



600 Southgate Drive  
Guelph ON Canada  
N1G 4P6

Tel: +1.519.823.1311

October 20, 2021

**Ashley Ley, AICP**  
Technical Director  
[aley@akrf.com](mailto:aley@akrf.com)

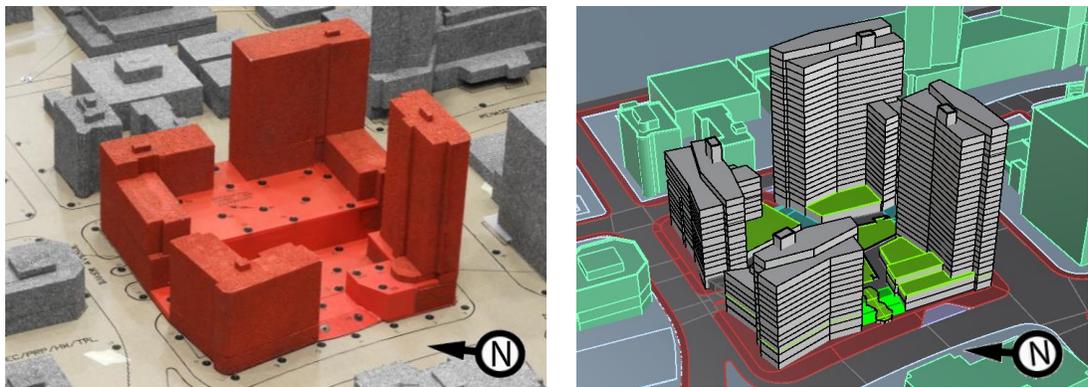
**Re: Pedestrian Wind Conditions  
Hamilton Green  
White Plains, NY  
RWDI Reference No. 2201062 (1701929)**

Dear Ashley,

Rowan Williams Davies & Irwin Inc. (RWDI) conducted a wind tunnel study for the Hamilton Green development in February of 2018. The predicted wind conditions on and around the development were presented in our report titled "*200 Hamilton Avenue – White Plains, NY – Pedestrian Wind Study, RWDI #1701929, February 22, 2018*".

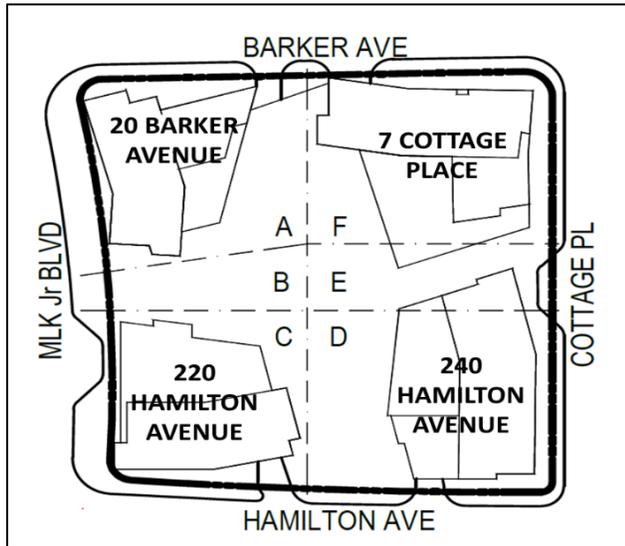
## Design Changes

Since the report was issued, design changes have been made according to the latest 3D model received by RWDI on October 1, 2021. Image 1 shows the building massing used for the wind tunnel test (left) in comparison to a rendering of the updated design (right). The intent of this letter is to comment on the impact of the design changes on the wind conditions predicated from the wind tunnel study conducted in 2018.



**Image 1:** Wind Tunnel Study Model (Left) versus Updated Design (Right)

As shown above, the massing of the towers and podiums are similar to what was previously tested in the wind tunnel. The primary differences are that the height of the podium on the north side of the site has been reduced and a central walkway has been added. Similarly, the heights of two towers have been slightly increased (by 3' for 240 Hamilton Avenue and 5' for 20 Barker Avenue), while the heights of the other two buildings remain the same as what was previously tested. The shapes of the towers have changed, adding some architectural features, although keeping the general form. The previously tested heights are summarized in Table 1 below.



**Image 2:** Key Plan of Development

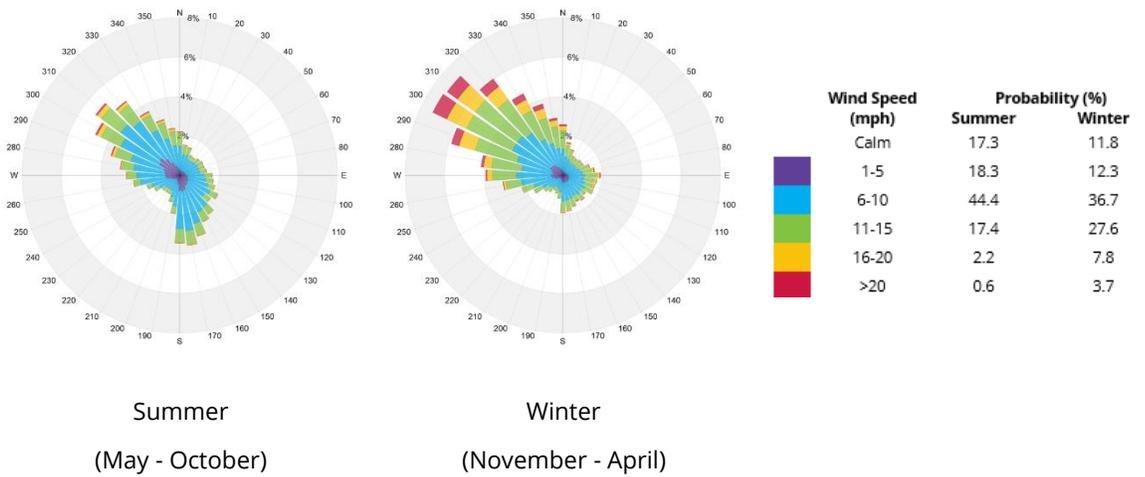
**Table 1:** Summary of Building Heights

Building	Wind Tunnel Tested Height (ft)	New Height (ft)
240 Hamilton Avenue	275	278
220 Hamilton Avenue	280	280
20 Barker Avenue	145	150
7 Cottage Place	150	150

### Meteorological Data

Wind statistics recorded at Westchester County Airport between 1985 and 2020, inclusive, were considered for the Summer (May through October) and Winter (November through April) seasons. Image 3 graphically depicts the directional distributions of wind frequencies and speeds for the two seasons.

Winds from the northwest directions are most prevalent in both summer and winter. During summer, winds from south and south-southeast directions are also frequent. Strong winds of a mean speed greater than 20 mph measured at the airport (at an anemometer height of 30 ft.) occur more often in the winter (3.7%) than in the summer (0.6%).



**Image 3:** Directional distribution of winds approaching Westchester County Airport from 1985 to 2017

## Anticipated Wind Conditions

### Grade Level Locations

From a pedestrian wind comfort perspective, wind conditions on and around the proposed development, including along the surrounding sidewalks and elevated plaza space, are generally expected to remain appropriate at all areas during the summer with mainly sitting, standing and some strolling wind comfort conditions. During the winter, similar to the previous wind tunnel test results, more strolling and walking wind comfort conditions are anticipated on and off site. Higher wind speeds are still anticipated at the stairs and walkways passing between the proposed 220 and 240 Hamilton towers (Locations 82 and 83) and at the southwest corner of 220 Hamilton (Location 4) and northeast corner of 7 Cottage Place (Location 12).

The new walkway between 240 Hamilton and 7 Cottage is not aligned with the northwest prevailing wind direction and therefore high wind speeds are not expected there.

### Building Entrances

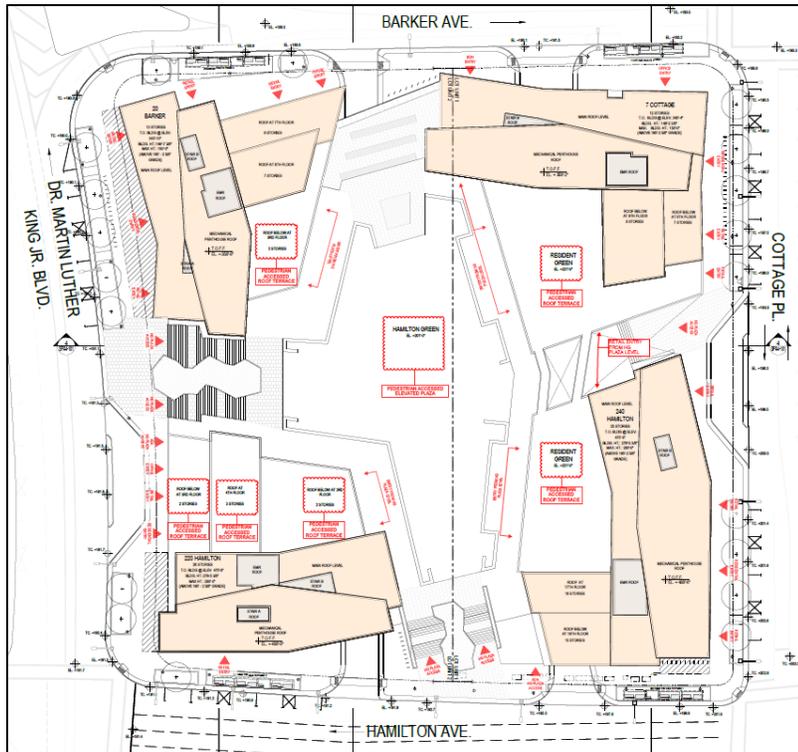
Image 4 includes a current markup of key pedestrian entrance locations which differ from RWDI's previous understanding in 2018. It is understood that primary entrances that were previously located at building corners where higher wind speeds were anticipated have been removed and relocated to calmer wind areas. This is a positive modification to the design and should be retained. Appropriate wind conditions are anticipated at all building entrances.

### Podium Amenity Spaces

The development includes numerous pedestrian accessible roof terraces facing the elevated pedestrian plaza as indicated in Image 4. Similar wind comfort conditions are anticipated to what was reported in the 2018 wind tunnel study report. The Design Team should review the 2018 reported conditions with



RWDI's Pedestrian Wind Criteria (also included in 2018 report) to determine if the anticipated programming for these spaces aligns with the desired level of comfort. For areas where lower wind speeds are desired RWDI can offer additional feedback on appropriate wind mitigation concepts for consideration.



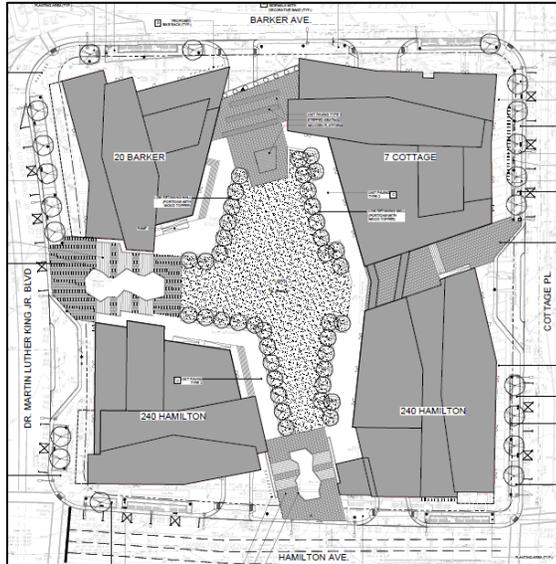
**Image 4:** Hamilton Green Building Mark-up of Entrances and Pedestrian Accessible Podium Level Terraces

## Wind Mitigation Features

### Landscaping

The previous wind tunnel tests did not include any landscaping in order to quantify the baseline worst case conditions. Landscaping is a positive feature from a wind mitigation perspective and is encouraged in areas where wind speeds are highest. RWDI understands that a landscape plan has since been created for the development as shown in Image 5.

This landscape plan includes deciduous trees throughout the central plaza area as well as numerous perimeter trees along sidewalks and walkways. The inclusion of landscaping is expected to have a positive benefit on pedestrian wind conditions. Where possible, the design team is encouraged to make use of marcescent and coniferous tree species which will retain their foliage and provide protection from the wind in the winter months. This would be particularly beneficial for landscaping along sidewalks located near building corners.



**Image 5:** Hamilton Green Landscape Plan

***Other Mitigation Options***

To help further improve pedestrian comfort, the wind control strategies as outlined in RWDI’s February 2018 report should be considered as the design continues to progress. For example, the addition of canopies at building corners where higher wind speeds are anticipated in the winter and landscaping within the pedestrian walkways between towers (Location 82 and 83) is encouraged.

**Summary**

Due to the relatively minor massing changes, the wind conditions for the updated design, reflected in latest 3D model received by RWDI on October 1, 2021, are expected to remain largely similar to those predicted from the initial 2018 wind tunnel study.

To quantify the transient behavior of wind and refine any conceptual mitigation strategies, additional physical scale-model tests in a boundary-layer wind tunnel would be required.

We trust the above assessment satisfies your requirements for the project currently. Should you have any questions or require additional information, please do not hesitate to reach out.

Yours truly,

**RWDI**

Chris Oreskovic, M.E.Sc., P.Eng.  
Project Engineer

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

Edyta Chruscinski, P.Eng., PMP  
Senior Project Manager / Associate