FINAL REPORT

LAKEVIEW VILLAGE

MISSISSAUGA, ON

PEDESTRIAN WIND STUDY

RWDI #1804164

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SUBMITTED TO

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EXECUTIVE SUMMARY

Wind conditions around the proposed Lakeview Village development are discussed in detail within the content of this report and are summarized as follows:

Grade Level

- Summer wind conditions for the proposed configuration are anticipated to be primarily suitable for sitting or standing. Higher wind speeds comfortable for walking are predicted in exposed areas and around taller buildings, with uncomfortable wind conditions at two locations on Block 1.

- During the winter season, seasonally higher wind speeds are expected to result in increased wind activity around the proposed development. Uncomfortable wind conditions are predicted primarily on the west portion of the development and at a few isolated areas around the tall buildings to the east.

- Wind speeds that do not meet the wind safety criterion are predicted at eight isolated locations around the project site. Wind control in the form of landscaping, hardscaping or massing changes can be implemented to improve wind speeds in each area.

- The addition of trees is expected to improve wind conditions significantly. Assuming that trees will retain their foliage throughout the year, the use of landscaping is expected to considerably reduce the number of areas around the project site with uncomfortable and/or unsafe wind conditions.

Above Grade

- Podiums of Buildings 1B, 1C, 3C, 6C, 9F, 9K, 10A, and 11A were instrumented with wind speeds sensors to measure wind comfort. Wind conditions on these podiums are predicted to be suitable for walking or uncomfortable throughout the year. Wind speeds on several podium levels are not expected to meet the wind safety criterion. These wind speeds are higher than desired for recreational activities and wind control is recommended in areas that will be accessible by pedestrians. Details such as parapets, landscaping or hardscaping were not included in the wind tunnel model and could improve wind conditions across the podium space.

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1 INTRODUCTION

RWDI was retained by Argo Development Corporation to assess and consult on the pedestrian wind conditions on and around the proposed Lakeview Village in Mississauga, ON. The project site, as shown in Image 1, is located on the southeast side of Lakeshore Road East in Mississauga. The proposed development consists of a masterplan which includes residential, commercial and institutional buildings. While most buildings are low- to mid-rise developments, there are several tall residential towers across the project site.

The purpose of the study is to assess the wind environment around the project in terms of pedestrian comfort and safety. The quantitative assessment was based on wind speed measurements on a scale model of the project and its surroundings in a boundary-layer wind tunnel. The assessment focused on critical pedestrian areas including the main entrances, outdoor amenity areas, and walkways around the project site.

This report summarizes the methodology of wind tunnel studies for pedestrian wind conditions, describes the City of Mississauga pedestrian wind comfort and safety criteria, presents the local wind conditions and their effects on pedestrians and provides conceptual wind control measures, where necessary.

Image 1: Site plan – Aerial view of site and surroundings (courtesy of Google Earth™)

2 METHODOLOGY

2.1 Test Configurations

In order to assess the wind environment around the proposed project, a 1:400 scale model of the project site and surroundings was constructed for the wind tunnel tests and the following configurations were tested:

Proposed:	Proposed project with existing surroundings (Image 2a).
Proposed with trees:	Proposed project with existing surroundings and proposed landscaping (Image 2b).

The scale model of the proposed project (as shown in Images 2a and 2b) was constructed using the design information and drawings listed in Appendix A. The wind tunnel model included all relevant surrounding buildings and topography within approximately 950 m radius of the study site. The boundary-layer wind conditions beyond the modelled area were also simulated in RWDI's wind tunnel. The wind tunnel model was instrumented with 395 wind speed sensors to measure mean and gust wind speeds at a full-scale height of approximately 1.5 m. The placement of wind measurement locations was based on our experience and understanding of the pedestrian usage for this site. These measurements were recorded for 36 equally incremented wind directions.

Image 2a: Wind tunnel study model – Proposed

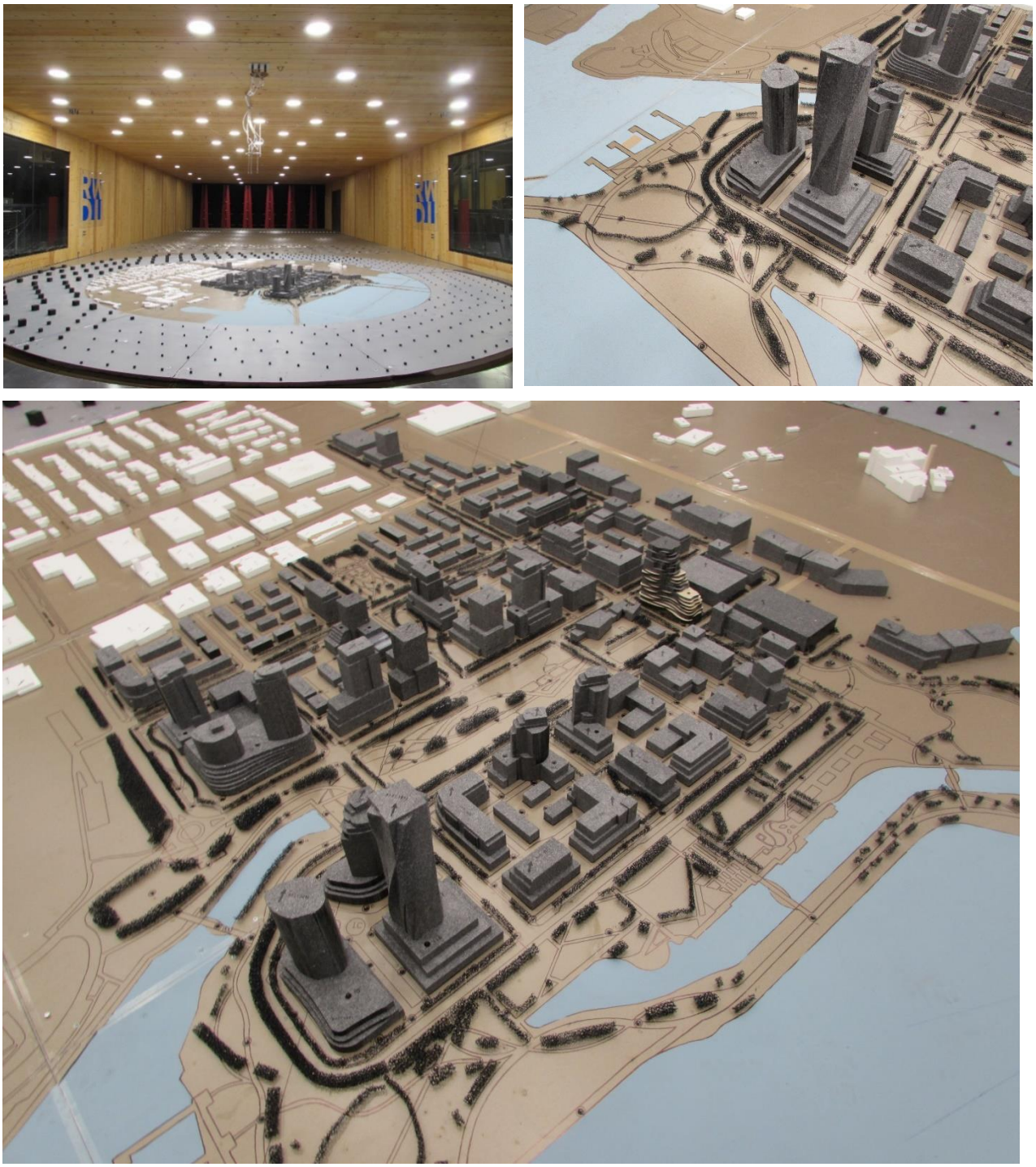


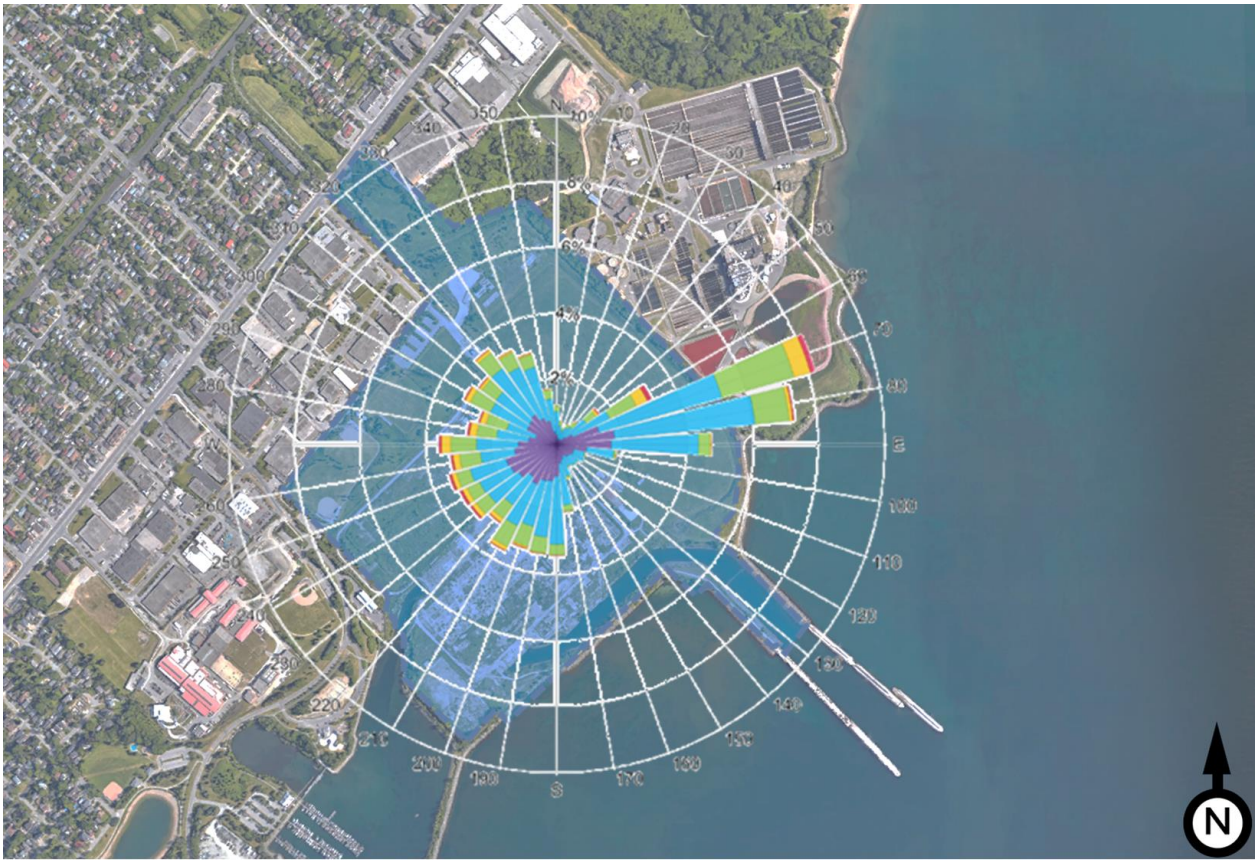
Image 2b: Wind tunnel study model - Proposed with trees

2.2 Meteorological Data

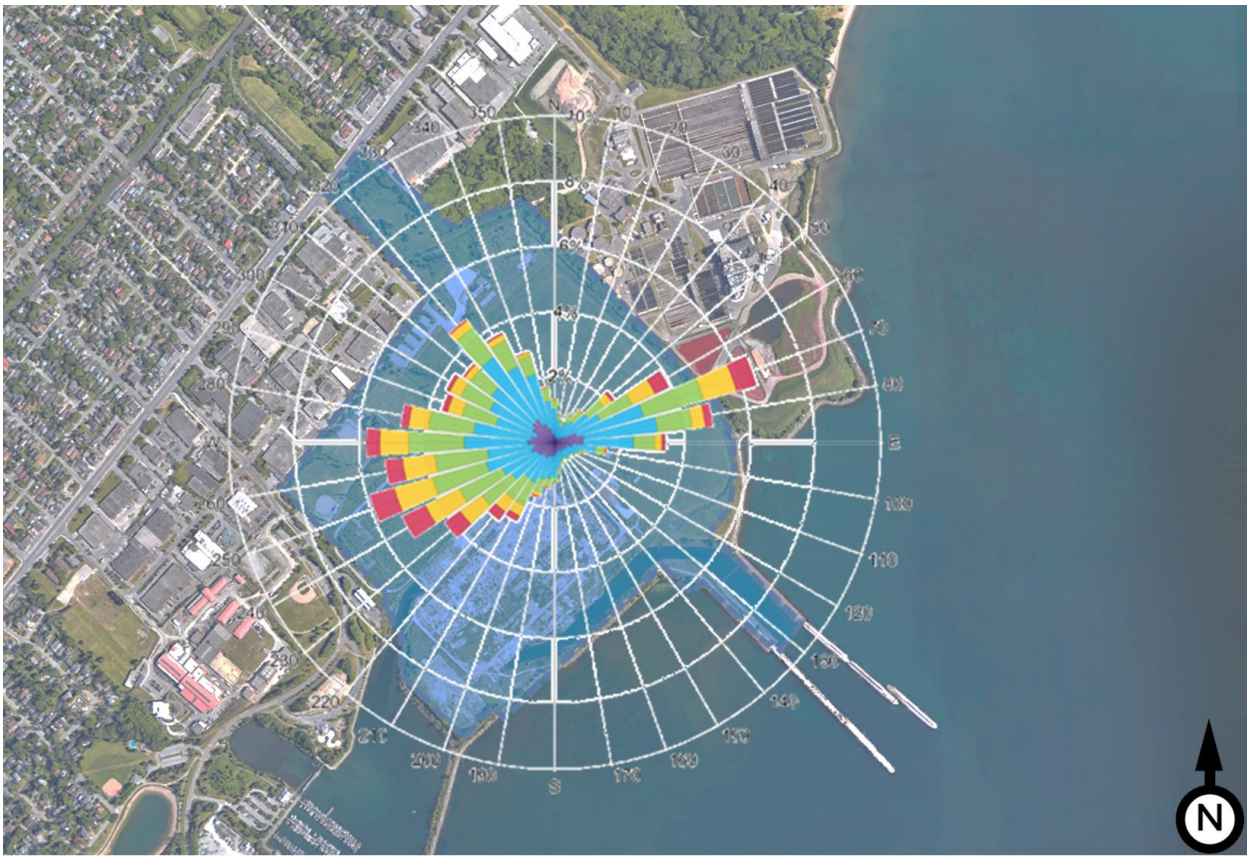
Wind statistics recorded at Toronto Island Airport between 1987 and 2017, inclusive, were analyzed for the Summer (May through October) and Winter (November through April) seasons. Image 3 graphically depicts the directional distributions of wind frequencies and speeds for the two seasons.

Winds from the east-northeast and southwest through northwest directions are predominant in both the summer and winter, as indicated by the wind roses. Strong winds of a mean speed greater than 30 km/h measured at the airport (at an anemometer height of 10 m) occur more often in the winter (17.1%) than in the summer (4.2%).

Wind statistics from Toronto Island 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 City of Mississauga criteria for pedestrian comfort and safety.



Summer (May to October)



Winter (November to April)

Wind Speed (km/h)	Probability (%) Summer	Winter
Calm	5.8	2.7
1-10	30.7	17.4
11-20	43.5	38.2
21-30	15.8	24.6
31-40	3.3	11.3
>40	0.9	5.8

Image 3: Directional distribution of winds approaching Toronto Island Airport from 1987 to 2017

2.3 Wind Criteria

The City of Mississauga pedestrian wind criteria are used in the current study.

City of Mississauga Pedestrian Wind Criteria

Comfort Category	GEM Speed (km/h)	Description
Sitting	≤ 10	Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away
Standing	≤ 15	Gentle breezes suitable for main building entrances, bus stops, and other places where pedestrians may linger
Walking	≤ 20	Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering
Uncomfortable	> 20	Strong winds of this magnitude are considered a nuisance for all pedestrian activities, and wind mitigation is typically recommended

Notes:
(1) GEM speed = max (mean speed, gust speed/1.85);
(2) GEM speeds listed above are based on a seasonal exceedance of 20% of the time between 6:00 and 23:00. Nightly hours between 0:00 and 5:00 are excluded from the wind analysis for comfort since limited usage of outdoor spaces is anticipated; and,
(3) 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 colder climate such as that found in Mississauga, there are distinct differences in pedestrian outdoor behaviours between these time periods.

Safety Criterion	Gust Speed (km/h)	Description
Exceeded	> 90	Excessive gust speeds that can adversely affect a pedestrian's balance and footing. Wind mitigation is typically required.

Notes:
(1) Based on an annual exceedance of 9 hours or 0.1% of the time for 24 hours a day; and,
(2) Only gust speeds 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.

3 PREDICTED WIND CONDITIONS

The predicted wind comfort and safety conditions pertaining to the two test configurations assessed are graphically depicted on site plans in Figures 1a through 3b. These conditions and the associated wind speeds are presented in Table 1, located in the Tables section of this report. The following is a detailed discussion of the suitability of the predicted wind comfort conditions for the anticipated pedestrian use of each area of interest.

3.1 Summer Wind Conditions

Wind conditions comfortable for walking are appropriate for sidewalks. Lower wind speeds, conducive to standing, are preferred at main entrances where pedestrians are apt to linger. Wind speeds comfortable for sitting are preferred for areas intended for passive activities, such as parks.

3.1.1 Proposed

Wind conditions around the project site are generally expected to be comfortable for sitting or standing in most areas (Figure 1a). These wind conditions are suitable for areas where pedestrians are expected to linger, such as entrances. Slightly windier conditions – suitable for walking – are expected in open areas exposed to the prevailing winds, or around the larger towers around the project site. These areas include pedestrian areas along the shore of Lake Ontario – such as the Panorama Point Park and the Western Pier (Figure 1.1a), around Block 1 (Figure 1.2a), the Waterway Park (Figure 1.4a) and isolated areas around Blocks 5 through 7 and Block 15 (Figures 1.3a and 1.5a). These wind speeds are suitable for sidewalks and walkways; however, they are generally considered to be higher than desired for entrances and parks, where pedestrians may linger. It is recommended that the suitability of these conditions be compared with the usage of each pedestrian space when more refined uses of the project sites have been determined. Wind speeds are expected to be uncomfortable around two pedestrian areas on Block 1 (Locations 29 and 32 in Figure 1.2a) and wind control is recommended.

Wind speeds on the podiums of Towers 1B, 1C, 3C, 6C, 9F, 10A and 11A (Locations 114 through 117, 120, 367 through 373 and 376) were measured for pedestrian comfort. Wind speeds are expected to be comfortable for standing, walking or uncomfortable on the podiums. These wind speeds are higher than desired if the podium spaces are designated as amenity areas. Podium details such as parapets, landscaping, canopies or hardscaping were not included in the wind tunnel model, but they would improve wind conditions.

3.1.2 Proposed with trees

The addition of landscaping (Figure 1b) is expected to improve summer wind conditions throughout the development. Calmer wind conditions – suitable for sitting – are expected to become more prevalent with the addition of landscaping. Overall, wind conditions are expected to be comfortable for sitting and standing in most areas. These conditions are suitable for the parks along Lake Ontario, and around Waterway Commons, where pedestrians are expected to linger for extended periods of time during the summer months. Wind speeds between Buildings 1A through 1C are expected to remain comfortable for walking, with an isolated area at the southern perimeter of Building 1A that is expected to have uncomfortable wind conditions (Location 32 in Figure 1.2b). Additional wind control is recommended in this area and on Block 1 once the designated pedestrian uses for each area has been established.

Wind speeds on the podiums are not expected to change with the addition of trees at grade level.

3.2 Winter Wind Conditions

3.2.1 Proposed

Seasonally higher wind speeds during the winter months are expected to result in conditions primarily comfortable for standing or walking (Figure 2a). Wind control is recommended in areas where pedestrians are expected to linger during the winter season, including entrances and potential outdoor seating areas.

Uncomfortable conditions are expected in large open areas that are more exposed to prevailing winds from the east-northeast and west-southwest. These areas include the Panorama Point Park (Figure 2.1a), pedestrian areas around Block 1 and Waterway Commons (Figure 2.2a), as well as a few other isolated areas around the development.

Winter wind conditions are expected to be uncomfortable across most podium spaces. It is recommended that pedestrian access to these spaces be restricted during the winter season.

3.2.2 Proposed with trees

Should the landscaping planted around the project site retain its foliage during the winter season, a reduction in wind speeds is expected throughout the site (Figure 2b). If the trees are deciduous and will not retain their foliage during the winter season, winter wind conditions will resemble those described in Section 3.2.1 and Figure 2a.

Wind conditions are expected to be suitable for standing and walking in most areas around the site, and the use of landscaping is expected to improve wind speeds in most areas with uncomfortable wind speeds. However, wind speeds at several isolated areas around the project site are expected to remain uncomfortable and additional or modified wind control is recommended.

The addition of landscaping at grade level is not expected to impact winter wind conditions on the podium levels.

3.3 Wind Safety

3.3.1 Proposed

Wind speeds are expected to meet the wind safety criterion in most areas around the development (Figure 3a). Wind speeds that do not meet the safety criterion are predicted around Block 1 (Locations 29, 32 and 121), Block 4B (Location 86), Block 5B (Locations 110 and 11), Block 7D (Location 103) and Block 15B (Location 389).

Wind speeds on the podiums of Block 1B, 1C, 10A and 11A are not expected to meet the wind safety criterion (Location 114, 116, 368, 372 in in Figure 3a).

3.3.2 Proposed with trees

The addition of trees (with year-round foliage retention) is anticipated to improve wind safety conditions in select areas around the project site (Figure 3b). Wind safety speeds around the north perimeter of Block 1, the south perimeter of Block 4B, and the south corner of Block 7D are expected to meet the wind safety criterion with the addition of landscaping. However, wind speeds at five isolated areas at grade are not expected to meet the safety criterion. Wind control measures are recommended.

Wind safety conditions on the elevated amenity spaces are predicted to be similar both with and without trees at grade level.

3.4 Wind Control

Wind control is recommended in areas where uncomfortable or unsafe wind conditions are anticipated. Modified landscaping can be implemented to include coniferous trees, planters and screens around areas where higher than desired wind speeds are expected to occur. Design details like setting back a tall tower from the edges of a podium, deep canopies close to ground level, wind screens, etc. can help reduce wind speeds to a large extent. Detailed mitigation strategies can be provided once the usage of each pedestrian areas has been determined. Examples are presented in Image 4.

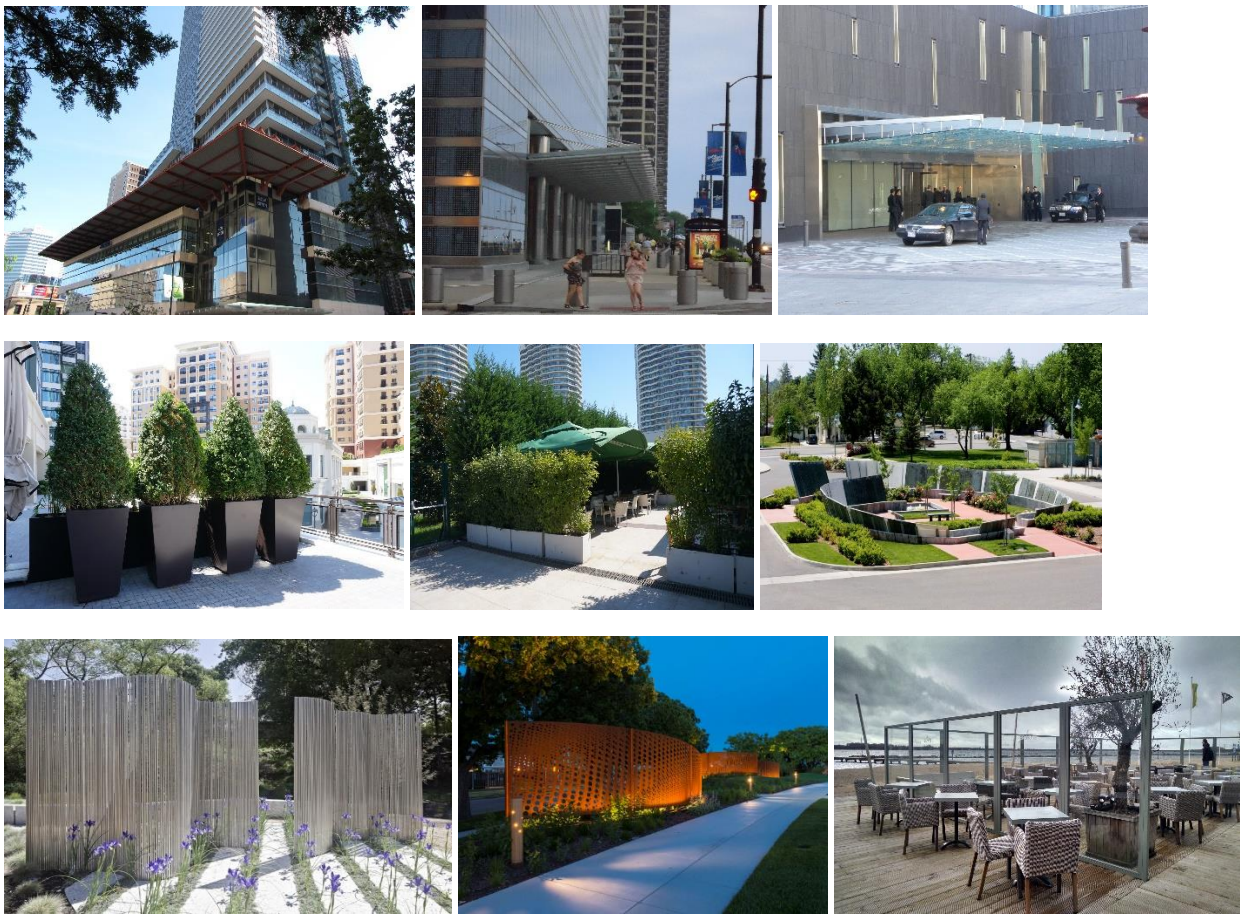


Image 4: Examples of wind control

Although the initial wind tunnel study identified uncomfortable wind conditions for some areas of the proposed development during the winter, additional site features will be modeled in subsequent wind tunnel testing once the design is closer to being finalized. It is anticipated that mitigation measures will help to improve wind conditions in these areas and further testing will verify the effectiveness of additional wind control measures.

4 APPLICABILITY

The wind conditions presented in this report pertain to the proposed Lakeview Village as detailed in the architectural design drawings listed in Appendix A. Should there be any design changes that deviate from this list of drawings, the wind condition predictions 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.

5 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.

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FIGURES

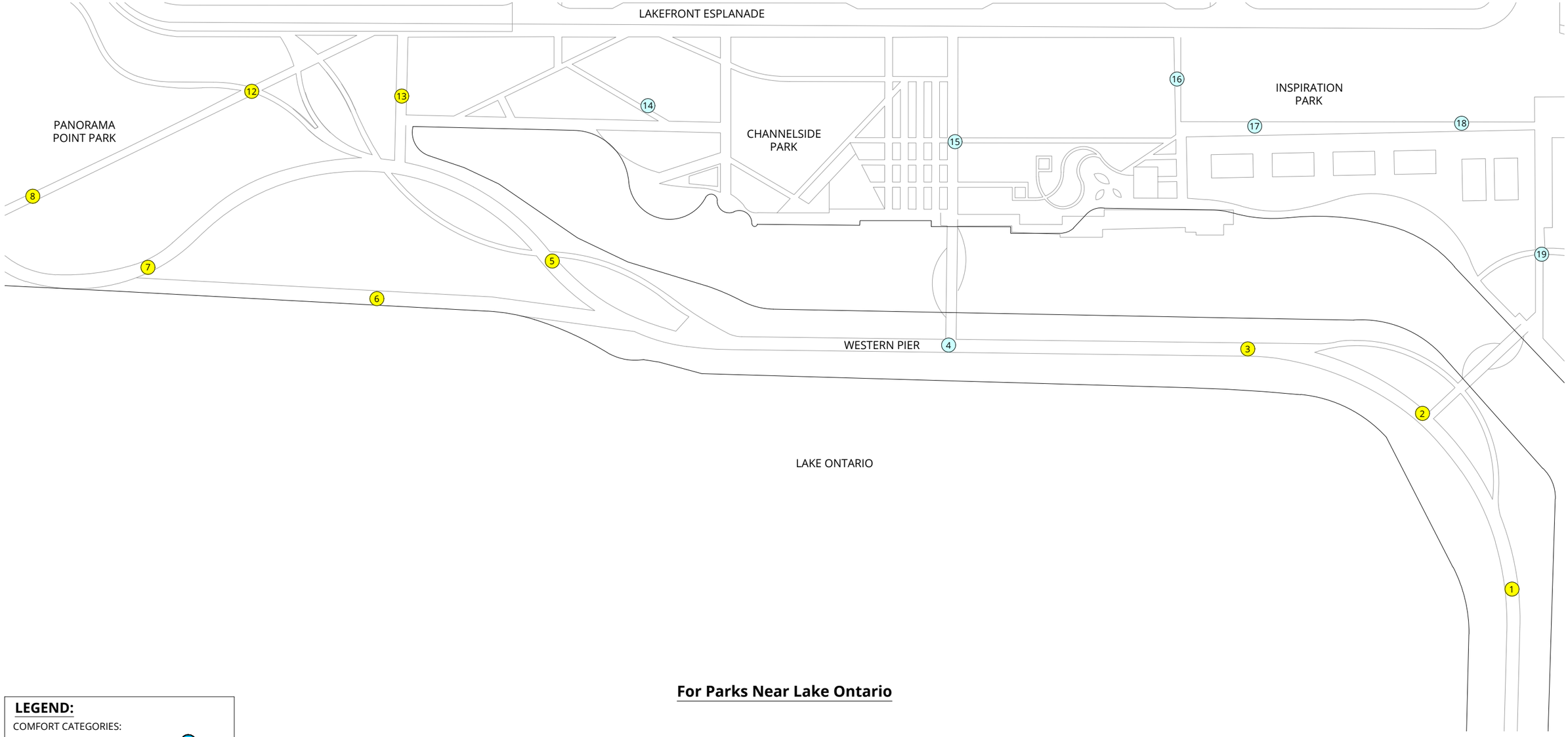
Key Plan of Entire Site
Proposed

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	KP
Approx. Scale:			N/A
Date Revised:			Nov. 1, 2018



For Parks Near Lake Ontario

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level

0 30 60m

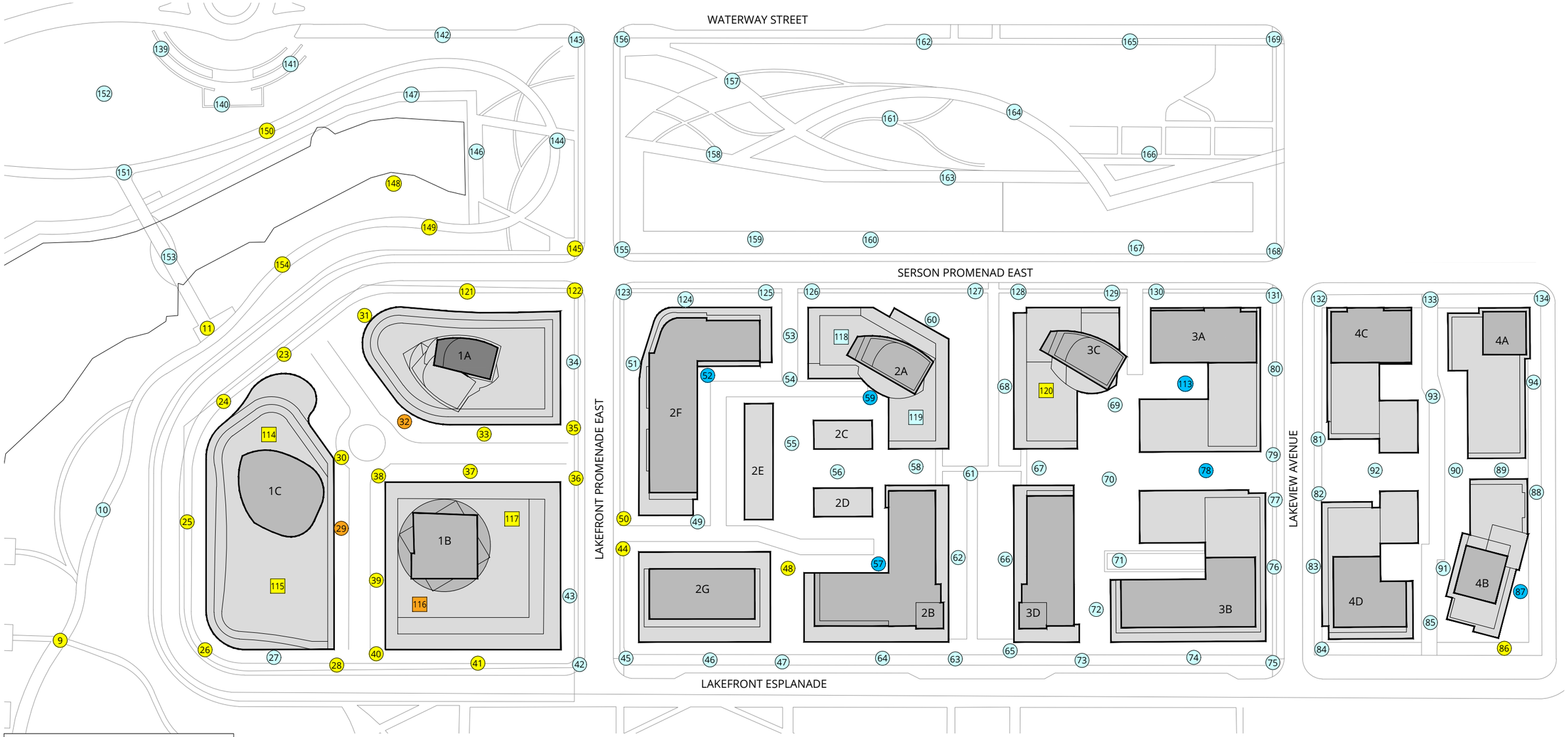
Pedestrian Wind Comfort Conditions
Proposed
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by: SPA	Figure: 1.1a
Approx. Scale:	1:1500
Date Revised:	Nov. 1, 2018



LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level
- Podium Level

For Building Plots 1 - 4

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

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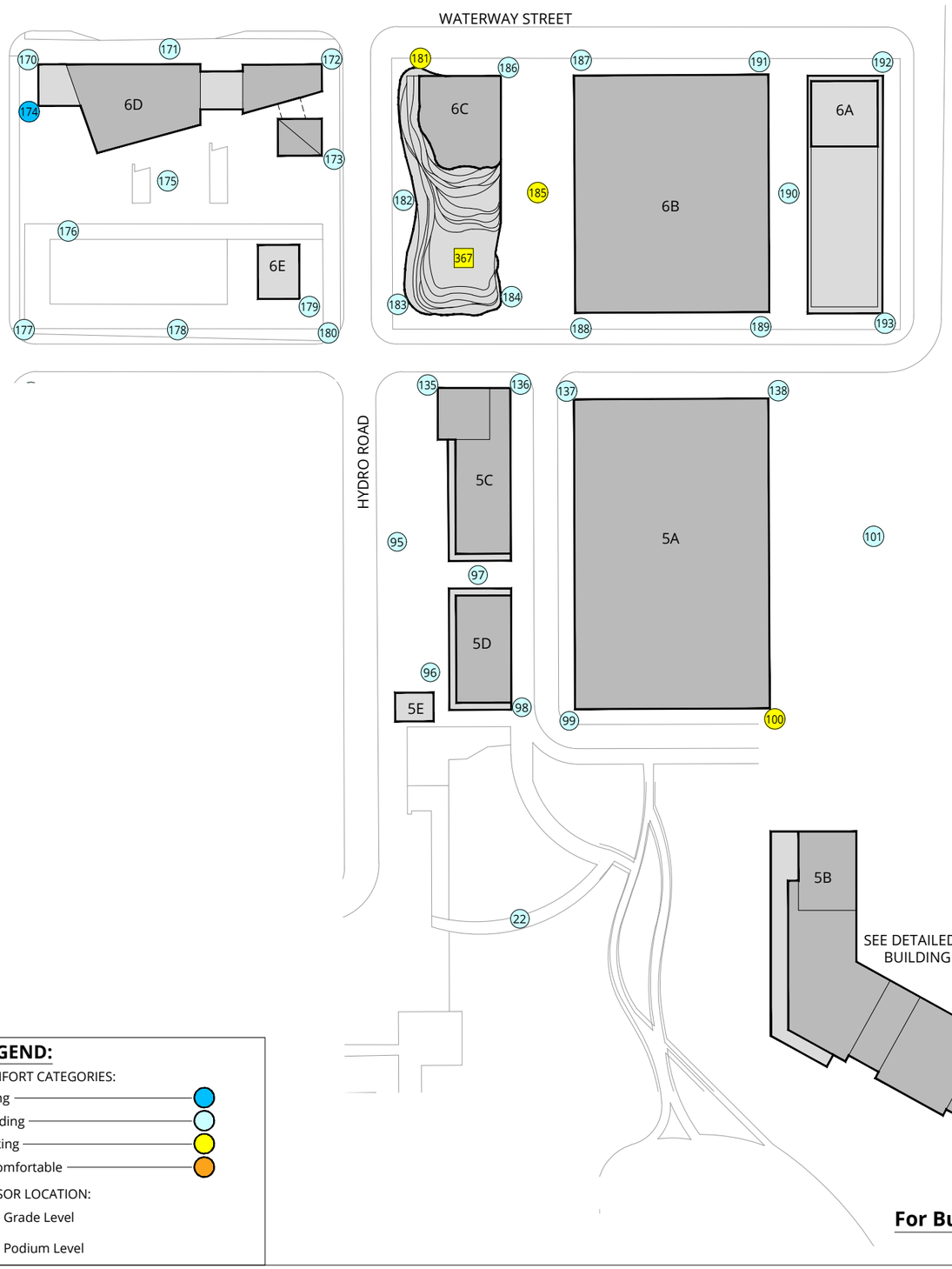

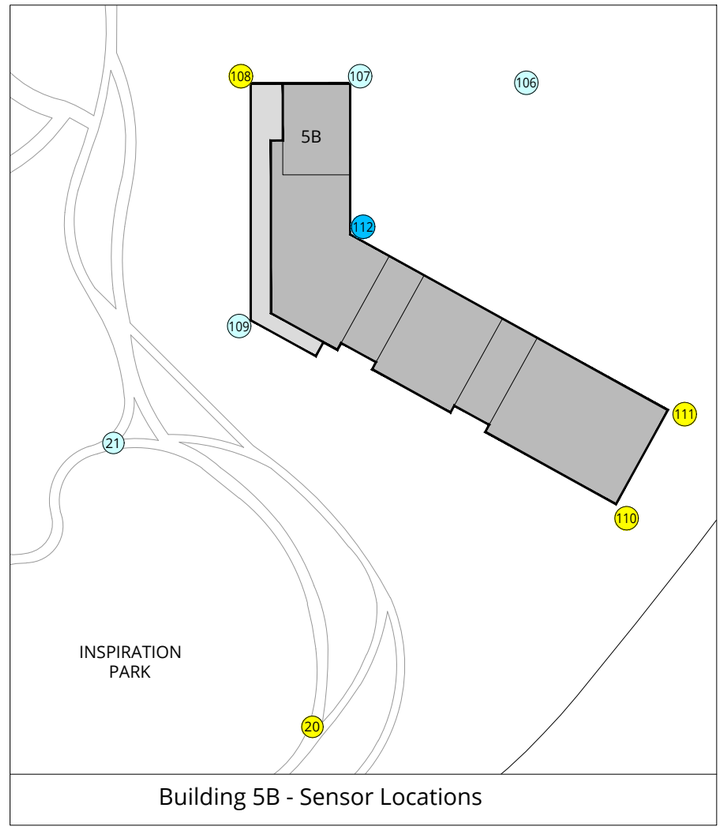

Building 5B - Sensor Locations

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	1.3a
Approx. Scale:		1:1500	
Date Revised:		Nov. 1, 2018	

For Building Plots 9 - 13

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

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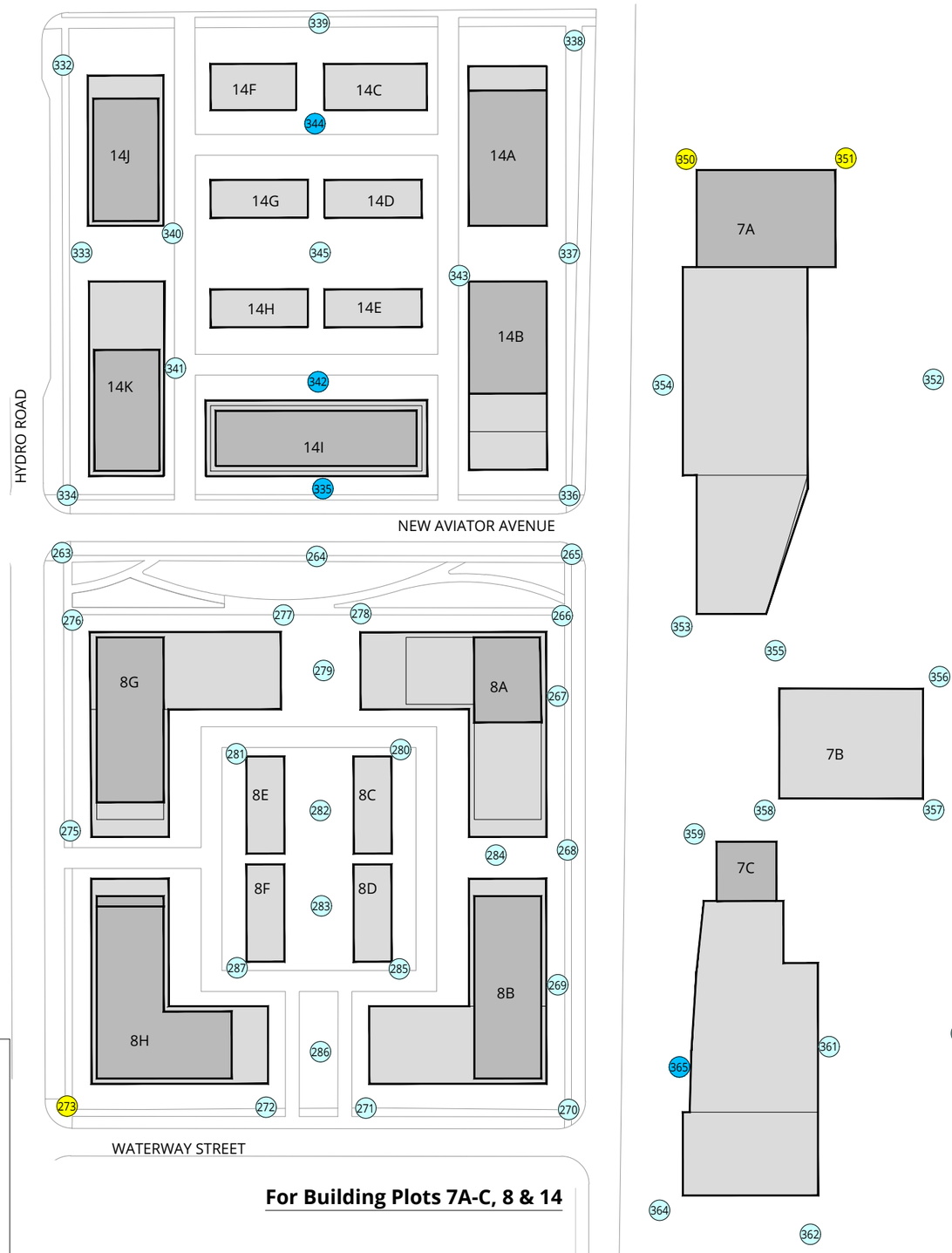


LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level

For Building Plots 7A-C, 8 & 14

For Building Plots 15A-K

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	1.5a
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

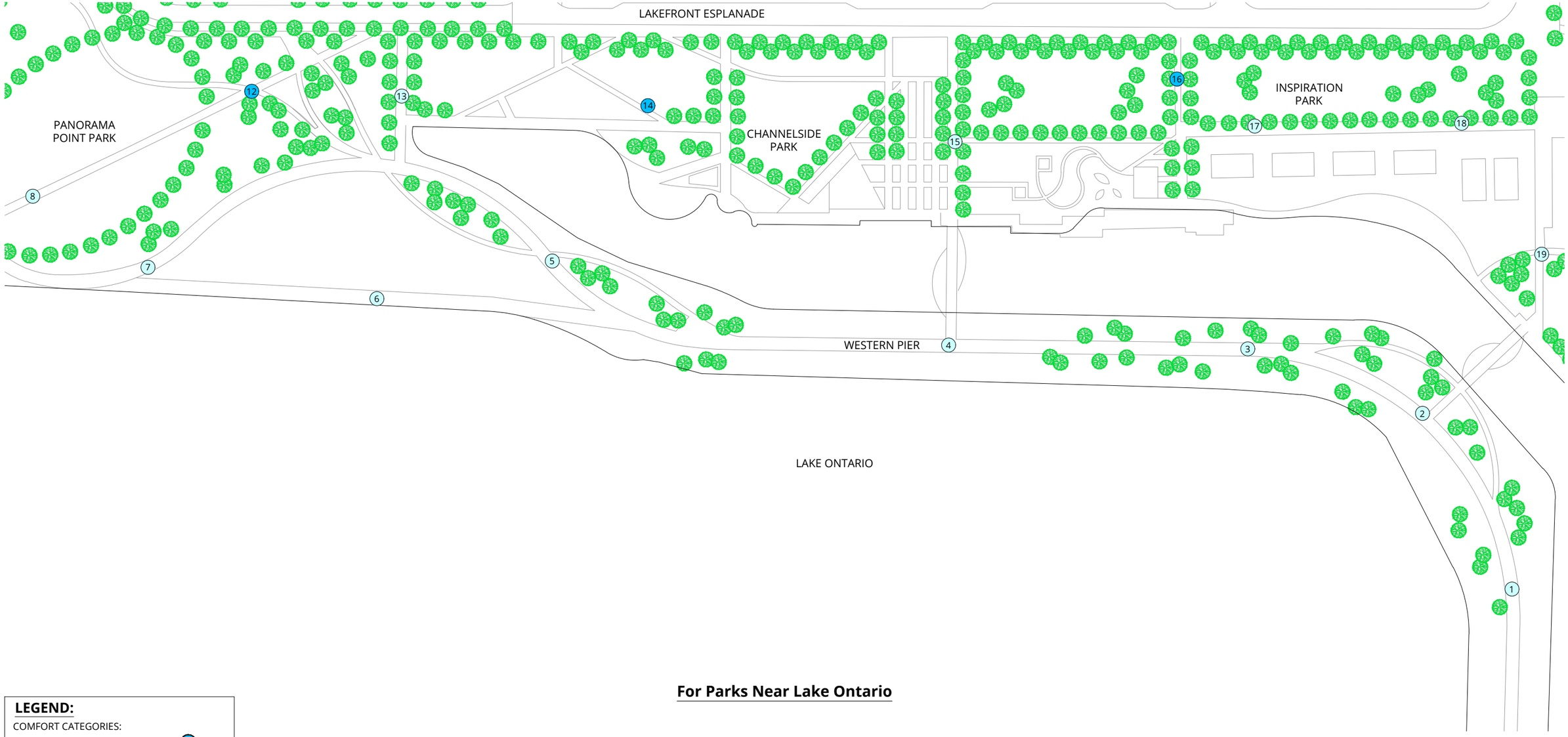
Key Plan of Entire Site
Proposed With Trees

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	KP
Approx. Scale:			N/A
Date Revised:			Nov. 1, 2018



For Parks Near Lake Ontario

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level

LANDSCAPING:

- Tree

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed With Trees
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:1.1b
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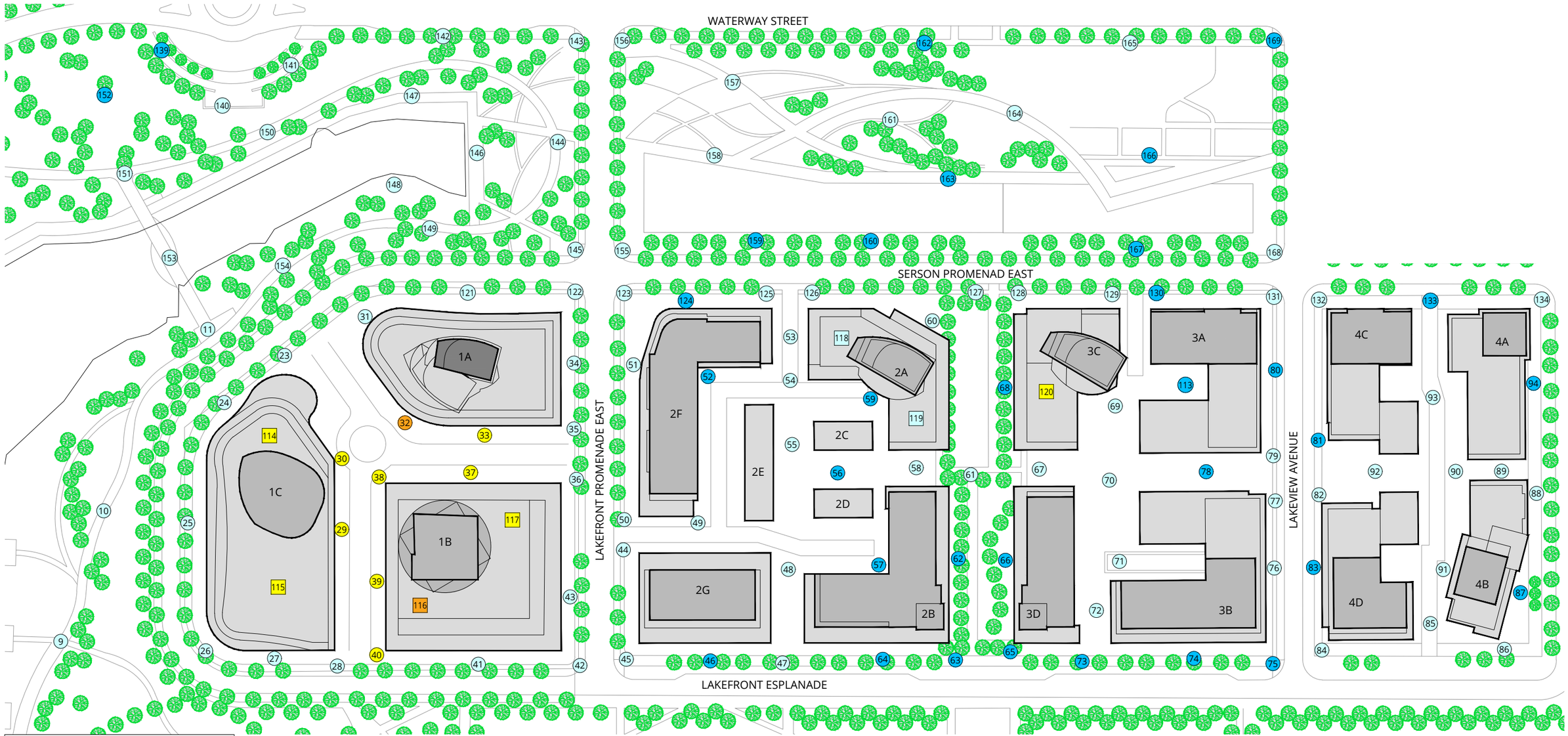

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level
- Podium Level

LANDSCAPING:

- Tree

For Building Plots 1 - 4

0 30 60m

Pedestrian Wind Comfort Conditions

Proposed With Trees

Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

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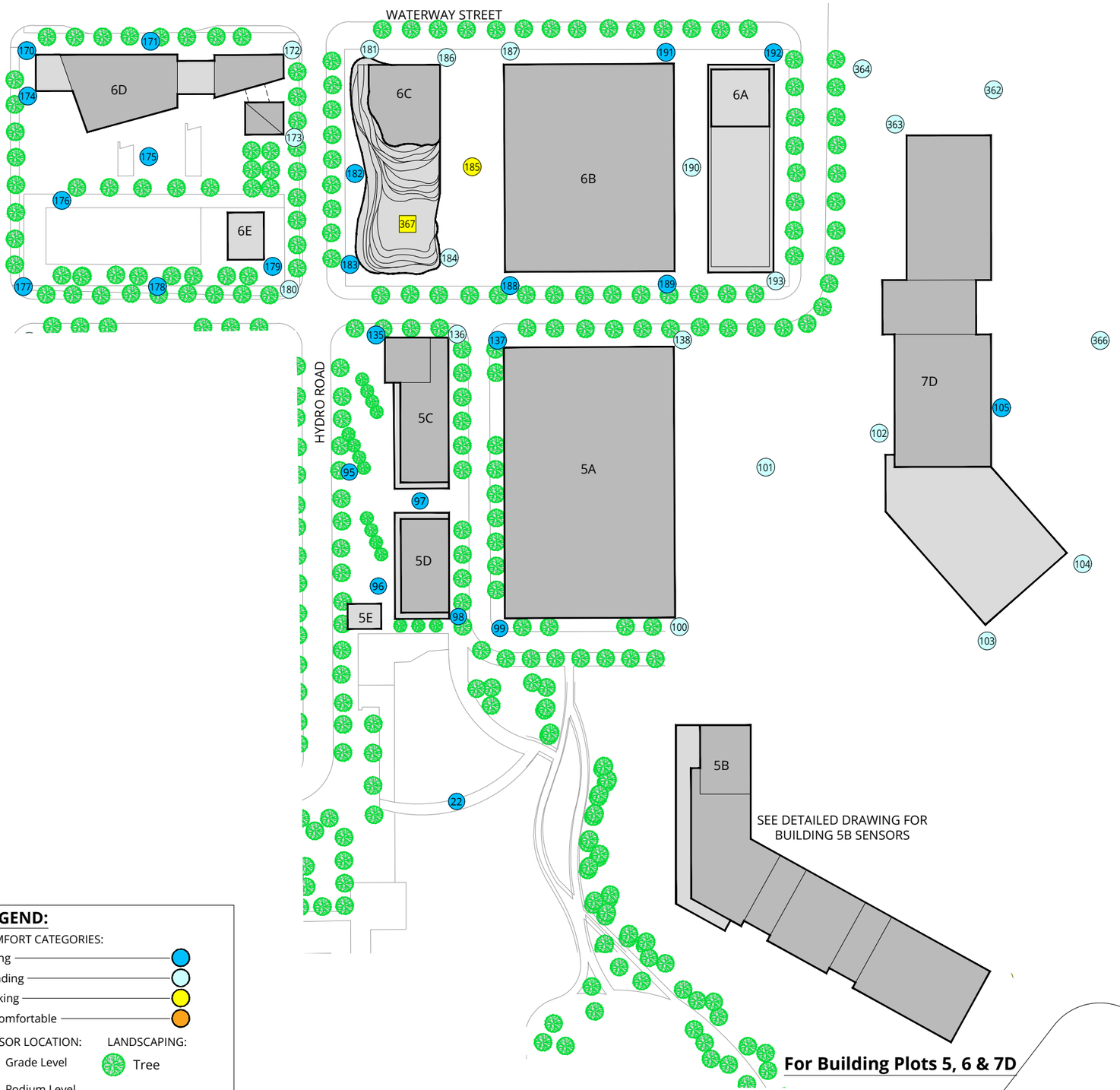
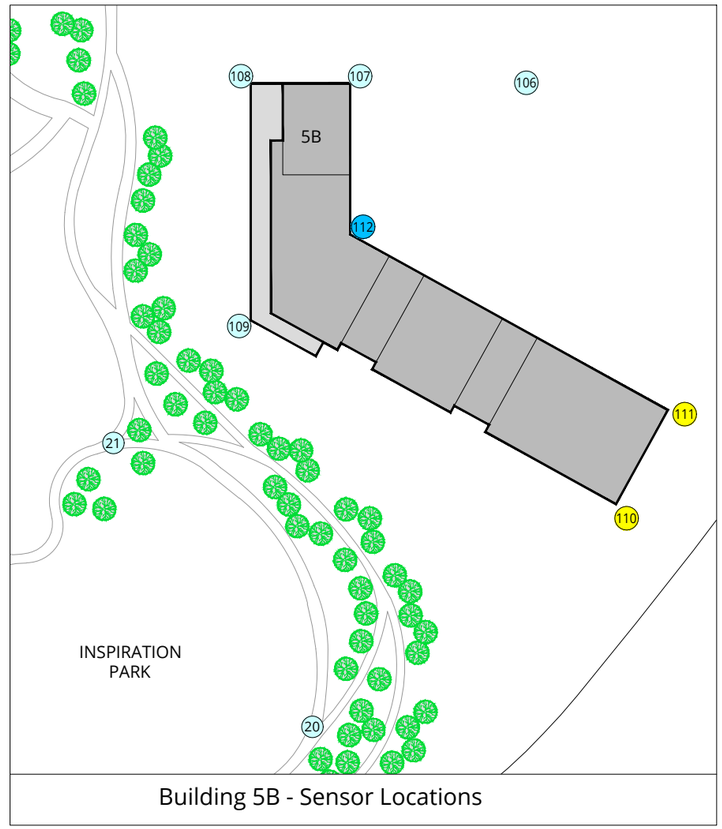
Date Revised:	Nov. 1, 2018		

Project #1804164





Building 5B - Sensor Locations

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

LANDSCAPING:
- Tree

For Building Plots 5, 6 & 7D

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed With Trees
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	1.3b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

LANDSCAPING:
- Tree

For Building Plots 9 - 13

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed With Trees
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

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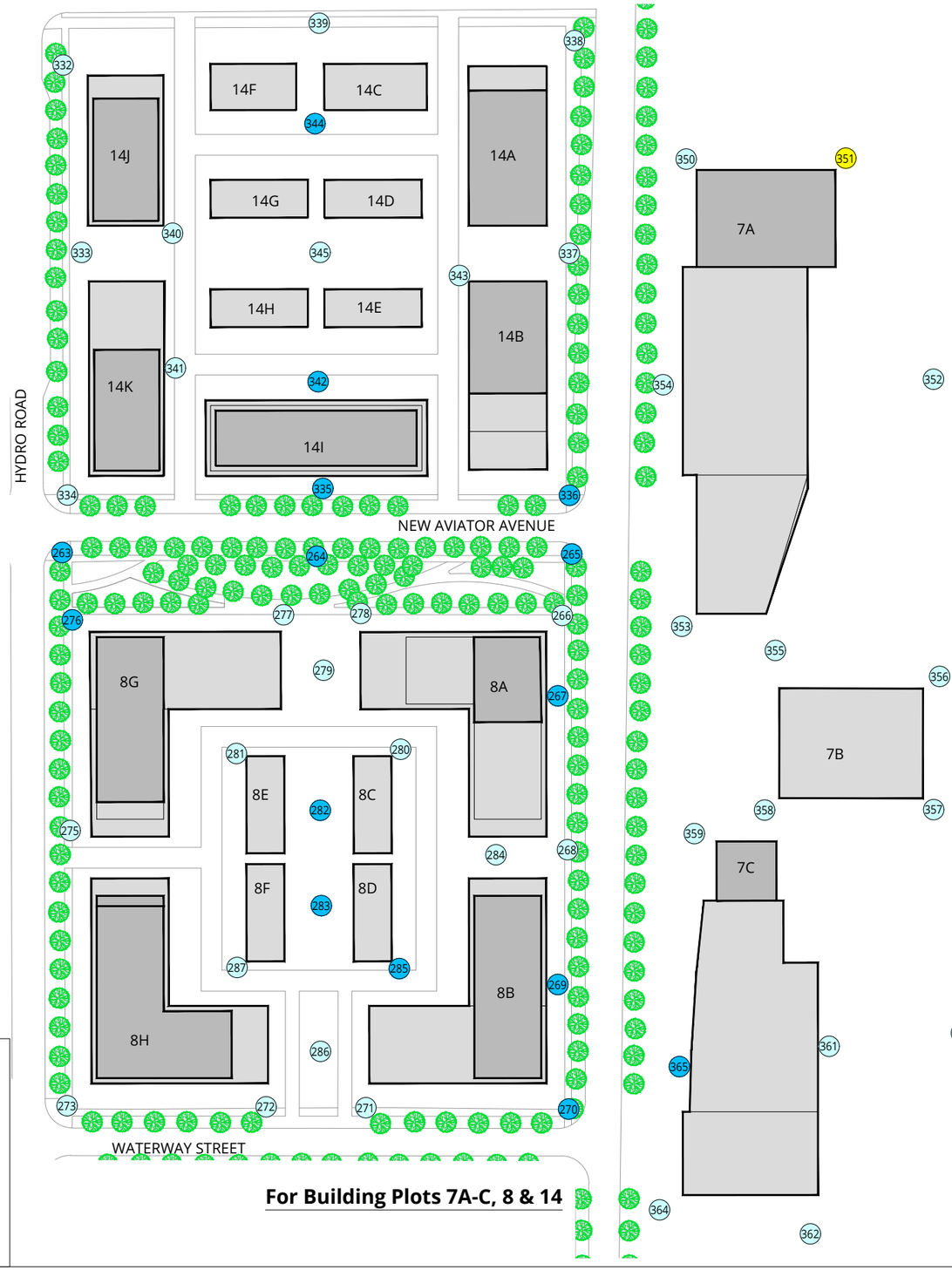
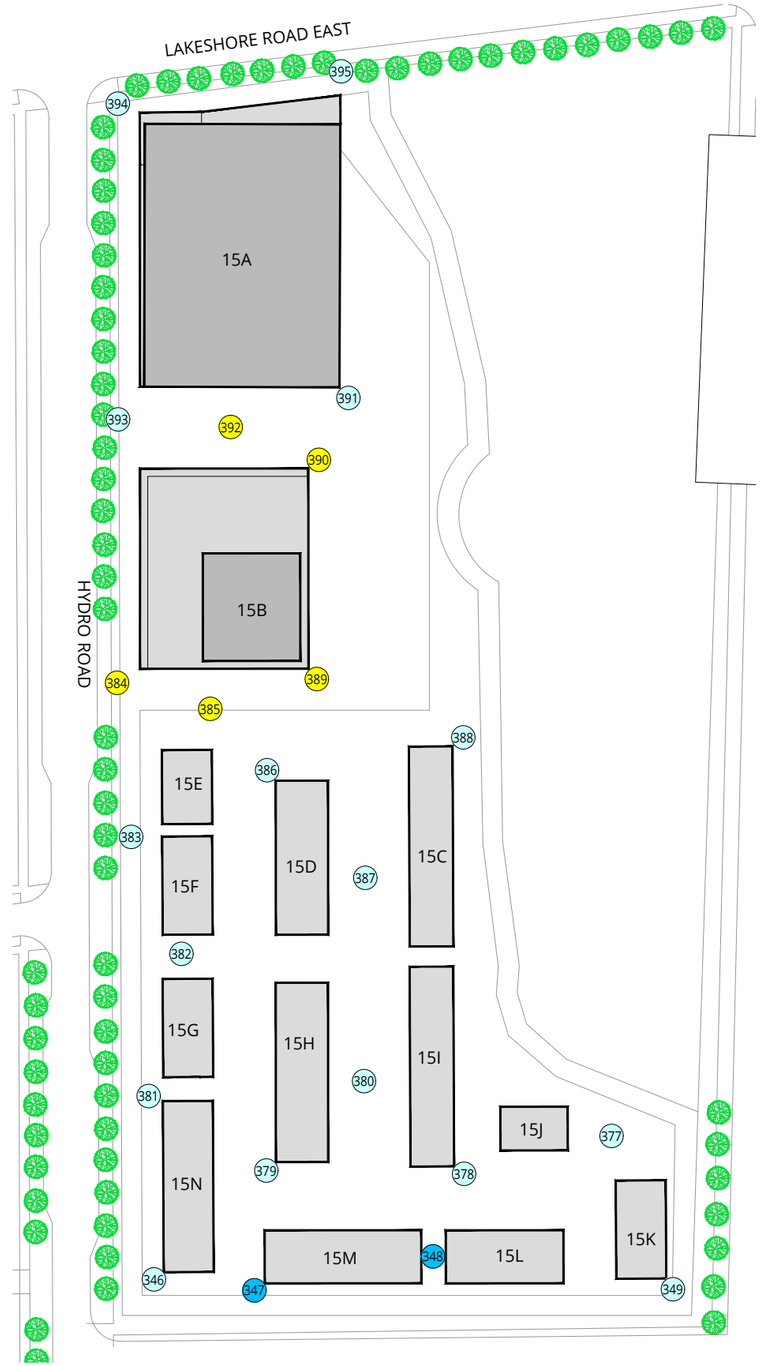


For Building Plots 7A-C, 8 & 14



For Building Plots 15A-K

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION: Grade Level

LANDSCAPING: Tree

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed With Trees
Summer (May to October, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	1.5b
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Date Revised:	Nov. 1, 2018		

Key Plan of Entire Site
Proposed

Lakeview Village - Mississauga, ON

True North

Project #1804164

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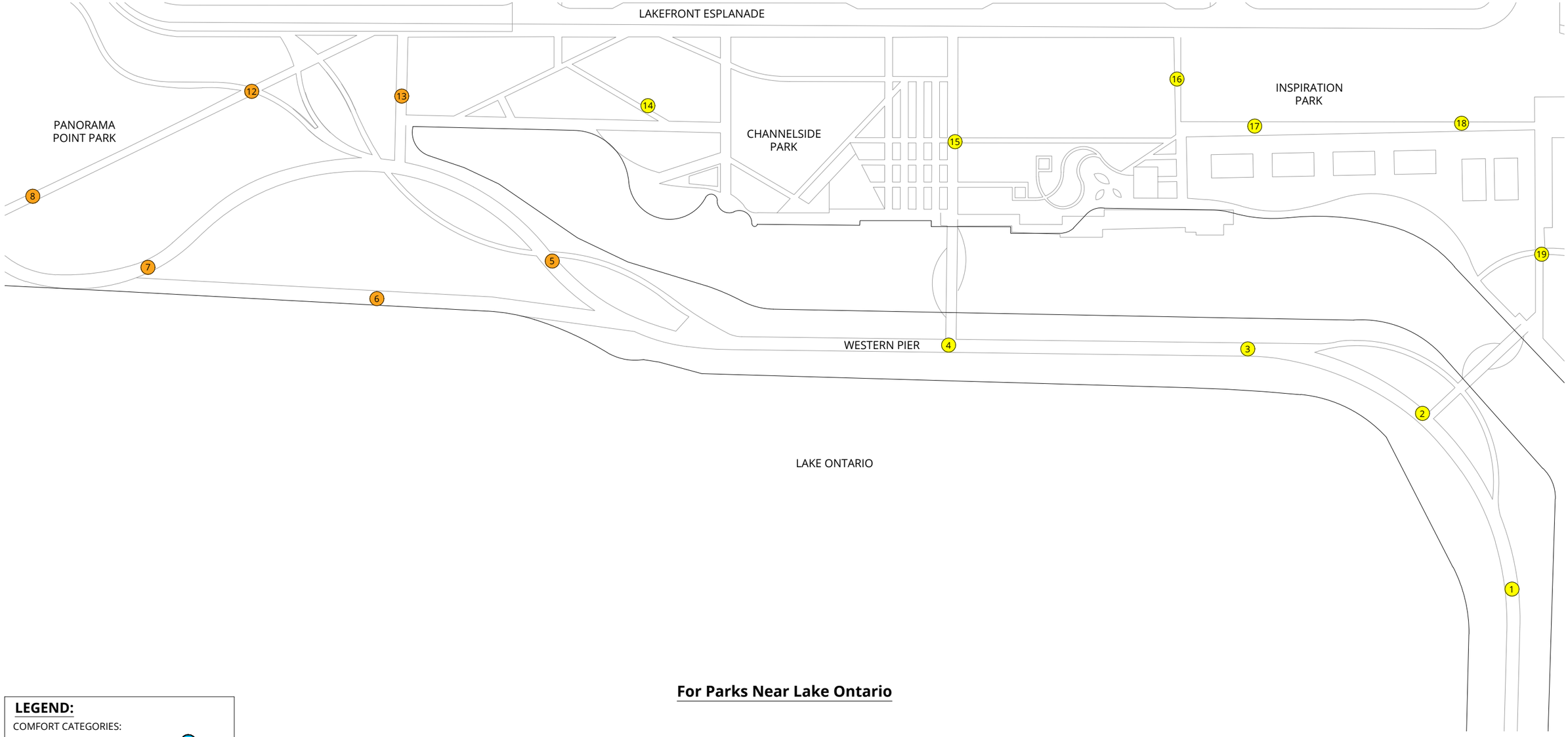
Date Revised:			Nov. 1, 2018



For Parks Near Lake Ontario

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level

0 30 60m

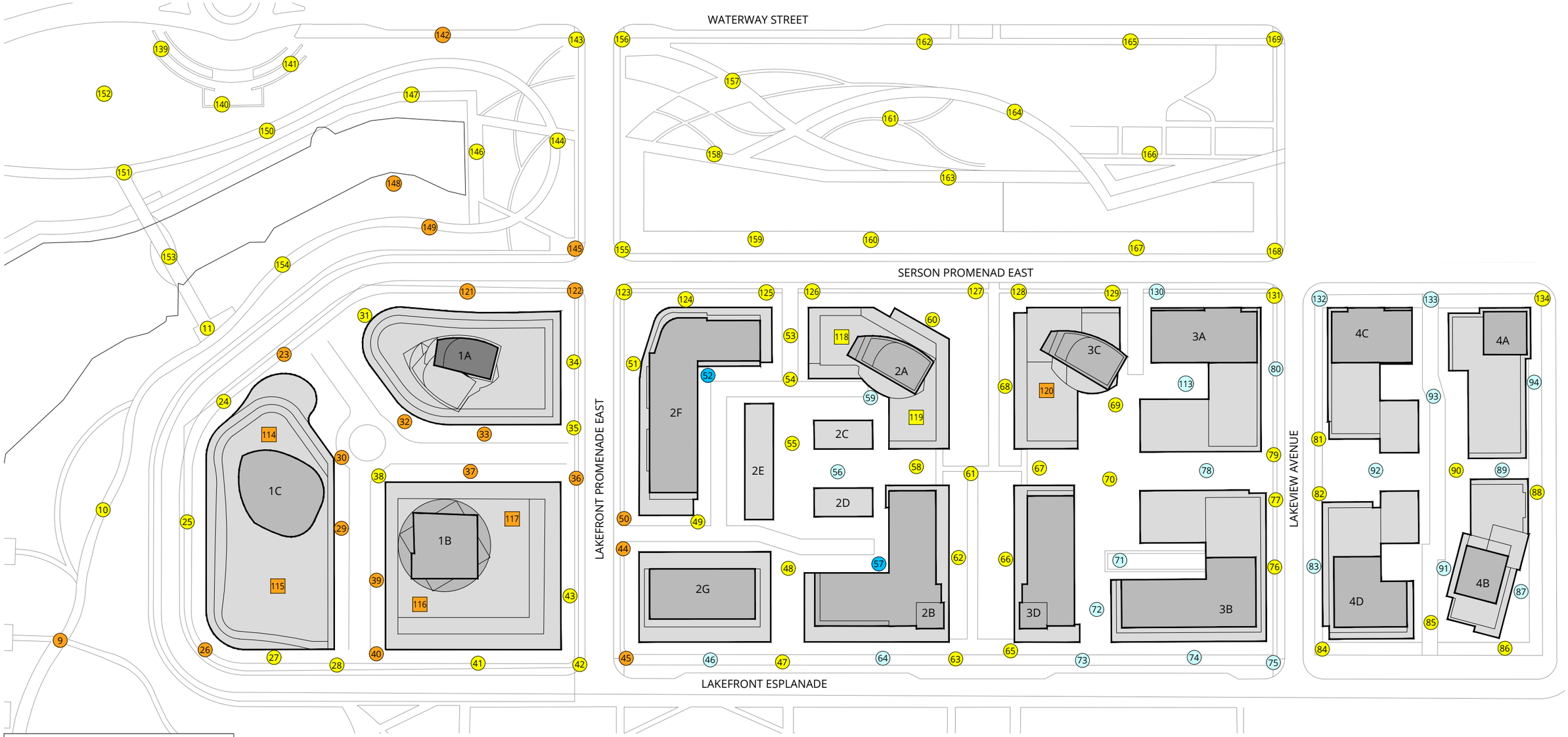
Pedestrian Wind Comfort Conditions
Proposed
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by: SPA	Figure: 2.1a
Approx. Scale:	1:1500
Date Revised:	Nov. 1, 2018



LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level
- Podium Level

For Building Plots 1 - 4

0 30 60m

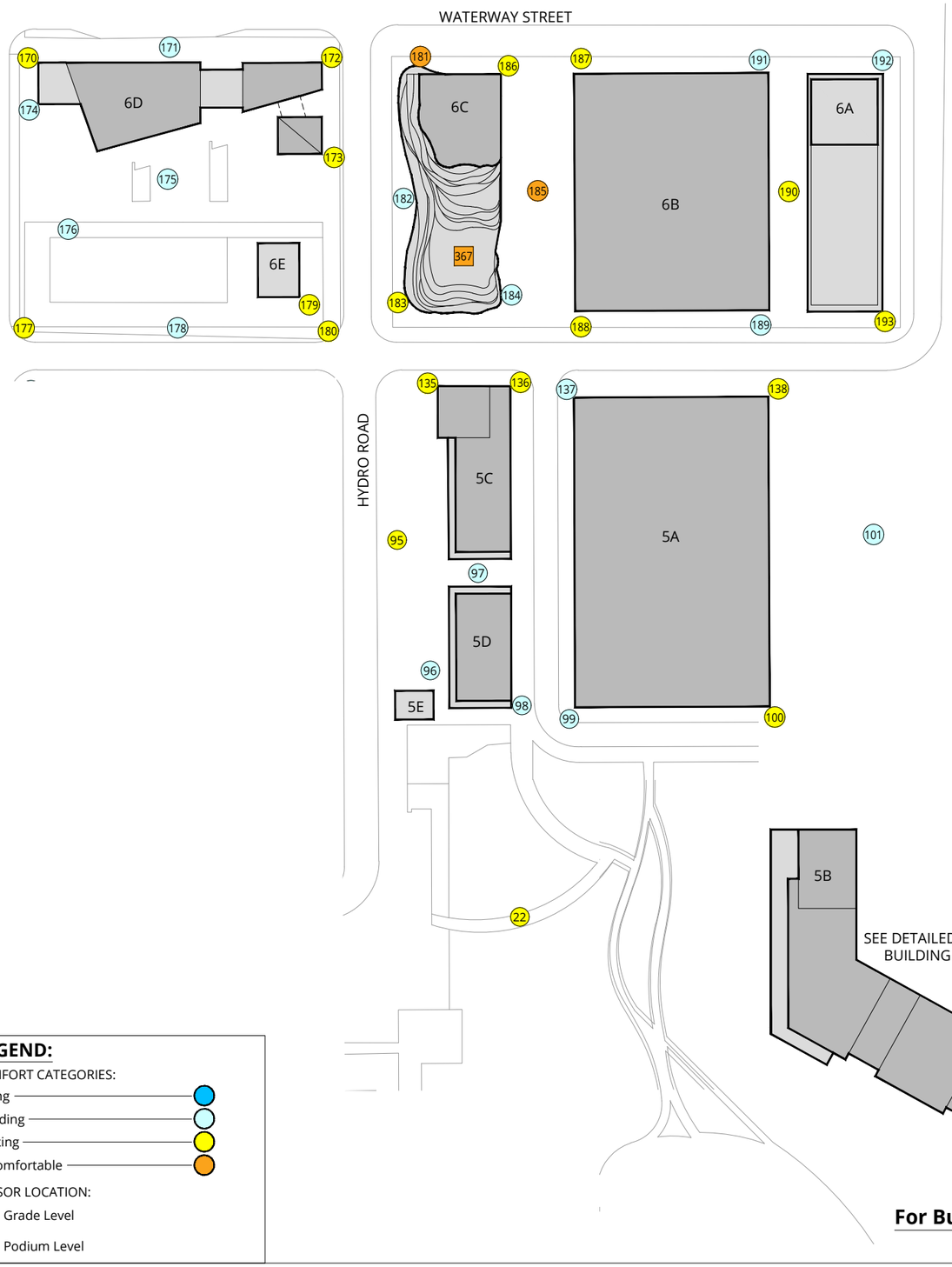
Pedestrian Wind Comfort Conditions
Proposed
Winter (November to April, 6:00 to 23:00)

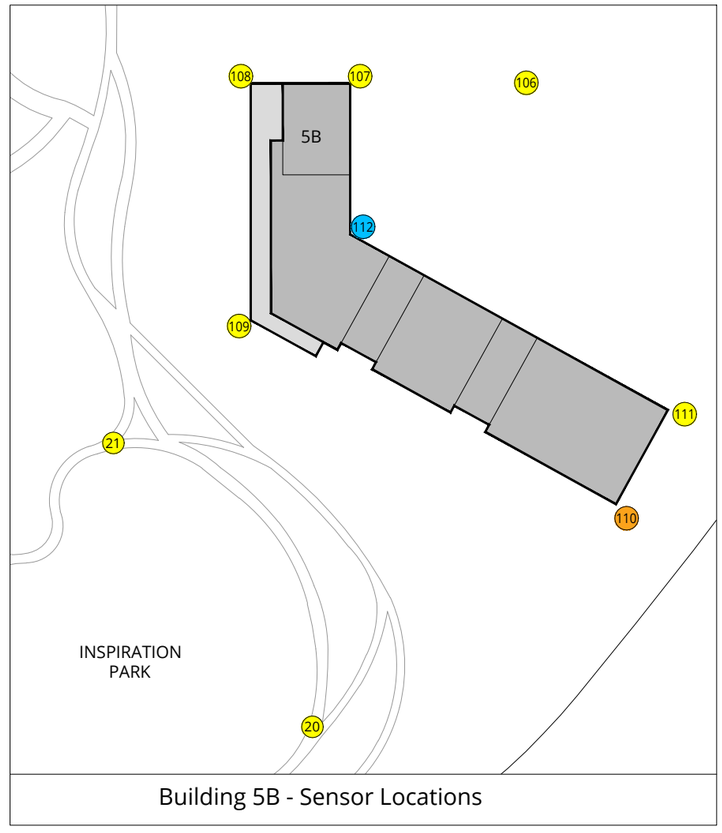
Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	2.2a
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		





Building 5B - Sensor Locations

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

For Building Plots 5, 6 & 7D

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Drawn by:	SPA	Figure:	2.3a
Approx. Scale:	1:1500		
Project #1804164	Date Revised:	Nov. 1, 2018	

For Building Plots 9 - 13

0 30 60m

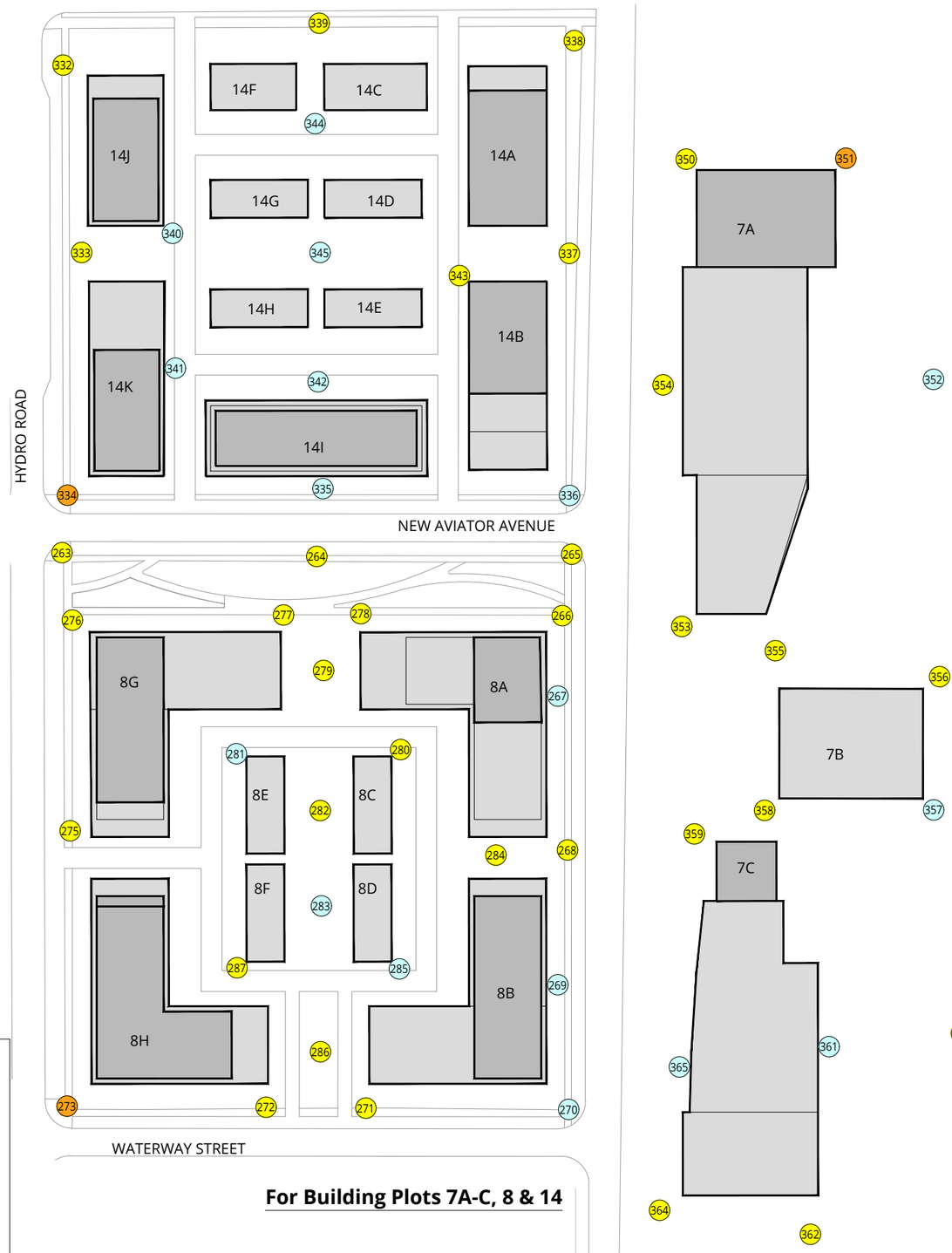
Pedestrian Wind Comfort Conditions
Proposed
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by: SPA	Figure: 2.4a	
Approx. Scale:	1:1500	
Date Revised:	Nov. 1, 2018	



LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level

For Building Plots 7A-C, 8 & 14

For Building Plots 15A-K

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	2.5a
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

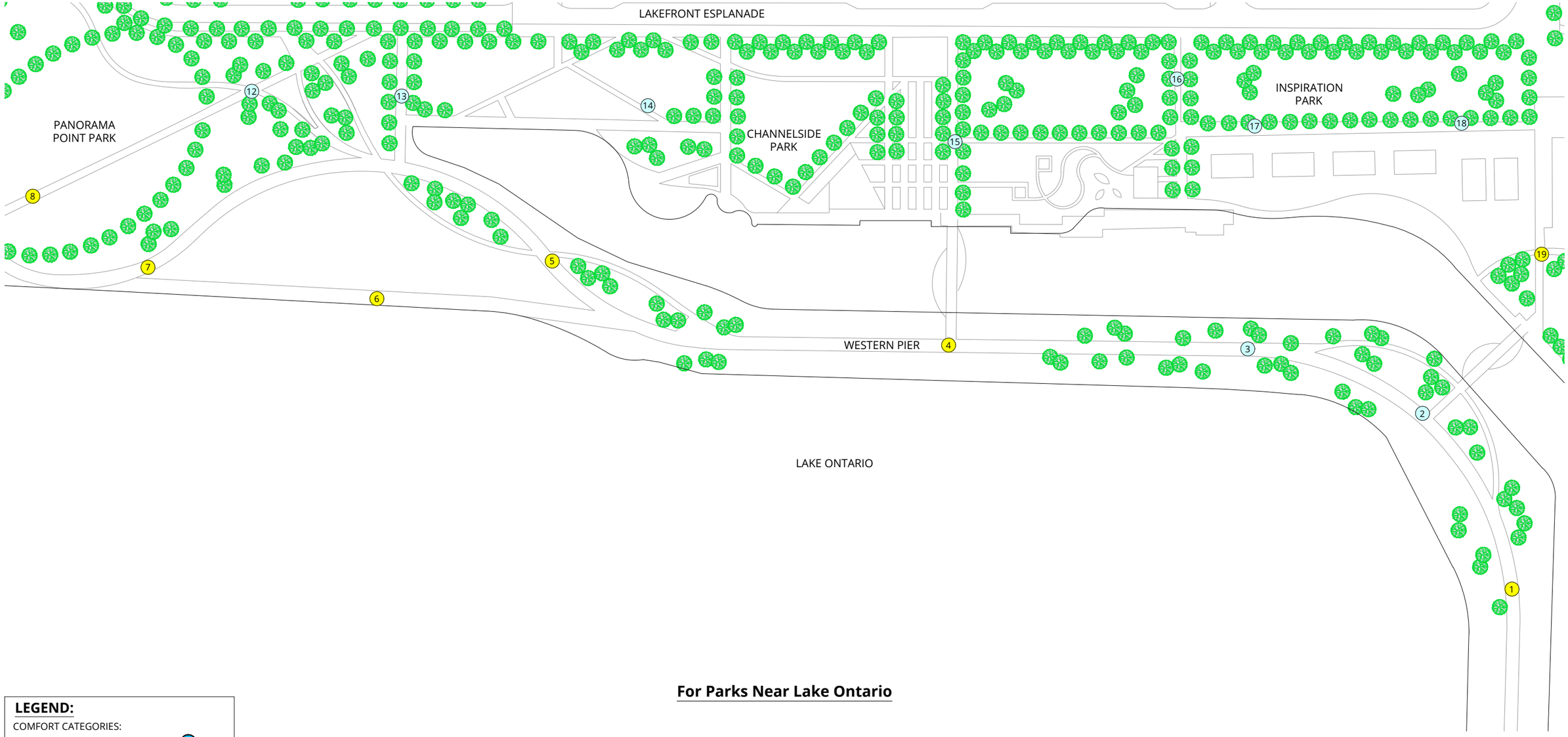
Key Plan of Entire Site
Proposed with Trees

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	KP
Approx. Scale:			N/A
Date Revised:			Nov. 1, 2018



For Parks Near Lake Ontario

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level

LANDSCAPING:
- Tree

0 30 60m

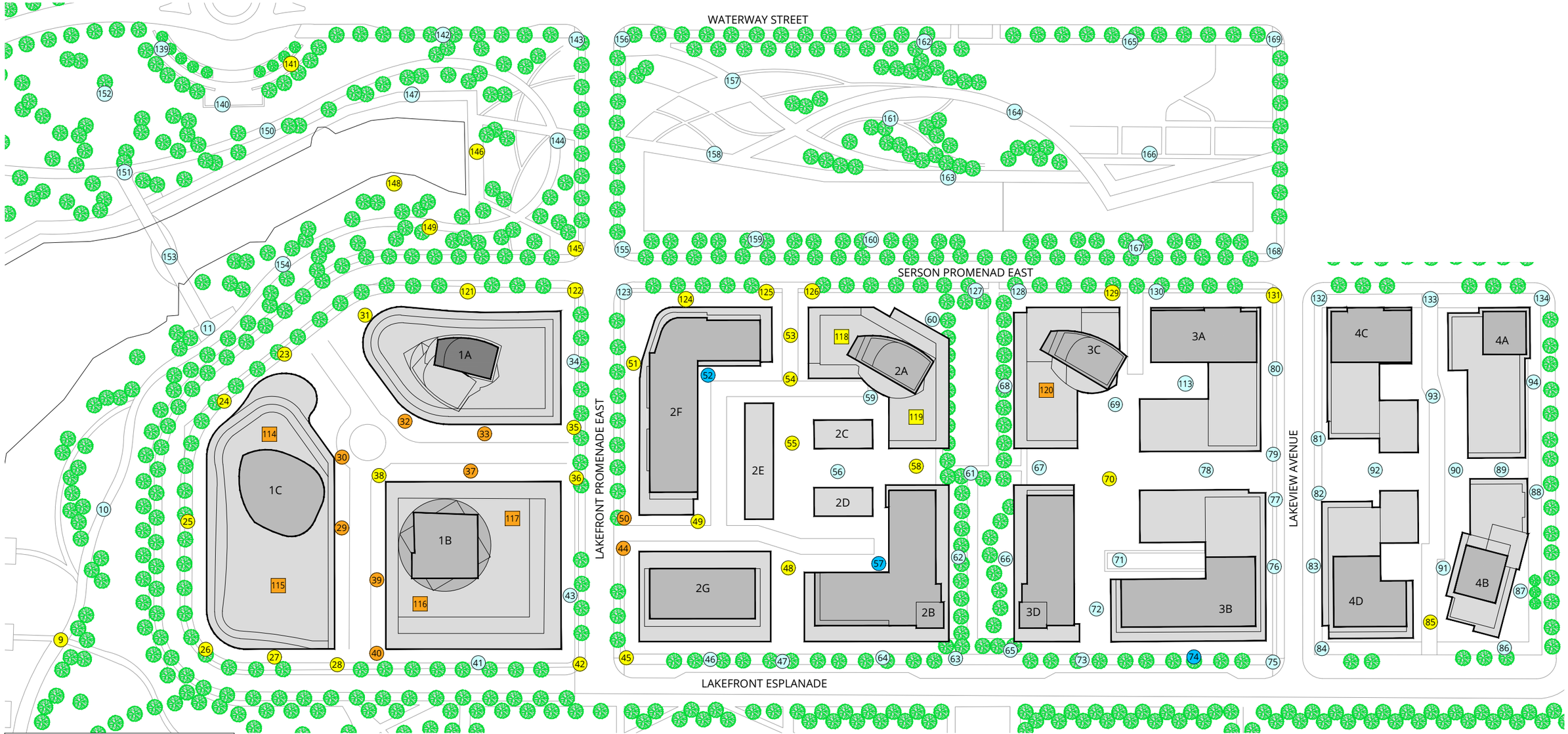
Pedestrian Wind Comfort Conditions
Proposed With Trees
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	2.1b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		



LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Grade Level
- Podium Level

LANDSCAPING:

- Tree

For Building Plots 1 - 4

0 30 60m

Pedestrian Wind Comfort Conditions

Proposed With Trees

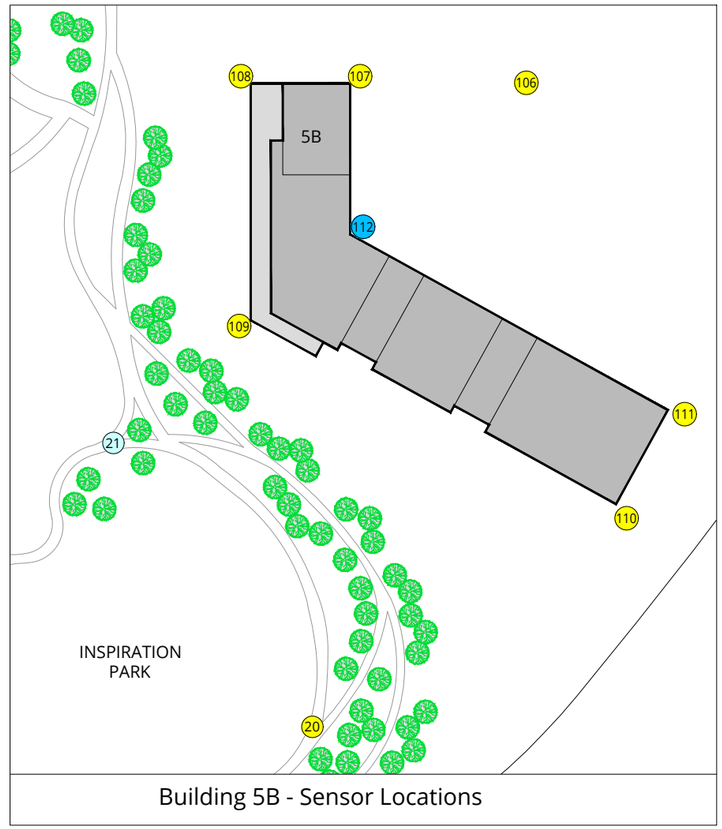
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	2.2b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		



Building 5B - Sensor Locations

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

LANDSCAPING:
- Tree

For Building Plots 5, 6 & 7D

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed With Trees
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	2.3b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:
- Grade Level
- Podium Level

LANDSCAPING:
- Tree

For Building Plots 9 - 13

0 30 60m

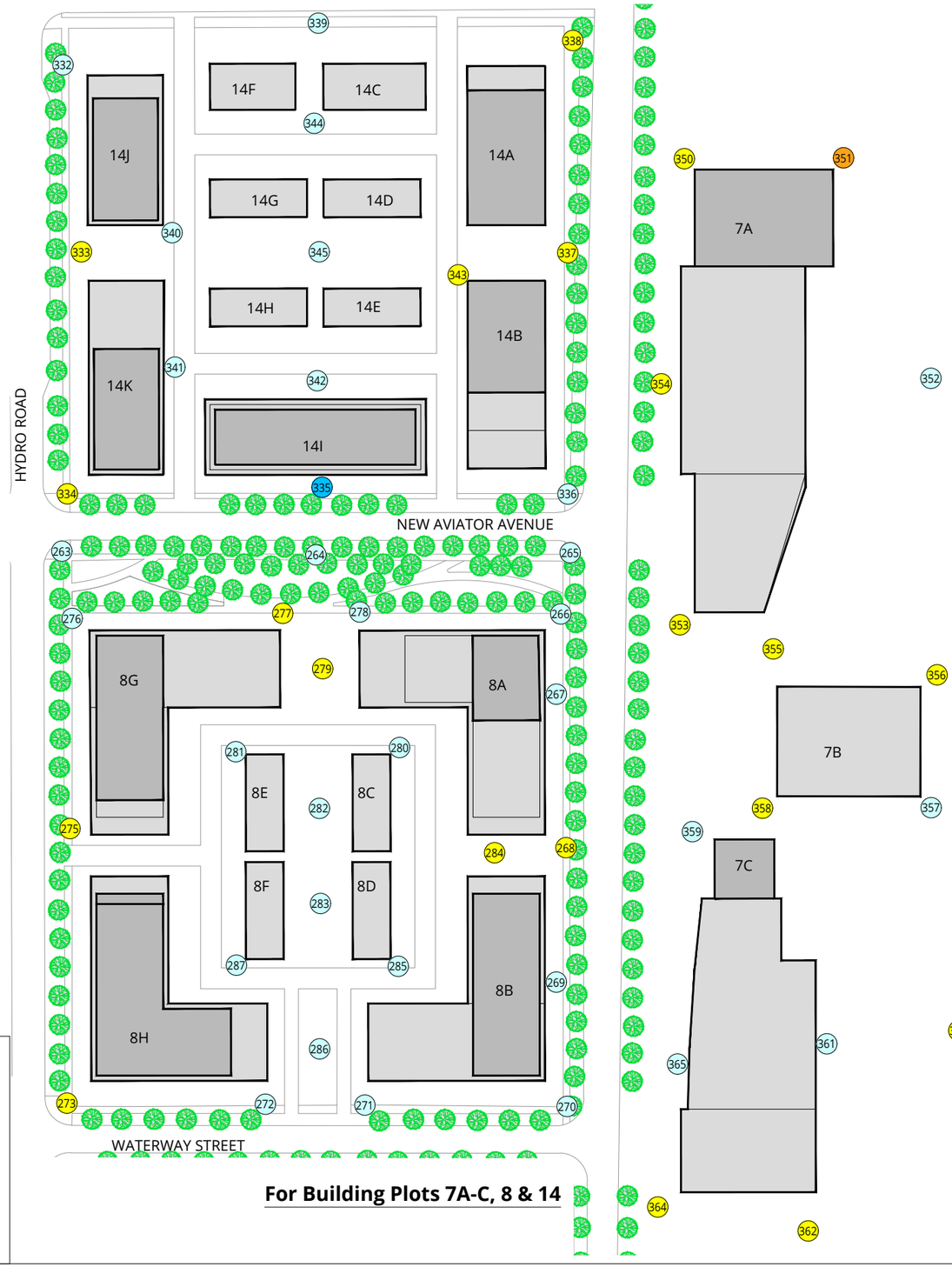
Pedestrian Wind Comfort Conditions
Proposed With Trees
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

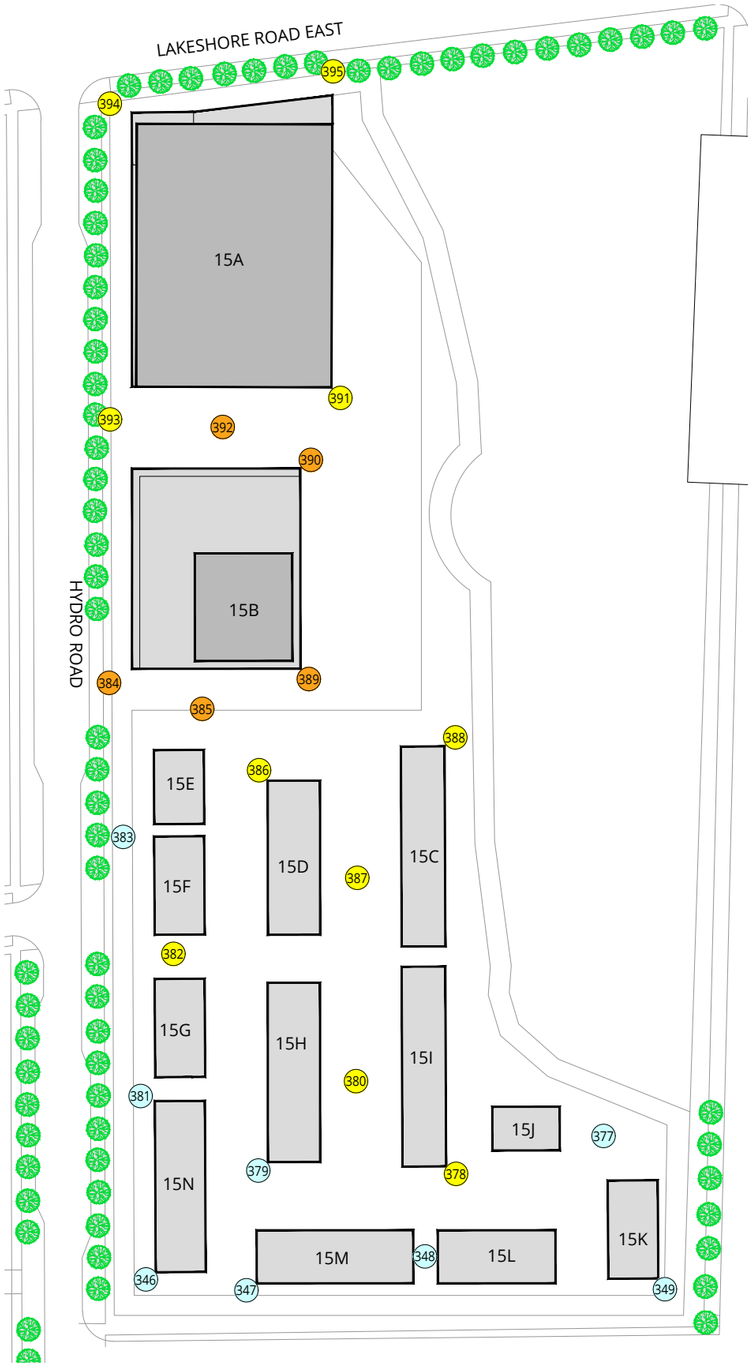
True North

Project #1804164

Drawn by:	SPA	Figure:	2.4b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		



For Building Plots 7A-C, 8 & 14



For Building Plots 15A-K

LEGEND:

COMFORT CATEGORIES:
- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION: Grade Level

LANDSCAPING: Tree

0 30 60m

Pedestrian Wind Comfort Conditions
Proposed With Trees
Winter (November to April, 6:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	2.5b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

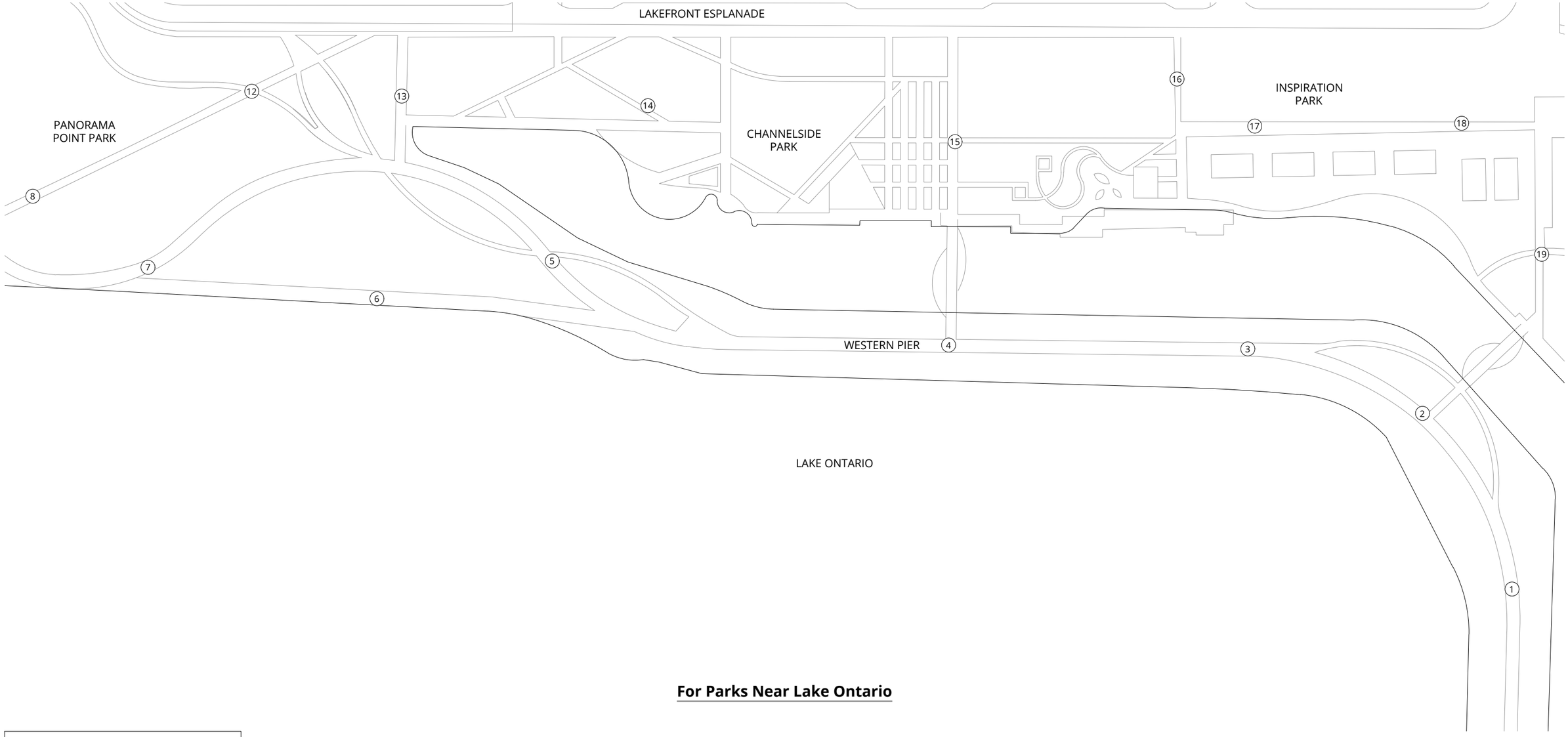
Key Plan of Entire Site
Proposed

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	KP
Approx. Scale:		N/A	
Date Revised:		Nov. 1, 2018	



For Parks Near Lake Ontario

LEGEND:

SAFETY CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Podium Level

0 30 60m

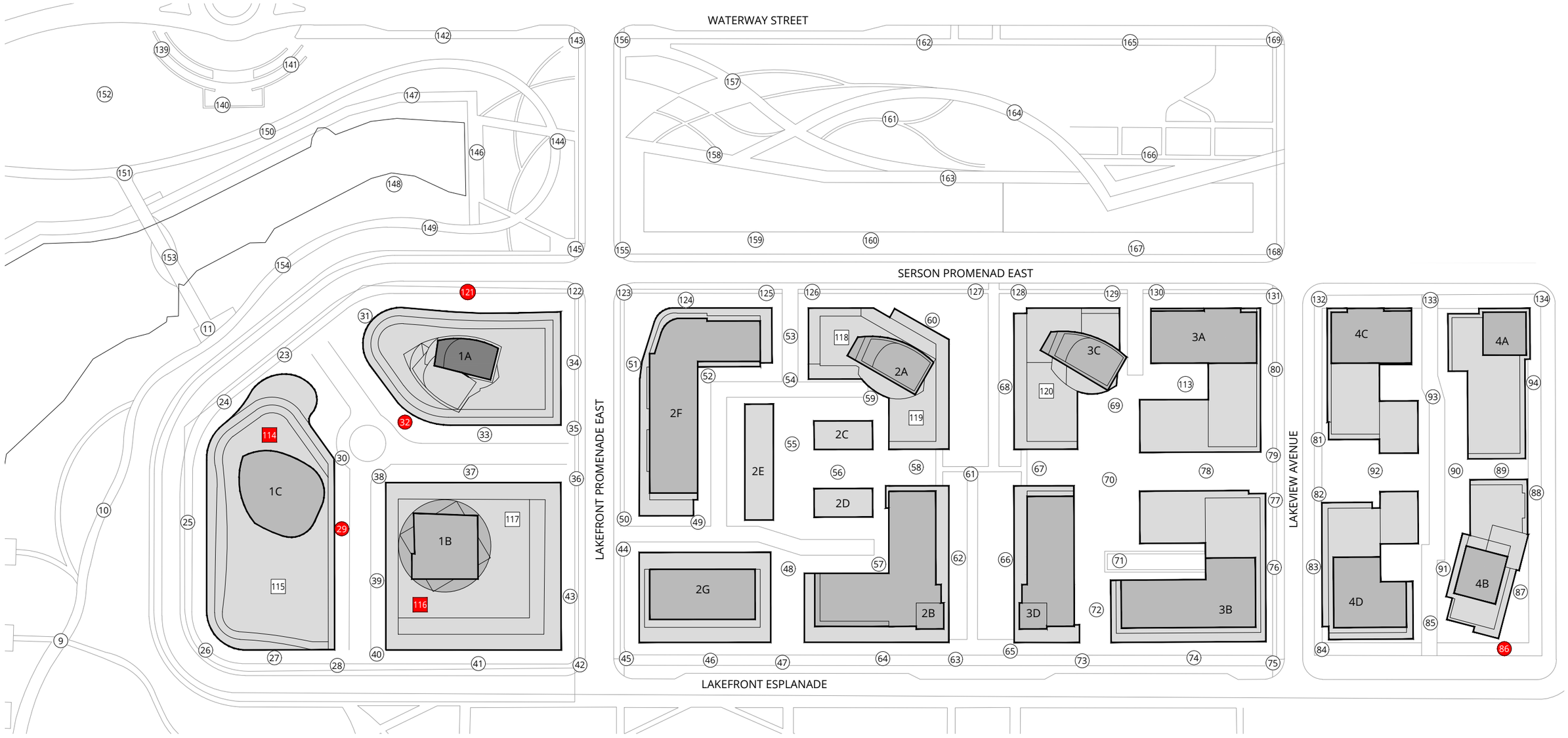
Pedestrian Wind Safety Conditions
Proposed
Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	3.1a
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		



LEGEND:

SAFETY CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Podium Level

For Building Plots 1 - 4

0 30 60m

Pedestrian Wind Safety Conditions

Proposed

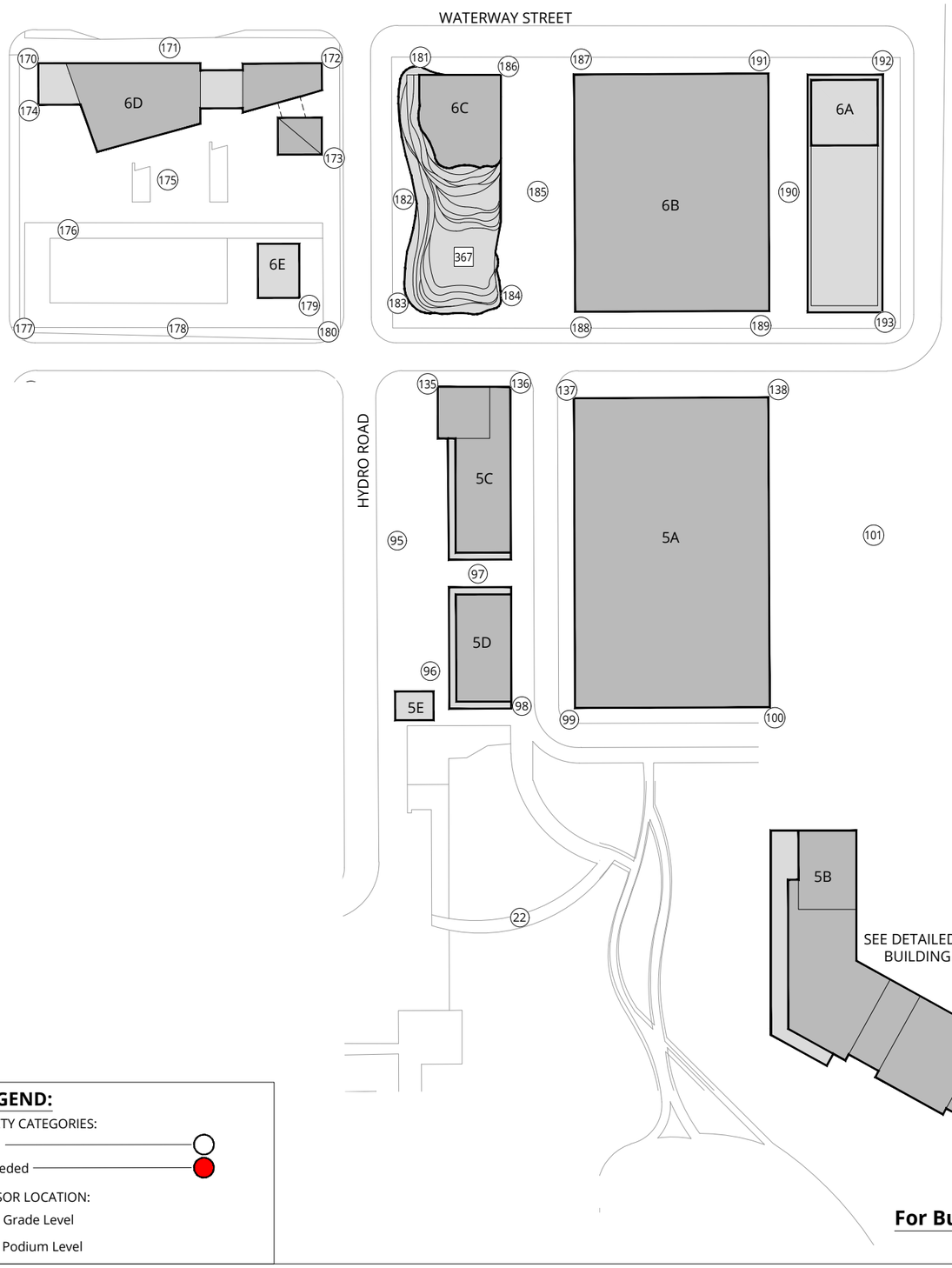
Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	3.2a
Approx. Scale:		1:1500	
Date Revised:		Nov. 1, 2018	



Building 5B - Sensor Locations

LEGEND:

SAFETY CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Podium Level

For Building Plots 5, 6 & 7D

0 30 60m

Pedestrian Wind Safety Conditions
Proposed
Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	3.3a
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

For Building Plots 9 - 13

0 30 60m

Pedestrian Wind Safety Conditions
Proposed
Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by: SPA	Figure: 3.4a	
Approx. Scale:	1:1500	
Date Revised:	Nov. 1, 2018	

LEGEND:

SAFETY CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Podium Level

For Building Plots 7A-C, 8 & 14

For Building Plots 15A-K

0 30 60m

Pedestrian Wind Safety Conditions

Proposed

Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	3.5a
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

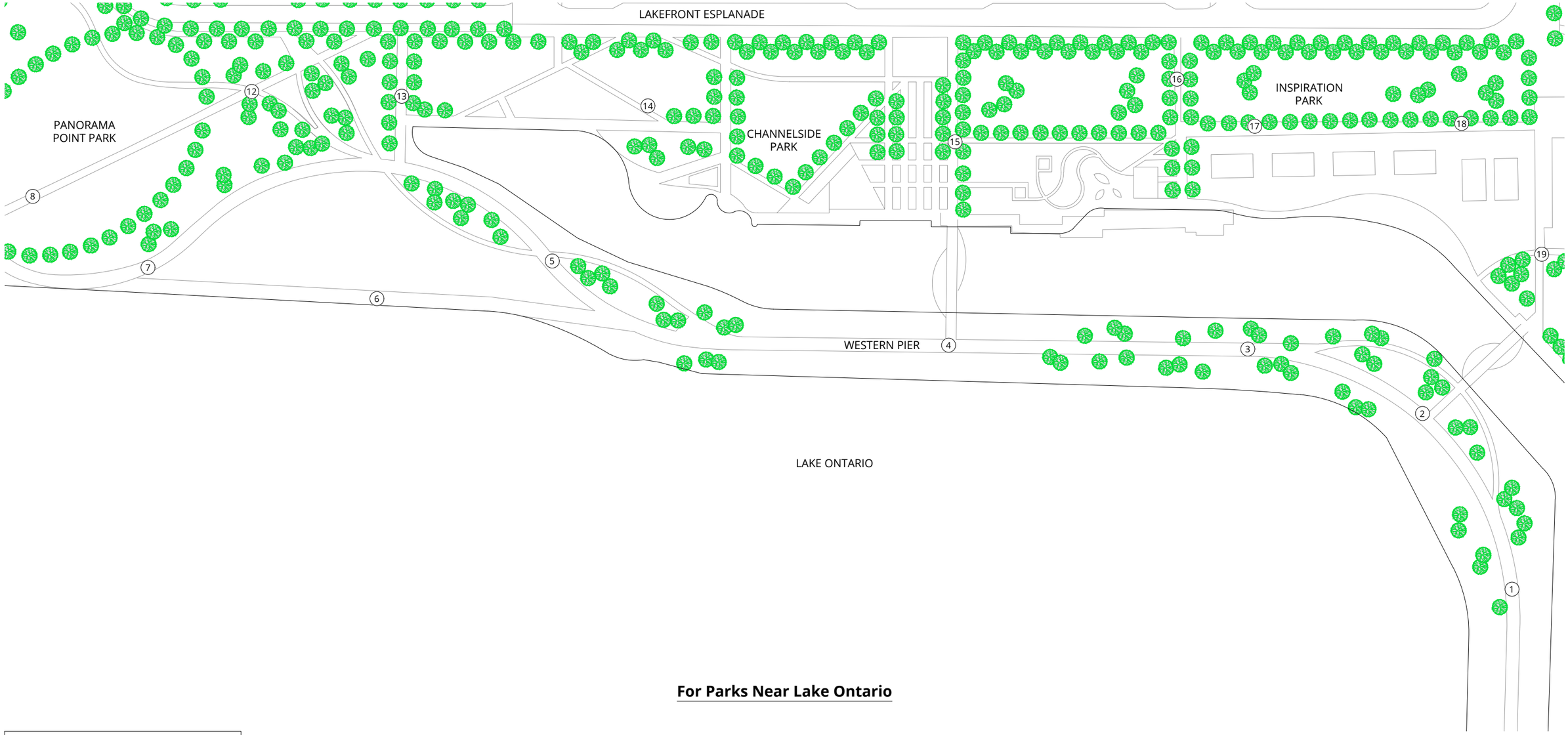
Key Plan of Entire Site
Proposed With Trees

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by: SPA	Figure: KP	
Approx. Scale:	N/A	
Date Revised:	Nov. 1, 2018	



For Parks Near Lake Ontario

LEGEND:

SAFETY CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Podium Level

LANDSCAPING:

Tree

0 30 60m

Pedestrian Wind Safety Conditions

Proposed With Trees

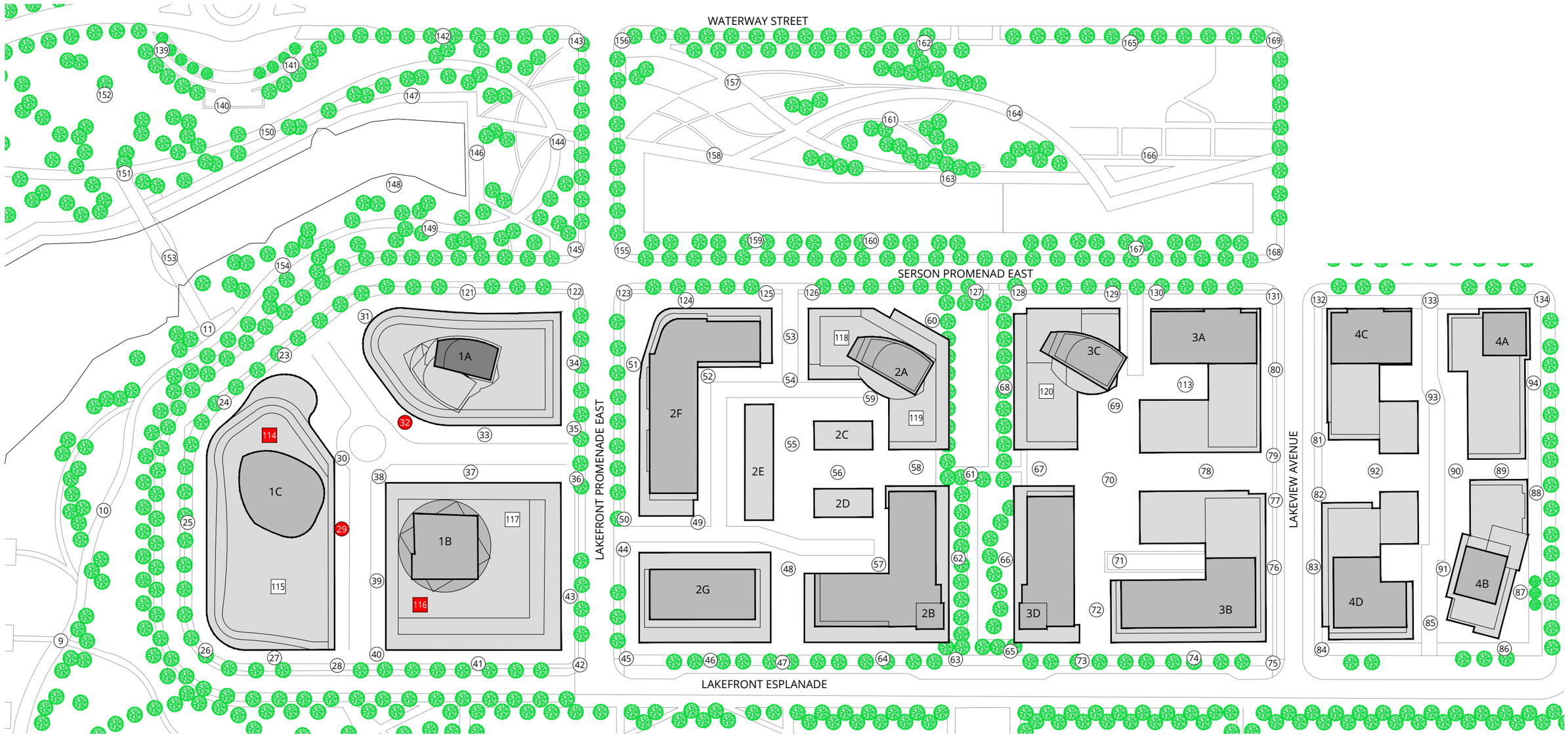
Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:3.1b
Approx. Scale:	1:1500	
Date Revised:	Nov. 1, 2018	



LEGEND:

SAFETY CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Podium Level

LANDSCAPING:

Tree

For Building Plots 1 - 4

0 30 60m

Pedestrian Wind Safety Conditions

Proposed With Trees

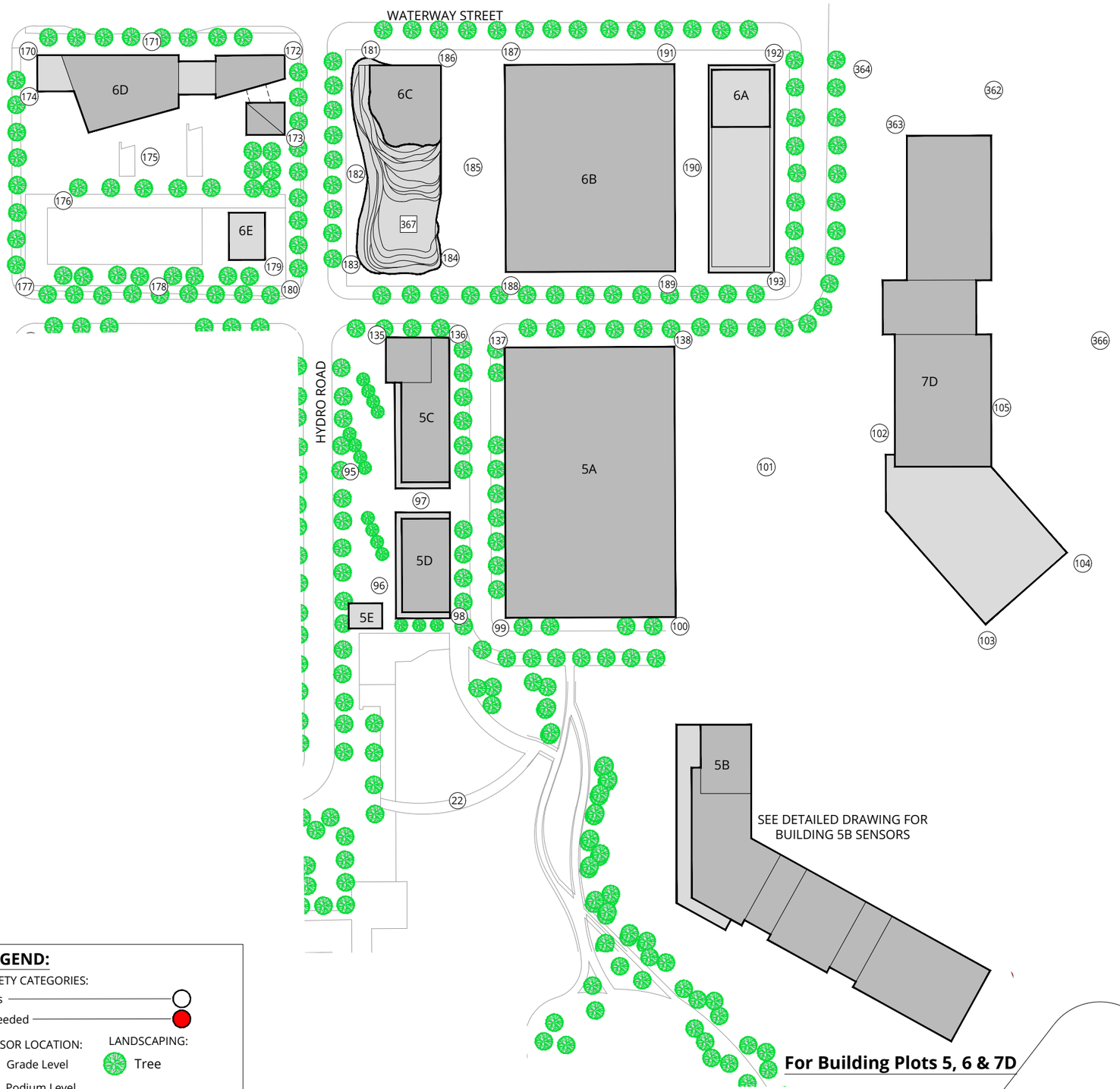
Annual (January to December, 0:00 to 23:00)

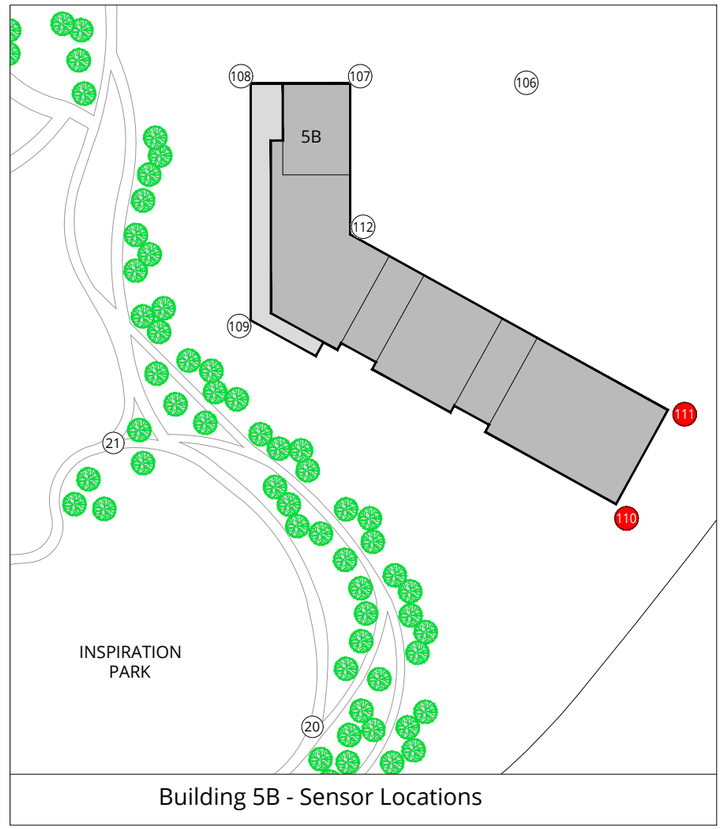
Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	3.2b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		





Building 5B - Sensor Locations

LEGEND:

SAFETY CATEGORIES:
- Pass
- Exceeded

SENSOR LOCATION:
- Grade Level
- Podium Level

LANDSCAPING:
- Tree

For Building Plots 5, 6 & 7D

0 30 60m

Pedestrian Wind Safety Conditions
Proposed With Trees
Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Drawn by:	SPA	Figure:	3.3b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

Project #1804164

LEGEND:

SAFETY CATEGORIES:

Pass

Exceeded

SENSOR LOCATION:

Grade Level

Podium Level

LANDSCAPING:

Tree

For Building Plots 9 - 13

0 30 60m

Pedestrian Wind Safety Conditions

Proposed With Trees

Annual (January to December, 0:00 to 23:00)

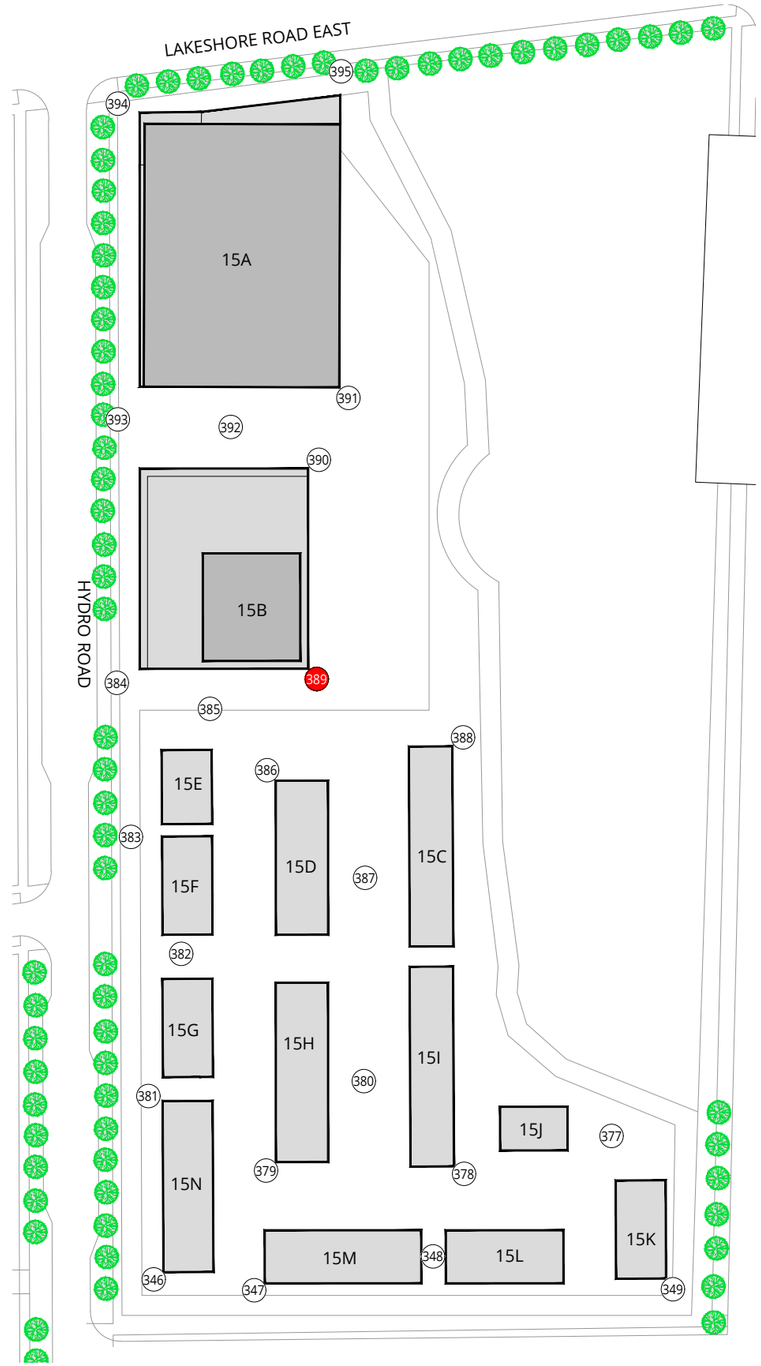
Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	3.4b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

For Building Plots 7A-C, 8 & 14



For Building Plots 15A-K

LEGEND:

SAFETY CATEGORIES:
- Pass
- Exceeded

SENSOR LOCATION:
- Grade Level
- Podium Level

LANDSCAPING:
- Tree

0 30 60m

Pedestrian Wind Safety Conditions
Proposed With Trees
Annual (January to December, 0:00 to 23:00)

Lakeview Village - Mississauga, ON

True North

Project #1804164

Drawn by:	SPA	Figure:	3.5b
Approx. Scale:	1:1500		
Date Revised:	Nov. 1, 2018		

TABLES

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
1	Proposed	16	Walking	20	Walking	71	Pass
	Proposed with trees	15	Standing	19	Walking	70	Pass
2	Proposed	16	Walking	19	Walking	69	Pass
	Proposed with trees	12	Standing	14	Standing	56	Pass
3	Proposed	16	Walking	19	Walking	68	Pass
	Proposed with trees	12	Standing	15	Standing	53	Pass
4	Proposed	15	Standing	19	Walking	70	Pass
	Proposed with trees	15	Standing	18	Walking	67	Pass
5	Proposed	16	Walking	21	Uncomfortable	70	Pass
	Proposed with trees	13	Standing	16	Walking	60	Pass
6	Proposed	16	Walking	22	Uncomfortable	70	Pass
	Proposed with trees	15	Standing	18	Walking	67	Pass
7	Proposed	17	Walking	22	Uncomfortable	72	Pass
	Proposed with trees	14	Standing	18	Walking	71	Pass
8	Proposed	17	Walking	23	Uncomfortable	71	Pass
	Proposed with trees	13	Standing	18	Walking	61	Pass
9	Proposed	17	Walking	22	Uncomfortable	72	Pass
	Proposed with trees	12	Standing	16	Walking	56	Pass
10	Proposed	14	Standing	18	Walking	66	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
11	Proposed	16	Walking	19	Walking	82	Pass
	Proposed with trees	11	Standing	14	Standing	53	Pass
12	Proposed	16	Walking	22	Uncomfortable	74	Pass
	Proposed with trees	10	Sitting	13	Standing	50	Pass
13	Proposed	16	Walking	22	Uncomfortable	73	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
14	Proposed	15	Standing	19	Walking	68	Pass
	Proposed with trees	10	Sitting	14	Standing	57	Pass
15	Proposed	15	Standing	18	Walking	68	Pass
	Proposed with trees	11	Standing	13	Standing	62	Pass
16	Proposed	14	Standing	17	Walking	69	Pass
	Proposed with trees	10	Sitting	12	Standing	54	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
17	Proposed	15	Standing	18	Walking	69	Pass
	Proposed with trees	11	Standing	13	Standing	65	Pass
18	Proposed	14	Standing	17	Walking	70	Pass
	Proposed with trees	11	Standing	14	Standing	67	Pass
19	Proposed	15	Standing	18	Walking	69	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass
20	Proposed	16	Walking	20	Walking	69	Pass
	Proposed with trees	14	Standing	17	Walking	64	Pass
21	Proposed	15	Standing	18	Walking	68	Pass
	Proposed with trees	11	Standing	15	Standing	61	Pass
22	Proposed	13	Standing	16	Walking	71	Pass
	Proposed with trees	10	Sitting	13	Standing	66	Pass
23	Proposed	16	Walking	21	Uncomfortable	88	Pass
	Proposed with trees	14	Standing	17	Walking	80	Pass
24	Proposed	16	Walking	20	Walking	77	Pass
	Proposed with trees	13	Standing	17	Walking	61	Pass
25	Proposed	16	Walking	20	Walking	78	Pass
	Proposed with trees	13	Standing	18	Walking	68	Pass
26	Proposed	20	Walking	27	Uncomfortable	88	Pass
	Proposed with trees	14	Standing	19	Walking	68	Pass
27	Proposed	15	Standing	20	Walking	79	Pass
	Proposed with trees	12	Standing	18	Walking	68	Pass
28	Proposed	16	Walking	20	Walking	72	Pass
	Proposed with trees	13	Standing	17	Walking	68	Pass
29	Proposed	21	Uncomfortable	25	Uncomfortable	101	Exceeded
	Proposed with trees	19	Walking	22	Uncomfortable	98	Exceeded
30	Proposed	19	Walking	25	Uncomfortable	82	Pass
	Proposed with trees	18	Walking	22	Uncomfortable	79	Pass
31	Proposed	16	Walking	20	Walking	81	Pass
	Proposed with trees	15	Standing	17	Walking	87	Pass
32	Proposed	22	Uncomfortable	30	Uncomfortable	105	Exceeded
	Proposed with trees	21	Uncomfortable	26	Uncomfortable	100	Exceeded

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
33	Proposed	19	Walking	24	Uncomfortable	84	Pass
	Proposed with trees	18	Walking	23	Uncomfortable	80	Pass
34	Proposed	14	Standing	17	Walking	76	Pass
	Proposed with trees	11	Standing	14	Standing	58	Pass
35	Proposed	16	Walking	19	Walking	73	Pass
	Proposed with trees	14	Standing	17	Walking	66	Pass
36	Proposed	16	Walking	22	Uncomfortable	78	Pass
	Proposed with trees	14	Standing	20	Walking	72	Pass
37	Proposed	19	Walking	26	Uncomfortable	85	Pass
	Proposed with trees	18	Walking	23	Uncomfortable	82	Pass
38	Proposed	16	Walking	19	Walking	76	Pass
	Proposed with trees	16	Walking	18	Walking	76	Pass
39	Proposed	20	Walking	26	Uncomfortable	89	Pass
	Proposed with trees	18	Walking	24	Uncomfortable	86	Pass
40	Proposed	19	Walking	26	Uncomfortable	90	Pass
	Proposed with trees	16	Walking	23	Uncomfortable	83	Pass
41	Proposed	16	Walking	20	Walking	73	Pass
	Proposed with trees	12	Standing	15	Standing	59	Pass
42	Proposed	15	Standing	19	Walking	72	Pass
	Proposed with trees	12	Standing	16	Walking	65	Pass
43	Proposed	15	Standing	20	Walking	74	Pass
	Proposed with trees	11	Standing	15	Standing	59	Pass
44	Proposed	17	Walking	23	Uncomfortable	88	Pass
	Proposed with trees	15	Standing	21	Uncomfortable	81	Pass
45	Proposed	15	Standing	21	Uncomfortable	77	Pass
	Proposed with trees	12	Standing	18	Walking	75	Pass
46	Proposed	13	Standing	15	Standing	67	Pass
	Proposed with trees	10	Sitting	12	Standing	54	Pass
47	Proposed	13	Standing	16	Walking	66	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
48	Proposed	16	Walking	19	Walking	77	Pass
	Proposed with trees	13	Standing	17	Walking	66	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
49	Proposed	13	Standing	16	Walking	63	Pass
	Proposed with trees	13	Standing	17	Walking	67	Pass
50	Proposed	17	Walking	24	Uncomfortable	89	Pass
	Proposed with trees	15	Standing	22	Uncomfortable	84	Pass
51	Proposed	15	Standing	20	Walking	78	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass
52	Proposed	8	Sitting	10	Sitting	40	Pass
	Proposed with trees	8	Sitting	10	Sitting	40	Pass
53	Proposed	13	Standing	17	Walking	67	Pass
	Proposed with trees	12	Standing	17	Walking	64	Pass
54	Proposed	15	Standing	19	Walking	72	Pass
	Proposed with trees	14	Standing	18	Walking	70	Pass
55	Proposed	12	Standing	16	Walking	64	Pass
	Proposed with trees	11	Standing	16	Walking	61	Pass
56	Proposed	11	Standing	14	Standing	53	Pass
	Proposed with trees	10	Sitting	13	Standing	49	Pass
57	Proposed	8	Sitting	10	Sitting	40	Pass
	Proposed with trees	7	Sitting	10	Sitting	38	Pass
58	Proposed	13	Standing	17	Walking	65	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass
59	Proposed	10	Sitting	13	Standing	47	Pass
	Proposed with trees	9	Sitting	13	Standing	45	Pass
60	Proposed	13	Standing	17	Walking	76	Pass
	Proposed with trees	11	Standing	14	Standing	59	Pass
61	Proposed	15	Standing	19	Walking	78	Pass
	Proposed with trees	11	Standing	15	Standing	60	Pass
62	Proposed	14	Standing	17	Walking	79	Pass
	Proposed with trees	8	Sitting	11	Standing	44	Pass
63	Proposed	14	Standing	16	Walking	64	Pass
	Proposed with trees	10	Sitting	13	Standing	53	Pass
64	Proposed	12	Standing	14	Standing	68	Pass
	Proposed with trees	10	Sitting	11	Standing	53	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
65	Proposed	15	Standing	20	Walking	75	Pass
	Proposed with trees	10	Sitting	13	Standing	57	Pass
66	Proposed	14	Standing	17	Walking	67	Pass
	Proposed with trees	9	Sitting	12	Standing	48	Pass
67	Proposed	11	Standing	16	Walking	64	Pass
	Proposed with trees	11	Standing	15	Standing	64	Pass
68	Proposed	13	Standing	18	Walking	69	Pass
	Proposed with trees	10	Sitting	14	Standing	52	Pass
69	Proposed	12	Standing	16	Walking	65	Pass
	Proposed with trees	12	Standing	15	Standing	65	Pass
70	Proposed	13	Standing	19	Walking	81	Pass
	Proposed with trees	13	Standing	18	Walking	81	Pass
71	Proposed	11	Standing	15	Standing	64	Pass
	Proposed with trees	11	Standing	14	Standing	62	Pass
72	Proposed	13	Standing	14	Standing	61	Pass
	Proposed with trees	11	Standing	13	Standing	56	Pass
73	Proposed	12	Standing	14	Standing	69	Pass
	Proposed with trees	10	Sitting	12	Standing	59	Pass
74	Proposed	12	Standing	13	Standing	66	Pass
	Proposed with trees	9	Sitting	10	Sitting	56	Pass
75	Proposed	13	Standing	15	Standing	62	Pass
	Proposed with trees	10	Sitting	13	Standing	49	Pass
76	Proposed	14	Standing	16	Walking	81	Pass
	Proposed with trees	11	Standing	13	Standing	68	Pass
77	Proposed	13	Standing	16	Walking	77	Pass
	Proposed with trees	11	Standing	14	Standing	72	Pass
78	Proposed	10	Sitting	13	Standing	55	Pass
	Proposed with trees	10	Sitting	13	Standing	54	Pass
79	Proposed	13	Standing	16	Walking	74	Pass
	Proposed with trees	11	Standing	14	Standing	70	Pass
80	Proposed	11	Standing	14	Standing	57	Pass
	Proposed with trees	10	Sitting	13	Standing	50	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
81	Proposed	12	Standing	17	Walking	63	Pass
	Proposed with trees	10	Sitting	14	Standing	58	Pass
82	Proposed	13	Standing	16	Walking	64	Pass
	Proposed with trees	11	Standing	14	Standing	62	Pass
83	Proposed	12	Standing	14	Standing	55	Pass
	Proposed with trees	10	Sitting	13	Standing	50	Pass
84	Proposed	14	Standing	18	Walking	78	Pass
	Proposed with trees	12	Standing	15	Standing	71	Pass
85	Proposed	14	Standing	18	Walking	70	Pass
	Proposed with trees	13	Standing	17	Walking	66	Pass
86	Proposed	16	Walking	17	Walking	93	Exceeded
	Proposed with trees	13	Standing	15	Standing	68	Pass
87	Proposed	10	Sitting	12	Standing	59	Pass
	Proposed with trees	9	Sitting	11	Standing	51	Pass
88	Proposed	15	Standing	18	Walking	84	Pass
	Proposed with trees	13	Standing	15	Standing	78	Pass
89	Proposed	14	Standing	15	Standing	81	Pass
	Proposed with trees	12	Standing	14	Standing	77	Pass
90	Proposed	13	Standing	16	Walking	74	Pass
	Proposed with trees	12	Standing	15	Standing	65	Pass
91	Proposed	12	Standing	14	Standing	69	Pass
	Proposed with trees	12	Standing	14	Standing	70	Pass
92	Proposed	12	Standing	14	Standing	62	Pass
	Proposed with trees	11	Standing	13	Standing	56	Pass
93	Proposed	12	Standing	15	Standing	62	Pass
	Proposed with trees	11	Standing	14	Standing	58	Pass
94	Proposed	12	Standing	14	Standing	77	Pass
	Proposed with trees	10	Sitting	11	Standing	68	Pass
95	Proposed	13	Standing	17	Walking	70	Pass
	Proposed with trees	8	Sitting	11	Standing	45	Pass
96	Proposed	11	Standing	14	Standing	57	Pass
	Proposed with trees	8	Sitting	11	Standing	41	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
97	Proposed	11	Standing	15	Standing	72	Pass
	Proposed with trees	9	Sitting	12	Standing	55	Pass
98	Proposed	13	Standing	15	Standing	60	Pass
	Proposed with trees	8	Sitting	10	Sitting	45	Pass
99	Proposed	12	Standing	15	Standing	69	Pass
	Proposed with trees	8	Sitting	9	Sitting	41	Pass
100	Proposed	16	Walking	17	Walking	87	Pass
	Proposed with trees	12	Standing	15	Standing	82	Pass
101	Proposed	12	Standing	15	Standing	72	Pass
	Proposed with trees	11	Standing	14	Standing	71	Pass
102	Proposed	13	Standing	16	Walking	72	Pass
	Proposed with trees	13	Standing	16	Walking	71	Pass
103	Proposed	16	Walking	19	Walking	91	Exceeded
	Proposed with trees	15	Standing	19	Walking	89	Pass
104	Proposed	14	Standing	17	Walking	65	Pass
	Proposed with trees	14	Standing	16	Walking	67	Pass
105	Proposed	9	Sitting	11	Standing	53	Pass
	Proposed with trees	9	Sitting	11	Standing	52	Pass
106	Proposed	13	Standing	16	Walking	63	Pass
	Proposed with trees	13	Standing	16	Walking	63	Pass
107	Proposed	14	Standing	18	Walking	77	Pass
	Proposed with trees	13	Standing	18	Walking	76	Pass
108	Proposed	16	Walking	19	Walking	75	Pass
	Proposed with trees	15	Standing	18	Walking	68	Pass
109	Proposed	15	Standing	20	Walking	74	Pass
	Proposed with trees	15	Standing	19	Walking	73	Pass
110	Proposed	19	Walking	21	Uncomfortable	94	Exceeded
	Proposed with trees	17	Walking	19	Walking	94	Exceeded
111	Proposed	16	Walking	19	Walking	94	Exceeded
	Proposed with trees	16	Walking	19	Walking	94	Exceeded
112	Proposed	8	Sitting	10	Sitting	46	Pass
	Proposed with trees	8	Sitting	10	Sitting	46	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
113	Proposed	10	Sitting	11	Standing	47	Pass
	Proposed with trees	9	Sitting	11	Standing	46	Pass
114	Proposed	16	Walking	24	Uncomfortable	92	Exceeded
	Proposed with trees	16	Walking	24	Uncomfortable	93	Exceeded
115	Proposed	18	Walking	25	Uncomfortable	87	Pass
	Proposed with trees	18	Walking	25	Uncomfortable	88	Pass
116	Proposed	23	Uncomfortable	29	Uncomfortable	104	Exceeded
	Proposed with trees	23	Uncomfortable	29	Uncomfortable	104	Exceeded
117	Proposed	18	Walking	23	Uncomfortable	87	Pass
	Proposed with trees	18	Walking	23	Uncomfortable	89	Pass
118	Proposed	15	Standing	19	Walking	71	Pass
	Proposed with trees	15	Standing	19	Walking	69	Pass
119	Proposed	15	Standing	19	Walking	78	Pass
	Proposed with trees	15	Standing	19	Walking	78	Pass
120	Proposed	16	Walking	22	Uncomfortable	85	Pass
	Proposed with trees	16	Walking	22	Uncomfortable	82	Pass
121	Proposed	18	Walking	22	Uncomfortable	99	Exceeded
	Proposed with trees	15	Standing	18	Walking	86	Pass
122	Proposed	16	Walking	22	Uncomfortable	81	Pass
	Proposed with trees	12	Standing	16	Walking	63	Pass
123	Proposed	15	Standing	19	Walking	76	Pass
	Proposed with trees	11	Standing	15	Standing	55	Pass
124	Proposed	12	Standing	18	Walking	77	Pass
	Proposed with trees	10	Sitting	16	Walking	70	Pass
125	Proposed	13	Standing	19	Walking	77	Pass
	Proposed with trees	11	Standing	17	Walking	73	Pass
126	Proposed	14	Standing	18	Walking	67	Pass
	Proposed with trees	12	Standing	16	Walking	61	Pass
127	Proposed	14	Standing	17	Walking	77	Pass
	Proposed with trees	13	Standing	14	Standing	72	Pass
128	Proposed	13	Standing	16	Walking	59	Pass
	Proposed with trees	11	Standing	14	Standing	52	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
129	Proposed	13	Standing	19	Walking	72	Pass
	Proposed with trees	12	Standing	16	Walking	67	Pass
130	Proposed	11	Standing	15	Standing	58	Pass
	Proposed with trees	9	Sitting	13	Standing	52	Pass
131	Proposed	13	Standing	18	Walking	67	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass
132	Proposed	12	Standing	15	Standing	57	Pass
	Proposed with trees	11	Standing	14	Standing	51	Pass
133	Proposed	12	Standing	15	Standing	55	Pass
	Proposed with trees	10	Sitting	13	Standing	48	Pass
134	Proposed	15	Standing	19	Walking	88	Pass
	Proposed with trees	12	Standing	15	Standing	74	Pass
135	Proposed	12	Standing	16	Walking	65	Pass
	Proposed with trees	8	Sitting	11	Standing	42	Pass
136	Proposed	13	Standing	16	Walking	89	Pass
	Proposed with trees	12	Standing	14	Standing	82	Pass
137	Proposed	11	Standing	15	Standing	56	Pass
	Proposed with trees	9	Sitting	12	Standing	45	Pass
138	Proposed	13	Standing	16	Walking	89	Pass
	Proposed with trees	12	Standing	14	Standing	82	Pass
139	Proposed	15	Standing	19	Walking	73	Pass
	Proposed with trees	10	Sitting	14	Standing	52	Pass
140	Proposed	15	Standing	19	Walking	77	Pass
	Proposed with trees	11	Standing	14	Standing	57	Pass
141	Proposed	15	Standing	20	Walking	72	Pass
	Proposed with trees	11	Standing	16	Walking	60	Pass
142	Proposed	15	Standing	22	Uncomfortable	76	Pass
	Proposed with trees	11	Standing	15	Standing	55	Pass
143	Proposed	15	Standing	20	Walking	72	Pass
	Proposed with trees	11	Standing	13	Standing	53	Pass
144	Proposed	15	Standing	19	Walking	69	Pass
	Proposed with trees	12	Standing	15	Standing	54	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
145	Proposed	16	Walking	21	Uncomfortable	79	Pass
	Proposed with trees	12	Standing	17	Walking	63	Pass
146	Proposed	15	Standing	20	Walking	70	Pass
	Proposed with trees	13	Standing	16	Walking	59	Pass
147	Proposed	15	Standing	20	Walking	71	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
148	Proposed	17	Walking	21	Uncomfortable	83	Pass
	Proposed with trees	13	Standing	16	Walking	75	Pass
149	Proposed	18	Walking	22	Uncomfortable	88	Pass
	Proposed with trees	14	Standing	17	Walking	77	Pass
150	Proposed	16	Walking	20	Walking	77	Pass
	Proposed with trees	11	Standing	14	Standing	59	Pass
151	Proposed	15	Standing	19	Walking	71	Pass
	Proposed with trees	11	Standing	14	Standing	55	Pass
152	Proposed	15	Standing	19	Walking	66	Pass
	Proposed with trees	10	Sitting	13	Standing	51	Pass
153	Proposed	15	Standing	19	Walking	76	Pass
	Proposed with trees	12	Standing	15	Standing	58	Pass
154	Proposed	16	Walking	19	Walking	77	Pass
	Proposed with trees	11	Standing	14	Standing	63	Pass
155	Proposed	14	Standing	19	Walking	73	Pass
	Proposed with trees	11	Standing	15	Standing	57	Pass
156	Proposed	14	Standing	19	Walking	69	Pass
	Proposed with trees	11	Standing	15	Standing	59	Pass
157	Proposed	14	Standing	18	Walking	68	Pass
	Proposed with trees	11	Standing	15	Standing	58	Pass
158	Proposed	14	Standing	19	Walking	68	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
159	Proposed	13	Standing	18	Walking	69	Pass
	Proposed with trees	9	Sitting	12	Standing	45	Pass
160	Proposed	14	Standing	18	Walking	70	Pass
	Proposed with trees	9	Sitting	12	Standing	46	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
161	Proposed	13	Standing	17	Walking	64	Pass
	Proposed with trees	11	Standing	14	Standing	54	Pass
162	Proposed	14	Standing	17	Walking	67	Pass
	Proposed with trees	10	Sitting	12	Standing	46	Pass
163	Proposed	13	Standing	17	Walking	63	Pass
	Proposed with trees	10	Sitting	13	Standing	50	Pass
164	Proposed	13	Standing	18	Walking	64	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
165	Proposed	14	Standing	19	Walking	76	Pass
	Proposed with trees	11	Standing	15	Standing	57	Pass
166	Proposed	12	Standing	17	Walking	62	Pass
	Proposed with trees	10	Sitting	14	Standing	52	Pass
167	Proposed	13	Standing	17	Walking	65	Pass
	Proposed with trees	10	Sitting	12	Standing	50	Pass
168	Proposed	12	Standing	17	Walking	66	Pass
	Proposed with trees	11	Standing	14	Standing	55	Pass
169	Proposed	13	Standing	16	Walking	67	Pass
	Proposed with trees	10	Sitting	13	Standing	55	Pass
170	Proposed	13	Standing	17	Walking	64	Pass
	Proposed with trees	10	Sitting	13	Standing	50	Pass
171	Proposed	11	Standing	15	Standing	56	Pass
	Proposed with trees	9	Sitting	12	Standing	49	Pass
172	Proposed	13	Standing	16	Walking	63	Pass
	Proposed with trees	11	Standing	14	Standing	53	Pass
173	Proposed	15	Standing	18	Walking	75	Pass
	Proposed with trees	12	Standing	15	Standing	58	Pass
174	Proposed	9	Sitting	12	Standing	47	Pass
	Proposed with trees	8	Sitting	11	Standing	48	Pass
175	Proposed	11	Standing	14	Standing	60	Pass
	Proposed with trees	9	Sitting	12	Standing	53	Pass
176	Proposed	11	Standing	15	Standing	55	Pass
	Proposed with trees	9	Sitting	11	Standing	49	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
177	Proposed	12	Standing	16	Walking	59	Pass
	Proposed with trees	10	Sitting	12	Standing	45	Pass
178	Proposed	11	Standing	14	Standing	53	Pass
	Proposed with trees	8	Sitting	10	Sitting	37	Pass
179	Proposed	13	Standing	16	Walking	78	Pass
	Proposed with trees	10	Sitting	12	Standing	65	Pass
180	Proposed	15	Standing	18	Walking	83	Pass
	Proposed with trees	11	Standing	13	Standing	70	Pass
181	Proposed	16	Walking	21	Uncomfortable	89	Pass
	Proposed with trees	15	Standing	19	Walking	82	Pass
182	Proposed	11	Standing	14	Standing	58	Pass
	Proposed with trees	8	Sitting	11	Standing	45	Pass
183	Proposed	14	Standing	18	Walking	74	Pass
	Proposed with trees	9	Sitting	11	Standing	45	Pass
184	Proposed	13	Standing	15	Standing	60	Pass
	Proposed with trees	12	Standing	14	Standing	57	Pass
185	Proposed	16	Walking	21	Uncomfortable	85	Pass
	Proposed with trees	16	Walking	21	Uncomfortable	85	Pass
186	Proposed	15	Standing	19	Walking	80	Pass
	Proposed with trees	14	Standing	18	Walking	75	Pass
187	Proposed	14	Standing	18	Walking	71	Pass
	Proposed with trees	13	Standing	17	Walking	66	Pass
188	Proposed	13	Standing	16	Walking	71	Pass
	Proposed with trees	10	Sitting	13	Standing	52	Pass
189	Proposed	11	Standing	14	Standing	63	Pass
	Proposed with trees	9	Sitting	11	Standing	61	Pass
190	Proposed	12	Standing	16	Walking	70	Pass
	Proposed with trees	11	Standing	15	Standing	63	Pass
191	Proposed	11	Standing	15	Standing	56	Pass
	Proposed with trees	10	Sitting	14	Standing	52	Pass
192	Proposed	12	Standing	15	Standing	65	Pass
	Proposed with trees	10	Sitting	13	Standing	54	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
193	Proposed	14	Standing	16	Walking	79	Pass
	Proposed with trees	11	Standing	14	Standing	61	Pass
194	Proposed	17	Walking	21	Uncomfortable	73	Pass
	Proposed with trees	14	Standing	17	Walking	67	Pass
195	Proposed	16	Walking	21	Uncomfortable	81	Pass
	Proposed with trees	15	Standing	21	Uncomfortable	78	Pass
196	Proposed	16	Walking	22	Uncomfortable	82	Pass
	Proposed with trees	15	Standing	20	Walking	76	Pass
197	Proposed	16	Walking	24	Uncomfortable	89	Pass
	Proposed with trees	15	Standing	22	Uncomfortable	79	Pass
198	Proposed	13	Standing	19	Walking	68	Pass
	Proposed with trees	11	Standing	15	Standing	55	Pass
199	Proposed	13	Standing	18	Walking	71	Pass
	Proposed with trees	12	Standing	16	Walking	59	Pass
200	Proposed	13	Standing	16	Walking	62	Pass
	Proposed with trees	10	Sitting	13	Standing	49	Pass
201	Proposed	14	Standing	18	Walking	64	Pass
	Proposed with trees	10	Sitting	14	Standing	53	Pass
202	Proposed	14	Standing	18	Walking	66	Pass
	Proposed with trees	12	Standing	15	Standing	53	Pass
203	Proposed	14	Standing	18	Walking	64	Pass
	Proposed with trees	10	Sitting	14	Standing	53	Pass
204	Proposed	15	Standing	20	Walking	78	Pass
	Proposed with trees	13	Standing	18	Walking	72	Pass
205	Proposed	13	Standing	19	Walking	77	Pass
	Proposed with trees	10	Sitting	15	Standing	63	Pass
206	Proposed	13	Standing	20	Walking	76	Pass
	Proposed with trees	11	Standing	16	Walking	62	Pass
207	Proposed	13	Standing	15	Standing	69	Pass
	Proposed with trees	11	Standing	13	Standing	66	Pass
208	Proposed	15	Standing	16	Walking	81	Pass
	Proposed with trees	14	Standing	15	Standing	71	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
209	Proposed	14	Standing	18	Walking	72	Pass
	Proposed with trees	14	Standing	17	Walking	68	Pass
210	Proposed	19	Walking	22	Uncomfortable	83	Pass
	Proposed with trees	17	Walking	20	Walking	77	Pass
211	Proposed	16	Walking	19	Walking	73	Pass
	Proposed with trees	14	Standing	17	Walking	64	Pass
212	Proposed	12	Standing	17	Walking	66	Pass
	Proposed with trees	10	Sitting	13	Standing	49	Pass
213	Proposed	12	Standing	16	Walking	61	Pass
	Proposed with trees	9	Sitting	13	Standing	47	Pass
214	Proposed	12	Standing	17	Walking	69	Pass
	Proposed with trees	10	Sitting	14	Standing	55	Pass
215	Proposed	12	Standing	16	Walking	59	Pass
	Proposed with trees	9	Sitting	11	Standing	42	Pass
216	Proposed	14	Standing	19	Walking	72	Pass
	Proposed with trees	11	Standing	15	Standing	62	Pass
217	Proposed	12	Standing	16	Walking	60	Pass
	Proposed with trees	9	Sitting	12	Standing	45	Pass
218	Proposed	13	Standing	19	Walking	72	Pass
	Proposed with trees	11	Standing	15	Standing	71	Pass
219	Proposed	14	Standing	17	Walking	71	Pass
	Proposed with trees	12	Standing	15	Standing	66	Pass
220	Proposed	12	Standing	18	Walking	71	Pass
	Proposed with trees	12	Standing	17	Walking	66	Pass
221	Proposed	14	Standing	17	Walking	69	Pass
	Proposed with trees	12	Standing	15	Standing	64	Pass
222	Proposed	17	Walking	19	Walking	70	Pass
	Proposed with trees	14	Standing	16	Walking	64	Pass
223	Proposed	17	Walking	20	Walking	78	Pass
	Proposed with trees	16	Walking	20	Walking	76	Pass
224	Proposed	14	Standing	16	Walking	69	Pass
	Proposed with trees	12	Standing	15	Standing	64	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
225	Proposed	14	Standing	18	Walking	72	Pass
	Proposed with trees	13	Standing	18	Walking	70	Pass
226	Proposed	12	Standing	17	Walking	65	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass
227	Proposed	11	Standing	16	Walking	61	Pass
	Proposed with trees	11	Standing	15	Standing	54	Pass
228	Proposed	12	Standing	16	Walking	61	Pass
	Proposed with trees	11	Standing	15	Standing	56	Pass
229	Proposed	11	Standing	15	Standing	59	Pass
	Proposed with trees	11	Standing	14	Standing	53	Pass
230	Proposed	13	Standing	17	Walking	62	Pass
	Proposed with trees	10	Sitting	13	Standing	58	Pass
231	Proposed	15	Standing	19	Walking	71	Pass
	Proposed with trees	12	Standing	16	Walking	63	Pass
232	Proposed	14	Standing	19	Walking	72	Pass
	Proposed with trees	12	Standing	15	Standing	69	Pass
233	Proposed	17	Walking	21	Uncomfortable	75	Pass
	Proposed with trees	14	Standing	17	Walking	66	Pass
234	Proposed	11	Standing	15	Standing	62	Pass
	Proposed with trees	9	Sitting	12	Standing	53	Pass
235	Proposed	11	Standing	16	Walking	61	Pass
	Proposed with trees	8	Sitting	11	Standing	40	Pass
236	Proposed	14	Standing	18	Walking	67	Pass
	Proposed with trees	10	Sitting	13	Standing	51	Pass
237	Proposed	13	Standing	18	Walking	71	Pass
	Proposed with trees	10	Sitting	15	Standing	59	Pass
238	Proposed	14	Standing	19	Walking	71	Pass
	Proposed with trees	12	Standing	15	Standing	58	Pass
239	Proposed	17	Walking	21	Uncomfortable	81	Pass
	Proposed with trees	15	Standing	18	Walking	75	Pass
240	Proposed	14	Standing	15	Standing	84	Pass
	Proposed with trees	11	Standing	12	Standing	82	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
241	Proposed	15	Standing	18	Walking	71	Pass
	Proposed with trees	14	Standing	18	Walking	68	Pass
242	Proposed	15	Standing	20	Walking	73	Pass
	Proposed with trees	14	Standing	19	Walking	70	Pass
243	Proposed	15	Standing	18	Walking	75	Pass
	Proposed with trees	12	Standing	14	Standing	67	Pass
244	Proposed	12	Standing	15	Standing	79	Pass
	Proposed with trees	11	Standing	12	Standing	73	Pass
245	Proposed	12	Standing	15	Standing	68	Pass
	Proposed with trees	11	Standing	14	Standing	58	Pass
246	Proposed	11	Standing	13	Standing	61	Pass
	Proposed with trees	9	Sitting	12	Standing	53	Pass
247	Proposed	13	Standing	18	Walking	67	Pass
	Proposed with trees	11	Standing	15	Standing	60	Pass
248	Proposed	10	Sitting	15	Standing	55	Pass
	Proposed with trees	9	Sitting	13	Standing	50	Pass
249	Proposed	11	Standing	15	Standing	53	Pass
	Proposed with trees	10	Sitting	13	Standing	49	Pass
250	Proposed	13	Standing	17	Walking	67	Pass
	Proposed with trees	11	Standing	15	Standing	63	Pass
251	Proposed	13	Standing	19	Walking	68	Pass
	Proposed with trees	9	Sitting	12	Standing	51	Pass
252	Proposed	12	Standing	15	Standing	64	Pass
	Proposed with trees	11	Standing	14	Standing	62	Pass
253	Proposed	11	Standing	15	Standing	65	Pass
	Proposed with trees	11	Standing	15	Standing	67	Pass
254	Proposed	15	Standing	19	Walking	71	Pass
	Proposed with trees	14	Standing	19	Walking	72	Pass
255	Proposed	14	Standing	17	Walking	68	Pass
	Proposed with trees	13	Standing	17	Walking	68	Pass
256	Proposed	15	Standing	18	Walking	75	Pass
	Proposed with trees	15	Standing	18	Walking	76	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
257	Proposed	15	Standing	20	Walking	70	Pass
	Proposed with trees	14	Standing	19	Walking	67	Pass
258	Proposed	12	Standing	15	Standing	57	Pass
	Proposed with trees	11	Standing	15	Standing	53	Pass
259	Proposed	12	Standing	16	Walking	65	Pass
	Proposed with trees	11	Standing	16	Walking	62	Pass
260	Proposed	11	Standing	15	Standing	57	Pass
	Proposed with trees	11	Standing	14	Standing	57	Pass
261	Proposed	11	Standing	14	Standing	53	Pass
	Proposed with trees	10	Sitting	13	Standing	50	Pass
262	Proposed	11	Standing	14	Standing	61	Pass
	Proposed with trees	11	Standing	13	Standing	57	Pass
263	Proposed	13	Standing	19	Walking	73	Pass
	Proposed with trees	10	Sitting	15	Standing	62	Pass
264	Proposed	13	Standing	18	Walking	69	Pass
	Proposed with trees	9	Sitting	11	Standing	51	Pass
265	Proposed	13	Standing	16	Walking	69	Pass
	Proposed with trees	10	Sitting	12	Standing	55	Pass
266	Proposed	13	Standing	18	Walking	71	Pass
	Proposed with trees	12	Standing	15	Standing	66	Pass
267	Proposed	11	Standing	13	Standing	61	Pass
	Proposed with trees	9	Sitting	11	Standing	55	Pass
268	Proposed	14	Standing	18	Walking	74	Pass
	Proposed with trees	13	Standing	17	Walking	70	Pass
269	Proposed	11	Standing	13	Standing	62	Pass
	Proposed with trees	9	Sitting	12	Standing	52	Pass
270	Proposed	12	Standing	15	Standing	60	Pass
	Proposed with trees	10	Sitting	13	Standing	51	Pass
271	Proposed	12	Standing	16	Walking	62	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
272	Proposed	14	Standing	16	Walking	67	Pass
	Proposed with trees	13	Standing	14	Standing	64	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
273	Proposed	17	Walking	21	Uncomfortable	89	Pass
	Proposed with trees	15	Standing	19	Walking	86	Pass
274	Proposed	14	Standing	19	Walking	77	Pass
	Proposed with trees	13	Standing	18	Walking	69	Pass
275	Proposed	15	Standing	20	Walking	77	Pass
	Proposed with trees	14	Standing	18	Walking	70	Pass
276	Proposed	12	Standing	16	Walking	62	Pass
	Proposed with trees	10	Sitting	14	Standing	53	Pass
277	Proposed	15	Standing	20	Walking	79	Pass
	Proposed with trees	13	Standing	17	Walking	69	Pass
278	Proposed	12	Standing	17	Walking	69	Pass
	Proposed with trees	11	Standing	15	Standing	57	Pass
279	Proposed	13	Standing	16	Walking	68	Pass
	Proposed with trees	12	Standing	16	Walking	66	Pass
280	Proposed	12	Standing	17	Walking	66	Pass
	Proposed with trees	11	Standing	15	Standing	60	Pass
281	Proposed	11	Standing	15	Standing	62	Pass
	Proposed with trees	11	Standing	14	Standing	59	Pass
282	Proposed	12	Standing	16	Walking	63	Pass
	Proposed with trees	10	Sitting	15	Standing	56	Pass
283	Proposed	12	Standing	15	Standing	61	Pass
	Proposed with trees	10	Sitting	14	Standing	56	Pass
284	Proposed	12	Standing	17	Walking	66	Pass
	Proposed with trees	11	Standing	16	Walking	64	Pass
285	Proposed	11	Standing	15	Standing	56	Pass
	Proposed with trees	10	Sitting	14	Standing	54	Pass
286	Proposed	12	Standing	16	Walking	65	Pass
	Proposed with trees	11	Standing	15	Standing	60	Pass
287	Proposed	13	Standing	16	Walking	75	Pass
	Proposed with trees	12	Standing	15	Standing	71	Pass
288	Proposed	14	Standing	18	Walking	69	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
289	Proposed	14	Standing	18	Walking	67	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass
290	Proposed	12	Standing	18	Walking	77	Pass
	Proposed with trees	11	Standing	16	Walking	68	Pass
291	Proposed	15	Standing	18	Walking	71	Pass
	Proposed with trees	13	Standing	15	Standing	65	Pass
292	Proposed	12	Standing	15	Standing	63	Pass
	Proposed with trees	10	Sitting	12	Standing	49	Pass
293	Proposed	11	Standing	13	Standing	57	Pass
	Proposed with trees	11	Standing	13	Standing	55	Pass
294	Proposed	10	Sitting	13	Standing	51	Pass
	Proposed with trees	10	Sitting	13	Standing	51	Pass
295	Proposed	11	Standing	14	Standing	58	Pass
	Proposed with trees	11	Standing	14	Standing	59	Pass
296	Proposed	14	Standing	19	Walking	76	Pass
	Proposed with trees	13	Standing	18	Walking	70	Pass
297	Proposed	10	Sitting	13	Standing	51	Pass
	Proposed with trees	9	Sitting	12	Standing	50	Pass
298	Proposed	11	Standing	14	Standing	55	Pass
	Proposed with trees	11	Standing	14	Standing	55	Pass
299	Proposed	10	Sitting	12	Standing	51	Pass
	Proposed with trees	9	Sitting	12	Standing	48	Pass
300	Proposed	12	Standing	15	Standing	56	Pass
	Proposed with trees	10	Sitting	14	Standing	52	Pass
301	Proposed	12	Standing	15	Standing	62	Pass
	Proposed with trees	10	Sitting	13	Standing	50	Pass
302	Proposed	9	Sitting	12	Standing	42	Pass
	Proposed with trees	8	Sitting	11	Standing	42	Pass
303	Proposed	10	Sitting	13	Standing	48	Pass
	Proposed with trees	10	Sitting	13	Standing	47	Pass
304	Proposed	11	Standing	15	Standing	54	Pass
	Proposed with trees	11	Standing	15	Standing	54	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
305	Proposed	11	Standing	15	Standing	59	Pass
	Proposed with trees	11	Standing	15	Standing	59	Pass
306	Proposed	11	Standing	15	Standing	65	Pass
	Proposed with trees	11	Standing	15	Standing	63	Pass
307	Proposed	13	Standing	17	Walking	69	Pass
	Proposed with trees	11	Standing	16	Walking	59	Pass
308	Proposed	13	Standing	18	Walking	71	Pass
	Proposed with trees	13	Standing	17	Walking	67	Pass
309	Proposed	11	Standing	15	Standing	57	Pass
	Proposed with trees	11	Standing	15	Standing	56	Pass
310	Proposed	13	Standing	18	Walking	71	Pass
	Proposed with trees	12	Standing	18	Walking	68	Pass
311	Proposed	13	Standing	17	Walking	73	Pass
	Proposed with trees	11	Standing	15	Standing	61	Pass
312	Proposed	11	Standing	15	Standing	59	Pass
	Proposed with trees	9	Sitting	11	Standing	47	Pass
313	Proposed	12	Standing	16	Walking	59	Pass
	Proposed with trees	9	Sitting	12	Standing	49	Pass
314	Proposed	13	Standing	16	Walking	67	Pass
	Proposed with trees	7	Sitting	10	Sitting	39	Pass
315	Proposed	12	Standing	15	Standing	57	Pass
	Proposed with trees	10	Sitting	13	Standing	51	Pass
316	Proposed	14	Standing	20	Walking	77	Pass
	Proposed with trees	12	Standing	16	Walking	64	Pass
317	Proposed	10	Sitting	14	Standing	53	Pass
	Proposed with trees	9	Sitting	12	Standing	49	Pass
318	Proposed	12	Standing	17	Walking	65	Pass
	Proposed with trees	11	Standing	15	Standing	59	Pass
319	Proposed	12	Standing	16	Walking	63	Pass
	Proposed with trees	11	Standing	15	Standing	59	Pass
320	Proposed	11	Standing	15	Standing	59	Pass
	Proposed with trees	11	Standing	15	Standing	58	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
321	Proposed	11	Standing	17	Walking	68	Pass
	Proposed with trees	11	Standing	17	Walking	69	Pass
322	Proposed	11	Standing	16	Walking	62	Pass
	Proposed with trees	11	Standing	16	Walking	61	Pass
323	Proposed	12	Standing	16	Walking	62	Pass
	Proposed with trees	11	Standing	15	Standing	60	Pass
324	Proposed	10	Sitting	13	Standing	50	Pass
	Proposed with trees	10	Sitting	13	Standing	52	Pass
325	Proposed	11	Standing	13	Standing	57	Pass
	Proposed with trees	10	Sitting	13	Standing	57	Pass
326	Proposed	10	Sitting	14	Standing	55	Pass
	Proposed with trees	9	Sitting	13	Standing	50	Pass
327	Proposed	9	Sitting	12	Standing	64	Pass
	Proposed with trees	8	Sitting	10	Sitting	45	Pass
328	Proposed	10	Sitting	12	Standing	56	Pass
	Proposed with trees	9	Sitting	11	Standing	48	Pass
329	Proposed	12	Standing	17	Walking	60	Pass
	Proposed with trees	10	Sitting	14	Standing	53	Pass
330	Proposed	12	Standing	17	Walking	64	Pass
	Proposed with trees	12	Standing	16	Walking	60	Pass
331	Proposed	12	Standing	17	Walking	62	Pass
	Proposed with trees	12	Standing	17	Walking	61	Pass
332	Proposed	11	Standing	16	Walking	59	Pass
	Proposed with trees	11	Standing	15	Standing	57	Pass
333	Proposed	13	Standing	19	Walking	77	Pass
	Proposed with trees	12	Standing	19	Walking	73	Pass
334	Proposed	15	Standing	21	Uncomfortable	81	Pass
	Proposed with trees	14	Standing	19	Walking	76	Pass
335	Proposed	10	Sitting	12	Standing	75	Pass
	Proposed with trees	9	Sitting	10	Sitting	74	Pass
336	Proposed	12	Standing	15	Standing	60	Pass
	Proposed with trees	10	Sitting	12	Standing	52	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
337	Proposed	15	Standing	20	Walking	81	Pass
	Proposed with trees	15	Standing	19	Walking	79	Pass
338	Proposed	15	Standing	19	Walking	81	Pass
	Proposed with trees	13	Standing	17	Walking	71	Pass
339	Proposed	11	Standing	16	Walking	58	Pass
	Proposed with trees	11	Standing	15	Standing	57	Pass
340	Proposed	11	Standing	15	Standing	56	Pass
	Proposed with trees	11	Standing	14	Standing	56	Pass
341	Proposed	11	Standing	14	Standing	57	Pass
	Proposed with trees	11	Standing	13	Standing	54	Pass
342	Proposed	10	Sitting	13	Standing	50	Pass
	Proposed with trees	9	Sitting	13	Standing	48	Pass
343	Proposed	13	Standing	18	Walking	69	Pass
	Proposed with trees	12	Standing	18	Walking	67	Pass
344	Proposed	10	Sitting	14	Standing	50	Pass
	Proposed with trees	10	Sitting	13	Standing	48	Pass
345	Proposed	11	Standing	14	Standing	67	Pass
	Proposed with trees	11	Standing	14	Standing	64	Pass
346	Proposed	13	Standing	18	Walking	70	Pass
	Proposed with trees	11	Standing	15	Standing	57	Pass
347	Proposed	10	Sitting	13	Standing	56	Pass
	Proposed with trees	10	Sitting	13	Standing	53	Pass
348	Proposed	10	Sitting	13	Standing	47	Pass
	Proposed with trees	9	Sitting	12	Standing	46	Pass
349	Proposed	13	Standing	16	Walking	76	Pass
	Proposed with trees	12	Standing	15	Standing	61	Pass
350	Proposed	16	Walking	20	Walking	78	Pass
	Proposed with trees	13	Standing	18	Walking	71	Pass
351	Proposed	17	Walking	23	Uncomfortable	81	Pass
	Proposed with trees	17	Walking	22	Uncomfortable	80	Pass
352	Proposed	12	Standing	15	Standing	58	Pass
	Proposed with trees	11	Standing	15	Standing	57	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
353	Proposed	15	Standing	20	Walking	85	Pass
	Proposed with trees	15	Standing	19	Walking	80	Pass
354	Proposed	14	Standing	19	Walking	70	Pass
	Proposed with trees	11	Standing	17	Walking	65	Pass
355	Proposed	14	Standing	17	Walking	72	Pass
	Proposed with trees	13	Standing	16	Walking	73	Pass
356	Proposed	14	Standing	17	Walking	69	Pass
	Proposed with trees	14	Standing	17	Walking	70	Pass
357	Proposed	12	Standing	15	Standing	57	Pass
	Proposed with trees	11	Standing	15	Standing	56	Pass
358	Proposed	15	Standing	18	Walking	76	Pass
	Proposed with trees	15	Standing	18	Walking	78	Pass
359	Proposed	12	Standing	16	Walking	65	Pass
	Proposed with trees	11	Standing	15	Standing	58	Pass
360	Proposed	12	Standing	16	Walking	60	Pass
	Proposed with trees	12	Standing	16	Walking	61	Pass
361	Proposed	12	Standing	14	Standing	69	Pass
	Proposed with trees	12	Standing	14	Standing	71	Pass
362	Proposed	14	Standing	17	Walking	71	Pass
	Proposed with trees	14	Standing	16	Walking	70	Pass
363	Proposed	13	Standing	17	Walking	67	Pass
	Proposed with trees	13	Standing	16	Walking	63	Pass
364	Proposed	15	Standing	20	Walking	79	Pass
	Proposed with trees	15	Standing	19	Walking	76	Pass
365	Proposed	10	Sitting	13	Standing	56	Pass
	Proposed with trees	9	Sitting	12	Standing	51	Pass
366	Proposed	12	Standing	16	Walking	58	Pass
	Proposed with trees	12	Standing	16	Walking	58	Pass
367	Proposed	18	Walking	23	Uncomfortable	90	Pass
	Proposed with trees	18	Walking	23	Uncomfortable	89	Pass
368	Proposed	17	Walking	26	Uncomfortable	94	Exceeded
	Proposed with trees	17	Walking	26	Uncomfortable	94	Exceeded

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
369	Proposed	16	Walking	19	Walking	69	Pass
	Proposed with trees	16	Walking	19	Walking	70	Pass
370	Proposed	17	Walking	21	Uncomfortable	73	Pass
	Proposed with trees	17	Walking	21	Uncomfortable	73	Pass
371	Proposed	15	Standing	20	Walking	77	Pass
	Proposed with trees	15	Standing	20	Walking	77	Pass
372	Proposed	15	Standing	22	Uncomfortable	91	Exceeded
	Proposed with trees	14	Standing	21	Uncomfortable	88	Pass
373	Proposed	12	Standing	16	Walking	70	Pass
	Proposed with trees	12	Standing	17	Walking	72	Pass
374	Proposed	14	Standing	18	Walking	73	Pass
	Proposed with trees	14	Standing	18	Walking	74	Pass
375	Proposed	14	Standing	20	Walking	78	Pass
	Proposed with trees	14	Standing	20	Walking	76	Pass
376	Proposed	18	Walking	23	Uncomfortable	86	Pass
	Proposed with trees	18	Walking	22	Uncomfortable	84	Pass
377	Proposed	12	Standing	15	Standing	62	Pass
	Proposed with trees	11	Standing	15	Standing	54	Pass
378	Proposed	13	Standing	16	Walking	70	Pass
	Proposed with trees	12	Standing	16	Walking	70	Pass
379	Proposed	11	Standing	15	Standing	59	Pass
	Proposed with trees	11	Standing	14	Standing	57	Pass
380	Proposed	13	Standing	17	Walking	64	Pass
	Proposed with trees	13	Standing	17	Walking	66	Pass
381	Proposed	12	Standing	16	Walking	58	Pass
	Proposed with trees	11	Standing	14	Standing	54	Pass
382	Proposed	12	Standing	17	Walking	69	Pass
	Proposed with trees	12	Standing	17	Walking	68	Pass
383	Proposed	11	Standing	15	Standing	60	Pass
	Proposed with trees	11	Standing	15	Standing	56	Pass
384	Proposed	17	Walking	23	Uncomfortable	86	Pass
	Proposed with trees	17	Walking	22	Uncomfortable	86	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
385	Proposed	16	Walking	23	Uncomfortable	84	Pass
	Proposed with trees	16	Walking	23	Uncomfortable	84	Pass
386	Proposed	14	Standing	19	Walking	68	Pass
	Proposed with trees	14	Standing	18	Walking	68	Pass
387	Proposed	13	Standing	18	Walking	68	Pass
	Proposed with trees	13	Standing	18	Walking	69	Pass
388	Proposed	14	Standing	18	Walking	73	Pass
	Proposed with trees	14	Standing	19	Walking	73	Pass
389	Proposed	17	Walking	22	Uncomfortable	91	Exceeded
	Proposed with trees	17	Walking	22	Uncomfortable	91	Exceeded
390	Proposed	18	Walking	24	Uncomfortable	90	Pass
	Proposed with trees	18	Walking	23	Uncomfortable	90	Pass
391	Proposed	15	Standing	19	Walking	73	Pass
	Proposed with trees	14	Standing	18	Walking	73	Pass
392	Proposed	17	Walking	22	Uncomfortable	79	Pass
	Proposed with trees	16	Walking	21	Uncomfortable	77	Pass
393	Proposed	16	Walking	20	Walking	83	Pass
	Proposed with trees	14	Standing	18	Walking	73	Pass
394	Proposed	15	Standing	19	Walking	74	Pass
	Proposed with trees	13	Standing	17	Walking	65	Pass
395	Proposed	16	Walking	21	Uncomfortable	80	Pass
	Proposed with trees	15	Standing	20	Walking	80	Pass

Seasons		Hours
Summer	May - October	6:00 - 23:00 for comfort
Winter	November - April	0:00 - 23:00 for safety

Configurations

Proposed - Proposed project and existing surroundings

Proposed with trees - Proposed project with trees and existing surroundings

Comfort Speed (km/h)	
(20% Seasonal Exceedance)	
≤ 10	Sitting
11 - 15	Standing
16 - 20	Walking
> 20	Uncomfortable

Safety Speed (km/h)	
(> 0.1% Annual Exceedance)	
≤ 90	Pass
> 90	Exceeded

APPENDIX A

APPENDIX A:
DRAWING LIST FOR MODEL CONSTRUCTION

The drawings and information listed below were received from Argo Development Corporation and were used to construct the scale model of the proposed Lakeview Village. Should there be any design changes that deviate from this list of drawings, the results 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.

File Name	File Type	Date Received (dd/mm/yyyy)
18003_20180824_Wind Alternatives.skp	SketchUp	29/08/2018