

6. REZONING: 750-772 Pacific Boulevard – Northeast False Creek Sub-area 6B (Plaza of Nations)

Summary: To amend CD-1 (349) (Comprehensive Development) District for 750-772 Pacific Boulevard to permit the development of a variety of mixed-use terracing buildings up to 30 storeys in height, which include market residential units, commercial uses, social housing, civic facilities (including a community centre, ice rink, a 69-space childcare facility and music presentation centre), public plazas, public rooftop terraces and a seawall. The application is being considered under the Northeast False Creek Plan.

Applicant: James KM Cheng Architects Inc.

Referral: This item was referred to Public Hearing at the Policy and Strategic Priorities Meeting on June 20, 2018.

Recommended Approval: By the General Manager of Planning, Urban Design and Sustainability, subject to the following conditions as proposed for adoption by resolution of Council:

- A. THAT the application by James KM Cheng Architects Inc., on behalf of Canadian Metropolitan Properties Corp., to amend the CD-1 (349) (Comprehensive District) By-Law at 750 Pacific Boulevard [*Lot 155 False Creek Plan 21425 and District Lot 6352 Group 1 New Westminster District; PIDs 008-538-298 and 010-313-931 respectively*], to permit a mixed-use development with commercial, residential, community and civic uses, generally as presented in Appendix A of the Policy Report dated June 5, 2018, entitled “CD-1 Rezoning: 750-772 Pacific Boulevard – Northeast False Creek Sub-area 6B (Plaza of Nations)”, be approved subject to the following conditions:

CONDITIONS OF APPROVAL OF THE FORM OF DEVELOPMENT

- (a) That the proposed preliminary form of development be approved by Council in principle, generally as prepared by James KM Cheng Architects Inc. on behalf of Canadian Metropolitan Properties, and stamped “Received Planning Department, December 1, 2017” and reference drawings received on April 4, 2018, provided that the Director of Planning may allow alterations to this preliminary form of development when approving the detailed scheme of development as outlined in (b) below.
- (b) That, prior to approval by Council of the form of development, the Applicant shall obtain approval of a development application by the Director of Planning, who shall have particular regard to the following:

Urban Design

Form of development and density

1. Design development to the massing of the west building of the west block to create a more dynamic form and terracing pattern, to reduce the massing at upper levels, and to improve the relationship to the neighbouring building at Coopers Landing.

Note to Applicant: The 'habitable topography' concept of the terraced forms in most areas of the proposed development achieves a dynamic and organic composition through varied patterns of stepping heights and projecting forms. The western edge as currently proposed however, is rigidly patterned with uniform steps and extensive massing at upper levels. Various strategies including creating major breaks in building form, reducing massing at upper levels, and introducing varied setbacks and stepping patterns should be employed, as well as shifting eastward at upper levels aligning with portions of the Parq Vancouver building that obscure this portion of the view to the stadium spires. Achieving the intent of this condition will involve redistributing approximately 3,700 sq. m (40,000 sq. ft.) of residential density. Noting that the form of development is tightly tailored to achieve the principles of the Northeast False Creek (NEFC) Plan, reduction in overall density may be required.

Response:

The west building of the west block (Block A) has been further refined in the following ways with the goal to improve the relationship to the neighboring building.

Form:

Curved lines are introduced in both west and south faces to soften the overall building form.

Massing:

The reduced upper massing opens up views towards False Creek and Science World for both mid and upper level suites in Coopers Landing building, in comparison to the original rezoning massing.

Façade Articulation:

Varied balcony projections are introduced on both west and east sides of the west wing, which contribute to less monolithic façade expression.

In addition, the carved out 'valley' or 'gorge' expression has been applied to the south side of the north wing and the east side of the east wing that creates major vertical breaks in the building form.

2. Design development to shape and pull back the upper levels of the northeast corner of the east block to improve sunlight access to Georgia Wharf at 4:00 pm at the Equinox.

Note to Applicant: Pulling back and shaping the leading edge of the end of this building would open up further sunlight access to Georgia Wharf at

this time.

Response:

The proposed lower 'shoulder' at the east corner of the east block resulted in improved sunlight access to Georgia Wharf at 4:00 pm at the Equinox, in comparison to the original rezoning massing. (Refer to Arch. Drawing A.401 Sun Study by KPMB)

3. Design development to reflect in-process changes subsequent to the application dated December 1, 2017, that includes a reduction in the gross residential floor area to 149,109 sq. m (1,605,000 sq. ft.) and the accommodation of the civic centre on a maximum of three levels with full public access to the rooftop open space,.

Response:

The gross residential floor area is reduced to 149,109 sq.m (1,605,000 sq.ft.).

The Civic Centre programs are proposed at the east end corner of the east block (Block B) from Level 1 to Level 6: which results in high-visibility for all civic programs from Georgia Plaza and Pacific Blvd.

The Music Presentation Center is located at Level 1 with shared entrance and lobby space for the Ice Rink and Community Centre.

The Ice Rink is located at Level 3 with the capacity to share function space with community center at the same level.

The Community Centre is located at Level 3 - Level 6 with full access to the public rooftop open space at Level 6.

Also the Childcare facility is located at level 6 with direct access to the rooftop outdoor play area.

4. Design development to bring each Rezoning Site sub-area forward as a preliminary development permit application to ensure coordination and optimized relationships between the varied buildings that will comprise each block.

Note to Applicant: Composing blocks and frontages in a way that facilitates participation of multiple architects to contribute to the uniqueness of Northeast False Creek is part of the NEFC Urban Design Principles. The draft Design Guidelines for the site begin to articulate how this might be accomplished. The waterfront building (Rezoning Site sub-area C) is a particular opportunity for this given its visibility on the waterfront and the scale and form of the elements that comprise the preliminary form of development.

Response:

Each block (sub-area) is further developed to accommodate the varied building expressions at lower levels.

*The public realm is organized as a series of different character zones all of which are unique in terms of scale and character, integrating the architecture and the landscape, to create a remarkable and diverse series of connected places and experiences.
(Refer to Landscape Drawing Set, Open Space Framework L0.2-L0.31).*

Establishing a public realm framework with 8 distinct character zones provides an opportunity for multiple architects to participate in and contribute to the uniqueness of the development's public realm.

5. Design development to further reflect the concept of bringing greenery, gardens and other vegetation up the buildings in the overall form of development, the landscape design, and the sustainability strategies for the site.

Note to Applicant: The building designs must continue to evolve with plans, sections, details, and strategies that support the extent and diversity of trees and layered plantings, habitat, natural corridors, and rainwater management elements integral to the concept. See also Landscape Conditions (b)20 through (b)23 and (b)25 and Engineering Conditions (b)96 and (b)97 and (c)21.

Response:

Various tree and bush planters are provided at the ground level public realm, mid-level and roof top gardens in all three blocks to achieve the symbolic images that reference mountains and a vertical forest.

To achieve the continuous greenery in the overall form of development ,3 different types of planters are proposed at every residential terrace:

1. 1.45m wide continuous Edge Planter for Bushes
 2. 0.9m wide Free Standing Planter for Trees
 3. 3.63m wide Divider Planter for Tree and Bushes
- (Refer to Landscape Drawing Set, Planting Plans L4.01-L4.12 for proposed plantings and rainwater management elements (see also IRMP Appendix B).*

The details will be more fully developed to the satisfaction to the City at the DP stage, in consultation with City staff.

6. Design development to ensure that the underground structure is designed to support significant, regularly spaced trees of scale and type appropriate to the quality public realm and streetscape envisioned.

Note to Applicant: Support for the underground parking extending under the streets and many areas of the public realm is dependent on the ability to deliver a quality streetscape with trees of appropriate type and scale, planted "in-ground" conditions where they may thrive and are not compromised by virtue of placement over parking structure. See also Landscape Condition (b)21 and (b)25.

Response:

*The underground parking levels are designed to accommodate sufficient soil depths (2.1m) for mature trees in public realm above.
(Refer to Arch. Drawing A.309 Section)*

7. Retain the unique architectural design and resulting floor layout for the proposed development.

Note to Applicant: The unique architectural design was a key factor in the pro forma analysis and resolution of the community benefits offering. Should there be alterations to the elements of the building design affect the premium cost items or increases the sellable area, then the City may require the Applicant to pay an additional cash Community Amenity Contribution (CAC), based on the revised pro forma, prior to building permit issuance. See also Condition (c)57.

Response:

*The proposed design maintains the unique architectural design and floor layout.
(Refer to Arch. Drawing A.130 Typ Unit Layout by KPMB)*

Waterfront relationship

8. Design development to the waterfront plaza area to enhance the flexibility to host performances engaging the water, steps, plaza, and adjacent lower levels of the waterfront building.

Note to Applicant: The Retail Curation Strategy required at development permit application should aim to provide supportive ground-floor uses in the waterfront building and align with the Public Space Stewardship Strategy to support the overall goals of the NEFC Plan for the Events and Entertainment District. The waterfront building should be designed with the ability to open out and connect interior spaces to the adjacent waterfront area. The lower level terraces of the building should also be designed with potential for enjoying events in the waterfront plaza area.

Response:

Major enhancements were made to the waterfront building (Block C).

- *Elevated Public Roof Terrace at Level 3.*
- *Ramp access from south seawall naturally brings up pedestrians from waterfront promenade. And the south west corner lookout offers panoramic views of False Creek.*
- *The Public Pedestrian Bridge connects the Elevated Roof Terrace of Block C to the Civic Centre and to the Public Roof Garden of Block B.*
- *Newly Proposed Public Grand Staircase is proposed at N/W corner for high visibility from Central Plaza.*
- *Seating steps provide iconic views towards False Creek from different vantage points.*

- *The grand staircase provides Amphitheatre seating during special waterfront events*

These elements create a seamless interconnected pedestrian network in the complex – connecting the waterfront, public plaza and the civic centre.

Refer to Note #16 for the Retail Curation Strategy.

9. Design development to open out the lower level of the waterfront building to enable pedestrian level views and connections to the waterfront from the central plaza.

Note to Applicant: Consider pulling back the ground level of the building while retaining cantilevered or supported levels above to enable the waterfront building to achieve this while continuing to relate to the waterfront steps and carrying the extension of terracing up from the water level.

Response:

Refer to the Note #8.

10. Design development to provide inviting and public connections to upper level public spaces and rooftop terraces from the waterfront.

Note to Applicant: Highly visible and inviting access should be provided from grade at the waterfront and at the community centre, with bridging across the local street between the rooftop terraces of the waterfront building and the community centre. A combination of sculptural stairs/stepping terraces integrated into the building design and clear and accessible elevator access should be provided. See also Planning Condition (c)32.

Response:

Refer to the Note #8.

11. Design development to ensure that on-water structures are located, scaled and designed to enhance the experience of the waterfront.

Note to Applicant: The desire for a unique, more active and engaging waterfront as part of the Events and Entertainment District is a guiding principle of the NEFC Plan. While restaurants and other uses are encouraged on the water and at the water's edge, it is important that these elements are appropriately scaled, located, and designed to ensure that on balance the public visual connection and enjoyment of the water from the seawall is maintained and enhanced. It is important that the water at the foot of Georgia Street in the newly created inlet is not filled up and obscured with structures. In particular, consideration should be given to relocating the on-water building on the alignment of the east/west seawall connection through the waterfront building to open up views to the water along this important pedestrian and cycling connection.

Response:

The on-water structures will be designed to enhance the waterfront experience and to the satisfaction of the City at the DP stage, in consultation with City staff.

12. Design development to provide two publicly accessible waterfront docks or piers that extend into the waterfront at the turning points of the proposed seawall. Secure public access to these waterfront docks or piers with a statutory right-of-way (See also Engineering Condition (c)15 and (c)17).

Response:

Two publicly accessible waterfront docks or piers are proposed.

13. Design development in consultation and coordination with City staff to locate and design the Seaside Greenway to be a dedicated, safe and intuitive cycling facility off of the seawall along the Georgia Wharf where possible.

Note to Applicant: In approving the NEFC Plan, Council directed that the wharf area be designed to prioritize pedestrians, accommodating a dedicated, safe and intuitive cycling facility off of the seawall where possible. The current proposal succeeds in this objective along the southern portion of the waterfront building, but further work is required with City staff to determine the most suitable route and design for the connection to the northeast, and in relation to the future Georgia Plaza.

Strategies and Studies required prior to issuance of the first development permit

Response:

Seawall design remains as per Rezoning submission. Prioritizing pedestrians in the wharf area has been maintained and will be further developed at DP stage, in consultation with City staff.

14. Provide a conceptual Signage and Wayfinding Strategy that outlines design intent for the area.

Note to Applicant: The proximity of the site to the stadia and the Seawall, and the role of the site as part of the NEFC Events and Entertainment District warrants particular consideration of the approach to signage and wayfinding.

Response:

The intent of the Wayfinding Signage Strategy will be to enhance the character of the Plaza of Nations, a hub for entertainment, art and cultural activities. Signage is intended to:

- *Guide visitors and residents*
- *Illustrate sustainable systems at work*

Wayfinding strategies are also planned to be enhanced with:

- *Paving patterns*
- *Lighting*
- *Signage*

Signage to be:

- *Cohesive in appearance and quality of materials/craftsmanship*
- *Legible and intuitive*
- *Not visually intrusive*
- *Developed and scaled as per the sites different Character Zones*
 - o *Pacific Boulevard*
 - o *Local Street*
 - o *Central Plaza*
 - o *Waterfront Place*
 - o *Rooftop Gardens*

The Wayfinding Signage Strategy to comply with future City of Vancouver bylaws. The details will be more fully developed to the satisfaction to the City at the DP stage, in consultation with City staff.

15. Provide a Lighting Strategy that outlines design intent for the area.

Note to Applicant: The proximity of the site to the Stadia and the Seawall, and the role of the site as part of the NEFC Events and Entertainment District presents an opportunity to create an approach to lighting that supports and builds on the role of the area.

Response:

Both decorative and functional lighting are planned to be strategically used throughout the site to create a strong continuous visual language.

Conceptually, the intent of the lighting strategy is to:

*Conceptually reflect the role of the NEFC Events and Entertainment District
Enhance character zones*

Promote safe pedestrian uses

Provide an inviting and accessible public realm

Introduce a hierarchy of street lighting

Create Placemaking opportunities for events and entertainment

Highlight building facades, public art and environmental graphics

Provide programmable and flexible lighting to enable event organizers to reduce setup costs

Improve public safety

Reduce light pollution (dark-sky concept)

Enhance wayfinding strategies highlighting in item 14

The lighting strategy will be more fully developed to the satisfaction to the City at the DP stage, in consultation with City staff.

16. Provide a Retail Curation Strategy that establishes a framework for how

the proposed retail and commercial services (such as restaurants, cafes, bars, etc.) contribute to meeting the intent of the NEFC Plan, including:

- size and scale of new CRU mix;
- how the new businesses will contribute to an active street and public space edge condition;
- a mix of daytime and nighttime uses;
- opportunities for local hiring and procurement for inner-city residents and businesses; and
- opportunities to align objectives of the Retail Curation Strategy and the Public Space Stewardship Strategy as a means of increasing the success, safety and enjoyment of new public spaces and supporting local business opportunities.

Response:

All retail to be curated to allow for maximum vibrancy and showcase the Plaza of Nations as a destination in the Events and Entertainment District.

It will embody the following principles and strategies:

- *Engage local employment*
- *Retail uses and scales to respond/enhance character zones*
 - *Pacific Boulevard*
 - *Large scale – fast car/pedestrian focused*
 - *Large signage*
 - *Local Street*
 - *Medium scale – slow car/pedestrian focused*
 - *Central Plaza*
 - *Small/medium scale –pedestrian focused*
 - *Cafes/restaurants to spill outdoors*
 - *Waterfront Place*
 - *Small scale – pedestrian focused*
 - *Cafes/restaurants to spill outdoors*
- *Encourage a diversity of uses*
- *Variety of price points*

Potential commercial uses include, but are not limited to the following:

Hotel

Shops

Restaurants

Drinking establishments

Grocery Store

Offices

Mooring & Fish boats (along the water)

A Retail consultant will be engaged to carry through these principles and strategies at the DP Stage.

Undergoing RFP process for Retail Consultants. Scope of work will include SWOT Analysis, Competition Analysis, Market Positioning &

Tenant Mix Considerations, and Market Analysis & Floorspace Demand by Retail Type to meet the intent of the NEFC Plan and ensure the success of the development's commercial space.

17. Provide a Maintenance Strategy for Trees, Vegetation, Plantings on upper level terraces and roof decks.

Note to Applicant: The strategy should include general conditions relating to the physical provisions for trees and plantings, means of access for maintenance both physically and legally (i.e. strata provisions, covenants, etc.). See also Landscape Condition (b)21 and (b)30 and Sustainability Condition (b)45.

Response:

Terraces and roof decks with various tree and bush planters enhance the green mountain and vertical forest concept, while retain opportunities for urban ecology and agriculture.

In order to maintain this vegetation over the years, the following strategies will be employed:

- *Terraces will be limited common property, to be maintained by Stratas*
- *Proper access to green areas for maintenance and irrigation*
 - o *Window washing system could be used for Landscape Maintenance*
- *Develop a maintenance plan with planned inspections for public terraces*

The Maintenance Strategy for Trees, Vegetation, Plantings on upper level terraces and roof decks will be more fully developed to the satisfaction to the City at the DP stage, in consultation with City staff. For preliminary maintenance considerations, please refer to IRWMP.

18. Provide an Acoustical Design Strategy prepared by professionals in acoustic and mechanical engineering outlining approaches in the building design to achieve the requirements under the acoustics section of the proposed CD-1 By-law and draft Design Guidelines with the development permit applications, meeting the following performance criteria:

- (a) Noise isolation design strategies and passive and/or mechanical cooling;

Response:

The proposed building orientation was modelled by BKL Consultants Ltd. Enclosed balcony or high-performance windows with window shutters can mitigate predicted worst-case noise from BC Place events.

(See acoustic design strategy letter by BKL Consultants Ltd)

Mechanical Consultant will work closely with Acoustic Consultant to determine best locations for passive and/or mechanical cooling. Details to be provided at DP stage.

- (b) Mitigate event noise to achieve noise levels between 40 dBC and 50 dBC within the units during event periods; and

Response:

Enclosed balcony or high-performance windows with window shutters can mitigate predicted worst-case noise from BC Place events.

(See acoustic design strategy letter by BKL Consultants Ltd)

- (c) Ensure summertime internal thermal comfort levels in line with ASHRAE 55 v.2010 (with windows closed).

Response:

Mechanical systems will be designed to meet the requirements of ASHRAE 55-2010 for all regularly occupied spaces.

Note to Applicant: Building orientation and construction must mitigate as much as possible events in major facilities and outdoor spaces which will produce high levels of noise, particularly base noise (dBC), on a regular basis, and for significant periods of time.

19. Provision of a Public Space Stewardship Plan that identifies how the Applicant will implement, or partner to implement, the following of each new public space for the life of the space, to the satisfaction of the General Manager of Planning, Urban Design and Sustainability, the General Manager of Arts, Culture and Community Services and the General Manager of Engineering Services:

- (a) Ongoing management;
- (b) Maintenance;
- (c) Operations;
- (d) Safety/enforcement; and
- (e) Access/loading.

Note to Applicant: Infrastructure should be provided to facilitate event programming, including electricity, water, storage, access to public washrooms, including arrangements to secure public access.

Response:

The Plaza of Nations will become a central gathering place for all people irrespective of age, background or status. It will feature a variety and multitude of public spaces, including:

- Rooftop terraces
- Central Plaza
- Seawalk
- Legacy Forest

In order to enhance these public spaces, and ensure they are properly maintained, managed and programmed long-term, a framework will be

developed. This Public Space Stewardship Plan will ensure these spaces are:

- Continuously maintained and cared for
- Properly funded
- Programmed to be affordable, safe, accessible, and healthy for all
- Safe and accessible for people of all ages and abilities
- Flexible to facilitate various events and activities at various times of day, week, or seasons
- Programmed to promote social, cultural and community growth

The Public Space Stewardship Plan will be more fully developed to the satisfaction to the City at the DP stage, in consultation with City staff.

Landscape Design

20. Design development to the sustainable site strategy and landscape plan (for private property) to include the following:

- (a) A robust, layered and diverse tree canopy planting plan at the ground, rooftop, urban agriculture areas, as well as public and private terraces levels;

Response:

A Planting Plan has been provided for ground level, public and private rooftop terraces

(Refer to Landscape Drawing Set, Planting Plans L4.01-L4.12))

(Refer to Sustainable Large Developments Policy Report, Sustainable Sites and Access to Nature section)

- (b) Extensive green roof coverage, wherever possible; and

Response:

Extensive vegetated roof cover has been proposed where suitable.

(Refer to Landscape Drawing Set, Planting Plans L4.12).

(Refer to Sustainable Large Developments Policy Report, Sustainable Sites and Access to Nature section and Appendix B)

- (c) Explore opportunities for green walls, in appropriate locations, rather than blank expanses of exterior wall.

Response:

The opportunities for green walls are limited.

Blank expanses of exterior walls will be minimal through and avoided through the architectural design. Ground level uses to be glazed to ensure maximum vibrancy and activation at the ground plane.

21. Design development to the overall structural design to ensure adequate

soil volumes and planting depths for plants and trees, intensive green roof terraces and balcony garden levels is achieved.

Response:

Min soil depths have been provided:

- 3' for trees
- 1.5' for shrubs
- 1' for groundcovers

(See Landscape Sections L5.01-L5.05. Further planting details will be provided for Development Permit Application).

Note to Applicant: To ensure the long term viability of planting on slab and exposed upper roof conditions, soil depths must meet or exceed BCLNA planting standards. The project should be exemplary in this regard. At the ground level, avoid raised planter walls that can impede pedestrian flow and fragment space. This can be achieved by:

- (a) Angling the slab at the junction of the outer wall and ceiling of the underground parkade;

Response:

Stepped slabs of the ceiling of parkade provide sufficient soil depth.

(See Landscape Sections L5.01-L5.05)

- (b) Lowering the slab below plaza level to create contiguous tree planting trenches such that the tree base is level with the surrounding walking surfaces. The soil volume targets should be considered at a minimum of 12 m³ (cylindrical planters) or 16 m³ (rectangular planters), with 1 m depth and 2 m radially (measured from the trunk). Private and semi-private terraces should offer planter sizes and soil volumes that can support long term tree health and canopy cover;

Response:

Minimum soil volumes have been provided.

(See Landscape Sections L5.01-L5.05; further details will be provided for Development Permit Application)

- (c) Soil cells, structural or enhanced native soils and contiguous planting troughs should be explored;

Response:

Soil cells have been proposed for plaza and street trees planted on structure.

(Refer to Landscape Plan – Ground Level - Soil Cells Layout L3.14 & L5.01-L6.03)

- (d) Fully integrated planters should be provided, rather than add-on movable planters;

Response:

Permanent planters have been proposed whenever possible.

- (e) Avoid the necessity to mound soils to obtain minimum soil depths; and

Response:

Soil is flush with finish grade whenever possible.

- (f) Further details of a successful strategy will be required at the development permit stage including, but not limited to such issues as operational manuals and undertakings. See Urban Design Condition (b)17.

Response:

Further details and plans will be provided for Development Permit Application.

- 22. Design development to reduce or eliminate potable water use in the irrigation systems by using drought tolerant species, rainwater harvesting methods and efficient irrigation technology for all planted areas. See Engineering Conditions (b)97, (c)20 (c)21 regarding rainwater management.

Response:

*Rain water harvesting has been proposed as well as water efficient Irrigation system – drip system, weather sensitive controllers. (Irrigation Plan will be provided for Development Permit Application). Drought tolerant species have been selected.
(See Planting Plans L4.01-L4.12)*

Furthermore, the project is targeting 50% reduction in outdoor and 20% reduction in indoor potable water use.

(Refer to the Sustainable Large Developments Policy Report, Potable Water and Rainwater Management sections)

Note to Applicant: Potable water may be considered for urban agriculture areas and patios. Individual hose bibs should be provided for all patios of 100 sq. ft. or greater in size, to encourage patio gardening.

Response:

Hose bibs for urban agriculture area and individual hose bibs for all private patios greater than 100 sq ft. to be provided for Development Permit Application.

- 23. Provision of a detailed Landscape Plan illustrating soft and hard landscape treatment.

Note to Applicant: The landscape plan should include a planting plan listing common and botanical name, size and quantity of all existing/ proposed plant material. Plant material should be clearly illustrated on the Landscape Plan and keyed to the Plant List. Illustrate and clarify all outdoor surface/paving materials, site furniture, bicycle racks, lighting,

trash receptacles, hose bibs, signs, retaining wall treatment, parking vents, at-grade utilities, and public realm (building edge to the curb, street trees, lamp posts, fire hydrants, sidewalk treatment).

Response:

*Materials and Planting Plans have been provided.
(See Material Plans L3.01-L3.14 and Planting Plans L4.01-L4.12).*

Materials Plans including all paving materials, sidewalk treatments, site furniture, lighting elements.

(Refer to Landscape Drawing Set, Landscape Plan L3.01-L3.14 and Details L6.01-L6.03)

Planting Plans including all common and botanical names, sizes and quantities of plant material (Refer to Landscape Drawing Set, Planting Plans L4.01-L4.12). Size and quantity to be provided for Development Permit Application.

24. Provision of spot elevations to all outdoor areas (including top/bottom walls), including offsite context spot elevations in proximity (public sidewalks, inner boulevards and lanes).

Response:

*Spot elevations have been shown.
(Refer to the Landscape Drawing Set, Landscape Plans L3.01-L3.14, Grading Plan to be provided for Development Permit Application)*

25. Provision of large-scale sections [typical] through landscaped areas, including the ground oriented interface, the slab-patio-planter relationship, street trees, the lane interface, common areas and upper level planters.

Note to Applicant: The sections should include the planter materials, tree canopy, tree stem, outline of the root ball, voiding, built up membrane and dimensions.

Response:

*Sections have been provided.
(Refer to Landscape Drawing Set, Landscape Sections L5.01-L5.05)*

26. Provision of a vegetative surface area calculation overlay plan.

Note to Applicant: The plan should differentiate between extensive and intensive green roof types and provide a percentage ratio of soft and hard surface cover proposed.

Response:

*Vegetative surface area calculation has been provided.
(Refer to Appendix B of IRWMP and Landscape Drawing Set L2.01-L4.12)*

(Also found in Sustainable Large Developments Policy Report, Sustainable Site and Access to Nature section)

27. Provision of a separate Tree Management Plan.

Note to Applicant: Provide a large scale tree plan that is separate from the landscape plan sets. The plan should clearly illustrate all trees to be removed and retained, including dimensioned tree protection barriers for all trees, including street trees, and important construction management directives drawn out of the arborist report(s), where applicable.

Response:

A full scale (24" x 36") Tree Management Plan is provided; the Plan reflects the findings as noted within the previous (8 May 2017) and updated for PDP Arborist Report.

(Refer to Tree Management Plan by Quercus Consultants)

(Refer to Sustainable Large Developments Policy Report, Sustainable Site and Access to Nature section.)

28. Provision of a detailed Legacy Forest area management and successional plan, to include tree retention, new plantings, short and long term (5-10 year) planting/restoration measures and best management practices for proposed work within the forest stand.

Response:

Per the professional opinions in the Arborist Report (of 8 May 2018) and the updated Report for PDP, all trees in the 'Legacy Forest' are recommended for removal.

(Refer to Arborist Report by Quercus Consultants)

(Refer to Sustainable Large Developments Policy Report, Sustainable Site and Access to Nature section)

29. Provision of a revised, detailed arborist report, to include a strategy to retain portions of the Legacy Forest and augmented with forest succession recommendations.

Note to Applicant: The arborist report and rezoning proposal must be congruent. The design of the Legacy Forest should be further informed by an expanded arborist report and recommendations, with special attention to soil improvement, mitigation of compaction, testing, grade retention, rainwater management and other disturbances proposed in critical root zones. Further coordination to occur at the development permit stage.

Response:

Refer to Note #28 (above).

30. Provision of a habitat plan, written rationale and a maintenance specification, that includes site plantings, selection rationale, anticipated environmental services, and appropriate maintenance details.

Note to Applicant: See Sustainability Condition (b)45.

Response:

Legacy Forest Planting Plan has been provided (See Planting Plan – Legacy Forest L4.06) Conceptual habitat section has been provided

(See 6B Legacy Forest Typical Section L0.24) Detailed plan, rationale and maintenance to be provided at DP stage with consultation with City Staff.

31. Identification on the architectural and landscape drawings of built and landscape features intended to create a bird friendly design for the protection, enhancement and creation of bird habitat and to reduce potential “bird strike” in the development.

Note to Applicant: Refer to the *Bird Friendly Design Guidelines* for examples of built and landscape features that may be applicable, and provide a design rationale for the features noted. For more information, see the guidelines at

<http://council.vancouver.ca/20150120/documents/rr1attachmentB.pdf>
<http://council.vancouver.ca/20150120/documents/rr1attachmentC.pdf>

Response:

Vegetative terraces and rooftops, as well as green spaces and the Legacy Forest encourage bird species and wildlife in the Plaza of Nations. To ensure a bird friendly design:

- *Bird bath to be incorporated into the Landscape design for Development Permit Application*
- *Planting species are selected to meet Bird Friendly Design Guidelines. (Refer to the Landscape Drawing Set, Planting Plans L4.01 – L4.14 and L0.24 6B – Legacy Forest Typical Section)*
- *Light pollution to be minimized via a Lighting Strategy and dark-sky concept (Refer to Note #15)*
- *Building Design Guidelines in the Bird Friendly Design Guidelines to be reference at the DP stage once the façade and materials are further developed.*

32. Locate site utilities and vents onto private property and integrated discreetly into the building, avoiding landscaped and common areas.

Response:

Site utilities and vents to be located on private property and integrated discreetly into building. More detail to be provided at DP stage.

Sustainability

33. Meet the requirements of the *Green Buildings Policy for Rezonings* (amended February 7, 2017), including all requirements for Near Zero Emissions Buildings (i.e. Passive House certified or alternate near zero emissions standard approved by the Director of Sustainability), or Low Emissions Green Buildings. The requirements for Low Emissions Green Buildings are summarized at <http://guidelines.vancouver.ca/G015.pdf>

Note to Applicant: The Applicant will be required to demonstrate that the development is on track to achieve the above requirements at each stage of permit. For phased developments, it is expected that the individual development permits will meet the requirements of the *Green Buildings*

*Policy for Rezoning*s in effect at the time of development permit application. For more detail on the above requirements and what must be submitted at each stage, refer to the most recent bulletin *Green Buildings Policy for Rezoning*s – *Process and Requirements*.

Response:

*The project has adopted the Green Buildings Policy for Rezoning*s: *Low Emissions Path (Path B)*.

(Refer to Sustainable Large Developments Policy Report, Green Building Rezoning Policy for Rezoning section)

34. Design development to ensure that no habitable spaces or critical infrastructure is located below a flood construction level of 4.8 m GVRD datum (also known as CGVD28 datum) as prescribed in Floodplain Standards and Requirements in the Vancouver Building By-law, or the approved NEFC Plan or as per policy at the time development application, whichever is higher.

Note to Applicant: The Building By-law recommends that large sites adopt a flood construction level higher than the 4.6 m where possible to enhance community resilience. Section 2.2.8.5 of the By-law grants the Chief Building Officer the authority to increase the flood construction level. As Sub-area 6B is part of a large site, the flood construction level is set at 4.8 m or higher, according to the policy at the time of development application.

Response:

Structural/Geotechnical Strategy:

The parkade consists of three to four levels of concrete underground structural. Strategy to stop water ingress is by means of utilizing the shoring wall system such as Secant Piles, Deep Soil Mix, Sheet Piles or others, which penetrate deep into glacial till serving as water cut off wall. Permanent cast in place, concrete wall and strip footing will be poured against the shoring wall as additional water plug. Under slab drain will be provided to relieve small amount of water due to seepage through the water cut off wall system.

Ventilation openings to the parking structure will be coordinated at DP such that they don't compromise the integrity of the parking structure in relation to the required flood construction level.

At present all parking structure entries have been located above 4.8 m flood level with a strategy under development where an additional 1 m can be added to the proposed boardwalk/seawall extension to accommodate a flood level of 5.8 m.

(Refer to Landscape Drawing Set, Open Space Framework L0.22; L0.29 and L0.32 Flood Control)

35. Indicate on all relevant drawings the elevation of the "Flood Management Zone" at 4.8 m GVRD datum along "The Ribbon" and a future design

strategy for an additional metre beyond the predicted sea levels for 2100.

Note to Applicant: Flood protection works should follow best practices for urban settings, “Green Shores” approach where feasible, seismic resilience and integrate appropriate flood protection standards. The guidelines and requirements outlined by the BC Inspector of Dikes can be considered current best design practices.

Response:

To be provided by environmental/geotechnical engineer at DP stage. With help from the environmental, geotechnical and structural engineers, naturalized dike conditions are being explored wherever feasible to enhance ecology and resiliency of the site (Refer to Landscape Drawing Set L0.22; L0.29 and L0.32 Flood Control)

36. Comply with all applicable Fisheries and Oceans Canada, the Ministry of Forests, Lands, Natural Resource Operations & Rural Development and the City of Vancouver requirements for marine riparian and intertidal habitat restoration, in-water work and soil remediation.

Note to Applicant: Ensure all permits and applications for work in or about a watercourse is reviewed and approved, as appropriate, by Fisheries and Oceans Canada (DFO) and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development regarding protection of fish habitat, wildlife and habitat compensation.

Response:

Anticipated permitting requirements include those under the Fisheries Act (DFO) and the Navigation Protection Act (Transport Canada). Initial submissions have been made to both DFO and TC, and as additional project details become available they will be provided to regulators to facilitate ongoing discussions and evaluate potential project impacts (Refer to Memo from Dillon Consulting).

Permitting from the Ministry of Forests, Lands, Natural Resource Operations & Rural Development is not required.

37. Design development to ensure the flood protection works will meet the structural and geotechnical requirements of the City to the satisfaction of the General Manager of Engineering Services.

Note to Applicant: Geotechnical and coastal structural designs must meet the technical guidelines to the satisfaction of General Manager of Engineering Services and the Chief Building Official.

Response:

Geotechnical and coastal structural designs will meet the technical guidelines to the satisfaction of General Manager of Engineering Services and the Chief Building Official at the DP stage.

38. Design development to maximize habitat in the Flood Management Zone with diverse, native and drought tolerant plant choices above and below

the tide lines. Select trees and plants to support pollinators, birds, other fauna and beneficial micro-organisms. Provide a description of site plantings that includes selection rationale, anticipated environmental services, and appropriate maintenance. See also Landscape Condition (b)30.

Note to Applicant: Select plants that tolerate salty to brackish intertidal conditions. Select materials (e.g. rocks, snags, woody debris) and material sizes that support marine life. Seek details from the Park Board Biodiversity Strategy 2016 and a Qualified Environmental Professional.

Response:

Where plantings are proposed above, but in proximity to, the high tide line, plant species that tolerate salt spray and marine conditions will be specified. Some possible species include red-osier dogwood, willow (both of which can establish well amongst riprap), ocean spray, salmonberry and thimbleberry. Potential planting areas may include a growing medium to allow for establishment of vegetation cover and habitat.

Where marine enhancements are proposed they may include large rocks placed along the foreshore (e.g., boulder clusters) and an offshore reef that will be constructed with suitably sized rock to provide stable habitat for the colonization by seaweeds and other marine flora and fauna. Larger rock will also allow for the creation of larger interstitial spaces which will be beneficial as cover for fish and motile invertebrates such as crabs.

All works will be completed with the oversight of a Qualified Environmental Professional (Refer to Memo from Dillon Consulting for commentary on shoreline conditions 6A, 6B and 6C [as presented in Landscape Drawing Set])

39. Illustrate the minimum 15 m setback in all applicable drawings as per section 2.2.8.4 b) of Appendix A of the *Flood Plain Standards and Requirements*.

Note to Applicant: Identify the “Natural Boundary” in setbacks and include mean high and low water level in all applicable cross sections.

Response:

Butler Sundvick has confirmed that no natural boundaries remain on site. The 15m setback therefore does not apply.

40. Design the public streetscape to include two (2) standard City of Vancouver frost-free (depth at site permitting) water fountains and accompanying water service and sanitary service connection on the north or east or west frontage (water fountain, including water and sanitary service connection, to be provided by the City).

Note to Applicant: Frost-free service requires 6 ft. depth.

Response:

Location of two (2) water fountains will be provided for Development Permit Application.

41. Design development to mitigate local urban heat island effect. Indicate in drawings, with emphasis on the south and west frontage, where shade and cooling structures and/or design for the public and private realms will be placed or utilized.

Response:

The overall vegetative cover currently planned for the development is ~37%. The current design also decreases the amount of pervious area on-site from 95% to 86% through the addition of green spaces on roofs and planters.

This addition in landscape coverage will provide a reduction in the heat island effect as compared to the present site conditions. (Refer to the Sustainable Large Developments Policy Report, Sustainable Sites and Access to Nature section and Appendix B) (Also refer to IRWMP).

42. Establish educational and technical support services to building managers, strata, residents and businesses to help achieve sustainability success.

Note to Applicant: Consider using a “Greencierge” to help align to relevant City policies like Greenest City, Zero Waste 2040 and Transportation 2040. Refer to NEFC Plan, section 11.5 for more information on the “Greencierge”.

Response:

Zero waste support staff planned. Role expected to carry other responsibilities similar to those expected as “Greencierge” (Refer to Sustainable Large Developments Policy Report, Zero Waste Planning section)

Furthermore, the Owner is exploring the use of a Strata Management Company to establish educational and technical support services that will ensure the success of the sustainable infrastructure/programming that has been put in place.

43. Provision of a Post-Occupancy Study (POS) three (3) years following the issuance of an Occupancy Permit for each building to the satisfaction of the Director of Sustainability.

Note to Applicant: Include data, tables, graphs and other analytic tools to best illustrate sustainability trends in the development including but not limited to: annual energy demand, building systems efficiency, Greenhouse Gas (GHG) emissions, per capita potable water use history, resident comfort, local food assets and rainwater management systems.

Response:

Detailed post-occupancy monitoring and reporting plan to be provided at Development Permit stage, to the Satisfaction of the Director of

Sustainability.

44. Submit a letter of credit prior to the issuance of the development permit to the General Manager of Engineering Services for assurance of the POS completion.

Response:

Letter of credit to be issued prior to issuance of Development Permit.

45. Provision of a Building Operation Manual that documents specifications, operations, and maintenance requirements of systems including but not limited to: heating, ventilation, green roofs, landscape, rainwater management and irrigation.

Note to Applicant: As per the *Green Buildings Policy for Rezoning – Process and Requirements* commissioning process, the following items must be provided to the owner:

- (a) The final Commissioning Report;
- (b) Operating and maintenance manuals;
- (c) Training for operators or building managers; and
- (d) A digital copy of the full Operation and Maintenance (O&M) Manuals, a full PDF set of building as-built drawings, a copy of the Building Information Modeling (BIM) files if applicable, and the final building energy model file.

Response:

This has been adopted through the Green Buildings Policy for Rezoning.

(Refer to the Sustainable Large Developments Policy Report, Green Building Policy for Rezoning section and the Owner Commitment letter)

Food Assets

46. Design development to ensure that shared garden plots meet requirements for size, number and ancillary uses as outlined the Rezoning Policy for Sustainable Large Developments.

Note to Applicant: A minimum of 30% of units that do not have access to private outdoor space of more than 100 sq. ft., must have access to shared garden plot.

Response:

Adequate number of garden plots to be provided as outlined in the Rezoning Policy for Sustainable Large Developments.

(Refer to the Sustainable Large Developments Policy Report, Sustainable Food System section)

(Refer to Landscape Drawing Set, Landscape Plan L3.11)

47. Design development to ensure adequate space and facilities in the central plaza for the provision of a successful farmers market on site.

Note to Applicant: Facilities should include: adequate space for 30-60 vendors, access to hot and cold running water, sufficient power, loading, storage and cover from weather.

Response:

Requirement has been met, space for min. 30 vendors and access to utilities to be provided.

(Refer to Landscape Drawing Set, Open Space Framework L0.33-L0.35)

(Refer to the Sustainable Large Developments Policy Report, Sustainable Food System section)

48. Provision of composting facilities for organic waste associated with shared garden plots.

Response:

*Composting bins to be provided in Urban Agriculture area.
(Refer to Landscape Drawing Set, Landscape Plan L3.11)*

(Refer to the Sustainable Large Developments Policy Report, Sustainable Food System section)

49. Design development to align amenity spaces with kitchens to adjacent rooftop gardens.

Note to Applicant: Encourage the use of kitchens for the processing and sharing of harvested foods from the gardens and use for communal dining and social space.

Response:

Amenity kitchen spaces under consideration for affordable housing component of the project. Strategy will be further developed during development permit stage.

50. Provision of an on-site organics management facility to accommodate the residential and retail organic waste.

Response:

*On-site organics management facilities to be provided at P2 level
Detailed layout to be provided at the DP Stage.*

(Refer to the Sustainable Large Developments Policy Report)

Social Housing

51. Ensure no less than 50% of the social housing units are suitable for families with children as per the City's *High-Density Housing for Families with Children Guidelines*.

Response:

Minimum 50% of social housing units will be suitable for families with children as per the City's High-Density Housing for Families with Children Guidelines. Detailed unit layout to be provided at the DP Stage.

Social housing units have been divided into Block A and Block B to provide access to a variety of locations and to stagger the amount of units being delivered at once as per conversations with the City.

(Refer to the Sustainable Large Developments Policy Report, Affordable Housing section)

(Refer to Arch. Drawing Set A105-A114).

52. Design and construct the social housing in line with the City's Housing, Design and Technical Guidelines, including the requirement to deliver a minimum of 5% of units within each social housing building or parcel as wheelchair accessible.

Note to Applicant: Applicant to work with City staff to agree the location and unit type for the accessible units.

Response:

Minimum 5% of social housing units will be designed as wheelchair accessible. Detailed unit layout to be provided at the DP Stage.

Market Housing

53. Design development to ensure that no less than 35% of the market housing units are suitable for families with children, as per the *Family Room: Housing Mix Policy for Rezoning Projects*, with no less than 10% of all market units being three bedroom units, unless otherwise agreed to by the Director of Planning.

Note to Applicant: Any changes in the unit mix from the rezoning application may only be varied under the discretion of the Director of Planning or Development Permit Board provided that it does not go lower than 35% of the dwelling units designed to be suitable for families with children. *High-Density Housing for Families with Children Guidelines* is currently under review. Future development permit applications will be expected to respond to the latest version of the Guidelines at that time.

Response:

Minimum 35% of market housing units will be suitable for families with children as per the Family Room: Housing Mix Policy for Rezoning Projects, with a minimum of 10% market housing units being three bedroom. Detailed unit layout to be provided at the DP Stage.

*(Refer to the Sustainable Large Developments Policy Report,
Affordable Housing section)
Refer to Arch. Drawing Set A101-A128)*

54. Design development to ensure no less than 5% of the market housing units in each phase are designed to be wheelchair accessible.

Response:

Minimum 5% of market housing units will be designed as wheelchair accessible. Detailed unit layout to be provided at the DP Stage.

Civic Facilities and Public Spaces

55. Design development to the civic centre which will include a community centre, ice rink and childcare facility to the satisfaction of the Director of Facilities Planning and Development in consultation with the General Manager of Parks and Recreation and the Managing Director of Social Development.

Note to Applicant: The design of the community centre and ice rink should meet the intent of the Recreational Facility Technical Guidelines.

Response:

The current plans show a preliminary layout of the civic centre programs. The detailed layout will be designed to the satisfaction to the City at the DP stage, in consultation with City staff and based on the functional design program produced by Cornerstone Planning Group.

56. Design development of a 69-space childcare that will be licensable by Vancouver Coastal Health's Community Care Facilities Licensing (CCFL) and meets the intent of the City's *Childcare Design Guidelines* and *Childcare Technical Guidelines*, to the satisfaction of the General Manager of Arts, Culture and Community Services and the General Manager of Real Estate and Facilities Management. A minimum gross indoor area of 765 sq. m (8235 sq. ft.) and not less than (745 sq. m) 8,020 sq. ft. of contiguous outdoor area, with adequate space for each program is required.

Response:

*Minimum Childcare Outdoor area of 745 sq m (8,020 sq ft) to be provided (including 133 sq m of covered outdoor area) Final design to be provided for Development Permit Application.
(Refer to Arch. Drawing Set A106).*

Notes to Applicant:

- (a) The childcare facility is to be co-located with and integrated into the Community Centre;

Response:

The childcare is co-located with and integrated into the Community Centre at Level 6 of Block B (Refer to Arch. Drawing Set A106).

- (b) An additional 15% for mechanical requirements, or approximately 115 sq. m (1240 sq. ft.), should be factored into the design;

Response:

The required mechanical rooms will be provided at Level 6.

- (c) The childcare will require access to a dedicated garbage room, storage and end-of-trip facilities;

Response:

The childcare dedicated garbage room is provided at P2. Storage and end-of-trip facilities will be provided at Level 6.

- (d) Ensure dedicated elevator and access is sized to accommodate four-position strollers;

Response:

The childcare dedicated elevator will be designed to accommodate four-position strollers.

- (e) Parking needs are outlined in the *Childcare Design Guidelines*. 11 parking stalls (2 staff; 9 parent pick-up/ drop-off) will be required, preferably on Level P1. The parking stalls should be situated in close proximity to the dedicated childcare elevator, and safe passage from the parked vehicles to the elevator lobby should be provided;

Response:

11 Dedicated Parking Stalls for the Childcare are provided at P1 Level, along with the dedicated childcare elevator and lobby.

- (f) Provide a minimum floor-to-floor height of 12 ft. in childcare spaces;

Response:

The childcare spaces are designed with a minimum floor-to-floor of 12ft.

- (g) Mitigation measures to ensure optimal safety and supervision for the proposed childcare outdoor area;

Response:

The outdoor play area is provided near the childcare facility to ensure optimal safety and supervision.

- (h) Childcare facilities are to be located and oriented such that the outdoor play area is able to receive a minimum of 3 hours of direct sunlight per day, at the winter solstice. The proposed location is

well located for sunlight exposure; and

Response:

The proposed outdoor play area is able to receive a minimum of 3 hours of direct sunlight per day, at the winter solstice. (Refer to Arch. Drawing Set. A402)

- (i) Applicant to provide a detailed indoor and outdoor area allotment for each of the 4 childcare programs.

Response:

Design according to CoV Childcare Design Guidelines. Detailed layout to be provided at the DP Stage.

57. Applicant to provide a detailed table of areas specific to the childcare facility. The childcare facility, including siting, orientation and proximity to roadways, will be subject to review by Community Care Facilities Licensing (CCFL) and Vancouver Coastal Health.

Response:

Detailed table of areas for the childcare facility to be provided at the DP stage after further consultation and review with the City of Vancouver and Cornerstone Planning Group, Community Care Facilities Licensing, and Vancouver Coastal Health.

58. Design development to the civic centre to ensure a clear presence in the public realm with visibility, prominence, and clear connections to the future Georgia Plaza and if feasible on the central plaza; and to ensure highly visible, inviting and accessible public access to the civic centre rooftop terrace from grade at the waterfront.

Note to Applicant: The eastern corner of the civic centre will be an opportunity for a corner element and entry expression that is designed to welcome and draw people in from the future Georgia Plaza area and waterfront. See also Conditions (b)10 and (c)32.

Response:

Unified expression/materiality for Civic Centre, Grand Stairs, Pedestrian Bridge, Waterfront Steps etc. is being explored as design element that will highlight and unify the development's public amenities (Refer to Arch. Drawing Set A601).

Furthermore, the Civic Centre has been positioned to ensure a clear presence in the public realm, strategically positioned by the Georgia Plaza to ensure it is highly visible and inviting for the public.

The civic centre design will be further developed to the satisfaction to the City at the DP stage, in consultation with City staff.

59. Design development to provide direct elevator and stair access from below-grade parking and loading to the community centre and child care

spaces. Parking and loading arrangement to permit independent operation of music presentation centre from remainder of civic centre.

Response:

The dedicated elevator and stair access from below-grade parking and loading to the community centre and childcare spaces are provided. Parking and loading arrangement is designed to allow independent operation.

60. Provision of civic centre within a single air space parcel. Design development to provide for single atrium entrance for community centre and ice rink with the capacity to share function space and washrooms, and also secure and operate community centre and ice rink independently.

Response:

The Civic Centre is provided within a single air space parcel. A single shared double-height entrance is provided with ability to secure and operate community centre and ice rink independently (Refer to Arch. Drawing set A101-A106).

61. Design development of commercial kitchen in community centre to meet venting and other commercial kitchen requirements, including demand-controlled kitchen exhaust and non-fossil-fueled makeup air integrated with kitchen ventilation supply.

Response:

The commercial kitchen in the community centre will meet commercial kitchen requirements at the DP stage.

62. Provide separate dedicated mechanical and electrical rooms with separate metering for community centre, childcare facility, and ice rink.

Response:

Mechanical services for the community centre, childcare facility, and ice rink will be separately metered.

The separate dedicated mechanical and electrical rooms for these different programs are provided at P1 and P2 levels (Refer to Arch. Drawing Set A097-A099)

Metering for all major energy end uses has been adopted through the Green Buildings Policy for rezoning. (Please refer to the Sustainable Large Developments Policy Report, Green Building Policy for Rezoning section)

63. Design development of the community centre to meet structural requirements of the high-importance category classification as defined by the Vancouver Building By-Law. Design development to provide capacity to connect to portable emergency power supply to support post-disaster shelter functions including commercial kitchen, washrooms, lighting and heating.

Response:

Community centre will be designed to meet the high-importance category classification under wind and earthquake provisions as outlined in the BCBC 2018. Detailed design to be provided at the DP Stage.

64. The goal for the City-owned, high performance, new construction standard is to achieve near zero greenhouse gas emissions in new buildings. The purpose of this goal is to show leadership to the broader community in meeting the targets of the Renewable City Strategy, and adopt a near zero emission standard for new buildings much earlier than required by building code for all new buildings constructed city wide.

Response:

Community Centre, Ice Rink, and Music Centre will be designed to satisfy the requirements of the Low Emissions Green Buildings path of the Green Building Policy for Rezoning.

65. To achieve a goal of near zero GHG emissions in new buildings the following strategies are required to be incorporated into new city-owned buildings:

- (a) All City capital funded buildings must be designed to be certified to the Passive House energy performance standard, or an approved alternative zero emission building standard, and use only low carbon fuel sources, in order to minimise energy consumption and GHG emissions;

Response:

In review of the Community Centre, Ice Rink, and Music Centre it was determined Passive House would not be feasible. The spaces proposed are primarily non-residential and enclosed within a larger building which will not be pursuing Passive House certification. Given the combination of these two factors, the Passive House boundary and performance limits would be difficult to define for the purpose of certification.

- (b) LEED® Gold Certification is also required by the City of Vancouver for all public buildings, tenant improvements, and facilities funded by City capital funds which are over 500 square meters in area. Refer to the most current LEED® Canada NC, CI, or other appropriate LEED category, Guidebook. The current version of the USGBC LEED® for Homes - Multi-family Midrise for 4 to 12 storey buildings is also acceptable;

Response:

LEED certification will be achieved for City-owned facilities. A more detailed strategy will be developed as part of the Development Permit application.

- (c) Facilities received from other sources, including those constructed for the City using CAC funding, and those with long term leases to

the City for the life of the building, should be constructed to the same standard as City capital funded facilities. Where the City-funded facility is in an air space parcel in a larger building funded by others, and it is not viable to achieve Passive House certification for the whole building, then at a minimum the city owned portion of the building must be designed and shown to achieve a minimum of 35% reduction in energy consumption compared to the current City of Vancouver Building By-law (ASHRAE 90.1 2010 or NECB 2011), and reduce Greenhouse Gas Emissions through the use of only low carbon fuel sources;

Response:

If facilities proposed will be funded using CAC funding, the design team will ensure performance is equal to a minimum of 35% reduction in energy consumption compared to the current City of Vancouver Building By-law (ASHRAE 90.1 2010 or NECB 2011), and reduce Greenhouse Gas Emissions through the use of only low carbon fuel sources.

- (d) Mechanical and control systems should be designed to be as simple as possible to reduce maintenance costs and the need for specialized maintenance expertise; and

Note to Applicant: A preliminary energy modelling exercise must be undertaken during the preliminary design stage to evaluate options for design of the building envelope, mechanical and electrical systems, and energy conservation measures (ECMs) which meet or exceed the City's energy performance target and make the most sense for the project based on energy and GHG savings, financial impact and ease of maintenance.

Response:

Mechanical systems will be designed to simplify maintenance requirements and provide a robust yet simple controls system.

Energy modelling has been adopted through the Green Buildings Policy for rezoning and would be provided at the Development Permit stage.

(Refer to the Sustainable Large Developments Policy Report, Green Building Policy for Rezoning section)

- (e) The ice rink must be designed using CO₂-based refrigerant systems and incorporate heat recovery which will be use to heat the ice rink and other city-owned facilities.

Response:

The Ice Rink cooling system will be designed using a CO₂ based refrigerant system. As per discussions with CoV Engineering waste heat from the Ice Rink cooling system shall be either recovered for use within the Ice Rink or exported to the NEU.

66. Design and finish the following to the satisfaction of the General Manager of Planning, Urban Design and Sustainability, the Managing Director of Cultural Services, the Director of Public Space and Street Use, and the Director of Facilities Planning and Development for:

- (a) The central plaza as a minimum 2,800 sq. m (30,139 sq. ft.) area with a minimum 30.48 m (100 ft.) width at ground level;

Response:

*Central Plaza size requirement has been met
(Refer to Landscape Drawing Set, Landscape PlanL3.05)*

- (b) The waterfront plaza as a contiguous space comprised of a minimum waterfront steps area of 566 sq. m (6,091 sq. ft.), the 20 m (66 ft.) wide dedicated seawall in the waterfront plaza area, and a further setback area to the waterfront building to be determined during design development; and

Response:

*Waterfront Steps and Seawall space requirements have been met.
(Refer to Landscape Drawing Set, Landscape PlanL3.06 and Arch. Drawing Set A10).*

- (c) A level, hard-space plaza (preferably a portion of the above required central plaza or waterfront plaza) for the music presentation centre for outdoor dining with easy and direct access to and from amenity's food and beverage space, and for occasional event use, providing a useful, flexible space that can serve a variety of needs which include accommodating spillover functions from the music presentation centre, and informal and formal plaza use.

Response:

*Programming options have been explored and illustrated.
(Refer to Landscape Drawing Set, Open Space Framework L0.34 – L0.35)*

67. Design development of plazas to adhere to the City's *Plaza Design Guidelines*:

- (a) Provide details on functional use, design, and adjacencies for all plazas; and
- (b) Review requirements for emergency access and include special design consideration and infrastructure required for event and/or presentation use, including but not limited to, loading access, structural load capacity to accommodate loaded forklifts; electrical supply for lighting and power; running water and grey water disposal.

Response:

Functional use of spaces provided in landscape drawings. Final design to

be provided at DP. Design will adhere to City's Plaza Design Guidelines. (Refer to Landscape Drawing Set, Open Space Framework L0.1-L0.35).

68. Provide new acoustic report for plazas. Acoustic report identified from 2012 is no longer relevant. A new acoustic study and report for any and all plazas where outdoor event and presentations are identified, including central plaza and waterfront plaza, considering acoustic impact of plaza events and entertainment, for local area and South False Creek residential and office units is required.

Response:

Noise predictions and noise bylaw assessment for plaza performances are included. Refer to Outdoor Plaza Events Noise Assessment letter by BKL Consultants. Only symphonic music would meet City noise bylaw.

69. Provide, in consultation with the General Manager of Planning, Urban Design and Sustainability, Managing Director of Cultural Services, Director Public Space and Street Use, and the Director of Facilities Planning and Development, plaza stewardship details, in alignment with the Public Space Stewardship Strategy review, ensuring community access.

Notes to Applicant:

- Design public spaces with Urban Indigenous user groups in mind to ensure everyone feels welcome in that space.
- Seek opportunities to normalize Indigenous language in Vancouver, through wayfinding and place/asset naming.
- Seek opportunities to integrate Indigenous art and designs as a permanent part of the public realm.

Response:

Engagement of Indigenous groups is currently being led by CMPC and is expected to include the Musqueam Indian Band, Squamish Nation and Tsleil-Waututh Nation.

70. Design development of the music presentation centre, preferably adjacent to the civic centre, to the satisfaction of the Managing Director of Cultural Services and the Director of Facilities Planning and Development to ensure that the functional requirements of the music presentation centre can be met. Design development to meet to Detailed Functional Program requirements to be provided by the City. Spaces to include but are not limited to:

- (a) Overheight Performance spaces (Main Hall: 225 fixed seats plus 100 other patrons in a flexible configuration; Secondary Performance venue: 100 patrons seated or 150 patrons standing) and associated spaces including:
- (i) Control room/editing/recording/streaming room;
 - (ii) Lobby/entry/ticketing/merchandising (with overheight);
 - (iii) Green rooms/ dressing rooms;
 - (iv) Storage rooms (including for pianos, etc.);
 - (v) Mechanical rooms;

- (vi) Janitor rooms/support spaces; and
- (vii) Washrooms;
- (b) Crush bar, Food & Beverage Space, Catering Kitchen;
- (c) Administrative space; and
- (d) Programmable/educational room and music library/archives room.

Response:

The Music Presentation Centre will be further developed at the DP stage with consultation with City Staff to ensure the functional and programmatic requirements listed above are met. CMPC has engaged Cornerstone Planning Group to assist in producing a functional design program for the civic centre.

Mechanical rooms and space requirements for Mechanical services will also be coordinated with team for the DP submission.

71. Design development of the music presentation centre with a strong visual identity, ground-level entrance, and distinct presence, including large identification signage in high traffic, high visibility location, with spaces located on no more than two contiguous floors (no higher than second floor).

Response:

Music Presentation Centre has been relocated with strong ground-level presence. Further evolution at DP stage.

72. Design development of the music presentation centre with design input and review from a qualified performance space architect and an acoustic consultant to ensure acoustically-superior quality for the two theatre/performance venues: the Music Hall and the Informal Venue, and to ensure acoustic isolation between spaces within the music presentation centre, adjacent spaces within the building, from outdoors, and from mechanical equipment (i.e. HVAC), to the satisfaction of the Managing Director of Cultural Services and the Director of Facilities Planning and Development.

Response:

Special consideration will be given to the acoustic performance of the Mechanical systems serving the music venue. Requirements will be coordinated with the acoustic consultant.

73. The music presentation centre is to adhere to City's *Social Facility Technical Guidelines*, including:
- (a) Special consideration for music presentation centre fit and finishes may include but are not limited to: acoustic controls, architectural millwork, ceiling heights, wall, floor and ceiling finishes, mechanical including electrical, plumbing, lighting, and HVAC, specialties and furnishings, loading access, parking, bicycle parking, and accessibility for peoples with disabilities (including

performers and audiences, and technicians wherever possible);

- (b) Requires access to a dedicated garbage room, storage and end-of-trip facilities; and
- (c) Ensure dedicated freight-sized elevator and loading access, able to accommodate large equipment and instruments, including pianos.

Response:

Music Presentation Centre design to respond to the City's Social Facility Technical Guidelines.

Mechanical rooms and space requirements for Mechanical services will be coordinated with team for the Development Permit submission. Special consideration will be given for the sensitive areas of the music venue.

Engineering

- 74. The Applicant is advised to contact Engineering Services to acquire the project's permissible street use. Prepare a mitigation plan to minimize street use during excavation and construction (i.e. consideration to the building design or sourcing adjacent private property to construct from) and be aware that a minimum 60 days lead time for any major crane erection/removal or slab pour that requires additional street use beyond the already identified project street use permissions.

Response:

Mitigation Plan to follow prior to construction, at BP stage.

- 75. Provision of construction details to determine ability to meet municipal design standards for shotcrete removal (Street Restoration Manual section 02596 and Encroachment By-law (No. 4243) section 3A) and access around existing and future utilities adjacent the Rezoning Site. Current construction practices regarding shotcrete shoring removals have put City utilities at risk during removal of encroaching portions of the shoring systems.

Note to Applicant: Detailed confirmations of these commitments will be sought at the building permit stage with final design achievements certified and confirmed with survey and photographic evidence of removals and protection of adjacent utilities prior to building occupancy. Provision of written acknowledgement of this condition is required. Please contact Engineering Services for details.

Response:

Confirmation of these commitments to be provided at the BP stage.

- 76. Solid waste storage amenities are proposed in the parking level of buildings and must be no more than one storey below grade. Loading

bays must be provided within these underground structures where garbage and recycling can be picked up by a disposal service without the staging of containers on public right-of-way.

Response:

Solid waste storage amenities will not be located more than one storey below grade. Detailed waste collection and management amenities will be sized and located in greater detail at the Development Permit phase. Spaces will be established to support waste management strategy outlined in Sustainable Large Developments policy report, Zero Waste Planning section

77. The size of garbage/recycling storage rooms must be in compliance with the guidelines set out in the Garbage and Recycling Storage Amenity Design Supplement. The space allotted must exceed the minimum setout in the guidelines to allow for future waste diversion programs (e.g. electronics, bulky items, textiles), donation bins and for the re-use/exchange within common garbage areas.

Response:

Waste rooms will be detailed at the Development Permit phase and will comply with City of Vancouver Garbage and Recycling Storage Amenity Design Supplement. Spaces will be established to support waste management strategy outlined in Sustainable Large Developments policy report, Zero Waste Planning section

78. Provision of a letter from the hauling company servicing the site outlining the collection of garbage and recycling, including the frequency of trips.

Note to Applicant: Vehicle trips for waste stream collection should be minimized by engaging a single hauler.

Response:

Centralized waste rooms for each building will be designed to allow for waste collection from a single point, minimizing vehicle trips for waste stream collection.

Waste hauling company service letter will be provided as part of Development Permit application.

79. Provision of a leading edge processing of organic compostable material on site. Commercial composters utilizing controlled conditions can safely digest food waste at a much faster speed than natural conditions. This composting process reduces the volume by up to 90%, turning food waste into compost in 24 hours and is consistent with the City Greenest City 2020 goals of reducing GHG emissions. The Applicant is required to provide a letter from a service provider to ensure the feasibility of the system.

Note to Applicant: If this opportunity is not pursued, another innovative zero waste measure must be provided to meet the intent of the *Rezoning Policy for Sustainable Large Developments*.

Response:

Leading edge organics processing and digestion equipment currently planned. Detailed system sizing and locations to be provided at Development Permit application.

(Refer to the Sustainable Large Developments Policy Report, Zero Waste Planning and Sustainable Food Assets sections)

80. All receptacles in common areas should utilize clear signage and colour coding of various waste streams to encourage the proper diversion of material. Colour coding areas of the room to further clarify sorting options should be considered.

Note to Applicant: Signage and colour coding should be consistent with Metro Vancouver guidelines and utilize best practices.

Response:

Planned to be included into the zero-waste management plan. Detailed space layouts and signage samplings to be provided at Development Permit application.

(Refer to the Sustainable Large Developments Policy Report, Zero Waste Planning sections)

81. Provision of parking as per the Parking By-law.

Response:

Vehicle and bicycle parking will be provided in compliance with the requirements of the Parking By-law (Refer to Transportation Demand Management Plan)

82. Provision of abundant Class B bicycle parking near all retail entrances and the community centre, on private property outside of any sidewalk statutory right-of-way.

Response:

Class B bike racks have been provided in specified locations outside of SRW (Refer to Landscape Drawing Set, Landscape Plans L3.01-L3.08)

83. Provision of parking and loading access to the satisfaction of the General Manager of Engineering Services. The following revisions are required:

- (a) Provide sufficient ramp width and corner cuts to eliminate conflicts between general vehicle traffic and truck access on the parking ramp;

Response:

The Loading Management Plan prepared by Bunt includes vehicle turning path analysis for the largest truck size anticipated to service the development to confirm that the design of the parking and loading ramp and internal circulation routes do not have vehicle turning path conflict points.

- (b) If loading relaxations are being sought, a Loading Management Plan is required, and a Shared Loading Agreement may be required;

Response:

Loading relaxations from the requirements of the Parking By-law will be sought. The Loading Management Plan provides a rationale for the proposed supply, allocation and sharing of loading spaces among the different land uses by development phase .

- (c) Provision of a convenient 'stairs free' internal loading access to all CRUs and elevator cores. Consider a loading dock, loading lift or elevator to achieve this. Slopes in loading corridors should generally meet requirements for disability access;
- (d) Design development to improve performance of driveway crossings onto the internal roadway including increased sight distances and reduced ramp grades. For parking and loading ramps that are accessed directly from the street, the slope shall not exceed 5% in slope for the first 20 ft. of the ramp;
- (e) All Class B bicycle spaces to be located on private property in close proximity to the lobby or building entrance with 'stairs free' access and weather protection. Bicycles and racks shall not encroach into the SRW for the sidewalks along the internal roadway and the site; and

Response:

Class B bike racks have been provided in specified locations outside of SRW (Refer to Landscape Drawing Set, Landscape Plans L3.01-L3.08)

- (f) Provide automatic door openers on the doors providing access to the bicycle room(s) and note on plans.

Response:

Automatic door openers to bicycle rooms will be provided. More details to follow at DP Stage.

- 84. Design development to improve parking operations and comply with the Parking and Loading Design Supplement to the satisfaction of the General Manager of Engineering Services as follows:
 - (a) Provide improved drawings indicating the proposed parking, loading and bicycle parking facilities, including adequate dimensions, grades, elevations, and turning movement tracks in order to verify design adequacy and general compliance with the Parking By-law and the Parking and Loading Design Supplement; and
 - (b) Design development to improve access to bicycle parking.

Note to Applicant: The route must be 'stairs free' and not require use of the shared parking ramp.

Response:

All vehicle and bicycle parking, and loading will be designed in compliance with the dimensional standards outlined in the Parking By-law and the City of Vancouver Parking and Loading Design Supplement.

The Loading Management Plan includes vehicle turning path analysis for the largest truck size anticipated to service the development to confirm that the design of the parking and loading ramp and internal circulation routes do not have vehicle turning path conflict points.

85. The following information is required for drawing submission at the development permit stage to facilitate a complete Transportation review:
- (a) A complete tech table is required showing the calculations for the minimum required parking, loading, bicycle spaces and the number of spaces being provided;
 - (b) All types of parking and loading spaces individually numbered, and labelled on the drawings;
 - (c) Dimension of column encroachments into parking stalls;
 - (d) Dimensions for typical parking spaces;
 - (e) Dimensions of additional setbacks for parking spaces due to columns and walls;
 - (f) Dimensions of manoeuvre aisles and the drive aisles at the parkade entrance and all gates;
 - (g) Section drawings showing elevations and minimum vertical clearances for parking levels, loading bays, ramps, and security gates. These clearances must consider mechanical projections and built obstructions;
 - (h) Areas of minimum vertical clearances labelled on parking levels;
 - (i) Design elevations on both sides of the ramps and drive aisles at all breakpoints, loading bays, disability spaces, and at all entrances. The slope and length of the ramped sections at all breakpoints to be shown on the submitted drawings; and
 - (j) Indicate the stair-free access route from the Class A bicycle spaces to reach the outside. Stair ramps are not generally acceptable.

Response:

Conditions 85(a-j) will be addressed with the revised DP drawing set.

86. The new geometric design for the internal roadway is to include, but is not limited to, the following:

- (a) Relocate the parking and loading access for the Rezoning Site sub-area A block to be approximately 20 m further away from Pacific Boulevard;

Response:

The parking and loading access for Rezoning Site sub-area A block has been relocated 25 metres further away from Pacific Boulevard. The revised plan now locates the access approximately 60 metres from Pacific Boulevard which is sufficiently clear of intersection traffic operations based on projected future traffic volume conditions.

- (b) Design development to reduce road width at 90 degree corners while accommodating large vehicle movements. Additional corner cuts on the corners will be required to achieve the geometric design and to maintain a consistent 5.5 m sidewalk width around the corner. The dimensions for the corner cuts will be determined once a detailed review of the internal road geometric is completed;

Response:

Vehicle turning path analysis has been used to set recommended road widths at the internal roadway corner points.

- (c) Enhanced pedestrian crossing on the internal road between the central plaza and the Seawall;

(Refer to Landscape Drawing Set, Open Space Framework L0.13-L0.16)

- (d) Surface materials and treatment that support universal access for people of all ages and abilities, and that are low maintenance;

(Refer to Landscape Drawing Set, Details L6.01-6.03)

- (e) Provision of separate walking and cycling paths along the waterfront, except for the pedestrianized Georgia Wharf, each a minimum 4.5 m in width with suitable separation of a minimum 2.0 m in width, and with controlled pedestrian crossing points at key locations; and

Response:

Special Paving has been extended from Central Plaza to Waterfront Place including pedestrian crossing on the internal road. (Refer to Landscape Drawing Set, Open Space Framework L0.17-L0.32, Landscape Plans L3.01 L3-08 and L6.01' for surface materials and treatment see Details: Paving Material).

- (f) Provision of standard curb and gutter on all internal streets between any sidewalk and vehicle parking/travel lane and removal of all proposed bollards on these streets.

Response:

Parking and loading relocated access sub Block A relocated away from Pacific Boulevard. Surface materials to support universal access for people of all ages and abilities, while being low maintenance. Separate walking and cycling paths provided along

seawalk. Standard curb and gutter provided on all streets.

87. Design development to reduce parking provided on site to the minimum required to support the development.

Note to Applicant: As part of the updated Traffic Assessment and Management Study (TAMS) provided at the development permit stage, an analysis of parking requirements it to be completed. This analysis should reflect lower parking requirements due to the provision of TDM measures outlined in the Green Mobility Plan, consider strategies for unbundled vehicle parking from home ownership, and reflect observed vehicle ownership rates.

Response:

A revised traffic and parking rationale has been prepared for the planned Phase 1, 2 and 3 development of the Plaza of Nations site. By definition this is a Large Site development within the City of Vancouver which triggers the requirement for a TDM Plan which has been prepared by Bunt. The parking supply strategy is compliant with the requirements of the Parking Bylaw.

88. Design and construction of the Seawall is to be completed in conjunction with Engineering Services staff, and to the satisfaction of the General Manager of Engineering Services.

Note to Applicant: Corner cuts and additional setbacks may be required to improve the function of the corners in the proposed geometry, improve sightlines, and allow for integration with the existing and/or future Seawall design on the adjacent properties.

Response:

Design and construction details for the Seawall will be provided at DP stage, in conjunction with Engineering services staff and to the satisfaction of the General Manager of Engineering Services.

89. All public realm space intended to be managed by City of Vancouver including seawall, street right-of-way and dedicated pedestrian areas shall be designed in consultation with Engineering, to the satisfaction of the General Manager of Engineering Services.

Note to Applicant: Design of the public realm should include convenient access to connect to the electrical grid for events, festivals, and other users to prevent the use of fossil fuel based generators.

Response:

Access to electrical grid for events, festivals and other areas will be incorporated. Further design development to be coordinated with City Staff at the DP stage.

90. Provision of Zero Emission Vehicle parking stalls as per the following:

- (a) 100% of residential parking stall to have energized outlets at Level 2 (208/240V at 40A) or an EV Energy Management System that meets a performance standard that delivers at least 12 kWh to each stall over an 8-hour overnight period;
- (b) 10% of commercial and retails stall with Level 2 chargers;
- (c) 10% of the community centre stalls to have Level 2 chargers with an additional 20% to be wired for future expansion; and
- (d) Preferential parking for zero emissions vehicles to the satisfaction of the General Manager of Engineering Services.

Response:

Requirements will be met and have been detailed in transportation demand management plan and Green Mobility strategy outlined in the Sustainable Large Developments policy report, Green Mobility section.

91. Consideration should be given to implementing the following items as part of the Green Mobility plan:

- (a) Design development to achieve convenient access from Class A bicycle parking to excellent end of trip facilities for all non-residential uses. Consider bundling and locating commercial bike facilities adjacent to retail uses within the development area to leverage a better quality of infrastructure that exceeds the minimum standards of the Parking By-law in terms of convenience and design;
- (b) Provision of shared vehicles and parking spaces for shared vehicles, both one-way and two-way, within the development;
- (c) Limited use of hydraulic stacked bicycle parking may be considered for bicycle parking above Parking By-law requirements, with provision of technical information and product data that supports their use for All Ages and Abilities;
- (d) Reserved Carpool spaces for office use;
- (e) Rapid electric vehicle charging stations;

Response:

*Currently planned by the development.
(Refer to Green Mobility in the Sustainable Large Developments policy report, Green Mobility section)*

A Large Site TDM Plan has also been prepared by Bunt & Associates that achieves the required point totals for the various land use categories through provision of car share vehicles, Public Bike Stations (2), along with other TDM measures.

Furthermore, 20A/120V Outlets Locations will be coordinated at the DP stage.

- (f) Bicycle repair station with bicycle wash area;

Response:

*Currently planned by the development.
(Refer to Green Mobility in the Sustainable Large Developments policy report, Green Mobility section)*

- (g) Indoor, secured Class B bicycle spaces for visitors;
- (h) Provide subsidized car share memberships;
- (i) Provide subsidized bike share memberships;
- (j) Provide subsidized monthly compass cards;
- (k) Provide 'shared' compass cards for residential use;
- (l) Indicate on plans design accommodations made in Class A bicycle parking areas to accommodate bike trailers, cargo bikes, and other non-standard bike sizes; and
- (m) Provide information, transit & cycling maps, car share, bike share, compass cards to new residents to encourage sustainable transportation choices. Consider appointing a "Greencierge" as per the NEFC Plan (11.5.5) to assist residents and businesses in achieving Traffic Demand Management goals for the project.

- 92. Planting along Pacific Boulevard public realm to be consistent with the NEFC Detailed Design of Roads and Utilities.

Response:

Planting along Pacific Blvd has been proposed according to NEFC Detailed Design of Roads and Utilities (Refer to Landscape Drawing Set, Open Space Framework L0.5-L0.7 & Landscape Plan L3.01)

- 93. All planting on street rights-of-way are to be maintained by the adjacent property owner.

Response:

All planting on street rights-of-way will be maintained by adjacent property owner as CMPC will be responsible for maintaining the streets as part of the Agreement to allow private roads on-site.

- 94. No permanent irrigation system shall be installed in the street right-of-way, but may be considered in the internal street.

Response:

No irrigation to be installed in the ROW.

95. All plant material within the same continuous planting area which is located on street right-of-way within 10 m, measured from the corner, of an intersection, pedestrian crossing, entrance to a driveway or other conflict areas where sightlines need to be maintained for safety reasons, shall not exceed a mature height of 0.6 m, measured from the sidewalk. All plant material within the street right-of-way that is located outside of the areas described above shall not exceed 1 m in height, measured from the sidewalk.

Response:

Plant material has been selected to maintain sightlines. (Refer to Landscape Drawing Set, Planting Plans L4.01-L4.11).

96. Plants shall be planted in such a way as to not encroach on the sidewalk, street, lane, and/or bike lane. Provide minimum 0.30 m buffer of low groundcover in planting beds adjacent to sidewalks.

Response:

0.30 m groundcover buffer has been provided in planting beds along sidewalks. (Refer to Landscape Drawing Set, Planting Plans L4.01-L4.07)

97. Further to the Rainwater Management Plan, considerations should be given to the following when developing the plan:

- (a) Where the rainfall is to be retained and/or treated, staff do not accept the principle that distinct site areas that have large retention storage capacity in some way compensate for those areas of the site that are impervious, without the first and second 24 mm of runoff being directed towards these absorbent areas, and this being clearly demonstrated. The subsequent safe conveyance of rainfall surpassing 48 mm in 24 hours will also need to be demonstrated;

Response:

Retention and treatment facilities are located within the immediate area of the rainfall runoff source. Demonstration of the safe conveyance of excess rainfall will be addressed at detailed design.

- (b) Demonstrate that the receiving retention/treatment areas can accommodate the proposed runoff volumes;

Response:

Integrated Rainwater Management Plan Framework, submitted at the PDP stage, demonstrates that enough retention / treatment areas have been planned and are available to accommodate runoff volumes.

- (c) Submit a plan illustrating how rainfall is directed from impermeable surfaces into planted or other storage/treatment areas;

Response:

IRMP Framework demonstrates how this will be accommodated.

- (d) Provide area and volume calculations to support the overall rainwater management strategy;

Response:

IRMP Framework provides area and volume calculations.

- (e) Building/Public Realm Design to show leadership in the City's commitment to Green Building systems including an integrative approach to rainwater management to minimize potable water use and encourage the use of alternative water sources;

Response:

IRMP Framework addresses this item.

- (f) Public realm, including street areas, must also be designed to capture, reuse, infiltrate, evapotranspire, detain, and treat rainwater to the standard of the Integrated Rainwater Management Plan. This is to include the distribution of rainwater on a development scale to the greatest extent practicable, where the rainwater management system may be integrated into the public area infrastructure. The City may maintain streets areas, and consideration for City Operation's maintenance equipment and access to related drainage infrastructure will be necessary;

Response:

IRMP Framework presents proposed concepts for consideration.

- (g) Consideration should be given to a joyful expression of capture and movement of rainwater across the site; and
- (h) Detention tanks shall be considered only where alternative approaches to rainwater retention prove unachievable. Where detention tanks are to be proposed they should be considered for storing water for alternative uses on site.

Response:

IRMP Framework addresses re-use of captured rainwater.

Each BMP tier has been investigated and integrated into the design where feasible. Adopted as per the Green Building Policy for Rezoning and sustainable large developments policy. Also referenced in the sustainable large developments policy report, Rainwater Management section.

There are limited possibilities to express rainwater movement across the site, rainwater has been captured in soil cells below the paving surface. (See Landscape Plan – Soil Cells Layout – L3.14 and L3.12 Landscape Plan –

Level 17,18 & 19).

98. The Water Utility Plan drawing shows that a City-owned water main shall be built in the Road dedication and the Seawall Easement to serve "Lot 4." Stagnant water in this dead end is a concern of the City. The developer shall work with the City staff to resolve this issue to the satisfaction of the General Manager of Engineering Services.

Response:

To mitigate water quality concerns (stagnant water due to low demands), a dual watermain is proposed along the seawall easement from a point upstream of the Lot 3 service connection; this arrangement will ensure constant water circulation as part of the water demands from Lot 3 and Lot 4.

99. All structures, roadways, and public access pathways must be built to the Flood Construction Level.

Response:

Structures, roadways and public access pathways to be built to 4.8m, except for those connecting to lower neighboring properties.

100. Continuous, drained weather protection should be provided over publicly accessible sidewalks where there are commercial uses at grade.

Response:

Canopies to be provided over publicly accessible sidewalks where commercial uses are at grade.

101. Prior to issuance of the first development permit, the Applicant must provide a low carbon energy feasibility study, completed to the satisfaction of the General Manager Engineering Services, as per the requirements of the *Rezoning Policy for Sustainable Large Developments*.

Response:

The project team has been coordinating the completion of the LCES study with the CoV's NEU team. It will be completed and submitted by Friday, July 19th.

102. The proposed approach to site heating and cooling, developed in collaboration with the City, shall be provided prior to the issuance of any development permit, to the satisfaction of the General Manager of Engineering Services.

Response:

Based on discussions with CoV's NEU team, the PON development cooling demand can be met by a centralized cooling plant. The project will comply with the CoV's Energy Utility System Bylaw No. 9552 and will be a customer of the City owned NEU for all its heating demand, including space heating and domestic hot water heating. Details of the different mechanical plant options for heat recovery and ownership

boundaries shall be included in the Low Carbon Energy Feasibility Study report.

103. Provision for an adequate and appropriate dedicated Neighbourhood Energy Room to be utilized by the NEU for peaking/backup heat production and waste heat recovery shall be provided prior to the issuance of development permit, to the satisfaction of the General Manager of Engineering Services.

Note to Applicant: The Applicant is encouraged to work closely with City staff in the early design stages to identify requirements.

Response:

NEU peaking/backup heat production and waste heat recovery spatial requirements have been incorporated into the current PON development mechanical plantroom space allocation. These space requirements will be highlighted in in the Low Carbon Energy Feasibility Study (Refer to Arch. Drawing Set A095-A099). If required, LCES components, such as heat pumps and boilers, to be owned and operated by the City owned NEU shall be within this space allocation.

104. All buildings in the development shall connect to a City-owned low carbon NEU, should one be available for connection as determined by the General Manager of Engineering Services prior to development permit issuance, and shall adhere to the following requirements:

- (a) The heating and hot water system of all buildings in the development shall be designed to be easily connectable and compatible with Neighbourhood Energy to supply all heating and domestic hot water requirements; design provisions related to Neighbourhood Energy compatibility must be to the satisfaction of the General Manager of Engineering Services;

Note to Applicant: The Applicant shall refer to the Energy Utility System By-law (No. 9552) and Neighbourhood Energy Utility Building Connection Guideline (2016) for specific design requirements, which includes provisions related to the location of the mechanical room(s), centralization of mechanical equipment, pumping and control strategy, and other hydronic heating and domestic hot water system minimum requirements.

The Applicant is encouraged to work closely with Staff to ensure adequate provisions for NEU compatibility are provided for in the mechanical design. As a pre-condition to building permit, the City will conduct a peer design review of the building's connection to the NEU to ensure that the Neighbourhood Energy connectivity requirements have been satisfied.

Response:

The project will comply with the CoV's Energy Utility System By-law No. 9552 and will be a customer of the City owned NEU for all its heating demand.

- (b) Building-scale space heating and ventilation make-up air shall be provided by hydronic systems without electric resistance heat or distributed heat generating equipment (including but not limited to gas fired make-up air heaters, heat producing fireplaces, distributed heat pumps, etc.) unless otherwise approved by the General Manager of Engineering Services;
- (c) Provide for 21 m² of dedicated space on the P1 level of each building within the development to be utilized for an energy transfer station connecting the building(s) to the City-owned low-carbon NES, as outlined in the Neighbourhood Energy Connectivity Standards – Design Guidelines, to the satisfaction of the General Manager of Engineering Services; and
- (d) Detailed design of the building HVAC and mechanical heating system at the building permit stage must be to the satisfaction of the General Manager of Engineering Services.

Response:

All space heating and domestic hot water heating demand in the PON development will be met by the NEU. Both the development central plant and all building level plant will be configured to ensure this. Space for an energy transfer station has been allowed for in the PON development central plant. (Refer to Mech. Services Drawing and Arch. Drawing Set A095-A099)

Environmental Contamination

- 105. The Property Owner shall obtain and submit to the City copies of all contamination studies and the consequential remediation plan(s), approved by the Province (or any certified professional in accordance with the BC Environmental Management Act or regulation thereto), in respect to the Rezoning Site.

Response:

As per the Purchase and Sale Agreement between BC PavCo and Concord Pacific, the responsibility of all environmental issues on-site has been assigned to Pacific Place Remediation Project (PPRP). PPRP has been working with SLR Consulting and Golder to prepare a soil and groundwater management plan that will help them plan for excavation work and understand the types/quantities of contaminated soil on-site (Refer to Site Profile Documents).

- 106. The Property Owner shall obtain and submit to the City a Remediation Plan for all lands being transferred or dedicated to the City, and all lands required to service the Rezoning Site, including providing utility construction plans compatible with the accepted Remediation Plan(s), satisfactory to the City Manager.

Response:

See above. Process is underway by the Province of British Columbia. (Refer to Site Profile Documents)