panels or other energy-collection devices without requiring penetrations that could compromise the roof's integrity.

2.1.22 Make renewable energy systems visible to the public as a demonstration of sustainability efforts, where possible. Incorporate signage or educational displays explaining how the systems work and their environmental benefits.

Use low-embodied emission and high-performance materials

Rationale

The choice of building materials significantly contributes to the carbon footprint of buildings, both in terms of embodied carbon and operational carbon.

Guidelines

2.1.23 Use materials with high energy efficiency and performance ratings for building exteriors. These materials should minimize energy use and enhance the building's thermal performance, contributing to long-term sustainability and reduced operational emissions.

2.1.24 Select materials that actively reduce carbon in the atmosphere by sequestering carbon during their lifecycle. These materials, such as certain types of wood, bio-based products, and innovative concrete, contribute to lowering the overall carbon footprint of the building.

2.1.25 Include durable materials that reduce the need to replace or rehabiliate over time, thereby reducing the overall embodied energy in the building over its lifecycle.

2.1.26 Include locally sourced materials where possible to reduce transportation related emissions, support the local economy, and ensure that materials are suited to the local climate and conditions.

2.2 Street Interface and Connectivity

Design continuous and transparent streetwalls

Rationale

Continuous streetwalls create a defined edge along streets, giving pedestrians a sense of enclosure and safety. They promote "eyes on the street," enhancing public safety by increasing natural surveillance.

Guidelines

2.2.1 New developments should establish a continuous streetwall with active uses and primary entrances facing the street.

2.2.2 Strive for 75% of building facades being placed at the minimum setback line. Minimize the distance between the building and the sidewalk to create street definition and a sense of enclosure. (See Figure 7)

2.2.3 Incorporate small setbacks at street level to accommodate sidewalk cafes, patios and other outdoor seating areas that support the animation of the street.

2.2.4 Locate and design windows, balconies, and primary building facades to promote activity and natural surveillance of the street. A minimum of 75% of ground floor frontage on each street frontage should be transparent windows and / or entry ways.

Create fine-grained rhythm along street frontages

Rationale

Fine-grained rhythm along street frontages refers to the pattern created by frequent, small-scale variations in the design of building facades, doorways, windows, and storefronts along a street. It creates an engaging human-scaled pedestrian environment and encourages more people to walk. It also fosters social connections and economic activities.

Guidelines

2.2.5 Design street frontages that break up large buildings into smaller frontage units to accommodate multiple businesses or residential units. (See Figure 8)

i. Provide separate entrances for each unit to ensure frequent entrances (e.g., every 15-25m).

2.2.6 Express individual units via architectural design. An example is to use a variety of materials, textures, and colors to create visual interest and the placement of building elements like windows, balconies, canopies, awnings, etc. to create a cohesive rhythm.

2.2.7 Notwithstanding the above, continuous weather protection is encouraged along commercial frontages.

2.2.8 Create a transition in building widths if the new development is significantly

larger than adjacent buildings by visually dividing the building width into smaller sections that approximate the width of the neighbours.

2.2.9 Where the width of new development is significantly greater than the width of existing neighbouring buildings, articulate the front facade to maintain the rhythm of the street.

2.2.10 Express Individual Units; strategies include change in material, pattern, articulation, landscape elements, porches, etc.

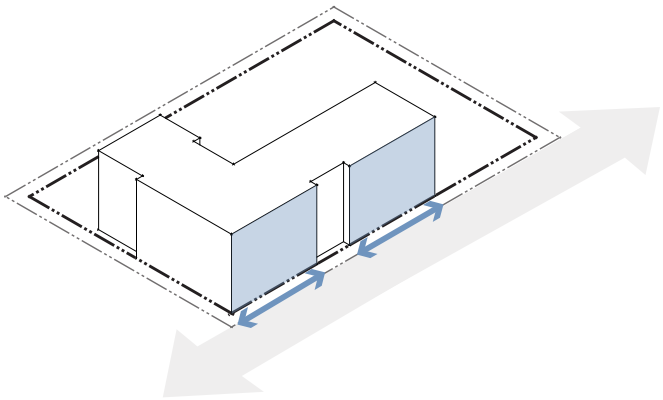


Figure 8: Building facades should be placed at the minimum setback line

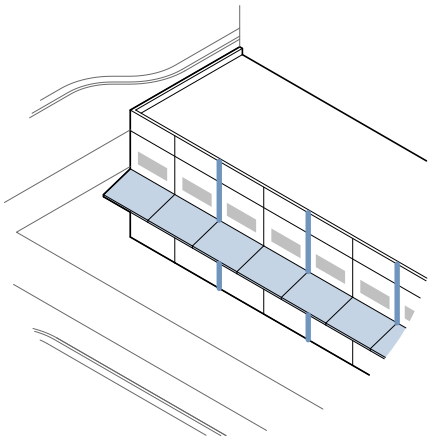


Figure 7: Fine-grained rhythm of diverse and narrow store fronts with weather protection.

Integrate mechanical, electrical, and plumbing systems with building design

Rationale

By integrating mechanical, electrical and plumbing systems from the outset, designers can ensure that they are seamlessly incorporated into the overall architecture, and don't compromise the functionality and comfort for occupants.

Guidelines

2.2.11 All mechanical roof-top equipment must be integrated into the design and screened from view to maintain a clean skyline and visual consistency.

2.2.12 Ground level equipment must be screened from view with earthen berms, plant material, or opaque screening. Use similar materials applied to the building.

2.2.13 Position parking vents and other outdoor infrastructure to avoid interference with pedestrian pathways and outdoor seating areas.

2.2.14 Locate outdoor units associated with heat pumps and other cooling systems to ensure that they allow for efficient maintenance and do not compromise outdoor amenity spaces, such as balconies.

2.3 Site Planning

Create permeable developments that encourage walking and landscape plans that focus on pedestrian circulation

Rationale

Walkways and pedestrian connections allow movement to and from sites. They often provide shaded, pleasant routes away from traffic, contributing to a more comfortable and enjoyable walking environment.

Guidelines

2.3.1 For frontages greater than 100m (except in the industrial land use designation), mid-block passages and connections are encouraged. (See Figure 9)

i. Ensure clear sight lines, allowing visibility from one end of a walkway to the other.

ii. Design active ground level uses with natural surveillance adjacent to walkways and avoid large expanses of blank walls.

2.3.2 Integrate design features that reduce conflicts between pedestrians, cyclists, and vehicles within the on-site circulation system. This may include speed bumps, raised crosswalks, and chicanes or design treatments, such as landscaping, textured paving, and visual cues to discourage speeding.

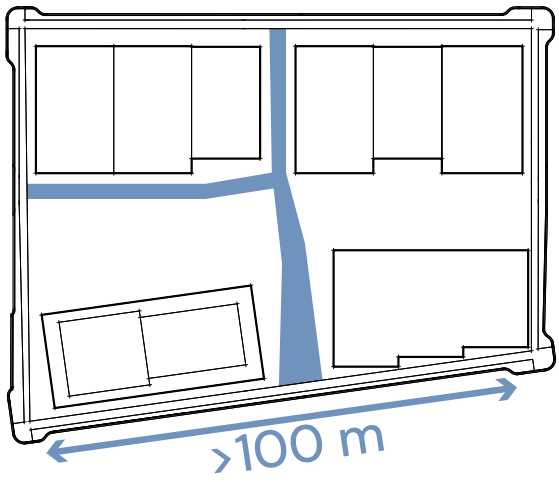


Figure 9: Break up large blocks with mid-block pedestrian connections.

Create landscape plans that focus on pedestrian circulation

Rationale

To create welcoming and safe developments include publicly accessible open space on-site, such as hard or soft landscaped setbacks, plazas, and mid-block pedestrian connections.

Guidelines

2.3.3 New developments should employ on-site wayfinding strategies that create attractive and appropriate signage for pedestrians, cyclists, and motorists.

2.3.4 Primary pedestrian routes should be emphasized through wider walkways and enhanced landscape treatments.

2.3.5 Pedestrian walkways to building entrances must be provided from parking area, municipal sidewalks (if applicable), storage, waste management and amenity areas.

2.3.6 Ensure there is convenient accessible access from building entrances to sidewalks, amenities, and parking areas.

2.3.7 Consider accessibility when selecting outdoor site furnishings.

2.3.8 Ensure there is convenient accessible access (with no stairs where possible) from building entrances to sidewalks, amenities, and parking areas.

Design accessible spaces in open areas

Rationale

On-site public and semi-public spaces should be designed as accessible spaces that can be used by people of all ages and abilities.

Guidelines

2.3.9 Use hard-packed and durable surfaces on pathways to improve accessibility for all users, including those with mobility aids, and avoid stairs wherever possible.

2.3.10 Design landscaping to ensure that at maturity, plants and trees do not encroach on pedestrian pathways, maintaining clear and unobstructed routes for pedestrians.

2.3.11 Select tree species that exhibit a higher standard height to ensure canopies grow above pedestrian realm.

2.3.12 Choose vegetation that does not bear fruit or drop excessive seeds, reducing potential slip hazards and minimizing maintenance demands on walkways.

2.3.13 Avoid designing sunken yards and private patios.

Integrate public art in site design

Rationale

Integrate public art or publicly visible art on-site to generate interest, curiosity and interaction to support creation of unique neighbourhoods.

Guidelines

2.3.14 The inclusion of art on building exteriors or integrated into landscaping is strongly encouraged in locations that are most visible to the public realm. Incorporate art at key locations and features such as: building façades; entrance walkways; railings and landscaping.

2.3.15 Where possible ensure art is publically visible to accommodate viewing and experience of the installation.

2.3.16 Public art and publicly visible art should reflect the diverse community of Nanaimo, and the rich history of the land.

2.3.17 Consider ways in which local art may be incorporated into the building or shared space, such as stained glass or mosaics into patio railings, seating, or lobby entrances to create a unique sense of place.

2.4 Landscape Design

Preserve natural features and habitats

Rationale

Preserving natural features and habitats in urban development promotes biodiversity, enhances ecosystems, and contributes to climate resilience.

Guidelines

2.4.1 Design and site buildings to protect and retain high-value trees and natural habitat features.

2.4.2 Employ low-impact development strategies to reduce disturbance and integrate natural elements into the overall site design.

2.4.3 Where appropriate, include green infrastructure such as bioswales, permeable paving and rain gardens.

Support urban tree canopy and natural areas

Rationale

Contribute to a thriving urban tree canopy by retaining existing trees where feasible and planting new trees on both public and private property.

Guidelines

2.4.4 Protect and expand the city's tree canopy wherever possible to enhance its ecological, climate, and human health benefits.

2.4.5 Siting buildings and integrating landscape design to protect and retain existing trees, significant vegetation, and natural features is encouraged.

2.4.6 Strive to achieve a coniferous tree ratio of 50% where possible.

Integrate developments with natural topography

Rationale

Nanaimo has diverse and, at times, dramatic natural topography. By designing new developments to be more integrated into the terrain, the unique characteristics of the City can be celebrated.

Guidelines

2.4.7 Development should be integrated with the natural topography of the site.

2.4.8 On sloping sites, design for stepping buildings along the slope with grade, and locate building entrances at each step where possible. (See Figure 10)

2.4.9 Incorporate landscape terracing to create usable open spaces on sloping sites.

2.4.10 Natural features such as rock outcrops should be retained and highlighted within the overall site plan.

2.4.11 When a building's ground floor is elevated above the pedestrian realm, a tiered landscape approach should be used to transition between elevations.

i. Naturescape using boulders, shrubs or groundcover.

ii. Low retaining walls with integrated planting.

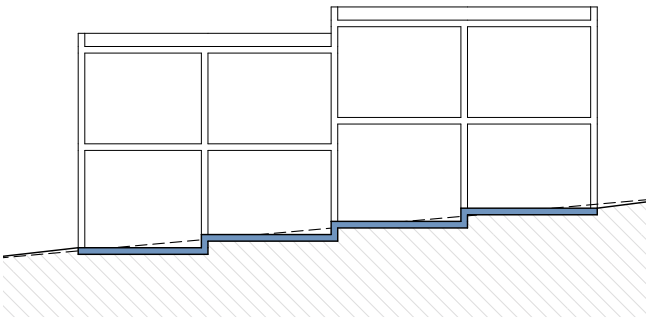


Figure 10: Step buildings along the slope of the grade.

2.4.12 Exposed concrete foundations and retaining walls should be kept to a minimum and where present should be finished with brick, paint, sandblasting, exposed aggregate finish, and/or screened with adequate landscaping.

Create multi-functional landscape elements

Rationale

As developments become more urban and compact, there is less land for open space and landscaping. Designing multi-functional amenity spaces and landscape elements helps maximize the use of a site.

Guidelines

2.4.13 Consider framing important open spaces, views of natural features and exposed rock outcroppings.

2.4.14 Design landscape features that users can interact with or that provide visual cues.

2.4.15 Trees and vegetative screens should be planted between and behind buildings, particularly in steep sloping areas, and should be large enough to break up the overall building mass.

2.4.16 Landscape design should support: shading (passive cooling) with deciduous plantings that allow increased solar gain in winter months; and windbreaks to reduce heat loss in winter.

2.4.17 Design internal courtyards to provide an array of meaningful amenities such as play areas, barbecues, outdoor fitness and seating with a balance of hard and softscape.

2.4.18 Design shared rooftop amenity spaces that maximize on surrounding views

2.4.19 Design public outdoor amenity areas to:

iii. Activate the street frontage at the ground level.

iv. Optimize sunny south facing locations where possible.

Achieve favourable microclimate outcomes

Rationale

Nanaimo includes many distinctive geographic conditions and unique qualities that should be considered at the design stage. This was healthier landscapes and more comfortable places can be created.

Guidelines

2.4.20 Ensure the provision of adequate soil volumes to provide for the health and longevity of trees, shrubs and groundcover within the project site.

2.4.21 Maximize absorbent landscapes using permeable paving, intensive and extensive green roof systems and blue-green roof systems where feasible.

2.4.22 Ensure site planning and design achieves favourable microclimate outcomes through strategies such as:

v. Locating outdoor spaces to maximize solar gain throughout the year.

vi. Using materials and colours that minimize heat absorption

vii. Planting a mix of evergreen and deciduous trees to provide a balance of shading and solar access in the winter.

2.4.23 Plant spacing should ensure planting beds are full yet are far enough apart to avoid overcrowding.

Design green and active rooftops

Rationale

Green and actively programmed rooftops can provide supplemental spaces for outdoor amenities, social interaction and environmental benefits.

Guidelines

2.4.24 Provide roof decks that maximize views.

2.4.25 Provide shading on rooftop gardens and amenity spaces.

2.4.26 Encourage multiple functions of rooftops to increase environmental and social benefits.

2.4.27 The use of high albedo, non-reflective landscaping is encouraged to prevent heat island effect.

2.4.28 Consider providing landscaped green roofs to manage runoff, add visual appeal, improve energy efficiency, reduce heat island effect, and provide amenity value.

Design for healthy watersheds and reduce stormwater runoff to improve water quality

Rationale

Incorporate best management practices for new and existing developments to support watershed health, such as pervious paving, rain gardens, bioswales, deep absorbent soils, green/ blue roofs, rainwater capture or detention systems, or other best practices and emerging techniques. Furthermore, on-site measures to treat or reduce stormwater runoff make positive impacts on the ecology of the neighbourhood.

Guidelines

2.4.29 Design landscape areas to mimic natural water systems by including stormwater detention, absorbent landscapes, and low water use standards to support watershed health.

2.4.30 Design surface parking areas to maximize rainwater infiltration by introducing rain gardens, planting islands, permeable unit paving.

2.4.31 Use of green infrastructure techniques such as bioswales, rain-gardens and on-site filtration should be designed to treat and manage rain-water runoff.

2.4.32 Strive for a maximum 3:1 slope (33%) for lawn areas and a maximum 2:1 (50%) for shrub and ground cover areas.

2.4.33 Sites should be designed to minimize water use for irrigation by:

i. Planting drought tolerant, native or adaptive plant species that will be resilient and maximize ecosystem services;

ii. Re-use captured rainwater for irrigation systems.

2.5 Planting Species and Materials

Utilize diverse species and recycled materials

Rationale

The materials and plants used in landscape design have an impact on the overall performance of the landscape in terms of ecological value, habitat, and embodied energy.

Guidelines

2.5.1 A minimum of 30% of the required common landscaped areas should include a diverse combination of plants and vegetation that are native to southern Vancouver Island, food-bearing (capable of being harvested for food and medicine) or that provide pollinator habitats.

2.5.2 Use native and/or drought tolerant trees and plants suitable for the local climate. A variety of sizes and species of both deciduous and coniferous plants should be provided for year-round interest, colour and aesthetic appeal.

2.5.3 Encourage the use of natural and recycled materials and durable furnishings.

i. Select materials and furnishings that reduce maintenance requirements and use materials and site furnishings that are sustainably sourced, re-purposed, or recycled.

Place plantings using 'Right Plant, Right Place' principles

Rationale

By considering site-specific conditions, appropriate landscaping can create durable, eco-friendly environments while softening the impact of built structures.

Guidelines

2.5.4 Select and locate plantings using 'right plant, right place' principles. Allow considerations for:

ii. Durability, micro-climate, soil suitability, habitat creation, and compatibility with the site's specific conditions.

iii. Buffering wind, framing the site and reinforcing building entrances where applicable through the use taller trees and planting.

iv. The provision of shading.

2.5.5 Use landscaping materials to soften development and enhance the public realm.

v. Use natural plan material instead of artificial turf or decorative rock and gravel where possible

vi. Use plantings to soften and reduce the perceived height of retaining walls and areas of blank walls (e.g. cascading plants, terraced shrubs, green walls).

2.6 Exterior Lighting

Optimize lighting to complement building façade and street relationship

Rationale

Thoughtfully designed lighting can accentuate the unique aspects of a building's façade, drawing attention to materials, shapes, and textures.

Guidelines

2.6.1 Exterior lighting should highlight building elements, signs, public art or other distinctive features.

2.6.2 High quality illumination should be included along the building frontage at a spacing consistent with the rhythm of the façade. Lighting should be downward facing, contribute to lighting of the pedestrian realm, and positioned to draw attention to the texture of the façade or signage.

Ensure adequate lighting in common areas to create a greater sense of welcome

Rationale

Effective lighting can create a welcoming atmosphere, encouraging social interaction and community engagement in public areas. It can reduce crime rates by increasing visibility and fostering a sense of safety among users .

Guidelines

2.6.3 Entrances, addresses, pathways, parking and landscaped areas should be illuminated at night while avoiding light spilling into residential units.

2.6.4 Integrating lighting into pathways from the front sidewalk and / or lane is recommended.

2.6.5 Exterior lights should not produce glare onto residential streets, public walkways, adjacent properties, or the sky.

Implement Dark Sky Compliant lighting to reduce light pollution

Rationale

Using Dark Sky Compliant lighting helps reduce light pollution by minimizing unnecessary upward light and glare, which can disrupt nocturnal ecosystems and impair human health.

Guidelines

2.6.6 Select fixtures that are fully shielded to direct light downward, preventing light from spilling into the sky. (See Figure 11)

2.6.7 Over-lighting should be avoided by installing low (3-4 metres) pole-mounted pedestrian-oriented fixtures."

2.6.8 Fixtures should be kept in scale with the adjacent buildings.

2.6.9 Energy efficient lighting should be utilized, including timers to minimize energy consumption.

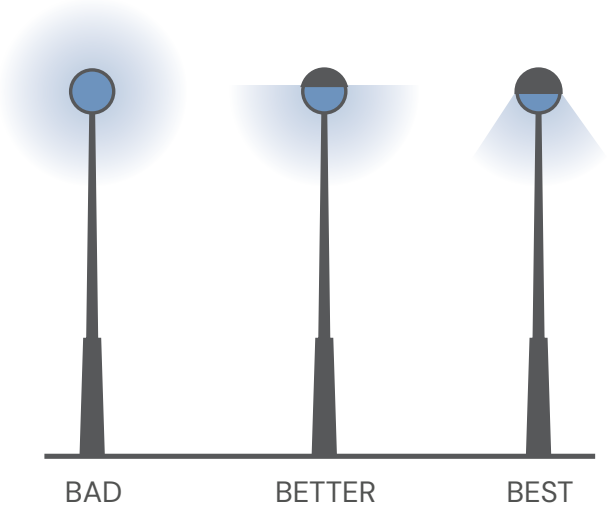


Figure 11: Lighting fixtures with downward facing light should enhance the public realm and limit light pollution.

2.7 Applying CPTED Principles

Design for natural surveillance to deter crime

Rationale

Natural surveillance deters crime by increasing visibility and ensuring that public areas are well-observed, which discourages criminal activity due to the higher risk of being seen and reported.

Guidelines

2.7.1 Design buildings to face streets, parks, and other public or common spaces. (See Figure 13)

2.7.2 Install ample outdoor lighting around building entrances, walkways, and parking areas to ensure visibility at night.

2.7.3 Provide clearly marked transitional zones that indicate movement from public to semi-private to private space.

2.7.4 All public and semi-private areas should maintain an unobstructed view (line of sight) from areas that are frequently and regularly occupied.

2.7.5 Fences and landscaping should not limit visibility or offer opportunities for concealment next to pedestrian pathways.

2.7.6 'Leftover" spaces that could provide opportunities for crime should be avoided in the site and building design.

2.7.7 Ramp and elevator entrances should be well lit and not located in isolated areas.

2.7.8 Loading entrances and parking garages should be secure.

2.7.9 Parking areas should have adequate levels of lighting for safety and visibility.

Ensure open spaces are designed for diverse uses

Rationale

When areas are actively used for social, recreational, and commercial activities, there is more natural surveillance to deter crime.

Guidelines

2.7.10 Design spaces for a variety of users and activities to ensure continual and diverse presence.

2.7.11 Provide benches, tables, and recreational facilities to support a variety of activities, contributing to more frequent use and informal stewardship of place.

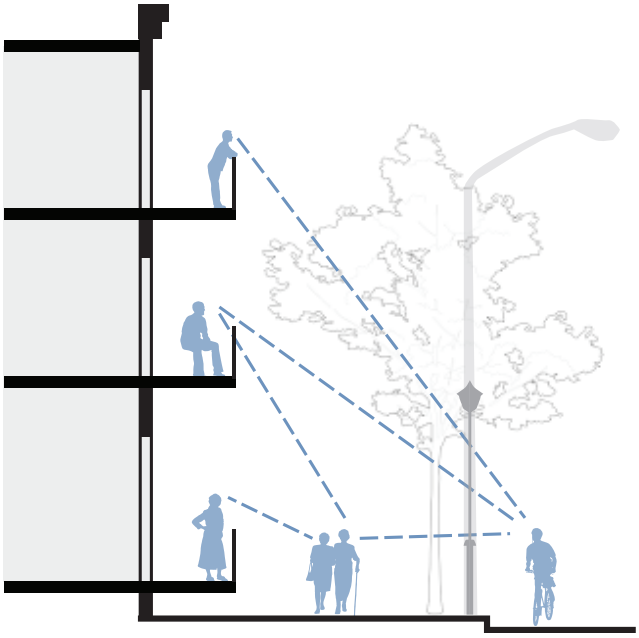


Figure 12: Natural Surveillance of Open Spaces

2.8 Access and Parking

Locate vehicle access, loading and garbage collection at rear of site

Guidelines.

2.8.1 Shared driveways between neighbouring properties are encouraged to minimize interruption to the pedestrian realm.

2.8.2 Locate parking accesses away from pedestrian entries and intersections.

2.8.3 Loading and waste management areas are to be located at the rear of a property. Where lanes do not exist, loading and waste management receptacles should be located at the side yards and be appropriately screened to reduce noise and visual impacts.

2.8.4 Provide three stream waste management receptacles on site (garbage, organics and recycling). These shall be clearly identified in the application drawings.

2.8.5 Loading areas should not restrict pedestrian or vehicle circulation on site.

2.8.6 Ensure doors and entrances to parking garages are not more visually prominent than any principal pedestrian entrance to a building.

Reduce the visual impact of Surface Parking

Rationale

Large, visible parking lots or garages along the street can create a monotonous and uninviting environment. By minimizing parking's presence, developments can enhance the visual appeal of the streetscape

Guidelines

2.8.7 By minimizing parking's presence, developments can enhance the visual appeal of the streetscape, contributing to a more attractive and cohesive urban fabric. (See Figure 14) New developments should accommodate off-street parking or loading spaces in one of the following ways, in order of preference:

i. Underground;

ii. Partially underground (where it is able to be accommodated without negatively impacting the street frontage);

iii. Garages or at-grade parking integrated into the building (located at the rear of the building); and

2.8.8 Where underground parking extends above the finished grade it must be screened by landscaping, including berms or patios.

2.8.9 Surface parking areas shall be divided into smaller parking courts or pockets by incorporating pedestrian pathways and landscaping.

2.8.10 In cases where publicly visible parking is unavoidable, use strategies to break up large parking areas, such as landscaping, tree planting, trellises, climbing vines, or other attractive screening

2.8.11 When visible from a street, landscaped island should be placed at the end of every row of parking spaces, adjacent to each internal aisle (target every 10 parking spaces)

2.8.12 Where possible, the site should be graded to lessen the visual impact of surface parking.

2.8.13 Curb stops or wider sidewalks are encouraged to protect pedestrian paths and sidewalks.

2.8.14 A reduction to the Parking Bylaw requirements may be considered to reduce visual impact, to improve safety, and to allow for improved landscape design and outdoor amenities

2.8.15 Consolidate driveway and laneway access points to minimize curb cuts and impacts on the pedestrian realm or common open spaces.

2.8.16 Where possible, utilize site grading to minimize the impacts of parking and

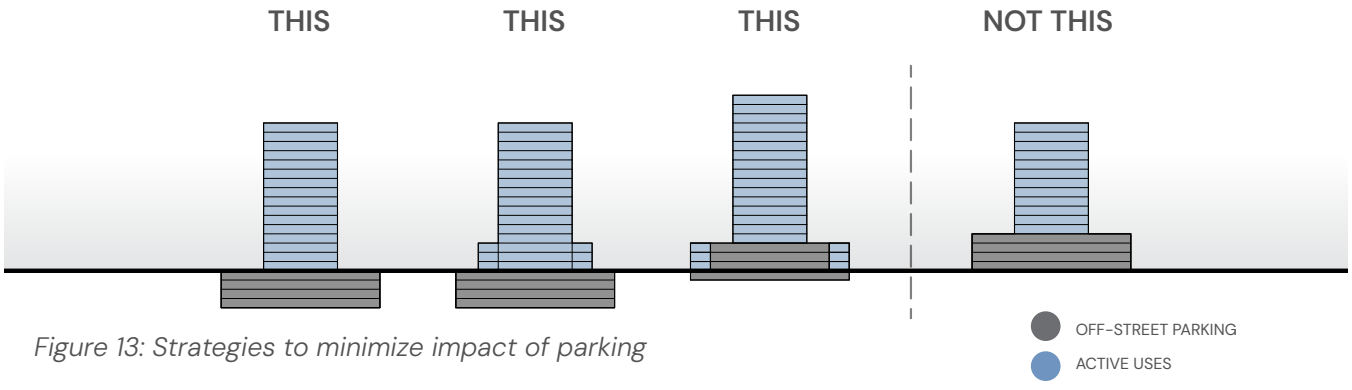


Figure 13: Strategies to minimize impact of parking

Design for convenient and safe cycling

Rationale

City-wide cycling infrastructure is foundational to support cycling as a preferred transportation option. Beginning and end of trip facilities, including convenient bicycle parking for both residents and visitors, also plays a foundational role.

Guidelines

2.8.17 Short-term bicycle parking should be weather-protected and located in a highly visible area near main entries. Bike racks should have two points of contact.

2.8.18 Consider at-grade entrances into shared interior bike storage rooms for long-term bicycle parking.

2.8.19 Provide connecting corridors to shared bicycle facilities where feasible to reduce the number of corners / changes in direction.

2.8.20 For multi-family residential developments, provide bicycle maintenance areas near long-term bicycle parking.

Design screening to improve street interface

Rationale

New developments should maintain visual privacy, aesthetic cohesion, and durability, while enhancing the overall design. This promotes a visually appealing environment and reduces the negative impact of unsightly or intrusive features, such as garbage storage or blank walls.

Guidelines

2.8.21 New developments should ensure that fencing is opaque or a combination of opaque and lattice designs.

2.8.22 Wood fencing must be constructed with a high level of finish, using pressure-treated wood for posts. Ensure post footings allow for positive drainage to prevent rotting.

2.8.23 Areas used for the storage of garbage or recyclable materials must be enclosed within a building or screened with the following considerations:

i. A complete visual barrier with a minimum height of 1.8 meters should be provided;

ii. Consider incorporating wooden architectural elements, such

as trellises or fixed barrier guard posts, to complement the building's design;

iii. Use landscaping materials like trellises or shrubs for screening.

2.8.24 For multi-family residential developments, implement screening between private patios and balconies sharing a common flank. Ensure that screening materials provide visual privacy for each unit.

2.8.25 Avoid at-grade blank walls, barred gates or fences over 1.2m tall along primary streets and street corners.

i. When unavoidable, screen blank walls with landscaping, public art, or special materials to increase visual interest.

2.8.26 Ensure adequately sized balconies and patios for eating / sitting / cooking if there is no other shared open space for residents. Exterior cladding must be of quality materials that age well and are assembled with a high level of attention to detail.

Private roads and multi-use paths

Guidelines

2.8.27 Private roads are envisioned to be shared roadways, where pedestrian take priority, road widths are relatively narrow to encourage slower vehicle speeds, street parking may be provided in pocket parking and where it can be integrated with boulevards and street trees.

2.8.28 Private roads are intended for motor vehicle volumes less than 250 vehicles per day and operating motor vehicle speeds less than 30 km/h. Speed regulation is intended to be achieved utilizing a variety of self-regulating speed reduction mechanisms including, but not limited too, medians, pinchpoints, chicanes, lane shifts, speed humps, 2-way streets with narrow profiles, roundabouts, diverts, building lines, street trees and on-street parking.

2.8.29 Design the private road network to interconnect to the existing and proposed street network, to shorten block length, travel time and distances to destinations and increase the choice of routes travelers can take.

2.8.30 Design private roads to meet universal design standards and the needs of all users, regardless of mode, age or ability. This includes, but is not limited too, pedestrian, cyclists, persons with mobility issues, users who are visually

impaired, smaller commercial vehicles and motorists.

2.8.31 Design private roads in accordance with the standards and specifications in the Manual of Engineering Standards and Specifications and the Complete Street Design Guidelines. This include incorporating features such as smooth travel surfaces, crosswalks, tactile walking surface indicators, curb ramps, pavement markings, landscaping, lighting, and street furniture.

2.8.32 Design private roads to meet fire vehicle access standards per the BC Building Code and the BC Fire Code. The design should include unobstructed travel for fire trucks and periodic deployment areas designed to ensure accessibility and space required to deploy firefighting equipment.

2.8.33 Design private roads to be attractive streetscapes that respond to surrounding land uses, providing opportunities for place-making, social interaction, and art.

2.8.34 Design private roads that improve ecology through stormwater management and vegetation.

Guidelines for multi-use paths on private property that are for public use

2.8.35 Multi-use paths are envisioned to be off-street, physically separated from motor vehicle traffic and used by active modes of transportation. The pathways are intended to provide connection links to public roads, offsite destinations, for example a park. and accommodate shared, bi-directional travel for all users.

2.8.36 Locate multi-use paths where opportunities for an interconnected greenway network can be created, to protect and increase habitat connectivity, including along lake and ocean waterfronts, watercourses, and slopes. Where environmental setbacks and constraints allow, design paths that reduce environmental impacts, reduce stormwater runoff and protect against erosion.

2.8.37 Bi-directional multi-use paths are recommended for low volume, leisure-oriented users. Where high-volumes and commuter-oriented users are anticipated that may cause conflict between different pathways users, notably contraflow bicycle movement, a uni-directional design is recommended.

2.8.38 Design multi-use pathways to meet universal design standards and the needs of all users, regardless of mode, age or ability. This includes, but is not limited too, pedestrian, cyclists, persons with mobility issues, and users who are visually impaired.

2.8.39 Design multi-use paths in accordance with the standards and specifications in the Manual of Engineering Standards and Specifications or other standards acceptable to the City.

2.8.40 Design multi-use paths to include wayfinding and amenities people are inclined to stop such as scenic areas, viewpoints, natural features, near existing amenities or destination and areas that are sheltered from wind and inclement weather. The amenities can include benches, picnic tables, rest areas, shelters, and drinking fountains.

2.9 Bird Friendly Developments

Increase visibility of glass to reduce bird collisions, dampen reflections, and reduce dangers of attractants and entrapment

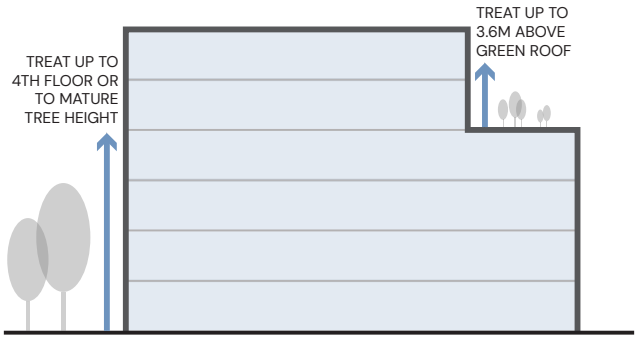


Figure 14: Apply glazing strategies to these critical areas where bird collisions are more likely

Rationale

Birds cannot perceive glass as a solid object and attempt to fly through transparent glass causing bird collisions. Increasing the visibility of glass reduces the risk of bird collisions.

Guidelines

2.9.1 Utilize adhesive film, acid-etch, or frit patterns to create visual noise which breaks up the transparency of glass and prevents bird from perceiving it as clear to fly through.

2.9.2 To ensure that such pattern designs are bird friendly, use high contrast and dense: spacing at a maximum 5cm x 5cm apart with markers no more than 0.32cm in size to provide an effective visual cue that alerts birds of glass.

2.9.3 Pay special attention to applying glazing strategies in the critical zone for collisions – up to the fourth floor of a building or mature tree height, whichever is greater, and up to 3.6m (12 feet) above a green roof. (See Figure 12)

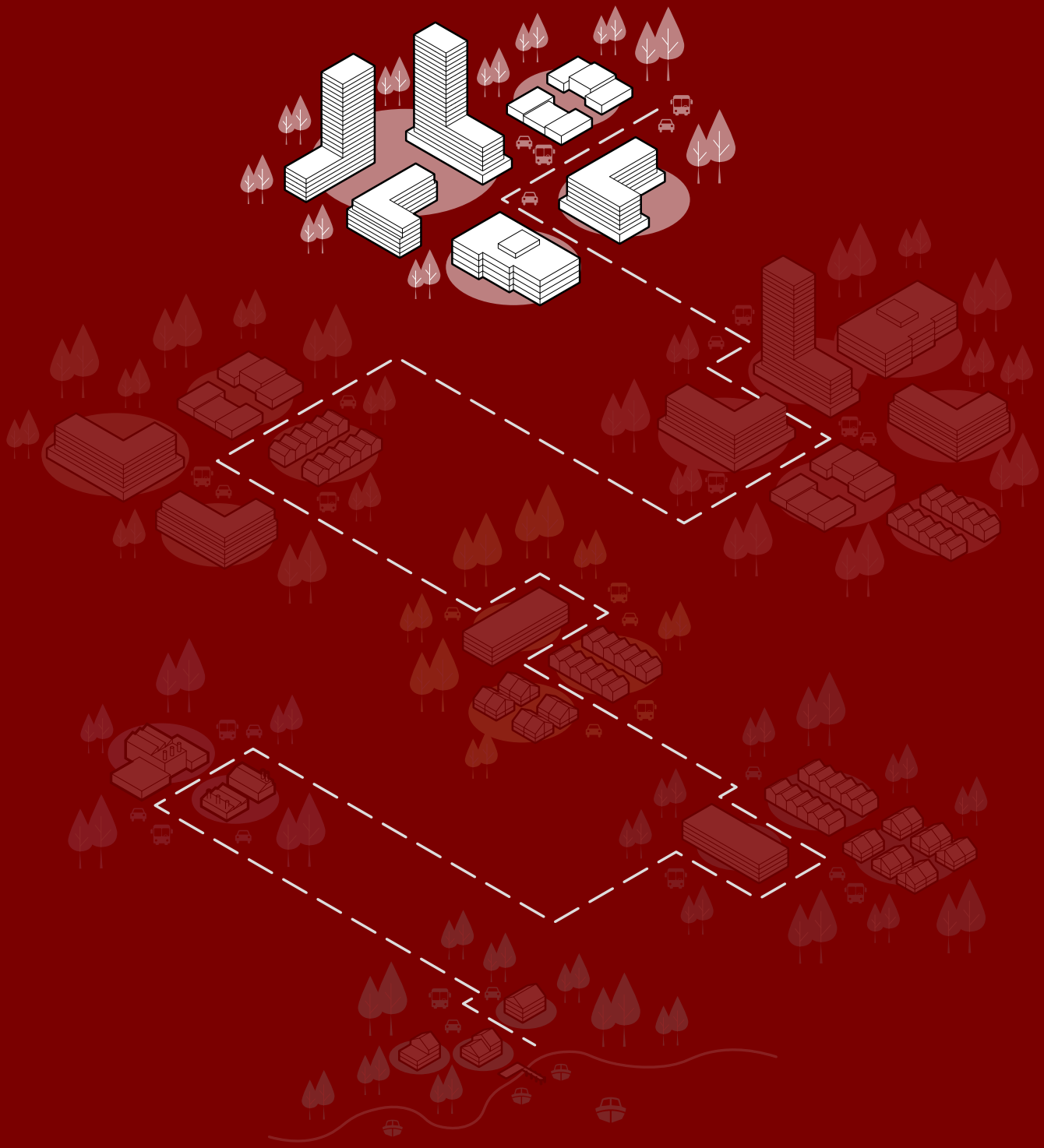
2.9.4 Utilize exterior screens, architectural mesh, and grilles to block reflections of vegetation and sky, and break up transparency.

2.9.5 Consider combining bird friendly objectives alongside co-benefit features such as solar shading, energy saving, increased thermal comfort, and additional wind and rain screening.

2.9.6 Ensure outdoor landscaping is at appropriate distance from glass, to reduce reflections.

2.9.7 Avoid interior landscaping near windows.

2.9.8 Use screens to secure enclosed spaces such as mechanical ducts, intake and exhaust vents and cap the ends of all open pipes and rails.



3. PRIMARY AND SECONDARY URBAN CENTRES

Primary and Secondary Urban Centres are to become the most dense, urban, and dynamic areas of the City of Nanaimo. Not only will residential growth increase here in the future, but a diverse range of services, businesses, and community facilities will emerge as well.

The form and character design guidelines for these areas are focused on managing the emergence of denser urban forms as well as creating an urban fabric that supports sustainable development and a vibrant public realm.

Buildings in these areas will range in form from low-rise buildings, to mid-rise and high rise forms. (See Figure 15) Creating a well-connected and comfortable pedestrian environment is important, with emphasis on active street level uses and building massing that allows for ample daylight on the street. Buildings in these designations may be mixed-use or designed to be flexible over time.

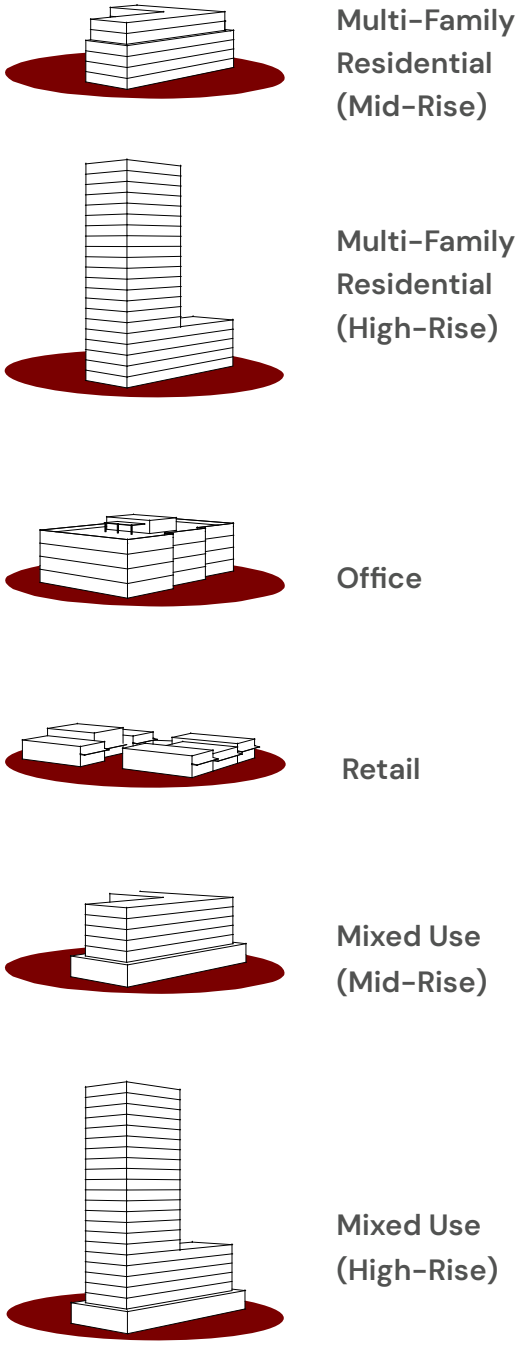


Figure 15: Potential building typologies in Primary and Secondary Urban Centres

3.1 Site Planning, Access, and Parking

3.1.1 Create well-defined, clearly visible, and universally accessible primary building entrances along primary streets or at street corners' by providing weather protection, using high quality feature materials or cladding, signage and lighting.

3.1.2 Entrances should be clearly visible from the principal frontage street. If this is not possible, an architectural element such as a gateway may be used to indicate the entrance location.

3.1.3 Provide separate and distinct entrances for residential uses from that of ground floor retail.

3.1.4 In mixed-use buildings, residential access should be sited away from the corner and generally located towards mid-block.

3.1.5 Exits from emergency stairs and parking garages require careful consideration from a personal and traffic safety perspective. Avoid the creation of dark recesses.

3.1.6 Provide opportunities for mid-block parklets, connections, corner plazas, and other open spaces to increase pedestrian connectivity.

3.1.7 Support an integrated walking, rolling and cycle network through the provision of dedicated lanes, walks and curb cuts to facilitate ease of movement through development sites.

3.1.8 Locate private patios and landscaping to minimize overlook from neighbours.

3.1.9 Above grade parking structures should provide habitable space along the perimeter. As an example, residential uses should be along the perimeter of the building with above grade parking behind it. (See Figure 16)

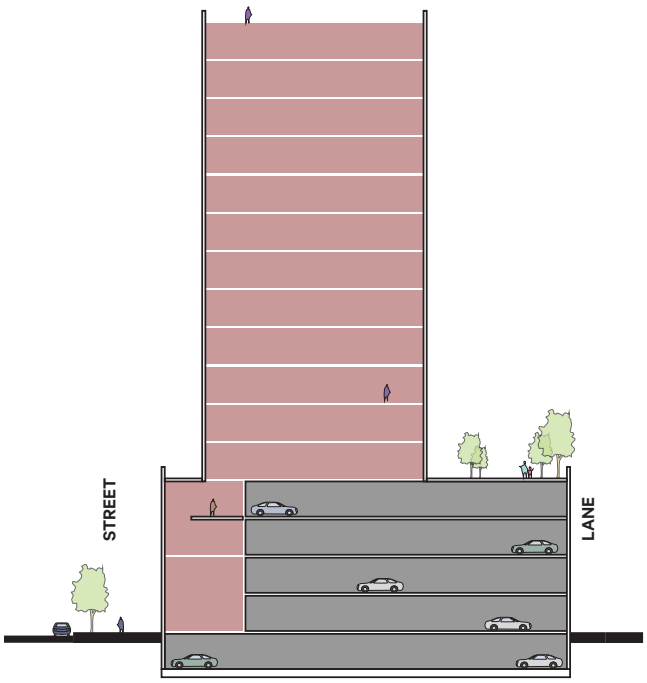


Figure 16: Habitable spaces wrapped around above-grade parking to avoid blank walls

3.1.10 Incorporate armatures, structural support, and electrical outlets on the exterior of buildings 7 to 12 metres above grade for temporary hanging of banners, lights, or fabric canopies to assist in special events and street markets along key streets.

3.1.11 Provide opportunities for community connection though the provision of plaza and privately owned public (POP) spaces along high visibility frontages and intersections.

3.1.12 Design should consider measures that improve wayfinding for people of all ages and abilities. This means incorporating elements with 'landmark' qualities such as a distinctive front entry, vivid colour, art, or unique landscape elements.

3.1.13 Underground parking is stongly encouraged in urban centres. At grade surface parking is discouraged other than short-term loading / unloading, valet station and drop-off turnarounds, etc.

3.2 Street Interface, Building Scale and Form, Architectural Design and Materiality

3.2.1 Maximize building facades along the street at the minimum setback line (target 75%).

3.2.2 Setbacks greater than the minimum prescribed may be supported when they contribute to the creation of entry courts, corner plazas, mid-block pedestrian links, or other new additions to the public realm.

3.2.3 Include opportunities for retail and restaurant uses to "spill over" into the public realm with space for outdoor displays, patios, etc adjacent to the sidewalks.

3.2.4 In order to maintain the primary emphasis on the street, create opportunities for additional public realm, these spaces should be intimate and human scaled. Dimensions of approximately 10m x 10m are supported with variations based on detailed design.

3.2.5 Create an opportunity for outdoor shopping and dining with the design of attractive plazas at street corners to attract visitors, and improve the seasonal capacity of businesses during warmer months.

3.2.6 All building facades, not just those on principal streets, shall be clad in a high-quality finish.

3.2.7 Brick, concrete, stone, cement, stucco, glass, metal, and wood are recommended exterior cladding options.

3.2.8 The use of mirrored or opaque glazing is strongly discouraged. Glass should have a maximum reflectivity of 8%.

3.2.9 Canopies, awnings and overhangs are encouraged to provide weather protection for a more comfortable pedestrian environment and usable outdoor space.

3.2.10 Canopies should extend a minimum of 1.5m over the public realm to sufficiently provide covered walkways in commercial areas.

3.2.11 Wherever possible, roofs should be considered as usable outdoor space and be accessible.

3.2.12 Variation in roof form along the street is not necessary, but may be supported if used to create visual interest in tandem with variation in the facade at podium level.

3.2.13 The roof of tall buildings will be highly visible from multiple vantage points around the city. Roof design should enhance the buildings overall form and character.

3.2.14 To ensure privacy for individual residential units, stagger balconies or provide separation screens while retaining opportunities for social interaction.

3.2.15 For buildings on steeply sloped streets, the height of the podium may step in concert with the change of slope.

3.2.16 Avoid the use of opaque privacy screens. Where privacy screens are required, design these in a manner that is integrated into the design of the building using similar materials used elsewhere on the exterior.

3.2.17 Design for weather protection on balconies and patios

3.2.18 For buildings greater than four storeys, a building base or podium should be clearly defined and scaled to have a proportional relationship to the street.

3.2.19 To support placemaking at key intersections, buildings should incorporate landmark or emblematic design features, such as prominent vertical elements, significant corner treatments, and entry plazas or large extensions of the public realm.

3.2.20 For floors that are six storeys or higher, target a maximum floor plate area of 650m^2. (See Figure 17)

3.2.21 Aim for a 25 metre separation between building towers. (See Figure 17)

3.2.22 While excessive building articulation is discouraged, the prominence of tower building forms requires special attention to avoid a monotonous building. Uninterrupted repetition of identical floor plates or continuous glass and window to wall treatments to the exterior of a tower are not supported.

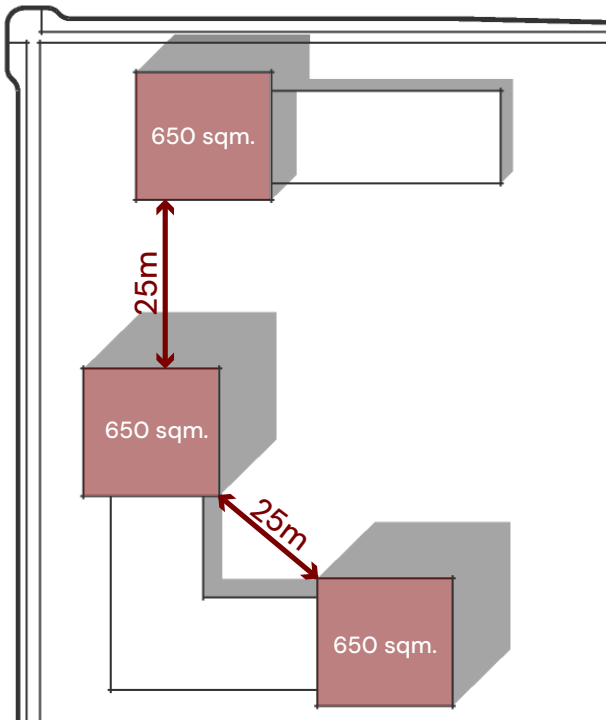


Figure 17: Max tower floorplate and minimum tower separation

3.3 Landscape Design, Amenities, and Utilities

3.3.1 Open spaces should have active at-grade uses that help animate the edges of the site and be designed to be inviting to encourage year-round use.

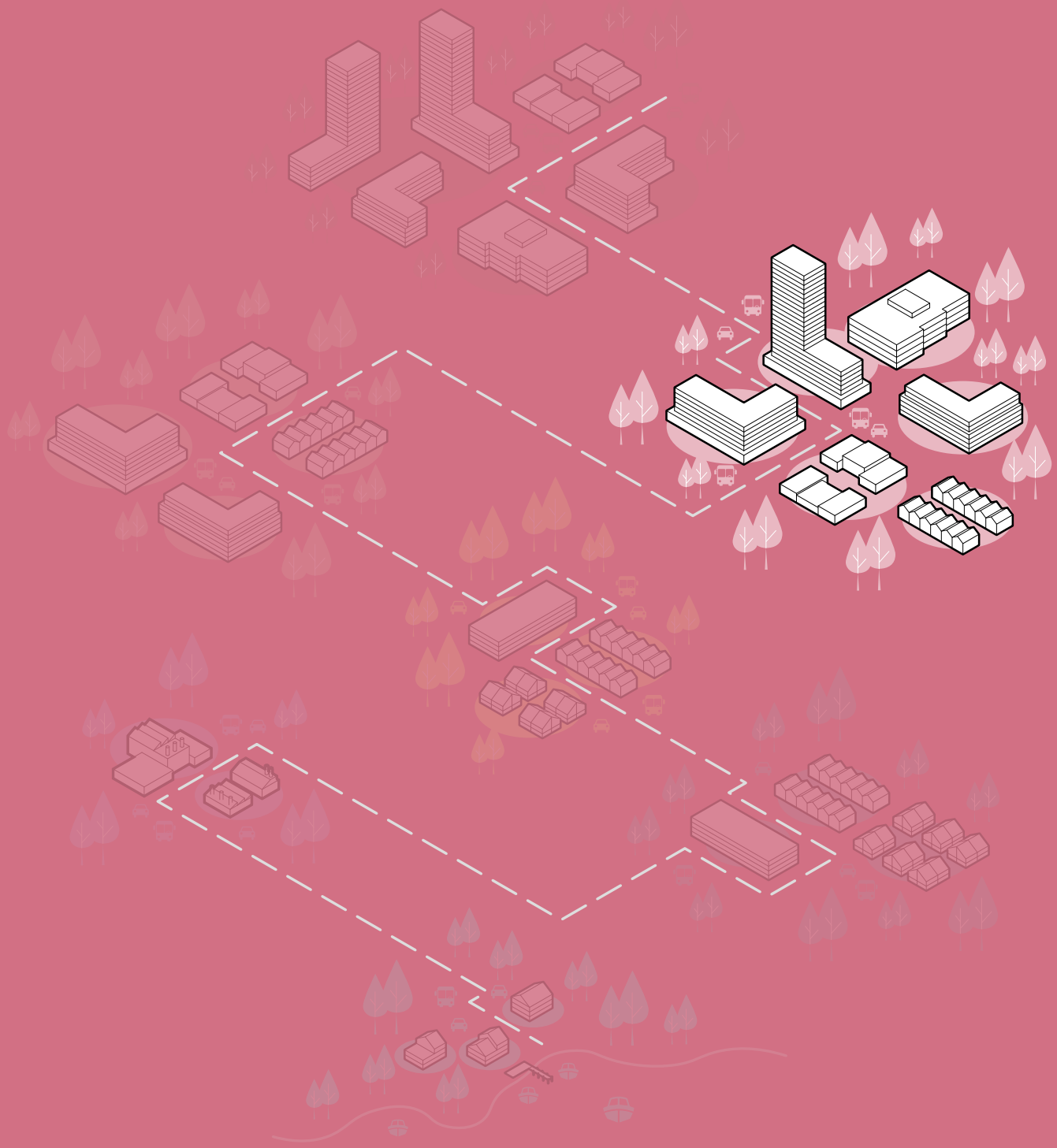
3.3.2 Design open spaces to be flexible and universally accessible for all users.

3.3.3 Maximize access to sunlight to encourage year-round use through tree planting, seating and weather protection.

3.3.4 Provide a range of seating and gathering opportunities, including both fixed and movable to allow for flexibility of use.

3.3.5 Explore the integration of inspirational landscapes and destination amenities to generate community interest and attract surrounding neighborhoods to commercial developments.

3.3.6 Create a unique identity for the development through customized and cohesive application of public realm elements, including signage, furnishings, and lighting features.



4. NEIGHBOURHOOD CENTRES

A Neighbourhood Centre will incorporate a range of building types - including townhomes, low-rise apartments, commercial, office, and mixed-use developments - but at a lower scale than those seen in primary and secondary urban centres.

Lands in these designations will play an important role in the future of Nanaimo, providing residents with local services and activities as well as informal places to meet and socialize. In this regard, neighbourhood centres will play an important role in supporting a sense of place and community. (See Figure 18) The inclusion of pedestrian links, pocket parks, and semi-public open space will be important. Additionally, guidelines that create a unique sense of identity for individual buildings or building elements will emphasize human-scale and diversity in the built form.

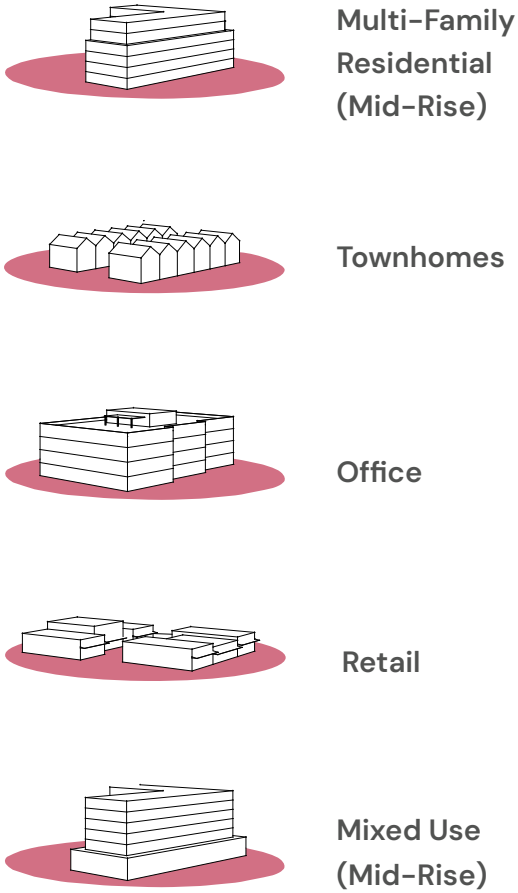


Figure 18: Potential building typologies in Neighbourhood Centres

4.1 Site Planning, Access, and Parking

4.1.1 Minimize negative impacts of parking ramps and entrances through treatments such as enclosure, screening, high quality finishes, sensitive lighting, and landscaping.

4.1.2 Minimize the use of on-site surface parking and avoid drive-throughs. Where surface parking exists on interior streets, design the spaces with high quality materials and a prominent pedestrian network.

4.2 Street Interface, Building Scale and Form, Architectural Design and Materiality

4.2.1 Minimize the distance between the building and the sidewalk to create street definition and a sense of enclosure, supported by high quality streetscape design.

4.2.2 Orient primary building facades and entries to the fronting street(s) or open space to create street edge definition and activity

4.2.3 Design all buildings to have transparent frontages to promote "eyes on the street", using strategies such as:

i. having continuous commercial and retail uses with windows and primary entrances facing the street;

ii. having ground-oriented residential units with windows and primary entrances facing the street; and;

iii. locating and designing windows, balconies, and primary building facades to promote activity and natural surveillance of the street.

4.2.4 On commercial frontages, incorporate frequent entrances (e.g., every 15m) to create punctuation and rhythm along the street, visual interest, and support pedestrian activity.

4.2.5 Commercial space should include generous amounts of windows and directly address adjacent spaces with opportunities for seating, weather protection, and signage.

4.2.6 Rooflines and vertical massing should be designed to maximize views of the water and contribute to a diversity of building form.

4.2.7 Peaked, sloped, or curved roof forms are encouraged on townhouses and low-rise apartments. These may be contrasted with horizontal roof overhangs or trellises to create variety and texture.

i. Where flat roofs are used, utilize horizontal overhangs with varying depths to contribute to variety and the individual expression of each unit.

4.2.8 Commercial building design should distinguish from residential forms through the use of balconies, bay windows, changing roof lines and other appropriate architectural detailing.

4.2.9 Avoid stone veneer or the use of 'heavy' materials at upper levels, opting instead for alternative durable materials that provide high-degrees of energy performance.

4.3 Landscape Design, Amenities, and Utilities

4.3.1 Neighbourhood Centres present unique opportunities for the inclusion of flexible spaces. Incorporate plazas and lawns to invite formal or informal programming on an occasional basis

4.3.2 To support placemaking at key intersections, buildings may incorporate landmark or emblematic design features, such as prominent vertical elements, significant corner treatments, and entry plazas or large extensions of the public realm.

4.3.3 Explore the integration of inspirational landscapes and destination amenities to generate community interest and attract surrounding neighborhoods to commercial developments.

4.3.4 Create an opportunity for outdoor shopping and dining with the design of attractive plazas at street corners to attract visitors, and improve the seasonal capacity of businesses during warmer months.

4.3.5 Infill development should respect the vertical and horizontal rhythm, proportions and details of adjacent buildings.

4.3.6 Locate taller building elements near the street, centre of site, or adjacent properties with similar heights. The massing should step down towards adjacent neighbourhood areas.

4.3.7 Reduce heat island effect by including robust planting or a green roof design. Consider the following:

i. Secure trees and shrubs to the roof deck.

ii. Ensure soil depths are appropriate for proposed planting.

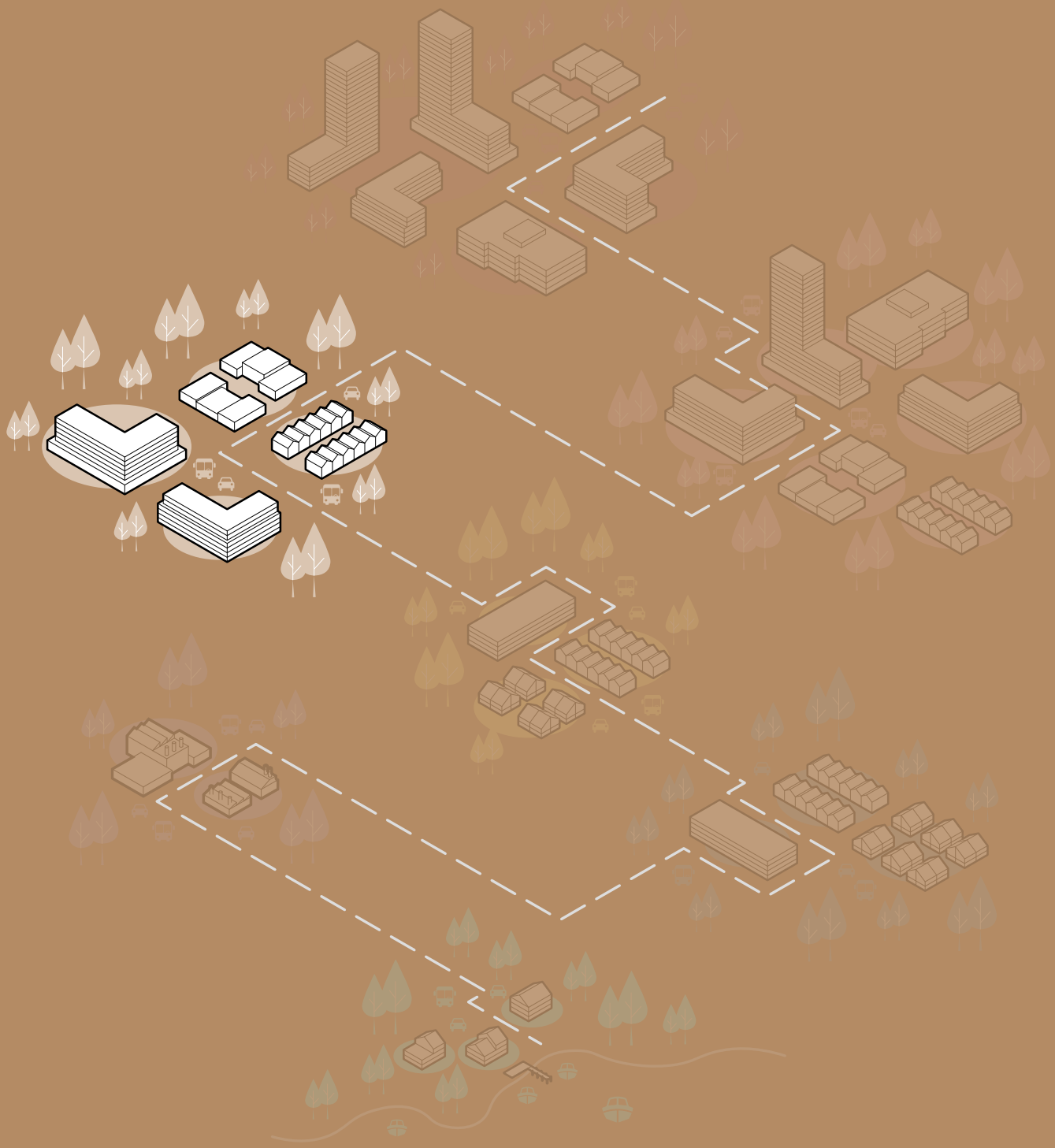
iii. Avoid using growing medium with high organic content for drainage.

iv. Ensure drainage is accommodated.

v. Consider opportunities for urban agriculture.

4.3.8 Public art, architectural treatments or landscaping which reduce the apparent massing or enhance the aesthetic value of visible blank walls are strongly encouraged.

4.3.9 Include electric outlets and other built infrastructure to support occasional farmer's markets. This may include flexible open space and armatures that allow for temporary weather protection.



5. CORRIDORS

Corridors are the city's connective tissue – tying together Urban Centres and destinations. These prominent city streets will become destinations in themselves, attractive routes designed for movement, living, and commerce . Corridors will feature human scale development and pedestrian-friendly options for mobility. Corridors will generally comprise of 3-6 storey mid-rise buildings including townhomes, apartments and mixed-use developments with commercial at-grade with residential above. (See Figure 19)

Corridors should be designed with limited length and interrupted by green spaces, whether existing or newly introduced, to create distinct sections and avoid monotonous strip development. Each segment should retain a unique sense of place, contributing to the overall character of the area. The pattern along the Corridor will vary, with mixed-use developments concentrated near transit hubs, while other areas will primarily consist of residential zones.

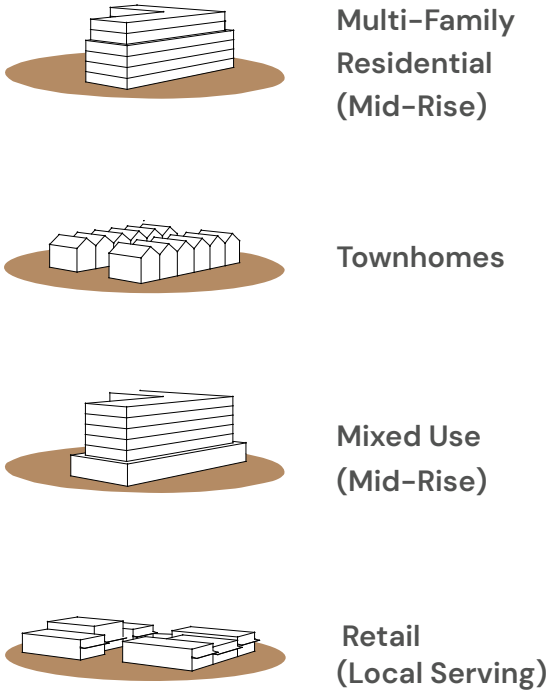


Figure 19: Potential building typologies in Corridors

5.1 Site Planning, Access, and Parking

5.1.1 Entrance lobbies should be located on the primary street and made visible through a change in massing, a recessed entry, low-level signage, and weather protection. The use of wood is strongly encouraged as a primary material at all entries to create a sense of warmth. (See Figure 21)

5.1.2 On corner lots, residential entries on the secondary street are supported in mixed-use buildings where a strong and active interface is maintained along the primary street through commercial uses, entries, and design.

In addition to General Design Guidelines, specific parking considerations for Townhouse Developments include:

5.1.3 Vehicular driveways or private lanes may be required to serve townhouse units and may access individual at grade (enclosed) garages. This is only supported in instances where townhouse units have separate front entries along a contiguous, semi-public pedestrian corridor or street.

5.1.4 When these are designed, an emphasis on creating comfortable pedestrian environment should be prioritized through the use of landscape edges, special pavers, pedestrian scale lighting, and seating, where possible.

5.1.5 Clearly visible site lines and the potential to connect to adjacent pedestrian links are strongly encouraged.

5.1.6 Incorporate space for pick up/ drop off and small delivery vehicles (e.g. Amazon) near front building entrance.

5.1.7 Ensure projects provide ample pathway width and space for connection to neighbourhood and regional mobility networks.

5.1.8 Consider traffic calming measure on interior roads and lanes.

5.1.9 Significant view corridors should be protected through the strategic siting of buildings.

5.2 Street Interface, Building Scale and Form, Architectural Design and Materiality

5.2.1 The primary façade of the building should be oriented to run along the length of the street frontage.

5.2.2 Place a greater emphasis on quality materials, fenestration, and articulation in the first three storeys of a building.

For non-residential uses:

i. Aim fora minimum of 60 percent of transparent glass is required at street level.

ii. Design a continuous streetwall. Entry courts (maximum 12m in width) may be recessed and include portions of the building up to 10m from the property line.

For residential uses:

iii. Direct at-grade access to the street should be provided from individual units.

iv. Individual unit entries should occur roughly every 6m in order to create a fine grained rhythm.

5.2.3 Small distinctive elements that help create identity for individual units is encouraged. This may include a custom pattern, canopy, entry detail, lighting, address numbers or armatures for hanging baskets. (See Figure 20)

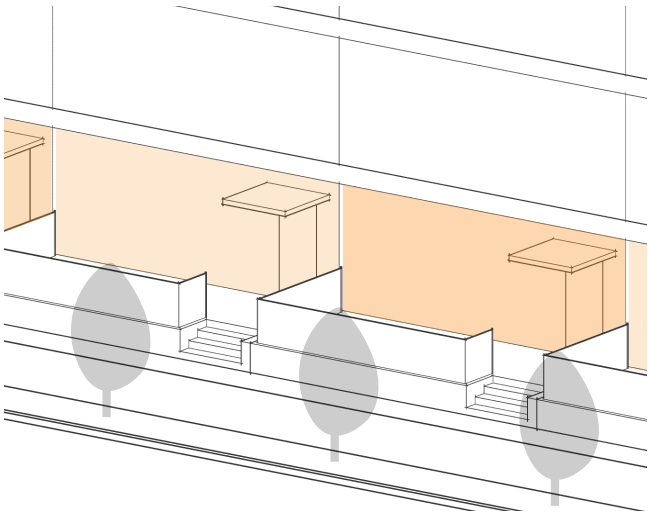


Figure 20: Ground-oriented residential units with individual units expressed via architectural design and landscape treatment.

5.2.4 In general, the tallest buildings or building elements are to be located closest to the street.

5.2.5 Where properties are located adjacent to a land use designation with lower intensity uses, massing should step down at the building corners to create a transition in massing.

5.2.6 Vertical breaks in facades should be provided every 12 to 24 metres, including a change in material.

5.3 Landscape Design, Amenities, and Utilities

5.3.1 Provide opportunities for functional landscapes along on-site walkways including wildflower, pollinator planting where feasible.

5.3.2 Explore green strategies for traffic calming and noise reduction along corridor routes, such as implementing a double row of trees and foreground planting to mitigate acoustic conflicts.

5.3.3 Design raised yards with landscaping and fencing to provide privacy, mitigate noise impacts, activate the street and keep eyes on roads and walkways.

5.3.4 Avoid designing sunken yards and private patios.

5.3.5 Provide rooftop amenities in multistory corridor developments for additional spaces for respite, refuge and solar access.

5.3.6 Consider the orientation of amenity spaces away from busy corridors where feasible to provide respite and refuge.

5.3.7 Provide versatile outdoor amenities to accommodate a wide range of programs and events.

5.3.8 Design public realm features such as seating areas, public art installations, and wayfinding signage that enhance the experience for both residents and visitors.

5.3.9 While amenities are typically reserved for the use of residents only, the activities they generate can be a positive benefit to the site and surrounding neighborhood by creating a sense of community vibrancy. Consequently, Amenity buildings should be located in a prominent location on the site where they enjoy at least partial visibility from the public realm such as the corner. When located interior to the site, create visual links to the street and primary entrances to the amenity to support visitor wayfinding and to contribute to eyes on the street.

6. NEIGHBOURHOOD AND SUBURBAN NEIGHBOURHOOD

Neighbourhoods and Suburban Neighbourhoods are primarily residential areas, each with their unique character and identity. Nanaimo's neighbourhoods will accommodate growth with infill housing, multi-unit housing, townhomes, and low-rise apartment buildings. (See Figure 22) An increasing mix of lower density housing types that complement a residential character and promotes social interaction is encouraged in all Neighbourhoods.

Though the scale of development in these areas is much lower than elsewhere in the City, some of the key urban design themes remain equally important: the manner in which buildings relate to the street, the provision of usable outdoor space, the creation of architectural interest in a manner that does not compromise the energy performance of the buildings, and the way in which massing is placed on a site all will impact the communities in which they are located.

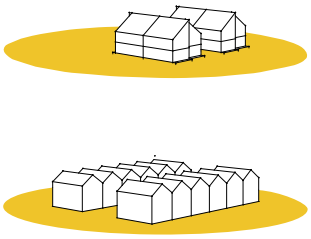


Figure 21: Potential building typologies in Neighbourhoods and Suburban Neighbourhoods

6.2 Site Planning, Access, and Parking

6.2.1 In general, off-street surface parking or covered parking (including garages) shall be located beneath or at the rear of the building and accessed from the lane, where there is a lane.

6.2.2 Where no lane exists, driveway access from the street, with flared curb cuts, will be allowed along side of the building. In such cases, shared driveways between adjacent buildings is highly encouraged.

i. The parking area shall be screened from view with plantings, hedges or screens

6.2.3 For large townhouse projects with internal strata roads, the strata roads shall also be framed positively by the new development.

i. Allow for adequate soil volumes to provide trees along internal strata lanes to breakup hardscape.

ii. Consider root barriers for any trees between driveways to avoid heaving or displacement of adjacent paving.

6.3 Street Interface, Building Scale and Form, Architectural Design and Materiality

6.3.1 Step back buildings above the third storey (target a 2 metres offset) to emphasize a residential character and to be sympathetic to the neighbourhood context.

6.3.2 Townhouse developments should be designed with a scale and rhythm that reflects individual units, providing a balanced transition from single family housing or other similar housing types.

6.3.3 Building elements including porches, raised entries, bay windows, roof extensions, fences, screens and landscaping are recommended to provide a transition from the sidewalk to the front door, allowing reduced front setbacks and a vibrant pedestrian realm.

6.3.4 Porches should be raised above the street level to provide separation from the street and a transition from the public street to the private interior. The ideal height for raised porches is between 0.6 -1.2 metres above street level. This may vary based on site constraints, grades and other factors like flood construction level. (See Figure 23)

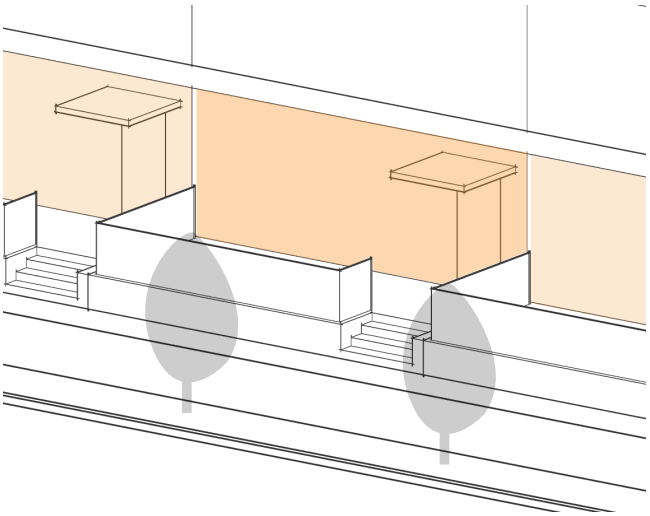


Figure 22: Raised porches highlighting the transition from public to private space.

6.4 Landscape Design, Amenities, and Utilities

6.4.1 Continuing neighbourhood patterns including green front yards is encouraged.

6.4.2 Front, rear, or side yards, when directly facing a street or other public space, shall have landscaped buffer areas and avoid tall fences that obstruct visual connection.

6.4.3 In general, each unit within multi-unit development should have usable private open space. Strive for at least 600m^2 in the form of:

i. front yard,

ii. rear or side yard,

iii. rooftop patio, or

iv. balconies.

6.4.4 Design at least one of the above open spaces to have access to sunlight.

6.4.5 Rooftop patios should ideally face the fronting street and minimize direct sight lines to neighbouring units.

6.4.6 Similarly, balconies should be carefully oriented and positioned to create opportunities for more "eyes on the street" and to reduce overlook into neighbouring units.

6.4.7 Landscapes should be designed to retain high value trees and natural habitat whenever possible.

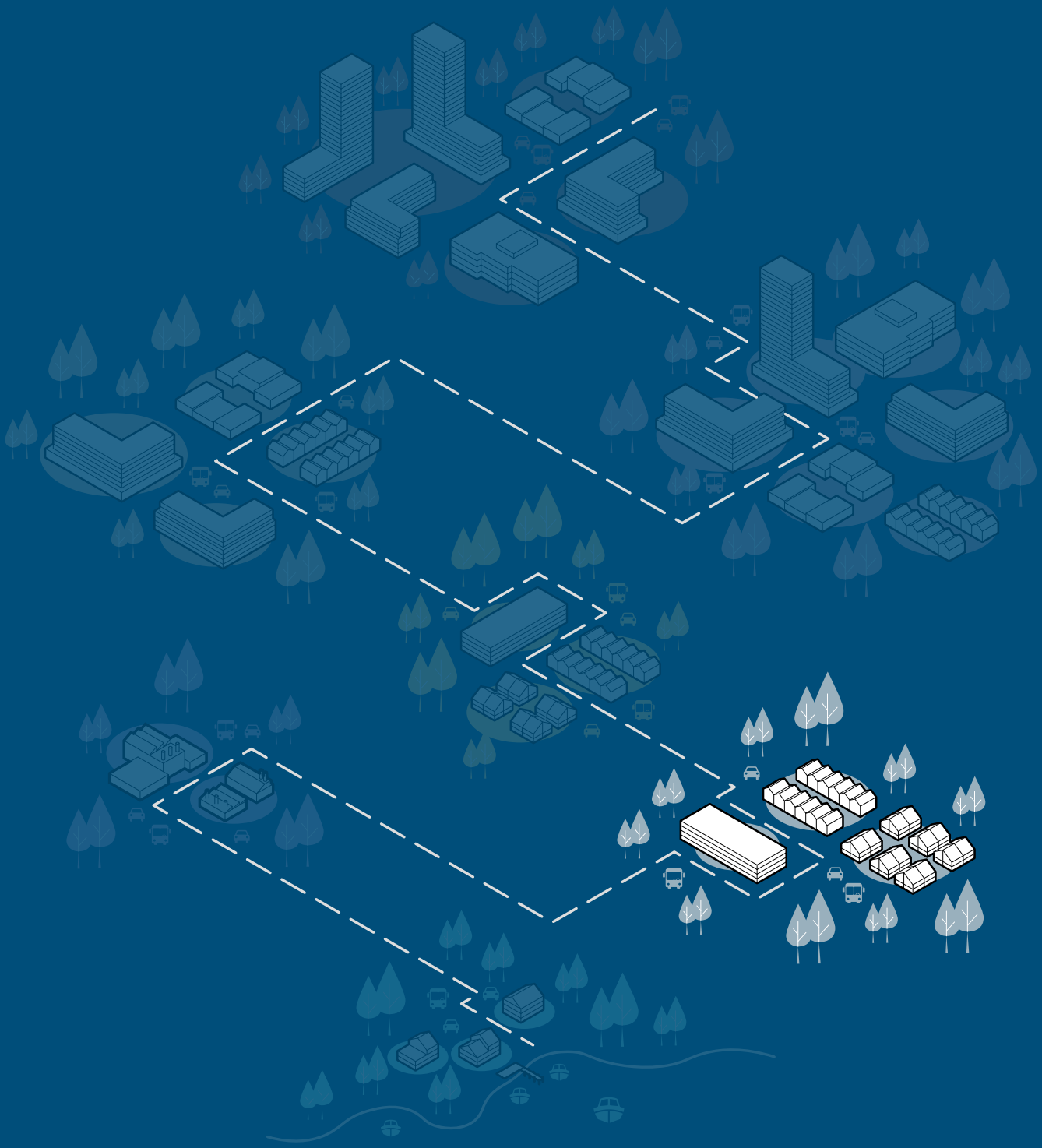
v. Cluster the parking to reduce overall amount of pavement on the site.

6.4.8 Provide space for planting trees on-site to increase tree canopy and provide shading.

6.4.9 Provide landscaping to buffer adjacent properties and enhance street frontage.

6.4.10 Use landscape treatments, such as front patios, accented paving treatments, walkways, fence and gate details, and other approaches to identify residential entry and add interest along the street and sidewalk.

6.4.11 Design front yards to include a direct path from the fronting street to the primary entry.



7. OLD CITY NEIGHBOURHOOD

The Old City Neighbourhood is located close to Nanaimo's downtown and features primarily low-rise residential and local commercial developments. (See Figure 24) The Old City is a unique part of the City with specific heritage values and character that warrants special attention and preservation. It is also important to support sensitive urban infill and activity close to the Downtown Urban Centre. Hence, new developments must contribute positively to the neighbourhood character.

Key components that define the character of Old City include: consistent lot sizes, defined yard, front yard depth and building height; similar building transition from the street to the front form and floor area; traditional character; and parking access off the lane.

The architectural character of existing buildings features recurrent use of elements such as pitched roofs, often with dormers; ground floor access from a private entry; projections or recesses such as bays and porches; substantial wood detailing; the use of wood siding and sand finished stucco.

Throughout the Old City there are numerous older character homes, some having heritage merit, which do serve to establish the traditional residential appearance of the area. The essence of these qualities has been distilled to provide a framework for the design guidelines.

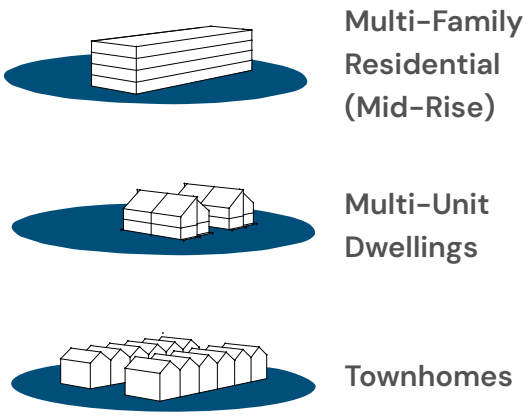


Figure 23: Potential building typologies in Old City Neighbourhood

7.1 Site Planning, Access, and Parking

7.1.1 Where the existing street setback varies, new development should adopt a setback sympathetic to the existing streetscape. (See Figure 25)

Figure 24: New development responds to existing setbacks along the street

7.1.2 Where sidewalks or pedestrian routes cross vehicular access areas, these should be demarcated by concrete paving or other highly textured pacing, to be visually separate from the asphalt.

7.1.3 To reduce the impact of larger scale developments to an established neighbourhood, long, unbroken street facing elevations should be avoided and individual units articulated to respect the existing street rhythm. (See Figure 26).

7.1.4 Apartment buildings should emphasize one principal entry from primary street.

THIS

NOT THIS

Figure 25: New developments should respect the existing rhythm of the street.

7.2 Street Interface, Building Scale and Form, Architectural Design and Materiality

7.2.1 Designs that celebrate the old-city neighbourhood heritage is encouraged.

7.2.2 To reduce the overall amount of fencing and hedging, consider creating porosity between the public and private realms to reinforce street activation and CPTED goals.

7.2.3 Plain concrete, concrete block or painted finishes on walls are discouraged.

7.2.4 In addition to thoughtful building siting and massing, the recurrent use of elements that reinforce a traditional residential character is essential, such as pitched roofs and dormers, ground floor access from a private entry, projections or recesses, substantial wood detailing, use of wood siding, and sand finished stucco.

7.2.5 Pitched roofs, commonly gable or hipped, are encouraged with exposed main beam supporting projections. Roofing materials such as wood shingles, wood shakes or asphalt shingles is also encouraged.

7.2.6 Projections and recesses (in the form of bays, dormers, turrets, room projections, porches and recessed balconies) are encouraged.

i. They create visual interest through the interplay of light and shadow and solid and void and give facades depth and distinctiveness.

7.2.7 In keeping with the character of residential neighbourhoods, provide each dwelling unit with an attractive and easily Identifiable ground floor entry, visible from the street.

7.2.8 Dwelling unit entrances should be singled out architecturally, by means of a roof, awning, or trellis. Such canopies serve to pinpoint the entry location and act as weather protection. Entrances should be lit and the lighting should illuminate the dwelling unit address.

7.2.9 The overall choice of materials and colour, should create a cohesive aesthetic and visual composition, suitable for a traditional residential neighbourhood

7.2.10 The use of traditional wall cladding is encouraged.

ii. Materials suitable for cladding exterior walls are horizontal wood siding (either shiplap or clapboard), wood shingles, and smooth troweled stucco combined with robust wood trim.

iii. Materials should not change at building comers as this gives them a “pasted-on “ look.

7.2.11 Robust wood detailing and ornamentation adding traditional residential character and visual complexity is encouraged.

7.2.12 Oversize square or round columns supporting porch or portico roofs are encouraged.

7.2.13 Substantial decorative wood balustrades are encouraged.

7.2.14 Colour schemes employing two or more contrasting or complementary hues emphasizing architectural details such as wood window trim, fascia boards, etc. is encouraged.

7.2.15 The use of the following window types are encouraged:

i. traditional rectangular wood windows with wide wood trim and casings is encouraged;

ii. traditional bays and corner windows are encouraged;

iii. Bay windows, turrets, box windows and dormer windows.

7.2.16 The amount of window to wall area should be limited to give a traditional, substantial appearance.

7.2.17 Window arrangement from floor to floor should demonstrate a balance of order, if not a geometric symmetry.

7.2.18 Feature windows with wooden grilles or stained-glass panels are encouraged.

7.2.19 Oversize square or round columns supporting porch or portico roofs are encouraged.

7.3 Landscape Design, Amenities, and Utilities

7.3.1 Typical building heights in Old City will be up to three storeys. Building heights greater than three storeys may be considered where:

i. stepped transition is provided with adjacent land uses and built forms

ii. height impacts are minimized by on-site or nearby natural or built features (e.g., slope of land or major transportation corridor)

7.3.2 Where consistency in massing and height along a street exists, the height of the new development should respond sensitively to that of adjacent development. A strategy would be stepped massing.

7.3.3 Window boxes and planters are encouraged.

7.3.4 Porches, verandas and balconies are encouraged as traditional socializing spaces and as important elements in building massing.

i. Porches form a void or open space at the base of a building, providing a balance to the solid building mass beyond and above.

ii. Streetscapes are strengthened by the repetition of predominant porch forms.

iii. Recessed balconies provide private covered outdoor open space and add interest to the upper floor of a building facade in much the same way as a porch affects the lower floor.

iv. Balcony projections provide outdoor open space and limited facade relief.

7.3.5 Where garages are connected to a dwelling unit, development of the roof area as an outdoor living space is encouraged.

7.3.6 The inclusion of special design features at pedestrian and vehicle entrances to the site are encourages, such as gates, canopies, pilasters, accent plantings, accent lighting, address numbers, etc.

7.3.7 When fences are used as screens, the fence design shall be highly detailed, and in keeping with traditional residential character

v. Picket fence, decorative wood and lattice.

vi. Plain board or chain-link fencing is discouraged.

7.3.8 When walls are used as screens, the face of the wall visible from the street shall be a highly textured finish, such as: exposed aggregate, concrete, brick, split face concrete, stucco, stone.

8. INDUSTRIAL AND LIGHT INDUSTRIAL

Industrial

The Industrial designation is intended to accommodate large-scale industrial operations that require extensive land, with access to key land and water transportation links that support trade

New Industrial developments should focus on efficient site layout, positive street relationship, using durable materials, and implementing energy efficient and sustainable design features.

Light Industrial

Light Industrial areas promote business and employment opportunities close to urban centers, offering jobs and services within proximity to residential areas. These zones are designed to be compatible with the surrounding urban environment, while accommodating the space, activities, and transportation links necessary to support industrial and commercial operations.

New light industrial developments should incorporate design features that blend functionality with urban compatibility, enhancing both business operations and the surrounding community. To create vibrant light industrial neighbourhoods ensure developments respect adjacent uses, include active ground floor uses, and use energy efficient and sustainable design features

8.1 Site Planning, Access, and Parking

8.1.1 Provide well-defined vehicle access points that efficiently connect to major transportation corridors. These access points should support smooth logistics and reduce traffic impacts on surrounding areas.

i. Consider various transportation modes including road, rail, and water-based networks and integrate required connections into new developments.

8.1.2 Provide strong pedestrian linkages through development sites without conflict with vehicles.

i. Consider potential for connecting to surrounding off-site walkways and green spaces.

ii. Provide clear on-site pedestrian pathways from surface parking to building entrances and from outdoor amenities to the street/ sidewalk.

8.1.3 Where new developments are proposed with adjoining non-industrial uses, employ the following strategies to reduce visual impacts and minimize noise:

i. Implement a double row of trees or dense landscaping to create a natural buffer.

ii. Incorporate fencing or architectural screens that complement the surrounding landscape.

8.1.4 Create safe industrial developments for all community members

i. Avoid building recesses, dark alcoves and the creation of hiding spots.

ii. Avoid passageways that are 'movement predictors' (pathways with no route options or forks).

iii. Avoid creating walls and sight-line obstructions. Keep shrubbery low and tree branches pruned up to eye level.

8.1.5 Position loading docks and service areas away from non-industrial uses, ensuring that trucks and heavy vehicles do not pass through or park near residential properties.

8.1.6 Include bike facilities within the development, such as secure bicycle storage and end-of-trip amenities (e.g., showers and lockers), to promote and support multi-modal transportation options for employees and visitors

8.2 Street Interface, Building Scale and Form, Architectural Design and Materiality

8.2.1 Orient the longer sides of buildings along primary streets to create a strong street presence, with the main building entrance directly facing the street to support accessibility and wayfinding.

8.2.2 Incorporate windows wherever feasible to allow for a visual connection between industrial processes inside the building and the outside/public realm

8.2.3 Where windows at eye-level are not feasible, Position windows at higher levels to distribute light evenly without compromising wall space or privacy.

8.2.4 Where windows are not suitable, create visual interest and a 'rhythm' to streetscape by incorporating distinctive vertical elements, planting vines, painting murals, or incorporating other architectural detailing elements.

8.2.5 Utilize skylights or roof windows to bring in natural light from above, especially in large industrial buildings where side windows may not provide sufficient illumination.

i. Space skylights evenly across the roof to achieve balanced lighting throughout the interior, minimizing the need for artificial lighting.

8.2.6 Provide human scaled building entrances that include canopies, awnings, or trellises, clearly visible from the street.

8.2.7 Use durable, high-quality materials that reflect the industrial character while contributing to the building's longevity and resilience.

i. A material palette that includes simple, robust industrial materials including corrugated steel and concrete block, combined with natural materials including heavy timbers and glulams, is recommended.

ii. Entrance materials that provide texture, color and warmth are recommended to offset large, less articulated industrial facades.

8.2.8 Integrate translucent or frosted wall panels along key sections of the facade to diffuse natural light into the building, while maintaining energy efficiency and privacy.

8.2.9 Break up the visual bulk of large buildings with architectural articulation, varied rooflines, and facade treatments.

8.2.10 Consider using setbacks or stepped facades to reduce the visual impact on surrounding areas, especially near residential or public spaces.

8.2.11 New developments should strongly consider building and roof forms that support energy efficiency, renewable energy capture and enhance natural light in interior spaces. Refer Section 3.1 for more details.

8.2.12 Orient non-industrial uses including

showrooms, retail and office spaces and staff rooms to the street within lower building forms, providing "eyes on the street" and a human scaled interface between the street and the larger industrial building.

8.2.13 For retail and other ancillary uses, provide greater transparency at grade

8.2.14 Covered outdoor workspaces are encouraged, where possible.

8.2.15 Multiple entrances for different uses/ units are encouraged. Each entrance should be designed to have transparency at grade, weather protection, setbacks (if needed), and outdoor conflict-free pedestrian pathways from the street and parking.

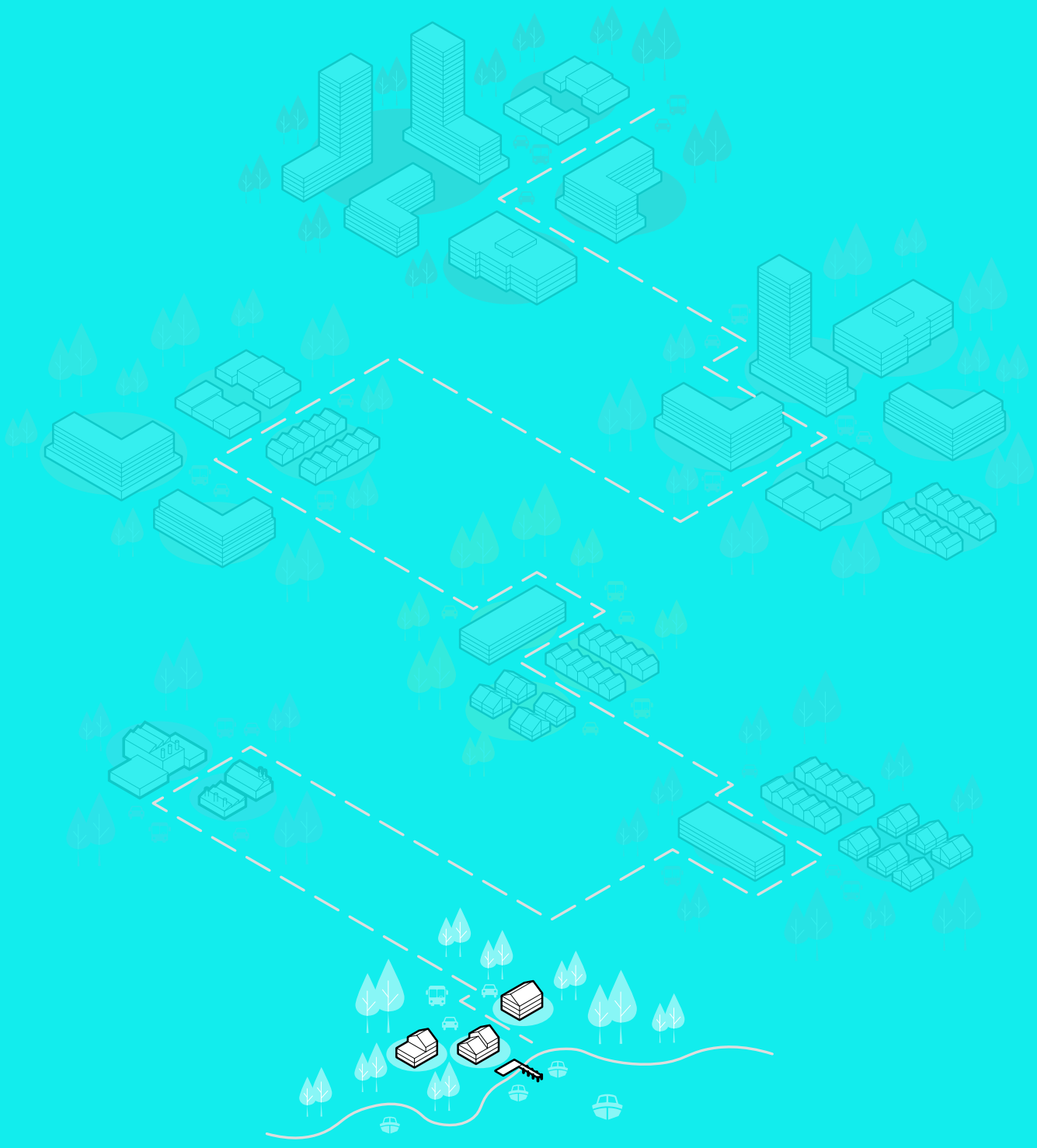
8.2.16 Neighbouring properties should share vehicle access points, where possible.

8.2.17 Avoid long stretches of blank, unarticulated walls at grade.

8.2.18 Articulation of facades along primary street frontage is encouraged. Avoid the boxy appearance typical of industrial buildings, making them more visually interesting and suitable for an urban context.

8.3 Landscape Design, Amenities, and Utilities

Refer to the general guidelines for landscape design, amenities, and utilities considertations for Industrial and Light Industrial Uses.



9. WATERFRONT

Nanaimo is a uniquely situated harbour city. The Waterfront designation is applied to ocean and foreshore areas in the city. It designates lands for a wide variety of uses that interface with the ocean environment. (See Figure 27) New developments along the waterfront could feature marine focused industry, small scale local, services, mixed-use, and residential uses.

The character of Nanaimo's waterfront varies, with residential areas to the north and more intense land uses as you move south toward Downtown. The harbor waterfront, stretching from the Departure Bay Ferry to the Nanaimo River Estuary, serves as the city's "working" waterfront, supporting marine industries, commerce, tourism, and recreation.

The design guidelines in this section focus on ensuring strong physical and visual public access to the waterfront, protecting waterfront lands that support marine dependent uses and maintaining key waterfront views.

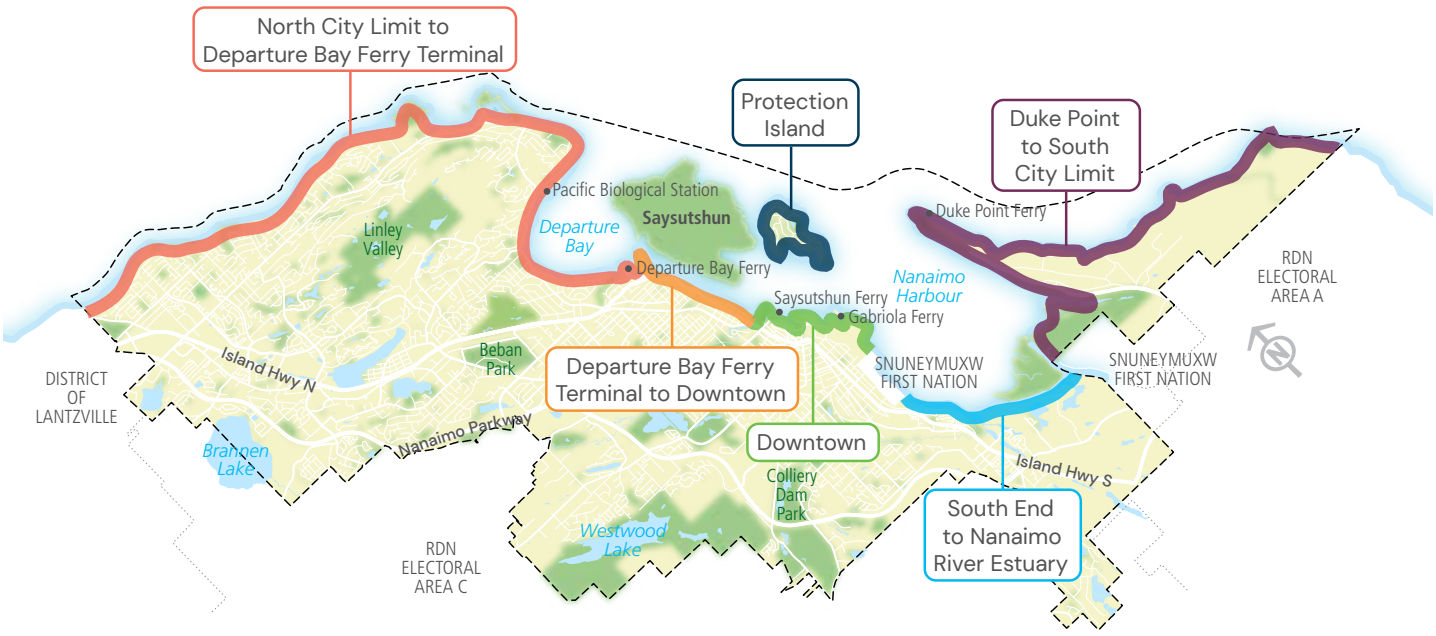


Figure 27: Illustrative Map of Nanaimo Waterfront Segments

9.1 Site Planning, Access, and Parking

9.1.1 In mixed-use areas, design lower floors for commercial or community-oriented uses that activate the waterfront, while residential units or offices occupy upper levels, ensuring vibrancy throughout the day.

9.1.2 Locate access points to buildings in a location that minimizes disruption on active and living shorelines.

9.1.3 For marine-focused industries and small-scale services, ensure that public access spaces face the waterfront and operational needs are accessed from the rear or side yards. Notwithstanding, primary street frontages such as Stewart Avenue should be designed with a positive street interface.

9.1.4 Ensure that the design of buildings and structures preserves key view corridors to the waterfront from surrounding streets and public areas.

9.1.5 Provide frequent and visible access points from adjacent streets to the waterfront, ensuring that no area is isolated. These should include accessible ramps, stairs, and pathways for all users.

9.1.6 Incorporate public plazas, seating areas, and small parks along the waterfront, designed to encourage gathering and leisure activities, enhancing the community's connection to the water.

9.1.7 Where possible, create public access for small watercraft launches via the ramp, dock, or pier structures associated with development.

9.1.8 The unique nature of waterfront developments may present considerable challenges in terms of locating infrastructure and parking. In all cases, design should prioritize pedestrian access and screen infrastructure from areas with the most pedestrian traffic.

9.1.9 Incorporate loading spaces discreetly into the design utilizing quality exterior finishes for servicing doors which fully screen the servicing area and are consistent with the overall architectural expression of the building.

9.1.10 Incorporate additional bicycle parking or reserve additional space for bicycle parking beyond bylaw requirements.

9.1.11 Environmental design along or near the foreshore that balances accessibility needs with ecological protection is encouraged and favoured over excessive signage or fencing. Provide public overlooks or welcoming environments to observe the shoreline and sub-aquatic marine life.

9.2 Street Interface, Building Scale and Form, Architectural Design and Materiality

9.2.1 Orient buildings along the waterfront to face the water, with active frontages like storefronts and restaurant patios that engage with the public realm and enhance the visual connection to the water.

9.2.2 Provide safe, universal access to the waterfront for pedestrians and cyclists of all ages and abilities.

9.2.3 Trees are intended to enhance local ecological conditions, reduce urban heat island effect, improve the pedestrian realm and assist in defining overall neighbourhood character and sense of place.

i. Street end views to the waterfront should be given consideration in the placement and planting of trees.

ii. Street, boulevard and public realm trees should be selected with consideration to scale, canopy shade, and have a high tolerance to salt and wind.

9.2.4 Materials that reference a west coast marine identity are expected such as cedar siding, corrugated metal, or wood.

9.2.5 Marine industrial colours are encouraged.

9.2.6 Avoid excessive variation in roof forms or articulation of building facades. Simple peaked roofs or angled flat roofs are acceptable with minimal dormers.

9.2.7 Materials that provide texture, color and warmth are recommended to offset large, less articulated industrial facades.

9.2.8 The Nanaimo waterfront will have unique seasonal qualities and influences that differ from elsewhere in Nanaimo. Design for flexibility and diversity in tenants for all waterfront buildings. This means:

iii. Incorporate windows and pull up doors in areas that face the waterfront walkway to facilitate temporary or seasonal businesses.

iv. Support simple, large span spaces that may be divided into smaller businesses or combined into a larger business over time through interior changes only.

v. Design for multiple entries to buildings off of a single primary access point to facilitate the long term flexibility of the structure.

9.3 Landscape Design, Amenities, and Utilities

9.3.1 Allow for additions to roof surfaces that generate electricity or capture rainwater to take advantage of buildings unique waterfront location. This may include solar panels, solar hot water heating, or wind mills. Integrate these elements into the overall building design to avoid a tacked on appearance.

9.3.2 Allow for alternative building types that are suitable for the marine environment

9.3.3 Consider creating intimate open space experiences like the City's Waterfront Walkway,, outdoor seating opportunities for viewing Mount Benson and the water.

9.3.4 Provide opportunities for seasonal events, local markets, festivals and gatherings along the waterfront.

9.3.5 Where marine-focused industries operate, create buffer zones with landscaping, fencing, or architectural features to separate operational areas from public access while maintaining visibility of maritime activities.

9.3.6 Reflect maritime elements in the public realm and site furnishings.

i. These include shipping cleats, pile/ pier structures, cabling.

ii. Material finishes should be robust, resistant to salt corrosion and reinforce the waterfront character of the site.

9.3.7 Consider surface materials of site furnishings that utilize long-lasting materials including certified hardwoods and metal finishes in order to minimize long term maintenance requirements.

9.3.8 Incorporate art into building facades, entrance walkways and railings.

9.3.9 Encourage the placement of art in distinctive locations unique to waterfront buildings.

9.3.10 Integrate public art into the design of the public realm

i. Public art themes should focus on sustainability, maritime, and community placemaking.

9.3.11 Consider interpretive displays to foster interest and awareness of local context and heritage.

9.3.12 Encourage a variety of ways to visually and physically engage the water's edge.

10. GLOSSARY OF TERMS

Blue-Green Roof System: Blue-Green roof system combines blue and green roof technologies. Conventional green roofs use a drainage layer to provide lateral drainage and irrigation. Blue roof technology, however, aims to increase both the volume of water stored and control the amount of water released to ease the burden on the overall stormwater system. When combined with a green roof system they maximize rooftop stormwater management capability. This may greatly reduce the need for other on-site stormwater management tools, such as cisterns, detention ponds, or underground storage tanks.

Building Envelope: The building envelope includes all the building components that separate the indoors from the outdoors. Building envelopes include the exterior walls, foundations, roof, windows and doors. The performance of the building envelope is impacted by a number of sub-systems, such as heating, cooling and ventilating equipment, plumbing and electrical systems. The interaction of the sub-systems with the components of the building envelope, as well as certain activities of the occupants, can affect the performance of the building envelope.

Continuous Soil Trench: Stormwater tree trenches are linear tree planting structures that promote healthy tree growth while also helping to manage runoff. They are often located behind the curb within the road right-of-way and consist of subsurface trenches filled with modular structures and growing medium, or structurally engineered soil medium, supporting an overlying sidewalk pavement. They improve tree health by providing access to soil, air and stormwater for irrigation, allowing them to survive longer in harsh urban conditions. They also provide road and walkway drainage, contribute to stormwater pollutant removal and decrease the volume of urban runoff entering local waterways.

CPTED (Crime Prevention Through Environmental Design): Refers to a group of strategies and concepts including the design of buildings and landscaping intended to reduce the fear of crime and opportunities to commit crimes.

Fenestration: The arrangement of windows and doors on the elevations of a building.

High Value Trees: Includes trees that are worthy of retention efforts based upon the review of a professional (International School of Arboriculture [ISA]) arborist that includes criteria such as age, structure, health, vitality, species, the tree's ability to withstand development activities in and around its above and below ground structures, the suitability of that tree relative to its location and on-site use and infrastructure, and the feasibility of the techniques required to retain the tree. These criteria will help inform when and where extra efforts can be focused to practically retain trees with an excellent chance of thriving into the future.

Low Impact Development (LID): Low impact development practices are ways of dealing with stormwater runoff in cities to prevent issues such as floods, erosion, sedimentation, and pollution. Unlike conventional stormwater management methods, LID mimics natural water cycles by increasing the infiltration of stormwater into the soil, where it gets absorbed by plants or filtered into underground aquifers.

Naturescape: Naturescape is a concept that aims to protect, maintain, and enhance wildlife habitat and native biodiversity. It encourages creating diversity, layers and edges, as well as using native plants on a property and in the re-design of landscapes. The principles of naturescaping include:

i. Stewardship: be a steward of the natural environment and local wildlife;

ii. Habitat: protect, restore and enhance natural habitat;

iii. Biodiversity: protect local biodiversity; and

iv. Conserve water: plant native species and reduce or eliminate lawn areas.

Permeable Paving: Permeable paving is a type of hard surfacing made of a porous material that enables rainfall to percolate and infiltrate through the pavement and into the aggregate layers and/or soil below. Permeable paving may be used as surfacing techniques for roads, parking lots, and pedestrian walkways. Permeable pavement surfaces may be composed of; pervious concrete, porous asphalt, paving stones, or interlocking pavers. Unlike traditional impervious paving materials such as concrete and asphalt.

Placemaking: Placemaking is a collaborative process that involves designing and developing public spaces to enhance the quality, identity, and functionality of a location. It aims to create spaces that are attractive, accessible, and meaningful to the community, fostering a sense of belonging and improving social, cultural, and economic vitality. Placemaking typically

integrates local culture, environmental features, and community needs, encouraging interaction, creativity, and a stronger connection between people and their surroundings.

Pollinator Friendly Planting: Pollinator friendly planting design is the intent of growing specific nectar and pollen- producing plants, in a way that attracts pollinating insects known as pollinators. Pollinator gardens are a way to offer support for these species. These gardens should provide various nectar producing flowers, shelter or shelter-providing plants for pollinators, and avoid the use of pesticides.

Private Open Space / Amenity Space: An open area or place that is privately owned and exclusively occupied, usually attached to a private dwelling or unit. Some privately owned open space can be made available for the public to access and use

Public Art: Art that is created for the general public to see and experience as a part of a new development. It may be located on private land and visible from public ream, or located along a statutory right of way, or located on public realm and secured through the development permitting process.

Soil Cells: Soil cells are modular systems that provide high quality uncompacted soil volumes for tree roots within a matrix that can be designed to site specifications. The cells are designed to provide trees in urban environments with suitable conditions that promote healthy growth, without disturbing the structures above.

Streetwall: A streetwall refers to the continuous line of building facades that align along the edge of a street, creating a defined boundary between the public space of the street and the private space of buildings.

Thermal Bridging: A thermal bridge, also called a cold bridge, heat bridge, or thermal bypass, is an area or component of an object which has higher thermal conductivity than the surrounding materials, creating a path of least resistance for heat transfer. As we insulate buildings to a higher level, thermal bridges can become a signific; ant source of heat loss.