



ÉTUDE ÉOLIENNE

1475 BOULEVARD RENÉ LEVESQUE A MONTREAL.

1475 BOULEVARD RENE LEVESQUE

PROPRIETE ALI KHAN



May 5, 2009

Mr. Ali Hossain Khan
9131-3633 Québec Inc.
1475, Boul. René-Lévesque West
Montreal, Qc.
H3G 1T8

Dear Mr. Khan:

**Re: Initial Pedestrian Comfort Assessment
1475 Boulevard René Lévesque Ouest,
Montreal, Quebec
GmE File Ref.: 09-026**

Following a review of the proposed architectural drawings and renderings by Michelange Panzini Architectes, we are pleased to provide an initial overall commentary regarding anticipated pedestrian wind conditions over the study site located at 1475 Boulevard René Lévesque West in Montreal, Quebec.

The noted project, located at the intersection of Boulevard René Lévesque West and Rue Mackay, is a thirty-four (34) storey mixed-use hotel and residential tower rising approximately 111 meters (m) above grade. A five (5) storey podium base features landscaped terrace levels and a sail shaped curved screen rising over the top of the tower. The current site is surrounded by medium size and low rise urban exposure with scattered tall buildings to the northeast.

The key pedestrian areas of the project include: the main entrance to the residential building and entrances to the hotel, and the sidewalks along Rue Mackay, Boulevard René Lévesque West, as well as along the southwest elevation.

Pedestrian wind comfort at grade is determined by three main factors which include orientation of the building relative to prominent wind directions, the building shape and massing and shelter provided by upwind buildings. For Montreal, the prominent wind directions occur from the southwest, northeast and southeast, with varying magnitudes depending on the season. Based on our in-house knowledge of common wind directions, as well as building design elements, it is our opinion from this preliminary review that the pedestrian wind conditions over the site are expected to comply, or can be mitigated to comply, with acceptable outdoor comfort standards as well as the City of Montreal guidelines for pedestrian wind comfort. Some wind mitigation will likely be required to alleviate winds for the northeast and southeast directions along Rue Mackay, Boulevard René Lévesque West and the terrace levels.

In more specific terms, the entrance areas along the podium base of the building overlooking Boulevard René Lévesque West are predicted to experience moderately strong wind conditions which could affect pedestrians comfort and operation of doors. In a similar way, entrances along Rue Mackay will experience similar conditions due to southeast winds. However, the tower setbacks from both these streets at the podium levels provide significant mitigation to direct winds from the southeast. Furthermore, since the criteria for pedestrian comfort at building access points is less arduous than for other pedestrian areas, the most important consideration will be door operation. Any such issues can be eliminated with the use of revolving doors or inclusion of a vestibule with external and internal doors. Wind conditions on the northwest side of the building are expected to be relatively calm most of the time due to infrequent wind probability for those wind directions. However, when northwest winds do arise, wind conditions at the northwest base of the tower will be substantially windier and uncomfortable for sedentary activities. The southwest side of the building looking onto Rue Guy is expected to be moderately calm much of the time.



Wind tunnel testing will be required to validate the opinions of this preliminary review and meet City of Montreal requirements. However, if windy conditions are discovered based on detailed wind tunnel testing, it is also our opinion that they can be suitably mitigated with landscape or architectural treatments. Available options to achieve desired mitigation would be verified by further wind tunnel testing over the affected areas.

This completes our initial assessment. Please advise us if there are any questions or additional information required.

Yours truly,

Gradient Microclimate Engineering Inc.

A handwritten signature in black ink, appearing to read "Lei Gong".

Lei Gong, PhD, P.Eng.
Project Engineer
GmE 09-026

A handwritten signature in black ink, appearing to read "Vincent Ferraro".

Vincent Ferraro, M.Eng., P.Eng.
Principal