



Development Permit Application for 833/835 Dunsmuir Road:

Official Community Plan Development Permit Area Guidelines:

18.5.2 Natural Features

Natural features and areas to be preserved, protected, restored, and enhanced where feasible:

Guideline	Comments
Retain existing healthy native trees, vegetation, rock outcrops and soil wherever possible.	N/A – due to underground parking structure.
Preserve and enhance native tree and shrub clusters that overhang the waters edge as these provide shade, protection and feeding habitat for fish and wildlife.	N/A
Preservation of natural topography is favoured over blasting or building of retaining walls.	N/A – due to underground parking structure.
Narrower maneuvering aisles, fewer and smaller parking spaces can be considered where natural areas are being conserved.	N/A – due to underground parking structure.
Design new development and landscaping to frame rather than block public views.	N/A
Avoid disturbing, compacting and removing areas of natural soil as this can lead to invasion by unwanted plant species, poor water absorption and poor establishment of new plantings. Use of local natural soil in disturbed and restored areas will support re-establishment of ecosystem functions.	Topsoil will be stripped and stored for re-use.

18.5.3 Biodiversity

Landscaping features that will protect, restore and enhance biodiversity. Where feasible:

Guideline	Comments
New landscaping shall consist predominantly of native plant and tree species. Plants that are native to the Coastal Douglas-fir biogeoclimatic zone are preferred in landscape treatments as they provide habitat for threatened indigenous flora and fauna. Drought tolerant plants native to western North America, that are known to be non-invasive, are a good alternative choice for landscaped areas.	Native shrubs and groundcovers will be emphasized for the Building Permit submission.
In residential locations plan for 'nature out front'; for new landscaping in front and exterior side yards use a variety of site-appropriate, native species; thereby contributing positively to pedestrian friendly urban streets, future greenways and habitat enhanced corridors.	The building is surrounded by diverse landscape elements including deciduous trees+ medium shrubs along Dunsmuir Rd, small deciduous trees and large shrubs between neighbouring buildings. Stepped, layered planters wrapped in vines follow the slope of Dunsmuir Rd. and wrap around the East side of the property, enhancing the streetscape experience.
Choose trees and plants for site conditions; consider shade, sunlight, heat, wind-exposure, sea spray tolerance, and year round moisture requirements in their placement.	Included.
Consider the habitat and food needs of birds, pollinators, and humans in tree and plant species	Included.

selection and placement; native plantings and food gardens compliment each other.	
Encourage native plant and food gardens to spill from private land into boulevards.	Challenging on this site due to changes in grade and planter walls.
Avoid monoculture plantings, especially expanses of turf grass outside of playing field sites.	A variety of plant species have been selected for this site.
Snags, logs, driftwood and rock cairns may be used as interesting landscaping features that also provide habitat for native flora and fauna.	N/A
Avoid using fast-growing non-native plants to cover and retain soils as they may become invasive and a constraint to the establishment of other plants.	N/A
Locate civil servicing pipes/lines under driveways or other paved areas to minimize tree root damage.	Servicing pipes will be located to minimize tree root damage.
Design retaining wall spacing and landscape planting areas of sufficient width and depth to support plantings	Retaining walls / planters have all been designed in consultation with adequate width and depth to support landscape plantings.
Support the daylighting of portions of the stormwater system for enhanced habitat.	N/A for this site.
Aim to meet the Canadian Landscape Standards in all landscaping installations.	Yes.

18.5.4 Natural Environment

Measures to protect, restore and enhance the natural environment (limit noise, light and air pollution).

Where it is reasonable:

Guideline	Comments
Strategically locate leafy trees/ hedges and water features to mask urban noises such as traffic, garbage collection and delivery locations. Consider that leafy rough barked trees, vine covered walls and natural ground cover materials will help dampen urban noise.	The extensive variety of shrubs, trees and vine-covered layered planters wrap the site, creating a protective barrier between the urban noise and the building.
Use International Dark-Sky Association approved lighting fixtures in outdoor locations. Outdoor lighting shall be no brighter than necessary, be fully shielded (directed downward and designed to serve pedestrian needs), have minimal blue light emissions and only be on when needed. Avoid vanity lighting, and lighting directed into the night sky and trees tops.	All outdoor lighting will be carefully selected from the International Dark-Sky Association approved fixtures and will be placed in a downward direction to avoid unnecessary disturbances.
Light spillage on to waterways is strongly discouraged.	Light spillage on to waterways will not occur on this site.
Place trees and vegetation near sources of air pollution including busy roadways, to assist in reduction of air pollution through the collection of particulate matter on leaves and needles, and absorption of toxic gases, including but not limited to: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, carbon dioxide, cadmium, chromium, nickel and lead.	Included.

18.5.5 Drainage and Erosion

Measures to control drainage and shoreline erosion. Where it is reasonable:

Guideline	Comments
Preserve, restore and enhance treed areas. Trees are the most effective form of absorbent landscaping due to their extensive root zones and their ability to both absorb water from the soil and intercept precipitation on leaves, needles and branches. Consider that native conifers are well adapted to local wet winters.	N.A.
Reduce the impact of surges in stormwater on shorelines by designing on-site stormwater retention systems to contain the first 3 centimetres [1.25 inches] of precipitation on site, per precipitation event; and incorporating rainwater collection systems into roof design and landscaping.	Storm water surges will be mitigated by the fact that there is very little exposed hard surface on the property.
Consider using shared private/ public rain gardens. Direct a portion of stormwater to adjacent public open spaces, when deemed appropriate by the Director of Engineering and Public Works.	Consider collection of roof water for irrigation use?
Maximize the ratio of planted and pervious surfaces to unplanted surfaces, and design paved areas to direct water towards vegetated areas, to help reduce surface run off. Where paved surfaces are needed, intersperse with drought resistant vegetation and trees, to help absorb stormwater, provide shade and reduce the local heat island effect.	The remaining lot area is predominantly covered by vegetated areas, the ground floor patios will have pervious pavers, and the pathways will direct water towards vegetated areas.
Use porous surfaces to enhance stormwater infiltration, permeable paving is preferable for all open air parking areas. Ensure installation methods contribute to sustained permeability and retention of stormwater on the site.	Most of the lot is porous in order to facilitate stormwater infiltration, and parking is located below ground.
Choose absorbent landscaping materials; leaf mulches, wood chips and good quality top soil, over gravel, pavers and concrete. Provide mulch of organic, locally derived materials; leaf mulch from local tree leaves is most desirable.	Included.
Incorporation of rain gardens, bio-swales, rain barrels, and even small depressions (puddles) into landscaping will help reduce surges of stormwater entering local waterways.	N/A.
Planting densities should ensure that vegetated areas will have near 100% plant coverage after two full growing seasons.	Included.

18.5.7 Native Bird Biodiversity

Measures to protect, restore and enhance native bird biodiversity. Where it is reasonable:

Guideline	Comments
Protect and enhance habitat features like mature trees, shrub clusters, native fruit bearing shrubs, fresh water ponds and ephemeral damp areas.	Measures have been taken to maximize potential to retain existing Cedar and Maple trees adjacent to the East side of the lot.

Encourage increased front yard habitat along quieter streets to reduce bird vehicle conflicts and enhance the pedestrian experience through native plantings.	N/A.
Sustain a mix of habitat types; including forest, shrubland, meadow, riparian wetland and coastal shoreline ecosystems in landscaping.	N/A.
Incorporate a vertical vegetation structure [vertical habitat] including layers of ground cover, shrub, understorey and canopy in landscape design.	N/A.
Choose a range of native plant species and sizes; a mix of coniferous and deciduous trees will enhance bird species diversity.	Will be included.
Incorporate architectural features that limit collisions between birds and windows including patterned, frosted or tinted glass, exterior louvers, blinds, sun shades and canopies.	This will be considered as the project enters design development.
Cap and screen all ventilation pipes and grates, avoid openings greater than 2.0 x 2.0 cm.	OK

23.5 Guidelines

Guideline	Comments
The size and siting of buildings that abut existing single- and two-unit and townhouse dwellings should reflect the size and scale of adjacent development and complement the surrounding uses. To achieve this, height and setback restrictions may be imposed as a condition of the development permit.	N/A
New buildings should be designed and sited to minimize visual intrusion on to the privacy of surrounding homes and minimize the casting of shadows on to the private outdoor space of adjacent residential units.	The building has been sited and stepped back appropriately, with the surrounding landscape creating a privacy buffer for adjacent residents. Shadow studies have been conducted for the building at various times during Summer Solstice, Spring/Fall Equinox and Winter Solstice.
High-density multi-unit residential buildings or mixed commercial/residential buildings in commercial areas should be designed so that the upper storeys are stepped back from the building footprint, with lower building heights along the street front to address human scale, public space, and maximum light penetration at street level.	N/A
Landscaping should emphasize the creation of an attractive streetscape, as well as provide privacy between individual buildings and dwellings, screen parking areas and break up large expanses of paving.	The layered landscaping enhances the streetscape and provides privacy.
Surface parking areas in developments less than five storeys in height, will be situated away from the street and screened by berms, landscaping or solid fencing or a combination of these three.	N/A
Underground parking should be encouraged for any multi-unit residential buildings exceeding four storeys.	Underground parking has been incorporated in this building.
The retention of public view corridors, particularly views to the water, should be encouraged wherever possible.	There are no public view corridors on this particular property.

To preserve view corridors and complement natural topography, stepped-down building designs are encouraged for sloping sites.	N/A
Retention and protection of trees and the natural habitat is encouraged wherever possible.	Where possible, trees have been retained.
Townhouses will be designed such that the habitable space of one dwelling unit abuts the habitable space of another unit and the common wall overlap between adjoining dwellings shall be at least 50 percent.	N/A
Site lighting should provide personal safety for residents and visitors and be of the type that reduces glare and does not cause the spillover of light on to adjacent residential sites.	Site lighting will be designed for residential safety and reducing glare, without causing spillover of light on adjacent sites.
Avoid excessively long blank walls adjacent to public streets.	Long blank walls are not present in this project.
Use architectural emphasis to define street corners.	Cladding materials playfully highlight and layer each corner of the building, and the landscape elements also emphasize the street corner.
Provide for building occupants to overlook public streets, parks, walkways and spaces, considering security and privacy of residents.	All units in the building have patios or balconies, enhancing the safety and privacy of residents.
Provide for slightly raised entrances to ground floor residences along with private yards that are accessible from the fronting street or lane to encourage community interaction.	Patios off ground floor units front the street. There is also a patio area for residents located along the street edge to encourage community interaction.
Use of indigenous and adaptive plant species is encouraged.	Included
All exterior lighting should avoid excessive stray light pollution and should meet International Dark-Sky standards.	Exterior lighting will meet International Dark-Sky standards.
Wherever possible, outdoor storage and parking areas should be screened from view.	Parking is located below ground.
Avoid expansive blank walls (over 5 m in length) and retaining walls adjacent to public streets.	No expansive blank walls are in this project, and retaining walls forming planters are stepped back from public streets.
Exposed stairway and hallways on the exterior street facing portion of the building are discouraged.	Stairways and hallways are not exposed.

24.5.1 Siting of buildings and structures

Where it is feasible:

Guideline	Comments
Orient buildings to take advantage of site specific climate conditions, in terms of solar access and wind flow; design massing and solar orientation for optimum passive performance.	Building is oriented for passive solar where practical, and will incorporate solar panels on the roof.
Build new developments compactly, considering the solar penetration and passive performance provided for neighbouring sites, and avoid shading adjacent to usable outdoor open spaces.	Building is flanked on all sides by either street, driveway or parking, so shading of neighbours is minimal. Usable outdoor open space receives sun morning to mid-day depending on the season.
In commercial, residential or commercial mixed-use designated areas with taller developments, vary	N/A

building heights to strategically reduce the shading on to adjacent buildings.	
Provide space for pleasant pedestrian pathways between buildings.	N/A
Strategically site buildings to sustain and increase the community's urban forest tree canopy cover.	N/A
Provide space for significant landscaping including varying heights of trees, shrubs and ground covers.	Significant space for landscaping has been provided, with varying heights of all three types of landscaping incorporated.
Provide intuitive pedestrian access to storefronts and businesses with site connectivity to nearby amenities and services to help promote walking and the use of other active transportation modes.	N/A
Provide usable outdoor amenities such as seating, food gardens, mini-libraries, and play spaces in semi-public areas to enhance the experience of walking and recreating in the neighbourhood.	N/A There aren't really any semi-public spaces on this property.
In residential neighbourhoods, provide space for larger trees and a second row of street trees as this will enhance the pedestrian experience by lowering wind velocity at street level, reducing excessive heating at ground level and absorbing vehicle and other urban noises.	A row of street trees facing each street has been provided. A second layer of trees are sited closer to the building, where appropriate.

24.5.2 Form and exterior design of buildings and structures.

Where it is feasible:

Guideline	Comments
Orient larger roof surfaces to the south for potential use of solar panels or photo-voltaic roofing.	The upper roof at L5 will incorporate solar elements.
Use roof designs that reduce heat transfer into neighbouring buildings, helping reduce the local heat island effect and the need for cooling of buildings in warmer months.	Selection of appropriate roofing design will help to reduce heat island effect.
Place more windows on the south side of buildings to increase solar gain, and fewer/ smaller windows on the north side to minimize heat loss.	This is generally good practice, however in MURB building types, this can sometimes be challenging due to unit layouts. Glazing in general is generous without being over-expansive.
Use roof over-hangs, fixed-fins or other solar shading devices on south and west facing windows to reduce peak summer heat gain while enabling sunlight penetration in winter months.	This has been considered and will be further detailed during design development.
Install adjustable overhangs above windows that can help control the amount of sun exposure in warmer months thereby reducing need for cooling.	Balcony shapes on the south elevation have been designed to provide shading for windows below.
Provide building occupants with control of ventilation; i.e. windows that open.	Minimum one operable window per room/space will be provided throughout.
Skylights are discouraged as they decrease insulating values and can interfere with solar panel installation.	No skylights have included in this project.
Add rooftop patios and gardens, particularly food producing gardens, as they can contribute to local resilience, livability, and reduction in greenhouse gas production by reducing food transportation costs.	Rooftop patios are included for 5 th floor residents, and include garden spaces.

Install greenhouses for growing food on rooftops where neighbourhood privacy and light intrusion concerns are mitigated.	Roof top greenhouses have not been included in this project at this time.
Avoid heavily tinted windows or reflective glass which will diminish the natural daylighting of interior spaces, thereby requiring increased energy requirements for interior lighting.	Glazing will be specified to provide a balance between adequate solar shading and light infiltration.
In exposed marine locations select durable materials that will withstand weather and sea spray, to ensure low maintenance costs and infrequent replacement needs.	High performing, durable materials have been specified.

24.5.3 Landscaping

Where it is feasible:

Guideline	Comments
Develop a front yard landscape design that is natural and delightful so residents do not need to leave the neighbourhood to experience nature.	Front yard landscaping is extensive, and common space patio is surrounded by vegetation.
Choose open space and landscaping over dedicating space to the parking and manoeuvring of private motor vehicles.	All parking is located below grade.
Conserve native trees, shrubs and soils, thereby saving the cost of importing materials and preserving already sequestered carbon dioxide.	N/A
Use deciduous trees for landscaping along southern exposures, as they provide shade in the summer and allow more sunlight through in the winter.	Deciduous trees are also located along the Southern portions of the lot.
Strategically place taller trees and vegetation on the south and west sides of buildings where there is more direct sun exposure.	This will be combined with preserving views for residents.
Strategically place coniferous trees such that they can buffer winter winds.	This will be considered as applicable and practical.
As context and space allow, plant trees that will attain a greater mature size, for greater carbon storage; removal of healthy trees is discouraged as the loss of the ecosystem services provided by larger trees will take many years to recover.	Included.
Plant trees with a larger canopy cover along roadways and sidewalks, thereby providing shading of paved areas, lowering the heating of paved surfaces and reducing the wind velocities in these pedestrian areas.	Medium (larger) deciduous trees are located along Dunsmuir Rd. and Garrett Place.
Plant shorter and sturdier vegetation closer to buildings and other structures, and taller vegetation further away to avoid potential damage from strong winds blowing vegetation against buildings.	Small shrubs are adjacent to building, and larger shrubs and trees towards the property lines.
For commercial areas, strategically increase green space between buildings, allowing room for landscaped pathways to improve the pedestrian experience, promote walking, and provide for improved light penetration on to sidewalks.	N/A
For parking areas and along boulevard/ sidewalk edges; plant trees to provide shade, store carbon and reduce the heat island effect.	N/A

24.5.4 Machinery, equipment and systems external to buildings and other structures.

Where it is feasible:

Guideline	Comments
For external lighting: <ul style="list-style-type: none"> • Choose efficient low-energy and long life technologies; • Design lighting to reinforce and compliment existing street lighting; • Use motion-sensitive or solar-powered lights whenever possible; • Layer lighting for varying outdoor needs; and • Provide lighting systems that are easily controlled by building occupants. 	Efficient low-energy lighting will be utilized and designed in order to complement existing lighting and be layered for various outdoor needs.
Use heat pumps, solar panels, green (living) roofing or an innovative system to improve a building's energy performance. Use durable, vandalism and graffiti resistant materials where neighbourhood surveillance may be limited.	Solar panels will be utilized to improve the building's energy performance.
Design for on-site heat recovery and re-use of water.	Re-use of water collected from the roof could possibly be considered for irrigation.
In commercial and industrial areas: design bicycle parking facilities to be inviting for cyclists. Locate bike racks near the main building entrance, with adequate lighting and weather protection.	Bicycle parking facilities are provided in the parking area. Bike racks are also located near the main entrance.
In commercial areas, provide fast charge electric vehicle charging stations near locations that have quick customer turnover, and ensure the station is easily accessible, well lit, and visible from the public street.	Infrastructure for Level 2 charging is being incorporated for all stalls in the parking area.
Provide car sharing facilities that are well lit, available for residents, and easily accessed from the public street.	There are no car sharing facilities for this site.

24.5.5 Special Features

Where it is feasible:

Guideline	Comments
Select building materials that have been shown to have a high level of durability for the use intended.	High performing, durable materials have been specified.
Use wood for construction as a means to sequester carbon dioxide - North American grown and sustainably harvested wood is preferable for building construction.	The building will be wood-frame construction over the parkade.
Select local and regionally manufactured building products whenever possible to reduce transportation energy costs.	This will be considered during further detailed design.
Reuse of existing buildings and building materials is encouraged.	This may not be appropriate, however materials will be recycled where possible.
Choose materials that have a high likelihood of reuse or recycling at end of life.	This will be considered during further detailed design.

25.5.1 Building and Landscape Design

Where it is feasible:

Guideline	Comments
Reduce the burden on built stormwater infrastructure by designing on-site retention systems to retain the first three centimetres (1.25") of stormwater on site, per precipitation event.	This will be considered during further detailed design and as noted above.
Provide space for absorbent landscaping, including significantly sized trees on the site and by not allowing underground parking structures to extend beyond building walls.	There is space for absorbent landscaping as well as significantly sized trees where appropriate.
Incorporate rainwater collection systems into roof design; consider using living roofs and walls as part of a rainwater collection system.	This will be considered during further detailed design.
Incorporate rain gardens into landscaping and direct rainwater towards vegetated areas.	N/A for this project.
Intersperse paved surfaces with drought resistant vegetation that will provide shade on those surfaces and design the paved surfaces to drain into the vegetation.	This will be considered during further detailed desing.
Design landscaping with more planted and pervious surfaces than solid surfaces.	The landscaping has been designed with more planted and pervious surfaces than solid surfaces.
Direct stormwater towards adjacent public spaces, with rain gardens/ bioswales located on public property where it would benefit both the new development and the municipality and where it is deemed appropriate by municipal staff.	N/A for this project.

25.5.2 Landscaping - Select Plantings for Site and Local Conditions

Where it is feasible:

Guideline	Comments
Retain existing native trees vegetation, and soil on site.	Soils will be stripped and stockpiled for re-use as applicable.
Plant species native to the Coastal Douglas-fir biogeoclimatic zone, as they are most suited to our climate and require little additional irrigation once established.	Included.
Consider shade, sunlight, heat, wind-exposure and sea spray, as well as water needs in the selection and placement of plant species.	Included.
Group plants with similar water needs into hydro-zones.	Included.

25.5.3 Landscaping – Retaining Stormwater on Site

Where it is feasible:

Guideline	Comments
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Preserve and restore treed areas. Trees are the most effective form of absorbent landscaping due to their extensive root zones and their ability to both absorb water from the soil and intercept precipitation on leaves, needles and branches. Consider that native conifers are well adapted to local wet winters.	N/A
Use pervious landscaping materials to enhance stormwater infiltration; permeable paving is preferable for surface parking areas.	This will be considered where applicable.
Avoid disturbing, compacting and removing areas of natural soil, as these are naturally absorbent areas.	This will be considered where applicable, however it will be challenging due to underground parking structure.
Locate civil servicing lines along driveways and other paved areas, to lessen the disturbance of natural soils and loss of their natural absorption qualities.	This will be considered where possible.
Use good quality top soil and compost for the finish grading of disturbed areas to contribute to the water holding capacity of newly landscaped areas.	Included.
Choose bark mulches or woodchips for walking paths for enhanced absorption.	N/A
Plant at densities that will ensure vegetated areas have 100% plant canopy coverage after two full growing seasons. Consider that understory native plants are adapted to local climates, absorb seasonal soil moisture and reduce compaction due to foot traffic.	Included.

25.5.4 Landscaping - Water Features and Irrigation Systems

Where it is feasible:

Guideline	Comments
Use automated high efficiency irrigation systems where irrigation is required.	Included.
Incorporate stormwater retention features into irrigation system design.	This will be considered where applicable.
Use recirculated water systems for water features such as pools and fountains.	N/A for this project.
Install plantings and irrigation systems to the Canadian Landscape Standard.	Included.