Sun/Shadow Study

Garden Drive, City of Oakville
TBG Project No. 24176

BIGLIERI GROUP

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1.0 PROPOSAL DESCRIPTION

The proposed development consists of four (4) four-storey townhouse blocks with a total of 48 townhouse units. Two shared green mews are situated between Block A, B and C. Vehicular access for Blocks A, B and C is via Garden Drive. A driveway between Block C and D leads to garage entrances for the building on Block D as well as 11 Surface parking spots.

2.0 SURROUNDING CONTEXT

The Subject Site is located at 105-159 Garden Drive, Oakville, Ontario; situated North of Lakeshore Road W and South of Rebecca Street. The Subject Site is currently unoccupied. Sharing the same block as the Subject Site are a four-storey residential building to the Southeast, a 3-storey townhouse project to the East and two (2) 3.5-storey townhouse buildings to the North. On the West side of Garden Drive sits a four-storey residential building. Further West of the Subject Site is St. Thomas Aguinas Catholic Secondary School. North of the Subject Site are single-detached dwellings and townhouse developments. South of Lakeshore Road W is St. Jude's Cemetery as well as additional single-family homes. Further east of the Subject Site is the commercial strip of Lakeshore Road W.

3.0 METHODOLOGY

Sun/Shadow Studies are performed to determine the extent of shadows cast by a proposed development onto the existing context, as well as those cast by the the nearby buildings onto the proposal (including adjacent properties, streets and public spaces). As per the Town of Oakville's TOR, Shadow Studies are required for proposals comprised of buildings five storeys and higher. It should be noted that the proposal consists entirely of 4-storey buildings. However, as the study was identified at the pre-consultation meeting it has been prepared in support of these applications.

As indicated by the Livable Oakville Plan and the Livable by Design Manual new buildings are to be designed and massed to mitigated adverse impacts from shadows, noise and sky views, among others. The geographic coordinates of the site, which determine the maximum altitude of the sun, is taken to be 43.436634N, 79.679139W.

In accordance with the Town's Terms of Reference, a Shadow Impact Analysis has been undertaken for April 21, June 21, September 21, and December 21. The test hourly intervals start 1.5 hours after sunrise and end 1.5 hours before sunset.

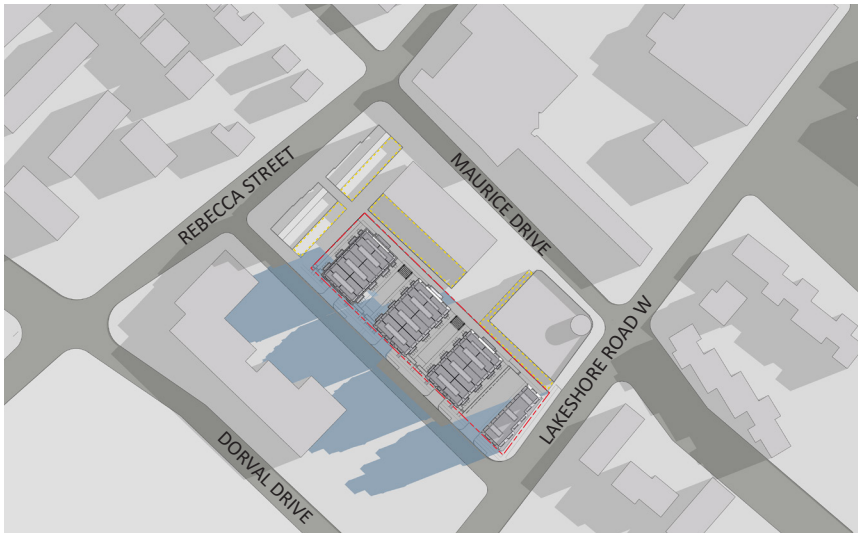
4.0 SUMMARY OF FINDINGS

This report outlines a shadow impact analysis undertaken to satisfy submission requirements for an Official Plan and Zoning By-Law Amendment application for the proposed residential development located at 105-159 Garden Drive. Oakville, Ontario. This work is based on sun shadow renderings generated using computer-aided design software and architectural drawings provided by Richard Wengle Architect Inc.

The results of this analysis are included in section 5.0. Net new Shadows cast by the proposed development are illustrated with blue shading, while shadows cast by the existing built form are illustrated with grey shading. The conclusions of the study are as folows:

1. Net new shadows cast from the proposed development do to not appear to adversely affect surrounding public sidewalks, parks or roadways.
2. The existing surrounding greenspace including the St. Thomas Aguinas Catholic Secondary School sports field and St. Jude's Cemetery do not appear to be adversely affected by the proposed development.
3. The alleyway north of the Subject site experiences shadows cast by the proposed project in the mornings, but disipates by 11:00 AM on April and September 21 and by 10:00 AM on June. During December 21 when the sun is lowest in the sky the shared alleyway experiences shadowing until 2:00 pm. It is noted that the laneway only serves vehicular traffic. A fence is located along that property line which would already cast shadows onto the laneway.
4. The existing second storey outdoor patios of the townhouses located east of the Subject Site experiences net new shadowing in the evening after 6:00 PM during April and September 21st. During June 21st the patio experiences shadowing at 7:00 PM.
5. The proposed project would not reasonably hinder the future implementation of rooftop solar panels of adjacent properties.

SUN/SHADOW ANALYSIS - APRIL 21ST



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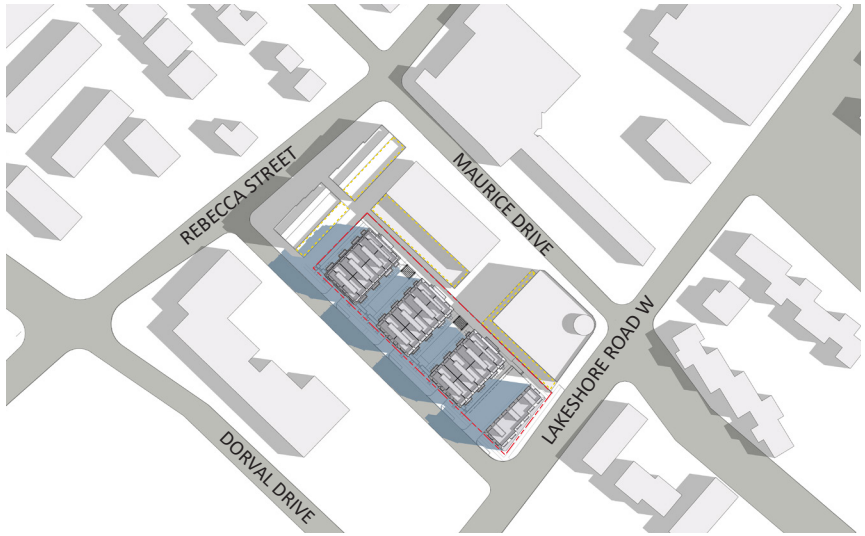

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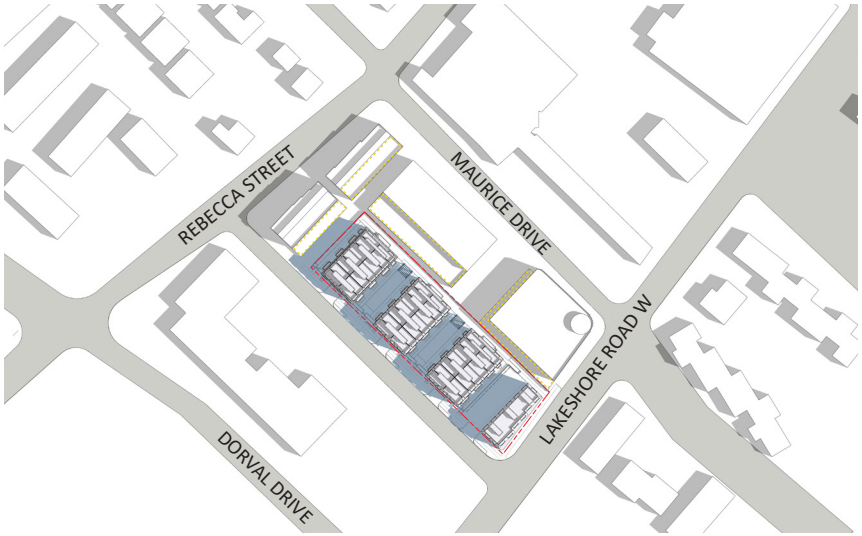

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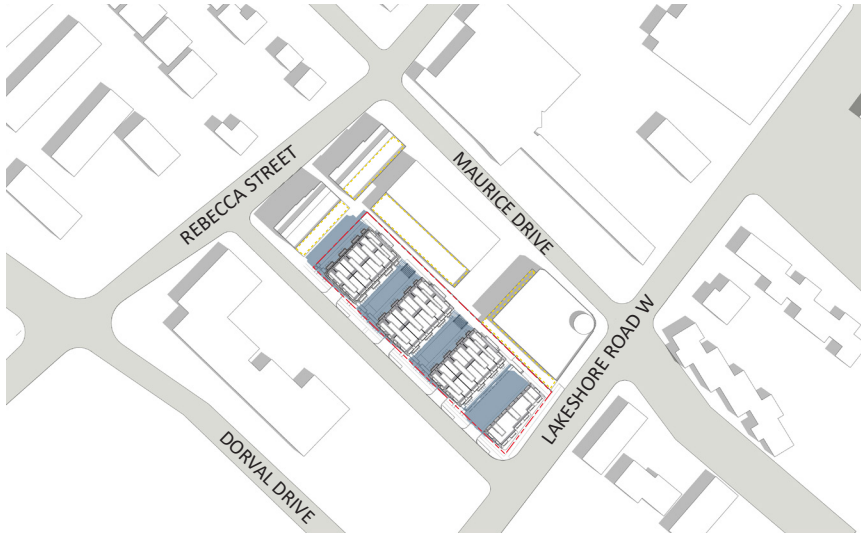
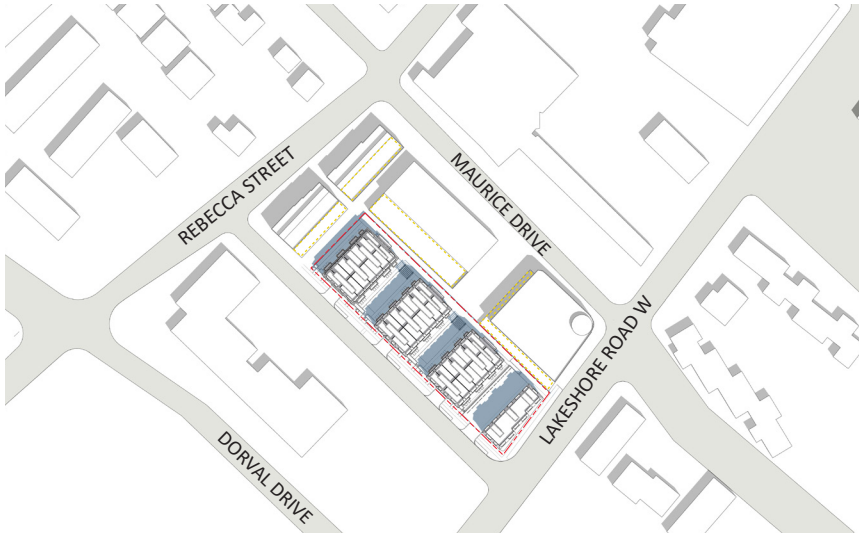


April 21, 11:00 AM

Subject Site
Incremental Shadows By the Proposal
Shadows Cast by Existing Buildings
Second Storey Outdoor Amenity Space

SUN/SHADOW ANALYSIS - APRIL 21ST



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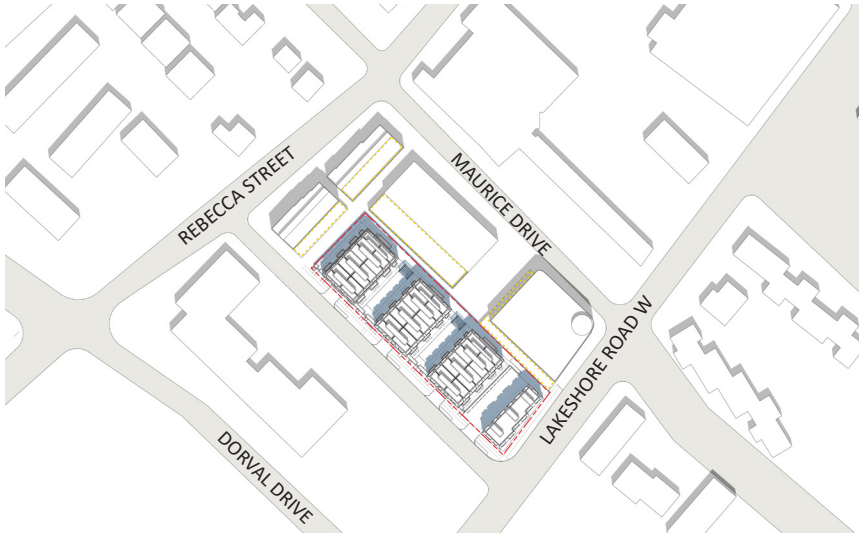

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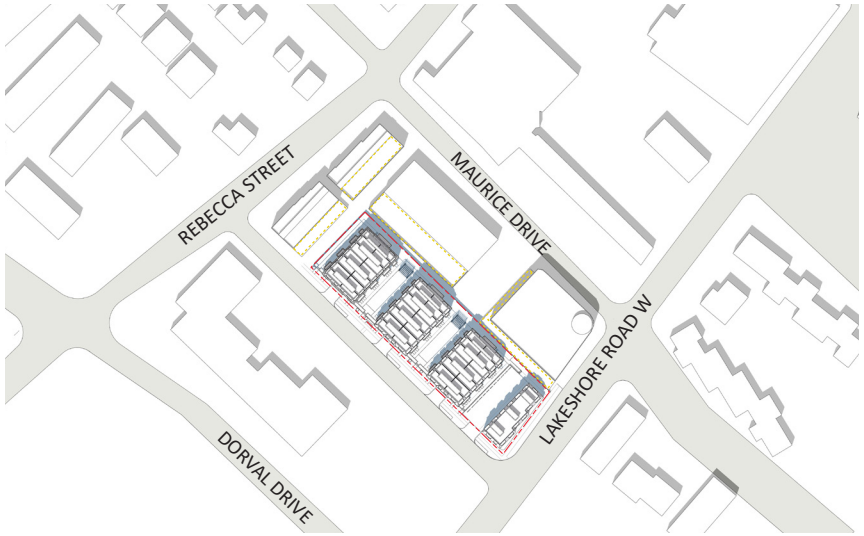

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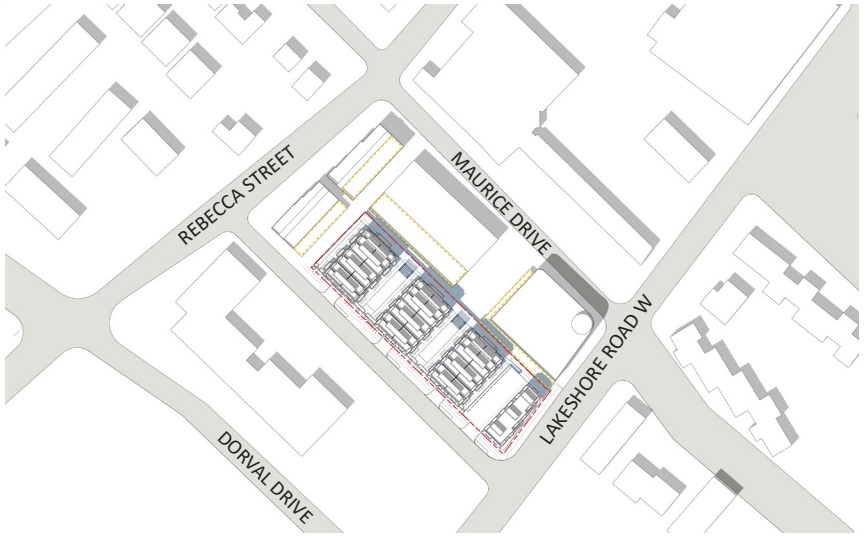

April 21, 3:00 PM

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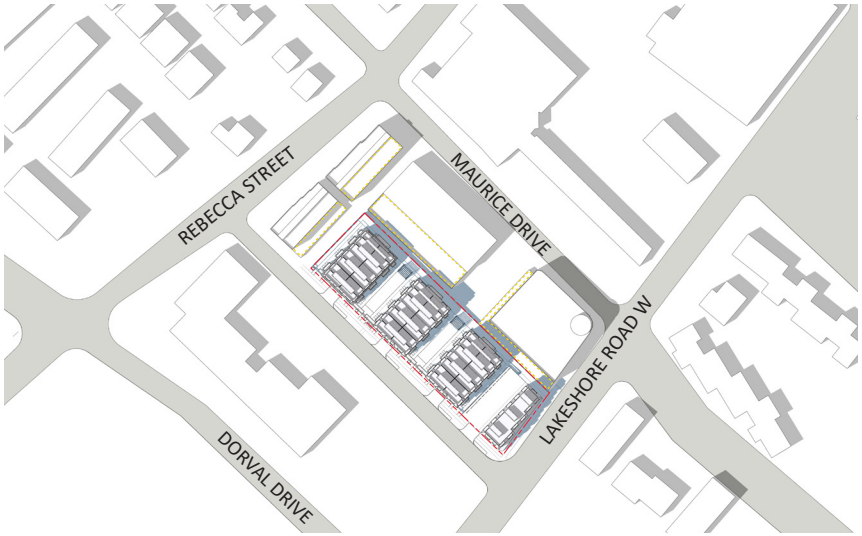

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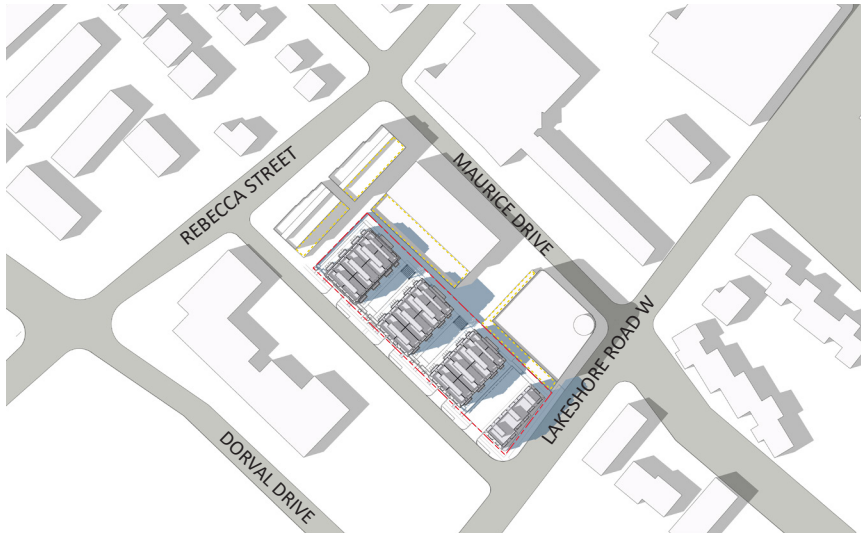

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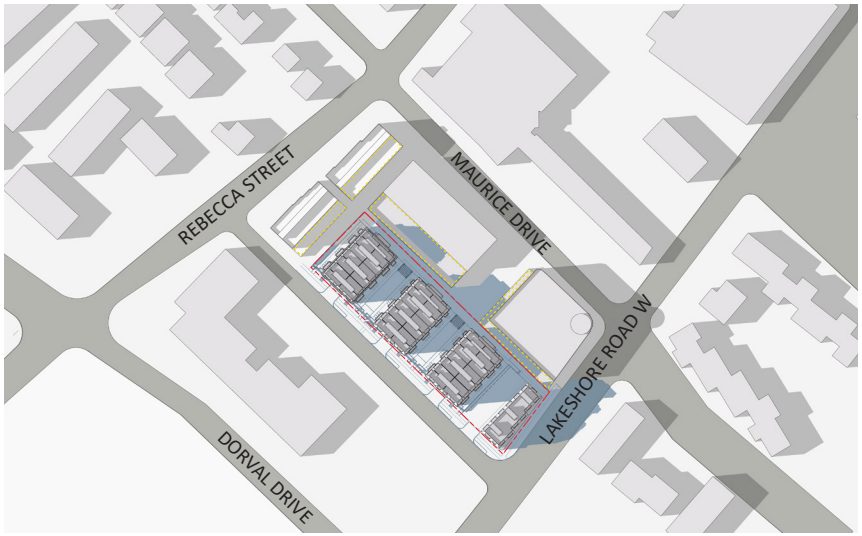

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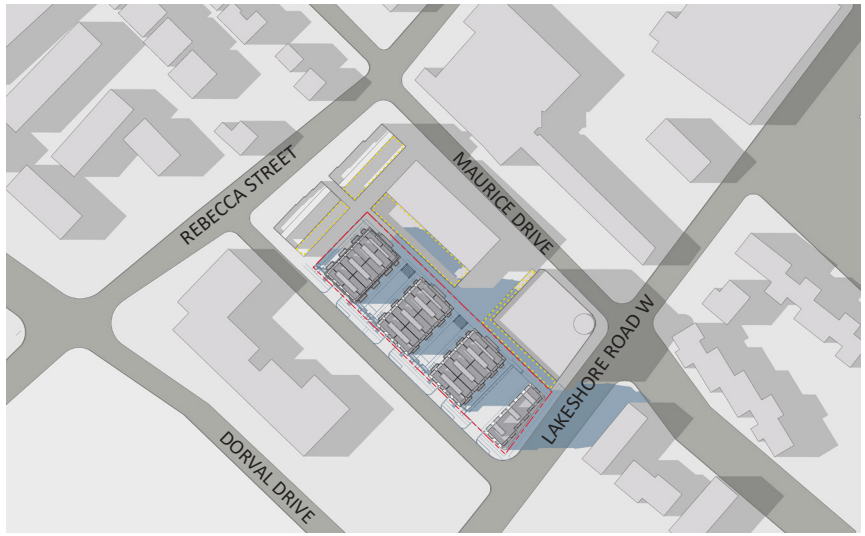

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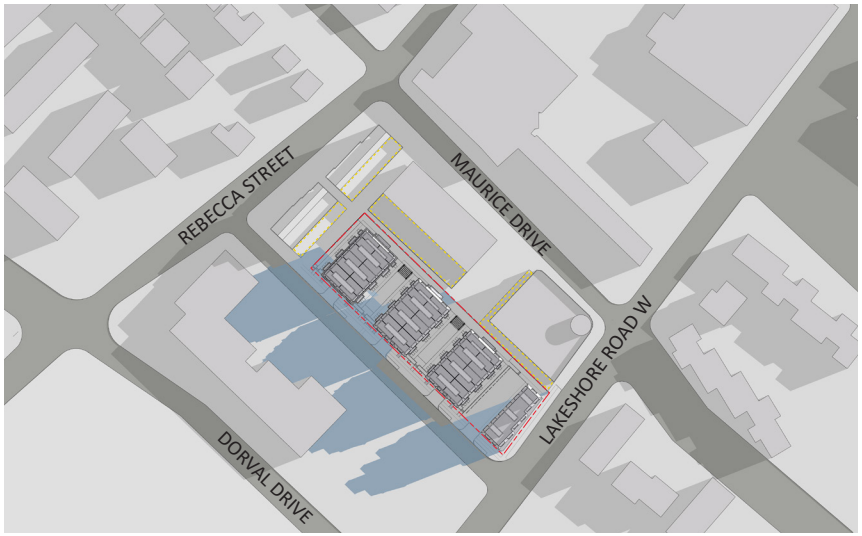
SUN/SHADOW ANALYSIS - JUNE 21ST



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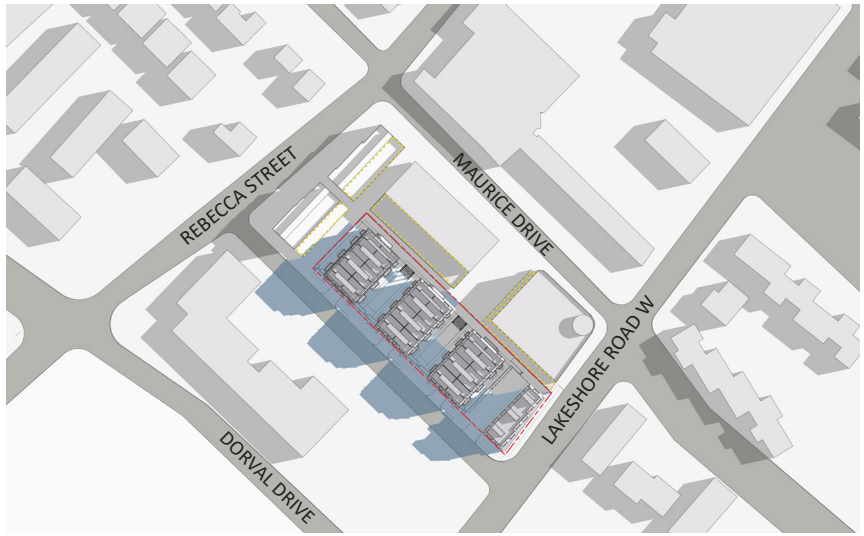

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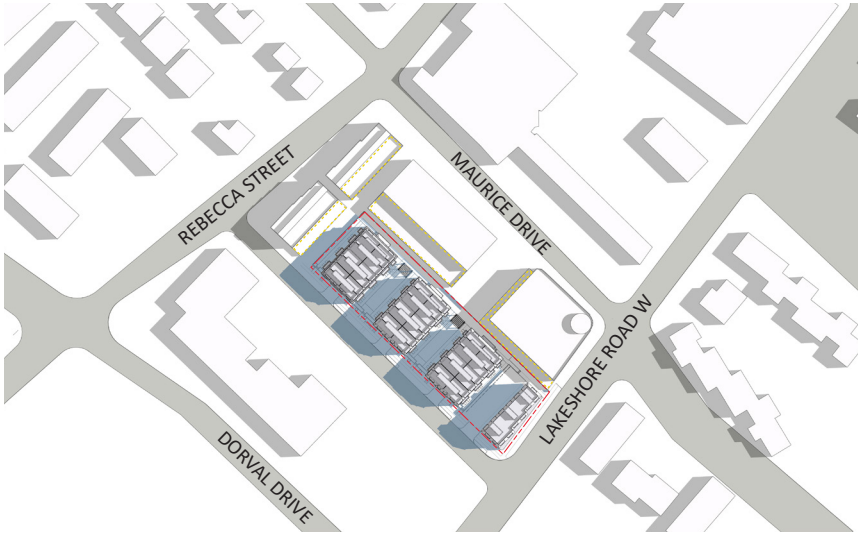

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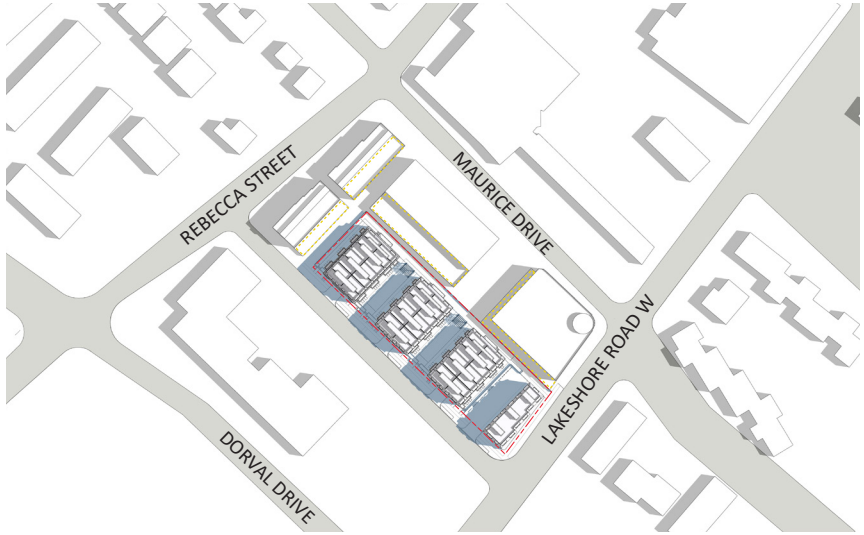

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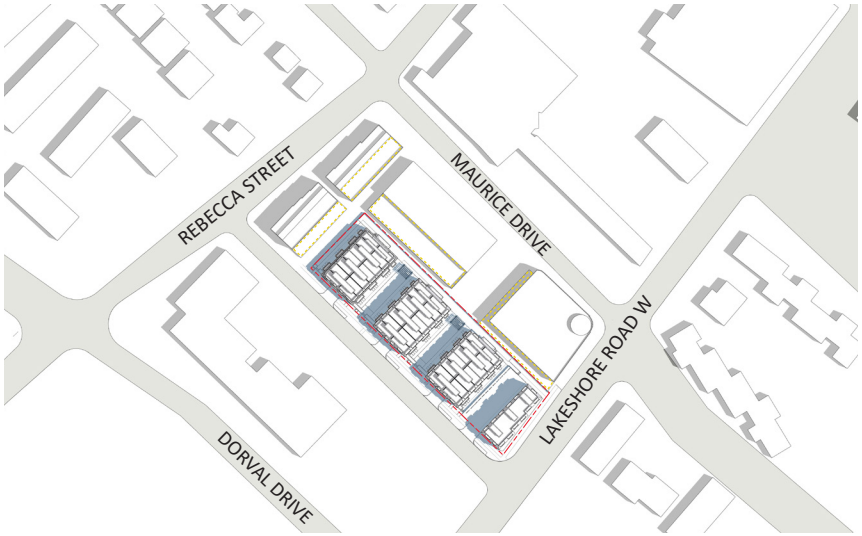

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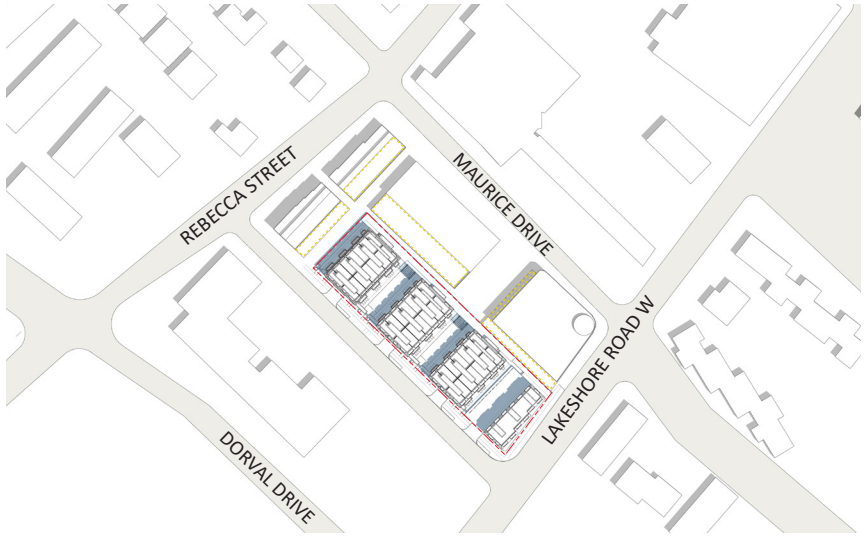

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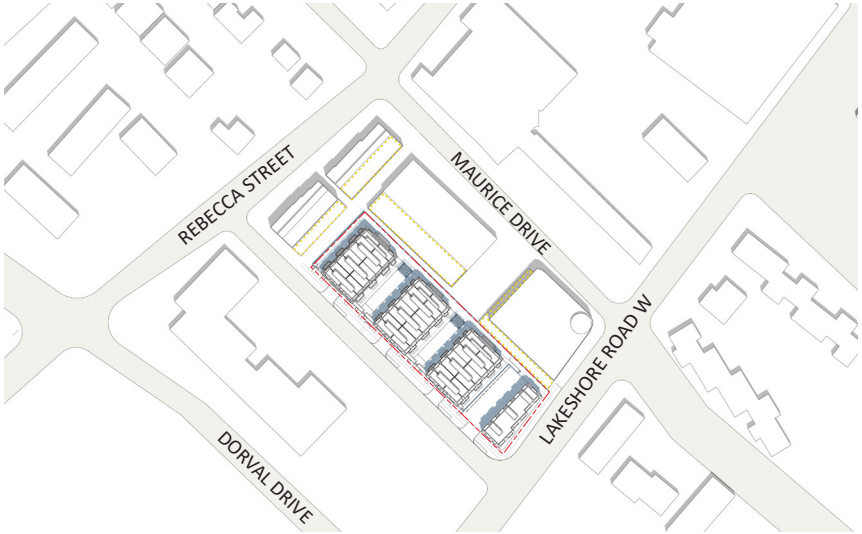

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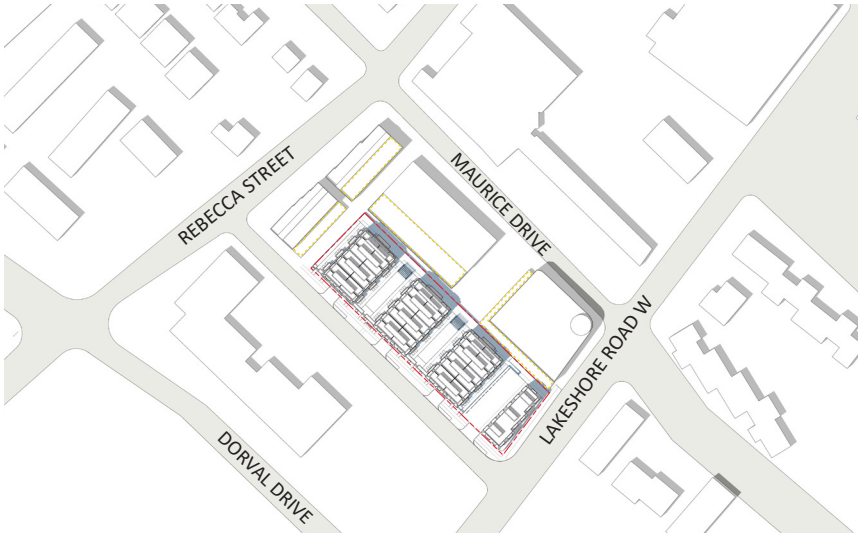

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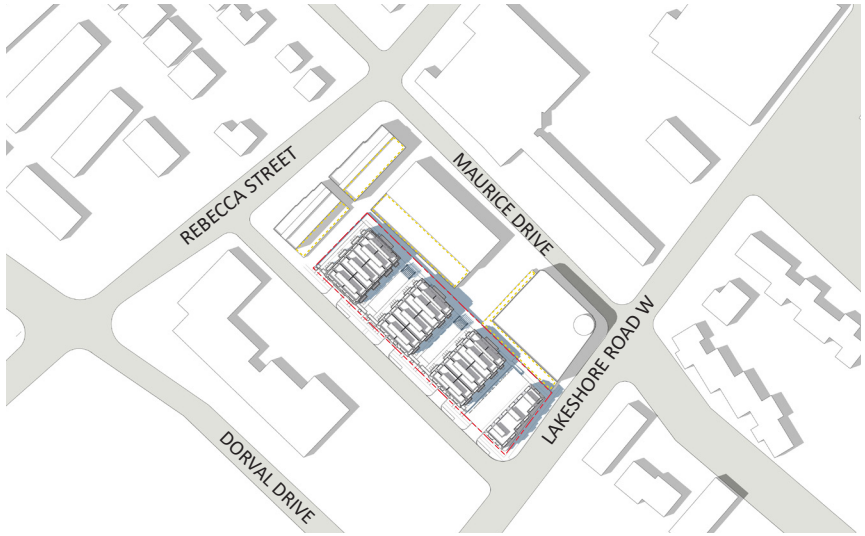

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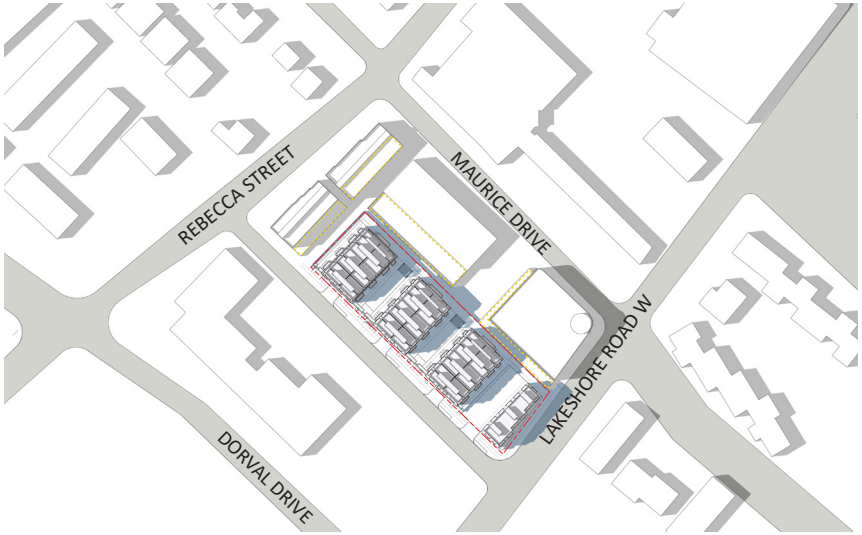

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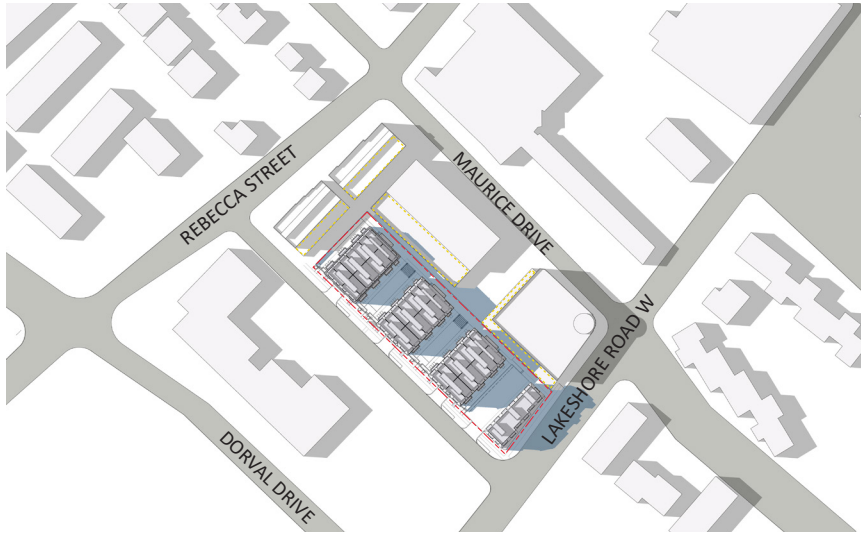

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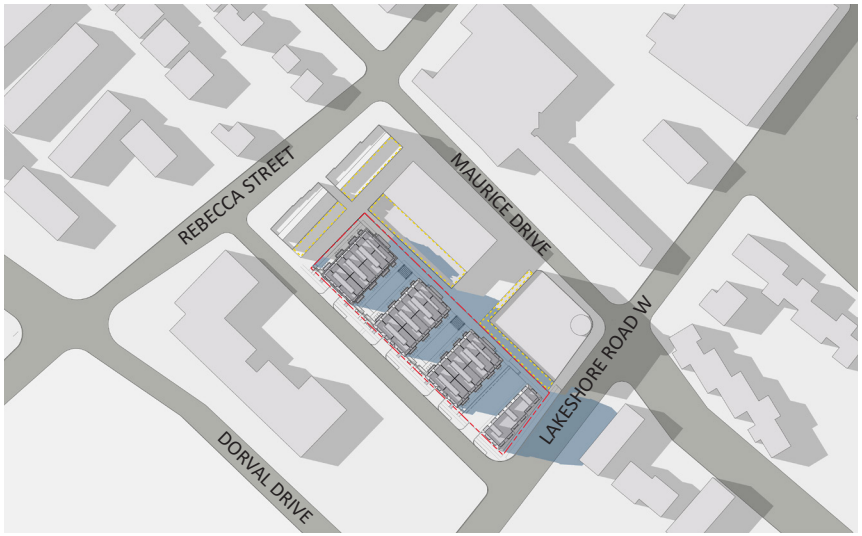

JUNE 21, 7:00 PM

JUNE 21, 7:30 PM

Subject Site
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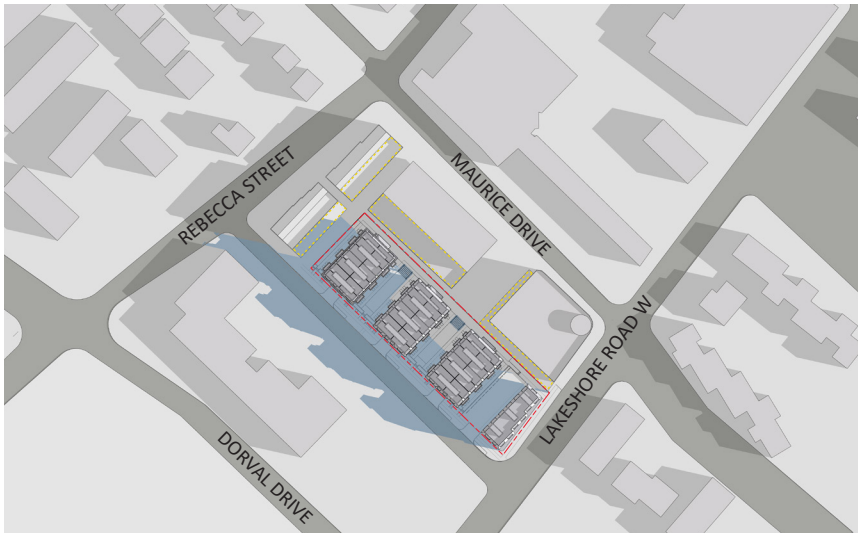
SUN/SHADOW ANALYSIS - SEPTEMBER 21ST



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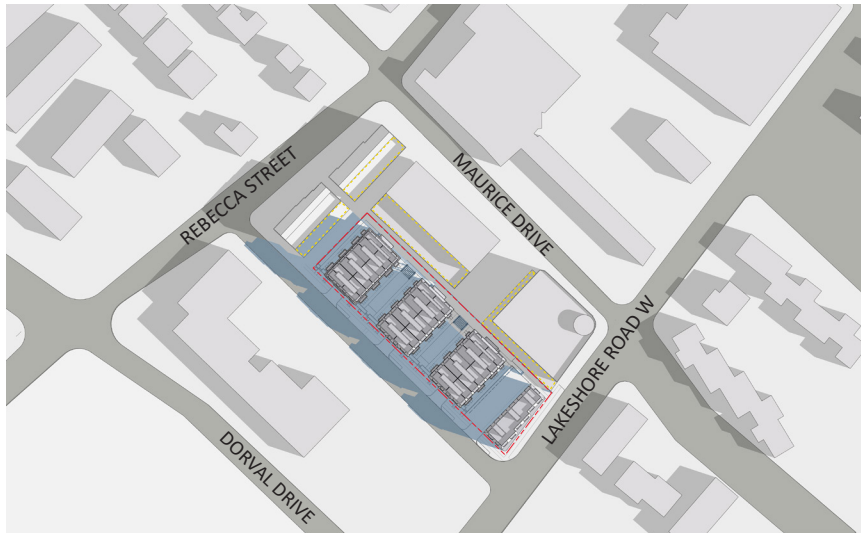

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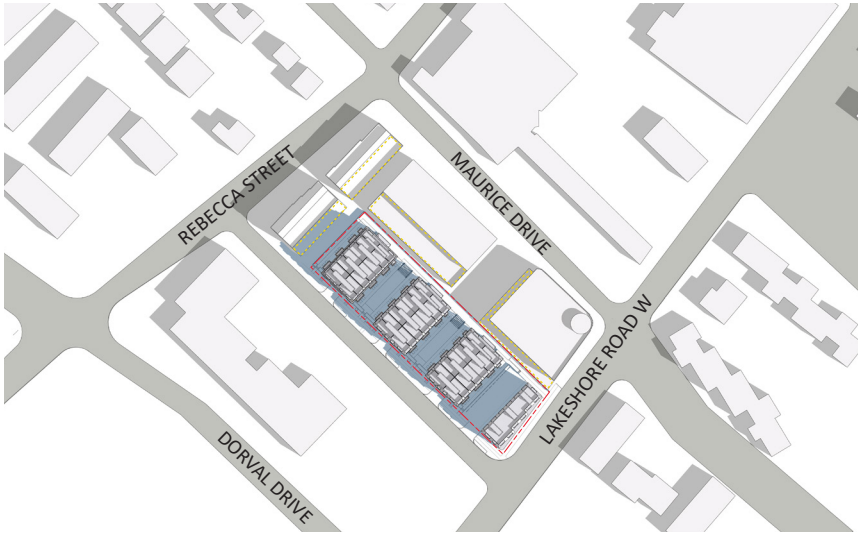

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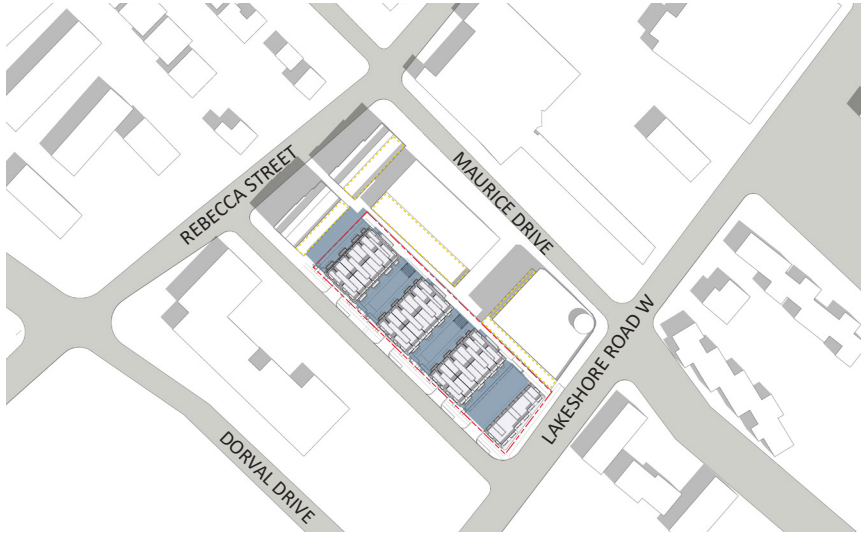

SEPTEMBER 21, 11:00 AM

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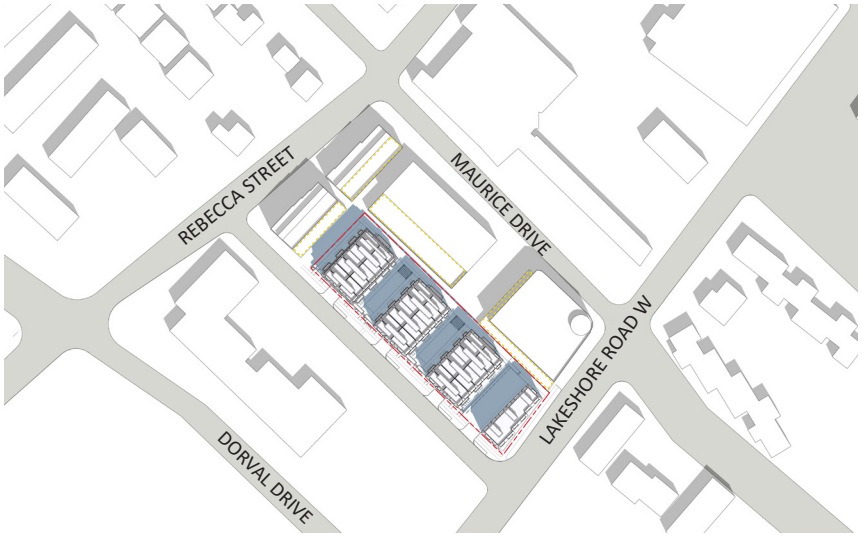

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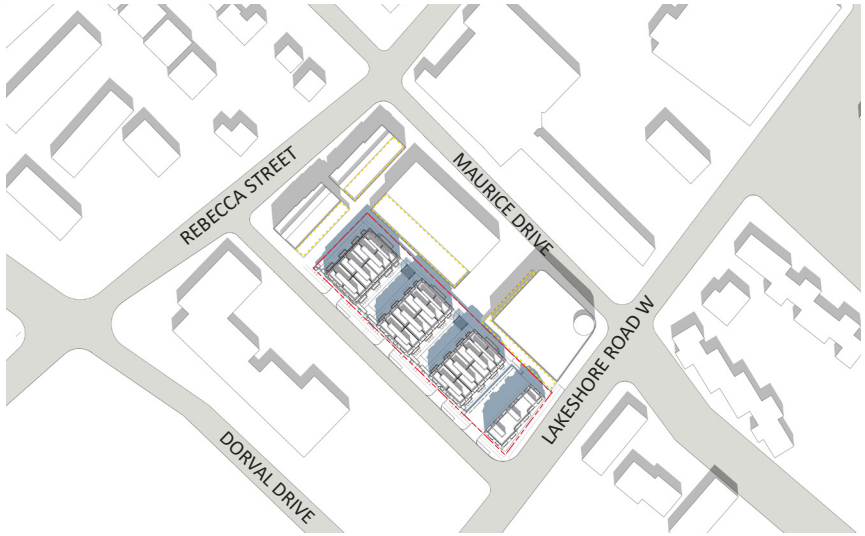

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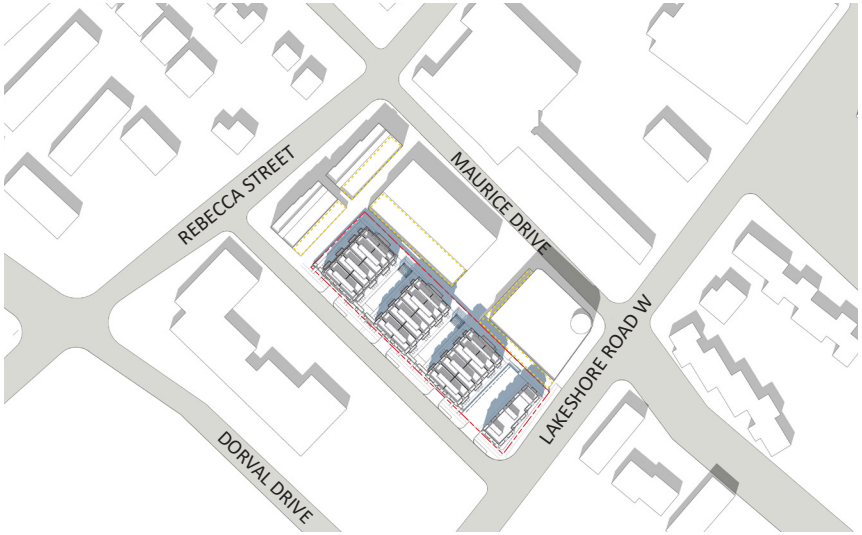

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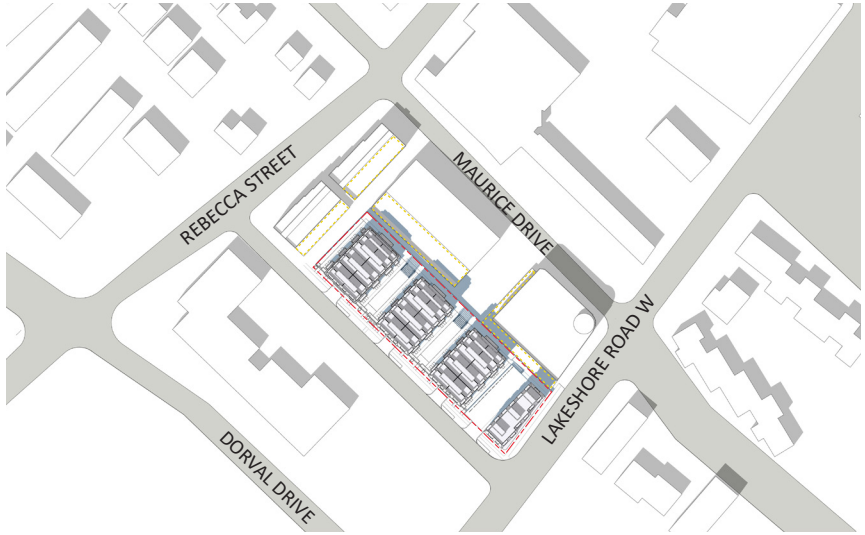

SEPTEMBER 21, 3:00 PM

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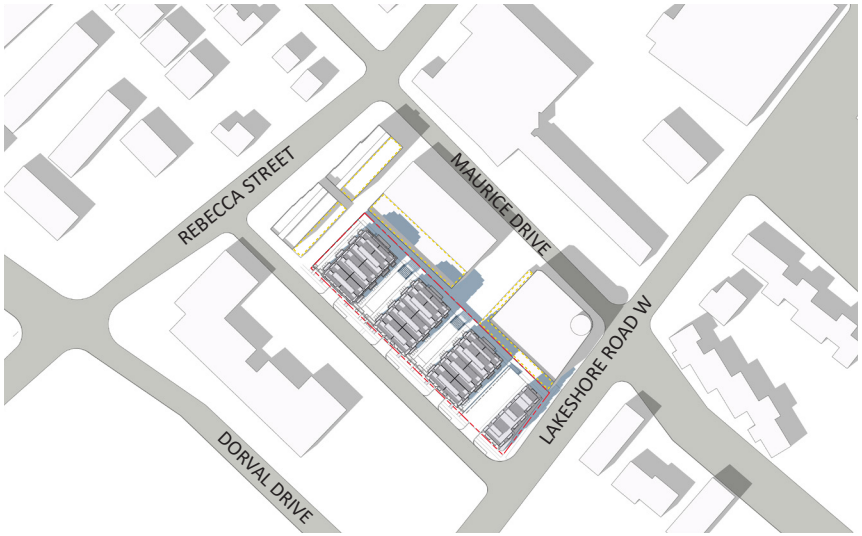
SUN/SHADOW ANALYSIS - SEPTEMBER 21ST



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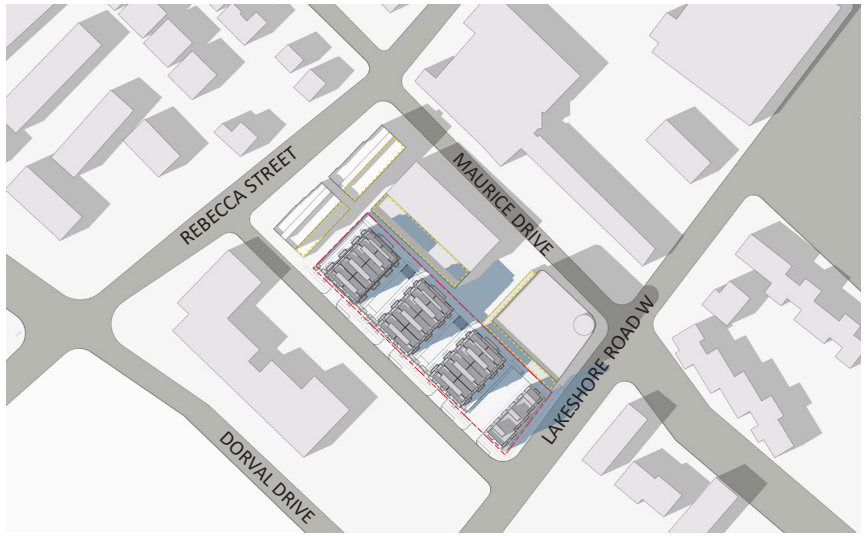

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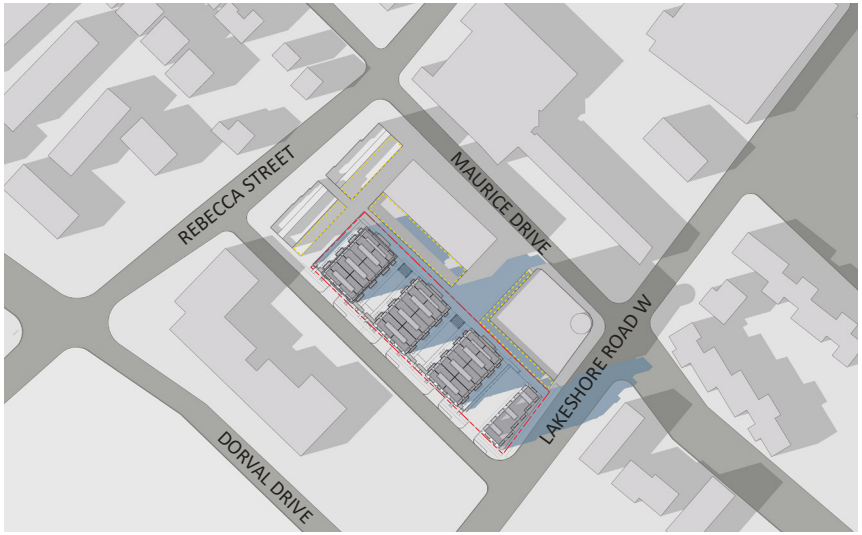

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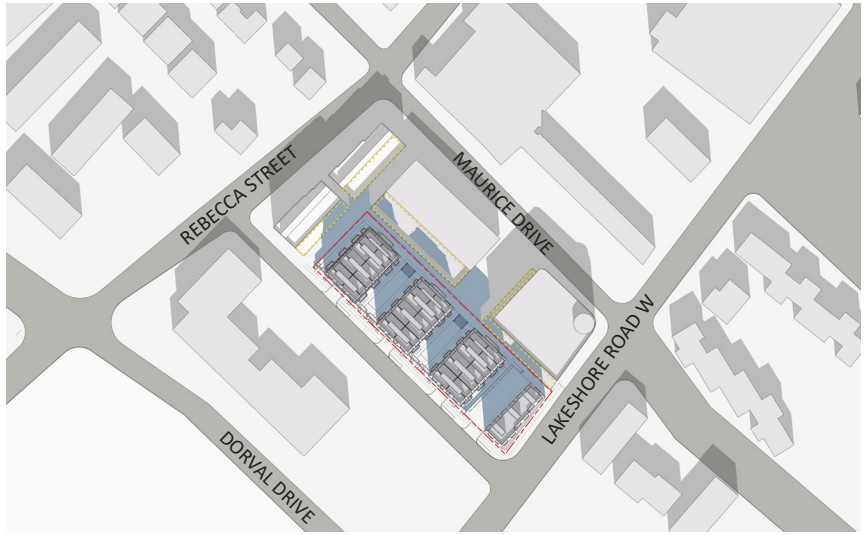
SUN/SHADOW ANALYSIS - DECEMBER 21ST

DECEMBER 21, 9:15 AM

DECEMBER 21, 10:00 AM

DECEMBER 21, 11:00 AM



DECEMBER 21, 12:00 AM

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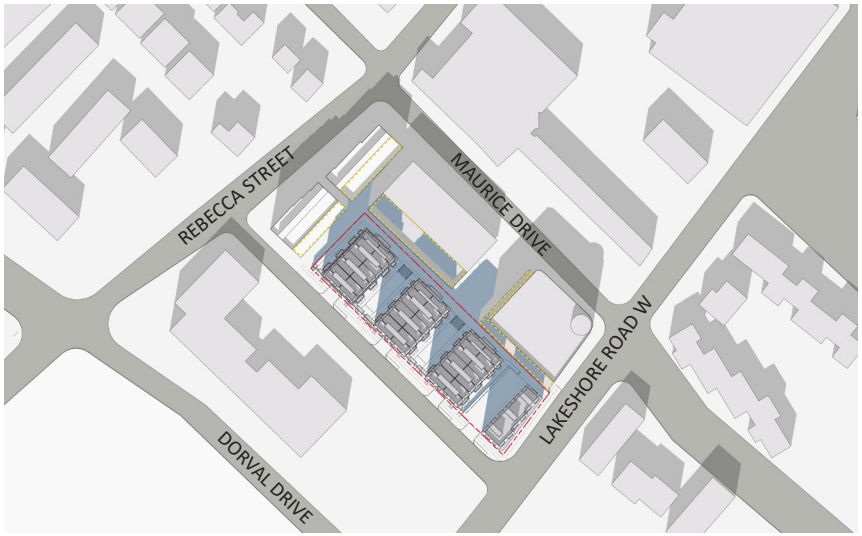
SUN/SHADOW ANALYSIS - SEPTEMBER 21ST



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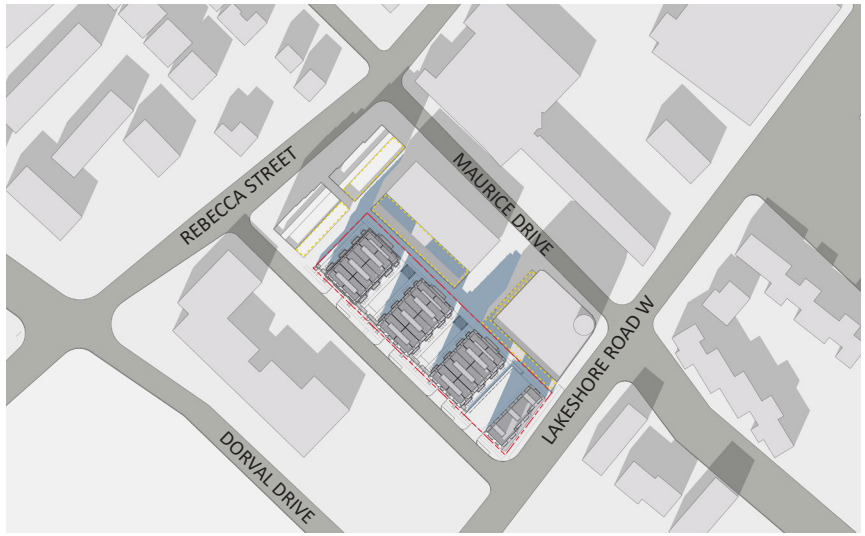

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DECEMBER 21, 3:00 PM

DECEMBER 21, 3:15 PM

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RAIDERS