City of Vancouver *Land Use and Development Policies and Guidelines*

Planning, Urban Design and Sustainability Department

453 West 12th Avenue, Vancouver, BC V5Y 1V4 | tel: 3-1-1, outside Vancouver 604.873.7000 | fax: 604.873.7100
website: vancouver.ca | email: planning@vancouver.ca | app: VanConnect

FALSE CREEK FLATS URBAN DESIGN AND DEVELOPMENT POLICIES AND GUIDELINES FOR FC-2 – THE INNOVATION HUB

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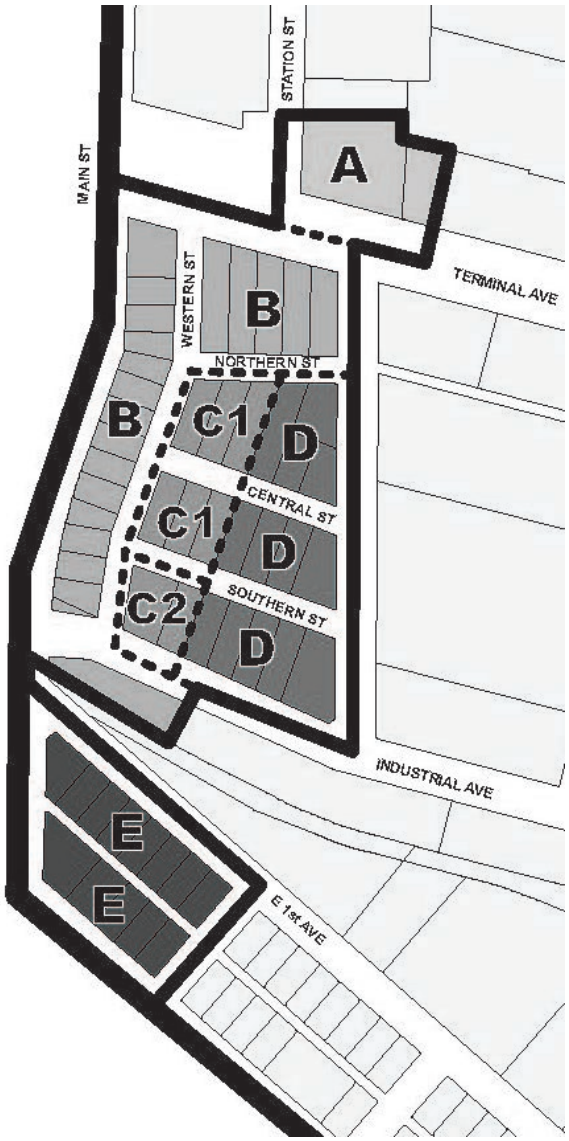
PART ONE

URBAN DESIGN POLICIES AND GUIDELINES

False Creek Flats Innovation Hub



FC-2 Zone District Map

Part 1: Urban Design Policies and Guidelines

1 Application and Intent

1.1 Plan Principles - General

Part One of these Urban Design Policies and Guidelines for the Innovation Hub of False Creek Flats are to be used in conjunction with Part Two – Development Policies, the FC-2 District Schedule, and the False Creek Flats Area Plan. As well as assisting the applicant, approvals including conditional or discretionary variations in regulations will be evaluated based on these documents.

The objectives of these policies and guidelines are based on the following principles.

(a) Intensify Employment Opportunities: Increase job space around existing and future transit sites that reflect the industrial character and nature of the area. Explore opportunities for higher use of existing buildings for more intensified job space.

(b) Maximize Flexibility: Ensure that new buildings can adapt and evolve to accommodate future changes in economic production.

(c) Encourage Vertical Stacking of Industry and Production Spaces: There is increasingly an opportunity to stack many industrial/production businesses in the same building. With the goal of increasing employment and the productive output of the area, the plan supports a return of vertically stacked industrial uses in the Flats.

(d) Take Advantage of Unique Opportunities: A thriving economy requires space for all scales of businesses from start-ups to headquarters. Large lot sizes create flexibility and scale not available elsewhere in the inner city. Plan for flexible outdoor spaces that can host a variety of uses over 24 hours.

(e) Create Buildings that Respect and Respond to the Public Realm: Design buildings at the scale of the pedestrian by incorporating elements at the ground floor that help to create attractive, well- functioning and welcoming spaces.

(f) Reference Industrial and Institutional Urban Fabric: Consider a campus approach to the design and siting of developments on large sites. Accommodate industrial and institutional scales within a finer grained urban setting to facilitate organic growth and phasing over time.

(g) Create healthy and productive workspaces: Design the public realm to maximize sunlight on public spaces and daylight in work environments.

(h) Encourage Working Rooftops: Expand economic functions to the roof tops of buildings

(i) Create Thoughtful Transitions Respectful of Surrounding Residential Neighbourhoods: Require transitions between working industrial lands and adjacent residential.

(j) Showcase Functional Workspaces in the Public Realm: Create links between the public realm and industrial function to showcase the industrial character of the Flats.

(k) Create Buildings and Neighbourhoods that Respond to Sea Level Rise: Low topographic elevations and anticipated sea level rise presents a major challenge for development in False Creek Flats. Provide adaptive, flood resilient building design solutions.

(l) Re-purpose Vehicle Parking: Minimize surface parking and design for parking areas to transition to work space over time as other modes of transportation improve.

1.2 Plan Principles – Innovation Hub

The FC-2 District Schedule is comprised of six sub-areas referred to as the 'Innovation Hub'. The idea of a productive City is intertwined with many things: entrepreneurship, local economic conditions and stimuli, planning policy, connections, and networks. Goals for the innovation hub include:

Preserve and celebrate PDR [Production/Distribution/Repair] by making it visible

- Ground floor roll-up garage doors, large windows
- Protect industry and preserve affordability for existing businesses
- Generate new businesses and provide non-profit industrial rental space

Maintain unique and historical existing street network and industrial character

- Generally maintain block size
- Create a sense of place through retaining industrial materials

Connectivity

- Develop a pedestrian network
- Maintain porosity through to Main Street

Make spaces multi-functional + flexible

- Design buildings and spaces to accommodate industry of various sizes
- Design spaces that are flexible and adaptable to changing uses over time

A place for jobs + industry

- Job creation in innovative and creative industries
- Community partnerships
- Prioritize a circular economy

Explore innovative parking models

- Consider opportunities where loading can serve dual functions such as becoming seating over the lunch hour or semi-private spaces for off-peak hour events.

1.3 Structure Plan – Innovation Hub

The structure plan provides a quick reference for the overall physical policies and guidelines and context for the Innovation Hub. Part Two – Development Policies should be referenced for further requirements. The following outlines the anticipated public realm and street network objectives. (*Numbers below correspond to Structure Plan next page.)*

① **Station Street:** Station Street re-alignment and 'normalized' at Terminal Avenue and future potential extension through to East First Avenue at Lorne Street is envisioned to be a 'complete street' that facilitates multi-modal access and connectivity.

② **East First Avenue:** As part of a longer term strategy, a 'normalized' four-way intersection to consolidate the existing intersections of Industrial Avenue and East First Avenue at Main Street is desired to improve multi-modal movements.

③ **Greening of Central Street:** Central Street functions as an east-west connection between Station Street and Main Street and will have a distinct hierarchy in the overall street network for the Innovation Hub. It should be a pedestrian and bike priority zone to link the Seaside Greenway to the Central Valley Greenway, as well as a location for future potential green infrastructure and ecological linkages between the False Creek Flats and False Creek.

④ **Central Mews and Plazas:** The central mews will function as a public north-south connector showcasing functional workspace. At the intersection of the mews and Central Street, a significant central community plaza is anticipated as well as smaller plazas on the north and south termini of the mews.

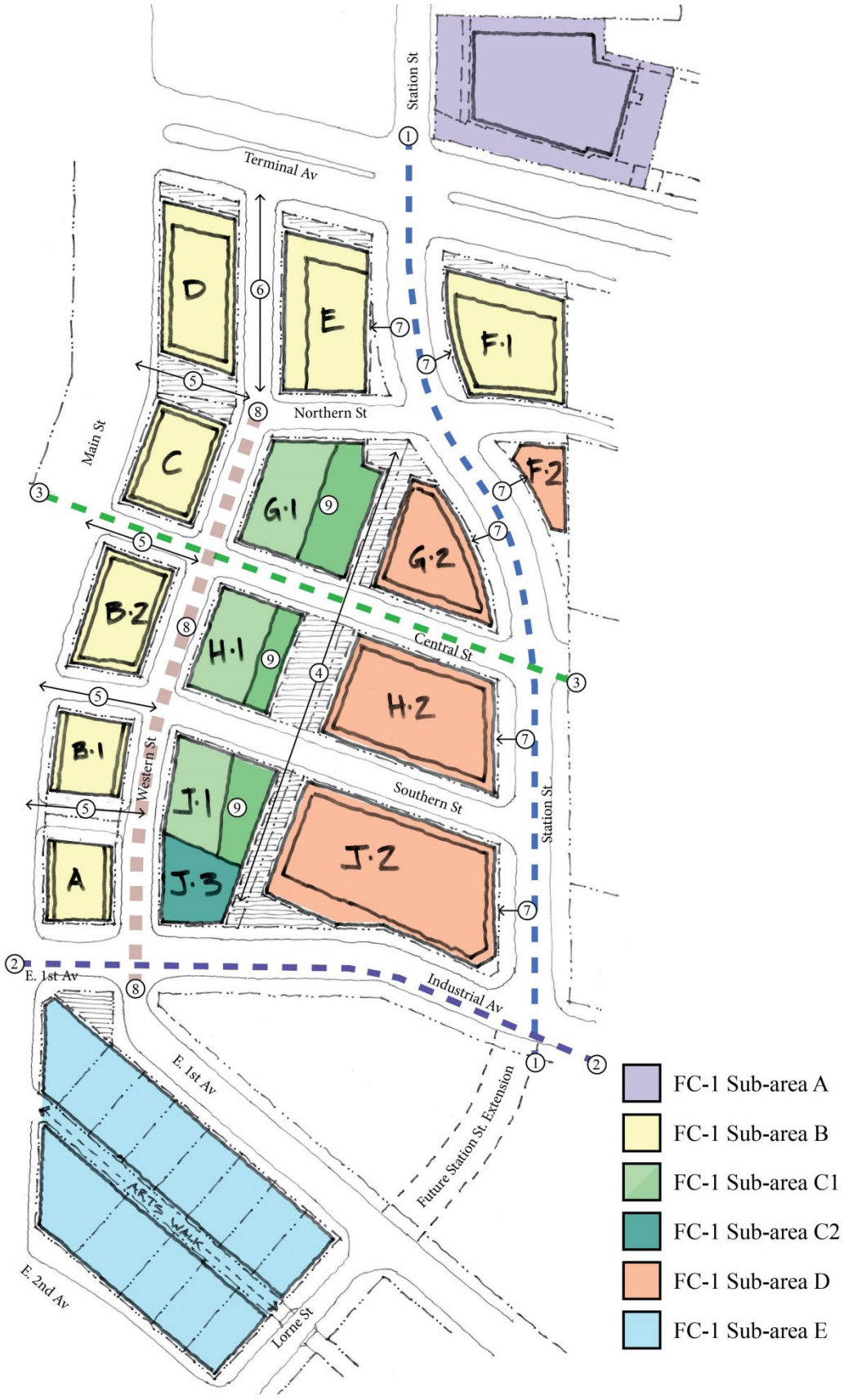
⑤ **Pedestrian Porosity Between Main Street and Western Street:** Maintain public connections between Main Street and Western Street. These should occur in alignment with Southern, Central, and Northern Street. Explore opportunities for ground floor uses to be visually transparent between the two streets.

⑥ **Western Street and the North Gateway:** The northern end of Western Street, in particular between Northern Street and Terminal Avenue, should be given special consideration as a public space and to potentially become car-light in the future, forming the desire path link to the SkyTrain.

⑦ **Station Street for Non-Motorized Building Access:** Though much emphasis in the 'Innovation Hub' is placed on the internal street network, Station Street provides an important 'frontage' that provides opportunities for non-motorized entry and lobby access.

⑧ **The 'Working' Street:** Western Street will function as a 'working' / industrial street that also aspires to be lively and engaging in how it interfaces with the adjacent building frontages. Consideration will be given to doubling its function as a social space and place for interaction including potentially being closed to traffic for the occasional special event.

⑨ **Green Valley:** The buildings between Western Street and the Central Mews are at lower density and building height. The intent is that they are situated to improve access to daylight and views for the surrounding buildings as well as being provided with green roof tops. This 'Green Valley' should include usable amenity green space for the community, the residents and the other tenants. Space devoted to urban agriculture may be considered for use by commercial tenants.



Structure Plan (with Lot Numbering)

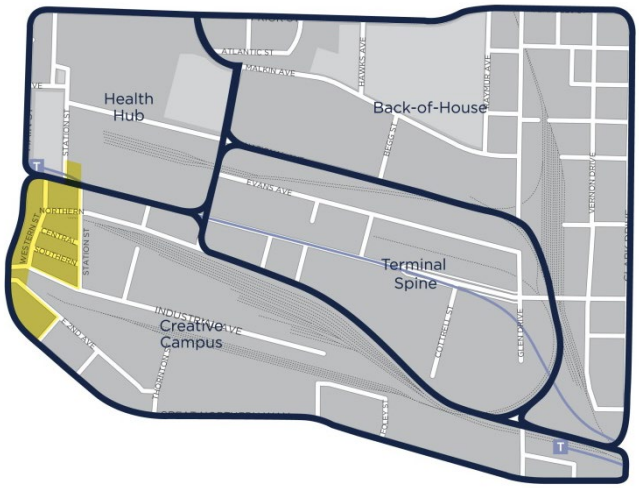
2 General Design Considerations

The Urban Design Policies and Guidelines for the Innovation Hub are derived from the policy objectives of the False Creek Flats Area Plan prioritizing the economic, employment, and enterprise characteristics of the Hub. Site layout and building design such as building separations, widths, depths, and setbacks should reinforce the surrounding urban industrial scale and street network and provide a means to inform opportunities for open space, vehicular access, rain water management and permeability as well as augmenting the Network of Public Spaces.

2.1 Neighbourhood Character

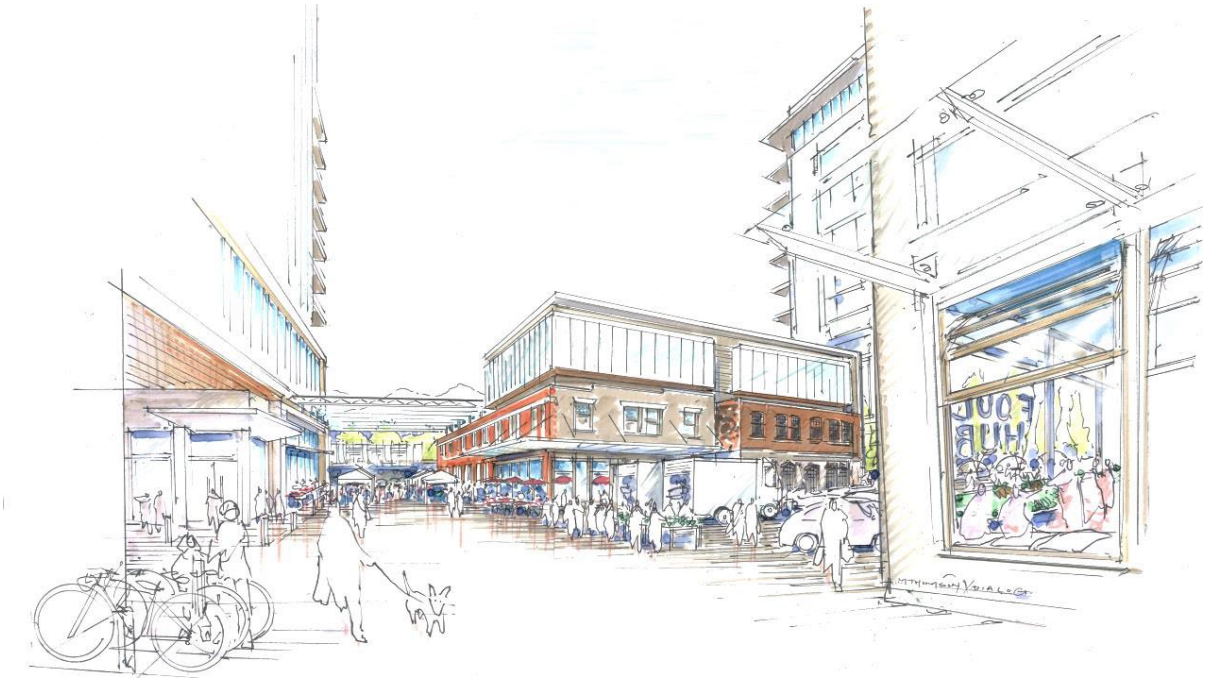
Innovation Hub Amenity Node

Key to False Creek Flats is the strategic economic potential of the seven acres termed the Innovation Hub that embraces business and economic experimentation and growth. Additional building heights and densities should be supported by an amenity-rich node including a plaza spaces, pedestrian connections, ground floor activations and amenity spaces.



Creative Campus Sub-Area

The FC-2 Innovation Hub falls within the Creative Campus sub-area. The intent for this sub-area is to enable intensification opportunities for well-functioning, flexible industrial and light industrial workspace while enhancing the public life and creating pedestrian interest. Refer to the False Creek Flats Urban Design Policies and Guidelines for I-2 and I-3 for additional intent and character descriptions for this area.



Street Character – Embrace the Historic Street Grid

Embed the area's historic grid as a starting point for the transportation network. A separate FC-2 Transportation Planning Study will provide detail on the street network role and function as well as providing better definition of parking and loading requirements, right of way widths and turning lanes requirements.

2.2 Unique Spaces and Places

The diverse combination of uses and forms of development in the False Creak Flats provides for opportunities to create unique and varied places. Places which create opportunities for public engagement in a variety of distinct places are highly encouraged.

2.3 Orientation

Building design should re-enforce established street orientations emphasizing street level entrances and storefronts. On corner sites, both street facing facades should be developed as front elevations. Irregular, curved or angled sites should result in non-orthogonal building geometries in particular at the lower levels. Tower forms above may be reoriented with respect to views and solar orientation.

2.4 Views

View corridors from Queen Elizabeth Park and from the intersection at Main Street and 6th Avenue may limit the ultimate achievable building height in the Innovation Hub.

New development should be considerate of the impact on existing distant views. However as development progresses, the industrial and institutional scales and densities anticipated in the False Creek Flats will have an impact on the ability to preserve these existing views. Development should therefore place a higher emphasis on the following strategies:

(a) Provide an attractive near view. This can include a finer grained urban fabric and building modules, high-quality materials and detailing, visually permeable facades, programming for active outdoor uses and landscape elements.
(b) Visually linking new open space to existing open space. This can serve to expand the depth of views.
(c) The form and shape of tower elements should be informed by view studies.
(d) View Cones will significantly impact achievable heights.

2.5 Topography: Floodplain

The False Creek Flats has low topographic elevations and will be at risk of flooding during large storms by the end of the century if projected sea level rise occurs. The Flood Plain Standards and Requirements as adopted by Vancouver City Council sets the designated flood plain at 4.6 m from GVRD datum. As a consequence, existing grades including street right of ways, are often one to two meters below the anticipated ground floor elevations. A plan to raise street elevations may be considered in the future. Therefore, new development should be designed to be adaptive when incorporating flood resilient construction methods while accommodating public realm objectives for both the current and potential future at grade conditions. Solutions should be accommodated within the property, be visually interesting, relate to the pedestrian scale, and may include increased building setbacks, internalized stairs and ramping as well as adaptable entries, loading and parking.

Floodplain strategies

2.6 Light and Ventilation

Light and ventilation are important for both workspace and residences.

2.6.1 **Residential**: For dwelling uses:

(a) living rooms should not face into courtyards;
(b) building massing should maximize sun access to courtyards and outdoor amenity areas;
(c) mechanical ventilation of commercial and service spaces should be pre-ducted for exhaust through the roof at the highest level or at a location having the least impact on residential liveability;
(d) maximize opportunities for cross ventilation of dwelling units such as corner units or double fronting units; and
(e) locate residential units and open spaces away from areas of noxious odours and fumes related to nearby traffic or land uses.

Note: Consult individual sub-areas for permitted Dwelling Uses and tenancy.

2.6.2 **All other Uses**: Daylight and ventilation in work environments can improve energy usage as well as promoting health and productivity. Considerations include:

(a) solar shading devices and glazing performance;
(b) building orientation and massing;
(c) increased floor and ceiling heights; and
(d) operable windows.

2.7 Weather

In all cases, weather protection should be provided at common building entries and individual entries. Continuous weather protection should be provided along all street frontages except that, it may not be provided continuously where it can be shown the provision would interfere with well-functioning industrial uses or where pedestrian traffic is not anticipated. Explore opportunities for weather protection that can encourage use as functional outdoor workspace.

2.8 Heritage

Heritage Buildings: In the Innovation Hub, two buildings in particular, 242 Terminal and 250 Terminal, contribute to its heritage character and architectural diversity. Both buildings are registered as 'B' on the *Vancouver Heritage Register.* Development proposals on these sites should include a substantial heritage retention strategy and be reviewed with City Planning staff early in pre-application process.

Neon: Neon Products Ltd. was established in Vancouver in the 1920s at 250-270 Terminal Avenue and by the 1950s, Vancouver was the largest manufacturer of neon signs in Western Canada. Explore opportunities to revive the presence of neon and highlight this cultural heritage.

Street Network: This sub-area of the False Creek Flats differs from other industrial areas in Vancouver in that the narrow streets offer an opportunity for a more fine grain public realm network. Development should reinforce and respect the existing street network.

2.9 Floor Plates

Provide flexible floor plates that can evolve and grow over time as small businesses grow. In the Innovation Hub, development should favour maximizing floor plate sizes over building height for commercial, industrial or retail uses.

3 Use

A variety of uses are supported in the Innovation Hub including, but not limited to laboratories, research and development, digital or tech offices, arts and cultural facilities, spaces for local food economy, and residential uses. Residential, where permitted, is only anticipated at the third level and above with the floors below reserved for other uses.

3.1 Vertical Stacking of Uses

As a means of intensifying industry and production spaces, exploration of vertically stacked uses is encouraged. Objectives for mezzanines and accessories uses include:

(a) continuity with the adjacent primary use or space;
(b) locate mezzanines away from front or flanking facades;
(c) a minimum floor to floor height for mezzanines of of 3.1 meters (10 ft); and
(d) convenient access to loading, garbage and elevators for all floors and mezzanines.

Vertical Stacking of Industrial Spaces

3.2 Uses at Grade

Active and engaging uses at grade should be provided. In the Flats an emphasis is placed on providing attractive, well-functioning and welcoming space to showcase workspace. Strategies including visually permeable frontages, operable window walls, setbacks and weather protection to accommodate outdoor workspaces are encouraged. The Director of Planning will consider relaxations to Conditions of Use in the District Schedule to encourage outdoor workspace and activities based on the compatibility of any dangerous, injurious, noxious or otherwise objectionable impact that could adversely affect the surrounding area and adjoining non-industrial districts.

Other than entrances and lobbies, residential and office uses should not be located at the ground floor level. Where accessory retail or service uses are permitted these spaces should be designed to function in concert with the primary use and have their own entrances and street presence.

4 Guidelines Pertaining to the Regulations of the Zoning and Development By-law and the Parking By-law

4.1 Building Height

The intent of increasing maximum achievable building heights in the Innovation Hub includes objectives for intensified employment opportunities, well-functioning and flexible job space, vertical stacking of industrial uses, working roof tops and response to sea level rise. New development should create an active and engaging public realm within a unique, vibrant, attractive, interesting and amenity rich environment. The Director of Planning may increase the maximum achievable building height based on the objectives of all applicable policies and guidelines including the evaluation of:

(a) Impact of building height, bulk, massing, location and overall design of the building on the site, surrounding buildings and streets. In addition, the general design considerations listed in Sections 2 and 5 describe the intents and objectives relating to general building expression and architectural components.

(b) The provision of on-site open space, landscape, and the effects of overall design on the general amenity of the area. In particular Sections 6 and 7 describe open space and landscape objectives for the Public Places and Spaces, Network of Public Spaces, On-Site Public Open Space, streetscapes and landscape.

(c) The effect on traffic in the area. Part Two – Development Policies for Off-Street Parking and Loading describing objectives for pedestrian, bicycle and vehicular access and circulation.

(d) Provision for pedestrian needs including continuous sidewalks, weather protection, safety, and active and engaging frontages that respect and respond to the public realm.

(e) Two view corridors: one from Queen Elizabeth Park and one from the intersection at Main Street and 6th Avenue limit the achievable building heights. This will range from approximately 42 meters on the south up to 51 meters on the north.

4.2 Front Yard and Setback

The intent of front yard setbacks is for buildings to be built out to the street frontages and yet also to provide opportunities for building articulation. The Director of Planning will consider relaxations to regulations controlling front yard setbacks based on the objectives of these policies and guidelines and the following:

(a) Minor projections into the 0.6 m front setback with the intent of improved building performance and articulation. Examples include solar shading devices or cornices.

(b) On corner lots the flanking street's façade will be evaluated the same urban design objectives as the front.

4.3 Floor Space Ratio (FSR)

The intent of increasing the maximum achievable floor area in the False Creek Flats is to provide opportunities for intensified employment and well-functioning and flexible job space. New development should create an active and engaging public realm within a unique, vibrant, attractive, interesting and amenity rich environment. See also Section 6 and Part 2. Not all sites will be able to achieve the maximum floor area. The Director of Planning may increase the maximum achievable floor area based on the objectives of all applicable policies and guidelines including the evaluation of:

(a) Impact of building height, bulk, massing, location and overall design of the building on the site, surrounding buildings and streets. In addition,the general design considerations listed

in Sections 2 and 5 describe the intents and objectives relating to general building expression and architectural components.

(b) The provision of on-site open space, landscape, and the effects of overall design on the general amenity of the area. In particular see Part Two – Development Policies for the provision of open space and streetscape.

(c) The effect on traffic in the area. See Sections 11, 12, and 13 in Part 2 of these guidelines describing objectives for pedestrian, bicycle and vehicular access and circulation.

(d) Provision for pedestrian needs including continuous sidewalks, weather protection, safety, and active and engaging frontages that respect and respond to the public realm.

4.4 Building Massing

Objectives in the False Creek Flats for intensified employment opportunities and well-functioning workspaces are anticipated to result in a form of development with greater than previously permissible densities, building heights, and floor plates. Form and massing should therefore be carefully considered with respect to other the objectives of these policies and guidelines.

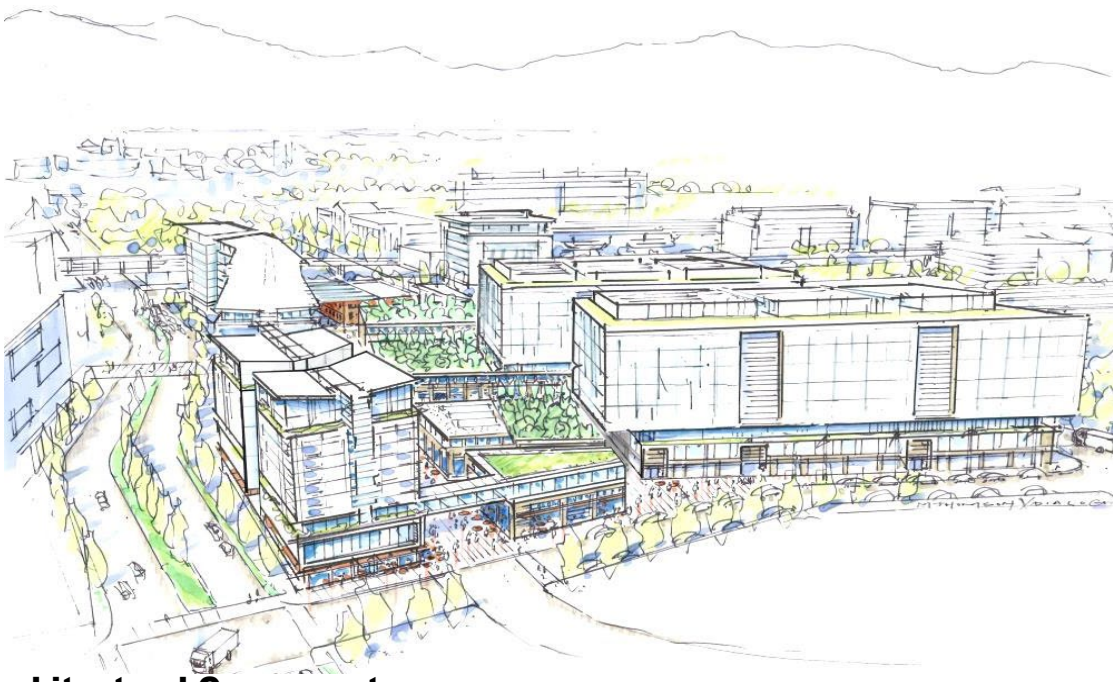
(a) **Longer Buildings**: Where the need for longer or wider buildings can be demonstrated, relaxations to regulations controlling building width and depth and building separation may be considered based on design merit and the provision of a commensurate amount of quality open space and pedestrian interest. Consideration should also be given to significant facade articulation and on-site connections by transparent bridges and walkways on the upper floors. Break up long frontages and expanses of wall planes with substantial recesses, setbacks or building separations.

(b) Tower Elements: **Tower elements (considered to be any portion of a building over 22.0 m (72 ft.) in building height) should:**

(i) be separated from other commercial tower elements by 15.2 m (50 ft)
(ii) be separated from residential tower elements by 24.0 m (80 ft).
(iii) for residential uses, reduced tower separations to 15.2 m (50 ft) may be considered based on the impact to private views and access to daylight on existing and anticipated adjacent development

(c) **The Network of Public Space**: Building massing should respect the importance of sunlight on the Network of Public Space. Development along Walk-the-Line and the Network of Public Space should seek to minimize shadowing on the opposite sidewalks, mini-parks, urban plazas and other public places.

(d) **Roof**: The profile and silhouette of roofs should be considered as part of the skyline. Elevator penthouses, mechanical rooms, equipment, vents and other appurtenances should be integrated with the architectural treatment of the roof and screened from view.



5 Architectural Components

The intent of architectural components and materials is to recognize the areas unique industrial heritage as well as the following objectives:

(a) Reinforce the near view with high-quality materials, detailing and active storefronts.
(b) Express a finer grain urban fabric by articulating smaller structural bays and modules.
(c) Generic "big box" building designs that exhibit little facade interest and transparency to the street should be avoided.
(d) Storefronts should be transparent at grade and are encouraged not to contain long blank walls.
(e) High clearance warehouse-type spaces should have clerestorey windows at the upper storey of the facade.
(f) Building interface at the public realm should emphasize details and proportions at the scale of the pedestrian with particular consideration to the objectives of animated streetscapes and showcasing functional outdoor workspaces.
(g) Reference the "heavy duty" context with details and expression.





5.1 Roofs

(a) Encourage working rooftops to expand economic functions to the roofs of buildings.
(b) Roof tops should be designed to be attractive where seen from above through use of landscaping, green roof technologies, choice of materials and colour.
(c) Elements such as gazebos and trellises may be considered, building height and floor area permitting.

5.2 Windows

Windows at grade are important to enhance pedestrian interest, particularly where retail uses are not required at grade.

(a) For retail, service or office uses:
    (i) maximize transparency through use of high transom, low sill window designs, as well as openable windows where appropriate. For service and office uses, design should allow for adaptation to retail use in the future.
(b) For industrial uses:
    (i) provide windows for viewing to industrial processes where possible; and
    (ii) where windows cannot be used, use other means to add visual interest such as expressed vertical elements, vines, murals, and detailing. Avoid long stretches of blank wall.
(c) Uses and functions which do not lend themselves to enhancing pedestrian interest should be located away from ground floor windows.
(d) Use of mirrored or highly reflective glazing, window decals or other vision obscured treatments are discouraged, and may not be permitted, especially at grade.

5.3 Entrances

The intent is to create buildings and spaces that relate to and respect the public realm as well as to showcase functional workspace. Characteristics of these buildings include:

(a) Main building entries should be clearly identifiable, transparent and accessible from the street.
(b) Locate secondary entrances and individual small tenant entries with frequency along adjoining sidewalks. Separate uses or accessory retail spaces should have separate and distinct entries.
(c) Reinforce visually and physically, the connection of interior spaces to the public realm. Strategies, such as operable folding storefronts and roll-up doors, are encouraged to introduce opportunities for outdoor workspace.
(d) Pedestrian interest and comfort at entries provided through specifically designed seating, signage, lighting and features that indicate the building's use and function,

5.4 Building Articulation

(a) Express an approximately 7.6 meters (25 ft) structural bay spacing on street facing facades, especially at the four lower floors or podium.
(b) Building articulation can be achieved with materiality, shadow lines and exposed structural components.
(c) Feature banding to break up perceived wall height may be used to assist in achieving horizontal articulation.
(d) Highly visible circulation and building systems are encouraged.
(e) Vertical service elements, such as stair and elevator shafts, may be used to assist in articulation, as well as being expressive of their function.

5.5 Exterior Walls and Finishing

(a) Exterior building design should reflect the industrial and institutional urban fabric of the sub-area by using appropriate, durable, and high-quality materials.
(b) Exterior materials that are encouraged include:
contemporary metal cladding systems;
heavy timber structural elements;
glass and steel;
masonry, architectural concrete or brick.
(c) Stucco and vinyl are discouraged as primary exterior materials and may not be permitted by the Building By-law.

5.6 Awnings and Canopies

(a) In terms of appearance, a uniform canopy or awning across the entire building façade may be inappropriate to the diverse and varied character of the Flats. Design architecturally integrated, high quality awnings and canopies, but ensure some variety in form, and/or the ability for tenants to vary them to suit themselves.
(b) Ensure that awnings and canopies are deep enough and close enough to the ground to provide shelter. The recommended minimum depth to height ratio is approximately 7:10.
(c) Transparent or translucent glazed canopies that permit the passage of light are encouraged.
(d) Section 2.7 describes where weather protection should be provided.

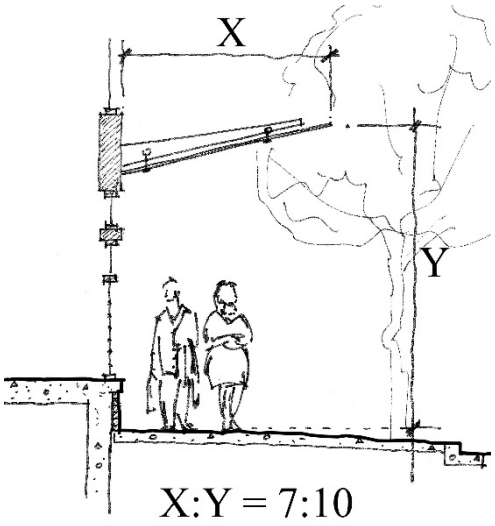


Figure 10 – Weather Protection

5.7 Lighting

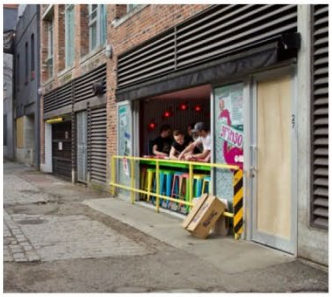
(a) Building, entry path and parking lighting should be integrated into the site and building design.
(b) For exterior lighting, incandescent and other white light sources are encouraged, while sodium vapour light sources are discouraged. Better performing, more efficient light sources such as LED's are highly encouraged.
(c) Exterior lights should be oriented away from adjacent residential properties, with cut-off shields to minimize light.
(d) For larger developments or campuses or where proximity to adjacent development is a concern, a site lighting plan indicating light levels and light fixture types should be provided.
(e) Review opportunities to utilize lighting design standards and guidelines that reduce negative impacts to birds and other wildlife.

5.8 Signs

(a) Corporate signage should be subordinate to the design of the building and architecturally integrated with the development.
(b) Internally illuminated or back light sign boxes are discouraged.
(c) Signage that compliments the industrial urban fabric and character established in the Flats is encouraged. Examples include neon, signage painted on walls, signs with individual letters placed directly on the building or signs incorporating materials that reinforce the character specific sub-areas such as steel, glass and heavy timber.
(d) One freestanding, ground oriented pylon sign is appropriate at each entrance to a large campus site, complimented by wayfinding signage at key decision points along internal drives or paths.

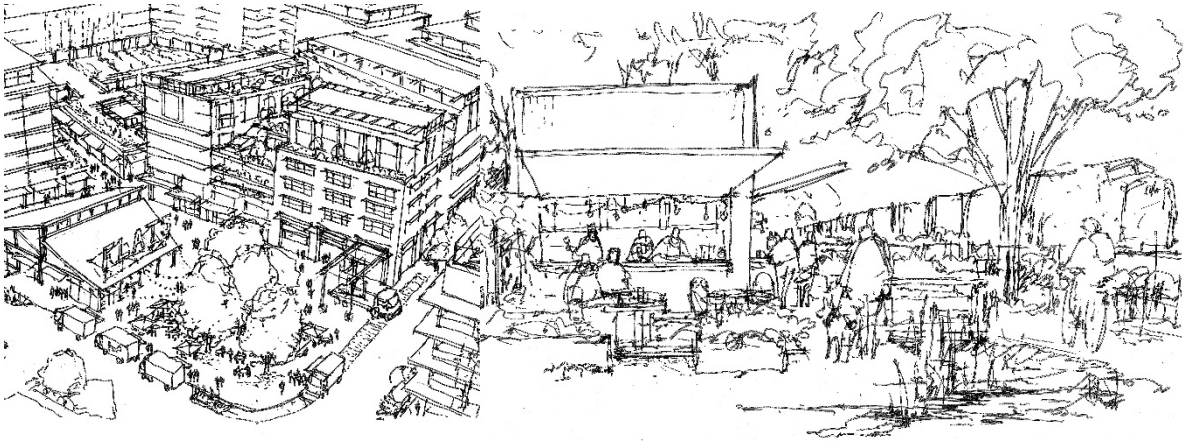
(e) At grade uses are encouraged to have minimal, clear, pedestrian oriented signage located at premises entries.




6 Open Space

6.1 Public Places and Spaces



Central Mews and Plazas

The central mews will function as a public north-south connector showcasing functional workspace. At the intersection of the mews and Central Street, a significant central community plaza is anticipated as well as smaller plazas on the north and south terminuses of the mews. The design and provision of these spaces should be informed by access to daylighting, ground floor uses and adaptability including seating, pedestrian use, special events and even loading.

Arts Walk

The lane between First Avenue and Second Avenue has a unique character and the potential to contribute to the public space network. While maintaining its primary function for servicing, it provides an opportunity to animate a walking link between the Innovation Hub and Emily Carr. This link is envisioned to be lined with commercial galleries, or an "arts walk." The future lane treatment could include lighting, seating and other public realm improvements.

Bike and Pedestrian Connections Central and Western Street

See Part Two Section 12. Central is a greenway and street that provides the main pedestrian and bike thoroughfare through the Hub creating a direct link to the sea wall. Urban green infrastructure will characterize Central Street with potential storm water management strategies being incorporated.

Active Frontages and Streets as Public Spaces

Explore opportunities for streets to be more than systems of conveyance such as off-peak and night time programming and events. For example artists working in the Innovation Hub might transform the space into a place for evening theatre performances.

6.2 Private Open Space

(a) Private open space should be provided for each dwelling unit in the form of balconies, decks or patios with a minimum single horizontal dimension of 1.8 m and a minimum area of 4.5 m^2 (50 sf); and
(b) Private open space should be designed to capture sun and views where possible, as well as to avoid noise and to take account of visual privacy and security. Balcony enclosure to reduce noise may be appropriate in some cases;

6.3 On-Site Public Open Space

The following should guide design and location of open spaces on private land. In some circumstances, an additional Right of Way may be requested from development to provide publicly accessible open space.

(a) Create inviting and comfortable places for people;
(b) Reintroduce water and natural systems;
(c) Encourage lively building edges and more welcoming street experience;
(d) Respect existing public views and explore creating new views of prominent features such significant landmarks;
(e) Support the display of local art, craft or industry;
(f) Explore opportunities for unconventional open spaces;
(g) Improve wayfinding and legibility;
(h) Encourage 24/7 activity and public life;
(i) Consider ways to ensure a safe, clean, clutter free environments;
(j) Landscaping elements and public art, including temporary projects, are encouraged, and
(k) Reflect the industrial history of the area as well as contemporary life, innovation and experimentation.
(l) Enhance habitat for birds, pollinators and other flora and fauna and following the Bird Friendly Design Guidelines.

Public Art

Public art should be considered based on the following process and objectives:
(a) Consideration for 24/7 access and use of the site;
(b) Opportunities for rotating installations and diversity of scale and material;
(c) Opportunities for art to be embedded in public spaces and infrastructure;
(d) Consider opportunities to create diversity throughout the site and in unexpected places; and
(e) Create public spaces built upon people being together in innovative ways.

7 Landscape

7.1 Streetscape

(a) Landscape design should provide for views into buildings for pedestrian interest, as well as special features such as opportunities to sit, view or take part in walking or active recreation.
(b) Explore opportunities for integrated rain water management.
(c) Provide a high quality public realm with street trees, landscaping, lighting, street furniture, signage and wayfinding, and green infrastructure where possible.

PART TWO

DEVELOPMENT POLICIES

False Creek Flats Innovation Hub (FC-2 Sub Areas B, C, and D)

Part 2: Development Policies

The following development policies apply to Sub Areas B, C and D of the FC-2 District (Innovation Hub) to assist in achieving the False Creek Flats Plan.

1 Neighbourhood Energy Systems (NES)

Where the General Manager of Engineering Services deems a connection to the NES is available and appropriate, buildings within any development will be required to connect to the NES prior to occupancy, or post-occupancy through a deferred services agreement, or otherwise, at such time that a system becomes available, subject to the following detailed provisions;

(a) Prior to issuance of a development permit, the proposed approach to site heating and cooling will be developed in collaboration with the City and the City's designated Neighbourhood Energy utility provider, to the satisfaction of the General Manager of Engineering Services.

(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 unless otherwise approved by the General Manager of Engineering Services.

(c) Prior to the issuance of a building permit the detailed design of the building/s HVAC and mechanical heating system must be to the satisfaction of the General Manager of Engineering Services.

(d) The building(s) heating and domestic hot water system shall be designed to be easily connectable and compatible with the City-designated Neighbourhood Energy System to supply all heating and domestic hot water requirements. The applicant shall refer to the *Neighbourhood Energy Connectivity Standards – Design Guidelines*, for design requirements related to neighbourhood Energy compatibility at the building scale. Design provisions related to Neighbourhood Energy compatibility must be to the satisfaction of the General Manager of Engineering Services. Note that prior to issuance of building permit, a declaration signed by the registered professional of record certifying that the Neighbourhood Energy connectivity requirements have been satisfied will be required.

(e) Adequate space will be provided for Neighbourhood Energy Utility energy production equipment and infrastructure, determined by the City in consultation with the developer at the time of development permit application.

(f) City and/or City-designated NES use and access should be granted to the building(s), P1 of the parkade, Neighbourhood Energy room, mechanical system and thermal energy system-related infrastructure within the development for the purpose of enabling NES connection and operation, or distribution infrastructure to service adjacent buildings on such terms and conditions as may be reasonably required by the General Manager of Engineering Services;

Where a NES connection is not available or otherwise deemed unfeasible at the time of development permit, the building shall be designed to meet the carbon performance targets identified in the Green Buildings Policy for Rezonings.

2 Green Buildings Policy

(a) Meet or exceed the requirements identified in the Green Buildings Policy for Rezonings at the time of application for Development Permit.

(b) Include visible green elements and employ green building and passive design elements. Examples include: rooftop gardens, green roofs and terraces, trees and plantings on upper levels and balconies, green walls and supports for vertical plant growth.

(c) Apply passive strategies to building heating, ventilation and cooling; examples include: the use of solar orientation and operable windows.

(d) Support the execution of innovative building design such as prefab/modular and/or tall wood for civic buildings or buildings that deliver public services.

3 Sustainability requirements

(a) Meet or exceed the requirements identified in the Rezoning Policy for Sustainable Large Development.

The Core Elements include the following:

(i) Sustainable Site Design
(ii) Access to Nature
(iii) Sustainable Food Systems
(iv) Green Mobility
(v) Rainwater Management
(vi) Zero Waste Planning
(vii) Affordable Housing
(viii) Low Carbon Energy Supply

4 Renewable Energy

(a) Support the supply and use of renewable energy, at both the site and neighbourhood scales.

(b) Support and demonstrate the use of rooftop and/or building-integrated solar renewable energy, with the goal of demonstrating how buildings can generate 7% or more of electricity demand on-site. For example, the rooftops of large commercial and industrial buildings could be designed to host a cooperative photovoltaic solar farm. In this case, access and other agreements will also be secured at the time of design to ensure the implementation of a photovoltaic solar farm.

5 Adaptation

(a) Plan for the impacts of sea level rise over the lifetime of buildings and infrastructure. Explore building and street design approaches that allow for adaptive alterations in the future with increasing flood risk, e.g. taller first floors, elevated utilities, water proof material, sump pumps & backflow preventers, and raised street networks to form flood cells.

(b) Plan for and incorporate design approaches for retrofitting buildings to improve both flood and seismic resilience, e.g. space and places for temporary flood barriers, at the time of application for Development Permit.

6 Integrated Rainwater Management Plan

(a) A detailed plan will be required at Development Enquiry to ensure that the development/s meet/s the requirements of the Integrated Rainwater Management Plan through strategies such as building design and infiltration systems.

(b) Employ engineered systems (rain gardens, pervious paving and cisterns) and roof-top systems (including green roofs) to capture, treat and convey rainwater into the City's storm water system.

7 Utilities and Site Servicing

(a) Ensure that existing utilities, including adjacent, on-site water, sanitary and storm water infrastructure, street lighting, and third party utilities are upgraded to meet the Innovation Hub's demands as necessary.

(b) Design, construct and install all new utilities incidental to servicing the area, and realign existing utilities if needed to meet Innovation Hub demands, within the proposed road network or statutory rights-of-way.

(c) Provide electrical services (including all third party utilities) on private property, without relying on space within streets or the public realm.

(d) A services agreement will be prepared setting out responsibilities for relocation and/or upgrading of utilities resulting from the development/s after giving consideration to the existing infrastructure and available development capacity.

(d) In order to improve the visual environment for residents, developments should investigate with the City Engineer the feasibility of using underground wiring for electric, telephone and cable services, including the removal or partial removal or existing overhead plant.

8 Resilience

(a) Design all new buildings and utilities to minimize impact on critical roads and services following a significant shock.

(b) Provide disaster-resilient and redundant water, sewer, energy and communications connections in accordance with best practice, hospital standards and Vancouver Building By-Law requirements, including back-up systems where necessary.

(c) Meet the polices of the City's Flood Plain Standards and Requirements Policy to:

- Reduce or prevent injury, human trauma and loss of life in the case of a flood.
- Minimize property damage during flooding events.
- Reduce the time it takes to return to operational functionality after flood waters recede.

(d) Work with the City's Resiliency and Risk Management staff through the development permit processes to identify resilience vulnerabilities associated with the project and develop mitigation strategies to address the vulnerabilities. Strategies should be explored to ensure the integrity of structures, systems and operations following a major disaster, with particular attention to earthquakes and flooding.

9 Environmental Remediation and Geotechnical

(a) Environmental remediation of contaminated development sites must be completed in accordance with Section 571B of the Vancouver Charter, and all city policies with respect to the remediation of city streets.

(b) Employ soil stabilization techniques such as piling and ground densification to ensure buildings, premises and roadways are seismically stable and not subject to liquefaction.

10 Rail

(a) Meet all applicable Transport Canada requirements, including but not limited to, Grade Crossing Standards and Standard Respecting Railway Clearance.

(b) Work with rail operators to align with relevant guidelines identified by the Federation of Canadian Municipalities and the Railway Association of Canada's Guidelines for New Development in Proximity to Railway Operations.

11 Circulation and Transportation

(a) Align with the policies and directions of the City's Transportation 2040 Plan

(b) Ensure that the 4.6 metre flood construction levels for ground floor heights are reconciled with street network elevations. Consider universal design and accessibility, phasing and implementation, and integration with existing infrastructure and development.

(c) Provide a Transportation Study, including: access, management, parking, loading and green mobility that assesses the impacts of the proposed development/s on existing transportation infrastructure, makes appropriate recommendations and determines the necessary mitigation measures, to the satisfaction of the General Manager of Engineering Services, and including the following detailed provisions:

11.1 Major Streets

Provide the following major streets:

(a) Station Street - Realign Station Street south of Terminal Avenue to normalize and create a 4-way intersection at Terminal Avenue. Widen Station Street to a 25 m right of way that includes sidewalks on both sides of the street, protected cycling facilities for all ages and abilities, and a high quality public realm with street trees, landscaping, lighting, street furniture, and green infrastructure where possible.

(b) Industrial Avenue – Pursue reconfiguration and consolidation the intersections of Industrial Avenue and East First Avenue at Main Street.

(c) Preserve the ability to extend Station Street south of Industrial Avenue to East First Avenue and connect to Lorne Street.

(d) Preserve the ability to provide a streetcar track within the street right-of-way on either East First Avenue or Industrial Avenue.

(e) A wider right-of-way may be required at intersections to accommodate turning lanes, pedestrian space, protected bike facilities and bus stops, subject to the Transportation Study and urban design intent.

(f) Provide appropriate traffic controls (e.g. full traffic signal, pedestrian actuated signals, protected bike phasing) and treatments at intersections and midblock crossings (e.g. raised crosswalks) to facilitate safe and efficient movement of all transportation modes.

11.2 Other Streets

Provide the following other streets:

(a) Western, Northern, Central, and Southern streets - using existing rights of way (a minimum of 15 m) until further transportation study assessment is provided. Facilitate access to residential properties and assume a simple street cross section with utility strip and paved surface, subject to above-noted Transportation Study for FC-2.

(b) Northern street - Access to residential properties and explore opportunity for walking and cycling connection that extends to Main Street.

(c) Central Street – "car light" or walking/cycling priority for the Central Valley Greenway and Walk the Line connection to the seawall, for all ages and abilities. Opportunities for green infrastructure, no driveways off of Central to support temporary street closures and public events. Dedication or SRW through the Main Street block and traffic signal at Main Street to be investigated.

(d) Southern Street - explore opportunity for walking and cycling connection that extends to Main Street.

12 Pedestrian and Cyclist Supportive Design

(a) Provide public bike share station/s on private property in locations that are highly visible and in close proximity to cycling routes and building entrances.

(b) Design streets and other public connections with a public realm that provides a safe, accessible, comfortable, convenient, and delightful walking and cycling experience.

(c) Design buildings to support walkability by providing ground-oriented active uses, small retail frontages, and multiple entrances for direct access to public streets.

(d) Particularly on Main Street, provide wide, continuous and well-designed weather protection along pedestrian routes and at key waiting and gathering places to minimize gaps in weather protection, where possible.

(e) Design buildings to accommodate and encourage cycling. Consider design elements such as easy access to secured interior bicycle storage from building entrances, bike access separated from vehicles, wider aisles and hallways, automatic door openers, weather protected exterior bicycle racks near building entrances, maintenance stations, accommodating non-standard bicycle types, exceeding minimum secured bike parking requirements, enhanced end-of-trip facilities, and a bike mobility centre.

13 Parking and Loading

(a) Design parking and loading in accordance with the City's Parking By-Law to accommodate parking demand on the site. Refinements to parking and loading may be considered through the development permit process (e.g. district parking, providing on-site car share spaces).

(b) Provide on-street parking in appropriate locations that support commercial and retail uses. Manage on-street parking using parking meters, time restrictions, and loading zones.

(c) Design on-site parking to be flexible and adaptable for conversion to other uses when no longer needed for parking vehicles. Approach on-street parking as a flexible resource that is integrated into a pedestrian-friendly public realm.

(d) Design driveways with minimum width to reduce conflicts with people walking and cycling.

(e) Parking access will not be allowed from Main Street, Terminal Avenue and Central Street. Access should be avoided on Station Street, subject to above-noted Transportation Study for FC-2.

(f) Loading and servicing is encouraged underground where possible, however, subject to the Transportation Study the option of smaller truck loading, deliveries, servicing and maneuvering on streets may be considered in certain areas, as an alternative to the use of private property only, with special consideration given to the safety of people walking and cycling on the streets.

(g) Above-ground parking structures are discouraged, but not prohibited. They will not be exempted from density calculations and may require analysis on the impacts to urban design and the public realm at the time of development permit approval.

14 Residential Development

(a) In the Innovation Hub, achieve 20% affordable housing consistent with the City's Rezoning Policy for Sustainable Large Developments as follows:

(i) In Sub Area B (refer to FC-2 District Schedule), allow increased density for residential use including a minimum of 8% of floor area as secured rental housing, seeking to achieve below market rentals for priority groups such as artists, low-income workers, and students, recognizing the City's objective for a range of public benefits in this area.

(ii) In Sub Area C (refer to FC-2 District Schedule), allow increased density for 100% non-market housing.

(b) Encourage innovative and creative residential forms to address housing needs of workers and students.