1001 King Phasing Brief





EUREKA!! @ LOWER KITCHENER
1001. 1007, 1015, 1027, AND 1051 KING STREET EAST AND 530,534, 542 AND 564 CHARLES STREET EAST
CITY OF KITCHENER

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1.1 INTRODUCTION

This report has been prepared to support the proposed development located at 1001, 1007, 1015, 1027 and 1051 King Street East and 530, 534, 542, and 564 Charles Street East, in the City of Kitchener, referred to herein ad the subject lands. The subject lands are located along King Street East and Chares Street East near the intersection of Ottawa Street North. The lot consolidation is compromised of a total area of 0.655 hectares.

This report aims to thoroughly outline the planned two-phase construction process for the project at 1001 King. The first part of the report will focus on the specifics of Phase A's design, offering an in-depth explanation of how the initial phase has been carefully planned to not only meet functional requirements but also ensure an aesthetically pleasing environment throughout the construction process. Emphasis will be placed on how Phase A has been thoughtfully designed to provide visual appeal, ensuring the area remains attractive and cohesive even as Phase B, which completes the full vision for the site, is yet to be constructed.

Additionally, the report will include various renderings and architectural elevations. These visual aids will help readers better understand the progression of the construction process and how each phase will fit together in terms of overall design and function. These renderings will also serve to illustrate how the two phases will interact, emphasizing the careful planning that has gone into balancing aesthetics and practicality.

Beyond the design aspects, the report will also address some of the logistical impacts that the phased construction approach may have on the overall project. Specifically, it will evaluate how the phased development might affect key components such as the outdoor amenity areas and parking requirements. Given that these elements are crucial for the function of the space, the analysis will explore how the project ensures compliance with zoning or planning regulations.

In summary, this report will offer a comprehensive overview of the design and practical considerations of the 1001 King project, focusing on how the phased construction strategy has been implemented to balance aesthetics, functionality, and compliance with necessary requirements.



1.2 PHASED DEVELOPMENT/CONSTRUCTION

The proposed development will be divided into two phases for financing purposes with phase A being constructed as the initial phase and phase B intending to be developed immediately after the completion of phase A

Phase A will include the following:

- 29 story tower
- 4 story podium level
- 267 residential units
- one commercial unit
- three live work units along the Charles
 St. east corridor
- 110 parking spaces
- 43 visitor parking spaces
- 3 accessible parking spaces
- two loading spaces
- FSR of 8.1

PHASE A:

The project architect, Reinders + Law, has prepared renderings to visually demonstrate the build out of the phase development.

To the right is a rendering of the building looking to the southeast from the north side of king St. E. The initial phase will include the construction of a four story podium along with a 29 story tower, planned as a purpose built rental.

The rendering shows the frontage of the building along king St. E. In the first phase and at grade one commercial unit will be established at 227.9 square meters in size in addition to the residential lobby area and access to the parking structure. Vehicular traffic for all residential and commercial patrons will use this access.

Phase a will contain all elements planned to commemorate the heritage value of the site. This includes installation of the art deco mural at the terminus of onward Ave. and King Street, the Eureka signage along the king St. frontage and commemoration of the architectural elements internal to the building.

The developer has provided an easement and letter of credit along the West side of the elevation of phase one to allow for a mural against the blank wall extending the length of the property should phase B not be developed within a certain time.

The tower designed plans for concrete paneling of various patterns up the length of the tower to provide visual interest prior to the construction of the remainder of the tower in phase B

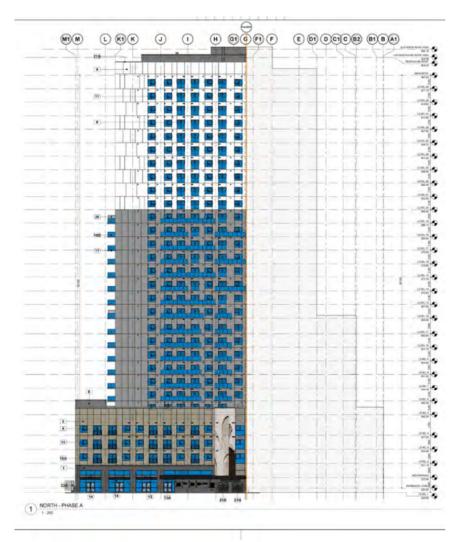


PHASE A:

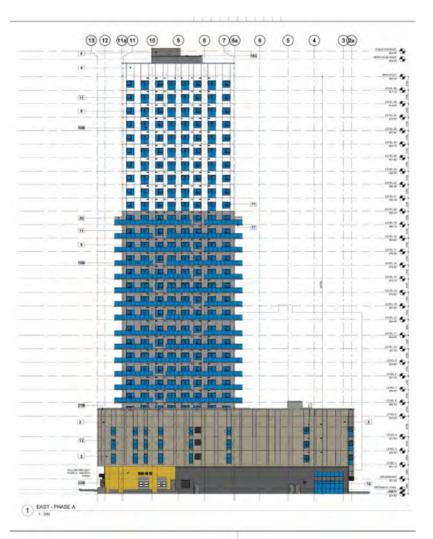
(Left) the rendering above shows the Phase 1 build out from king St. E perspective facing West. Main access into both phases of the site is located off King Street and will access the podium parking.

(Right) Architect's rendering of Phase 1 build out along Charles St. facing West. 3 live work units will be constructed as part of this phase along the first and second stories of the podium on Charles St. This percent perspective also shows the service access from Charles St. into the site which will be used for both phases





(Above) North Elevation—Phase A (along King Street East). Prepared by Reinders + Law



(Above) East Elevation—Phase A. Prepared by Reinders + Law



(Above) South Elevation—Phase A (along Charles Street). Prepared by Reinders + Law

(Above) Temporary West Elevation—Phase A. Phase B (once constructed) will connect to this elevation. *Prepared by Reinders + Law*

PHASE B: Full Build Out

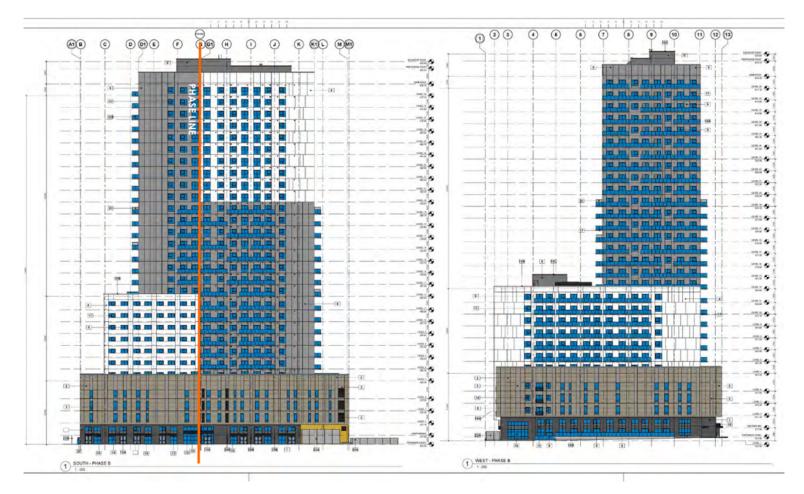
Phase B of construction is planned immediately following completion of phase A.

Phase B will include the completion of the 29 story tower as well as the remainder of the four story podium and an additional 11 story tower at the front of the site along King Street. The total height of each tower is 95.7 meters and 39.7 meters respectively.

When construction is complete, the building will house a total of 3 commercial units and 515 residential units including 13 live work units. A total of 337 parking spaces are proposed including nine visitor parking spaces. 257 Class A bicycle parking spaces are planned along with six Class B spaces.

The image to the right provides for an elevation of The North Face of the building at full build out. The 11 story tower is pulled to the front along the King Street east frontage, while the remainder of the 29 story tower is constructed in behind the elevation shows all commercial units planned along the King Street east frontage and how heritage commemorative art deco mural is incorporated to the entire building design.





(Above) South Elevation—full build out of Phases A and B (along Charles Street).

Prepared by Reinders + Law

(Above) West Elevation—full build out of Phases A and Prepared by Reinders + Law

1.3 AMENITY DESIGN

The Proposed development is committed to providing a variety of high-quality amenity areas sufficient for all potential residents in the form of common amenity area (indoor and outdoor), as well as private amenity areas in the form of individual patios and balconies. The urban design manual provides required amenity space calculations for general amenity area and children's play facilities in multiple residential developments. A 725sqm outdoor rooftop amenity area planned on top of the podium for phase A have been designed to include passive recreational areas, BBQ area, planter beds and turf area for play. Indoor amenity area is also provided with direct access to the outdoor amenity area and extends the potential amenity opportunities for residents of all ages and abilities, in all seasons.

Amenity Calculation $(2m2 \times \#units) + (2.5m2 \times \#bedrooms - \#units) = outdoor amenity space <math>(2m2 \times 267 \text{ units}) + (2.5m2 \times 323 - 267) = 1082m2$

Outdoor Amenity Provided 2481.8m2

- 725m2 outdoor roof top amenity
- 1756.8m2 Balconies

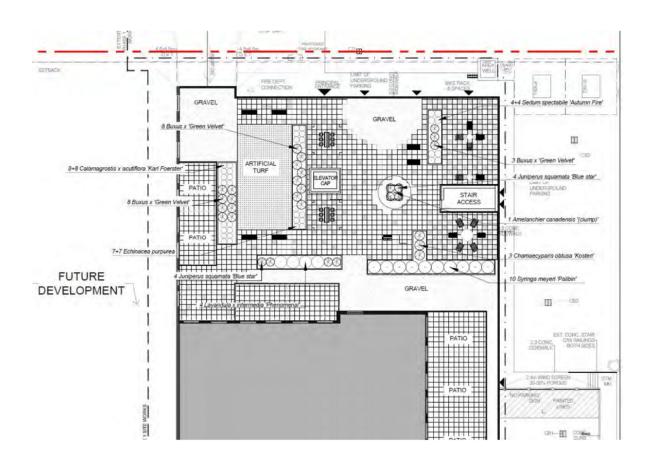
The images to the right are precedent in images to identify a variety of design elements and principles to be employed in the detailed design of common area amenities and provide a range of active two passive uses. Design features that provide robust amenity spaces suitable for all ages and abilities are to be considered.







Outdoor Amenity Space Plan



APPENDIX A – ARCHITECTURAL BRIEF – PREPARED BY REINDERS + LAW



BRIEF

TO: City of Kitchener

Garett Stevenson, Director of Development and Housing Approvals

FROM: Reinders + Law Ltd.

Kyle Reinders, OAA

DATE: December 17th, 2024

RE: 1001 King St – Phased Development



The King Ottawa and Charles development project at 1001 King Street East has been split into two Phases of Construction. Phase A is 267 units encompassing a 29-storey residential tower along with a 4-storey podium residential and parking garage building. Phase B is 248 units encompassing a 29-storey addition to the existing tower and a perpendicular 11 storey residential tower to complete the 515-unit development. The Phase line between Phase A and Phase B will be on the west side of grid line G which is running north and south in a straight line for this development (see drawing attached).

The rationale for undertaking the two-phase project is to suit the financial viability of the entire development. As soon as Phase A is built and occupancy can start, then the intention is for the Phase B development construction to start. Construction drawings for the Phase B development are nearing completion so that all detailing between the two Phases is complete in their integration and understood, while Phase A is being constructed. The building design has been developed with this two-Phase approach to allow the development to be undertaken. The following attributes have been considered in the two-Phase approach:

The Life Safety aspects (sprinklers, travel distances, spatial separation, fire protection, etc.) of Phase A and Phase B have been coordinated and complement each other. The Life Safety of Phase A is intact to serve the single development so that it can be occupied while Phase B construction is ongoing. Phase A is not dependent on Phase B to maintain the Life Safety of Phase A.

Once Phase B is constructed the Life Safety of the entire building is holistically complete. Whether reviewed singularly or in combination Life Safety has been coordinated and both these plans have been illustrated on the building permit submission for Phase A.

Elevator and vertical travel elements (stairs) have been coordinated so that when Phase A is constructed and occupied the appropriate number of elevations and exit stairwells have been provided to suit the Phase A development. When Phase B is constructed in the future, additional elevators and exit stairwells are being added to allow the completed development of Phase A and

B to act as a single building development. Entrances on King and Charles Streets developed in Phase A will be maintained as the entrance to the entire development once completed.

The Structural Cast-in place Engineers and the Total Precast Concrete Engineers have worked in tandem on both Phase A and Phase B. Phase A has the structure designed so that it is not dependent on the development of Phase B for structural or lateral loading. This way the Phase A development can be safely occupied while the Phase B development is under construction. The structures have been designed so that after the construction of the first tower the second tower can be erected independently but the final design will allow for one overall development. There is no additional structure being added in Phase B to sustain the Phase A structure.

The structural engineers have detailed the development of the raft slab for Phase A and the adjacent temporary shoring to the west of Phase A so that in the future the raft slabs can be connected for a holistic building structure and that the west development on this site will have additional shoring being placed on the north, east and south sides. Once these shoring elements are in place then the temporary shoring at the Phase A and B junctions can be removed. All details at the junction of the two buildings have been reviewed to allow the separate construction of both developments.

Phase A has been designed with a loadbearing CIP or Precast wall on the west side of the building. The exposed face of this building will be concrete with architectural details (reveals and panels) and windows along the future corridor connection, that will allow for a temporary aesthetic of this west face while the future Phase B building is being developed.

Similarly, this west face will be internally thermally insulated to allow the north facing units on this side to have a thermal barrier to the exterior while Phase B is being erected and constructed. This will allow for full comfort of these tenants until the building is fully constructed. Once Phase B is constructed the internal insulation of these north units will remain intact which increases the STC rating between the buildings.

The Developer has agreed to a letter of credit for placing a mural or artwork on the west face of the development should Phase B not proceed.

All heritage aspects of the development have been incorporated into Phase A showing the intentionality of the developer and the importance of these items. They have not been deferred to Phase B.

The building elevations of both buildings have been designed so that both Phases will match together and show one complete building mass when both Phases of the project are completed. Careful detailing has allowed this to occur.

Inherently the design of the Phase A and Phase B buildings have allowed them to exist singularly and together as complete developments.

Many phased residential projects have been completed across the province. Examples of phased developments that our firm has been involved in are:

<u>King Cameo Development on 3241 King St East.</u> This is a three-phase development by Vive Developments. Tower A is currently under construction, while Tower B is in for permit and Tower C has started design development. All three developments are link by a below and above grade parking garage while respecting each other's vistas. Development is similarly a multi-phase approach due to financing feasibility.

1430 Highland Road (Savic Homes) is a four phased development with Reinders and Law Ltd. being involved in the fourth phase 17 storey building completing the development. Similarly, the three other developments were permitted to occur before the final street facing facade of Building G. The three residential towers are linked by an underground parking garage and a sharing of various facilities.

<u>Redeemer University - Charis Live and Learn Centre</u> was a twin pod student housing project encompassing a north and south residential pod that allowed the north pod to be fully constructed to allow student occupancy while the south pod was being completed six months later to meet funding and financial timelines. A total of 170 student accommodations were provided in this facility.

In addition to these projects that we have been involved in, Vive Development's Director of Construction, Bassem Saweris, has been involved in multiple high-rise projects that have followed a similar process of Vertical Phasing. We have reviewed the methodology used in these projects in developing our approach as explained above.

<u>P2 Marina Walk</u> – Bassem was involved in Phase 2 of this Tower Complex as part of the contractor's team focused on forming and construction of the second phase of this elongated slab tower. This development was built in 4 consecutive vertical phases. Due to the length of the slab and the scale of the project, vertical phasing was introduced. This phasing was implemented to facilitate the leasing sales and marketing of smaller, incremental portions of the development. The phases were vertically connected to each adjacent phase. There were challenges in matching the texture and colour of the adjacent phases due to the weathering of the finish. This has informed the development at 1001 King to provide colour changes along these phasing lines to reduce the impact of matching finishes on adjacent precast panels. Another challenge was the connection between the two adjacent raft slabs. 1001 King St will use 1.0m of lean concrete in the connection between rafts rather that epoxy coat or dowelling.

JLT Cluster X, Sheikh Zayed Rd, Dubai – Bassem was involved as the Owner's Representative and Engineer-in-Charge of this two-phased project. The Tower development was split vertically through the center of the building with 3 elevators servicing one half of the development and 3 elevators servicing the other half of the development. The phasing was done as it was anticipated that Phase 1 was to be developed as offices and business centres and Phase 2 was being developed as a hotel. Phasing allowed for expedited construction of Phase 1 while contract negotiations continued for Phase 2. As Phase 1 was completed construction, work on Phase 2 began immediately from the base, attaching the newly built tower vertically at each level. The curtain wall building envelope provided a unique challenge in the detailing for water-tightness and constructability. The phasing line for the 1001 King development has been located at the joint of two precast panels at all points vertically on the tower. This allows for a simple and common joint detail to be used to complete the building envelope as Phase 2 is constructed.

In addition to the phasing strategies listed previously, 1001 King will also use knockout panels in the hallways and parking connections. The knockout panels will be constructed with heavy gauge steel study to facilitate enclosing Phase 1's building envelope while allowing for constructability of Phase 2 of the development. A shelf angle will be welded to the precast panel/slabs to allow for future connection to the Phase 2 building components.





Boundary Layer Wind Tunnel Laboratory

MEMO VIA EMAIL

Attn: Tristan Connelly, Vive Development

From: P. Case, Boundary Layer Wind Tunnel Laboratory

Date: January 7, 2025

Re: 1001 King St E, Kitchener (1001 King)

It is common practice that pedestrian level wind studies for new developments consider the full site in their completed configuration. It is less common to consider phased construction where the phasing is known or expected to be a relatively short term and therefore reflect an interim condition. In the case of the KOC development, the adjoining west side of the site (Phase 2) is to be constructed following Phase 1. The completed development (i.e. Phase 1 + 2) reflects a larger and broader (more bluff) configuration and as typical would be expected to displace more oncoming wind, thereby leading to the more critical wind conditions at ground level. In this respect, the interim condition (Phase 1 alone) can generally be expected to produce lesser winds at ground-level compared to that of the completed development.

Nonetheless, without Phase 2 present, the 29-storey tower extends to the ground which will impact the effect of downwash winds, particularly at the SW corner of the 29-storey building (at ground level), and at the NW corner of the 29-storey building (at podium level). While the fully phased development is expected to reflect the more critical condition for ground level winds, it would be prudent to incorporate mitigation to provide greater assurance for wind comfort in Phase 1 of the development. Recommended mitigation is illustrated in Figure 1.

Sincerely,



Director of Operations,

Boundary Layer Wind Tunnel Laboratory



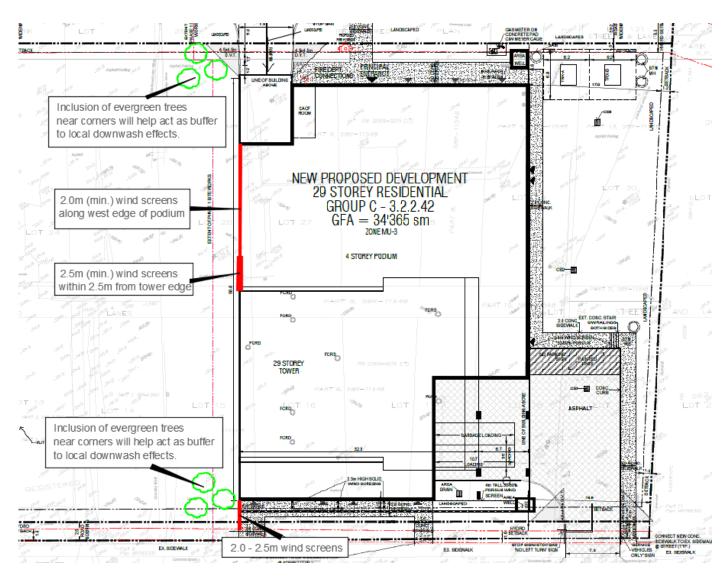


Figure 1 Suggested mitigation concepts for Phase 1