## HALIFAX

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Item No.<br>Design Review Committee<br>July 30, 2020

TO: Chair and Members of Design Review Committee

SUBMITTED BY:
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June 22, 2020
SUBJECT: Case 22708: Substantive Site Plan Approval for 1325 Lower Water Street, Halifax

## ORIGIN

Application by Southwest Properties.

## LEGISLATIVE AUTHORITY

Halifax Regional Municipality (HRM) Charter, Part VIII, Planning \& Development.

## RECOMMENDATION

It is recommended that the Design Review Committee:

1. Refuse the qualitative elements of the substantive site plan approval application for a 16 storey, with rooftop penthouse, mixed use building, in Downtown Halifax as shown in Attachments A and B, as the proposal does not comply with Sections 2.1c, 2.10i, 3.1.1a, 3.2.1a, 3.2.1f, 3.2.5a, 3.3.1b and 3.3.1c of the Design Manual, as noted in Attachment E; and
2. Refuse 5 of the 9 variances in 5 categories to the Land Use By-law requirements regarding upper storey side yard stepback, maximum height, Precinct 1 built form, and tower width and separation distances, as contained in Attachment B, as the proposal does not comply with Sections 3.6.6, 3.6.7, 3.6.8, and 3.6.10 of the Design Manual, as noted in Attachment D.

## BACKGROUND

Southwest Properties Ltd. has applied for a substantive site plan approval to build a 16 storey, with rooftop penthouse, mixed-use building at 1325 Lower Water St. in Downtown Halifax. (Map 1, Attachments A and B). To allow the development, the Design Review Committee must consider the application relative to the Design Manual within the Downtown Halifax Land Use By-law (LUB).

This report addresses relevant regulation held within both the Land Use By-law and Design Manual in order to assist the Committee in their decision.

| Subject Site | 1325 Lower Water Street, Halifax |
| :--- | :--- |
| Location | Corner of Lower Water and Morris Streets |
| Zoning (Map 1) | DH-1 (Downtown Halifax) |
| Lot Size | 6176.1 square metres (66478.9 square feet) |
| Site Conditions | Sloping, waterfront site |
| Current Land Use(s) | parking lot |
| Surrounding Land Use(s) | North - Bishops Landing Mixed Use Development <br> East - Halifax Harbour <br> South - Morris Street extension \& NS Power Office Building <br> West - Lower Water Street \& 7 Storey Multi-Unit Residential Building |

## Project Description

The applicant wishes to construct a 16 storey, with a rooftop mechanical penthouse, mixed-use building at 1325 Lower Water Street in Downtown Halifax. The details of the proposal are as follows (refer to Attachments $A$ and $B$ ):

- Mixed use building, with residential, ground floor retail, office use and restaurant use;
- 254 residential units;
- Parking is located in the midrise section of the building, in the grey banded area on levels 3 and 4;
- The building is 55.385 m tall at Lower Water St. for the tower portion which then changes to 30.67 m at the Northwest corner and steps down to 35.03 m at the lowest part of the eastern portion of the building;
- 36642 sq. m of GFA of which 18957.3 sq. m is residential and 8265.4 sq. m is commercial;
- Floor Area Ratio of 5.93;
- Building materials include: large format porcelain tile; pre-finished composite metal panel system; aluminum window wall system; and vision glazing;
- Approximately 8093.7 sq . m of plaza space;
- 229 indoor parking spaces; and
- 276.3 sq. m of amenity space.

Information about the approach to the design of the building has been provided by the project's architect (Attachment B). The proposed building floor plans, renderings, elevations and cross section can be found in Attachment A.

## Regulatory Context - Municipal Planning Documents

Regarding the Downtown Halifax Secondary Municipal Planning Strategy (DHSMPS) and the Downtown Halifax LUB, the following are relevant to the proposed development from a regulatory context:

- Zone: DH-1 (Downtown Halifax), Schedule W (Waterfront Development Overlay)
- Precinct: 1 Southern Waterfront
- Building Height (Pre and Post-Bonus): 39 m and 49 m respectively
- Viewplane: A portion of the site is covered by Viewplane 6, but the building has been confirmed to not conflict with this view plane
- Streetwall Setback: 0-4 m
- Streetwall Height: 18.5 m
- Prominent Civic/Cultural Frontage: The site is identified as a Prominent Civic / Cultural Frontage along Lower Water Street (Map 1 of the Design Manual)


## Site Plan Approval Process

Under the site plan approval process, development proposals within the Downtown Halifax Plan area must meet the land use and building envelope requirements of the Land Use By-law (LUB), as well as the requirements of the By-law's Design Manual. The process requires approvals by both the Development Officer and the DRC as follows:

## Role of the Development Officer

In accordance with the Substantive Site Plan Approval process, as set out in the Downtown Halifax LUB, the Development Officer is responsible for determining if a proposal meets the land use and built form requirements contained in the LUB. The Development Officer has reviewed the application and determined that the following elements do not conform to the Downtown Halifax LUB:

- Section 8(8): Mechanical penthouse shall not occupy more than $30 \%$ of the roof area;
- Section 10(4): any portion of a mid-rise building above a height of 18.5 m shall be setback 5.5 m from interior lot lines;
- Section 10(9): Any portion of a high-rise building above a height of 33.5 m shall be separated a minimum of 23 metres;
- Section 10(10): Buildings shall be a maximum width of 38 m and a maximum depth of 38 m ; and
- Section 10(13): Balconies shall be permitted encroachments into a setback or stepback provided that aggregate length of balconies does not exceed $50 \%$ of building face.


## Precinct 1 requirements

- Section 11(1)c: Maximum height of the building within 30 m of the Ordinary High-Water Mark (OHWM) is 12.5 m ;
- Section 11(1)e: Maximum width of a building parallel to OHWM is 21.5 m ;
- Section 11(1)f: Maximum width of any portion of a building above a height of 33.5 m shall be 21.5 m parallel to Lower Water St and a maximum depth of 38.5 m ; and
- Section 11(1)h: Buildings on lots with a streetline width greater than 27.5 m shall be setback from interior lot lines no less than $10 \%$ of the lot width or 8 m , whichever is less.

The applicant has requested that variances be considered for approval through the site plan review process in response to the above referenced inconsistencies with the LUB. Additional information on these requests can be found in Attachment B.

## Role of the Design Review Committee

The Design Review Committee, established under the LUB, is the body responsible for making decisions relative to a proposal's compliance with the requirements of the Design Manual. The role of the Design Review Committee in this case is to:

1. Determine if the project is in keeping with the design guidelines contained within the Design Manual (Attachment D);
2. Consider the variance requests that have been made pursuant to variance criteria in the Design Manual (Attachment B);
3. Provide advice to the Development Officer if the proposal is suitable in terms of the expected wind conditions on pedestrian comfort (Attachment C); and
4. Advise the Development Officer on the suitability of the post-bonus height public benefit being proposed by the applicant (Attachment E).

## Notice and Appeal

Where a proposal is approved by the Design Review Committee, notice of the decision is given to all assessed property owners within the DHSMPS Plan Area boundary plus 30 meters. Any assessed property owner within the area of notice may appeal the decision of the DRC to Regional Council. Where a proposal
is refused by the Design Review Committee, the applicant may appeal the decision of the DRC to Regional Council. If the appeal is from a refusal every assessed owner within the notice area will receive notice of the appeal hearing date. If an appeal is filed, Regional Council will hold a hearing and make decision on the application.

## COMMUNITY ENGAGEMENT

The community engagement process has been consistent with the intent of the HRM Community Engagement Strategy and the requirements of the Downtown Halifax LUB regarding substantive site plan approvals. The level of engagement was information sharing, achieved through the developer's website, public kiosks at HRM Customer Service Centres, and a Public Open House held on August 12, 2019.

## DISCUSSION

## Design Manual Guidelines

As noted above, the Design Manual contains a variety of building design conditions that are to be met in the development of new buildings and modifications to existing buildings as follows:

- Section 2.1 of the Design Manual contains design guidelines that are to be considered specifically for properties within Precinct 1 (Southern Waterfront);
- Section 2.10 of the Design Manual contains design guidelines that are to be considered for properties within Precinct 1 and 4 (Downtown Halifax Waterfront); and
- Section 3.6 of the Design Manual specifies conditions by which variances to certain Land Use Bylaw requirements may be considered.

An evaluation of the general guidelines and the relevant conditions as they relate to the project are found in a table format in Attachment D. The table indicates staff's analysis and advice as to whether the project complies with the guidelines. In addition, it identifies circumstances where there are different possible interpretations of how the project relates to a guideline, where additional explanation is warranted, or where staff advise the Design Review Committee should give attention in their assessment of conformance to the Design Manual. Staff have undertaken a detailed review of the proposal, and have identified the following items for further consideration by the Design Review Committee:

## Precinct One: Southern Waterfront (Section 2.1c)

Section 2.1c seeks to "ensure tall and slender towers provided that their placement and design are consistent with the objectives identified for this precinct and with the design guidelines". One of the overarching principles of the Design Manual is the requirement for towers to be tall and slender to allow for building shadows to move quickly across the site and surrounding areas in the downtown core.

Staff advise the proposed tower is too wide to be considered in keeping with the requirements of the Design Manual. The Downtown Halifax LUB states that the maximum tower dimension is 38 m and this building has a proposed depth of 53.4 m which is approximately $40 \%$ wider than the required maximum dimension. This creates a blocky building shape that is not in keeping with the desired built form in the Design Manual generally and in the Waterfront precinct specifically.

The Southern Waterfront is an area of high importance and includes a sub-area specific to the Downtown Halifax Waterfront with additional criteria that development must adhere to. More information about these guidelines is provided below.

Downtown Halifax Waterfront (Sections 2.10b, 2.10e, 2.10i, 2.10k)
Section 3.4.9 of the Downtown Halifax MPS describes the importance of the Halifax Waterfront and prescribes enhanced design discretion in this area to respond to the significance of the precinct. Policy 29 of the Downtown Halifax MPS describes the following intent for built form in this area:

- to provide a higher degree of discretion over the design and form of the building;
- to ensure appropriate height transitions that step down to the water's edge; and
- to maximize sky views, sun penetration to public spaces and streets and provide visual and public access to the water.

This is met through the provision of Schedule $W$ in the LUB as well as the additional design requirements of 2.10 in the Design Manual. The downtown Halifax Waterfront presents unique challenges as the parcels tend to be very large, because of their location at the waters edge, and because there is a requirement for the provision of public open space on a continuous boardwalk.

The intent of Section 2.10b is to
"...ensure that a generally complete and consistent streetwall is built along Lower Water Street that permits visual and physical access to the harbour along the eastward extension of the east-west streets to the water's edge, and at intermediate locations as deemed appropriate."

Staff advise the proposed streetwall is complete and consistent but does not provide either visual or physical access from the east to the water. The design of the streetwall is a relatively blank facade with limited activity. Staff note the presence of a door at the northwest corner of the building does help provide animation to the street, but this animation is generally absent over the rest of the streetwall. The proposal has provided only 2 entrances on the west façade along a 55 m frontage. Additionally, the Lower Water Street elevation is largely planters for approximately 37 metres of the frontage. The Design Manual also requires visual and physical access to the harbour, from Lower Water Street. The building does not provide this access as it is built out completely at the street property line.

Section 2.10 e seeks to ensure that "public open spaces are provided where the eastward extension of eastwest streets intersects the boardwalk. These open spaces shall be accomplished through the use of waterfront view corridors that extend from Lower Water Street to the water's edge". The L shape of the building impedes visual and physical access from Lower Water Street as the building extends along the full length between property boundaries at Lower Water Street. The extension of Morris Street does provide access as it is a publicly owned street and is identified as a waterfront view corridor in the Downtown Halifax MPS. The intent of the Plan is to activate these areas with small scale retail, restaurants and pedestrian oriented uses to provide an opportunity to enjoy the sun as this part of the site has the most sunlight. The building is designed so that much of this side of the building is used for servicing, driveways and emergency exits, which does not capitalize on the prominence that the Plan intended for these street extensions.

## Design of the Streetwall (Sections 3.2.1, 3.2.1f, and 3.4.1b)

To enhance the public realm and create pedestrian-oriented streetwall conditions, the Design Manual encourages active uses along street frontages, a high degree of building articulation, visual interest, visibility through abundant glazing and light penetration, more animation and "eyes on the street", prominent entrances and exemplary design along civic frontages.

Section 3.2.1a states "the streetwall should contribute to the fine grained character of the streetscape by articulating the façade in a vertical rhythm that is consistent with the prevailing character of narrow buildings and storefronts." The building is articulated horizontally but not vertically, and the building design does not include fine grained elements. Design cues could be pulled from buildings in the area which do provide a fine grained building articulation at the street level, and this rhythm should be continued along the street frontage of this proposal.

Section 3.2.1f requires that "streetwalls should have many windows and doors to provide eyes on the street and a sense of animation and engagement." Windows and doorways have been used at the corners of the building on Lower Water Street and provide an appropriate level of transparency at those locations, but there is a large stretch of the proposed frontage that remains inactive and without doors or windows. Discussions with the developer held through the application process resulted in a door being included towards the northwest corner of the building along the Lower Water Street elevation. While this is recognized as an improvement to the proposal, the majority of this prominent elevation remains not only
physically inaccessible to pedestrians, but also visually inaccessible given the orientation of the floorplates. Improvements to the remaining sections of the streetwall are needed to further animate the street frontage.

Section 3.2.1g states that "along pedestrian frontages at grade level, blank walls shall not be permitted, nor shall any mechanical or utility functions (vents, trash vestibules, propane vestibules, etc.) be permitted." The site does have a major grade change from the south corner to the north corner of the building along the Lower Water Street frontage. Entry points are proposed near the corners of the building that have been designed with large windows around the doorways, and planters have been proposed along the Lower Water Street frontage to reduce the impact of the grade change and to break up the space. Staff advise that significant sections of this elevation have not been animated and that the planters are insufficient to break up the blank wall and provide visual interest for passing pedestrians.

Section 3.4.1b identifies prominent civic frontages, and states that these frontages are highly visible building sites that front on important public open spaces such as the Citadel and Cornwallis Park, as well as important symbolic or ceremonial visual and physical connections such as the waterfront boardwalks, the proposed Grand Promenade linking the waterfront to the Town Clock, and other east-west streets that connect the downtown to the waterfront. Prominent Civic Frontages are shown on Map 1 in Appendix A of the Design Manual. This site is a prominent civic frontage that fronts on the Halifax Harbour, one of the most important and iconic spaces in the Municipality. This site should be developed to a high standard that is reflective of its signature location. Staff do not consider this proposal to be reflective of the design intent of the Design Manual and advise that it does not meet the intent of a prominent civic frontage due to the size of the building, the lack of articulation and animation on Lower Water Street, the lack of a narrow point tower and the inability of the proposal to meet the requirements of the Design Manual and Land-use Bylaw.

Sloping Conditions (Section 3.2.5 a)
Many streets in the downtown are sloped and pose challenges to creating a pedestrian-oriented streetwall, however new buildings must provide an appropriate interface to these sloping street conditions.

Section 3.2.5a seeks to "maintain active uses at-grade, related to the sidewalk, stepping with the slope. Avoid levels that are distant from grade." In response to the sloping condition, the building has an entryway at the northeast corner to activate that section of the street level. While this does help address the issue at that corner, large sections of the Lower Water Street frontage have not been activated. Approximately 37 m of street frontage are without windows or doorways, with the majority of the window placement occurring at over 2 m in height. The proposal does include planters to break up the space, but large stretches of this important street frontage remains without activation.

## Building Design and Articulation (Section 3.3.1b and 3.3.1c)

The articulation of a building is what gives it a human scale and sense of quality, through attention to detail. Articulation implies a 3 -dimensional façade, where windows and other elements have depth, creating a dynamic of light and shadow and solid to void.

Section 3.3.1b identifies that buildings should seek to contribute to a mix and variety of high-quality architecture while remaining respectful of downtown's context and tradition. Staff advise the building does not respond well to the existing context and fine-grained character of the downtown. Many of the historic buildings downtown are smaller scale and provide greater articulation at the street level with narrow retail frontages at the street edge. This particular area has featured more recent development and has many buildings which have been constructed in the past 15 years. The ground floor of the adjacent building to the northeast consists of many windows and doorways at the pedestrian level and utilises multiple bays to break up the ground floor. Both the Land Use By-law and Design Manual indicate that new construction should maintain and continue this rhythm and articulation.

Section 3.3.1c requires the consideration of architectural variety and visual interest. Opportunities to articulate the massing should be encouraged, including vertical and horizontal recesses or projections, datum lines, and changes in material, texture or colour. The banding provided around the podium does help define the lower portion of the building and provides some vertical articulation. However, this
articulation is not carried forward through the upper portions of the structure resulting in the midrise section of the building appearing bulkier and more repetitious in appearance.

## Variances

The applicant is requesting multiple variances to the quantitative requirements of the Downtown Halifax LUB. The requests are for 12 variances within 11 Sections of the LUB, for 9 building elements which fall under five different categories: 1 . side and rear yard setbacks, 2. upper storey side yard stepback, 3. maximum height, 4. precinct 1 built form variance, and 5 . tower width and separation distances. Each variance request is referenced in brackets by the variance number indicated on the drawings and in the application package (Attachment B).

Some variance requests apply in multiple locations, while other building features require more than one category of variances; those being the upper storey streetwall stepback, upper storey side yard stepback and tower width and separation distances. The applicant has outlined each of the variance requests on the plans (Attachment A) and has provided a rationale pursuant to the Design Manual criteria (Attachment B).

The staff review of each variance request is provided in this section as outlined below. Staff advise the extent of the proposed variances suggests the proposed building is too large for the site due to its failure to meet many of the requirements of the Land Use By-law related to size and height. Staff acknowledge that multiple attempts by the applicant to reconfigure the building while still retaining the proposed amount of floorspace has resulted in the requirement for new and additional variances.

## Variance Category 1: Side and Rear Yard Setback Variance

There is a single variance requested in this category related to Section 11(1)h of the LUB, which requires that buildings on lots with a streetline width greater than 27.5 m be setback from interior lot lines no less than $10 \%$ of the lot width or 8 m , whichever is less (Variance \#9). The lot is 57.98 m wide and $10 \%$ of this is 5.798 m . This is not being met along the northern or southern property boundaries as shown in the variance report. The northwest corner of the building is built to the property line and access to the site is through an encroachment easement. The southern side of the building is also built to the property line but is adjacent to the Morris Street waterfront view corridor which does not permit the construction of any structure within 7.6 .2 m from the mean centre line of the prolongation of the street to the harbour.

Section 11(2) of the LUB provides the ability to vary the requirements for section 11(1) (Southern Waterfront) where the relaxation is consistent with the criteria of the Design Manual. Sections 3.6.2 and 3.6.10 of the Design Manual allows for a variance to the built form requirements of Section 11(1) of the LUB subject to meeting certain conditions as outlined in Attachment D. Of the potential conditions for a variance, this application is being requested under the provision of Section 3.6.10a which is for a development that fills existing gaps created by vacant properties or parking lots with new development, and 3.6.2b that the modification does not negatively impact abutting uses by providing insufficient separation.

The applicant has requested a variance to Section 11(1)(h), which is a requirement for a minimum setback from the interior lot line. As this clause is in the Precinct 1 section of the LUB, a variance for 3.6.2 and 3.6.10 is required. Staff are satisfied that this request meets the criteria in the Design Manual as it is an existing parking lot and it provides sufficient space to abutting uses by virtue of being adjacent to the Morris Street waterfront view corridor. Staff advise that this variance meets the criteria of the Design Manual.

## Variance Category 2: Upper Storey Side Yard Stepback Variance

There are two variances requested in this category. The first is related to Section 10(4) of the LUB (Variance \#2) requires that any portion of a mid-rise building above a height of 18.5 m shall be setback 5.5 m from interior lot lines. The building does not meet this requirement at the northwest corner of the building. The provided setback is 4.6 m instead of the required 5.5 m . The second variance is related to Section 10(13) (Variance \#5) which allows balconies to be permitted encroachments into a setback or stepback provided that aggregate length of balconies does not exceed $50 \%$ of building face. Balconies are proposed around the majority of the building faces resulting in the need for a variance to be requested for the South and the west elevations.

Section 10(14) of the LUB provides the ability to vary the requirements for section 10(4) where the relaxation is consistent with the criteria of the Design Manual. Section 3.6.6 of the Design Manual allows for a variance to the upper storey side yard stepback requirement of the LUB subject to meeting certain conditions as outlined in Attachment D. Of the potential conditions for a variance, this application is being requested under Section 3.6.6.b where the height of the building is substantially lower than the maximum permitted building height and the setback reduction is proportional to that lower height. The maximum permitted height of a midrise portion of a building is 33.5 m and the building measures 30.67 m at this section which is equal to 2.83 m of difference. The setback is 0.9 m too close, which is less than the 2.83 m , making it proportional to the height reduction. Staff advise that this variance is consistent with the intent of the Design Manual.

The balconies on the southern elevation are $100 \%$ of the width of levels $12-16,62.26 \%$ of level 11 and $83.12 \%$ of levels $6-10$. The balconies on the western elevation are $84.41 \%$ of the building face and encroach approximately 1.6 m into the required setbacks. The fact that they cover most of the building, make the building appear wider. A variance may be considered under 1 of 2 conditions; $b$ ) where the height of the building is substantially lower than the maximum permitted building height and the setback reduction is proportional to that lower height, or; c) a reduction in setback results in the concealment of an existing blank wall with a new, well designed structure. The balconies do not meet either of these criteria as they are not covering a blank wall and the building is constructed to the maximum allowable height in these areas. Staff do not recommend the approval of this variance as it does not meet the requirements of the Design Manual.

## Variance Category 3: Maximum Height Variance

The applicant is requesting two variances to the maximum height requirements for this application. Section 8(8) of the LUB (Variance \#1) requires that a mechanical penthouse shall not occupy more than $30 \%$ of the roof area. Additionally, Section 11(1)c (Variance \#6) states that the maximum height of a building within 30 m of the Ordinary High-Water Mark (OHWM) is 12.5 m , which may be increased by 1 m for each additional metre of setback from the OHWM.

Section 8(11) of the LUB provides the ability to vary the requirements for section 10(4) where the relaxation is consistent with the criteria of the Design Manual. Section 3.6.8 of the Design Manual allows for a variance to maximum height requirements of the LUB subject to meeting certain conditions as outlined in Attachment E. Of the potential conditions for a variance, this application is being requested under the following provisions:

1. The rooftop mechanical occupies more than $30 \%$ of the roof area, which means that it is no longer exempt from height and must be included in the calculation for height. The applicant is requesting to vary the $30 \%$ requirement for rooftop coverage so that the mechanical structure remains exempt from the height restrictions. Section 3.6.8a and 3.6 .8 b are the requested considerations for variances for this part of the building. Section 3.6 .8 b allows for the consideration of additional height if it is for rooftop architectural features and the additional height does not result in an increase in gross floor area. The mechanical is designed in such a way as to add an architectural feature to the top of the building and does not include any usable building floor area. The mechanical includes a parapet around the building that should be included in the height variance. As this request is for mechanical on the roof, staff advise that it meets the requirements of the Design Manual.
2. The second request for a height variance is for the portions of the building that are within 30 m of the OHWM. The longer portion of the building that runs parallel to the northern section of the OHWM has a maximum height of $12.5 \mathrm{~m}+$ the additional setback, which is 21.2 m for a total permitted height of 31.37 m . The section of the building that is perpendicular to the northern section of the OHWM has a railing that is 60 cm taller than the permitted 31.37 m ( $12.5 \mathrm{~m}+$ additional setback of 18.87 m ). The north-east face of the building on levels $12,13,14,15$ and 16 are within the 30 m of the OHWM and over the 33.7 m of the maximum height, up to a maximum height of approximately 50 m at the $16^{\text {th }}$ level. Additionally, a portion of the railings on the mid-rise portion of the building at the north-east are above the maximum height. This is within the Precinct 1 built form criteria and must meet both the variance requirements of section 3.6.8 regarding height and 3.6.10 regarding Precinct 1 Built Form. The application meets the requirement for 3.6 .10 in that it fills
existing gaps created by vacant properties or parking lots with new development, but it is unclear how it meets section 3.6.8. In addition to the universal requirement to be consistent with the objectives and guidelines of the design manual, the allowable variance criteria for height is one of four criteria:
b. the additional building height is for rooftop architectural features and the additional height does not result in an increase in gross floor area;
c. the maximum building height is less than 1.5 metres below the View Plane or Rampart height requirements;
d. where a landmark building element is provided pursuant to the Design Manual; or
e. where the additional height is shown to enable the adaptive re-use of heritage buildings.

The requested variance is not for a rooftop architectural feature and does result in increased gross floor area, so b) does not apply. The maximum building height of this proposal exceeds the maximum permitted building height and the portion of the site subject to a view plane does not have a building within it, so c) does not apply. The portions of the building that require a height variance are for large sections of the middle part of the tower and do not provide any additional design elements that would allow for the consideration of d). Lastly, the building is not a heritage building and therefore e) does not apply. There is no variance criterion which applies to this context. As such, staff do not recommend the approval of this variance as it does not meet the requirements of the Design Manual.

## Variance Category 4: Precinct 1 Built Form Variance

This proposal requires four variances in this category. Section 11(1)c of the LUB (Variance \#6) requires the maximum height of the building within 30 m of the OHWM to be no greater than 12.5 m ; Section 11(1)e (Variance \#7) of the LUB, the maximum width of a building parallel to OHWM is 21.5 m . Section 11(1)f (Variance \#8) states that the maximum width of any portion of a building above a height of 33.5 m shall be 21.5 m parallel to Lower Water Street and a maximum depth of 38.5 m . Finally, Section 11(1)h (Variance \#9) requires buildings on lots with a streetline width greater than 27.5 m shall be setback from interior lot lines no less than $10 \%$ of the lot width or 8 m , whichever is less. These sections of the LUB provide additional oversight on the design of buildings within this area.

As mentioned earlier in the report, Section 3.4.9 of the Downtown Halifax MPS describes the importance of the Halifax Waterfront and prescribes enhanced design direction in this area to respond to the significance of the precinct. Schedule W of the LUB as well as the additional design requirements of 2.10 in the Design Manual are the tools used to achieve the design intent. The intent of the Plan is to create buildings with a point tower, with heights that step down as it approaches the waterfront to reduce shadow on the public space and to provide visual and public access to the waterfront.

The proposal requires 3 variances to enable the design, which would allow for a larger, wider and taller building than envisioned in the plan. The building design also reduces access to sun as it is massed and sited towards the southern property line in such a way that the proposed plaza area will be in shade for much of the day.

Section 11 (1)f restricts the maximum dimension of a building face parallel to the OHWM to 21.5 m . This may be increased by 1 m for every additional metre that the building is setback from the OHWM setback. In this case (Variance \#7), the maximum permitted building dimension facing the OHWM is 35.8 m and the applicant has proposed 44 m for the low-rise portion of the building. This criterion could be met by modulating the building face with recesses or offsets, but the applicant is not pursuing this option.

Section 11(2) of the LUB provides the ability to vary the requirements for Section 11(1) where the relaxation is consistent with the criteria of the Design Manual. Section 3.6.10 of the Design Manual allows for a variance to Precinct 1 Built Form Requirements subject to meeting certain conditions as outlined in Attachment D. Of the potential conditions for a variance, these 3 variances are being requested under the provision of 3.6.10a which is to fill existing gaps created by vacant properties or parking lots with new development. While the site is an existing parking lot and these requested variances meet this requirement,
they must also meet the criteria for height, tower dimension and setbacks as discussed in the other sections. Refer to each applicable section for further discussion on each variance. Staff recommend refusal of Variance \#6 and Variance \#8. Staff advise that Variance \#7 and Variance \#9 meet the requirements of the Design Manual.

## Variance Category 5: Tower Width and Separation

There are three variances required for this category, two relate to the tower dimensions and one is regarding the tower separation. Section 10(9) of the LUB (Variance \#3) requires that any portion of a high-rise building above a height of 33.5 m shall be separated from another non residential portion of the building by a minimum of 23 m . Section 10(10) (Variance \#4) states that buildings shall be a maximum width of 38 m and a maximum depth of 38 m , and Section 11(1)f (Variance\#8) requires that the maximum width of any portion of a building above a height of 33.5 m shall be 21.5 m parallel to Lower Water Street and a maximum depth of 38.5 m . The intent of these regulations is to ensure that towers have a smaller dimension in the waterfront area to help create spaces that have enhanced access to sunlight and sky view, by controlling the building massing and stepping heights down near the waters edge.

Section 10(14) of the LUB provides the ability to vary the requirements for Sections 10(9) and 10(10) and Section 11(2) of the LUB provides the ability to vary the requirements for Section 11(1) where the relaxation is consistent with the criteria of the Design Manual. Section 3.6.7 of the Design Manual allows for a variance to tower dimensions subject to meeting certain conditions as outlined in Attachment D. Of the potential conditions for a variance, this application is being requested under Section 3.6.7b: the modification results in a clear public benefit such as the remediation of an existing blank building wall.

The applicant has proposed the following as the potential public benefit to the building design:

- Improved view lines of the residents of the building;
- Reduced shadowing on the walkway; and
- The shape of the building is preferred by the applicant to the point tower form.

Staff have reviewed this request and advise that the views of the residents are not seen to be a public benefit, but rather a private benefit for the group of individuals who would ultimately reside in the proposed building. Having a tower form that is $40 \%$ wider than the requirements permit will blocks views to the harbour from various public vantage points near the site. The proposed public plaza/ walkway is in shadow most of the day due to the design and placement of the tower. The submission package indicates that a 2 tower design would be permitted under the existing plan creating large areas in shadow in the plaza, but height restrictions of 12.5 m from the OHWM would restrict height in this area reducing the potential to shadow the plaza. Lastly the Downtown Halifax MPS states that the desired shape of buildings in the downtown is slender point towers with maximum building dimensions of 38 m by 38 m generally and narrower in this area, with a maximum tower dimension of 21.5 m by 38 m in the Southern Waterfront, not wide terraced buildings. This intent is carried through in the requirements of the LUB and the Design Manual. The rationale provided by the applicant is not in keeping with the intent of the Downtown Halifax MPS. Reducing the width of the tower would result in the proposal meeting the requirement for tower separation and eliminate the need for a variance to Section 11(1) f. As such, staff recommend refusal of these variances.

## Wind Assessment

A Qualitative Wind Impact Assessment was prepared by the applicant for the project and is included in Attachment $C$. The need for the assessment results from the height of the building. Its purpose is to determine whether the site and its surroundings will be safe and comfortable for pedestrians once the new building is constructed. The assessment submitted for this proposal anticipates that the development will result in comfort levels suitable for persons sitting, standing, or walking at the sidewalk level but did indicate higher than desired wind activity for the outdoor amenity areas located on levels 11 and 12. Trellises, stand alone canopies and landscaping have been introduced to level 11 and the wind mitigation for level 12 will include canopies and tall, porous railings. The assessment indicates that these railings should be at least 2 m tall and $20-40 \%$ porosity to be effective. These mitigations are expected to create suitable wind conditions at these areas.

## Post-Bonus Height Public Benefit

The Downtown Halifax LUB specifies a maximum pre-bonus height of 39 m and a maximum post-bonus height of 49 m for this site. Projects that propose to exceed the maximum pre-bonus height are required to provide a public benefit. The LUB lists the required public benefit categories, and establishes a public benefit value that, with adjustments for inflation, is the equivalent of $\$ 4.70$ for every 0.1 square metres of gross floor area created by extending above the pre-bonus height. For this proposal the density bonus would equal $\$ 138,039.00$. The applicant has proposed to meet the bonus requirements under Section 12(7)(i) the provision of exemplary sustainable building practices and is proposing to seek LEED Gold certification.

The Design Review Committee's role is to review and recommend to the Development Officer whether a proposed public benefit should be accepted by the Municipality. With this, the final cost estimates of providing the public benefit will be determined and an agreement with the Municipality will be prepared for Regional Council's consideration at the permit approval stage.

## Conclusion

Staff advise that the proposed development and the requested variances are not reasonably consistent with the objectives and guidelines of the Design Manual. Staff note that the number of variances, and the scale of each variance suggest that the proposed building is too large for the site given the requirements of the Land Use By-law. Further, any attempt to shift the building around on the site in its current form, results in the triggering of a new set of variances. Therefore, it is recommended that the substantive site plan approval application be refused, for the reasons outlined in this report and in Attachment D.

## FINANCIAL IMPLICATIONS

There are no financial implications. The HRM costs associated with processing this planning application can be accommodated within the approved 2020/21 operating budget for C310 Urban \& Rural Planning Applications.

## RISK CONSIDERATION

There are no significant risks associated with the recommendations contained within this report.

## ENVIRONMENTAL IMPLICATIONS

No environmental implications are identified.

## ALTERNATIVES

1. The Design Review Committee may choose to approve the proposed variances outlined in Attachment C , accept the findings of the quantitative wind assessment included in Attachment D , recommend the Development Officer accept the public benefit as described in Attachment B, and approve the application as proposed, without conditions. An appeal of the Design Review Committee's decision can be made to Regional Council.
2. The Design Review Committee may choose to approve the application with conditions.

## ATTACHMENTS

Map 1 Location and Zoning

Attachment A Site Plan Approval Plans<br>Attachment B Design Rationale and Variance Requests<br>Attachment C Qualitative Wind Study<br>Attachment D Design Manual Checklist<br>Attachment E Post Bonus Height Public Benefit<br>Attachment F Building Floor Plans

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Jennifer Chapman, Planner III, 902.490.3999

Report Approved by: Steve Higgins, Manager of Current Planning, 902.490.4800



CUNARD
dP APPLICATION


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(1) LEVEL 11 GLASS RAILING


3D VIEW ILLUSTRATING THE PORTION OF GLASS RALLING ON LEVEL 11 THAT
ENCROACH ON THE 30 M SETBACK REQUIREMENTS


SECTION DETALL SHOWING THE HEIGHT OF
2 LEVEL 11 PARAPET


3D VIEW ILLUSTRATING THAT THE LEVEL 11 PARAPET DOES NOT ENCROACH ON THE OHWM SETBACK
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SECTION THROUGH LEVE
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## Cunard Block Waterfront

Downtown Land Use Bylaw Review DP Application
Design Rationale and Requested Variances


May $13^{\text {th }}, 2020$

Prepared by:
Zeidler Architecture

## Executive Summary

The Cunard Block is located on the prominent corner of 1325 Lower Water Street and Morris Street in downtown Halifax, Nova Scotia. The proposed Cunard building backs onto the harbour boardwalk and incorporates the public realm into the site through a mixed-use podium including office, retail, and 2-storeys of the architecturally screened parkade. The proposed project incorporates active street fronts on all elevations and an extensive, high-quality waterfront public plaza framed by 16-storey residential tower terracing towards the waterfront.

Cunard Lower Water Street façade embraces the meandering quality of Lower Water Street as desired in the design manual. The podium street wall façade angles to follow the street angle, while the mid-rise residential form along Lower Water Street steps back reducing the massing above the Street wall. The primary residential entrance is located at the important intersection of Lower Water Street and Morris Street. The Lower Water Street wall is activated by Commercial Retail Unit (CRU), Office and Restaurant directly accessible off the street front. The public plaza is activated by a mix of CRU units, restaurants, secondary residential lobby and as well as a mix of Patios and Terraces. Morris Street extension is activated by the CRU, as well as a pedestrian street extension to the boardwalk.

Public vehicle access to level 1 is limited to the north façade, utilising a shared existing driveway allows minimal impact on the pedestrian movements along Lower Water Street. Level 1 includes 39 parking stalls, waste and recycling, loading and drops off provided internally below Lower Water Street level. Residential parking access is provided of the south façade from the Morris Street Extension. Residential parking utilizes an internal ramp up to Level 3 and Level 4, maximising the active elevations along the exterior street level. Level 3 and level 4 are designed with an architectural stone/tile façade broken with a feature element above the residential entry below.

The building massing is comprised of a four-storey street wall podium, north to south and east to west sixstorey mid-rise masses, a five-storey tower capped by an architectural feature (mechanical penthouse). The four-storey podium provides mixed-use street wall at grade and parkade above. The mid-rise residential forms above the podium step back from the podium wall plane, creating an accessible roof terrace and reducing the massing as seen from street level. The residential form is further broken down into two distinct but connected masses. The Lower Water Street residential mass runs south to north six-storeys and is distinguished by glazing color and frosted balcony glass. The Morris Street Residential mass runs east to west parallel to Morris Street and setback farther back from Morris Street than the Lower Water Street mass. The Morris Street mass gradually steeps back from the waterfront providing a diminishing mass as seen from the waterfront and harbour front walk.

The building design embraces the outdoor amenity spaces created by the unique massing. Outdoor terraces are provided at the top of the podium, above the Lower Water Street mass, and the transition from mid-rise to the high rise of the Morris Street mass. The inclusion of extensive private balconies provides ample opportunity for residential access to both private and semi-public outdoor space.

As per section 3.4.9 of the Downtown Halifax Municipal Planning Strategy; HRM anticipated that variances would be required for developments located on waterfront lands due to the inability to design back-of-house areas. The Cunard Block project has been designed to meet the needs of the challenging waterfront site and specifically to meet the goals of Develop Nova Scotia, and the design objectives of the Downtown Halifax LUB and Design Manual.

## Cunard Block - Architectural approach

The project responds to the surrounding urban context and its proximity to the waterfront. The building massing is based on Design Manual by HRM guidelines for this precinct (Downtown Halifax Land Use By-law for Precinct 1) and the WDC guidelines for waterfront developments.

The project comprises a 16 storey residential building at the southwest corner of Lower Water Street and Morris Street extension. This includes a 10 storey base that extends north along Lower Water Street and east towards the Halifax harbour. The east west flank of the building terminates within the view plane \#6 and is set back over 21m from the edge of the board walk (Halifax Harbour Ordinary High-Water Mark) well in excess of the required setback of 8 m .

The building massing is comprised of a four-storey street wall podium, six-storey and seven-storey mid-rise masses, a five-storey tower capped by an architectural feature (mechanical penthouse). The four-storey podium provides mixed-use street wall at grade and parkade above. The mid-rise residential forms above the podium step back from the podium wall plane, creating an accessible roof terrace and reducing the massing as seen from street level. The residential form is further broken down into two distinct but connected masses. The Lower Water Street residential mass runs south to north six-storeys and is distinguished by glazing colour and balcony glass. The Morris Street residential mass runs east to west parallel to Morris Street and setback farther back from Morris Street than the Lower Water Street mass and frosted balcony glass. Morris Street mass gradually steps back from the water front providing a diminishing mass as seen from the water front and harbour front walk.

The 16 storey element that marks the southwest corner of the building rises to a height of 49 m conforming to the post bonus height limit for the area while the 10 storey base is under the 33.5 m mid-rise height limit.

The "L" shaped configuration of the building defines and creates a large public open space which dominates the north-east quadrant of the site creating opportunities for active and animated outdoor public spaces and facilitates active retail/commercial uses at the base of the proposed development along the waterfront. A secondary residential entrance will provide residents with easy access to the boardwalk and other contemplated public waterfront spaces. This entrance is marked by a canopy that extends as a white frame running up the height of the midrise portion of the building.

Residential parking has been provided in a discreet manner off the Morris Street extension with a total of 190 parking spaces above grade. All loading activities and 39 commercial parking are accessed off a shared access north of site. All loading and waste and recycling are contained within the footprint of the building in enclosed spaces ensuring that there is no impact on surrounding streets or public spaces.

The podium form is terraced away from the waterfront to mitigate the impact of the built form on the public realm.

Residential units have been arranged to ensure that a maximum number of units will have unobstructed views of the water and that the units can be laid out in an efficient manner. Expansive, glass clad balconies will further facilitate outdoor views and provide an extension to living spaces from every unit. Some of the balconies are accentuated with a raised white slab cover that will enhance the horizontality and stepped nature of the built form without obstructing views from within the residential units.

Amenities are located at the ground, $11^{\text {th }}$ and $12^{\text {th }}$ floors, with direct access to the large outdoor terrace overlooking the water with panoramic views of the harbour. An outdoor pool is located at this level for the use and enjoyment of the residents. Both the terraces at the $11^{\text {th }}$ and $12^{\text {th }}$ floors will be extensively landscaped as outdoor amenity spaces.

The building above the $10^{\text {th }}$ floor reduces to a very small floor plate in order to conform to HRM's requirements for the maximum length of 38 m for buildings above a height of 33.5 m . The space requirements to accommodate all of the mechanical equipment are currently resulting in two floors of mechanical space at the top of the building each having a floor to floor height of 4 m .

The top of the building is capped by a sculptural canopy element that extends from the top of the first mechanical level and helps reduce the formal impact of the upper mechanical floor. The canopy will enhance the silhouette of the building and provide opportunities for its soffit to be illuminated at night creating a strong presence in the waterfront skyline. The combination of the built form and the building elements will make this development visible and easily recognizable from great distances and will ensure that it becomes an instant landmark on this important site.

As evidenced above the project responds to the principles outlined in the Design by HRM Manual in creating an articulated ground plane, a defined podium street wall, and an appropriate size of building for heights above 33.5 m . Further it responds appropriately to view-plane and OHWM setback requirements.

## Sustainability

The project will incorporate the best in sustainable design strategies and will be targeting a LEED Gold level of certification. Some of the sustainable features to the incorporated in the project will be light coloured roofing materials to reduce the heat island effect, high performance exterior glazing systems to reduce heat gain and loss, operable windows for natural ventilation and to prevent heat build up in summer months, access to an abundance of natural light, rapidly renewable resources for materials and finishes, low voc paints, carpet and wall covering, low flow fixtures in washrooms, motion sensing lighting systems, high efficiency mechanical systems, on site storm water management systems which will be recycled for on site irrigation and green roofs where possible.

Other sustainable amenities include indoor and outdoor bike storage areas, easy access to a gym within the building and proximity to public transit.

The architectural aspirations of this project are to create a signature building for this important site in downtown Halifax that will be visually striking and functionally appropriate for its proposed uses. Most importantly it will enhance the public realm at its base and contribute to the creation of vibrant and animated street fronts at Halifax Waterfront.

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## Project Information

## Halifax Downtown Land Use By-Law Statistics

| MUNICIPAL ADDRESS | LEGAL DESCRIPTION |  |
| :--- | ---: | :--- |
| 1325 LOWER WATER STREET |  | PID 00003640, BLOCK C-24(C-2 AND C-4) |
| GROSS SITE AREA | SITE COVERAGE |  |
| TOTAL GROSS SITE AREA | $6,176.1$ SQ.M. | LEVEL 1 PODIUM / SITE AREA |
| PARCEL C-4 | $6,171.8$ SQ.M. | 3,801.4 S.Q. M. / 6,176.1 SQ.M. |
| PARCEL C-2 | 4.3 SQ.M. | 61.5\% COVERAGE |


| LAND USE CLASSIFICATION |
| :--- |
| CURRENT: DH-1 - DOWNTOWN HALIFAX ZONE HALIFAX DOWNTOWN BYLAW |
| CONTEXT MAPS: DH-1 AND SCHEDULE W, SOUTHERN WATERFRONT PRECINCT, NON-PRIMARY COMMERCIAL STREET, PRE-BOUNS HEIGHT |
| MAJR:39m (NE CORNER 19m), POST-BONUS HEEGHT MAJOR 49m (NE CORNER 19m), 0-4.0m STREET WALL SETBACK, 18.5m STREET WALL |
| HEIGHT ALONG LOWER WATER STREET, NOT WITHIN CENTRAL BLOCKS, NOT A PROMINENT TERMINUS SITE, WITHIN ARCHAEOLOGICAL |
| BUFFER ZONE. |
| DENSITY |
| GROSS FLOOR AREA |
| FLOOR AREA RATIO: (36,642 SQ.M. / 6,176 SQ.M.) |
|  |
| MAXIMUM ALLOWABLE GROSS FLOOR AREA |
| SITE UTILIZATION RATE (36,642 SQ.M. / 64,872 SQ.M.) |
| ARCHITECTURAL FEATURE (MECHANICAL PENTHOUSE) \% |
| (273 SQ.M./ 4,056 SQ.M.) |
| (273 SQ.M./ 1,110 SQ.M.) MPH ROOF AREA |
| BUILDING HEIGHT |

VIEW PLANE \#6 APPROXIMATELY 72 METRES
MAXIMUM PRE-BONUS HEIGHTS: MAJOR: 39 METRES (NE CORNER 19 METRES)
MAXIMUM POST-BONUS HEIGHTS: MAJOR: 49 METRES (NE CORNER 19 METRES)
NOTE: ARCHITECTURAL FEATURE BREACHES MAXIMUM POST-BONUS HEIGHT 30\% OF ROOF AREA ALLOWABLE AS PER SECTION 8
SENTENCE (8) OF HALIFAX DOWNTOWN LAND USE BYLAW

## Parking Statistics

| PARKING | PROPOSED |
| :--- | :---: |
| RESIDENTIAL TOWER (254 UNITS @ 0.67) | 196 STALLS |
| OFFICE | 12 STALLS |
| RESTAURANT | 14 STALLS |
| RETAIL | 7 STALLS |
| TOTAL: | 229 STALLS |


| REQUIRED | REQUIRED | CLASS A - PROVIDED | CLASS B - PROVIDED |
| :---: | :---: | :---: | :---: |
| MULTIPLE DWELLING UNITS |  |  |  |
| 0.5 PER DWELLING UNIT 0.5 X 254 | 127 |  |  |
| 80\% CLASS A | 102 | 104 |  |
| 20\% CLASS B | 25 |  | 26 |
| GENERAL RETAIL, RESTAURANTS |  |  |  |
| 1 SPACE PER 300 SQ.M. (1,726 SQM / 300) | 6 |  |  |
| 20\% CLASS A |  | 1 |  |
| 80\% CLASS B |  |  | 5 |
| GENERAL OFFICE |  |  |  |
| 1 SPACE PER 500 SQ.M. (1,029 SQM / 500) | 2 |  |  |
| $50 \%$ CLASS A |  | 1 |  |
| 50\% CLASS 8 |  |  | 1 |
| TOTAL: | 135 | 106 | 32 |

## Floor Area Statistics

FLOOR AREA SUMMARY (SQUARE METERS)

| LEVEL | GROSS AREA | DWELLING UNITS | PARKING STALLS |
| :---: | :---: | :---: | :---: |
| LEVEL 1 | 3,802.4 S.Q.M. |  | 39 STALLS |
| PARKADE (EXCLUDED) | 1,613 SQ.M. |  |  |
| RETAIL + RESTAURANT (EXCLUDED) | 1,212 SQ.M. |  |  |
| BIKE STORAGE (EXCLUDED) | 110 SQ.M. |  |  |
| LEVEL 1.5 - MEZZANINE - TENANT STORAGE | 327.7 SQ M |  |  |
| LEVEL 2 | 3,336.3 SQ.M. |  |  |
| OFFICE (EXCLUDED) | 967 SQ.M. |  |  |
| RETAIL + RESTAURANT (EXCLUDED) | 576 SQ.M. |  |  |
| RESIDENTIAL (EXCLUDED) | 855 SQ.M. | 12 UNITS |  |
| LEVEL 2.5-RAMP STORAGE | 140.5 SQ.M. |  |  |
| LEVEL 3 PARKADE | 3,901.3 SQ.M. |  | 90 STALLS |
| LEVEL 4 PARKADE | 3,901.3 SQ.M. |  | 100 STALLS |
| RESIDENTIAL LEVELS |  |  |  |
| TYPICAL LEVELS 5-10 (2,391.9 m², 30 units) | 14,351.4 SQ.M. | 180 UNITS |  |
| LEVEL 11 | 1,634.6 SQ.M. | 17 UNITS |  |
| LEVEL 12 | 1,119.9 SQ.M. | 12 UNITS |  |
| LEVEL 13 | 1,049.4 SQ.M. | 10 UNITS |  |
| LEVEL 14 | 985.4 SQ.M. | 8 UNITS |  |
| LEVEL 15 | 921.4 SQ.M. | 8 UNITS |  |
| LEVEL 16 | 848.8 SQ.M. | 7 UNITS |  |
| ARCHITECTURAL FEATURE (MECHANICAL PENTHOUSE) | 273.4 SQ.M. |  |  |
| ELEVATOR MACHINE ROOM | 48.1 SQM |  |  |
| TOTAL ROOF AREA (EXCLUDED) | 4,056 SQ.M. |  |  |
| SUBTOTAL | 36,642 SQ.M. | 254 UNITS | 229 STALLS |

## Site Specific Required Setbacks

SETBACKS

| LOCATION | REQUIREMENT PER HALIFAX DT LU BY-LAW |
| :--- | :--- |
| LOWER WATER STREET |  |
| STREETWALL | $0.0-4.0 \mathrm{~m}$ |
| MID-RISE (18.5m-33.5m) | 3.0 m |
| HIGH-RISE (ABOVE 33.5m) | 4.5 m |
| MORRIS STREET |  |
| STREETWALL | N/A |
| MORRIS STREET | MIN 7.62 m FROM MEAN CENTER LINE |
| MID-RISE (18.5m - 33.5m) | 3.0 m |
| HIGH-RISE (ABOV 33.5m) | 4.5 m |
| INTERIOR LOT LINES |  |
| LOW-RISE | NO SETBACK REQUIRED, MAX 20\% OF LOT WIDTH |
| MID-RISE (18.5m - 33.5m) | 5.5 m |
| HIGH-RISE (ABOVE 33.5m) | 11.5 m |


| ROOFTOP AMENITY SPACE PROVIDED | 1,100 SQM |
| :--- | :--- |
| LANDSCAPE OPEN AREA PROVIDED | 1,700 SQM |

## SITE DESIGN OBJECTIVES - DOWNTOWN HALIFAX WATERFRONT

The Cunard Block project has been designed to meet the needs of a challenging waterfront site and specifically to meet the goals of Develop Nova Scotia, the design objectives of the Downtown Halifax LUB and Design Manual. The building is designed to take advantage of the views of the harbour. A significant portion of the site has been designed to create a 'new' urban design plaza that will further activate the waterfront experience. The vibrant plaza provides an open public space connecting pedestrians between the Lower Water Street and the Halifax Harbour Walk. From a thorough review of the requirements and the objectives of Design Manual guidelines, the proposed massing configuration complies with the following waterfront objectives to embrace the new waterfront feature (where there was once a parking lot):
a. Objective - Ensure that public access to the waterfront is maintained and improved, and that the waterfront is in use around the clock in all four seasons.
Response - The proposed design maintains and improves the public access by providing improved sidewalks, plaza space and retail along the waterfront. At the heart of the proposed development, we have provided a vibrant urban plaza along the downtown Halifax Waterfront to activate the portion of the waterfront promenade with retail and restaurant frontages.
b. Objective - Ensure that a generally complete and consistent streetwall is built along Lower Water Street that permits visual and physical access to the harbour along the eastward extension of the eastwest streets to the water's edge, and at intermediate locations as deemd appropriate.
Response - The building fulfills this requirement along all active frontages. The open space designed at Cunard's north face provides direct access and view of the harbourfront. It will further extend the current access along the south face of Bishop's Landing. The sidewalk connection is maintained along the Morris street extension to connect the Lower Water Street to the waterfront. This development permits visual access to the harbour along the eastward extension of Morris Street as the Waterfront View Corridor has been preserved.
c. Objective - Ensure that Views of the harbour and of the sky are preserved by requiring that the upper storeys of buildings above the streetwall present a slender face to Lower Water Street, and that their long dimension is arranged perpendicular to Lower Water Street.
Response - The views of the harbour and of the sky are preserved since the upper storeys of the building are within the required building setbacks along the Lower Water Street and the long dimension of the high-rise portion of the building is arranged perpendicular to the Lower Water Street.
d. Objective - Ensure that the waterfront boardwalk is maintained, extended and improved and that the public enjoyment of the boardwalk is not negatively impacted by abutting development.
Response - The proposed design maintains, extends and improves the waterfront boardwalk by providing improved sidewalks, plaza space and retail along the waterfront. At the heart of the proposed development we have provided a vibrant urban plaza along the waterfront boardwalk to activate and improve the portion of the waterfront promenade with retail and restaurant frontages. The creation of this urban public plaza will enhance the public enjoyment of the boardwalk.
e. Objective - Ensure that public open spaces are provided where the eastward extension of east-west streets intersects the boardwalk. These open spaces shall be accomplished through the use of waterfront view corridors that extend from Lower Water Street to the water's edge.
Response - While not required in the site plan application Southwest, Develop Nova Scotia and Emera/NSP have agreed to explore ways to enhance private lands located between Morris Street and the harbour walk to provide greater public access while still serving the operation requirements of the adjacent properties.
Public open spaces (in the form of an urban public plaza) have been designed where the eastward extension of east-west streets intersects the boardwalk on our property. This plaza space with active retail and restaurant frontages has been designed all along the harbour to connect pedestrians between the Lower Water Street and the Halifax Harbour Walk along the north and east edge of the building. The eastern portion of the Morris Street extension to the harbour is the property of Emera, not southwest, and we have maintained the existing pedestrian connection to the waterfront. The
waterfront view corridor has been preserved along the Morris Street extension to enhance the visual connection to the waterfront.
f. Objective - Ensure that waterfront development incorporates human-scaled building elements. This means a range of building details from small (masonry units, door knobs, window mountings, etc.) to medium (doors, windows, awnings, balconies, railings, signs, etc.) to large (expression of floor lines, expression of structural bays, cornice lines, etc.).
Response - This development incorporates human-scaled building elements through the articulation of each facade. As shown on elevation drawings DP3.1, DP3.2, DP3.3, DP3.4; the applicant has provided building signs, canopies, vertical design elements, doors and restaurant windows have been provided to create street level expression. Eating establishment, retail services and residential lobby have been provided along the Lower Water Street to activate the pedestrian realm. Similarly, retail services have been provided all along the waterfront with numerous entry points. Refer to DP 2.1 and DP 2.2
g. Objective - Ensure that adequate consideration of future sea level rise has been incorporated into building design to avoid flooding, where ground floor residential uses are proposed.
Response - Adequate consideration of future sea level rise has been incorporated into building design to avoid flooding as residential is located above the grade level.
h. Objective - Ensure that all buildings are setback from the ordinary high-water mark or face of Seawall by no less than 8 meters
Response - Please refer to DP 1.1. The building complies with this objective to provide 8 meters setback, but Ordinary high-water mark setback variance is being sought for 30 m setback requirements.
i. Objective - Ensure building height immediately adjacent to the 8 metre setback shall not be higher than 12.5 metres. Height may increase as distance from the boardwalk or the water's edge increases at a rate of approximately one metre of vertical height for every one metre of horizontal stepback from the boardwalk or water's edge.
Response - Please refer to Site plan DP 1.1 and building elevations for building heights. Variance 6 has been requested for the railing on level 11 and high-rise building portion where building height is above the required 33.7 meters maximum height.
j. Objective - Ensure that every effort is made to provide north south pedestrian connections through the middle of these large properties.
Response - The proposed design provides north south pedestrian connection through the middle of the site through active street face and active plaza space. At the heart of the proposed development, we have provided a vibrant public plaza along the northern edge which connects the Lower Water Street and Morris Street to the boardwalk.
k. Objective - Ensure that long, unbroken runs of building wall at the water's edge or boardwalk's edge are not permitted. The longest run of building face permissible abutting either the water's edge or the boardwalk shall be 21.5 metres. Building walls longer than 21.5 metres must be modulated through the use of such devices as articulation of the building mass, significant stepbacks from the water's edge or boardwalks edge, the interruption of the building wall with public spaces, etc.
Response - Building walls have been modulated to provide longest width of 21.5 metres abutting the boardwalk or parallel to OHWM. Long, unbroken runs of building wall at the boardwalk's edge are not provided in this development.
I. Objective - Ensure that high quality, low-maintenance site furnishings and lighting styles that conform to the requirements of the HRM Municipal Service Systems Design Guidelines (HRM Red Book) are used in both private and public developments along the waterfront.
Response - High quality, low-maintenance site furnishings and lighting styles that conform to the requirements of the HRM Municipal Service Systems Design Guidelines ("HRM Red Book") are used in this development.

Section 3.4.9 of the Downtown Halifax Municipal Planning Strategy's "Waterfront Development", p. 26. Policy 29 specifically supports a "higher degree of discretion over the design and form of development for waterfront lands." This provision supports the requested variances.

As specifically mentioned in section 2.10 of the Design Manual, waterfront sites are challenging and require a more flexible design-guideline development review process. Due to the challenging nature of the site conditions, we request your consideration of the identified variances. We believe these variances allow for a development that exceeds the requirements of the design manual.

## Site Variances

## Variance 1 - Building Height - Architectural Feature on Level 17

Section 8 (8) The Height requirements in subsection (6) and (7) of section 8, and subsection (15C) of Section 7 shall not apply to a church spire, lightning rod, elevator enclosure, an elevator enclosure above a structure required for elevator access to roof top amenity space, flag pole, antenna, heating, ventilation, air conditioning equipment, clock tower, solar collector, roof top cupola, parapet, cornices, eaves, penthouses or other similar features, provided that the total of all such features, shall occupy in the aggregate less than $30 \%$ of the area of the roof of the building on which they are located. Section 8 (10) Features referenced in subsection (8) shall be setback no less than 3 metres from the outer most edge of the roof on which they are located. No setback is required for clock towers, parapets, cornices and similar architectural features.

A "Maximum Height Variance" is requested and enabled through the requirements of section 3.6.8 a and $b$ of the S-1 Design Guidelines and as per the following:
a. the maximum height is consistent with the objectives and guidelines of the Design Manual; The proposed architecture feature on Level 17 [architectural railing and roof overhang feature] as shown on the sketch on the next page occupies $39.2 \%$ of the roof area it occupies, and is within 3 metres setback from the outer most edge of the roof on the west side of the building. These variances are being requested as the rooftop architectural feature contribute more to the skyline of the entire downtown using architectural quality night lighting as per objectives of section 3.3.4a of the Design Manual. Also, the expression of the architectural feature clearly distinguishes it from the building midrise and high-rise portion as per the objectives of section 3.3.4b,3.3.4d,3.3.4f and 3.3.1a of the Design Manual. By moving the architectural feature on level 17 allows for a central location to house mechanical equipments, thereby allowing maximum roof accessibility on lower roofs and increasing the green roof/ outdoor amenity space as per section 3.3.4c.
b. the additional building height is for rooftop architectural features and the additional height does not result in an increase in gross floor area;
The centralized location of architectural feature on level 17 allows for an architecturally integral design consistent with the objectives and guidelines of sections 3.3.1a and 3.3.4c of the Design Manual as it creates a distinguished roofline feature highlighted with the night lighting. The architectural feature space will be used to house mechanical equipment only and will not increase residential gross floor area.

Required coverage area $-30 \%$ of the area of the roof of the building on which they are located Provided coverage area - The architectural feature occupies $39.2 \%$ of the roof area on which it is located
Total roof area on level $17-1,110$ sq $m$
Total architectural feature area - 435 sq m


Image 1: shows the total roof area on level 17 and the total area of the architectural feature

## Variance 2 - Mid-Rise Building

Section 10(4) Above a height of 18.5 metres, or the height of the streetwall, the mid-rise portion of a building shall be setback from interior lot lines no less than $10 \%$ of the lot width or 5.5 metres, whichever is less.

The variance requested is for building portion [8.9 sq m] within the required setback of 5.5 metres for mid-rise portion along the north face. For this section, "Side and Rear Yard Setback Variance" is requested and enabled through the requirements of section 3.6.2 a and b of the S-1 Design Guidelines and as per the following:
a. the modified setback is consistent with the objectives and guidelines of the Design Manual; The north west corner of the building along the interior lot line encroaches the 5.5 metres setback and is set at 4.6 metres setback from interior lot line. The 4.6 m setback is provided to align the mid-rise portion with the streetwall of the low-rise portion on the Lower Water Street and to create a corner feature for the building as per the objectives and guidelines of sections 3.3.1c and 3.3.1d of the Design Manual. Refer to 3-D models on pages 22 and 23. The modified mid-rise setback of 4.6 metres does not negatively impact the adjacent uses since the property line varies along the north side, and existing right-of-way provides sufficient separation between the buildings. 5.5 metres mid-rise setback is maintained from this existing right-of-way and is consistent with the adjacent existing buildings as per section 3.1.2b of the Design Manual.
b. The modification does not negatively impact abutting uses by providing insufficient separation. The provided setback of 4.6 m on the north west corner does not negatively impact abutting uses as the property line varies along the north edge and sufficient separation has been maintained between the two properties by the right of way on the adjacent property. The variance is being requested to provide a corner feature for the building.

Design Manual section 3.6 .2 is indicative of policy behind bylaw and accurately reflects Cunard setback condition.

The northwest corner aligns with 3.6.6.b. because the setback reduction is proportional to the lower building height (building does not reach maximum height permitted) at that location.

Required Setback - 5.5 metres
Provided Setback - 5.5 metres [4.6 metres only at the N-W corner]


Image 2: shows the mid-rise portion of the building along Bishop's Landing encroaching the 5.5 metres setback line from the interior lot line

## Variance 3 - High-Rise Building

Section 10(9) portion of a high-rise building above a height of 33.5 metres shall be separated a minimum of 23 metres between the high-rise portion of other buildings on the same lot or the high-rise portion of the same building on the same lot, where both of the high-rise portions are used for residential purposes.

With reference to the high-rise portion of the building, the applicant is requesting a minimum separation distance variance. A separation variance is requested between the residential tower and the glass railing provided as per wind assessment measures for the pool area. For this section, "Maximum Tower Width Variance" is requested and enabled through the requirements of section 3.6.7 $a$ and $b$ of the S-1 Design Guidelines and as per the following:
a. the maximum tower width is consistent with the objectives and guidelines of the Design Manual; The building width above 33.5 metres is 21.5 metres while depth ranges from 53.4 meters at level 12 to 40.7 meters at level 16 to create a unique building articulation that reinforces the key elements of base, middle portion and top of the building as per the objectives of section 3.3.1a, 3.3.1b \& 3.3.1c of Design Manual. This variance is required since the glass railing is not an enclosed built structure. Pool deck is provided to create an amenity feature for the residents, which is not enclosed, and higher pool railing is provided as per wind assessment mitigation measures and fall protection. The architectural design utilizes a terraced form rather than twin towers to facilitate access to the amenity space, create more view lines through the site and improve views to the waterfront for the residents as per the objectives and guidelines of sections 2.10c and 3.3.1a of the Design Manual.
b. The modification results in a clear public benefit such as the remediation of an existing blank building wall.
The building massing creates an amenity space on level 12 terrace as a public benefit for the residents which require a 23 metres separation variance since it is not an enclosed built structure. The stepped massing as currently proposed offer public benefit of creating an amenity space on level 12 and plaza space on ground level over the use of a combination of separated tower forms as shown on image 3. The reason we provided this comparison is because two towers would require a 23 metres separation whereas a variance is requested for the amenity space with no enclosed structure provided as a result of a terraced building form.


Image 3a: Obstructed harbor views along the north side.


Image 3b: wider harbor views with stepped building form.

## Variance 4 - Building Setbacks and Stepbacks - Terracing building form

Section 10(10) Any portion of a building above a height of 33.5 metres shall be a maximum width of 38 metres and a maximum depth of 38 metres.

For this section, "Maximum Tower Width Variance" is requested and enabled through the requirements of section 3.6 .7 a and $b$ of the $S$-1 Design Guidelines and as per the following: a. the maximum tower width is consistent with the objectives and guidelines of the Design Manual; The building width above 33.5 metres is 21.5 metres while depth ranges from 53.4 meters at level 12 to 40.7 meters at level 16 to create a unique building articulation that reinforces the key elements of base, middle portion and top of the building as per the objectives of section 3.3.1a of Design Manual. Shadow study has also been provided to show no significant impact with the increase of the depth of the building on the surrounding developments. The architectural design utilizes a terraced form rather than twin towers to facilitate both light and views to the waterfront from adjacent buildings as per the objectives and guidelines of sections 2.10c and 3.3.1a of the Design Manual.


Image 4: the above sketch shows the public benefit of 12,000 sf of public plaza space created by the building form.
b. The modification results in a clear public benefit such as the remediation of an existing blank building wall.
The massing as currently proposed offers several public benefits over the use of a combination of separated tower forms as recommended by the design guidelines. These public benefits include and are not limited to 1) improved view lines for the residents of the development site, 2) a new waterfront vibrant plaza has been designed to activate the portion of the waterfront promenade with retail and restaurant frontages all along the harbour, 3) reduced shadowing on public walkways, and most importantly 4) a more unique and elegant built form that is tailored to the specific view corridor requirements, that embraces its location and the public space that is adjacent to it.

Variance 5 - Balcony design - length/ depth
Section 10(13) Balconies shall be permitted encroachments into a setback, stepback or separation distance, at or above the level of the second storey of a building, provided that the protrusion of the balcony is no greater than 2 metres from the building face and the aggregate length of such balconies does not exceed $50 \%$ of the horizontal width of that building face.

All the balconies in the building are no greater than 2 metres from the building face, and there is no setback requirement along the north and east faces of the building. But variance is requested for the balconies along the south and west faces of the mid-rise and high-rise portion of the building that encroach into the setback area and have the aggregate length of more than $50 \%$ of the building face on which they are located. For this section, "Maximum Tower Width Variance" is requested and enabled through the requirements of section 3.6.7 a and b of the S-1 Design Guidelines and as per the following:
a. the maximum tower width is consistent with the objectives and guidelines of the Design Manual; Balconies along the south and west sides on mid-rise and high-rise portion of the building exceed the maximum 50\% of building face allowable as these balconies act as architectural feature for the building with transparent tempered glass construction to increase visual connection and creates visual interest all along the Waterfront.
Balconies along Morris Street are an architectural design feature to distinguish two distinct residential mid-rise masses as per section 3.3.1c of the Design Manual to provide architectural variety and opportunities to articulate the massing and to provide the maximum tower width consistent with the objectives and guidelines of the Design Manual.
b. The modification results in a clear public benefit such as the remediation of an existing blank building wall.
The balconies provide a visual public benefit as these balconies create a visually interesting faces rather than just blank walls.

North Elevation - Balconies do not encroach into the setback area. There is a condition along the north west corner, where balconies encroach into the interior lot line setback, but the aggregate length of the balconies is less than $50 \%$ of the building face on which they are located.
East Elevation - Balconies do not encroach into the setback area. Please refer to Site Plan.
South Elevation - Balconies encroach into the setback area and have the aggregate length of more than $50 \%$ of the building face on which they are located. Variance is required.
West Elevation - Balconies encroach into the setback area and have the aggregate length of more than $50 \%$ of the building face on which they are located. Variance is required.

Please refer to the attached elevations on the following pages for the balcony percentage.


NORTH ELEVATION - NO VARIANCE REQUIRED



## Variance 6 - Precinct 1: Southern Waterfront

Section 11(1)(c) The maximum height of any building shall be 12.5 metres;
Section 11(d) building height in clause (c) may increase at a rate of 1 metre for every additional 1 metre of setback from the minimum required setback from the ordinary high water mark;

The intent of the ordinary high water mark setback is to provide clear and uninterrupted public passage along the waterfront and access to the water's edge.

The Cunard project is designed to not only maintain existing boardwalk access along the seawall, but also to augment it with generous, high quality public spaces developed in the seawall setback area. The inlet between Cunard and Bishop's Landing will become a unique feature activated with public access.

Furthermore, the primary intent of this provision is to ensure that the setback from the seawall's east edge is achieved. Relaxation of this setback requirement on the north and south edges of the inlet are consistent with the Downtown Halifax Municipal Planning Strategy and the Design Manual.

Building height variance is requested for portions of levels 12, 13, 14, 15 and 16 on the northeast face of the building and portion of architectural glass railing on level 11 that is within 30 metres of the ordinary high-water mark. As per the requirements of the section 11 (1) (d), the maximum height of the building at north-east setback can be a total of 33.7 metres [12.5 metres +21.2 metres high], but portions of levels 12, 13, 14, 15 and 16 that are within 30 metres of the OHWM exceeds this requirement. Similarly, on the north setback, maximum height of the building can be 31.37 metres and a portion of glass railing on level 11 is exceeding this requirement by 600 mm .
For this section, "Precinct Built Form Variance" is requested and enabled through the requirements of section 3.6.10 a of the S-1 Design Guidelines as per the following:
a. fill existing gaps created by vacant properties or parking lots with new development;

This development is built on an existing parking lot and has retail, restaurants and public plaza along the waterfront to activate the harbor with public activities. Variance is required for the north east face of the building that has portions at levels 12, 13, 14, 15 and 16 above the height requirement of 33.7 metres and architectural glass railing on level 11 above the height requirement of 31.37 metres.
Required Height - 33.7 metres on NE corner and 31.37 metres for glass railing on the north side of the building
Provided Height - 36.5 meters for level 12 to 48.9 meters for level 16


The intent of the OHWM setback is to provide clear and uninterrupted public passage along the waterfront and access to the water's edge as provided in the design and shown in the image on the left.


Portions of the north-east building face on levels 12, 13, 14, 15 and 16 that are within 30 metres of OHWM and over the required 33.7 metres of building height limit require this variance.

Portion of the railing that is over the required 31.37 metres of building height and within 30 metres of OHWM setback requires this variance.

Image 5: Any part of the building that does not project outside the extent of blue mass complies with the section 11 of the Downtown Halifax Landuse Bylaw


Image 6: This image shows portion of the north-east building face on level 12 that is within 30 metres of OHWM and over the required 33.7 metres of building height limit


Image 7: This image shows portion of the architectural glass railing on level 11 that is within 30 metres of OHWM and over the required 31.37 metres of building height limit

## Variance 7 - Precinct 1: Southern Waterfront

Section 11(1)(e) The width of any building face parallel to the ordinary high-water mark shall not exceed 21.5 metres;
Section $11(1)(\mathrm{g})$ the width of any low-rise or mid-rise building face parallel to the ordinary high water mark may increase at a rate of 1 metre for every additional 1 metre setback
from the ordinary high water mark;
This variance is requested for 44 metres long low-rise portion on the north along the plaza which partially faces the OHWM but is within 30 metres of the OHWM, and 56 metres long mid-rise portion that is at 21.2 metres additional setback of the OHWM. It is to be noted that this is a unique situation due to inlet condition. The bylaw requirement was intended to prevent buildings from having a wide east face facing the harbor, but this variance is requested for the north face. For this section, "Precinct Built Form Variance" is requested and enabled through the requirements of section 3.6.10 a of the S-1 Design Guidelines and as per the following:
a. fill existing gaps created by vacant properties or parking lots with new development;

This development is built on an existing parking lot and has retail component and public plaza along the Waterfront to activate the harbor with public activities. Variance is required for the low-rise and mid-rise portion of the north face of the building parallel to OHWM.
For Low-Rise portion - The provided width of 44 metres [the required width as per section 11(1)g is 35.8 m ] of north face is required to make the residential floor plate viable as the width of the principal building form is required to achieve market target suite floor areas within a standard 6.4 metres suite width structural bay, and to create an architectural form of terraced design.
For Mid-Rise portion - The provided width of 56 [ the required width as per section 11(1)g is 42.7 m ] of north face is required to make the residential floor plate viable as the width of the principal building form is required to achieve market target suite floor areas within a standard 6.4 m suite width structural bay, and also to create an architectural form of terraced design.

## Variance 8 - Precinct 1: Southern Waterfront

Section 11(1)(f) Any portion of a building above a height of 33.5 metres shall be a maximum width of 21.5 metres parallel to Lower Water Street and a maximum depth of 38.5 metres.

The width of the building parallel to Lower Water Street for the high-rise portion is 21.5 metres.
The variance is requested for the building depth which varies from 53.4 metres at level 12 to 40.7 metres at level 16. For this section, "Precinct Built Form Variance" is requested and enabled through the requirements of section 3.6.10 a, b and $f$ of the S-1 Design Guidelines and as per the following: a. fill existing gaps created by vacant properties or parking lots with new development; This development is built on an existing parking lot and has retail component along the Waterfront and the Lower Water Street. Variance is required for portion of building above a height of 33.5 meters parallel to Lower Water Street with building depth ranging from 53.4 meters at level 12 to 40.7 meters at level 16 to create a terracing building form that enhances the quality of light and views to the Halifax Harbour as per the objectives of section 2.10a,b,c and 3.3.1c of the Design Manual. The proposed building mass located on the south west corner of the site does not impact the shadowing, while providing required density. Also, refer to shadow study in Appendix C and 3-D models on pages 24 and 25.
Required Depth - 38.5 metres
Provided Depth - 53.4 meters at level 12 to 40.7 meters at level 16
b. enhance the public realm in the area, including the extension of the east-west streets between Lower Water Street and the harbour and their intersection with the Halifax Harbour Walk, the pedestrian interface of the proposed building and the Halifax Harbour Walk, provide or improve sidewalks along Lower Water Street, or provide for public or private plazas or parks;
The building development is in alignment with this requirement since pedestrian connection has been proposed along the east-west extension of Morris street to the Halifax Harbour Walk, and public plaza has been created along the Harbour Walk with retail and restaurant frontages to activate the plaza space. Increasing the depth of the building doesn't impact the pedestrian connections and plazas created along the Harbour Walk and the Lower Water Street, in fact terraced building form creates better views to the harbour from living spaces and allows more rooftop amenity spaces. Also, the terracing form highlights the building and separates the building base that forms the streetwall from the high-rise portion, thus increasing the focus on the plaza space and creates an interesting building form in accordance with the objectives of section 3.3.1c of the Design Manual.
f. ensure Lower Water Street has streetwall and landscaping conditions that emphasize its meandering qualities and emergence as an important street.
The terracing form highlights the building form and distinguishes the building base [Streetwall] which has been activated by retail frontages on the Lower Water Street and has landscaped planters all along the street to enhance the meandering qualities and create a vibrant streetscape.

## Variance 9 - Southern Waterfront

Section 11(1)(h) Buildings on lots with a streetline width greater than 27.5 metres shall be setback from interior lot lines no less than $10 \%$ of the lot width or 8 metres, whichever is less. Where a lot has more than one streetline, the greater lot width shall apply; and clauses (b) through (e) apply to any building or portion thereof within 30 metres of the ordinary high-water mark.

For this section, "Precinct 1 Built Form Variance" is requested and enabled through the requirements of section 3.6.10 c and d of the S-1 Design Guidelines and as per the following:
c. frame the open spaces identified above; or

Along the south property line, the Waterfront View corridors are maintained as per the objectives of section 2.10c of the Design Manual to frame the Waterfront between the buildings. There is no risk of
insufficient building separation since the framed space will always be maintained. $8 m$ setback variance from the interior lot line is also sought as south property line does not act as an interior lot line throughout its length as it is a hybrid of street and interior lot line and will create setback in the architectural form. Refer to 3-D models on pages 24 and 25.
d. provide adequate separation between buildings;

Adequate building separation has been provided along the Nova Scotia Power Inc (NSPI) south property line since Morris street is a hybrid of street and interior lot line, and setbacks have been provided as per section 7 (18) Waterfront View Corridor and section 9 (7) Streetwall Stepbacks of Halifax Land-Use Bylaw. Morris street mean centre line has been extended from the Lower Water Street intersection to the eastern lot boundary to preserve the waterfront views which determines the 7.62 m waterfront view corridor setback along the south property line with objectives of the sections 2.10 e and 2.10c of the Design Manual. The separation will be maintained as construction over the Waterfront View Corridors is not allowed. Refer to 3-D models on pages 24 and 25.
Similarly, adequate building separation has been provided along the north property line, since the property line varies along this side, and existing right-of-way provides sufficient separation between the buildings. The north west corner of the building is set at 4.6 metres setback from interior lot line to align the mid-rise portion with the streetwall of the low-rise portion on the Lower Water Street creating an architecturally strong corner feature for the building as per the objectives and guidelines of section 3.3.1c of the Design Manual.


## 01 - Estimated LUB Variances

Variance 1 - section 8(8) Architectural feature occupies $56.3 \%$ of roof area it occupies instead of 30\%

Variance 3 - section 10(9) Any portion of a highrise building above a height of 33.5 metres shall be separated a minimum of 23 metres Variance 9 - Section 11(1)(h) Buildings on lots with a streetline width greater than 27.5 metres shall be setback from interior lot lines no less than $10 \%$ of the lot width or 8 metres


02 - Estimated LUB Variances
Variance 1 - section 8(8) Architectural feature occupies $56.3 \%$ of roof area it occupies instead of 30\%
Variance 9 - Section 11(1)(h) Buildings on lots with a streetline width greater than 27.5 metres shall be setback from interior lot lines no less than $10 \%$ of the lot width or 8 metres,


03 + 04 - Estimated LUB Variances
Variance 1 - section 8(8) Architectural feature on Level 17 occupies $56.3 \%$ of roof area it occupies instead of $30 \%$
Section 8(10) Roof top architectural feature is within 3 metres of setback area
Variance 2 - section 10(4) 5.5 metres setback for mid-rise portion along the interior lot line
Variance 3 - section 10(9) Any portion of a high-rise building above a height of 33.5 metres shall be separated a minimum of 23 metres
Variance 4 - section 10(10) Any portion of a building above height of 33.5 metres shall be a maximum width of 38 m \& maximum depth of 38 m is not provided.
Variance 6 - section 11 (1)(c) Maximum height of the building within 30 meters of the OHWM to be 33.7 meters. Maximum height variance is required

Variance 7 - section 11(e) width of building face parallel to the OHWM is 44 meters for low-rise portion and 56 meters for mid-rise portion
Variance 8 - section 11(f) Any portion of a building above a height of 33.5 metres shall be a maximum width of 21.5 metres parallel to Lower Water Street and a maximum depth of 38.5 metres
Variance 9 - Section 11(1)(h) Buildings on lots with a streetline width greater than 27.5 metres shall be setback from interior lot lines no less than $10 \%$ of the lot width or 8 metres

## Estimated LUB Variance Table

| LAND USE BY-LAW SECTION | PG | SOUTHERN WATERFRONT HALIFAX LUB REQ. | PROPOSED BUILDING | DESIGN RATIONALE FOR REQUESTED VARIANCES | Variance Section | DRM | Variance number |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 BUILT FORM REQUIREMENTS |  |  |  |  |  |  |  |

Mechanical penthouse shall not occupy more than $30 \%$ of the roof area
Features referenced in
subsection (8) shall be setback no less than 3 metres from the outer most edge of the roof on which they are located. No setback is required for clock towers, parapets, cornices and similar architectural features.

The 'architectural feature' on Level 17 occupies $39.2 \%$ of roof area it occupies and is within 3 metres of the setback area.

The proposed architectural feature on Level 17 is illuminated at nighttime and occupies $12.9 \%$ of the development roof area to contribute more to the downtown skyline and the visual quality of the skyline. This architectural feature becomes a central location to house mechanical equipments, thereby allowing maximum roof accessibility on lower roofs. The centralised location allows for an architecturally integral part of the building design as per the best practices of sections 3.3.1a and 3.3.4 of the Design Manual.

10(4) Any portion of a mid-rise building above a height of 18.5 m shall be setback 5.5 m from interior lot lines.

10(9) Any portion of a high-rise building above a height of 33.5 metres shall be separated a minimum of 23 metres

The proposed setback for northwest building edge is 4.65 m . Refer to Site Plan DP1.2

Pool deck is provided to create an amenity feature for the residents and higher pool railing is provided as per wind assessment mitigation measures and fall protection.

Variance is required for the north-west corner of the building since 5.5 metres setback is not maintained to align the mid-rise portion with the street wall of the lowrise portion on the Lower Water Street and to create an engaging architectural corner.

The floor slab of level 12 is within the height limitation but variance is required for the amenity space and pool railing which is an architectural element like a parapet or a clock tower and does not increase the gross floor area

Building depth ranges from 53.4m @ 12th floor to 40.7m @ 16th floor
10(14)

The building depth varies to create a terraced building form to enhance the quality of light and views. The proposed building mass located on the south west corner of the site minimizes the shadowing while providing the required density.

## PERMITTED ENCROACHMENTS

2 10(13) Balconies shall be permitted encroachments into a setback or stepback provided that aggregate length of balconies does not exceed $50 \%$ of building face.

Continuous balconies at a portion of Lower Water St. \& Morris St. exceed $50 \%$ of building façade.

The architectural concept of continuous balconies, with glass guardrails, as an architectural design feature to express the building's massing and form.

Waterfront to activate the harbor with public activities
Variance is required for the portions of Levels 12, 13,
14,15 and 16 that are within 30 metres of the OHWM and exceeds the height requirement of 33.7 metres.

The width of the principal building form is required to 6.4 m suite width structural bay and to create a terraced form unique building

The building depth varies to create a terraced building form enhancing the quality of light and views. The proposed building mass located on the south west corner of the site minimizes the shadowing while providing the required density. Refer to the shadow study in Appendix C.

Variance is required since building setback is less than 8.0 m adjacent to Nova Scotia Power Inc (NSPI) [south and north interior lot line due to site conditions and to reinforce the continuous linear form of the street wall along the Lower Water Street with respect to the overal building mass.
2.10 a b 2.1
c
3.3.1c
3.6.10
a,b f
2.10c
2.10 e
3.3.1c
3.6.10c
3.6 .10 d

## Halifax Downtown Land Use By-Law

## Context Maps:

Refer to Appendix A for Context Maps
Map 1: Zoning and Schedule W
DH-1 and within Schedule W
Map 2: Downtown Precincts
1 Southern Waterfront
Map 3: Pedestrian Orientated Commercial Streets
Site not located on primary commercial streets
Map 4: Maximum Pre-Bonus Heights
Major: 39 metres (NE Corner 19 metres)
Map 5: Maximum Post-Bonus Heights
Major: 49 metres (NE Corner 19 metres)
Map 6: Streetwall Setbacks
Setbacks Vary (0-4.0m)
Map 7: Street Wall Heights
18.5 metres along Lower Water Street.

Map 8: Central Blocks
Site not within Central Block
Map 9: Prominent Visual Terminus Sites
Site not a Prominent Terminus Site
Map 10: Archaeological Resources
Site Within Archaeological Buffer Zone

## Land Use Requirements - Section 7

Permitted uses - Downtown Halifax Zone (DH-1)
$7(1)$ The project is proposed with residential and Commercial uses as permitted in the $\mathrm{DH}-1$
Pedestrian-Orientated Commercial Street Uses
(2) Project site is not located on a Primary Commercial Street on Map 3, but active street uses Retail and Restaurants are proposed along the façade at grade.
(3) Pedestrian entrances and lobbies associated with any use permitted pursuant to subsection (1) may face and have access onto Pedestrian-Oriented Commercial Streets. Proposed primary pedestrian residential lobby is located next to corner of Lower Water Street and Morris Street and secondary residential lobby is accessed through public plaza.
Residential Uses: Dwelling Unit Mix
(4) One third of dwelling units are required to include two or more bedrooms. The building does comply with this requirement. 85 of the current 254 dwelling units are two or more-bedroom units.
(5) Residential uses to have separate direct access to the exterior ground level separate from any nonresidential use. The building does comply with this requirement.
Residential Uses: Storm Surge Protection
(12) No residential portion of a building on a lot within Schedule W, shall be erected, constructed at an elevation less than 3.8 metres of the Canadian Geodetic Vertical Datum. First finished residential level established at +7.12m CGVD with the majority above +18.5m CGVD.
(13) Subsection (12) does not apply to parking garages, accessory structures or entrances to residential uses. Residential parking garage entrance on Morris Street view corridor.
(14) Not applicable.
(15) Plans to clearly identify required elevations, contours and lot grading information to determine the building complies with subsection (12). Plans have been submitted.
Institutional, Cultural \& Open Space Zone (ICO)

## Permitted Land Uses

(16) Not Required - applies to ICO
(17) Not Required - applies to ICO

## Waterfront View Corridors

(18) To preserve water front view corridors, every structure shall be setback a minimum of 7.62 metres from the mean centre line of the prolongation of Morris Street from their intersection with Lower Water Street to the eastern lot boundary. The proposed building is setback from the Morris Street view corridor by the required 7.62 m .
(19) Plans to clearly identify the proposed building complies. Plans indicate the water front view corridor.

## Waterfront View Corridor: Abutting Uses

(22) Cultural uses;

Banks and related uses;
Licensed alcohol establishments;
Personal Service uses;
Retail uses;
Movie theaters;
Commercial recreation uses; and
Uses accessory to the foregoing.
Eating Establishment, Office Lobby and uses accessory to the foregoing are proposed uses along Morris Street

## Built Form Requirements - Section 8

Building Height: Maximum Pre-Bonus Heights and Maximum Post-Bonus Heights
(6) Building will not be erected, constructed, or located so that it exceeds the maximum Pre-Bonus Heights and maximum Post-Bonus Heights.
(7) Notwithstanding subsection (6), the maximum Pre-Bonus Heights specified on Map 4, may be exceeded to the Maximum Post-bonus Heights specified on Map 4.
The proposed building post-height is 49 m , compliant with Map 4
(8) The Height requirements in subsection (6) and (7) of section 8, and subsection (15C) of Section 7 shall not apply to a church spire, lightning rod, elevator enclosure, an elevator enclosure above a structure required for elevator access to roof top amenity space, flag pole, antenna, heating, ventilation, air conditioning equipment, clock tower, solar collector, roof top cupola, parapet, cornices, eaves, penthouses or other similar features, provided that the total of all such features, shall occupy in the aggregate less than $30 \%$ of the area of the roof of the building on which they are located. Architectural feature on Level 17 occupies $39.2 \%$ of roof area it occupies to allow for maximum roof accessibility on lower roofs by shifting mechanical space to a centralized location within the architectural feature. The centralized location allows for an architecturally integral design as per the best practices of section 3.3.4 of the design manual. Refer to variance section, Variance 1 on page 14
(9) Not identified as a Visual Terminus Site.
(10) Features referenced in subsection (8) shall be set back no less than 3 metres from the outer most edge of the roof on which they are located. No setback is required for clock towers, parapets, cornices and similar architectural features. Variance is required for 3 m setback condition. Please refer to variance 1 on page 14
(11) The requirements of subsection (8) and (9) may be varied by site plan approval where the relaxation is consistent with the criteria of the Design Manual.

## Landscaping for flat rooftops

(12) All buildings erected or altered, with a flat roof shall provide a fully landscaped area on those portions of the flat roof not required for architectural features or mechanical equipment. These landscaped areas need not be fully accessible except where they are provided pursuant to the requirements of subsections (10) and (11D) of section 7. Flat roofs where provided are designed to be accessible to occupants further enhanced by moving mechanical requirements to centralized location and will be fully landscaped. These landscaped roof terrace areas will be protected from the wind with features recommended in the wind study to mitigate the wind impact.

## Land Uses at Grade

(13) The ground floor of a building, excluding a parking garage, that has access at the street line or Transportation Reserve shall have a floor-to-floor height of no less than 4.5 metres. The Building complies with this requirement.

View Plane Requirements
(14) Notwithstanding any provision of this By-law, no building shall be erected, constructed, altered, reconstructed, or located in any zone so as to protrude through a View Plane except as permitted pursuant to Section 24 of the Halifax Peninsula Land Use By-Law, as amended from time to time. The development site is located immediately west of the habour-front pedestrian promenade and is subject to View Plane \#6.

## Rampart Requirements

(17) Notwithstanding any provision of this By-law, no building shall be erected, constructed, altered, reconstructed, or located in any zone so as to be visible above the ramparts as specified by Section 26B of the Halifax Peninsula Land Use By-Law, as amended from time to time. Building complies with View plane requirements.
Wind Impact
(18) Any building resulting in a height exceeding 20 metres shall only be permitted following consideration of its wind impact pursuant to the performance standards in schedule S-2. See Pedestrian Wind Comfort Assessment. The landscaped roof terrace areas will be protected from the wind with features recommended in the Wind Comfort Assessment to mitigate the wind impact.
Landscape design will be undertaken to include all elements listed in wind study to mitigateimpact of wi nd during warm weather seasons, \& seasonal restrictions will be in place to reduce heaviest wind Impacts.

## Prohibited External Cladding Materials

(20) The following external Cladding materials shall be prohibited:
(a) Vinyl;
(b) Plastic;
(c) Plywood;
(d) Concrete block;
(e) Exterior insulation and finish systems where stucco is applied to ridged insulation;
(f) Metal siding utilizing exposed fasteners;
(g) Darkly tinted or mirrored glass; and
(h) Vinyl windows on registered heritage properties or properties located within a heritage conservation district.
Prohibited external cladding is not used on this project.

## Materials used on the building:

1 Large Format Porcelain Tile
2 Pre-Finished composite metal panel system
3 Aluminum window wall system
4 Vision glazing
5 Prohibited External Cladding Materials as per section 8 (20):

## Variances

A variance under Section $\mathbf{8 ( 1 1 )}$ ) is being sought. The variance is required for 8 (8), and (13) and is consistent with the provisions of Section 3.3.4 of the Design Manual.

## Streetwalls - Section 9

## Streetwall: Streetline Setbacks

9(1) Streetwalls shall have a streetline setback as specified in map 6. The proposed building has a street line setback of 0.0 metres along Lower Water Street and 1.0 m from the Morris Street extension.

## Streetwall: Height

(2) Maximum streetwall height shall be as specified on Map 7. Building complies with 18.5 metres max street wall height.
(3) The minimum streetwall height shall be 11 metres high, or the height of the building where the building height is less than 11 metres. Building complies with minimum streetwall height as per definitions in Halifax Land Use Bylaw. See DP3.4 west building elevation for minimum streetwall height dimension.
(4) Where there is more than one streetwall of differing heights the lowest of the streetwalls shall be the permitted street wall height. Site is only affected by Lower Water Street wall.

## Streetwall: Width

(5) A streetwall shall extend the full width of a lot abutting the streetline. The streetwall extends the full lot width abutting the street line.
(6) On lots other than on Central Blocks, the streetwall width may be reduced to no less than $80 \%$ of the lot width of a lot abutting a streetline, provide the streetwall is Contiguous. The streetwall extends the full lot width abutting the Lower Water Street streetline.

## Streetwall: Stepbacks

(7) The following minimum stepbacks above the streetwall shall apply to buildings with streetwall setback requirements of 0 to 4.0 metres as identified on map 6:
a. a minimum of 3 metres for that portion of a building that is a maximum of 33.5 metres in height; or The proposed development is stepped back 3.0 metres to a maximum building height of 33.5 metres.
b. a minimum of 4.5 metres for that portion of a building that is greater then 33.5 metres in height. The proposed development is stepped back 4.5 metres for that portion of a building that is greater then 33.5 metres in height.

## Variances

The variances under Section 9(8) are being sought. The variances required for $9(7 \mathrm{~b})$ and is consistent with the provisions of Section 3.6.5 of the Design Manual.

## Building Setbacks and Stepbacks - Section 10

Low-Rise Buildings
10(1) No setback is required from an interior lot line for a low-rise building or the low-rise portion of a building.
(2) With the exception of required streetwall setbacks, a low-rise building or the low-rise portion of a building is permitted to cover 100\% of the lot upon which it is situated. Building occupies $62.6 \%$ of the subject site, with public plaza provided at grade along the harbour front.
(3) Outside Central Blocks on lots located outside of Central Blocks, as identified on Map 8, a low-rise building or the low-rise portion of a building may be setback from interior lot lines no more than 20\% of the lot width. Proposed building is compliant along southern property line, but a public plaza is provided for the public benefit along the north east corner of the site.

## Mid-Rise Building

(4) Above a height of 18.5 metres, or the height of the streetwall, the mid-rise portion of a building shall be setback from interior lot lines no less than $10 \%$ of the lot width or 5.5 metres, whichever is less. Where a lot has more than one streetline, the greater lot width shall apply.
Above the height of 18.5 m the mid-rise portion of the building, 3.0 metres setback is provided for 25 metres width of the building along Morris Street portion of the property and 5.5 metres setback is provided for the remaining width of the building along the interior lot line.
Variance is required for the North west side of the building since 5.5 metres setback is not maintained to align the mid-rise portion with the streetwall of the low-rise portion on the lower water street and to create a corner feature for the building.
Refer to variance section, Variance 2 on page 15.
(5) The mid-rise portion of a building shall not project beyond the vertical plane of the exterior walls of the low-rise portion of the building. The proposed building is compliant.

## Mid-Rise Buildings: Central Blocks

(6) Outside Central Block

High-Rise Buildings
(7) Any portion of a high-rise building above a height of 33.5 metres shall be setback 11.5 metres from interior lot lines.
(8) Any portion of a high-rise building above a height of 33.5 metres shall be separated a minimum of 17 metres between the high-rise portion of other buildings on the same lot of the high-rise portion of the same building on the same lot.
(9) Any portion of a high-rise building above a height of 33.5 metres shall be separated a minimum of 23 metres between the high-rise portion of other buildings on the same lot of the high-rise portion of the same building on the same lot. Refer to variance section, Variance 3 on page 14. Only one high-rise building provided above 33.5 m . But the pool railing is also a part of the high-rise portion of the building and variance is required to not have the minimum separation between the building and the pool railing since railing is required as per wind mitigation measures.
(10) Any portion of a building above a height of 33.5 metres shall be a maximum width of 38 metres and a maximum depth of 38 metres. Building width above 33.5 metres is 21.5 m while depth ranges from 53.4 meters at level 12 to 40.7 meters at level 16. The architectural design utilizes a terraced form rather than twin towers to facilitate both light and views to the waterfront from adjacent buildings. Refer to variance section, Variance 4 on page 17.
(2) Outside Central Block

Permitted Encroachments
(13)Balconies shall be permitted encroachments into a setback, stepback or separation distance, at or above the level of the second storey of a building, provided that the protrusion of the balcony is no greater than 2 metres from the building face and the aggregate length of such balconies does not exceed $50 \%$ of the horizontal width of that building face. Refer to variance 5 on page 18.

## Variances

A variance under Section 10 (14) is being sought. The variance is required for 10 (4), (7), (10), and (13) and is consistent with the provisions 3.6.6 and 3.6.7 of the Design Manual.

## Precincts: Additional Requirements - Section 11

## Precinct 1: Southern Waterfront

11(1) In addition to all other requirements of this bylaw, the following shall apply to Schedule W as shown on Map 1:
(b) All buildings shall be setback no less than 8 metres from the ordinary high water mark; Low-rise building is set back from the OHWM 22.3 m and mid-rise is setback 32.0 m .
(c) The maximum height of any building shall be 12.5 metres; The proposed building is setback 23.9 m from OHWM, this requirement is superseded by sentence (d).
(d) Building height in clause (c) may increase at any rate of 1 metre for every additional 1 metre of setback from the minimum required setback from the ordinary high water mark; This variance is requested for the north face of the building within 30 metres of the ordinary high water mark and at 28.6 metres setback from OHWM setback. As per the requirements of the section 11 (1) (c), the maximum height of the building at this setback can be a total of 33.1 metres [ 12.5 metres +20.6 metres high], refer to variance 6 on page 19.
(e) The width of any building face parallel to the ordinary high water mark shall not exceed 21.5 metres; Refer to variance 7 on page 21 For Low-Rise portion - The provided building face width parallel to OHWM is 44 m .
(f) Any portion of a building above a height of 33.5 metres shall be a maximum width of 21.5 metres parallel to Lower Water Street and a maximum depth of 38.5 metres. Portion of building above a height of 33.5 meters parallel to Lower Water Street is 21.5 meters. Building depth ranges from 53.4 meters at level 12 to 40.7 meters at level 16. The proposed building mass located on the south west corner of the site minimizes the shadowing, while providing required density.
Refer to variance section, Variance 8 on page 22.
(g) The width of any Low-Rise or Mid-Rise building face parallel to the ordinary high water mark may increase at a rate of 1 metre for every additional 1 metre setback from the ordinary high water mark;
Refer to variance 7 on page 21.
For Low-Rise portion - The provided building face width parallel to OHWM is 44 m .
For Mid-Rise portion - The provided building face width parallel to OHWM is 56 m .
(h) Buildings on lots with a streetline width greater than 27.5 metres shall be setback from interior lot lines no less than $10 \%$ of the lot width or 8 metres, whichever is less. Where a lot has more than one streetline, the greater lot width shall apply; and clauses (b) through (e) apply to any building or portion thereof within 30 metres of the ordinary high-water mark. The southern property boundary is a hybrid of street and interior line and to maintain architectural design; 7.62 metres setback has been maintained from the mean centre line of the prolongation of Morris street from their intersection with Lower Water Street to the eastern lot boundary to preserve the waterfront views as per section 7 (18) Waterfront view corridor. Variance is required since building setback is less than 8.0 m adjacent to Nova Scotia Power Inc (NSPI) [south] and north interior lot line due to site conditions and to reinforce the continuous linear form of the street wall along the lower water street with respect to the overall building mass.
Refer to variance section, Variance 9 on page 23.
Variance
A variance under Section 11 (2) is being sought. The variance is required for 11(1) e, 11(1) f and 11(h) and is consistent with the provision 3.6.10 of the Design Manual.

## Post Bonus Height Benefit - Section 12

Public benefit will be provided as required in Section 12 of Downtown Halifax Land Use By-Law

## Signs - Section 13

The proposed building and tenant signage shall comply with all guidelines and requirements.

## Parking - Section 14

(1) Accessory surface parking is not provided for the proposed building.
(15) A total of 142 Bicycle spaces are provided in the proposed development as required.
(17) A bicycle storage room for Class ' $A$ ' parking is provided on level 1 accessible from Lower Water Street visitor access.
(18) Uncovered Class ' $B$ ' bicycle parking is provided on the north public plaza and is accessible from the secondary residential entrance and the boardwalk.

## Appendix B - Context Maps

## Map 1 - Zoning and Schedule W



Effective: 16 May 2015

## Map 2 - Downtown Precincts



Map 3 - Pedestrian-Oriented Commercial Streets


## Map 4 - Maximum Pre-Bonus Heights (in metres)



Effective: 17 August 2013
Note: Effective date does not indicate date of data creation.

## Map 5 - Maximum Post-Bonus Heights (in metres)



## Map 6 - Streetwall Setbacks



Effective: 16 May 2015
Note: Effective date does not indicate date of data creation

## Map 7 - Streetwall Heights



Note Effective date does not indicate date of data creation

## Map 8 - Central Blocks



Map 9 - Prominent Visual Terminus Sites


Effective: $\mathbf{2 4}$ October 2009
Note: Effective date does not indicate date of data creation

## Map 10 - Archaeological Resources



## Appendix C - Shadow Study

## Proposed Building - Shadow Study




SEPTEMBER 21-10 AM


SEPTEMBER 21-2 PM


SEPTEMBER 21-12 PM


SEPTEMBER 21-3 PM


SEPTEMBER 21-1 PM


SEPTEMBER 21-4 PM

## Building Split into Two Towers above 33.5m height - Shadow Study



Louann Scallion-Morine, PMP<br>Planning Analyst<br>Southwest Properties Limited<br>1475 Lower Water Street, Suite 100<br>Halifax, Nova Scotia B3J $3 Z 2$<br>louann.morine@southwest.ca

## Re: Pedestrian Wind Comfort Assessment Cunard - 1325 Lower Water Street - Halifax, NS RWDI Reference \# 1500704

Dear Louann,

As per your request, Rowan Williams Davies \& Irwin Inc. (RWDI) has prepared this letter to comment on the potential wind effects that may be caused by recent design revisions to the proposed Cunard Development at 1325 Lower Water Street in Halifax, NS.

## Wind Tunnel Results

RWDI conducted a wind tunnel test in 2015 for the previous Cunard Development design and our findings on wind conditions were summarized in the following report:

> Pedestrian Wind Consultation Wind Tunnel Tests - 1325 Lower Water Street - Halifax, Nova Scotia, RWDI Project \# 1500704, January 23, 2015, by Nishat Nourin, Dan Bacon and Hanqing Wu

The wind tunnel testing was conducted for the existing and proposed configurations to evaluate the impact of the proposed development (Images 1a and 1b). It was concluded that suitable wind comfort conditions were predicted on and around the proposed development at the grade level. Overall, the grade level pedestrian wind comfort conditions for the proposed development and around the site were found to be similar to those for the existing configuration. However, higher-than-desired wind activity was predicted at the terraces at Levels 11 and 12, including wind safety exceedances at two locations along the north edge of the terrace at Level 12. Conceptual mitigation measures were described in the 2015 report (Appendix A).


Image 1a: Wind tunnel model of the existing site and surroundings in 2015


Image 1b: Proposed development and surroundings in 2015

## Previous Design Changes

There have been several rounds of design changes since the wind tunnel testing in 2015. RWDI provided our opinions on the potential wind impacts that may be caused by these design changes, with the most recent letter of opinion dated January 27, 2020 (Appendix B), based on the building design received by RWDI on October 29, 2018 and January 22, 2020, as well as our previous wind tunnel results.

Pedestrian Wind Comfort Assessment - Cunard - 1325 Lower Water Street, Halifax, Nova Scotia, RWDI Project \# 1500704, January 27, 2020, by Hanqing Wu and Dan Bacon

In the above letter we concluded that "revised design has a building massing and geometry similar to that tested in the wind tunnel in 2015 and, as a result, our previous wind tunnel results and recommendations remain valid. Overall, suitable wind conditions are predicted for pedestrian areas at grade for both the summer and winter seasons. Terraces at Levels 11 and 12 are exposed to higher wind speeds and wind mitigation is required if passive activities are planned for these areas" (Appendix B).

## Current Design

The floor plans received by RWDI on February 25, 2020 (Image 2) indicate a shift of the tower to the north to create a T -shaped building. As a result, the proposed tower will have setbacks or podiums on both the north and south sides, which is a positive design change in reducing wind activity at grade. However, terraces at Levels 5 and 11are expected to be exposed to wind speeds higher than desired for passive activities, as indicated in the initial wind tunnel report in 2015 and our recent letter of opinion in January 2020.


Image 2: Current floor plans at Levels 5 (top), 11 (mid) and 12 (bottom)

## Summary

Based on the current building design received by RWDI on February 25, 2020 and our wind tunnel testing for the same development in 2015, the tower shift to the north is a positive design change in reducing the wind activity at grade. Our conclusions in the 2015 report and the January 2020 letter are still applicable for the wind conditions both at grade and on podium terraces.

We trust this satisfies your current requirements. Should you have any questions or require additional information, please do not hesitate to contact us.

Yours truly,
RWDI

## Original Signed

Hanqing Wu, Ph.D., P.Eng.
Senior Technical Director/ Principal
Original Śigned

Dan Bacon<br>Senior Project Manager / Principal

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# 1325 Lower Water Street <br> Halifax, Nova Scotia 

## Report

## Pedestrian Wind Consultation Wind Tunnel Tests

RWDI \# 1500704
January 23, 2015

## SUBMITTED TO

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## Appendices

Appendix A: Drawing List for Model Construction

## 1. INTRODUCTION

Rowan Williams Davies \& Irwin Inc. (RWDI) was retained by Southwest Properties Limited to consult on the pedestrian wind conditions for the proposed 1325 Lower Water Street in Halifax, Canada. The purpose of the study was to assess the wind environment around the development in terms of pedestrian wind comfort and safety. This objective was achieved through wind tunnel testing of a 1:400 scale model of the proposed development for the following configurations:

Configuration A - Existing: existing surroundings without the proposed development; and,
Configuration B - Proposed: existing surroundings with the proposed development;
The photographs in Figures 1a and 1b show the test model in RWDI's boundary-layer wind tunnel. The proposed building is approximately 60 m high, consisting of a 16-storey building containing ground floor retail, office and amenity spaces on the second floor and rental units on the floors above. The $11^{\text {th }}$ floor contains a swimming pool and outdoor amenity space. The test model was constructed using the design information and drawings listed in Appendix A. This report summarizes the methodology of wind tunnel studies for pedestrian wind conditions, describes the RWDI pedestrian wind criteria, presents the local wind conditions and their effects on pedestrians and provides conceptual wind control measures, where necessary.

## 2. SUMMARY OF WIND CONDITIONS

The wind conditions around the proposed 1325 Lower Water Street development are discussed in detail in Section 5 of this report and may be summarized as follows:

- Appropriate wind comfort conditions are predicted on and around the proposed development at the grade level. Overall, the grade level pedestrian wind comfort conditions for the proposed development and around the site were found to be similar to those for the existing configuration.
- Higher than desired wind activity is predicted at the $11^{\text {th }}$ floor and $12^{\text {th }}$ floor terraces. Suggestions for wind control are presented.
- Winds at two locations along the northwest edge of the $12^{\text {th }}$ floor terrace are predicted to exceed the wind safety criterion for the proposed configuration. Conceptual mitigation measures are described.


## 3. METHODOLOGY

As shown in Figures 1a and 1b, the wind tunnel model included the proposed development and all relevant surrounding buildings and topography within a 460 m radius of the study site. The boundarylayer wind conditions beyond the modelled area were also simulated in RWDI's wind tunnel. The model was instrumented with 65 wind speed sensors to measure mean and gust wind speeds at a full-scale height of approximately 1.5 m . These measurements were recorded for 36 equally incremented wind directions.

Wind statistics recorded at the Shearwater Airport between 1984 and 2014 were analysed for the Summer (May through October) and Winter (November through April) seasons. Figure 2 graphically depicts the directional distributions of wind frequencies and speeds for the two seasons. Winds are frequent from the southwest quadrant in the summer, as indicated by the left wind rose in the figure. During the winter, the prevailing winds are from the northwest quadrant, as indicated by the wind rose on the right of the figure.

Strong winds of a mean speed greater than $30 \mathrm{~km} / \mathrm{h}$ measured at the airport (at an anemometer height of 10 m ) occur for $2.4 \%$ and $10.6 \%$ of the time during the summer and winter seasons, respectively. Strong winds are evenly distributed among all directions during the summer. During the winter, strong winds from the northwest quadrant are more frequent, as indicated by the right wind rose in Figure 2.

Wind statistics from the Shearwater Airport were combined with the wind tunnel data in order to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the RWDI criteria for pedestrian comfort and safety.

## 4. EXPLANATION OF CRITERIA

The RWDI pedestrian wind criteria are used in the current study. These criteria have been developed by RWDI through research and consulting practice since 1974 (References 1 through 6). They have also been widely accepted by municipal authorities as well as by the building design and city planning community.
\& SCIENTISTS

## RWDI Pedestrian Wind Criteria

| Comfort <br> Category | GEM Speed <br> $(\mathrm{km} / \mathrm{h})$ | Description |
| :--- | :---: | :--- |
| Sitting | $\leq 10$ | Calm or light breezes desired for outdoor restaurants and seating areas <br> where one can read a paper without having it blown away |
| Strolling | $\leq 17$ | Gentle breezes suitable for main building entrances and bus stops <br> Moderate winds that would be appropriate for window shopping and <br> strolling along a downtown street, plaza or park <br> Relatively high speeds that can be tolerated if one's objective is to walk, <br> run or cycle without lingering <br> Strong winds of this magnitude are considered a nuisance for most <br> activities, and wind mitigation is typically recommended |
| Uncomfortable | $>20$ | $\leq 20$ |

Notes: (1) Gust Equivalent Mean (GEM) speed = max(mean speed, gust speed/1.85); and
(2) GEM speeds listed above are based on a seasonal exceedance of $20 \%$ of the time between 6:00 and 23:00.

| Safety <br> Criterion | Gust Speed <br> $(\mathrm{km} / \mathrm{h})$ | Description |
| :--- | :---: | :--- |
| Exceeded | $>90$ | Excessive gust speeds that can adversely affect a pedestrian's balance <br> and footing. Wind mitigation is typically required. |
| Note: Based on an annual exceedance of 9 hours or $0.1 \%$ of the time for 24 hours a day. |  |  |

A few additional comments are provided below to further explain the wind criteria and their applications.

- Both mean and gust speeds can affect pedestrian's comfort and their combined effect is typically quantified by a Gust Equivalent Mean (GEM) speed, with a gust factor of 1.85 (References 1, 5, 7 and 8).
- Instead of standard four seasons, two periods of summer (May to October) and winter (November to April) are adopted in the wind analysis, because in a moderate or cold climate such as that found in Halifax, there are distinct differences in pedestrian outdoor behaviours between these two time periods.
- Nightly hours between midnight and 5 o'clock in the morning are excluded from the wind analysis for wind comfort since limited usage of outdoor spaces is anticipated.
- A $20 \%$ exceedance is used in these criteria to determine the comfort category, which suggests that wind speeds would be comfortable for the corresponding activity at least $80 \%$ of the time or four out of five days.
- Only gust winds need to be considered in the wind safety criterion. These are usually rare events, but deserve special attention in city planning and building design due to their potential safety impact on pedestrians.
- These criteria for wind forces represent average wind tolerance. They are sometimes subjective and regional differences in wind climate and thermal conditions as well as variations in age, health, clothing, etc. can also affect people's perception of the wind climate. Comparisons of wind speeds for different building configurations are the most objective way in assessing local pedestrian wind conditions.


## 5. PREDICTED WIND CONDITIONS

Table 1, located in the Tables section of this report, presents the wind comfort and safety conditions for the two test configurations. These conditions are graphically depicted on a site plan in Figures 3a through 5b.

In our discussion of anticipated wind conditions, reference may be made to the following generalized wind flows. Tall buildings tend to intercept the stronger winds at higher elevations and redirect them to the ground level (see Image 1). Such a Downwashing Flow is often the main cause for wind accelerations around large buildings at the pedestrian level. In addition, Corner Acceleration occurs when winds accelerate around building corners at pedestrian level, and cause a localized increase in the wind activity in that area (see Image 2). If these building/wind combinations occur for prevailing winds, there is a greater potential for increased wind activity.


Image 1 - Downwashing Flow


Image 2 - Corner Acceleration

### 5.1 Grade Level (Locations 1 through 54)

The existing wind conditions at the grade level are generally comfortable for sitting and standing during summer (Figure 3a). Slightly higher winds speeds comfortable for walking or better are expected during winter (Figure 4a). No uncomfortable wind condition is predicted for the existing configuration.

Wind conditions suitable for walking or strolling are appropriate for sidewalks. Lower wind speeds conducive to standing are preferred at main entrances where pedestrians are apt to linger. For the proposed configuration, Locations 3, 6 to 10 and 54 represent the main entrances of the proposed development. The wind conditions at the main entrances are predicted to be comfortable for sitting or
standing for both summer and winter (Figures 3 b and 4b). These wind conditions are considered appropriate for the entrances.

Wind speeds at all potential outdoor seating areas are mainly comfortable for standing in the summer (Locations 46 to 49 in Figure 3b). During winter, slightly higher wind speeds comfortable for strolling are expected. The proposed landscaping, which was not modelled in the wind tunnel testing, would reduce the wind speeds in these areas.

In general, the sidewalks immediately around the proposed development are expected to be comfortable for standing or strolling during summer (Figure 3b). During winter, the wind conditions are predicted to be comfortable for strolling or walking (Figure 4b). The offsite walkways include those along Lower Water Street, Morris Street and the walkways around the Halifax Harbour. The offsite walkways are predicted to be comfortable for sitting or standing during summer (Figure 3b). Higher wind activity, mostly comfortable for strolling or walking, is expected during winter (Figure 4b). In addition, wind conditions on the boardwalk are not negatively affected by the proposed development as shown in Figures 3a through 5b.

Wind conditions at all grade locations meet the safety criterion for both the existing and proposed configurations.

### 5.2 Terrace Levels 11 and 12 (Locations 55 through 65)

Typically for accessible terraces intended for passive activities, wind conditions that are comfortable for sitting or standing are desirable, depending upon the activity planned. In summer, the terrace on the $11^{\text {th }}$ floor of the proposed development is predicted to be comfortable for standing or strolling (Locations 55 to 59 in Figure 3b). The higher than desired wind conditions along the northwest and northeast edges of the Level 11 terrace is due to both the exposure of the area to the northerly, westerly and southerly winds and the deflection and subsequent downwashing of these winds off the building facades (Locations 56, 57 and 58 in Figure 3b). During winter, this area is expected to be comfortable for strolling or walking (Locations 55 to 59 in Figure 4b). Since this area will have limited usage during winter, the higher wind speeds in winter should not be a concern.

If lower wind activity is desired for the level 11 podium on the north side of the tower, tall parapets at least 2 m high and approximately $20-30 \%$ porous can be installed along the edges of the terrace. Landscaping and trellises can also be installed around the areas where occupants are likely to gather (see examples in Images 3 and 4). Trellises, stand-alone canopies and other such horizontal elements provide shelter from downwashing flows.


Image 3 - Examples of Porous Parapets


## Image 4 - Examples of Landscaping And Trellises

The terrace on the $12^{\text {th }}$ floor, on the east side of the proposed tower is predicted to be comfortable for standing or strolling during summer. Higher wind speeds comfortable for walking or strolling is expected during winter (Locations 60 to 65 in Figures 3 b and 4 b ). Two locations northwest edge of the $12^{\text {th }}$ floor podium did not meet the wind safety criterion (Locations 60 and 61 in Figure 5b). This is due to the exposure of the area to predominant winds from northwest, north and east. In addition, these winds downwash off the tower façade on to the terrace, thereby creating high wind activity.

It would be beneficial to install tall porous parapets along the edges of the podium to reduce the impact of the prevailing winds. In addition, horizontal wind control features, such as a canopy or trellises, similar to those recommended for the Level 11 terrace, can be used to improve the overall wind conditions. Examples of these are shown in Images 3 and 4.

## 6. APPLICABILITY

The wind conditions presented in this report pertain to the model of the proposed 1325 Lower Water Street development constructed using the architectural design drawings listed in Appendix A. Should there be any design changes that deviate from this list of drawings, the wind conditions presented may change. Therefore, if changes in the design are made, it is recommended that RWDI be contacted and requested to review their potential effects on wind conditions.

## 7. REFERENCES

1) ASCE Task Committee on Outdoor Human Comfort (2004). Outdoor Human Comfort and Its Assessment, 68 pages, American Society of Civil Engineers, Reston, Virginia, USA.
2) Williams, C.J., Hunter, M.A. and Waechter, W.F. (1990). "Criteria for Assessing the Pedestrian Wind Environment," Journal of Wind Engineering and Industrial Aerodynamics, Vol.36, pp.811-815.
3) Williams, C.J., Soligo M.J. and Cote, J. (1992). "A Discussion of the Components for a Comprehensive Pedestrian Level Comfort Criteria," Journal of Wind Engineering and Industrial Aerodynamics, Vol.41-44, pp.2389-2390.
4) Soligo, M.J., Irwin, P.A., and Williams, C.J. (1993). "Pedestrian Comfort Including Wind and Thermal Effects," Third Asia-Pacific Symposium on Wind Engineering, Hong Kong.
5) Soligo, M.J., Irwin, P.A., Williams, C.J. and Schuyler, G.D. (1998). "A Comprehensive Assessment of Pedestrian Comfort Including Thermal Effects," Journal of Wind Engineering and Industrial Aerodynamics, Vol.77\&78, pp.753-766.
6) Williams, C.J., Wu, H., Waechter, W.F. and Baker, H.A. (1999). "Experiences with Remedial Solutions to Control Pedestrian Wind Problems," Tenth International Conference on Wind Engineering, Copenhagen, Denmark.
7) Lawson, T.V. (1973). "Wind Environment of Buildings: A Logical Approach to the Establishment of Criteria", Report No. TVL 7321, Department of Aeronautic Engineering, University of Bristol, Bristol, England.
8) Durgin, F. H. (1997). "Pedestrian Level Wind Criteria Using the Equivalent average", Journal of Wind Engineering and Industrial Aerodynamics, Vol. 66, pp. 215-226.

## TABLES

325 Lower Water Street - Halifax, Nova Scotia
Pedestrian Wind Consultation
RWDI\#1500704
January 23, 2015

Table 1: Pedestrian Wind Comfort and Safety Conditions


325 Lower Water Street - Halifax, Nova Scotia
Pedestrian Wind Consultation
RWDI\#1500704
January 23, 2015

Table 1: Pedestrian Wind Comfort and Safety Conditions


Seasons
Summer = May to October Winter $=$ November to April

## tours

:00 to 23:00 for Comfort 0:00 to 23:00 for Safety

## Configuration

Existing = without the proposed development
Proposed = with the proposed development
fort Category

Wind Safety Category
(0.1\% Annual Exceedance)

1325 Lower Water Street - Halifax, Nova Scotia
Pedestrian Wind Consultation
RWDI\#1500704
January 23, 2015

Table 1: Pedestrian Wind Comfort and Safety Conditions


1325 Lower Water Street - Halifax, Nova Scotia
Pedestrian Wind Consultation
RWDI\#1500704
January 23, 2015

Table 1: Pedestrian Wind Comfort and Safety Conditions


1325 Lower Water Street - Halifax, Nova Scotia
Pedestrian Wind Consultation
RWDI\#1500704
January 23, 2015

Table 1: Pedestrian Wind Comfort and Safety Conditions

| Location | Configuration | Wind Comfort (20\% Seasonal Exceedance) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Summer |  | Winter |  |
|  |  | Speed (km/h) | Rating | Speed (km/h) | Rating |
| 65 | Existing | Data Not Available |  |  |  |
|  | Proposed | 13 | Standing | 16 | Strolling |

Wind Safety (0.1\% Exceedance)
Annual

| Speed <br> $(\mathrm{km} / \mathrm{h})$ | Rating |
| :---: | :---: |
|  |  |
| 77 | Pass |

Wind Safety Category
(0.1\% Annual Exceedance)

```
\(\leq 90 \mathrm{~km} / \mathrm{h} \quad\) Pass
\(>90 \mathrm{~km} / \mathrm{h}\) Exceeded
```

Summer = May to October
Winter = November to April

## Configuration

Existing = without the proposed development
Proposed = with the proposed development

## Hours

6:00 to 23:00 for Comfort 0:00 to 23:00 for Safety

Wind Comfort Category
(20\% Seasonal Exceedance)
$\leq 10 \mathrm{~km} / \mathrm{h} \quad$ Sitting

11 to 14 Standing
15 to 17 Strolling
18 to $20 \quad$ Walking > $20 \mathrm{~km} / \mathrm{h} \quad$ Uncomfortable

## FIGURES



| Figure No. 1a | RWD |  |
| :--- | :--- | :--- |
|  | Date: January 19, 2015 |  |



Wind Tunnel Study Model
Proposed Configuration


Summer
(May - October)
Wind Speed (km/h) (km/h)

Calm
1-10
11-20
21-30
31-40
$>40$


Winter (November - April)

## Directional Distribution (\%) of Winds (Blowing From) Shearwater Airport (1984-2014)







HALIFAX HARBOUR

MORRIS STREET
(19)


| Pedestrian Wind Comfort Conditions - Proposed Summer (May to October, 6:00 to 23:00) | True North 7 | Drawn by: ARN | Figure: 3b | D) |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Approx. Scale: | 1:1500 |  |
| 1325 Lower Water Street - Halifax, Nova Scotia | Project \#1500704 | Date Revised: | Jan 21, 2015 |  |






APPENDIX A

## APPENDIX A: DRAWING LIST FOR MODEL CONSTRUCTION

The drawings and information listed below were received from Southwest Properties Limited and were used to construct the scale model of the proposed 1325 Lower Water Street. Should there be any design changes that deviate from this list of drawings, the results may change. Therefore, if changes in the design area made, it is recommended that RWDI be contacted and requested to review their potential effects on the pedestrian wind conditions presented in this report.

| File Name | File Type | Date Received <br> (dd/mm/yyy) |
| :---: | :---: | :---: |
| 01-aerial view over water | JPEG image | $15 / 12 / 2014$ |
| 02-water view 1 | JPEG image | $15 / 12 / 2014$ |
| 03-water view 2 | JPEG image | $15 / 12 / 2014$ |
| 04-aerial view over lower water | JPEG image | $15 / 12 / 2014$ |
| 05-view along lower water 2 | JPEG image | $15 / 12 / 2014$ |
| 06-view along lower water | JPEG image | $15 / 12 / 2014$ |
| 07-view at retail | JPEG image | $15 / 12 / 2014$ |
| 1 Lower Ground Floor-Morris | AutoCAD drawing | $18 / 12 / 2014$ |
| 2 Upper Ground Floor-lower Water Street - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 3 FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 4,6,8,10 FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 5,7,9FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 11 FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 12 FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 13 FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 14 FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |
| 15 FLOOR - Standard | AutoCAD drawing | $18 / 12 / 2014$ |

# Louann Scallion-Morine, PMP 

Planning Analyst

## Southwest Properties Limited

1475 Lower Water Street, Suite 100
Halifax, Nova Scotia B3J $3 Z 2$
louann.morine@southwest.ca

## Re: Pedestrian Wind Comfort Assessment Cunard - 1325 Lower Water Street - Halifax, NS RWDI Reference \# 1500704

Dear Louann,

As per your request, Rowan Williams Davies \& Irwin Inc. (RWDI) has prepared this letter to comment on the potential wind effects that may be caused by recent design revisions to the proposed Cunard Development at 1325 Lower Water Street in Halifax, NS. RWDI conducted a wind tunnel test in 2015 for the previous Cunard Development design and our findings on wind conditions were summarized in the following report:

Pedestrian Wind Consultation Wind Tunnel Tests - 1325 Lower Water Street - Halifax, Nova Scotia, RWDI Project \# 1500704, January 23, 2015, by Nishat Nourin, Dan Bacon and Hanqing Wu.

## Wind Tunnel Results

The 2015 wind tunnel testing was conducted for the existing and proposed configurations to evaluate the impact of the proposed development (Image 1). It was concluded that suitable wind comfort conditions were predicted on and around the proposed development at the grade level. Overall, the grade level pedestrian wind comfort conditions for the proposed development and around the site were found to be similar to those for the existing configuration. However, higher-than-desired wind activity was predicted at the terraces at Levels 11 and 12, including wind safety exceedances at two locations along the north edge of the terrace at Level 12. Conceptual mitigation measures were described in the 2015 report (Appendix A).


Image 1a: Wind tunnel model of the existing site and surroundings in 2015


Image 1b: Proposed development and surroundings in 2015

## Comparison of the 2015 and Current Designs

Based on the revised building design drawings received by RWDI on October 29, 2018, the building design used in the 2015 wind tunnel testing and the current design of the Cunard Development have a similar massing and floor plans, as shown in Image 2. These two designs have the same building height, the same L-shaped floor plans with similar dimensions and similar tower setbacks at various floors.

There are some minor changes in the current design that will not create any negative wind impacts. For example at Level 1, the lobby entrance on the north façade is still located at the recessed inner corner, but with a narrower passageway; there are a few more retail entrances along the north and east façades; and the northeast building corner is now "double notched" in the current design, instead of one in the 2015 design (see two upper plans in Images 2a and 2b). At Level 2, the west façade along Lower Water Street is continuously recessed for the south portion, where the main residential lobby and office entrance are located (mid plan in Image 2b).

The recently revised design shows guardrails along the perimeters of all above-ground terraces. They were not included in our wind tunnel model in 2015 (Image 1b), and would improve the predicted wind conditions in these areas.

As a result of the similar building massing, the wind tunnel results and recommendations provided in our 2015 report remain valid for the current design. Suitable wind conditions at the ground level areas are predicted and wind mitigation will be required for the terraces at Levels 11 and 12. Based on the floor plans received on January 22, 2020, the Level 11 outdoor amenity area would include trellises, stand-alone canopies and landscaping elements. These are positive design features which would improve the overall wind comfort
conditions. If these features are implemented, the resultant wind speeds are expected to be suitable for the intended use during the summer at Level 11 terrace. The latest floor plan for Level 12 also indicates that canopies and tall, porous railings will be included at this terrace. These features are favorable for wind control and would improve the wind speeds predicted during the wind tunnel test. It should be noted that the railings should be at least 2 m tall and within 20-40\% porosity to be effective.


Image 2a: Floor plans at Levels 1 and 2 and south elevation for the 2015 wind tunnel testing

## Summary

The potential wind conditions around the revised design of the Cunard Development are discussed in the letter, based on the current building design received by RWDI on October 29, 2018 and January 22, 2020 and our wind tunnel testing for the same development in 2015.

It is our opinion that the revised design has a building massing and geometry similar to that tested in the wind tunnel in 2015 and, as a result, our previous wind tunnel results and recommendations remain valid. Overall, suitable wind conditions are predicted for pedestrian areas at grade for both the summer and winter seasons. Terraces at Levels 11 and 12 are exposed to higher wind speeds and wind mitigation is required if passive activities are planned for these areas.

We trust this satisfies your current requirements. Should you have any questions or require additional information, please do not hesitate to contact us.

Yours truly,

RWDI

## Original Signed

Hanqing Wu, Ph.D., P.Eng.
Senior Technical Director/ Principal
Original Śigned

Dan bacon
Principal / Senior Project Manager

| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Section | Guideline | Complies | Discussion | N/A |
| 2 | Downtown Precinct Guidelines (refer to Map 2 for Precinct Boundaries) |  |  |  |
| 2.1 | Precinct One: Southern Waterfront |  |  |  |
| 2.1a | Fill existing gaps created by vacant properties and parking lots with new development. | $\checkmark$ |  |  |
| 2.1b | Create a system of open space that includes: <br> - extensions of east-west streets between Lower Water Street and the Harbour as key components of an open space network; <br> - the boardwalk; <br> - sidewalks along Lower Water Street, and; <br> - plazas and small parks where the extensions of the east-west streets intersect the boardwalk. | $\checkmark$ |  |  |
| 2.1c | Tall and slender towers provided that their placement and design are consistent with the objectives identified for this precinct and with the design guidelines. | No | Towers are not slender. The building massing is very 'blocky' with the towers exceeding the maximum depth dimensions (10 (7), 11 $1(e)$ and (f) in the LUB. Creating tall, slender towers is one of the key elements of the design manual. |  |
| 2.1d | Ensure that development along Lower Water Street has streetwall and landscaping conditions that emphasize its meandering qualities and emergence as an important street. Encourage measures such as sound-proofing requirements for new development to reduce the conflict created by truck traffic traveling along Lower Water Street. | $\checkmark$ |  |  |
| 2.1e | Permit surface parking lots only when they are an accessory use and are in compliance with the Land Use By-Law and design guidelines. |  |  | $\checkmark$ |
| 2.1 f | New waterfront development shall adhere to section 2.10 of the Design Manual. |  | Refer to 2.10 |  |
| 2.10 | Downtown Halifax Waterfront <br> This section applies to waterfront lands in precincts 1 and 4 that lie between Lower Water Street and the Harbour, in addition to the requirements of precincts 1 and 4 above. |  |  |  |
| 2.10a | Ensure that public access to the waterfront is maintained and improved, and that the waterfront is in use around the clock in all four seasons. | $\checkmark$ | Proposal includes access to the waterfront and the open space plan is |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Section | Guideline | Complies | Discussion | N/A |
|  |  |  | being developed by Develop Nova Scotia. |  |
| 2.10b | Ensure that a generally complete and consistent streetwall is built along Lower Water Street that permits visual and physical access to the harbour along the eastward extension of the east-west streets to the water's edge, and at intermediate locations as deemed appropriate. | partial | The streetwall is complete and consistent, but it does not provide visual or physical access from the east to the water. |  |
| 2.10c | Ensure that views of the harbour and of the sky are preserved by requiring that the upper storeys of buildings above the streetwall present a slender face to Lower Water Street, and that their long dimension is arranged perpendicular to Lower Water Street. | $\checkmark$ | Tower is oriented in this manner |  |
| 2.10d | Ensure that the waterfront boardwalk is maintained, extended and improved, and that the public enjoyment of the boardwalk is not negatively impacted by abutting development. | $\checkmark$ |  |  |
| 2.10 e | Ensure that public open spaces are provided where the eastward extension of east-west streets intersects the boardwalk. These open spaces shall be accomplished through the use of waterfront view corridors that extend from Lower Water Street to the water's edge. | partial | The $L$ shape of the building prevents visual and physical access from Lower Water Street to the waterfront as the building is massed out to the property boundaries along Lower Water Street. <br> A boardwalk is proposed at the end of the eastward extension of the street. There is a waterfront view corridor that runs along Morris St which will be used for driveway access. |  |
| 2.10 f | Ensure that waterfront development incorporates human-scaled building elements. This means a range of building details from small (masonry units, door knobs, window mountings, etc.) to medium (doors, windows, awnings, balconies, railings, signs, etc.) to large (expression of floor lines, expression of structural bays, cornice lines, etc.). | $\checkmark$ | Development around the waters edge includes human scaled elements. |  |
| 2.10 g | Ensure that adequate consideration of future sea level rise has been incorporated into building design to avoid |  | Residential uses are located above grade. | $\checkmark$ |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Section | Guideline | Complies | Discussion | N/A |
|  | flooding, where ground floor residential uses are proposed. |  |  |  |
| 2.10h | Ensure that all buildings are setback from the ordinary high water mark or face of Seawall by no less than 8 metres. | $\checkmark$ |  |  |
| 2.10i | Ensure building height immediately adjacent to the 8 metre setback shall not be higher than 12.5 metres. Height may increase as distance from the boardwalk or the water's edge increases at a rate of approximately one metre of vertical height for every one metre of horizontal stepback from the boardwalk or water's edge. |  | The longer portion of the building that runs parallel to the northern section of the OHWM has a maximum height of $12.5 \mathrm{~m}+$ the additional setback, which is 21.2 m for a total permitted height of 31.37 m . The section of the building that is perpendicular to the northern section of the OHWM has a railing that is 60 cm taller than the permitted 31.37 m (12.5 m+ additional setback of 18.87 m ). The north-east face of the building on levels $12,13,14,15$ and 16 are within the 30 m and over the 33.7 m of the maximum height, up to a maximum height of approximately 50 m at the 16th level. <br> Additionally, a portion of the railings on the mid-rise portion of the building at the northeast are above the maximum height. |  |
| 2.10j | Ensure that every effort is made to provide north south pedestrian connections through the middle of these large properties. | $\checkmark$ |  |  |
| 2.10k | Ensure that long, unbroken runs of building wall at the water's edge or boardwalk's edge are not permitted. The longest run of building face permissible abutting either the water's edge or the boardwalk shall be 21.5 metres. | $\checkmark$ |  |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Section | Guideline | Complies | Discussion | N/A |
|  | Building walls longer than 21.5 metres must be modulated through the use of such devices as articulation of the building mass, significant stepbacks from the water's edge or boardwalks edge, the interruption of the building wall with public spaces, etc. The general massing approach is to be one of linear finger buildings perpendicular to Lower Water Street resulting in a pattern of narrowing and widening of the public realm along the waters or Halifax Harbourwalk edge. |  |  |  |
| 2.101 | Ensure that high quality, low-maintenance site furnishings and lighting styles that conform to the requirements of the HRM Municipal Service Systems Design Guidelines (HRM Red Book) are used in both private and public developments along the waterfront. | $\checkmark$ |  |  |
| 3 | General Design Guidelines |  |  |  |
| 3.1 | The Streetwall |  |  |  |
| 3.1.1 | Pedestrian-Oriented Commercial <br> On certain downtown streets pedestrian-oriented commercial uses are required to ensure a critical mass of activities that engage and animate the sidewalk These streets will be defined by streetwalls with continuous retail uses and are shown on Map 3 of the Land Use By-law. <br> All retail frontages should be encouraged to reinforce the 'main street' qualities associated with the historic downtown, including: |  |  |  |
| 3.1.1a | The articulation of narrow shop fronts characterized by close placement to the sidewalk. |  | The portion of the building that faces Lower Water Street does not provide narrow retail shops. NW corner brought down to meet, but articulation is not fine grained. |  |
| 3.1.1b | High levels of transparency (non-reflective and non-tinted glazing on a minimum of $75 \%$ of the first floor elevation). | $\checkmark$ |  |  |
| 3.1.1c | Frequent entries. | $\checkmark$ |  |  |
| 3.1.1d | Protection of pedestrians from the elements with awnings and canopies is required along the pedestrian-oriented commercial frontages shown on Map 3 and is encouraged elsewhere throughout the downtown. | $\checkmark$ | The building cantilevers over the ground floor space to provide weather protection. |  |
| 3.1.1e | Patios and other spill-out activity is permitted and | $\checkmark$ | Patios are provided |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
|  | encouraged where adequate width for pedestrian passage is maintained. |  | along those portions of the building facing the waterfront. |  |
| 3.1.1f | Where non-commercial uses are proposed at grade in those areas where permitted, they should be designed such that future conversion to retail or commercial uses is possible. | $\checkmark$ |  |  |
| 3.1.2 | Streetwall Setback (refer to Map 6) |  |  |  |
| 3.1.2b | Setbacks vary $(0-4 \mathrm{~m})$ : Corresponds to streets where setbacks are not consistent and often associated with non-commercial and residential uses or house-form building types. New buildings should provide a setback that is no greater or lesser than the adjacent existing buildings. | $\checkmark$ |  |  |
| 3.1.3 | Streetwall Height (refer to Map 7) <br> To ensure a comfortable human-scaled street enclosure, streetwall height should generally be no less than 11 metres and generally no greater than a height proportional (1:1) to the width of the street as measured from building face to building face. Accordingly, maximum streetwall heights are defined and correspond to the varying widths of downtown streets: generally $15.5 \mathrm{~m}, 17 \mathrm{~m}$ or 18.5 m . Consistent with the principle of creating strong edges to major public open spaces, a streetwall height of 21.5 m is permitted around the perimeter of Cornwallis Park. Maximum Streetwall Heights are shown on Map 7 of the Land Use By-law. | $\checkmark$ |  |  |
| 3.2 | Pedestrian Streetscapes |  |  |  |
| 3.2.1 | Design of the Streetwall |  |  |  |
| 3.2.1a | The streetwall should contribute to the fine grained character of the streetscape by articulating the façade in a vertical rhythm that is consistent with the prevailing character of narrow buildings and storefronts. |  | The building is articulated horizontally but not vertically, and the building design does not include fine grained elements. Design cues should be pulled from buildings in the area which do provide a fine grained building articulation at the street level, and this rhythm should be continued along the street frontage of this proposal. |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
| 3.2.1b | The streetwall should generally be built to occupy $100 \%$ of a property's frontage along streets. | $\checkmark$ |  |  |
| 3.2.1c | Generally, streetwall heights should be proportional to the width of the right of way, a 1:1 ratio between streetwall height and right of way width. Above the maximum streetwall height, further building heights are subject to upper storey stepbacks. | $\checkmark$ |  |  |
| 3.2.1d | In areas of contiguous heritage resources, streetwall height should be consistent with heritage buildings. |  |  | $\checkmark$ |
| 3.2.1e | Streetwalls should be designed to have the highest possible material quality and detail. | $\checkmark$ | Materials appear to be high quality. |  |
| 3.2.1f | Streetwalls should have many windows and doors to provide eyes on the street and a sense of animation and engagement. | partial | Windows and the level of transparency is good in sections, but there is a large stretch of the proposed frontage that still feels inactive and without windows. The additional doorway provided at Lower Water Street level helped to improve this, but there is still a large section that is not well animated. |  |
| 3.2.1g | Along pedestrian frontages at grade level, blank walls shall not be permitted, nor shall any mechanical or utility functions (vents, trash vestibules, propane vestibules, etc.) be permitted. | partial | Major grade change from the south corner to the north corner of the building along the Lower Water Street frontage. <br> Entry points are proposed near the corners of the building that have been designed with large windows around the doorways. Planters have been proposed along the Lower Water Street frontage to reduce the impact of the grade change and |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
|  |  |  | to break up the space. Staff have concerns that significant sections of this elevation have not been animated and that the planters are insufficient to break up the blank wall. |  |
| 3.2.2 | Building Orientation and Placement |  |  |  |
| 3.2.2a | All buildings should orient to, and be placed at, the street edge with clearly defined primary entry points that directly access the sidewalk. | $\checkmark$ |  |  |
| 3.2.2b | Alternatively, buildings may be sited to define the edge of an on-site public open space, for example, plazas, promenades, or eroded building corners resulting in the creation of public space (see diagram at right). Such treatments are also appropriate for Prominent Visual Terminus sites identified on Map 9 of the Land Use By-law. |  |  | $\checkmark$ |
| 3.2.2c | Side yard setbacks are not permitted in the Central Blocks defined on Map 8 of the Land Use Bylaw, except where required for through-block pedestrian connections or vehicular access. |  |  | $\checkmark$ |
| 3.2.3 | Retail Uses |  |  |  |
| 3.2.3a | All mandatory retail frontages (Map 3 of Land Use By-law) should have retail uses at-grade with a minimum $75 \%$ glazing to achieve maximum visual transparency and animation. |  |  | $\checkmark$ |
| 3.2.3b | Weather protection for pedestrians through the use of well-designed awnings and canopies is required along mandatory retail frontages (Map 3) and is strongly encouraged in all other areas. | $\checkmark$ | This site is not a mandatory retail frontage. However, the building design includes canopy over the Lower Water St frontage |  |
| 3.2.3c | Where retail uses are not currently viable, the grade-level condition should be designed to easily accommodate conversion to retail at a later date. | $\checkmark$ |  |  |
| 3.2.3d | Minimize the transition zone between retail and the public realm. Locate retail immediately adjacent to, and accessible from, the sidewalk. | $\checkmark$ |  |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
| 3.2.3e | Avoid deep columns or large building projections that hide retail display and signage from view. | $\checkmark$ |  |  |
| 3.2.3f | Ensure retail entrances are located at or near grade. Avoid split level, raised or sunken retail entrances. Where a changing grade along a building frontage may result in exceedingly raised or sunken entries it may be necessary to step the elevation of the main floor slab to meet the grade changes. | $\checkmark$ |  |  |
| 3.2.3g | Commercial signage should be well designed and of high material quality to add diversity and interest to retail streets, while not being overwhelming. |  |  | $\checkmark$ |
| 3.2.4 | Residential Uses |  |  |  |
| 3.2.4a | Individually accessed residential units (i.e. town homes) should have front doors on the street, with appropriate front yard privacy measures such as setbacks and landscaping. Front entrances and first floor slabs should be raised above grade level for privacy, and should be accessed through means such as steps, stoops and porches. |  |  | $\checkmark$ |
| 3.2.4b | Residential units accessed by a common entrance and lobby may have the entrance and lobby elevated or located at grade-level, and the entrance should be clearly recognizable from the exterior through appropriate architectural treatment. | $\checkmark$ |  |  |
| 3.2.4c | Projects that feature a combination of individually accessed units in the building base with common entrance or lobby-accessed units in the upper building, are encouraged. | $\checkmark$ | The residential portion of the building will be accessed via a lobby. |  |
| 3.2.4d | Units with multiple bedrooms (2 and 3 bedroom units) should be provided that have immediately accessible outdoor amenity space. The amenity space may be at-grade or on the landscaped roof of a podium. | $\checkmark$ |  |  |
| 3.2.4e | Units provided to meet housing affordability requirements shall be uniformly distributed throughout the development and shall be visually indistinguishable from market-rate units through the use of identical levels of design and material quality. |  |  | $\checkmark$ |
| 3.2.4f | Residential uses introduced adjacent to pre-existing or concurrently developed eating and drinking establishments should incorporate acoustic dampening building materials to mitigate unwanted sound transmission. | $\checkmark$ | The exterior walls will be designed to provide acoustic separation as required. Dwelling units on level 2 have outdoor patio and will |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
|  |  |  | have triple-glazed windows and extra insulation to mitigate unwanted sound transmission. |  |
| 3.2.5 | Sloping Conditions |  |  |  |
| 3.2.5a | Maintain active uses at-grade, related to the sidewalk, stepping with the slope. Avoid levels that are distant from grade. | partial | The restaurant portion of the building is separated from grade. Entryway was provided at street level to activate that section of street level, but large sections of frontage still remains inactive. Active art installation proposed to respond to this, but no detailed information provided as to what this will be. |  |
| 3.2.5b | Provide a high quality architectural expression along facades. Consider additional detailing, ornamentation or public art to enhance the experience. | $\checkmark$ |  |  |
| 3.2.5c | Provide windows, doors and other design articulation along facades; blank walls are not permitted. | partial | There is a significant change in grade from the southern corner to the northern corner along the Lower Water Street frontage. Doorways and planters are introduced to this section of the building elevation to reduce the impact of the grade change and to break up the space, but large sections of the frontage remain unactivated. |  |
| 3.2.5d | Articulate the façade to express internal floor or ceiling lines; blank walls are not permitted. | $\checkmark$ |  |  |
| 3.2.5e | Wrap retail display windows a minimum of 4.5 metres around the corner along sloping streets, where retail is present on the sloping street. |  |  | $\checkmark$ |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
| 3.2.5f | Wherever possible, provide pedestrian entrances on sloping streets. If buildings are fully accessible at other entrances, consider small flights of steps or ramps up or down internally to facilitate entrances on the slope. | $\checkmark$ |  |  |
| 3.2 .5 g | Flexibility in streetwall heights is required in order to transition from facades at lower elevations to facades at higher elevations on the intersecting streets. Vertical corner elements (corner towers) can facilitate such transitions, as can offset or broken cornice lines at the top of streetwalls on sloping streets. | $\checkmark$ |  |  |
| 3.2.7 | Other Uses |  |  |  |
| 3.2.7a | Non-commercial uses at-grade should animate the street with frequent entries and windows. | $\checkmark$ |  |  |
| 3.3 | Building Design |  |  |  |
| 3.3.1 | Building Articulation |  |  |  |
| 3.3.1a | To encourage continuity in the streetscape and to ensure vertical breaks in the façade, buildings shall be designed to reinforce the following key elements through the use of setbacks, extrusions, textures, materials, detailing, etc.: <br> - Base: Within the first four storeys, a base should be clearly defined and positively contribute to the quality of the pedestrian environment through animation, transparency, articulation and material quality. <br> - Middle: The body of the building above the base should contribute to the physical and visual quality of the overall streetscape. <br> - Top: The roof condition should be distinguished from the rest of the building and designed to contribute to the visual quality of the skyline. | $\checkmark$ | The base and middle of the building are well distinguished from one another. <br> The base is well defined and distinguished from the middle of the building. <br> Architectural high quality lighting along the roof feature will also be added along the top of the building to further contribute to the skyline. |  |
| 3.3.1b | Buildings should seek to contribute to a mix and variety of high quality architecture while remaining respectful of downtown's context and tradition. |  | The building does not respond to the existing context and fine grained character of downtown. The buildings downtown are smaller scale and provide more articulation at the street level with narrow retail frontages at the street edge. |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
| 3.3.1c | To provide architectural variety and visual interest, other opportunities to articulate the massing should be encouraged, including vertical and horizontal recesses or projections, datum lines, and changes in material, texture or colour. |  | The building does not have vertical articulation, and the midrise section of the building is visually monotonous and bulky. <br> The banding provided around the podium does help define the lower portion of the building and provide vertical articulation, however this articulation is not carried forward through the upper portions of the building. |  |
| 3.3.1d | Street facing facades should have the highest design quality, however, all publicly viewed facades at the side and rear should have a consistent design expression. | $\checkmark$ | All sides of the building have a consistent expression. |  |
| 3.3.2 | Materials |  |  |  |
| 3.3.2a | Building materials should be chosen for their functional and aesthetic quality, and exterior finishes should exhibit quality of workmanship, sustainability and ease of maintenance. | $\checkmark$ |  |  |
| 3.3.2b | Too varied a range of building materials is discouraged in favour of achieving a unified building image. | $\checkmark$ |  |  |
| 3.3.2c | Materials used for the front façade should be carried around the building where any facades are exposed to public view at the side or rear. | $\checkmark$ |  |  |
| 3.3.2d | Changes in material should generally not occur at building corners. | $\checkmark$ |  |  |
| 3.3.2e | Building materials recommended for new construction include brick, stone, wood, glass, in-situ concrete and pre-cast concrete. | $\checkmark$ |  |  |
| 3.3.2f | In general, the appearance of building materials should be true to their nature and should not mimic other materials. | $\checkmark$ |  |  |
| 3.3.2g | Stucco and stucco-like finishes shall not be used as a principle exterior wall material. | $\checkmark$ |  |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
| 3.3.2h | Vinyl siding, plastic, plywood, concrete block, EIFS (exterior insulation and finish systems where stucco is applied to rigid insulation), and metal siding utilizing exposed fasteners are prohibited. | $\checkmark$ |  |  |
| 3.3.2i | Darkly tinted or mirrored glass is prohibited. Clear glass is preferable to light tints. Glare reduction coatings are preferred. | $\checkmark$ |  |  |
| 3.3.2j | Unpainted or unstained wood, including pressure treated wood, is prohibited as a building material for permanent decks, balconies, patios, verandas, porches, railings and other similar architectural embellishments, except that this guideline shall not apply to seasonal sidewalk cafes. | $\checkmark$ |  |  |
| 3.3.3 | Entrances |  |  |  |
| 3.3.3a | Emphasize entrances with such architectural expressions as height, massing, projection, shadow, punctuation, change in roof line, change in materials, etc. | $\checkmark$ |  |  |
| 3.3.3b | Ensure main building entrances are covered with a canopy, awning, recess or similar device to provide pedestrian weather protection. | $\checkmark$ |  |  |
| 3.3.3c | Modest exceptions to setback and stepback requirements are possible to achieve these goals. | $\checkmark$ |  |  |
| 3.3.4 | Roof Line and Roofscapes |  |  |  |
| 3.3.4a | Buildings above six storeys (mid and high-rise) contribute more to the skyline of individual precincts and the entire downtown, so their roof massing and profile must include sculpting, towers, night lighting or other unique features. | $\checkmark$ |  |  |
| 3.3.4b | The expression of the building top (see previous) and roof, while clearly distinguished from the building middle, should incorporate elements of the middle and base such as pilasters, materials, massing forms or datum lines. | $\checkmark$ |  |  |
| 3.3.4c | Landscaping treatment of all flat rooftops is required. Special attention shall be given to landscaping rooftops in precincts $3,5,6$ and 9 , which abut Citadel Hill and are therefore pre-eminently visible. The incorporation of living green roofs is strongly encouraged. | $\checkmark$ |  |  |
| 3.3.4d | Ensure all rooftop mechanical equipment is screened from view by integrating it into the architectural design of the building and the expression of the building top. | $\checkmark$ |  |  |



| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
|  | access portals and garages. |  |  |  |
| 3.5.1c | Locate loading, storage, utilities, areas for delivery and trash pick-up out of view from public streets and spaces, and residential uses. | $\checkmark$ | Waste area in parking area. |  |
| 3.5.1d | Where access and service areas must be visible from or shared with public space, provide high quality materials and features that can include continuous paving treatments, landscaping and well designed doors and entries. | $\checkmark$ |  |  |
| 3.5.1e | Coordinate and integrate utilities, mechanical equipment and meters with the design of the building, for example, using consolidated rooftop structures or internal utility rooms. | $\checkmark$ |  |  |
| 3.5.1f | Locate heating, venting and air conditioning vents away from public streets. Locate utility hook-ups and equipment (i.e. gas meters) away from public streets and to the sides and rear of buildings, or in underground vaults. | $\checkmark$ |  |  |
| 3.5.4 | Lighting (to be reviewed at permit stage) |  |  |  |
| 3.5.4a | Attractive landscape and architectural features can be highlighted with spot-lighting or general lighting placement. |  |  | $\checkmark$ |
| 3.5.4b | Consider a variety of lighting opportunities inclusive of street lighting, pedestrian lighting, building up- or down-lighting, internal building lighting, internal and external signage illumination (including street addressing), and decorative or display lighting. |  |  | $\checkmark$ |
| 3.5.4c | Illuminate landmark buildings and elements, such as towers or distinctive roof profiles. |  |  | $\checkmark$ |
| 3.5.4d | Encourage subtle night-lighting of retail display windows. |  |  | $\checkmark$ |
| 3.5.4e | Ensure there is no light trespass onto adjacent residential areas by the use of shielded full cutoff fixtures. |  |  | $\checkmark$ |
| 3.5.4f | Lighting shall not create glare for pedestrians or motorists by presenting unshielded lighting elements in view. |  |  | $\checkmark$ |
| 3.5.5 | Signs (to be reviewed at permit stage) |  |  |  |
| 3.5.5a | Integrate signs into the design of building facades by placing them within architectural bay, friezes or datum |  |  | $\checkmark$ |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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|  | lines, including coordinated proportion, materials and colour. |  |  |  |
| 3.5.5b | Signs should not obscure windows, cornices or other architectural elements. |  |  | $\checkmark$ |
| 3.5.5c | Sign scale should reinforce the pedestrian scale of the downtown, through location at or near grade level for viewing from sidewalks. |  |  | $\checkmark$ |
| 3.5.5d | Large freestanding signs (such as pylons), signs on top of rooftops, and large scale advertising (such as billboards) are prohibited. |  |  | $\checkmark$ |
| 3.5.5e | Signs on heritage buildings should be consistent with traditional sign placement such as on a sign band, window lettering, or within architectural orders. |  |  | $\checkmark$ |
| 3.5.5f | Street addressing shall be clearly visible for every building. |  |  | $\checkmark$ |
| 3.5 .5 g | The material used in signage shall be durable and of high quality and should relate to the materials and design language of the building. |  |  | $\checkmark$ |
| 3.6 | Site Plan Variance |  |  |  |
| 3.6.2 | Side and Rear Yard Setback Variance |  |  |  |
| 3.6.2a | the modified setback is consistent with the objectives and guidelines of the Design Manual; and | $\checkmark$ |  |  |
| 3.6.2b | the modification does not negatively impact abutting uses by providing insufficient separation. | $\checkmark$ |  |  |
| 3.6.6 | Upper Storey Side Yard Stepback Variance |  |  |  |
| 3.6.6a | the upper storey side yard stepback is consistent with the objectives and guidelines of the Design Manual; and | $\checkmark$ |  |  |
| 3.6.6b | where the height of the building is substantially lower than the maximum permitted building height and the setback reduction is proportional to that lower height; or |  | The maximum permitted height of a midrise portion of a building is 33.5 m and the building is 30.67 m at this section equal to 2.83m of difference. The setback is 0.9 m too close, which is less than the 2.83 m , making it proportional to the height reduction. |  |


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| Section | Guideline | Complies | Discussion | N/A |
|  |  |  | The variance request for balconies do not meet these requirements. |  |
| 3.6.6c | a reduction in setback results in the concealment of an existing blank wall with a new, well designed structure. |  | The variance request for balconies do not meet this requirement. |  |
| 3.6.7 | Maximum Tower Width Variance |  |  |  |
| 3.6.7a | the maximum tower width is consistent with the objectives and guidelines of the Design Manual; and |  | The Design Manual emphasises the importance of having slender towers-the terraced form of this proposal is not in keeping with the desired form as stated in the Design Manual. |  |
| 3.6.7b | the modification results in a clear public benefit such as the remediation of an existing blank building wall; or |  | Applicant has proposed the following as public benefit <br> - Improved view lines of the residents of the building <br> - Reduced shadowing on the walkway <br> - The shape of the building. <br> The views of the residents are not a public benefit, but a private benefit for the individuals who reside in the building. The public plaza/ walkway is in shadow most of the day. The Design Manual states that the desired shape of buildings in the downtown is slender towers, not wide terraced buildings. |  |


| Attachment D - Design Manual Checklist - Case 22708 |  |  |  |  |
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| Section | Guideline | Complies | Discussion | N/A |
| 3.6.8 | Maximum Height Variance |  |  |  |
| 3.6.8a | the maximum height is consistent with the objectives and guidelines of the Design Manual; and | $\checkmark$ | The criteria is met for Variance 1 but variance 6 does not have any information provided |  |
| 3.6.8b | the additional building height is for rooftop architectural features and the additional height does not result in an increase in gross floor area; | $\checkmark$ | The proposal includes rooftop mechanical, but it has been designed in such a way as to be screened and provide an architectural feature. |  |
| 3.6.8c | the maximum building height is less than 1.5 metres below the View Plane or Rampart height requirements; |  |  | $\checkmark$ |
| 3.6.8d | where a landmark building element is provided pursuant to the Design Manual; or |  |  | $\checkmark$ |
| 3.6.8e | where the additional height is shown to enable the adaptive re-use of heritage buildings. |  |  | $\checkmark$ |
| 3.6.10 | Precinct 1 Built Form Variance |  |  |  |
| 3.6.10a | fill existing gaps created by vacant properties or parking lots with new development; or | $\checkmark$ |  |  |
| 3.6 .10 b | enhance the public realm in the area, including the extension of the east-west streets between Lower Water Street and the harbour and their intersection with the Halifax Harbour Walk, the pedestrian interface of the proposed building and the Halifax Harbour Walk, provide or improve sidewalks along Lower Water Street, or provide for public or private plazas or parks; or |  |  |  |
| 3.6.10c | frame the open spaces identified above; or |  |  |  |
| 3.6 .10 d | provide adequate separation between buildings; or |  |  |  |
| 3.6 .10 e | propose tall and slender towers, where permitted, provided that their placement and design are consistent with the objectives identified for this precinct and with the Design Manual; or |  |  |  |
| 3.6.10f | ensure Lower Water Street has streetwall and landscaping conditions that emphasize its meandering qualities and emergence as an important street. |  |  |  |

April 12, 2019

Jennifer Chapman
Planner III
Planning
HRM
PO Box 1749
Halifax, NS
B3J 3A5

Dear Jennifer:

Re: Case \#22129 - Cunard pre-application for substantive site plan approval for mixed-use building with a 16-storey residential tower at 1325 Lower Water Street, Halifax

We are proposing to construct the Cunard Block project to the post-bonus height of 49 metres. This represents an additional gross area of $2,937 \mathrm{~m}_{2}$ when compared to the pre-bonus height of 39 metres.

The Downtown Halifax Land Use By-Law references a required public benefit for each $0.1 \mathrm{~m}_{2}$ of gross floor area. For this project, the amount would equate to $\$ 138,039.00$. We are proposing approval under section 12 (7) (i) - the provision of exemplary sustainable building practices. We will seek LEED Gold certification for this project, with credits for both durable building envelope and advanced commissioning, measurement and verification.

For your reference, consulting costs associating with this certification alone will exceed \$138,039.00, before any consideration is given to the capital investments required to achieve the referenced certification.

## Sincerely, / , <br> Original Signed

Eric Burchill
Vice President - Planning \& Development







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