



CONSULTING ENGINEERS
& SCIENTISTS

March 17, 2010

Mr. Hank Wang
McCormick Rankin Corporation
2655 North Sheridan Way, Suite 300
Mississauga, Ontario,
L5K 2P8

RWDI AIR Inc.
650 Woodlawn Road West
Guelph, ON
Canada N1K 1B8

*A member of the
RWDI Group of Companies*

Re: Noise & Vibration Assessment, East Bayfront - Queens Quay East
RWDI Project W07-5120B Email: Hwang@mrc.ca

Dear Hank,

RWDI AIR Inc. (RWDI) was retained by McCormick Rankin Corporation (MRC) to conduct an environmental noise and vibration study for the Toronto Transit Commission (TTC) Eastern Waterfront Project located in Toronto, Ontario. This study was limited to the proposed street car rails to be located on Queens Quay East between Yonge Street and the end loop just east of Parliament Street. This report presents the results of our studies.

METHODOLOGY

This study was based on the Transit Noise and Vibration Impact Assessment algorithms published by the U.S. Department of Transportation Federal Transit Administration (FTA). The FTA model was previously validated for modeling of TTC street car installations by comparison against noise and vibration measurements of existing tracks conducted by RWDI (RWDI W07-5120C). Inputs to this assessment were from drawings of the proposed road and rail layouts (Drawing 6377-Q-2 received April 21, 2009) along Queens Quay East.

The predicted noise levels were assessed against the MOE / TTC Transit Expansion Protocols. These guidelines state that the 16 hour equivalent sound level ($L_{eq}(16h)$) for daytime operation must not exceed the higher of 55 dBA or the existing background ambient sound level, and that the 8 hour equivalent sound level ($L_{eq}(8h)$) must not exceed the higher of 50 dBA or the existing background ambient sound level. The location for assessment of daytime noise levels is at the Outdoor Living Area (OLA) of each receptor, and the assessment of night-time noise levels is at the plane of the receptor's windows. Maximum rail pass-by noise levels (L_{max}) are limited to 77 dBA to 80 dBA at any time of the night or day as assessed at the plane of the receptor's windows.

The predicted vibration levels were assessed against the CN Rail vibration level guidelines. These guidelines state that the vibration levels from a single pass-by should not exceed 0.144 mm/s RMS. The guidelines are applicable to the floor of a dwelling unit, but since calculation of building-borne vibration is beyond the scope of this study, assessment is made at the foundation of the receptors. The predicted vibration levels are also shown against the ISO 2631-2 guideline limits for whole body vibration in buildings.

The noise levels were assessed for eight representative receptors in the expansion area. The receptors are referred to as NR1 through NR8. The receptors are spread across the entire project study area and are shown in the future build case after the area undergoes change. There are certain sections of the new zoning bylaw that is currently under appeal to the Ontario Municipal Board (OMB) to be rezoned as potentially residential to the north of Queens Quay between Jarvis Street and Bonnycastle Street. For this analysis, it is assumed that this area will be resolved and zoned residential. The zoning of the lands within the study boundaries is shown in Figure 1. A copy of the amendment to the zoning by-law for the area can be found in Appendix A. The representative receptors are shown in Figure 2. These receptors represent the worst case impacts expected from the rail expansion. Currently noise and potentially vibration sensitive lands are found between the Yonge Street Slip and the Redpath Sugar lands. Noise and potentially vibration sensitive lands are also found between the Lower Jarvis Slip and the Sherbourne Park South Lands. These areas are not expected to be impacted by noise or vibration due to the elevated levels created by local vehicle traffic.

The vibration study was based on rail speeds of 50 km/h, on the track nearest each receptor. The study did not take into account any special track work since it is anticipated to be located only in the underground section of the rail line. Since the CN Rail vibration guidelines are based on a worst-case pass-by, there is no consideration given to differences in levels of service during the daytime, evening, and night-time.

The noise study was also based on rail speeds of 50 km/h, at a distance equal to that from between the two tracks to the property of the future receptor as the exact set back distances are not presently known. The study took into account “wheel squeal” produced by railcars rounding the end loop at the east side of Parliament Street, and the TTC’s expected operating times during the daytime, evening, and night-time. Background levels for the noise study were determined through road noise modeling using the Ontario Road Noise Method for Environment and Transportation (ORNAMENT) algorithm. Inputs to the ORNAMENT algorithm were based on traffic predictions for the project area. The greater of the background sound levels or defaults (55 dBA for daytime and 50 dBA for night-time) are used as the guideline sound level limits. All receptors have been calculated to have elevated background sound levels above the defaults. The resulting Guideline Sound Level Limits can be found in Table 1 in the Noise Assessment Results section of this report.

NOISE ASSESSMENT RESULTS

The predicted noise levels at each receptor are below the applicable guideline limits at each of the eight receptors. Predicted levels are compared with guideline limits in Tables 1 and 2.

Table 1: Noise Assessment Results, L_{eq} Assessment

Receptor ID	Time Period	Predicted Sound Level (dBA) ^[1]	Guideline Sound Level Limit (dBA) ^[1]	Meets Criteria?
NR1	Day	57	64	Yes
	Night	50	57	Yes
NR2	Day	56	67	Yes
	Night	50	60	Yes
NR3	Day	56	67	Yes
	Night	50	60	Yes
NR4	Day	56	67	Yes
	Night	50	60	Yes
NR5	Day	57	64	Yes
	Night	51	58	Yes
NR6	Day	56	67	Yes
	Night	50	61	Yes
NR7	Day	57	65	Yes
	Night	51	58	Yes
NR8	Day	58	67	Yes
	Night	51	60	Yes

Notes: 1. Sound levels are presented as $L_{eq}(16)$ for daytime periods and $L_{eq}(8h)$ for night-time periods

Table 2: Noise Assessment Results, L_{max} Assessment

Receptor ID	Predicted Maximum Sound Level (dBA)	Guideline Sound Level Limit (dBA)	Meets Criteria?
NR1	75	77	Yes
NR2	74	77	Yes
NR3	73	77	Yes
NR4	73	77	Yes
NR5	75	77	Yes
NR6	73	77	Yes
NR7	75	77	Yes
NR8	72	77	Yes

VIBRATION ASSESSMENT RESULTS

The predicted vibration levels (track above grade) are shown graphically as the distance between the nearest track and receptor varies, in Figure 3. The most important criterion of the five is the CN guideline. The other four are shown for reference purposes. The MOE / TTC Transit Expansion Protocols specify that “any point on the outdoor premises of a person not closer than 15 m from the track centerline where sound originating from transit operations is received.” The predicted vibration levels are below all of the applicable receptors at a distance greater than 15 m.

The predicted vibration levels (below grade) are compared with the CN guideline limits in Figure 3. The difference between the two results is the distance between the nearest track and the underlying bedrock. Since the distance between the track and the bedrock is unknown, both situations are shown below. The calculation was completed assuming a minimum separation distance of 15 m between the track and the receptor.

CONCLUSIONS

The predicted noise levels are below the guideline limits at each of the eight receptors. The predicted vibration levels are below the guideline limits at all receptors, if the minimum separation distance of 15 m is maintained between the centre line of the tracks and the façade of the sensitive receptor. All future developments within the study area of this project should require a noise and vibration study to ensure they comply with the applicable noise and vibration criteria.

Yours very truly,

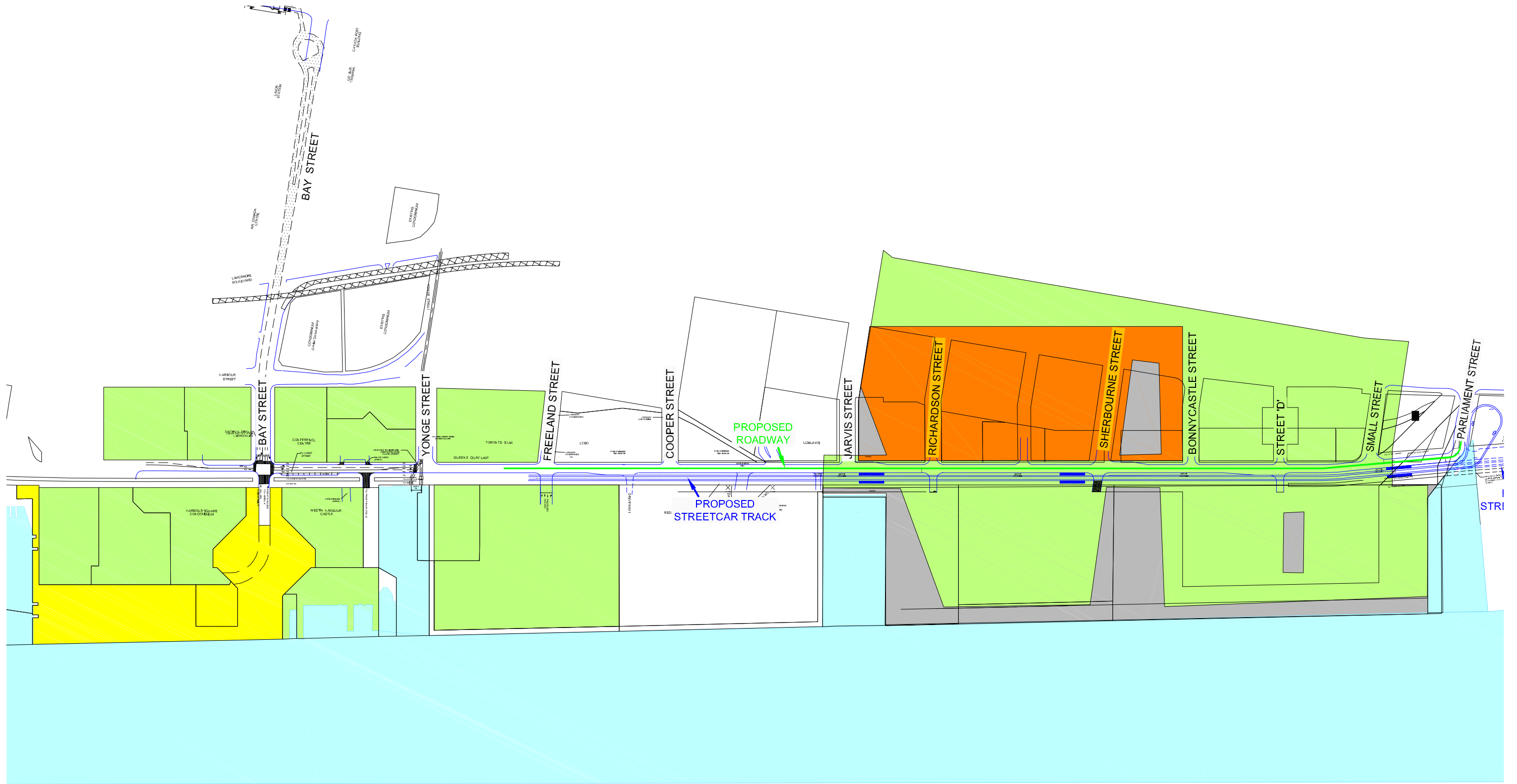
RWDI AIR Inc.

Scott Penton, P.Eng.
Project Director / Associate

SLP/anc

Attach.

FIGURES



LEGEND:

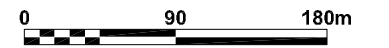
	OMB Hearing for Re-zoning of Land Use
	Commercial Residential
	Park Space
	Open Space

Zoning of Land Uses

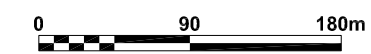
TTC Eastern Waterfront - Easy Bayfront - Queens Quay East - Toronto, Ontario



Drawn by: NTN	Figure: 1
Approx. Scale: 1:4500	
Date Revised: Dec. 10, 2009	



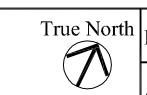
Project #W07-5120B



LEGEND:
 Noise Sensitive Receptor

Representative Noise Sensitive Receptors

TTC Eastern Waterfront - Easy Bayfront - Queens Quay East - Toronto, Ontario

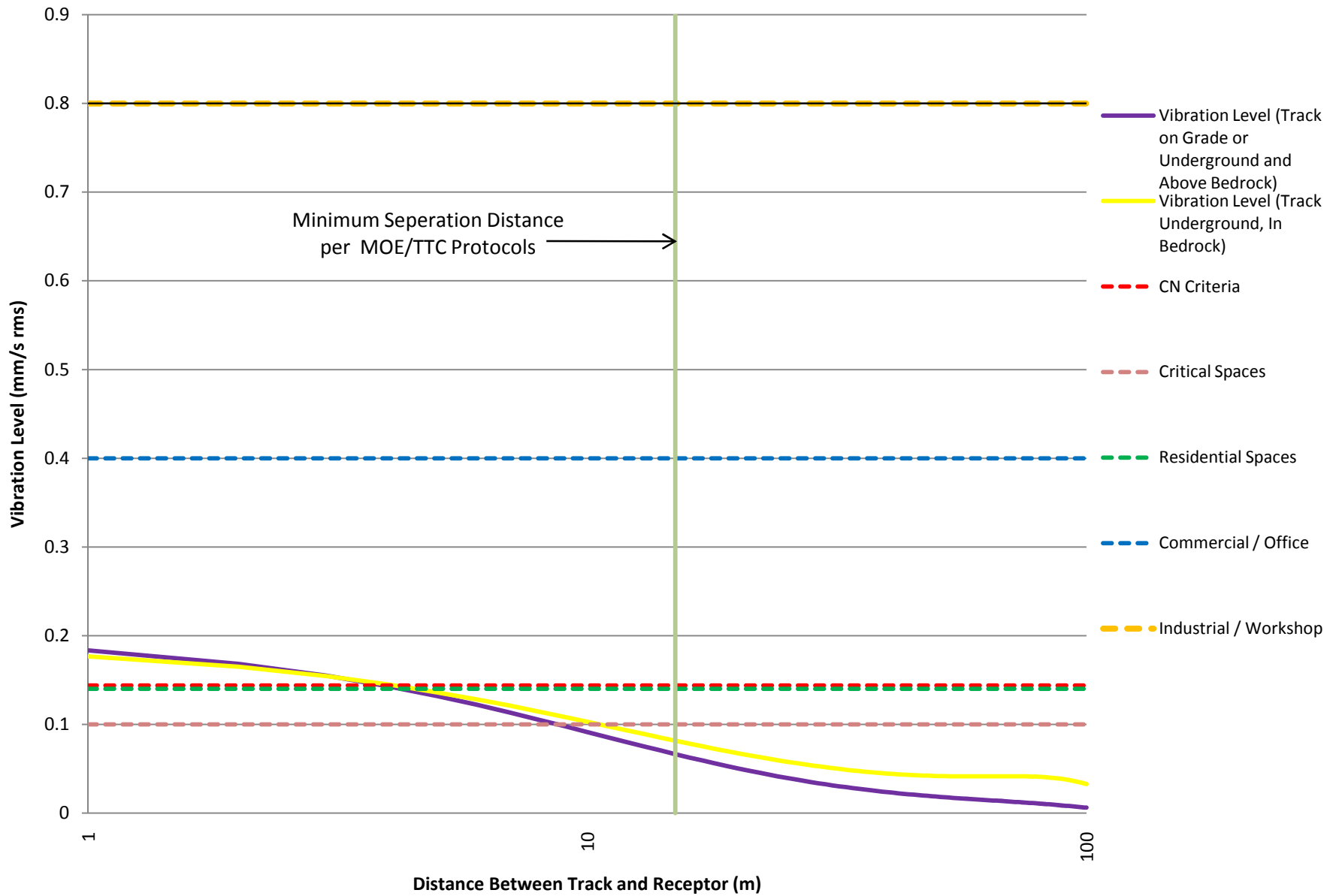


Drawn by: NTN Figure: **2**
 Approx. Scale: 1:4500
 Date Revised: Nov 30, 2009



Project #W07-5120B

Figure 3 - Ground-Borne Vibration versus Distance



APPENDIX A

Authority: Toronto and East York Community Council Report 7, Clause 17, adopted as amended, by City of Toronto Council on September 25, 26 and 27, 2006
Enacted by Council: September 27, 2006

CITY OF TORONTO

BY-LAW No. 1049-2006

To amend the General Zoning By-law No. 438-86 of the former City of Toronto with respect to the East Bayfront – West Precinct.

WHEREAS Council at its meeting held on September 25, 26 and 27, 2006, adopted as amended, Clause 17 of Toronto and East York Community Council Report 7; and

WHEREAS this By-law is passed in implementation of the City of Toronto Secondary Plan for the Central Waterfront; and

WHEREAS authority is given to Council by Section 34 and 36 of the *Planning Act*, R.S.O. 1990, c.P. 13, as amended, to pass this By-law; and

WHEREAS pursuant to Section 37 of the *Planning Act*, Council may, in a by-law passed under Section 34 of the *Planning Act*, authorize increases in height or density of development beyond those otherwise permitted by the by-law, in return for the provision of such facilities, services and matters as set out in the by-law; and

WHEREAS Council of the City of Toronto has provided adequate information to the public and has held at least one public meeting in accordance with the *Planning Act*; and

WHEREAS Council of the City may in a by-law passed under Section 34 of the *Planning Act* authorize increases in height and density not otherwise permitted in the By-law in return for the provision of facilities, services or matters as are set out in the By-law;

The Council of the City of Toronto HEREBY ENACTS as follows:

1. Section 2(1) of By-law No. 438-86, being “A By-law to regulate the use of land and the erection, use, bulk, height, spacing of and other matters relating to buildings and structures and to prohibit certain uses of lands and the erection and use of certain buildings and structures in various areas of the City of Toronto”, as amended, is further amended by inserting after the definition of “*East Bayfront*”, the following:

“*East Bayfront – West Precinct*” means that part of the City of Toronto delineated by heavy lines and shown on the following map;

2. District Map 51G-312 contained in Appendix “A” of the aforesaid By-law No. 438-86, is hereby further amended by redesignating the lands delineated by heavy lines to “CR (h)” and “G” as shown on Map A attached hereto.
3. Height and Minimum Lot Frontage Map 51G-312 contained in Appendix “B” of the aforesaid By-law No. 438-86, is hereby further amended by designating the lands delineated by heavy lines as shown on Map B attached hereto.

4. Section 12(1)334 of the aforesaid By-law No. 438-86 is amended by adding the following:

“130 Queens Quay East

143 Lake Shore Boulevard East”

5. Section 12(1) 426 of the aforesaid By-law No. 438-86 is amended by adding, following the phrase “*East Bayfront*”, the words:

“other than in the *East Bayfront – West Precinct*”.

6. Section 12(1) of the aforesaid By-law No. 438-86 is amended by adding the following exception:

470. to prevent the erection or use of buildings or structures or the use of land in the *East Bayfront – West Precinct* in accordance with the following provisions:

Permitted Uses:

- (a) the following uses shall be permitted within a CR district:

- (i) those non-residential uses permitted within a CR district in section 8(1)(f) (b), and subject to the qualifications in section 8(2) where applicable, except for an *automobile service and repair shop, automobile service station, car washing establishment, motor vehicle repair shop, class A, or commercial parking lot*;
- (ii) a *district energy, heating and cooling plant*, a vacuum waste collection facility; and
- (iii) those residential uses permitted within a CR district in Section 8(1)(f)(a), and subject to the qualifications in section 8(2) where applicable, provided that the owner of the *lot* elects to provide the facilities, services or matters referred to in paragraph (v) below and enters into the agreement(s) referred to in subparagraph (v)(v).

- (b) the following uses shall be permitted within a G district:

- (i) those uses permitted within a G district in section 5(1)(f);
- (ii) within the areas shown as Area A and Area F on Map 3 those uses permitted within a G district and a Gm district in section 5(1)(f);
- (iii) within the area shown as Area B on Map 3:

- (A) those uses permitted within a G district and a Gm district in section 5(1)(f);
- (B) patios and open air markets provided they are associated with the ground floor uses in abutting buildings;
- (C) the structures listed in the column entitled “STRUCTURE” in the following Chart provided that they are associated with a building on a *lot* abutting Area A as shown on Map 3 and provided they comply with the restrictions set out opposite the structure in the columns entitled “MAXIMUM PERMITTED PROJECTION” and “OTHER APPLICABLE QUALIFICATIONS”.

	STRUCTURE	MAXIMUM PERMITTED PROJECTION	OTHER APPLICABLE QUALIFICATIONS
A.	eaves or cornices	1.0 m into Area B	
B.	Canopy	Not more than 2.0 m into Area B	Not above the second storey.

- (iv) within the area shown as Area C – Jarvis Slip Open Space on Map 3:
 - (A) those uses permitted within a G district and a Gm district in section 5(1)(f); and
 - (B) those uses permitted within a CR district by subparagraph (a) herein, except *sensitive land uses*, provided that:
 1. a minimum of 3000 square metres of *publicly accessible open space* is provided within the combined Areas C and D shown on Map 3;
 2. no building exceeds 20 metres in *height*;
 3. ground floor uses in any building are restricted to *ground floor animation uses*; and
 4. an 8 metre separation is provided at the ground floor level between any building within Area C and any building within Area D.
- (v) those uses permitted by paragraph 6(c)(i) and 6(c)(ii) herein.

- (c) where the zoning for a CR district is followed by an “h” holding symbol, permitted uses prior to the removal of the “h” shall be limited to the following:
- (i) those uses and buildings existing on September 27, 2006, or an addition thereto not exceeding 100 square metres in *non-residential gross floor area* or 10% of the *non-residential gross floor area* existing on September 27, 2006, whichever is the greater;
 - (ii) any use permitted within a CR district by subparagraph (a) herein, with the exception of *sensitive land uses*, within a building existing on September 27, 2006, or an addition thereto not exceeding 100 square metres in *non-residential gross floor area* or 10% of the *non-residential gross floor area* existing on September 27, 2006, whichever is the greater, and
 - (iii) a *commercial parking lot*.

Maximum Height and Building Envelope:

- (d) maximum *height* shall be in accordance with section 4(2) except that buildings located within Area A, Area B and Area C as shown on Map 1 may contain building components which exceed the permitted *heights* provided such building components:
- (i) do not exceed a *height* of:
 - (A) the sum of 12 metres and the applicable *height* limit within Area A and B; and
 - (B) the sum of 74 metres and the applicable *height* limit within Area C; exclusive of those rooftop structures and equipment as permitted by section 4(2)(a)(i) and (ii)
 - (ii) contain no floor having a dimension, measured between the exterior faces of exterior walls at the level of each floor, and including any balconies and other projections, which exceeds 40 metres in Area C;
 - (iii) in Area A are located a minimum of 15 metres from any *side lot line* and a minimum of 30 metres from any other such building component located on the same *lot*;
 - (iv) in Area B are located a minimum of 5 metres from any *side lot line* and a minimum of 10 metres from any other such building component located on the same *lot*;

- (v) in Area A, Area B and Area C are set back a minimum distance from the exterior wall of the storey immediately below of:
 - A. 5 metres where such wall faces a *public park*, or Queens Quay East, or
 - B. 3 metres where such wall faces a *street* other than Queens Quay East.
- (vi) in Area A do not exceed a width of 20 metres, measured between the exterior faces of exterior walls at the level of each floor, along a line parallel to Queens Quay East, and a maximum depth of 40 metres;
- (vii) in Area B do not exceed a width of 20 metres, measured between the exterior faces of exterior walls at the level of each floor, along a line parallel to Lake Shore Boulevard East, and a maximum depth of 40 metres;
- (e) Nothing in subparagraphs d(ii) and d(iii) shall apply to prevent components of a building located within Area B and Area C with *heights* as permitted by subparagraph d(i), provided:
 - (i) any components located within Area C above a *height* of 58 metres comply with subparagraph d(ii); and
 - (ii) the combined width of such components within one building above a height of 46 metres does not exceed 60 metres, measured between the exterior faces of exterior walls at the level of each floor along a line parallel to any *lot line* adjacent to a *street*.

Parking and Loading:

- (f) parking facilities shall be provided in accordance with section 4(5);
- (g) loading facilities shall be provided in accordance with section 4(8);
- (h) bicycle parking shall be provided in accordance with Section 4(13);

Residential Amenity Space:

- (i) *residential amenity space* shall be provided in accordance with section 4(12) except that:
 - (i) the maximum amount of indoor *residential amenity space* which shall be required for any building is 300 square metres; and
 - (ii) the maximum amount of outdoor *residential amenity space* which shall be required for any building is 300 square metres.

Build-To Lines

- (j) no building may be erected or used on a *lot* subject to *Build-to Line A* as shown on Map 4 unless:
 - (i) an exterior face of the building is located no more than 0.15 metres back from *Build-to Line A* between *grade* and a *height* of 12 metres, for a minimum of 85% of the length of the *frontage* of the *lot* identified as *Build-to Line A*; and
 - (ii) an exterior face of the building is located no more than 5 metres back from *Build-to Line A* between a *height* of 12 metres and a *height* of 36 metres, for a minimum of 85% of the length of the *frontage* of the *lot* identified as *Build-to Line A*.
- (k) no building may be erected or used on a *lot* subject to *Build-to Line B* as shown on Map 4, unless an exterior face of the building is located not less than 2 metres, and not more than 2.5 metres from *Build-to Line B*, between *grade* and a *height* of 18 metres, for a minimum of 85% of the length of the *frontage* of the *lot* identified as *Build-to Line B*;
- (l) no building may be erected or used on a *lot* subject to *Build-to Line C* as shown on Map 4 unless an exterior face of the building is located no more than 0.1 metres back from *Build-to Line C* between *grade* and a *height* of 18 metres, for a minimum of 85% of the length of the *frontage* of the *lot* identified as *Build-to Line C*;
- (m) no building may be erected or used on a *lot* abutting Lake Shore Boulevard East unless the exterior face of the building facing Lake Shore Boulevard East has a minimum *height* of 24 metres for a minimum of 85% of the length of the Lake Shore Boulevard East *frontage* of the *lot*;
- (n) notwithstanding paragraphs (k) and (l) above, belt courses, cornices, eaves, pilasters, sills may project into the area between an exterior face of a building and a build-to line;
- (o) for the purposes of paragraphs (j), (k) and (l) above, where the exterior building face includes a colonnade or an unenclosed balcony, such exterior face shall be deemed to include:
 - (i) the open area between any columns; and
 - (ii) openings for any unenclosed balcony no greater than 5.0 metres in depth.

Setbacks:

- (p) no building or structure within a 40 metre *height* district may exceed 20 metres in *height* unless the portion of the building above such *height* is

set back a minimum distance of 3 metres from the exterior face of such building which faces a G district or a *street*;

- (q) no part of any building or structure above *grade* may be located closer than 5 metres to *Setback Line A* as shown on Map 4;
- (r) no building or structure may be located within Setback Area B as shown on Map 4;
- (s) window separation requirements in section 8(3) PART II 1(a) and (c) shall apply;

Exception – Height, Building Envelope and Setbacks:

- (t) notwithstanding subparagraphs d(iv), (p) and (q) above, the types of structures listed in the column entitled “STRUCTURE” in the following chart are permitted in the setback area listed in the column entitled “LOCATION” provided they comply with the restrictions set out opposite the structure in the columns entitled “MAXIMUM PERMITTED PROJECTION” and “OTHER APPLICABLE QUALIFICATIONS”:

	STRUCTURE	LOCATION	MAXIMUM PERMITTED PROJECTION	OTHER APPLICABLE QUALIFICATIONS
A.	eaves or cornices	- Setback Line A as identified in paragraph (q) - Areas identified in paragraph (p)) - Areas identified in paragraph (d)(iv)	Not more than 1 m into the required setback area	
B.	uncovered platform	- Setback Line A as identified in paragraph (q)	Not more than 1.5 m into the required setback area	No more than 0.2 m above grade
C.	roof over a terrace	- Setback Line A as identified in paragraph (q)	Not more than 1.5 m into the required setback area	
D.	canopy	- Setback Line A as identified in paragraph (q)	Not more than 1.5 m into the required setback area	Not above the second storey
E.	bay window	- Setback Line A as identified in paragraph (q) - Areas identified in paragraph (p) - Areas identified in paragraph (d)(iv)	Not more than 0.75 m into the required setback area.	Width not to exceed 3.0 m where the window meets the wall

	STRUCTURE	LOCATION	MAXIMUM PERMITTED PROJECTION	OTHER APPLICABLE QUALIFICATIONS
F.	stairs	- Setback Line A as identified in paragraph (q)	Not more than 1.0 m into the required setback area.	
G.	balconies	- Setback Line A as identified in paragraph (q) - Areas identified in paragraph (p) - Areas identified in paragraph (d)(iv)	Not more than 2.0m into the required setback area.	

Ground Floor Animation Areas:

- (u) no building or structure on a *lot* subject to a Ground Floor Animation Area requirement as shown on Map 2 may be erected or used unless:
 - (i) least 70% of the length of the *frontages* identified as Animation Frontage and Animation Frontage – Colonnade Zone on Map 2 are used for no purposes other than *ground floor animation uses*;
 - (i) no *dwelling units* are located on the ground floor of buildings or structures facing an Animation Frontage and Animation Frontage - Colonnade Zone as shown on Map 2; and
 - (iii) along those *frontages* shown as Animation Frontage – Colonnade Zone on Map 2, a continuous colonnade is provided having a minimum width of 3.5 metres and a minimum vertical clearance of 5 metres.

Section 37 Agreement:

- (v) pursuant to Section 37 of the *Planning Act*, the heights and density of residential development contemplated herein are permitted subject to compliance with all of the conditions set out above and in return for the provision by the owner of the *lot* of the following facilities, services and matters to the City at the owner's sole expense and in accordance with and subject to the agreement(s) referred to in subparagraph (v) below:
 - (i) to secure the provision of local infrastructure improvements through one or a combination of the following:
 - A. to provide a contribution of \$69.86 per square metre of *residential gross floor area* towards local infrastructure improvements, to be paid prior to the issuance of the first above-grade building permit for the *lot* or for the portion of the *lot* being developed;

- B. to undertake local infrastructure improvements in lieu of part or all of the contribution set out in subclause (i)(A), the value of which is to be determined by the City.
- (ii) to secure the provision of not less than 20% of the total number of *dwelling units* as new *affordable rental housing* through one or a combination of the following:
- A. the provision and maintenance of new *affordable rental housing* on the *lot* for a term of not less than 25 years;
 - B. a dedication to the City of sufficient land for the purpose of constructing the new *affordable rental housing* on the *lot*; or
 - C. a cash-in-lieu contribution to the City in the amount of the value otherwise required by subclause B above, to be paid prior to the issuance of the first above-grade building permit for the *lot* or for the portion of the *lot* being developed.
- (iii) any development containing ownership *dwelling units* shall provide not less than 5% of all ownership *dwelling units* with the following size restrictions:
- A. A maximum *residential gross floor area* of 46.5 square metres for *bachelor dwelling units*;
 - B. A maximum *residential gross floor area* of 60.4 square metres for a *one-bedroom dwelling unit*;
 - C. A maximum *residential gross floor area* of 79 square metres for *two bedroom dwelling units*;
 - D. A maximum *residential gross floor area* of 93 square metres for *three bedroom dwelling units*;
 - E. A maximum *residential gross floor area* of 120 square metres for a two bedroom townhouse/stacked townhouse unit; and
 - F. A maximum *residential gross floor area* of 135 square metres for a three bedroom townhouse/stacked townhouse unit.

- (iv) in addition to the requirements of subparagraphs (i), (ii) and (iii), the owners of those areas shown as Area C on Map 1 convey land to the City for use as a public street, parkland or for other public open space purposes;
- (v) the owner of lands within the *East Bayfront – West Precinct* proposed for residential uses shall enter into one or more agreements with the City pursuant to section 37 of the *Planning Act* to secure the facilities, services and matters required by this paragraph and such agreements are to be registered on title, to the satisfaction of the City.
- (w) lands zoned with the “(h)” symbol shall not be used for any purpose other than as provided for in paragraph (c) above until the “(h)” symbol has been removed. An amending by-law to remove the “(h)” symbol in whole or in part shall be enacted by City Council when the implementation of the following conditions have been secured to the satisfaction of Council through the execution and registration on title of an agreement or agreements pursuant to Section 37, 41, 51 and/or 53 of the *Planning Act*, as appropriate:
 - (i) A public art contribution in accordance with the City’s public art program of a value not less than 1% of the gross construction costs of all buildings and structures to be erected on the lot;
 - (ii) The provision of sustainable development measures that, in the opinion of the City, would be sufficient to achieve a minimum of Leadership in Energy and Environmental Design (LEED) Silver Certification for all buildings and structures to be constructed on the lot. Although obtaining a minimum of official LEED Silver Certification is not required, the owner shall:
 - A. prepare plans and reports to the satisfaction of the City, certified by qualified consultants and subject to peer review at the sole cost of the owner, that outline the manner in which the sustainable development measures are to be implemented, and the Owner shall develop the lot in accordance with such plans;
 - B. make a LEED application and provide to the City a copy of the LEED application together with written confirmation that it has been submitted.
 - (iii) The connection of all buildings to a district energy system and/or on-site renewable energy sources, if available at costs comparable to other energy sources;

- (iv) The submission of Site Plan Application(s) for review and comment by the Toronto Waterfront Revitalization Corporation Design Review Panel;
- (v) The provision of a *noise study* and detailed design plans in support of a Site Plan Application for any *sensitive land use*, which demonstrates that appropriate noise mitigation measures will be implemented. The *noise study* shall be submitted by the owner to the City of Toronto and the City shall provide a copy to *Redpath*. The *noise study* shall be peer reviewed by the City and by *Redpath* should *Redpath* so choose. Upon request by *Redpath*, comments received from *Redpath* shall be presented to City Council in a process that permits a reasonable opportunity for *Redpath* to give reasons for such comments;
- (vi) Inclusion of a provision in the agreement that the owner will undertake any required mitigation, attenuation or equivalent measures identified in the *noise study*, to the satisfaction of the City;
- (vii) Provision of a *vibration study* and detailed design plans in support of a Site Plan Application for any *sensitive land use* proposed within 75 metres of Queens Quay East, the rail spur or future transit line accommodating rail service to *Redpath* [distance measured property line to property line]. The *vibration study* shall be submitted by the owner to the City of Toronto and the City shall provide a copy to *Redpath*. The *vibration study* shall be peer reviewed by the City and by *Redpath* should *Redpath* so choose. Upon request by *Redpath*, comments received from *Redpath* shall be presented to City Council in a process that permits a reasonable opportunity for *Redpath* to give reasons for such comments;
- (viii) Inclusion of a provision in the agreement that the owner will undertake any required mitigation, attenuation or equivalent measures identified in the *vibration study*, to the satisfaction of the City;
- (ix) The provision of an *emissions study* and detailed design plans in support of a Site Plan Application, for any *sensitive land use* within the East Bayfront – West Precinct area that are proposed to be located west of Lower Sherbourne Street and west of Street “B”. The *emissions study* shall be submitted by the owner to the City of Toronto and the City shall provide a copy to *Redpath*. The *emissions study* shall be peer reviewed by the City and by *Redpath* should *Redpath* so choose. Upon request by *Redpath*, comments received from *Redpath* shall be presented to City Council in a process that permits a reasonable opportunity for *Redpath* to give reasons for such comments;

- (x) Inclusion of a provision in the agreement that the owner will undertake any required mitigation, attenuation or equivalent measures identified in the *emissions study*, to the satisfaction of the City;
- (xi) Inclusion of a provision in the agreement that the owner shall not request City Council to approve or grant any Site Plan Application for any development that will accommodate a *sensitive land use* until *Redpath* has been given at least 30 days to review the *noise study*, *vibration study* and *emissions study*, in order to provide a response to the City.
- (xii) Inclusion of a provision in the agreement that prior to the issuance of a Building Permit in respect of any building(s) that will accommodate a *sensitive land use* for which a *noise study*, *vibration study* or *emissions study* was undertaken, written confirmation(s) by appropriate qualified consultants will be submitted to the City that the builder's plans for such building(s) incorporate the architectural control measures required by such *noise study*, *vibration study* and/or *emissions study*, and that the City shall provide such confirmation(s) to *Redpath*.
- (xiii) Inclusion of the following specific warning clause (the "Warning Clause") in all offers of agreements of purchase and sale:

"Warning: This site is in proximity to the Tate & Lyle Canada Ltd. Refinery located at 95 Queens Quay Boulevard East (the "Redpath Facility") which operates 24 hours a day, 7 days a week. Various processes, shipping and receiving, and rail operations may either operate continuously or at any time of day or night. Activities may include: loading, unloading and repair of large tractor trailers or bulk bin trucks; loading, unloading and movements of railway cars along Queens Quay Boulevard; docking and unloading of ocean going ships; venting of steam; construction and repair; and operation of various sugar refining processes. In addition, there may be industrial odours emanating from the refinery from time to time. There may be alterations and/or expansions to the Redpath Facility in the future. Notwithstanding the inclusion of certain mitigation features within this development to lessen potential noise, odour and visual impact from the Redpath Facility, from time to time noise from the Redpath Facility is likely to be audible, odours may be unpleasant, and dust may be bothersome. Tate & Lyle Canada Ltd. advises that it will not be responsible for any complaints or claims arising from any of the activities at or relating to the Redpath Facility, property or operations thereon."

- (xiv) The inclusion of the Warning Clause in any condominium disclosure statement applicable to all lands, or portion thereof, proposed to be developed with a *sensitive land use* and the condominium purchasers and their successors and assigns shall be advised of the Warning Clause in the Status Certificate (both for original and subsequent purchasers). Equivalent provisions are to be contained in any consent pursuant to Section 53 of the *Planning Act*;
- (xv) A large area plan shall be displayed in the sales pavilion(s)/office(s) for any residential development, prominently identifying the *Redpath* facility.
- (xvi) In the case of the lands shown as Area E on Map 3, in addition to those matters set out in subparagraphs (w)(i) to (xvi) above, the owner shall prepare a conceptual design for a school, a community centre, associated open spaces and other potential uses to the satisfaction of the City and the relevant school board(s);
- (xvii) In the case of the lands known municipally in 2005 as 215 Lake Shore Boulevard East, in addition to those matters set out above, the owner shall submit and implement a management plan for conducting a Part 2 Archaeological Assessment satisfactory to the City; and
- (xviii) In the case of lands within the *East Bayfront – West Precinct* proposed for residential uses, in addition to those matters set out above, the owner has elected to provide the facilities, services or matters referred to in paragraph (v) above and entered into the agreement(s) referred to in subparagraph (v)(v).
- (xix) The City shall provide *Redpath* with a copy of the final Agreement within 10 days of it being executed.

Definitions:

for the purposes of this exception:

“*affordable rental housing*” means rental housing where the total monthly shelter cost (gross monthly rent including utilities – heat, hydro and water – but excluding parking and cable television charges) is at or below one times the average City of Toronto rent, by unit type (number of bedrooms), as reported annually by the Canada Mortgage and Housing Corporation;

“*Build-to Line A*”, “*Build-to Line B*” and “*Build-to Line C*” means those *frontages* and setback lines respectively identified as Build-to Line A, Build-to Line B, and Build-to Line C on Map 4;

“*district energy, heating and cooling plant*” means a building or structure that is used for the production of electrical power, heating and cooling which is generated/converted at one or more linked locations and then is distributed to the users;

“*emissions study*” means a study of all relevant emissions including dust, odour and air quality, prepared by a qualified air quality consultant, that makes specific recommendations for air quality mitigation features to be incorporated into the design of the development taking into account relevant Ministry of Environment guidelines and regulations;

“*ground floor animation uses*” shall have the same meaning as the expression *street-related retail and services uses*, except that, in addition to those uses listed in sections 8(1)(f)(b)(i), (ii) and (iv), an *artist’s or photographer’s studio*, or a *custom workshop* shall also be permitted;

“*noise study*” means a study of all relevant noise sources prepared by a qualified noise consultant that makes specific recommendations for noise mitigation features to be incorporated into the design of the development taking into account relevant Ministry of Environment guidelines regulations and relevant sections of the Toronto Municipal Code, including Chapter 591 or its successors.

“*publicly accessible open space*” shall have the same meaning as the term *common outdoor space*, except that such areas may be accessible from a *street*, or from the Waterfront Promenade shown as Area A on Map 3;

“*Redpath*” means the lands and premises known municipally as 95 Queens Quay Boulevard East, in the City of Toronto, owned and operated by Tate & Lyle Canada Ltd., its successors or assigns;

“*sensitive land use*” means a *hotel*, a *commercial school*, a *trade school* and all those uses permitted within a CR district in sections 8(1)(f)(a)(i) and (ii), and in section 8(1)(f)(b)(ii) and (iii), but does not include a fire hall, *performing arts studio*, police station, *a public art gallery or a public museum*;

“*Setback Line A*” means those *frontages* identified as Setback Line A on Map 4;

“*vibration study*” means a study of vibration from transportation sources, prepared by a qualified noise and vibration consultant, that makes specific recommendations for mitigation features to be incorporated into the design of the development taking into account commonly used criteria in Ontario for assessing vibration in building(s).

7. Section 12(2) 270 is amended by adding the map attached hereto as Map C.

8. Section 12(2) 311 is amended by adding, following the phrase “*East Bayfront*”, the words:

“other than in the *East Bayfront – West Precinct*”

9. Section 12(2) 312 is amended by adding, following the phrase “*East Bayfront*”, the words:

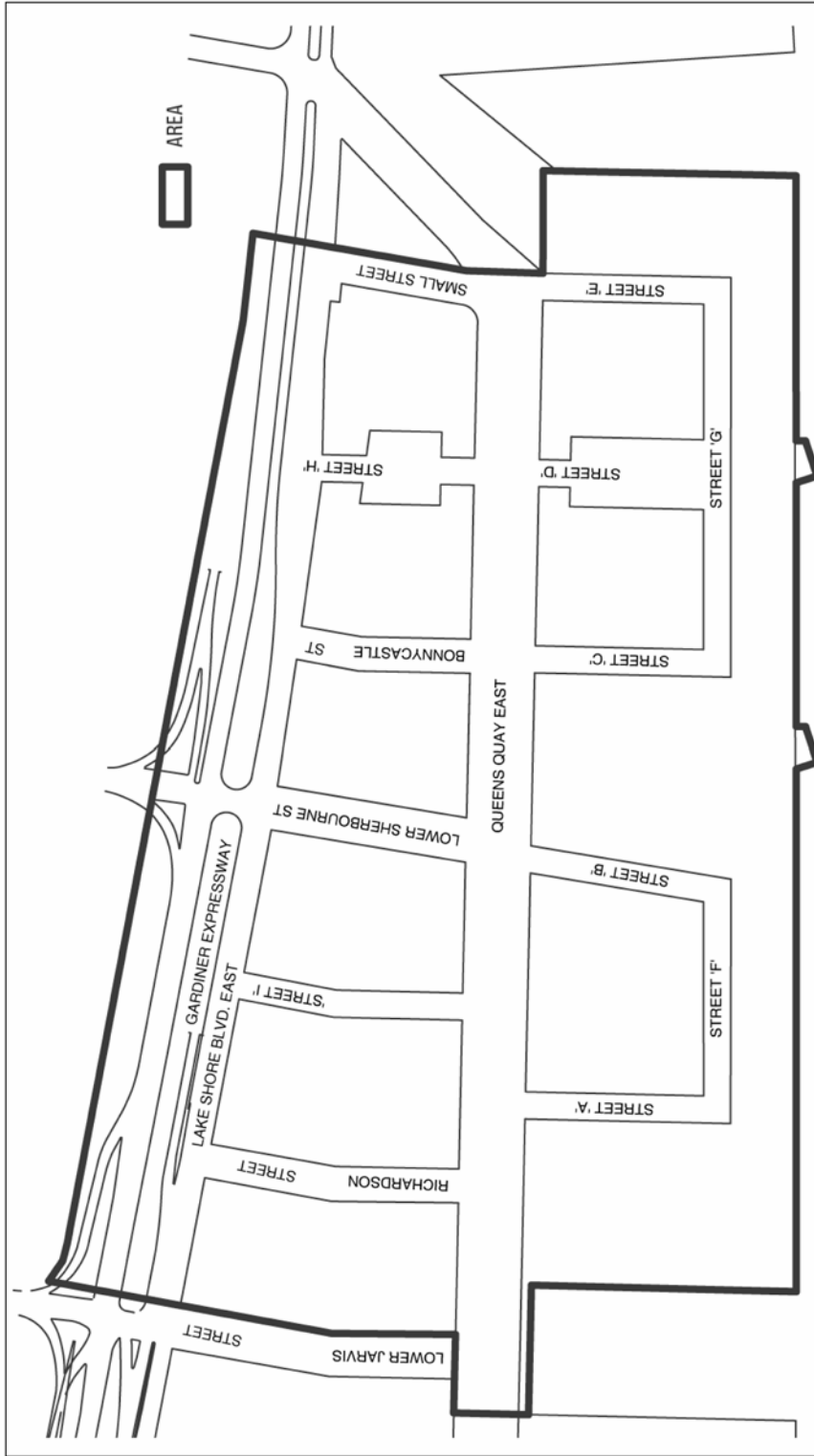
“other than in the *East Bayfront – West Precinct*”

ENACTED AND PASSED this 27th day of September, A.D. 2006.

DAVID R. MILLER,
Mayor

ULLI S. WATKISS
City Clerk

(Corporate Seal)



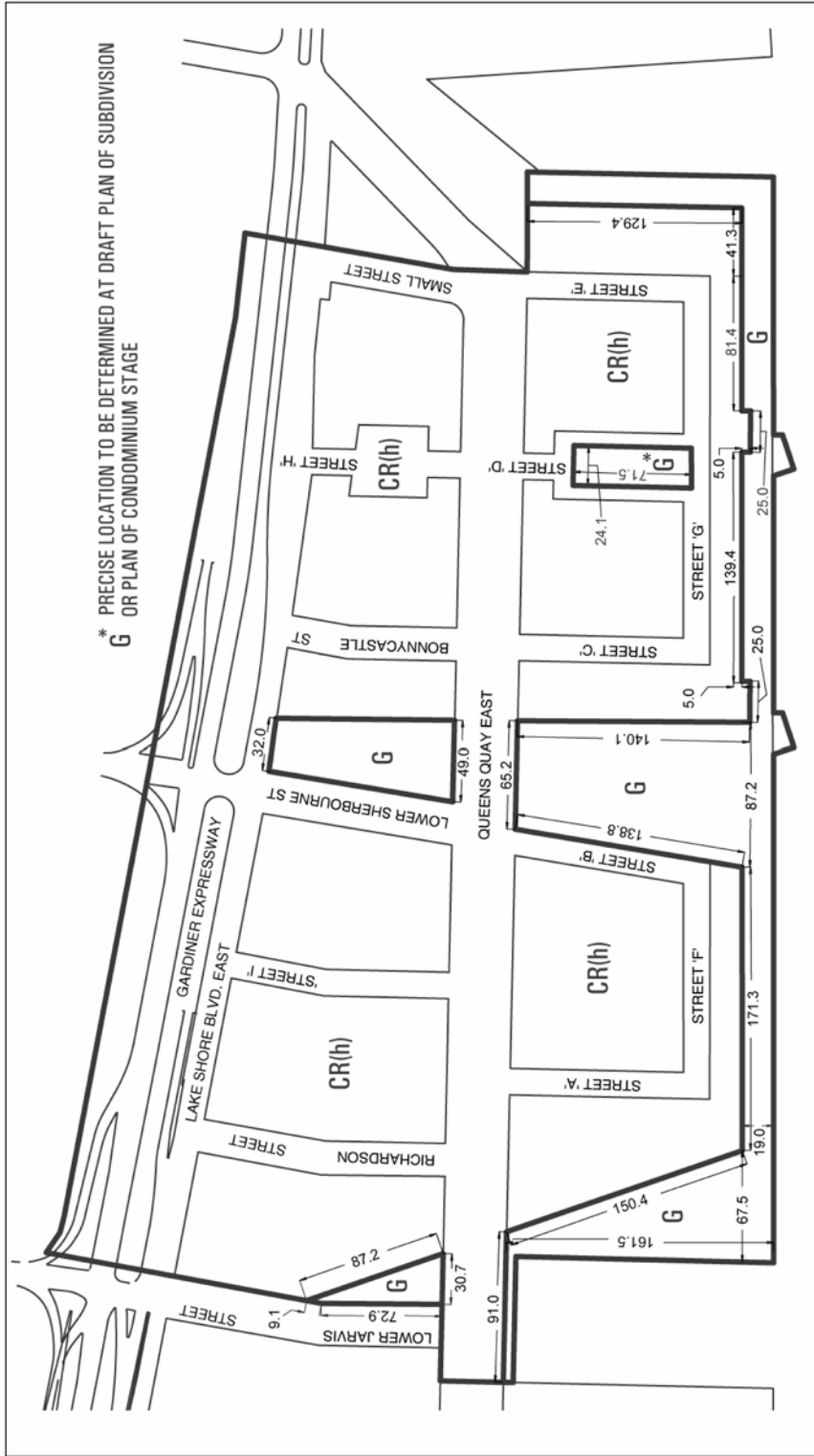
East Bayfront - West Precinct

Toronto City Planning Division
Area Referred to as "East Bayfront - West Precinct"

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only

↑
Not to Scale
08/16/06



Map A: District Use Map

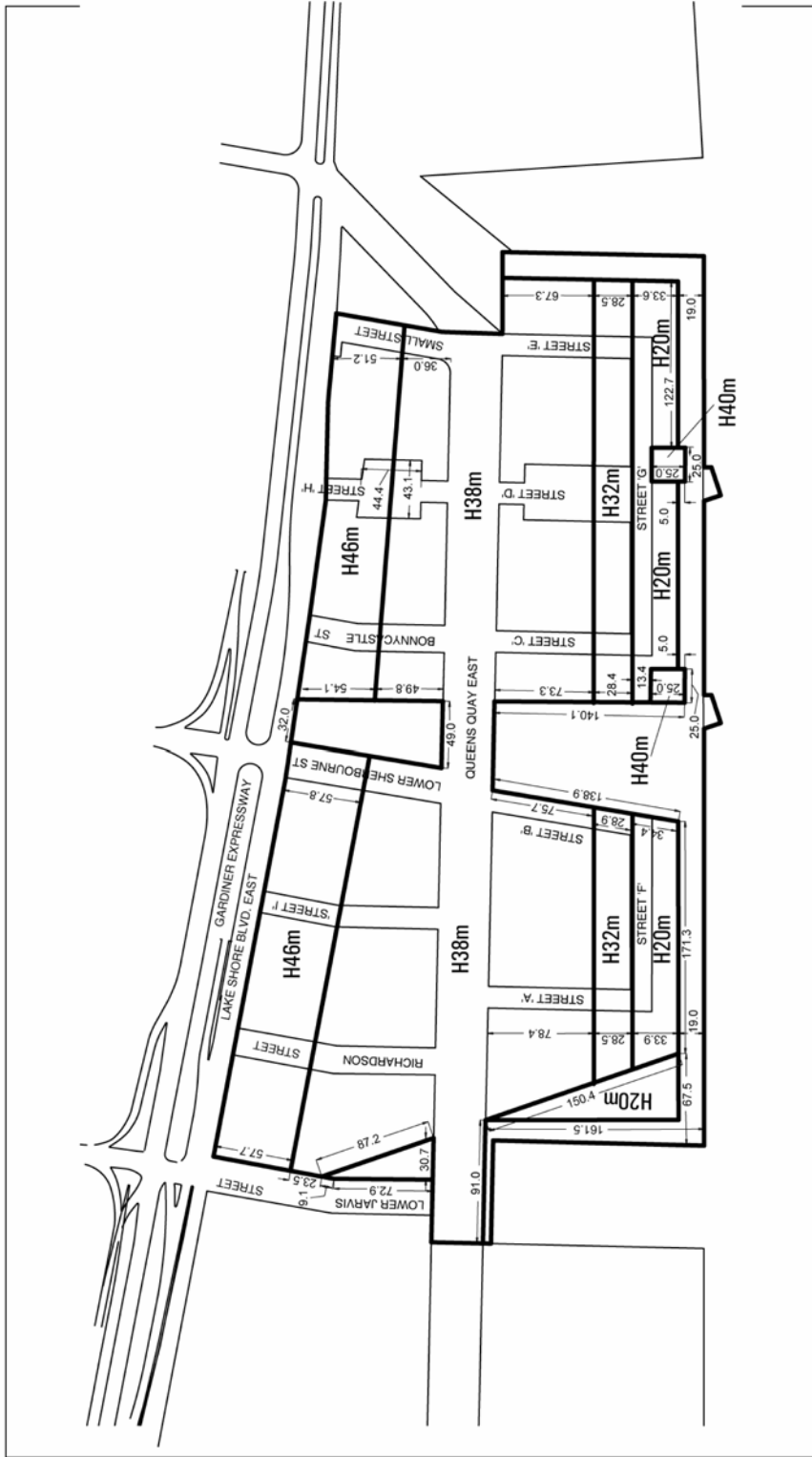
East Bayfront - West Precinct

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only



Not to Scale
08/16/06



East Bayfront - West Precinct

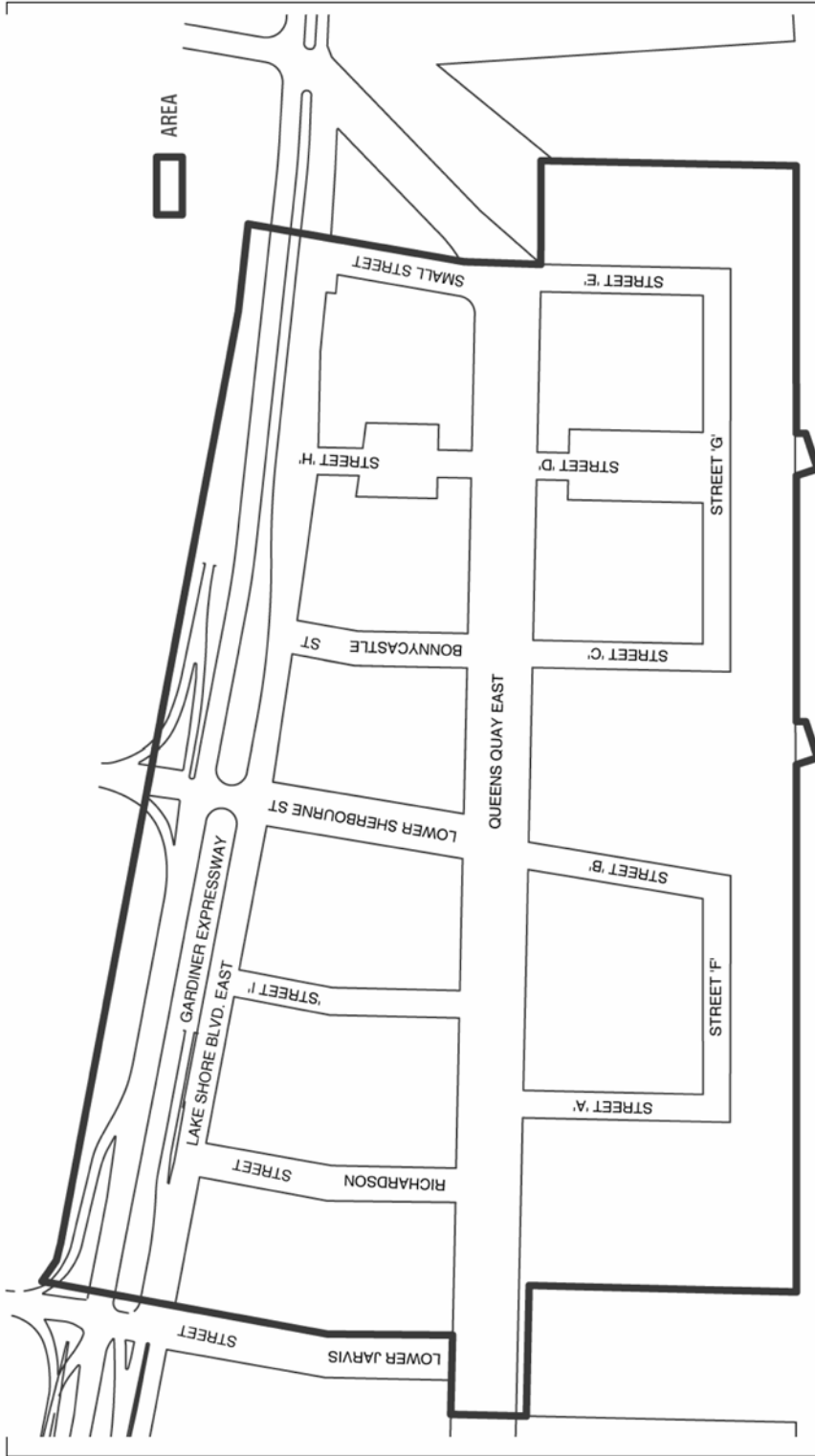
Toronto City Planning Division
Map B: Maximum Heights Plan

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only



Not to Scale
08/1606



East Bayfront - West Precinct



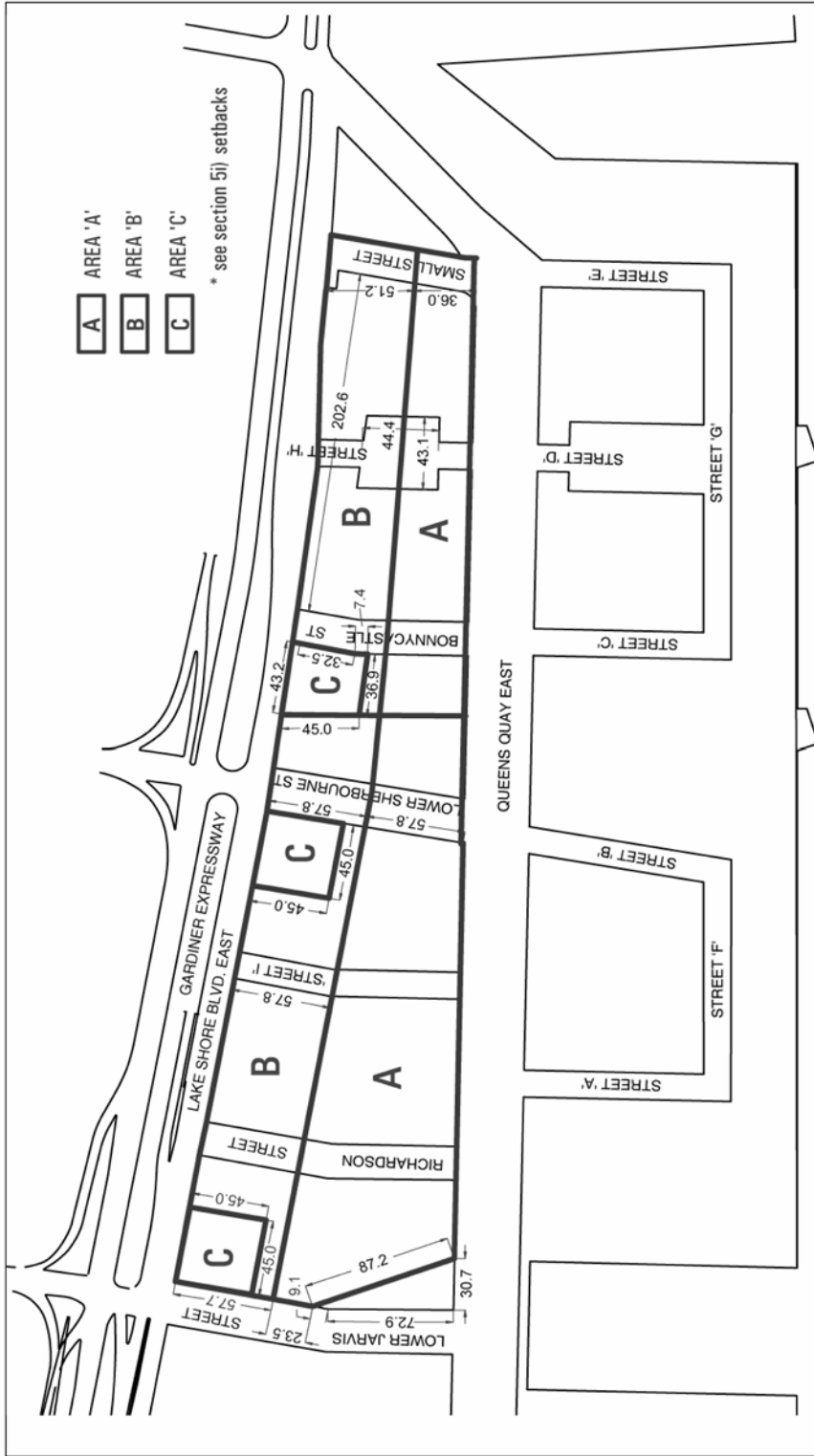
Map C: Lands Exempt from Section 12(2) 270

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only



Not to Scale
08/1606



East Bayfront - West Precinct

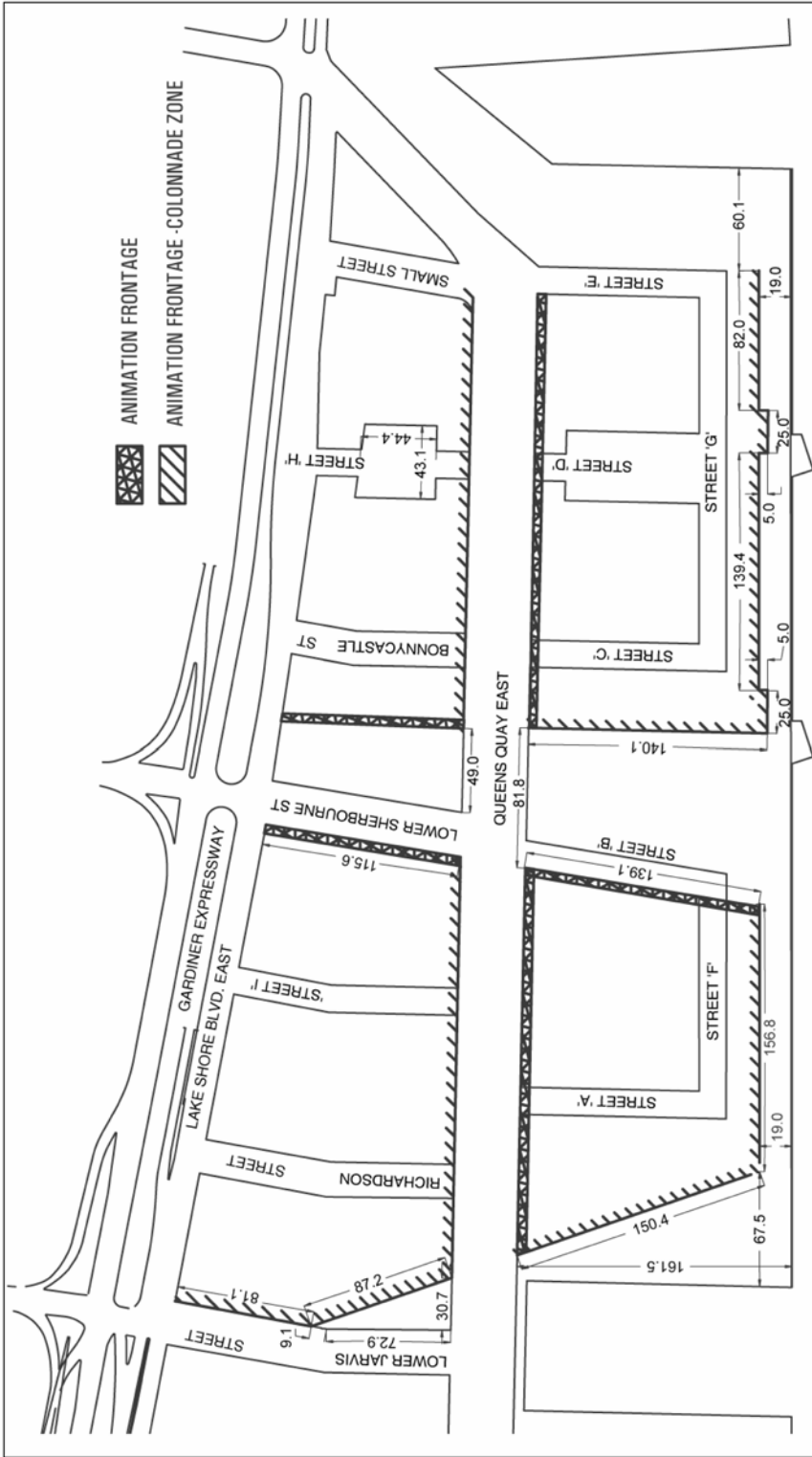
Map 1: Heights Plan with Exception Areas

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only



Not to Scale
08/16/06



East Bayfront - West Precinct



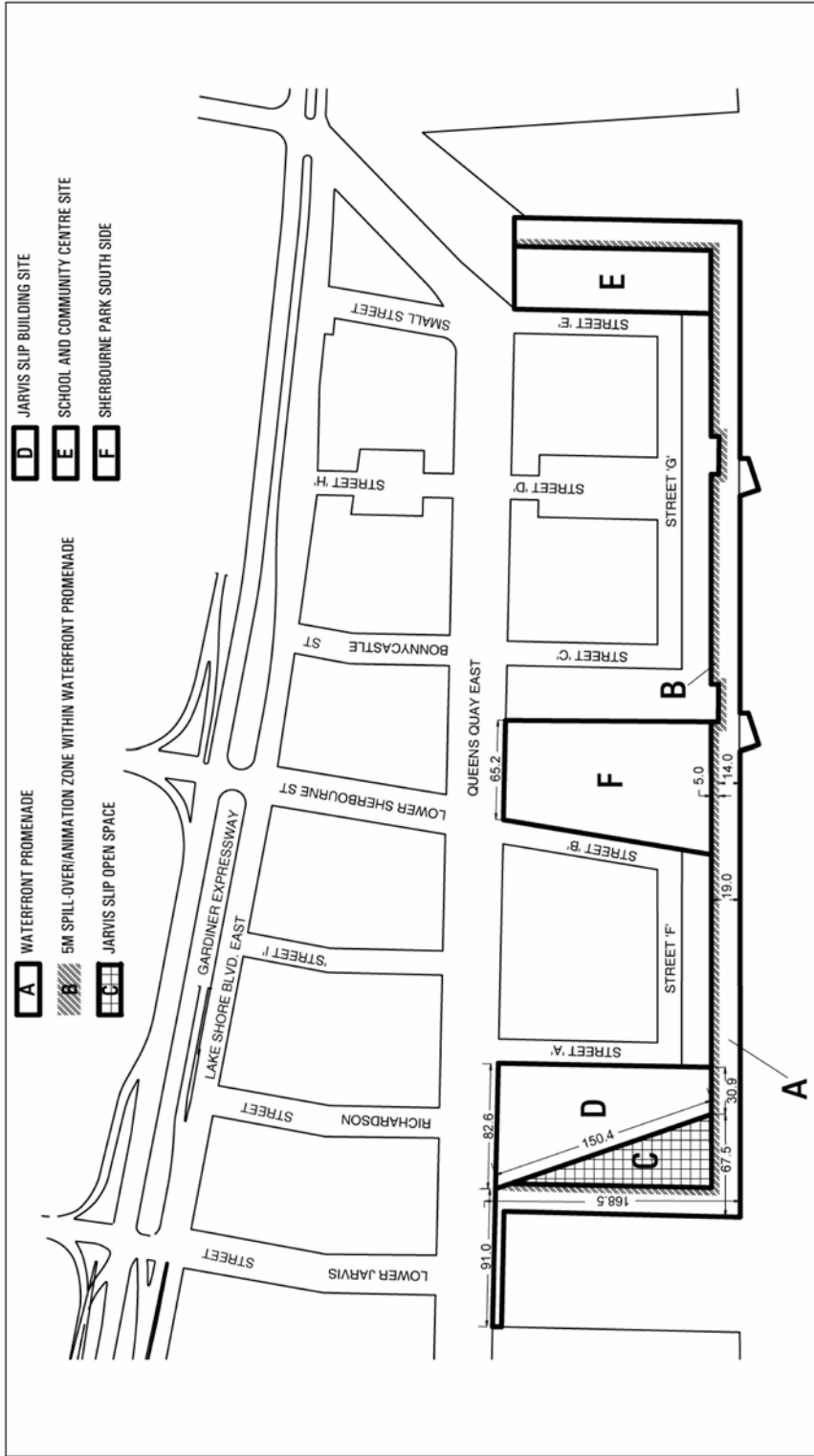
Map 2: Ground Floor Animation Area

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only



Not to Scale
08/16/06



East Bayfront - West Precinct



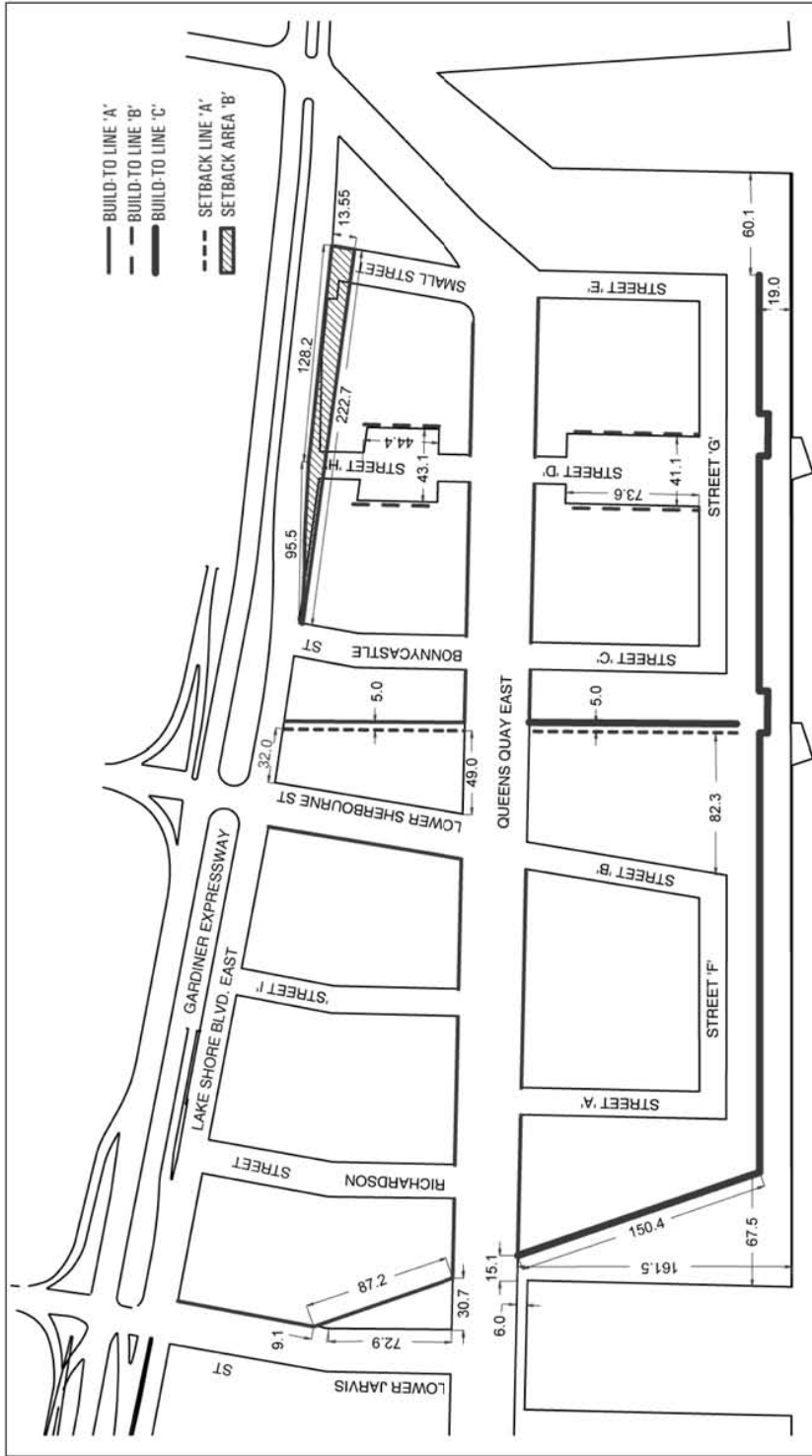
Map 3: Water's Edge Promenade

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only



Not to Scale
08/16/06



East Bayfront - West Precinct

Toronto City Planning Division
Map 4: Build-To/Setback Plan

File # 06_160461

The Location of Streets 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H' and 'I' Are Shown For Illustrative Purposes Only

