

2150 LAKE SHORE SHADOW STUDY

2150 - 2194 - LAKE SHORE
BOULEVARD WEST
23 PARK LAWN ROAD
TORONTO

CPPIB Park Lawn Canada Inc
FCR (Park Lawn) LP

SHADOW ANALYSIS

INTRODUCTION

A sun shadow study was completed for the proposed Master Plan, as requested by City staff, to analyze the effect of shadowing from new development shown in the Master Plan on the surrounding context. Shadow Studies are not a typical required for Draft Official Plan Amendment (OPA) applications, as the Draft OPA is a policy document that sets out a framework for the proposed development of the site, not a detailed development proposal such as the conceptual development shown in the Master Plan. As such, this study has been issued and included in this application for illustrative purposes only - it has no direct relationship to the Draft OPA that is the subject of this application. This study is intended to help staff understand the Master Plan proposal and to help inform the Secondary Plan study.

The shadow study assessed the shadowing on an hourly basis from 9:18 am to 6:18 pm for each of the vernal equinox (March 21), the summer solstice (June 21), and the autumnal equinox (September 21).

The shadow study distinguishes between the shadows deriving from the existing context and the net new shadows deriving from the proposed development. The assessment provided below discusses the combined impact of these shadows within the site and on the adjacent context.

AUTUMNAL & VERNAL EQUINOXES

Analysis of the Context

In the morning hours between 9:18 am and 10:18 am during the vernal and autumnal equinoxes, shadows extend to the west of the site across Park Lawn Road. At 9:18 am, shadows reach the northmost residential tower on the west side of Park Lawn Road, as well as non-residential development further to the north on the west side of Park Lawn Road and the central Ontario Food Terminal building. By 10:18 am, these shadows no longer reach existing residential and non-residential development in the surrounding context, and by 11:18 am shadows have moved off of Park Lawn Road entirely as well.

At 3:18 pm shadows begin to cross Lake Shore Boulevard W to the east of the site, reaching existing residential towers opposite the site. A small sliver of shadow also reaches Jean Augustine Park at that hour, though it should be noted that this park is already largely in shadow from the existing building immediately south of the park at this hour. By 4:18 pm, this shadow has moved entirely off of Jean Augustine Park. At this hour, shadows continue to extend across Lake Shore Boulevard towards existing residential towers to the east, though it should be noted that much of this area is already in shadow from existing residential development. At 5:18 pm some modest incremental net new shadows reach Humber Bay Shores park; these new shadows are comparatively minor given the park is already largely in shadow from the existing

development immediately west of the site at this hour. By 6:18 pm, the area to the west of the site is almost entirely shadowed by existing development, and net new shadows are negligible, excepting the area immediately opposite the site on the west side of Lake Shore Boulevard W.

Due to the site's location primarily to the north of existing development in the area, as well as the high-rise character and related shadows cast by existing development in the area, net new shadows are primarily cast to the north of the site on the highway and Ontario Food Terminal. To the extent that new shadows reach existing development in the early morning and late afternoon and evening hours, incremental new shadows are modest. Incremental shadows are in keeping with the extent of shadowing from existing development at these hours, when much of the area is already in shadow at this time of year. To the extent that new shadows reach existing parks in the area, new shadows are minor and limited to late afternoon/evening hours when these areas are largely already in shadow. As such, shadows from new proposed development are appropriate and in keeping with the character and existing conditions in this high density urban context.

Analysis of the Proposed Park

At 9:18 am the proposed park is almost entirely in shadow, the majority of which is from existing development to the east, with the remainder from proposed development to the east of the park. At 10:18 am the majority of the park is still in shadow, both from existing and proposed development to the east, though approximately one third of the park begins to receive sun at this hour. At 11:18 am shadows from existing development have moved off the park, and approximately half of the park remains in shadow from proposed development to the south and east of the park. Between 12:18 pm and 1:18 pm, shadows from the proposed development to the south and east of the park have primarily moved off of the park, with the significant majority of the park receiving sun. At 2:18 pm shadows from proposed development to the southwest of the park begin shadowing the western half of the park; over half of the eastern portion of the park continues to receive sun at this hour. At 3:18 pm, shadows from proposed development to the southwest continue to move across the park, with approximately one third of the park receiving sunlight. At 4:18 pm, shadows from proposed development have largely moved off the park, with the significant majority of the park receiving sun. At 5:18 and 6:18 pm at this time of year, shadows lengthen, resulting in the significant majority of the park and site in general being in shadow.

Due to the extent of existing shadowing in the area, the proposed park has been strategically placed internally within the site, further from existing high rise development to the south, east and west of the site. Proposed development to the south of the park has been sculpted and kept at a mid-rise and low-rise scale, further reducing the extent of shadowing on the proposed park. As a result, between 10:18 am and 4:18 pm at least an approximate one third of the park remains free of shadows, allowing for enjoyment of sun access on a significant portion of the park throughout most of the day. Over the lunch hours – 12:18 to 1:18 pm – shadows on the park are minimal, allowing for excellent sun access during these hours. It should be noted that providing sunlight on new parks in this type of high density context is challenging. This is evidenced by the current extent of shadowing on Jean Augustine Park from existing development to its south. Comparatively, the efforts of the proposed development to strategically locate the park and sculpt proposed development to reduce shadowing are more sensitive and more effective in reducing shadowing and providing adequate sunlight on the proposed park.

In summary, the proposed development is in keeping with the character of existing development in this context, and is generally more sensitive and strategic in its successful efforts to reduce shadowing and provide sun access on the proposed park. In this urban context, the extent of shadowing on the park is appropriate at the vernal and autumnal equinoxes.

SUMMER SOLSTICE

Analysis of the Context

Compared to the autumnal and vernal equinoxes, in the morning hours at the summer solstice shadows extend further to the immediate west of the site. At 9:18 am some existing shadows and incremental shadows from the proposed development reach the podiums of the three buildings with frontage on the west side of Park Lawn Road as well as the northern most residential tower. By 10:18 am, these shadows have moved further north, with only a portion of the northern most building on the west side of Park Lawn Road receiving some incremental shadowing at its northern tip. By 11:18 am shadows have moved off of all but a small sliver of the eastern side of Park Lawn Road. From 11:18 am to 2:18 pm new incremental shadowing is almost entirely limited to the site itself; shadows do not reach the Food Terminal site, and just begin shadowing the west side of Lake Shore Boulevard at 2:18 pm. At 3:18 pm, new shadows begin reaching across to the east side of Lake Shore Boulevard, reaching residential towers opposite the site. These shadows lengthen and reach additional towers and areas between 4:18 and 6:18 pm, but are in keeping with the extent of existing shadowing from the high-rise towers located between Lake Shore Boulevard and Marine Park Drive.

New incremental shadows do not reach Jean Augustine Park at any time during the summer solstice. Some minor incremental patches and slivers of new shadow reach Humber Bay Shores park at 6:18 pm only, at which point much of the park is already in shadow from existing development immediately to the west. As such, at the summer solstice, shadows from new proposed development are appropriate and in keeping with the character and existing conditions in this high density urban context.

Analysis of the Proposed Park

Similar to the equinoxes, at 9:18 am, much of the park is in shadow both from existing and proposed development to the east. But by 10:18 am the significant majority of the park receives sun, with only two small patches of shadow from proposed development to the east reaching the park. This condition is maintained between 10:18 am and 12:18 pm, where only a negligible patch of shadow is cast on the eastern edge of the park from proposed development to the east, resulting in the park effectively receiving full sun between these hours. At 1:18 pm the park is free of any shadows. At 2:18 pm a small patch of shadow from proposed tower to the west begins to reach the western edge of the park. This fast moving shadow moves over the park between 2:18 and 4:18 pm, still allowing the majority of the park to receive sun during this period. At 5:18 pm, the shadow from the proposed tower to the west has moved off the park, and only a small patch of shadow from the podium portion of development to the west begins to reach the western edge of the park, leaving the significant majority of the park in full sun. At 6:18, the significant majority of

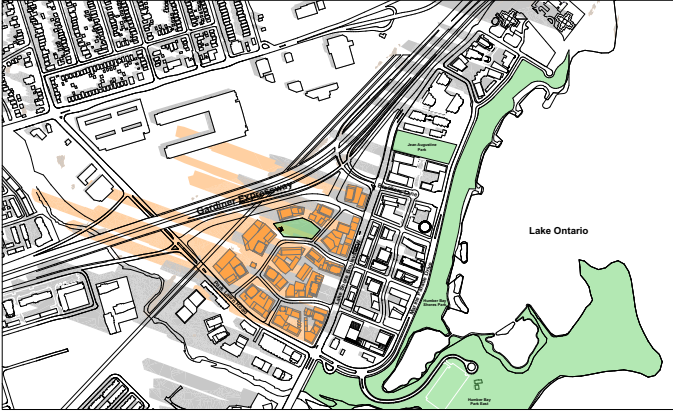
the park still receives sun, despite patches of shadow from proposed development to the west lengthening and reaching more of the western edge and northern tip of the park.

In summary, at the summer solstice, when the park will receive the most use, the effects of the Master Plan's efforts to strategically locate the park and sculpt massing to the south are pronounced, minimizing shadowing on the park and resulting in excellent access to sun throughout the day, beyond the 9:18 am window.

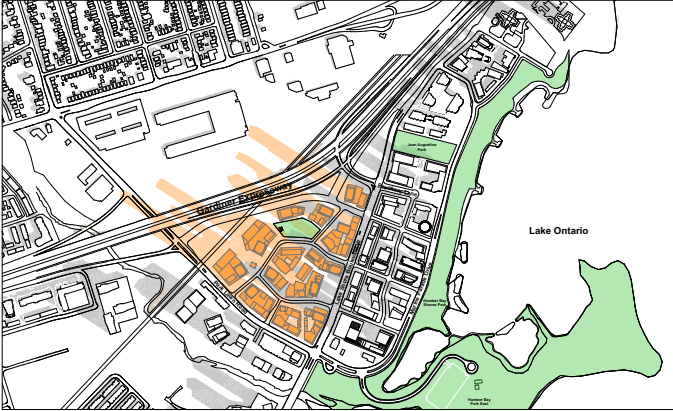
CONCLUSION

The site is located at the northeast corner of Park Lawn Road and Lake Shore Boulevard, and existing residential development in the immediate context is located to the south, east and west of new development on the site. As such, net new shadows are primarily cast upon the site itself, and on less sensitive uses to the north of the site, including the Gardiner Expressway and Ontario Food Terminal. To the extent that new shadows reach existing development in the immediate context, this occurs in the early morning and late evening hours, where incremental new shadows are modest and are in keeping with the extent of shadowing from existing development. The extent of incremental shadows on existing parks in the area is generally minor and appropriate in this context, given it is limited to the afternoon and evening hours and is modest in comparison to shadows on existing parks from existing development. With regards to conditions within the site, efforts to strategically locate the proposed park and sculpt massing are both successful in reducing the extent of shadowing on the park, particularly at the summer solstice when the park will receive the greatest use. In conclusion, incremental new shadows from the proposed Master Plan are appropriate and are in keeping with the character and existing conditions in this high density urban context.

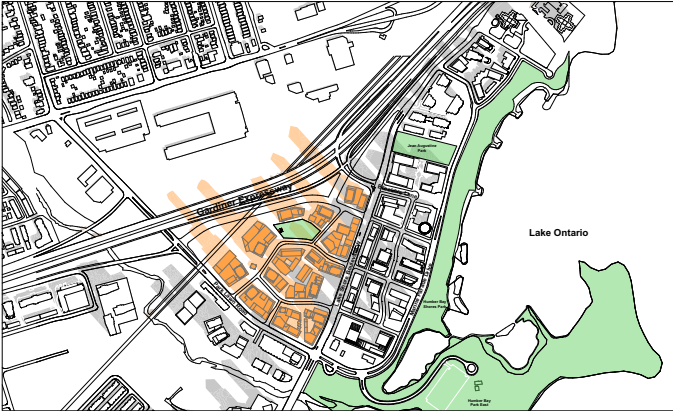
MARCH 21ST



9:18am



10:18am



11:18am



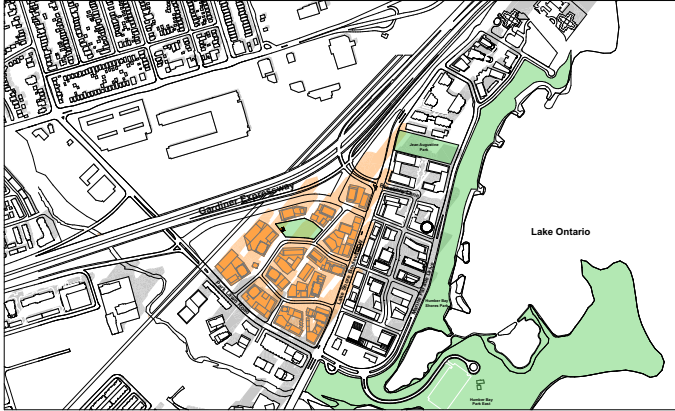
12:18pm



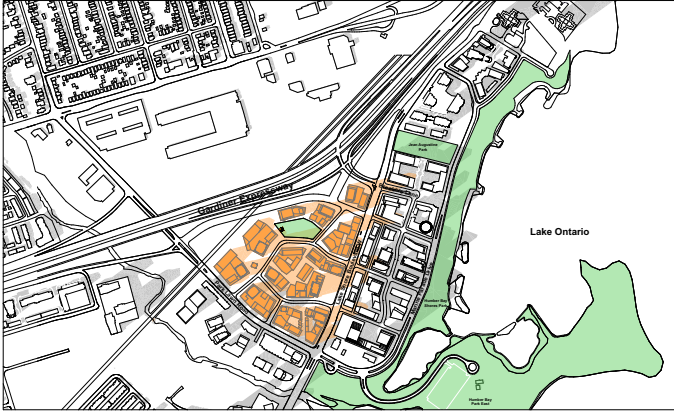
1:18pm



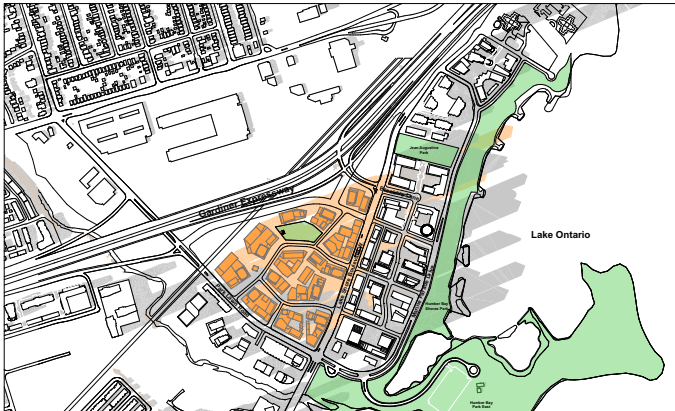
2:18pm



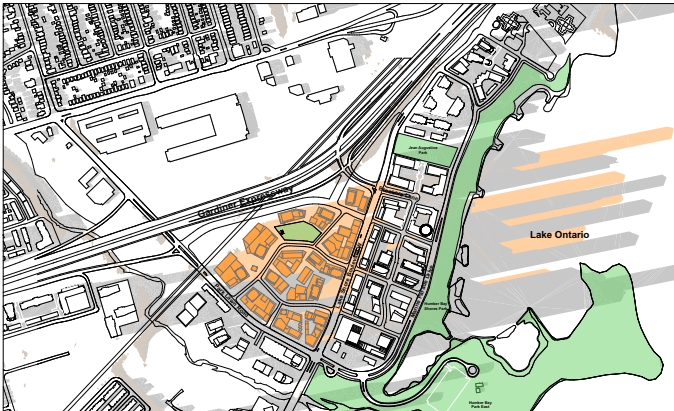
3:18pm



4:18pm

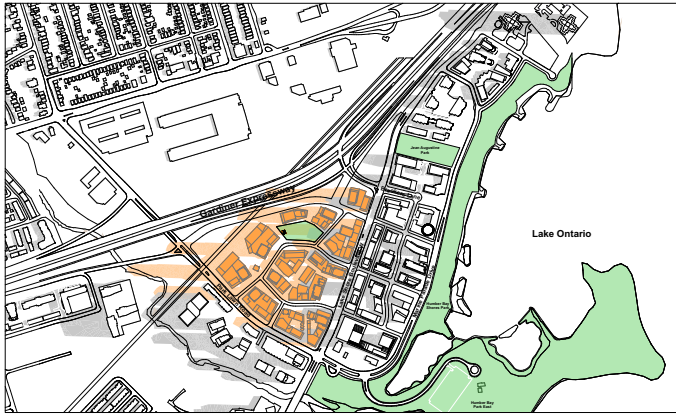


5:18pm

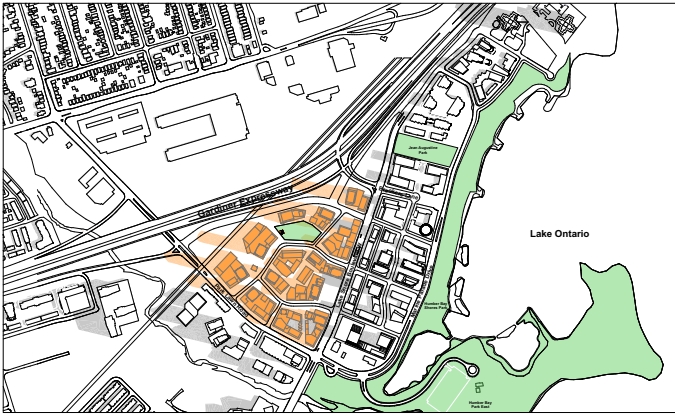


6:18pm

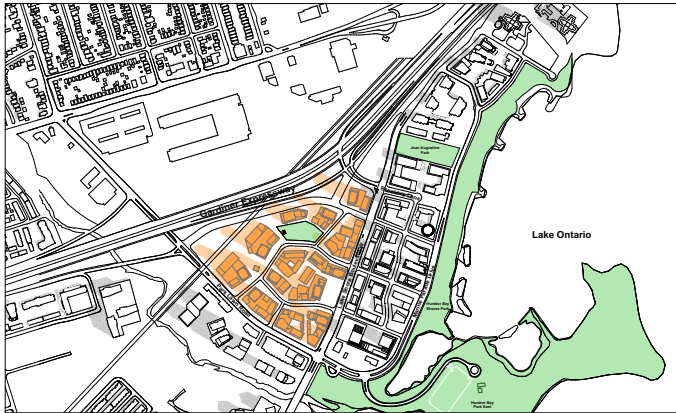
JUNE 21ST



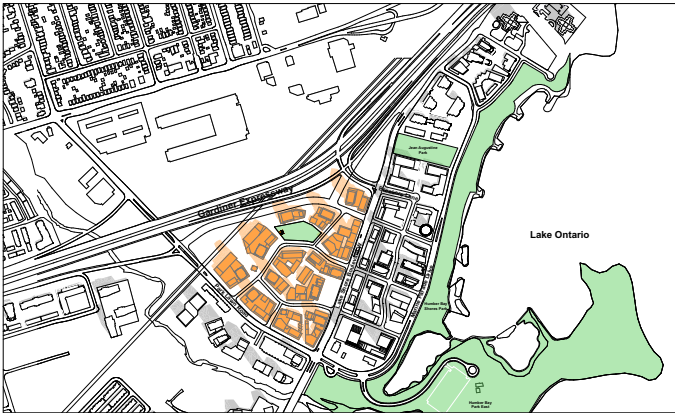
9:18am



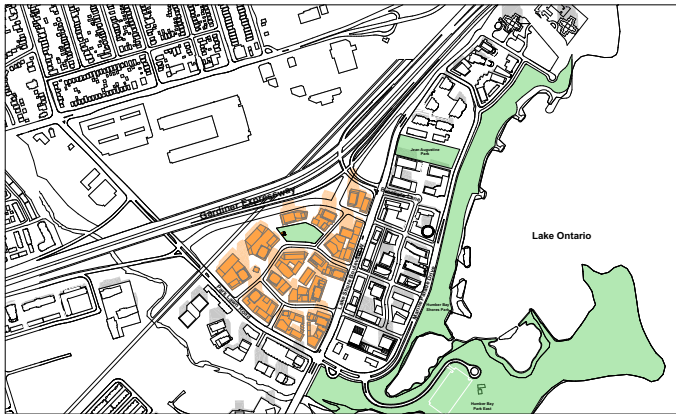
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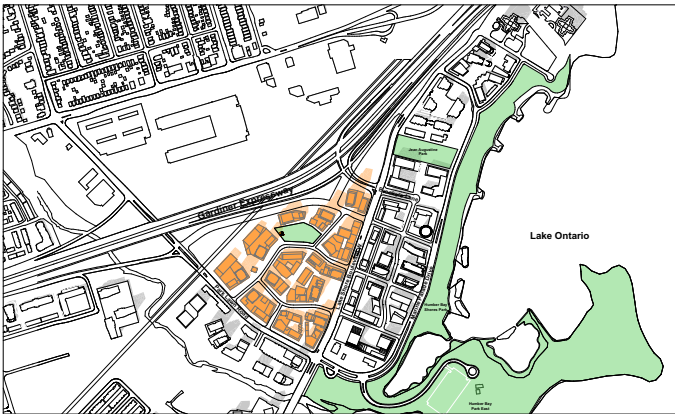
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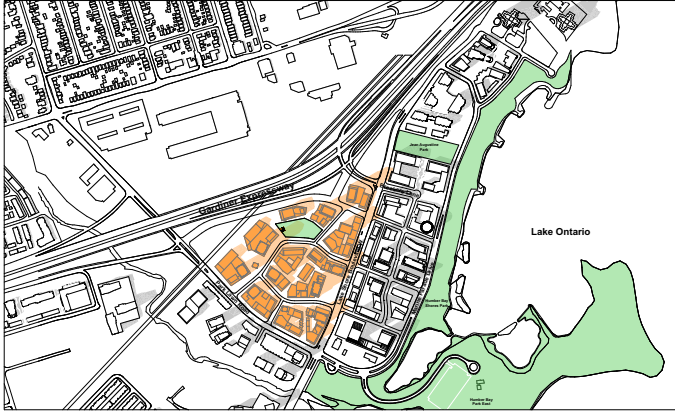
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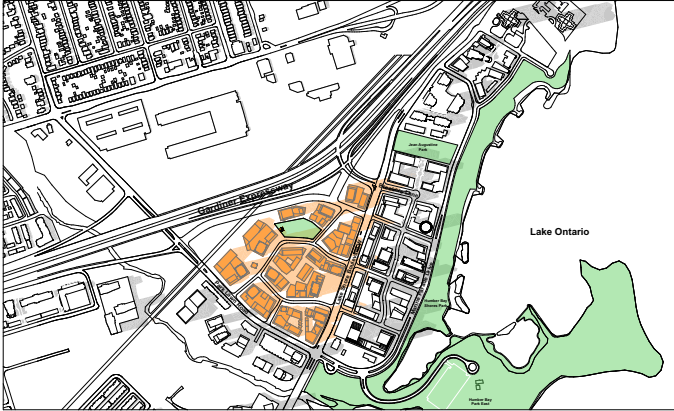
1:18pm



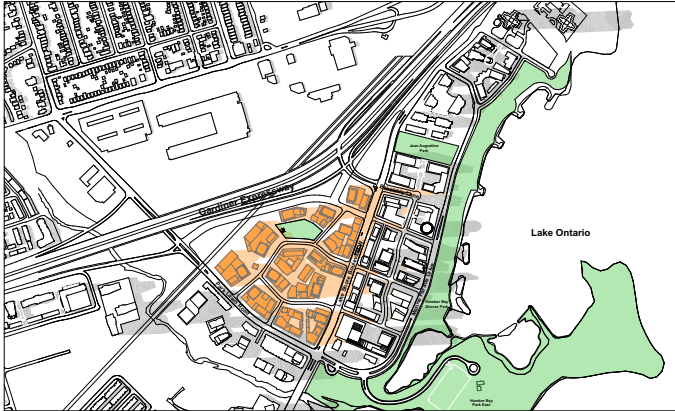
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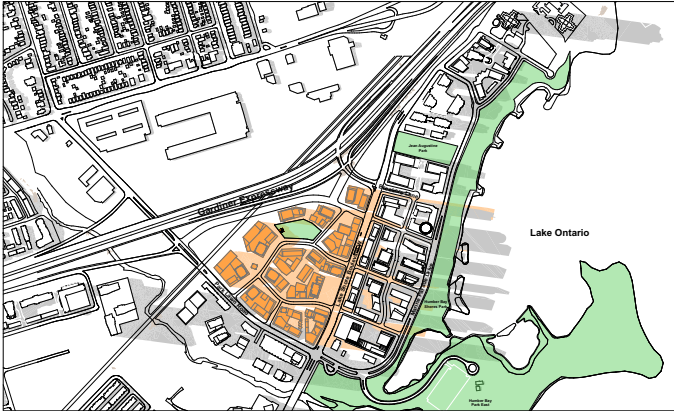
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4:18pm

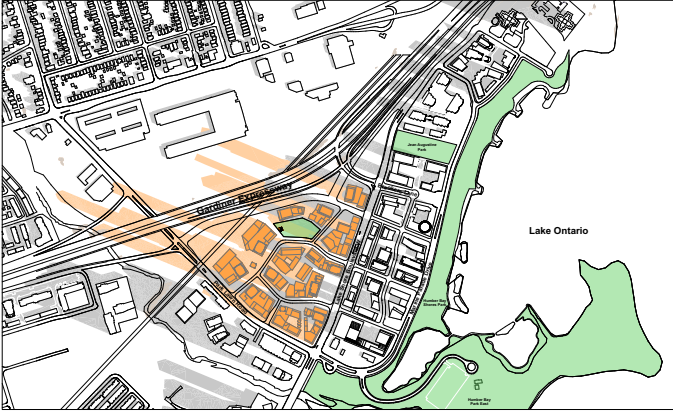


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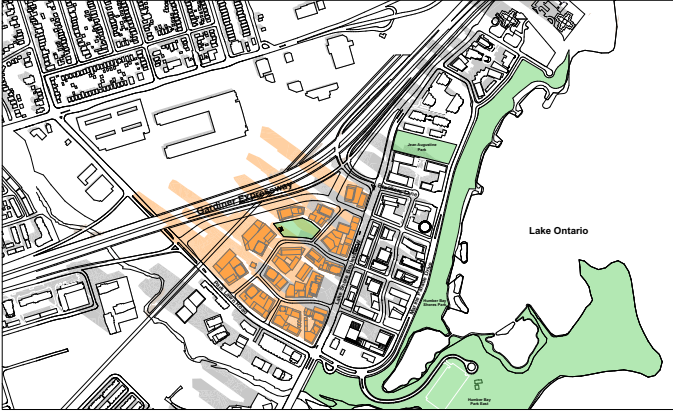


6:18pm

SEPTEMBER 21ST



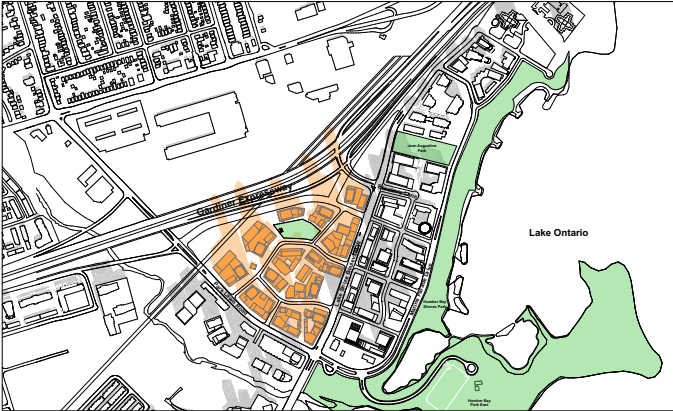
9:18am



10:18am



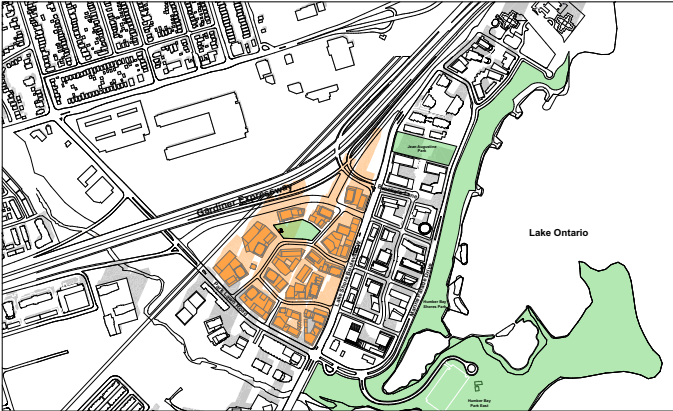
11:18am



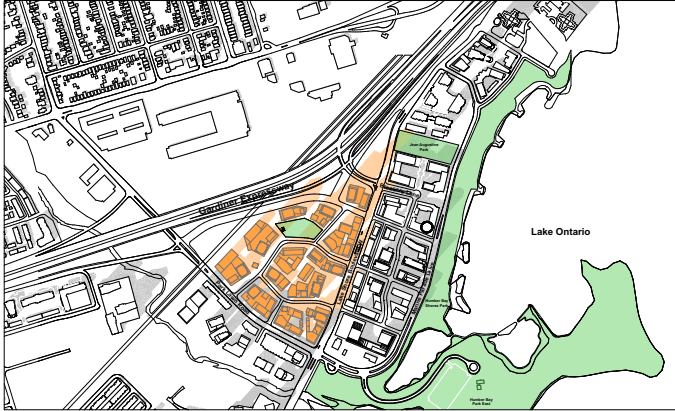
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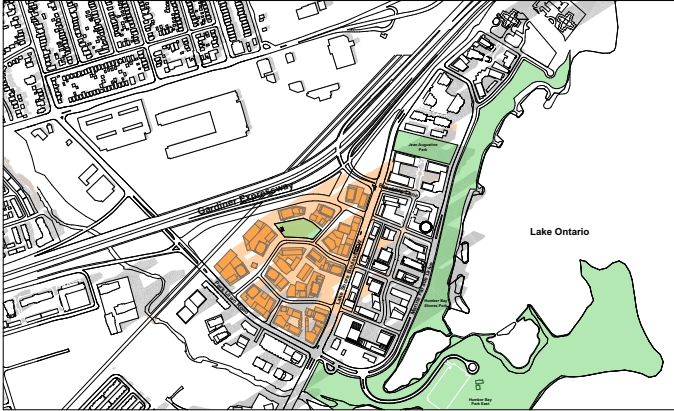
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2:18pm



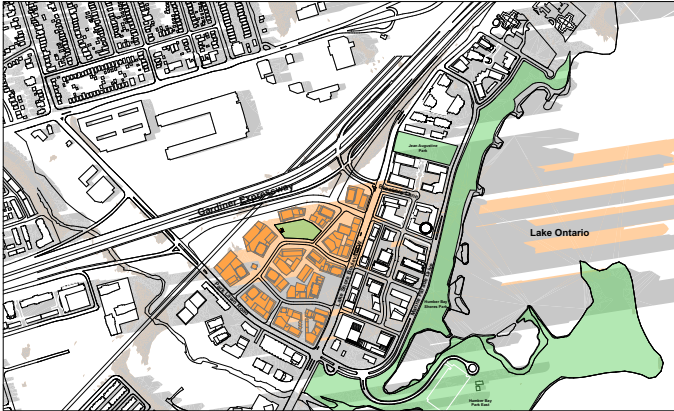
3:18pm



4:18pm



5:18pm



6:18pm

