6310 Hazeldean Road

Shadow Study
June 2022

FOTENN
Planning + Design

6310 Hazeldean Rd

Shadow Impacts and Analysis

As-of-Right

Shadow Analysis - As-of-Right

As specified in the City of Ottawa's Terms of Reference for Shadow Analysis, a detailed Shadow Analysis is required for a Zoning Bylaw Amendment application submission.

The City of Ottawa's Terms of Reference for Shadow Analysis requires the following Test Dates and Times:

- / Equinox: March/September 21st, 8am – 6pm (EDT)
- / Summer Solstice: June 21st, 8am – 8pm (EDT)
- / Winter Solstice: December 21st, 9am – 3pm (EST)

This section demonstrates the shadow impacts of the as-of-right development potential during the Spring/Fall Equinox, and the Winter and Summer Solstice.

This shadow study was prepared in SketchUp Pro, one of the most common software used in the industry to prepare such studies. Models prepared in this software are accurately geolocated using Latitude and Longitude coordinates for the site. The study:

- / Considers Ottawa's time zone standard of -5h UTC.
- / Considers Daylight Savings Time during the Summer Solstice and Equinox dates.
- / Considers Latitude: 45.265908N or 45°15'57.3"N
  Longitude: 75.940241W or 75°56'24.9"W

The models included in this section illustrate the shadowing impacts of a development constructed according to the existing AM9 zoning applicable to the site. As shown in the models, most of the shadows are cast northward onto the road right-of-way or the shopping centre (GM14 Zone) to the north.

The low-rise residential areas to the northwest and southeast continue to receive uninterrupted sunlight throughout the year, with some impacts in certain seasons for brief periods shortly after sunrise and shortly before sunset.

The following pages show shadow projections on an hourly basis for each of the 3 dates tested.

Winter Solstice - December 21 (EST)

On the Winter Solstice, impacts are mainly over arterial mainstreet and mixed-use areas north of subject site. The surrounding low-rise residential areas are not impacted by shadows cast by the building during the tested hours.

Spring/ Fall Equinox - March/ September 21 (EDT)

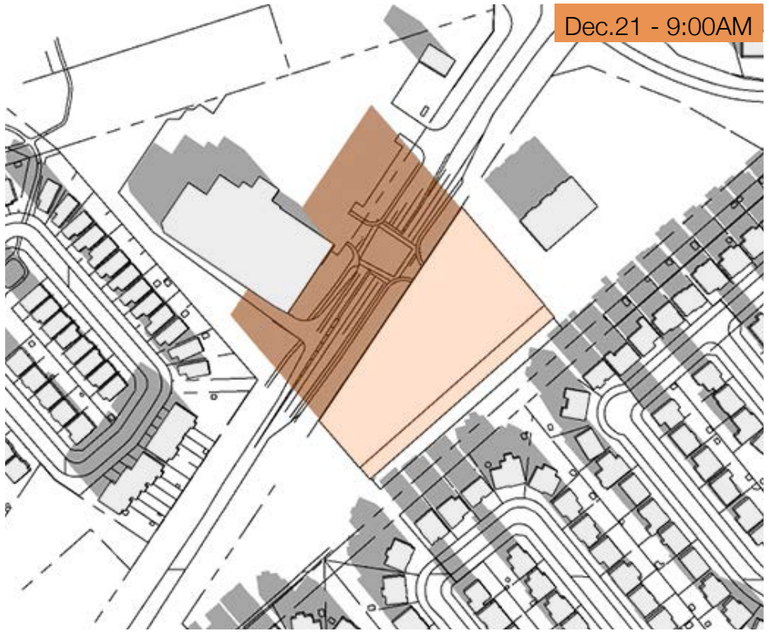
During the Spring or Fall Equinox, shadows partially reach the low-rise residential area north-west until 8am, and the area south-east at 6pm. There are no impacts in these areas for the remainder of the studied times. For most of the day, the shadows produced by the as-of-right building envelope affect only the commercial properties immediately north and east of the site.

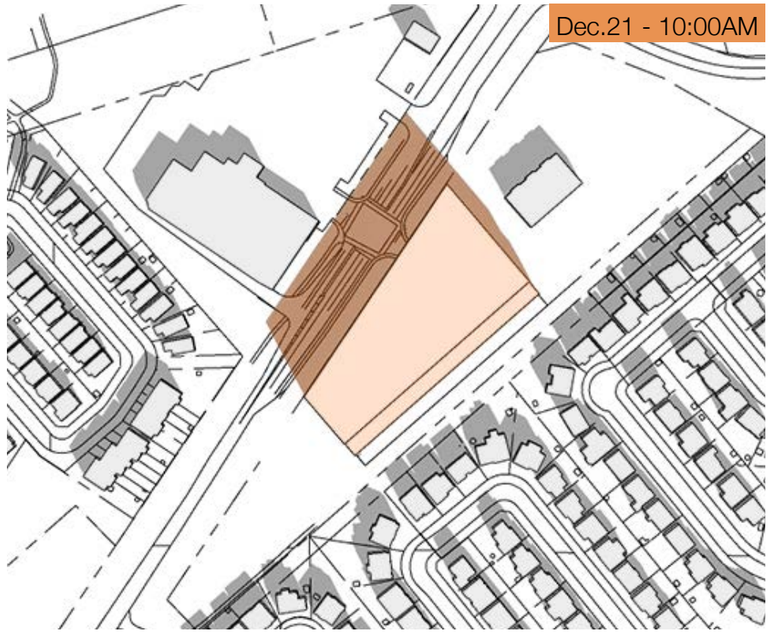
Summer Solstice - June 21 (EDT)

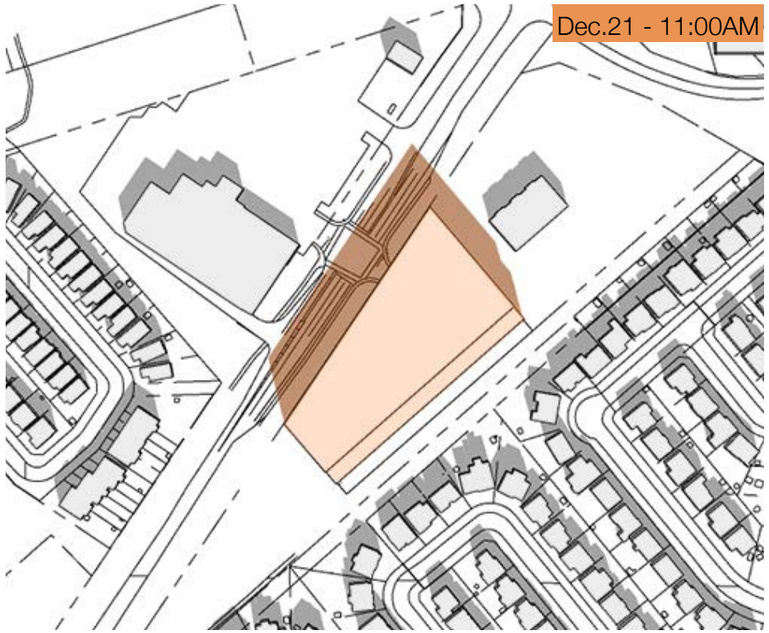
In Summer months, shadows stay mostly within site boundaries from 8AM until 7PM. Shadows begin to be cast on neighbouring properties to the southeast at 7pm.

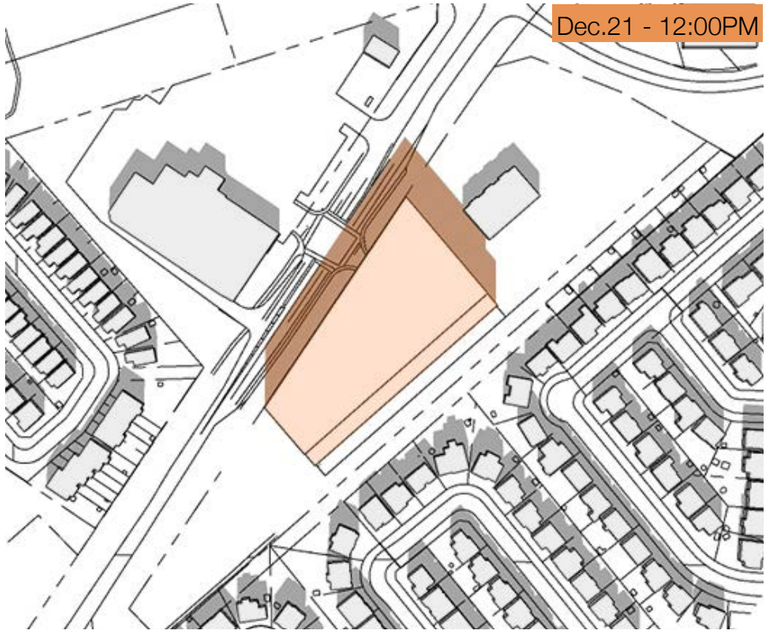
Shadow Analysis - As-of-Right

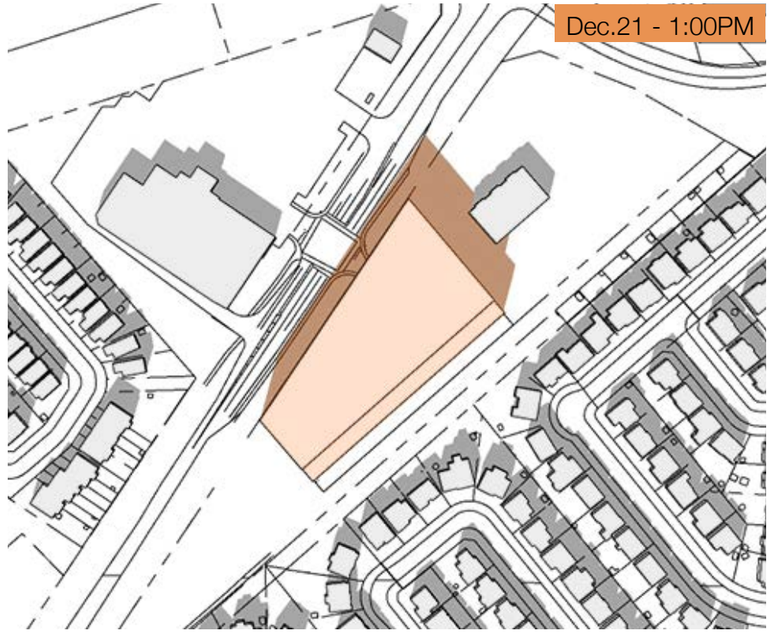
WINTER SOLSTICE
December 21st, 9am – 5pm (EST)



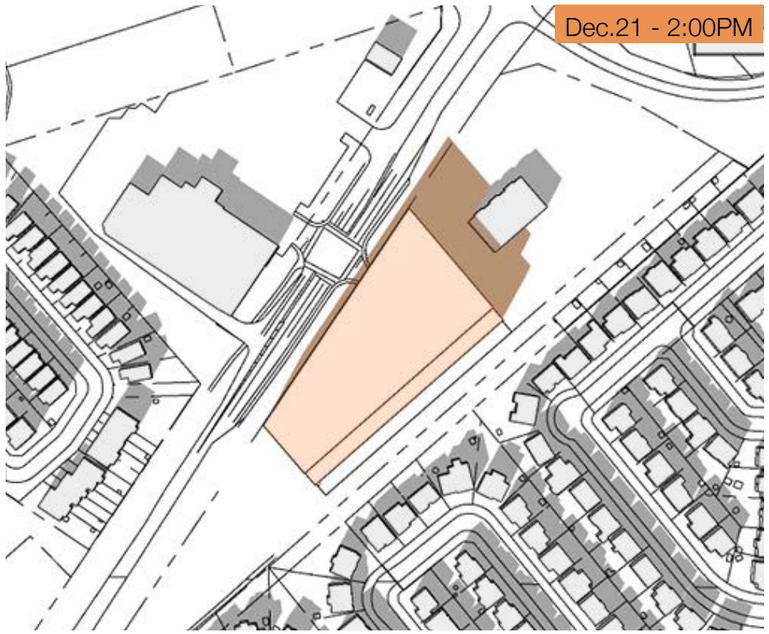


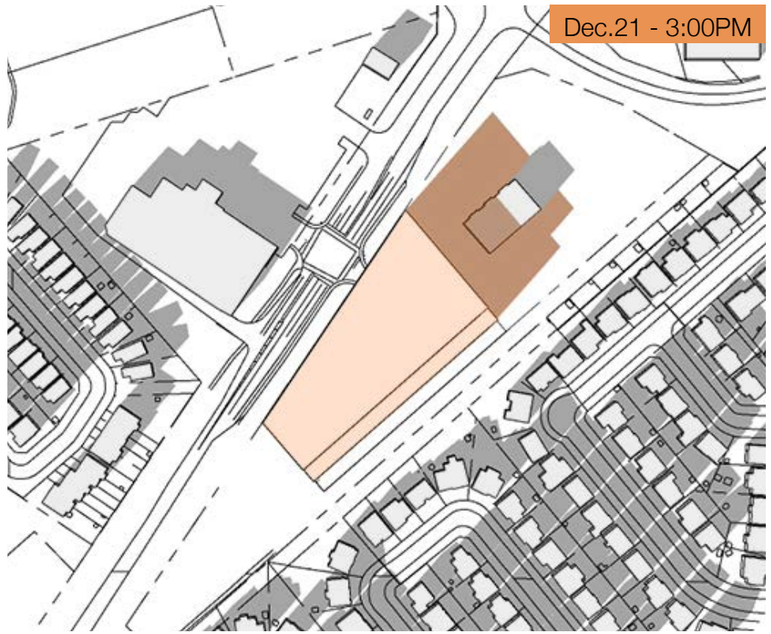






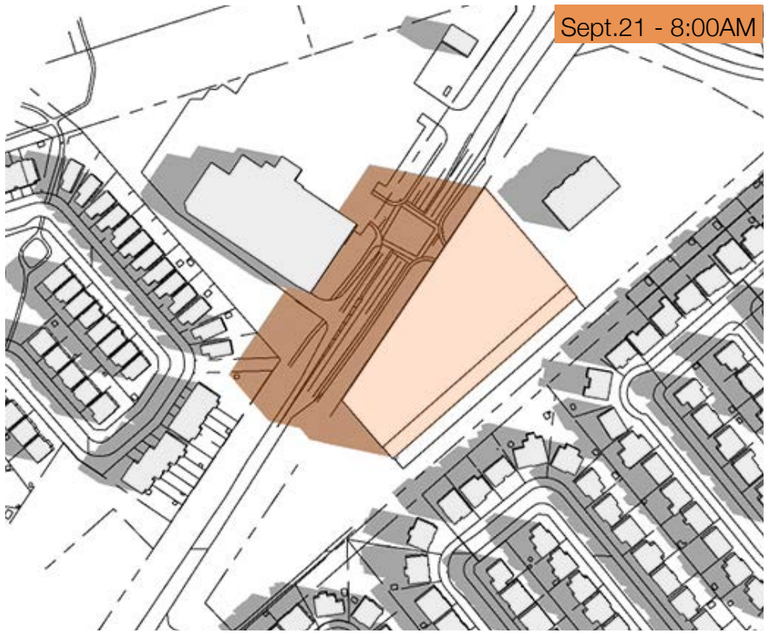
Shadow Analysis - As-of-Right

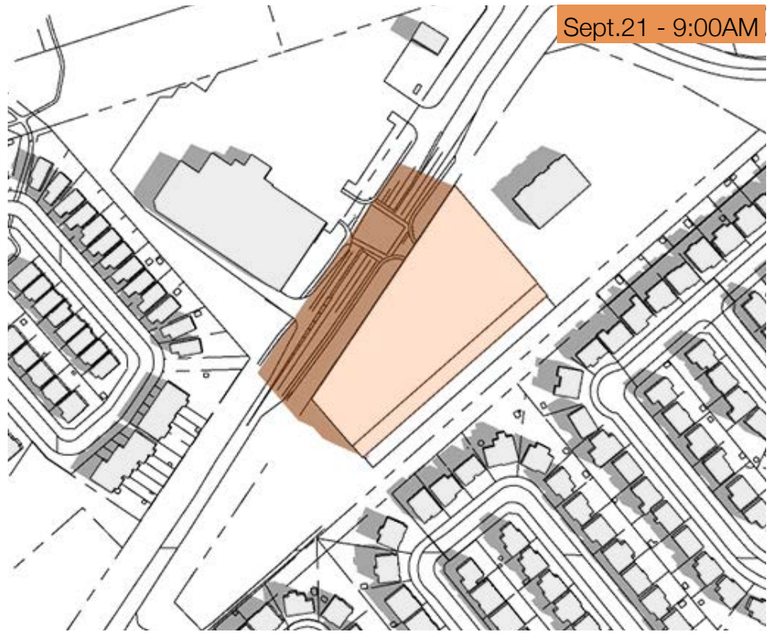


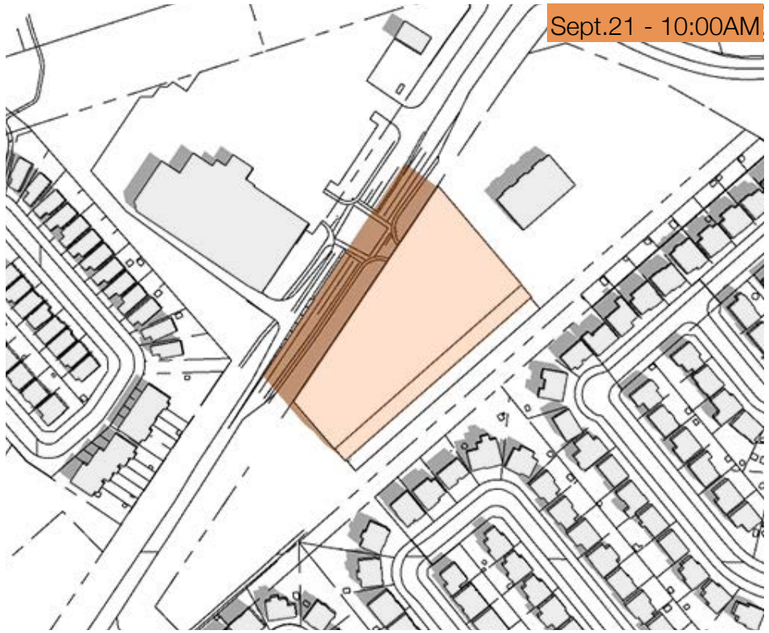


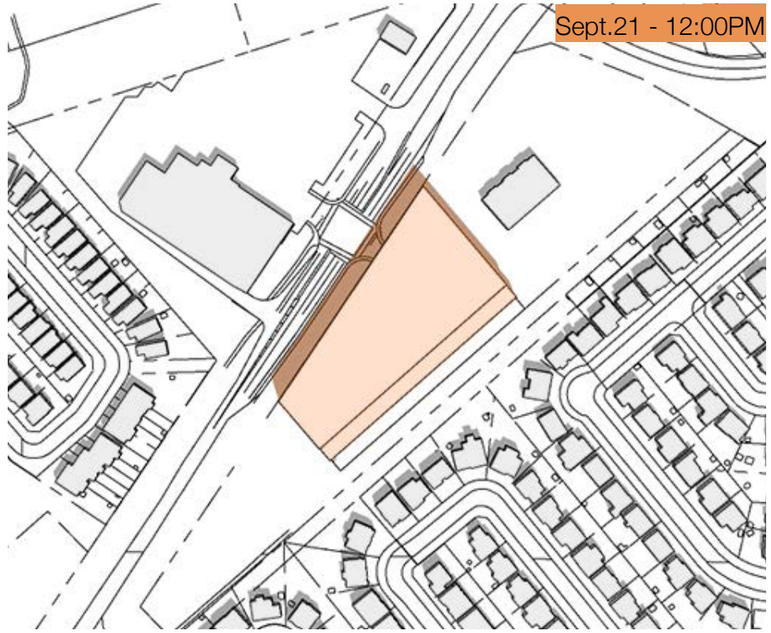
Shadow Analysis - As-of-Right

SPRING/ FALL EQUINOX
March/ September 21st, 8am – 6pm (EDT)





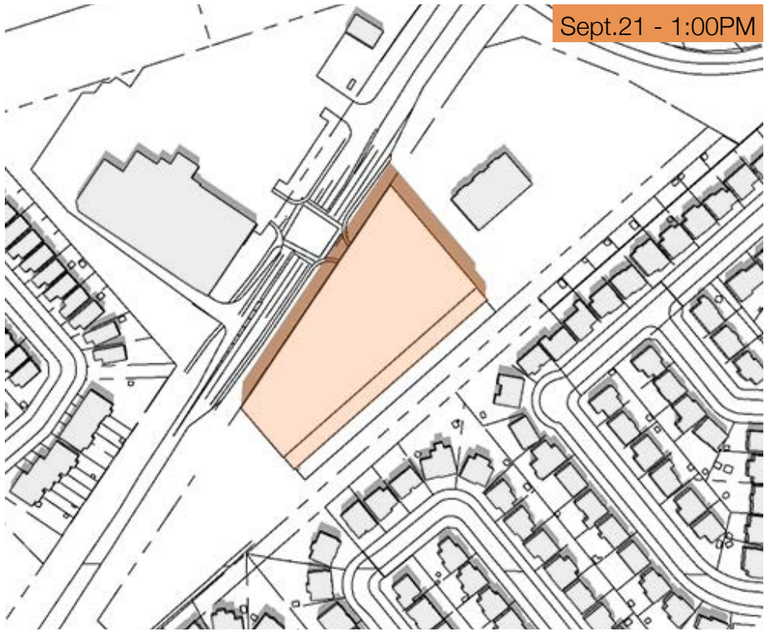


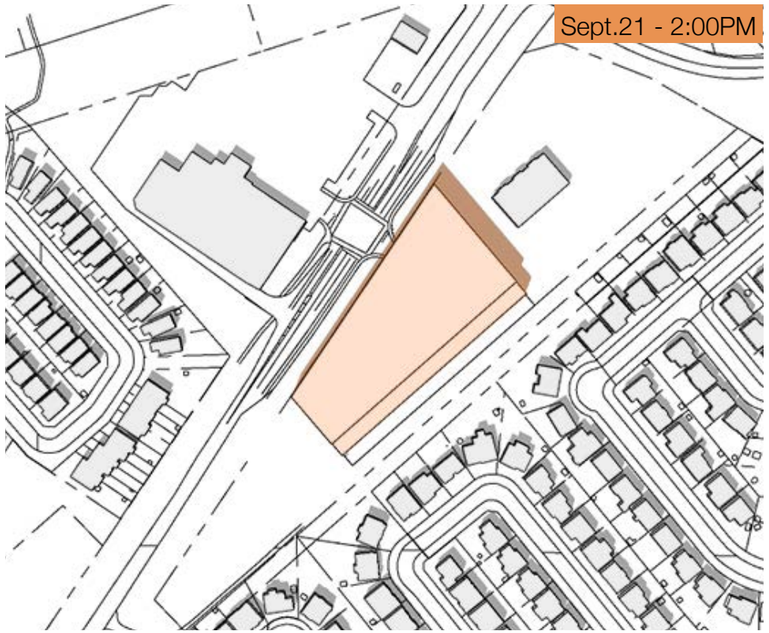


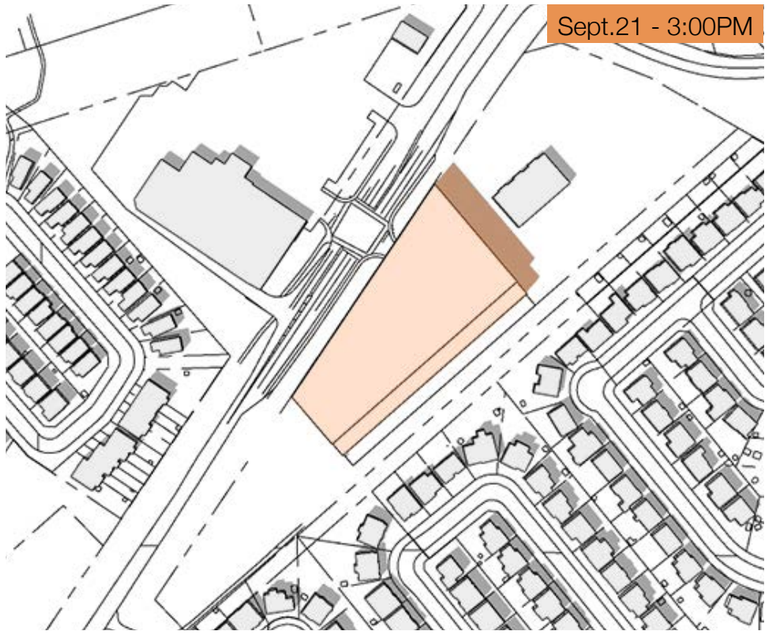
June 2022

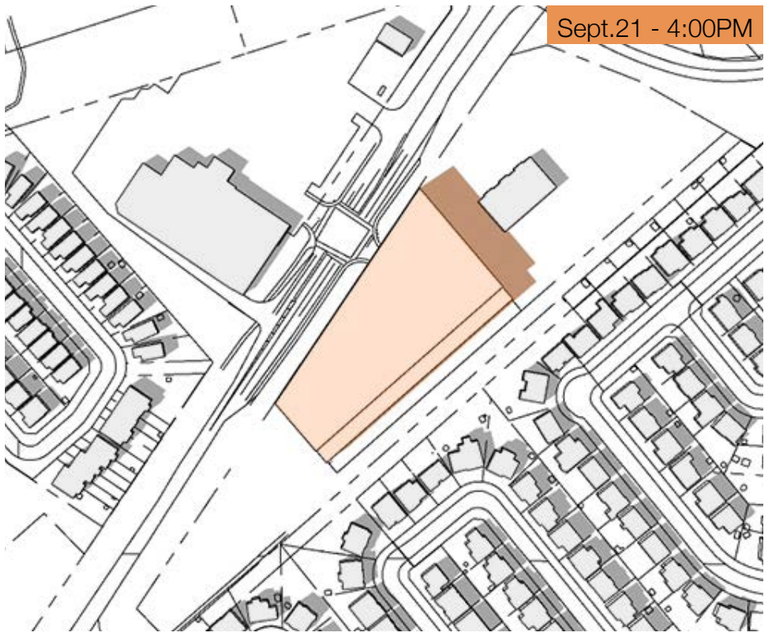
6310 Hazeldean Road
Shadow Analysis

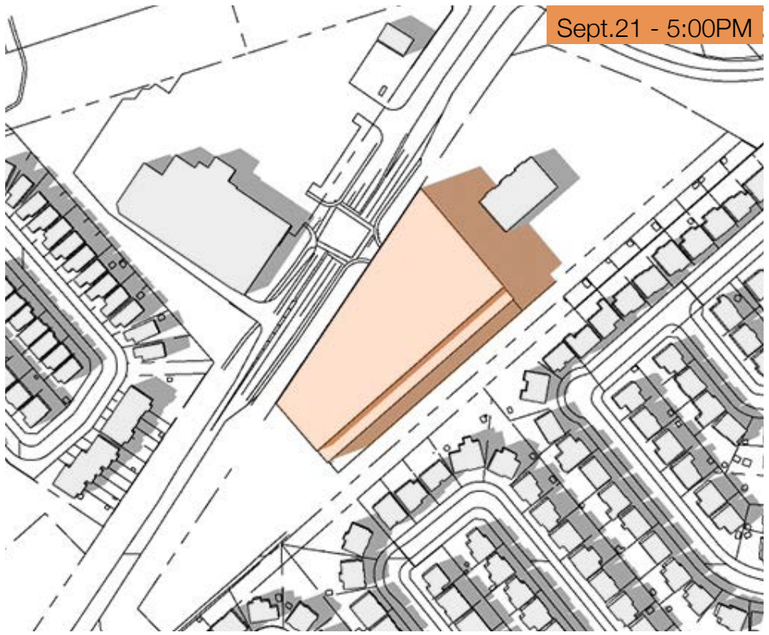
Shadow Analysis - As-of-Right

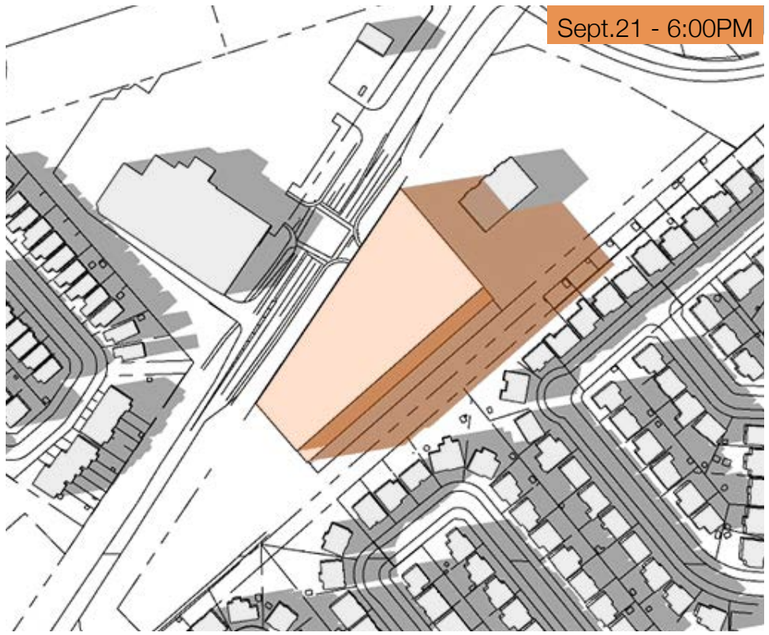












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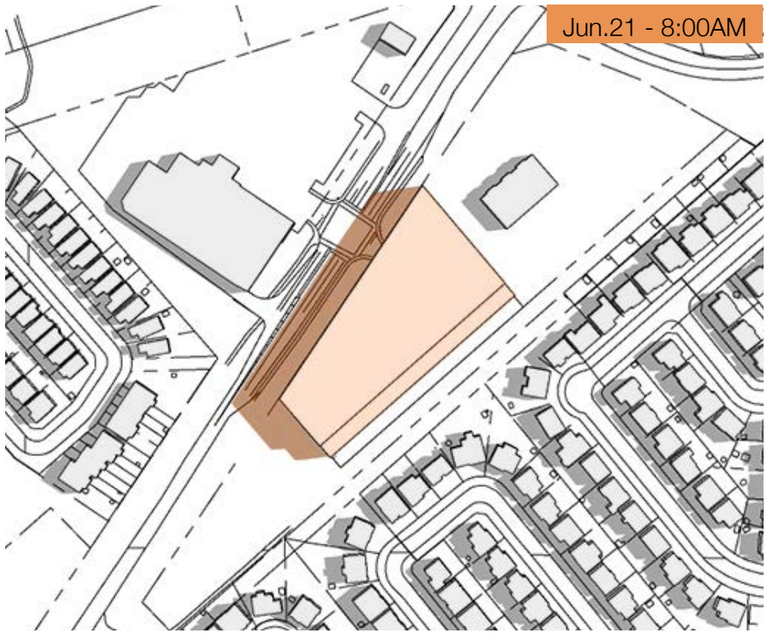
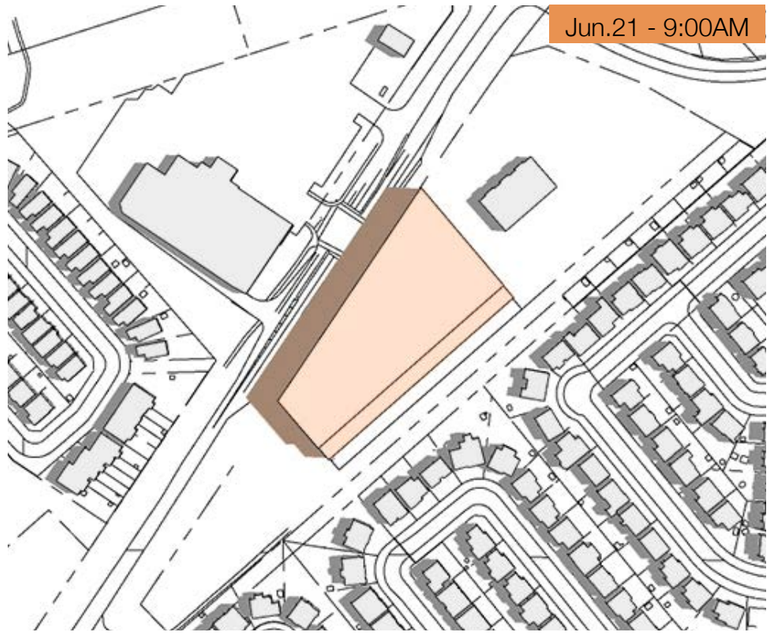
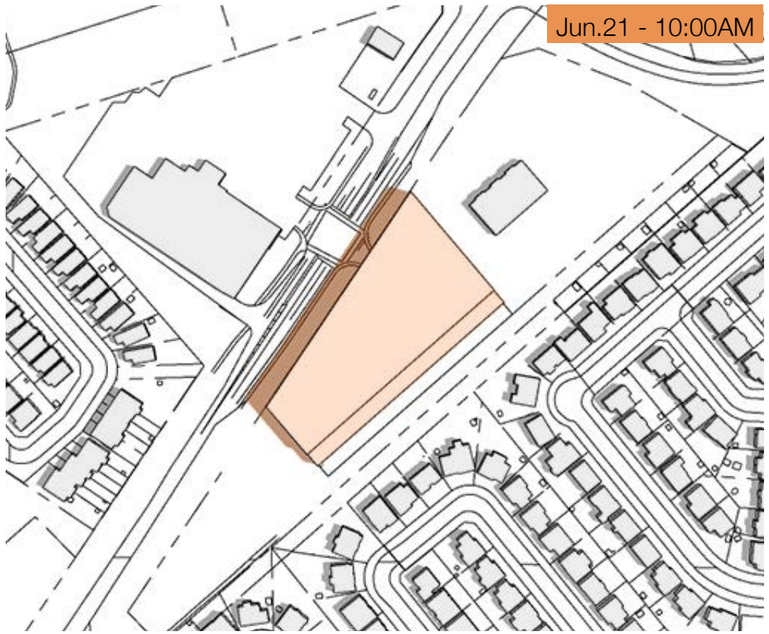
6310 Hazeldean Road
Shadow Analysis

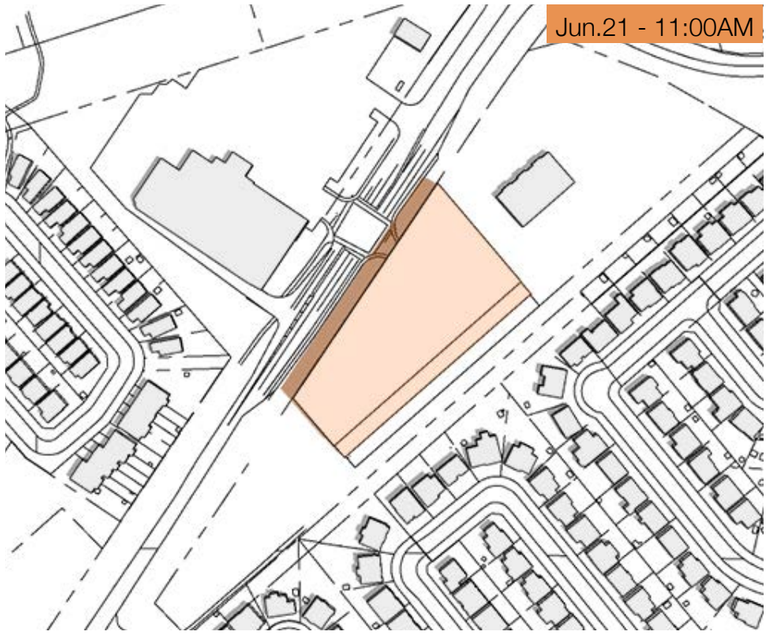
Shadow Analysis - As-of-Right

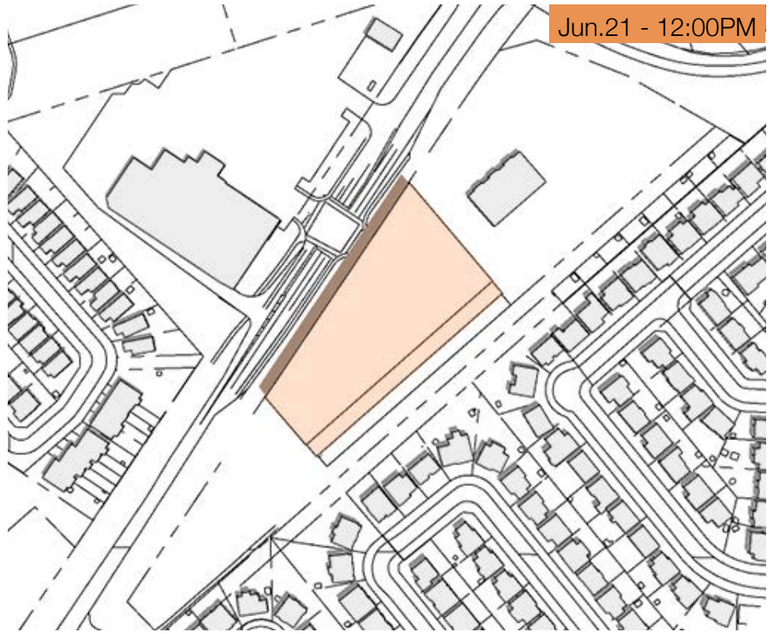
SUMMER SOLSTICE
June 21st, 8am – 8pm (EDT)











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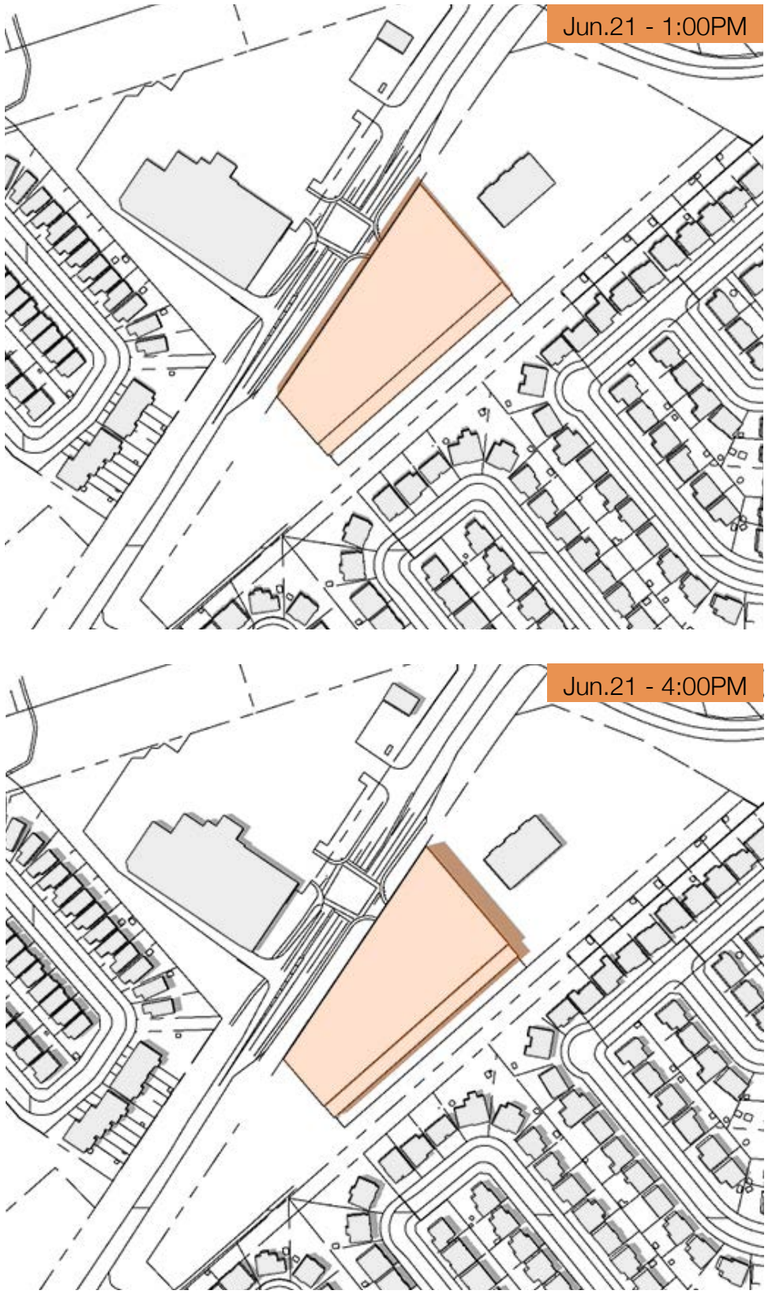
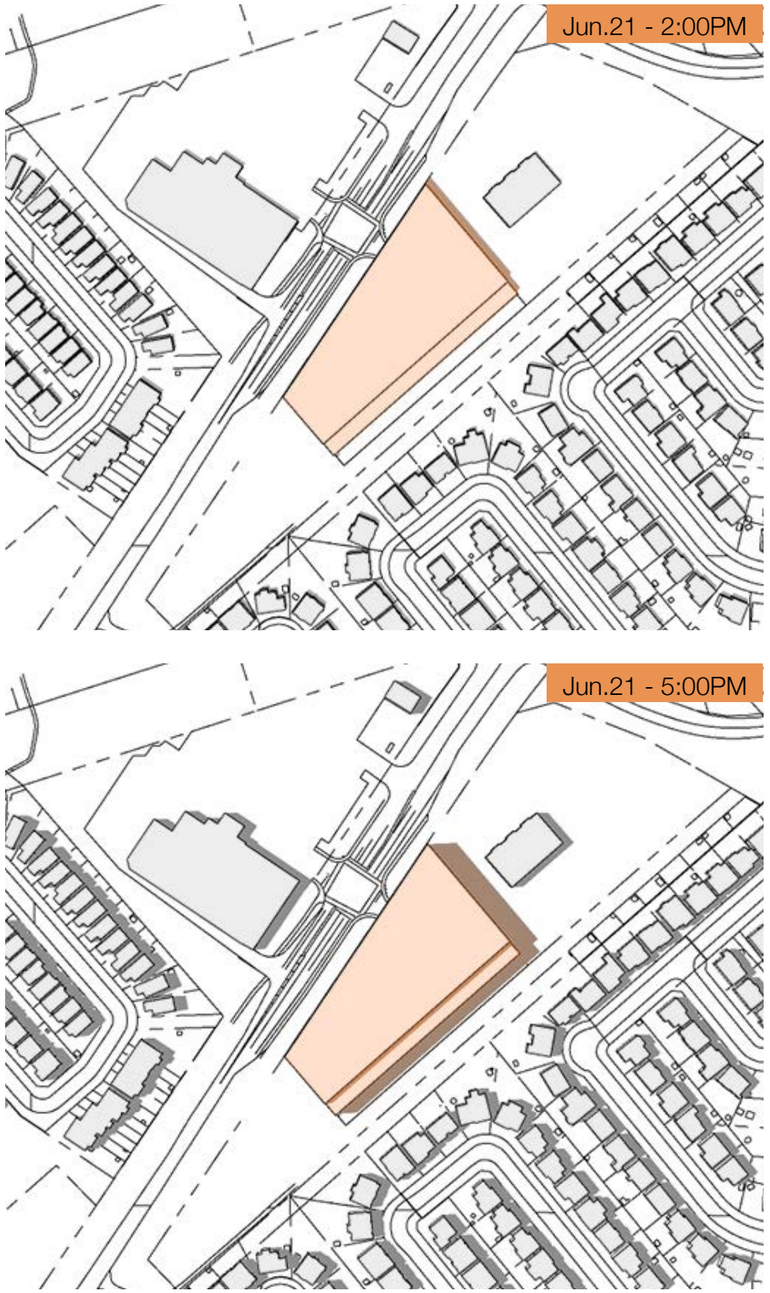
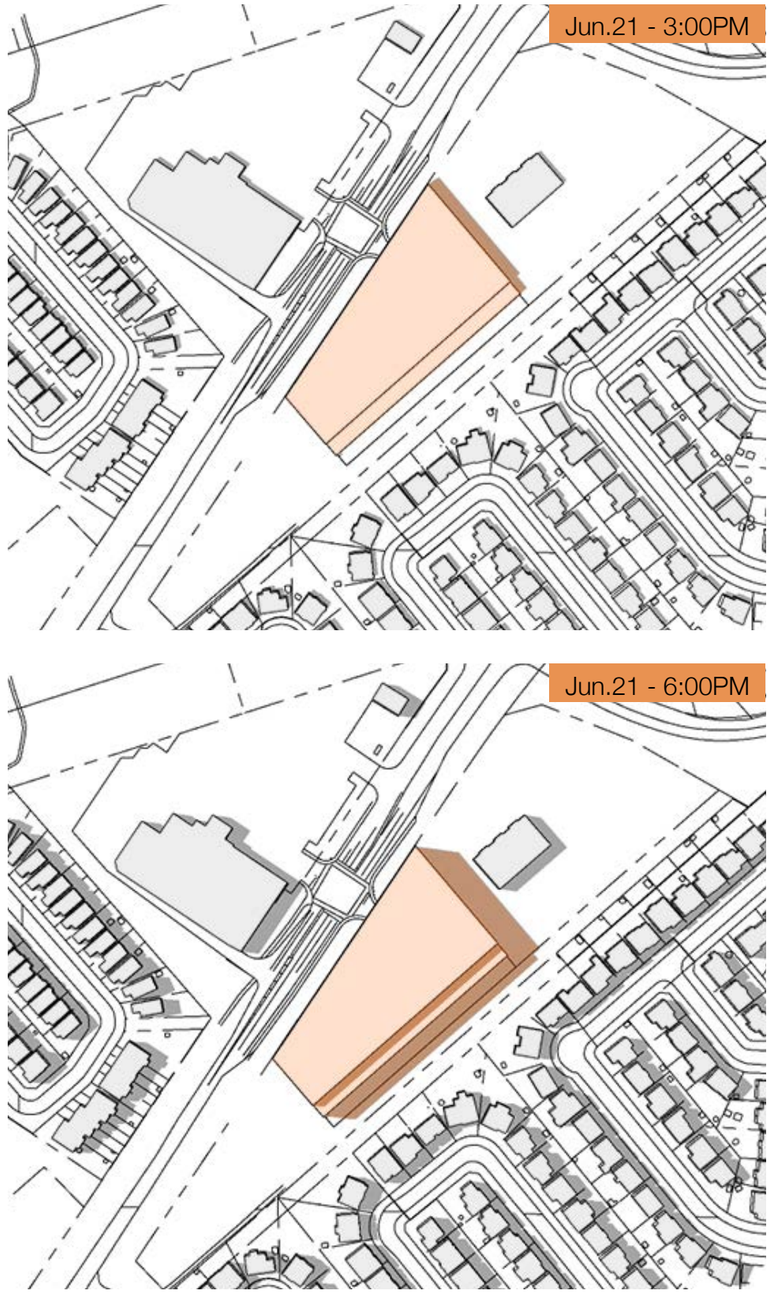
Shadow Analysis

Shadow Analysis - As-of-Right







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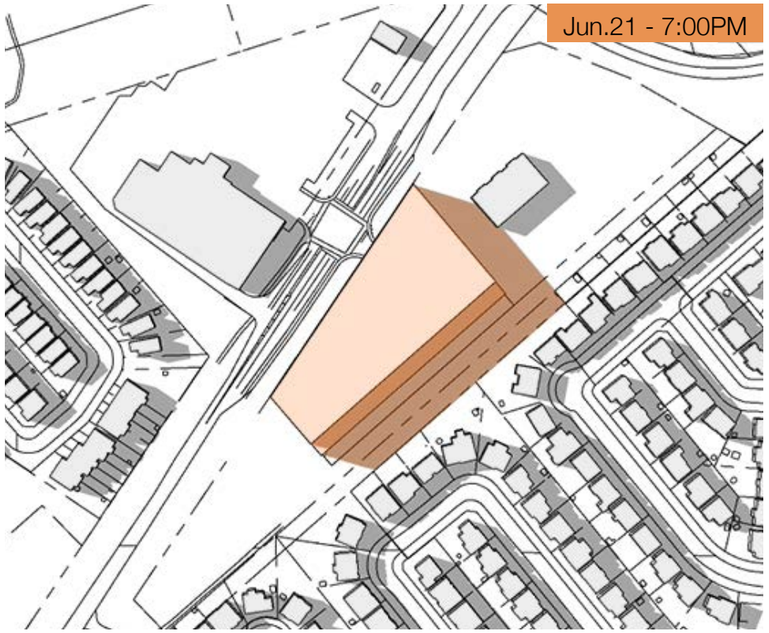

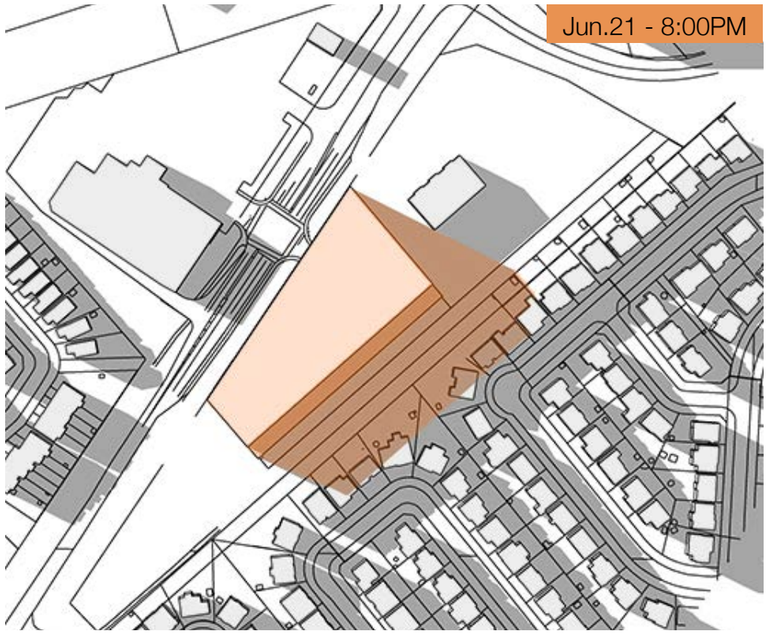

6310 Hazeldean Rd

Shadow Analysis of Proposed Development

Shadow Analysis - Proposed

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This section demonstrates the shadow impacts of the proposed development during the Spring/Fall Equinox, and the Winter and Summer Solstice.

This shadow study was prepared in SketchUp Pro, one of the most common software used in the industry to prepare such studies. Models prepared in this software are accurately geolocated using Latitude and Longitude coordinates for the site. The study:

- Considers Ottawa's time zone standard of -5h UTC.
- Considers Daylight Savings Time during the Summer Solstice and Equinox dates.
- Considers Latitude: 45.265908N or 45°15'57.3"N
  Longitude: 75.940241W or 75°56'24.9"W

The timing and extent of shadowing impacts of the proposed development is largely consistent with the as-of-right model, with modest increases in the early morning or evening during certain seasons.

The models included in this section illustrate the shadowing impacts of the proposed development. As shown in the models, most of the shadows are cast northward onto the road right-of-way or the shopping centre (GM14 Zone) to the north.

The low-rise residential areas to the northwest and southeast continue to receive uninterrupted sunlight throughout the year, with some impacts in certain seasons for brief periods shortly after sunrise and shortly before sunset. Shadowing impacts on properties beyond the as-of-right envelope are generally limited to the early morning and at 8pm, when shadows are similarly being cast by low-rise dwellings.

Winter Solstice - December 21 (EST)

On the Winter Solstice, impacts are mainly over arterial mainstreet and mixed-use areas north of subject site. The low-rise residential area is not impacted during the hours established in the terms of reference and used in this study.

Spring/ Fall Equinox - March/ September 21 (EDT)

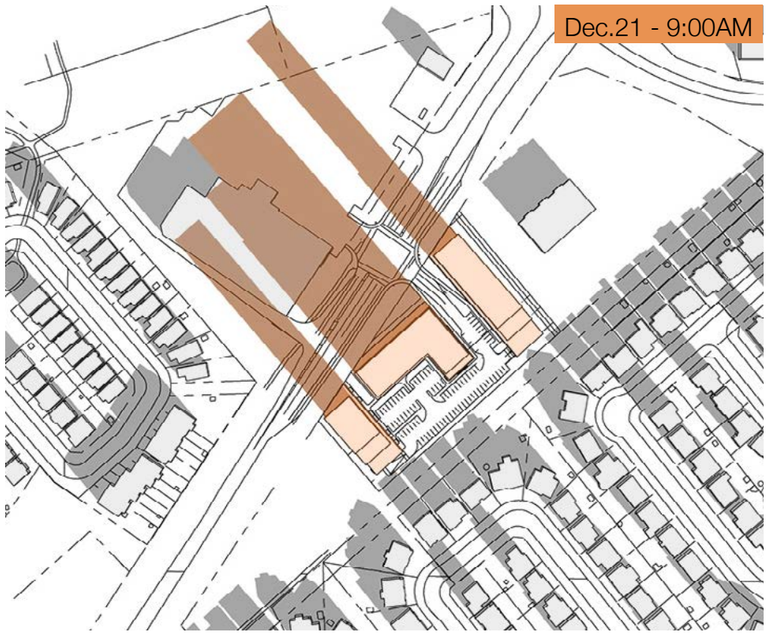
During the Spring or Fall Equinox, shadows partially reach the low-rise residential area north-west until 8am, and the area south-east after 6pm, with only a few metres of extra impact when compared to the as-of-right conditions. There are no impacts in these areas for the remainder of the studied times. For most of the day, the shadows produced by the proposed building envelope affect only the commercial properties immediately north and east of the site.

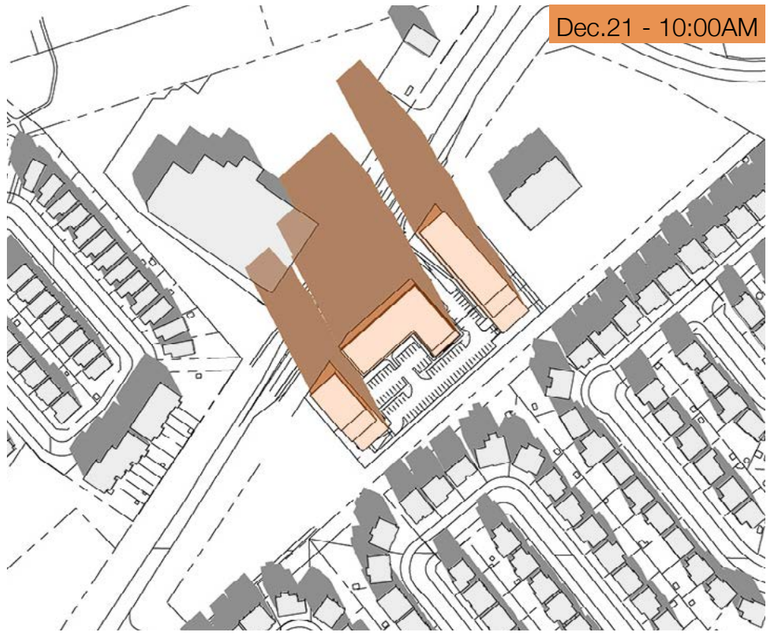
Summer Solstice - June 21 (EDT)

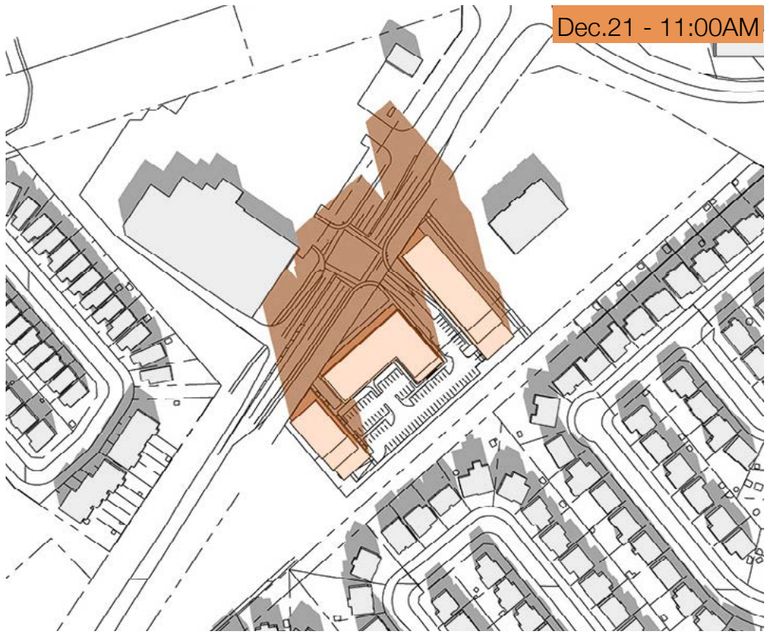
In the summer months, shadows stay mostly within site boundaries from 9am until 7pm, when shadows are cast to the southeast. At 8pm, shadowing impacts from the development affects some additional properties compared with the as-of-right envelope, but most of these properties are also affected by shadowing from surrounding low-rise dwellings during this time.

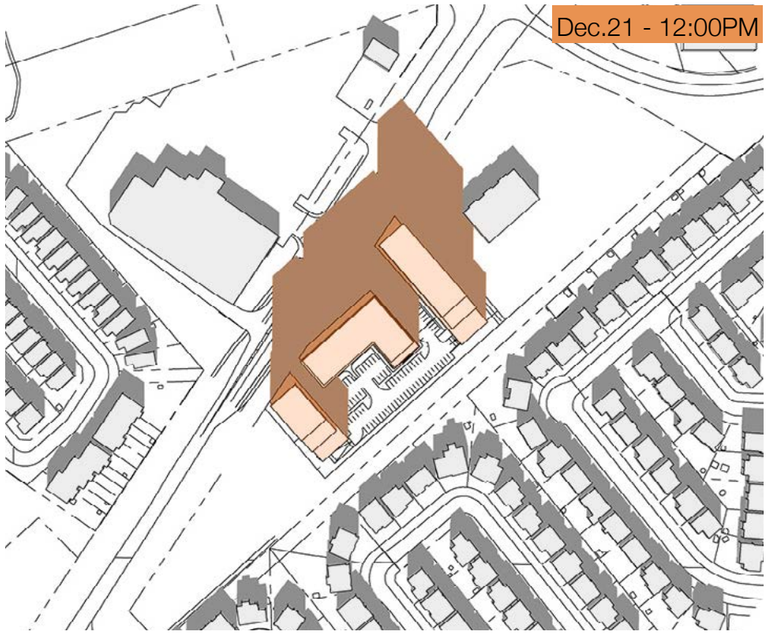
Shadow Analysis - Proposed

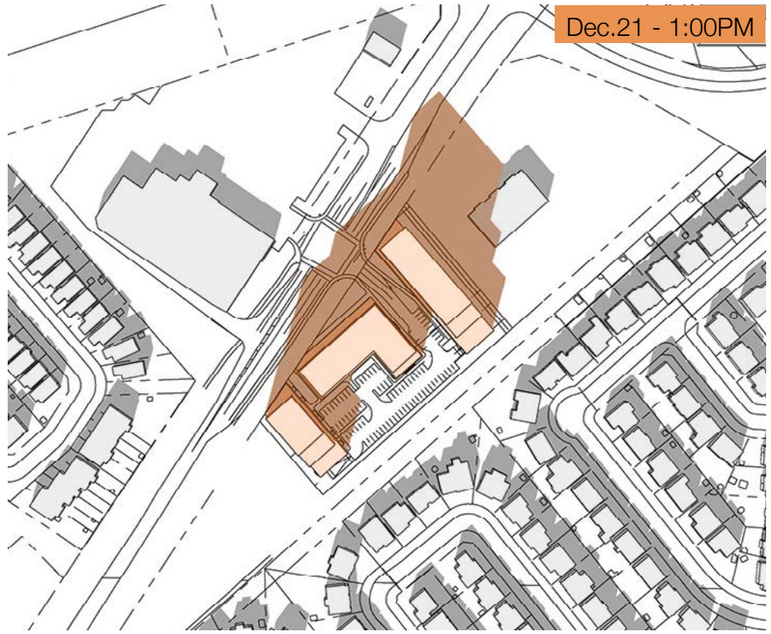
WINTER SOLSTICE
December 21st, 9am – 5pm (EST)











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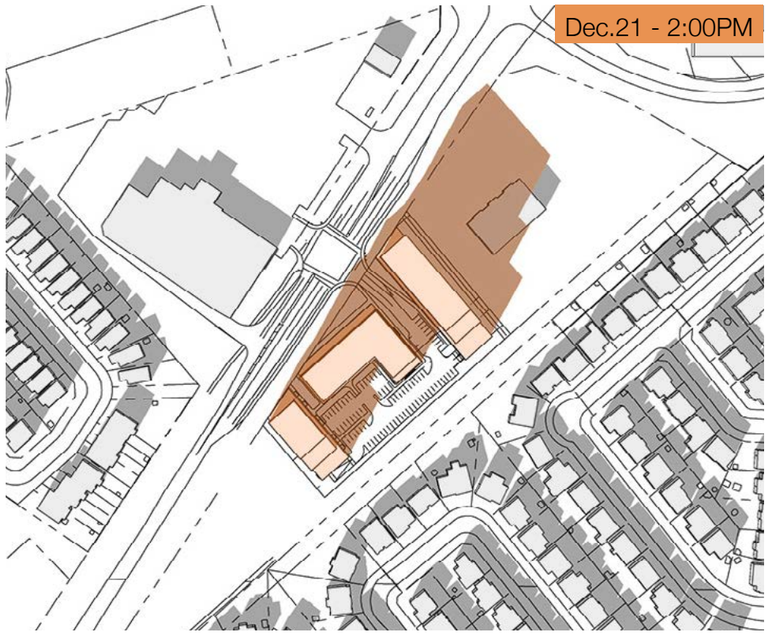
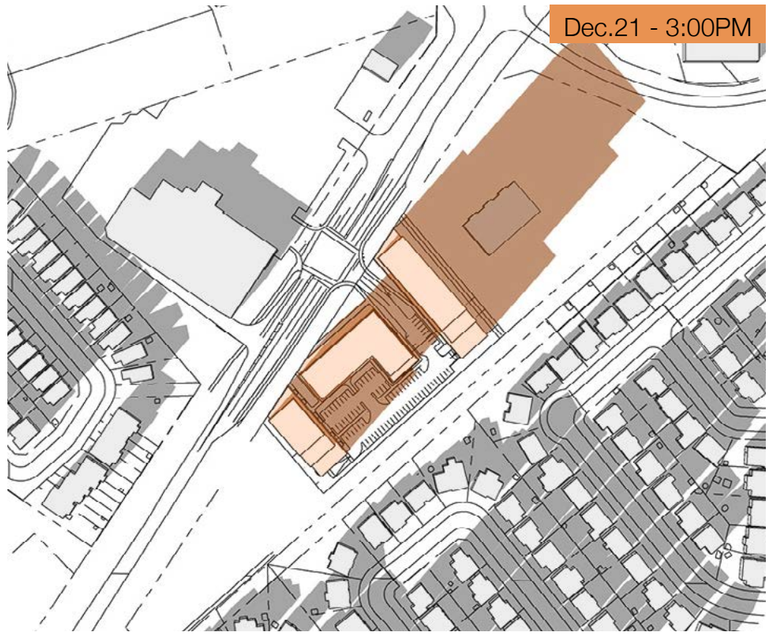
6310 Hazeldean Road
Shadow Analysis

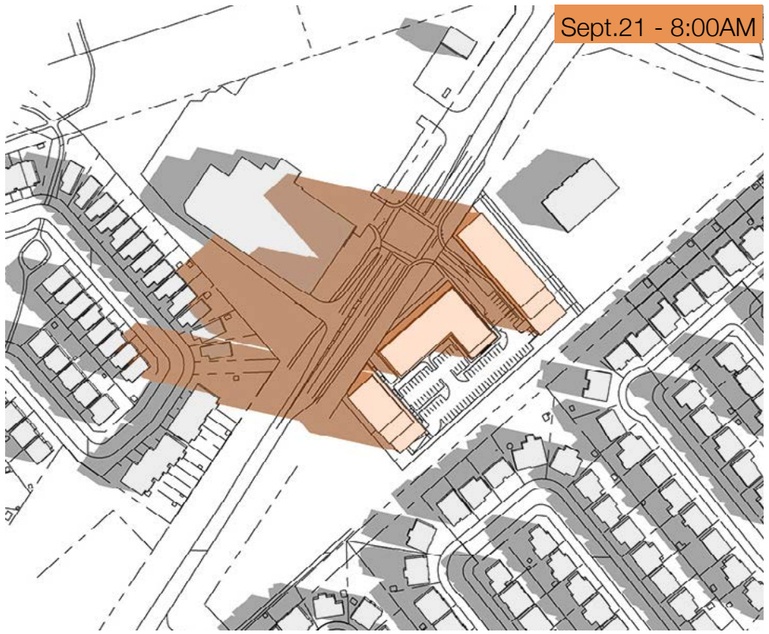
Shadow Analysis - Proposed

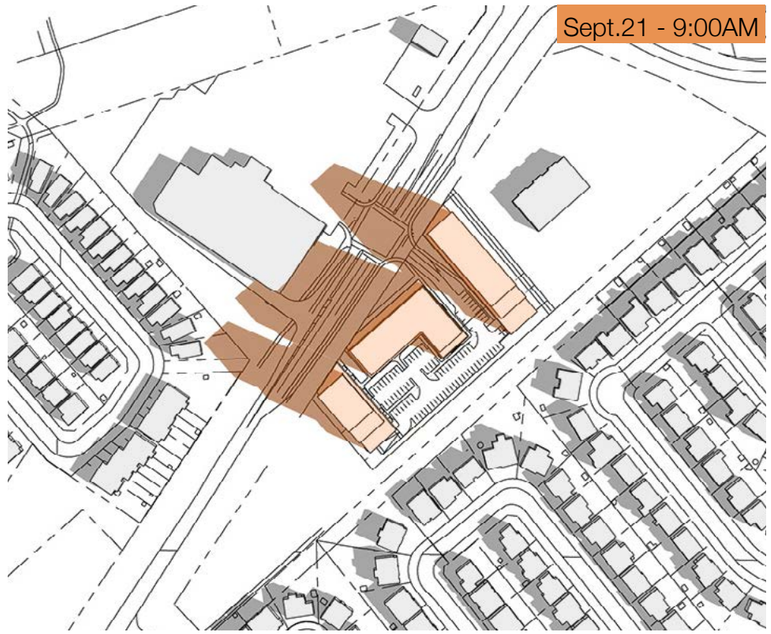


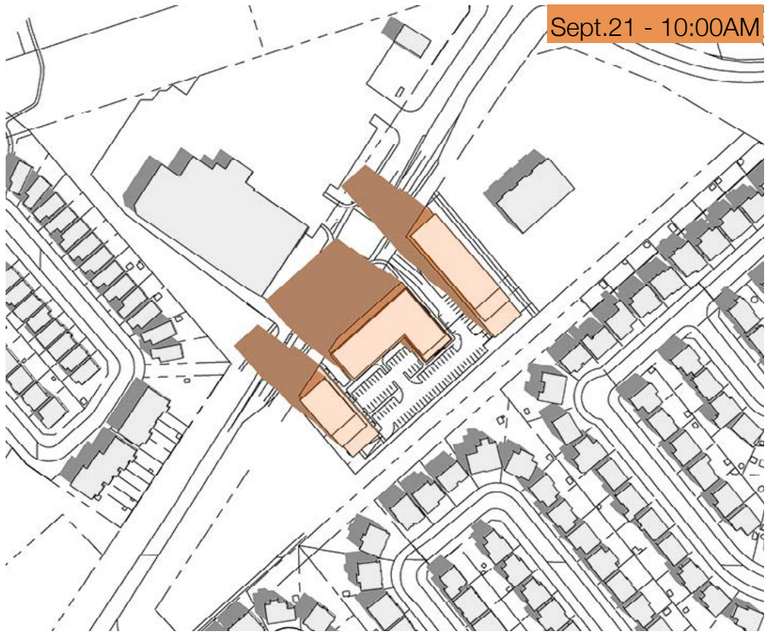


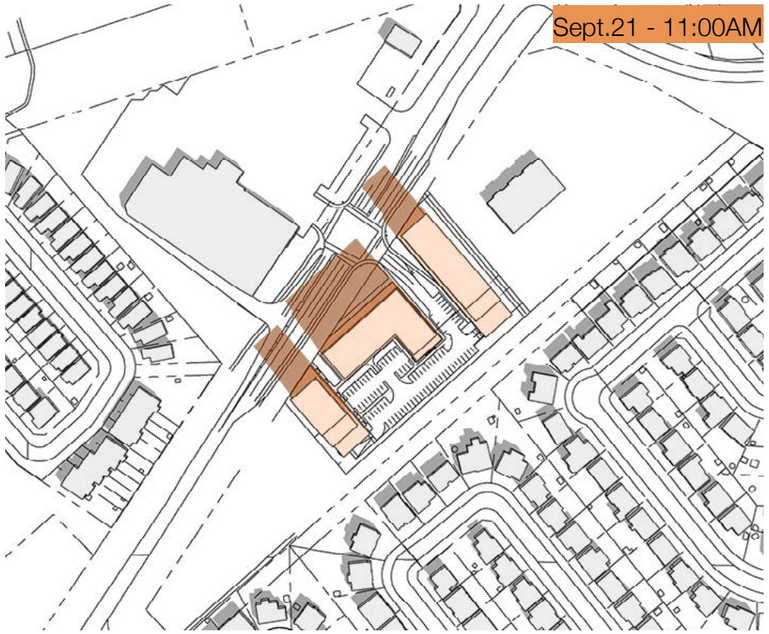
Shadow Analysis - Proposed

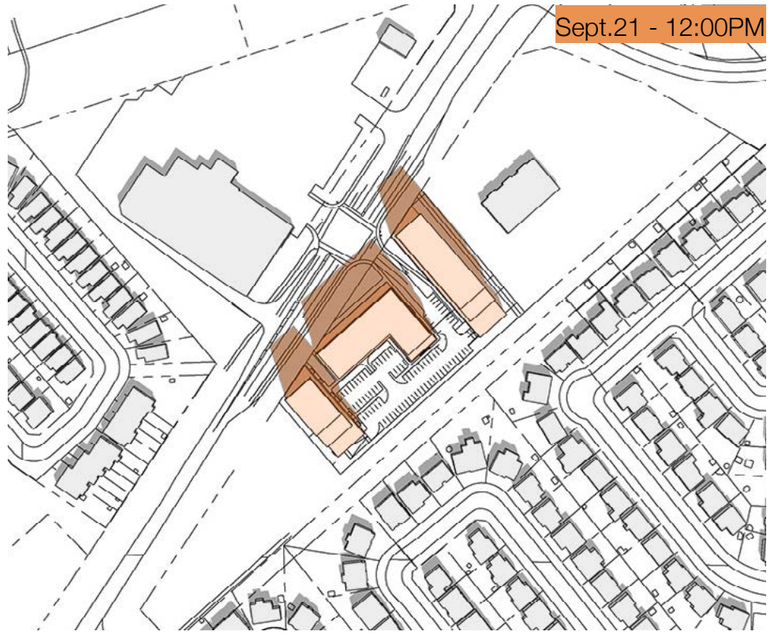
SPRING/ FALL EQUINOX
March/ September 21st, 8am – 6pm (EDT)











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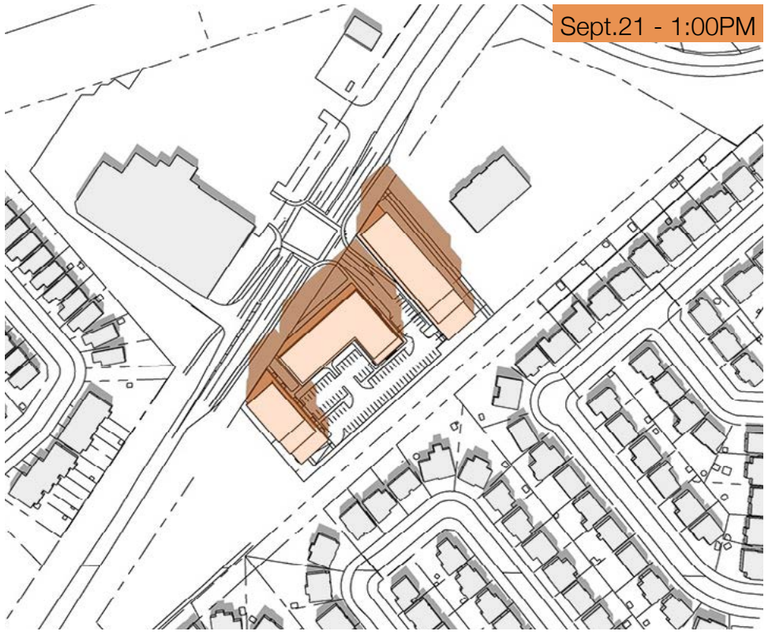
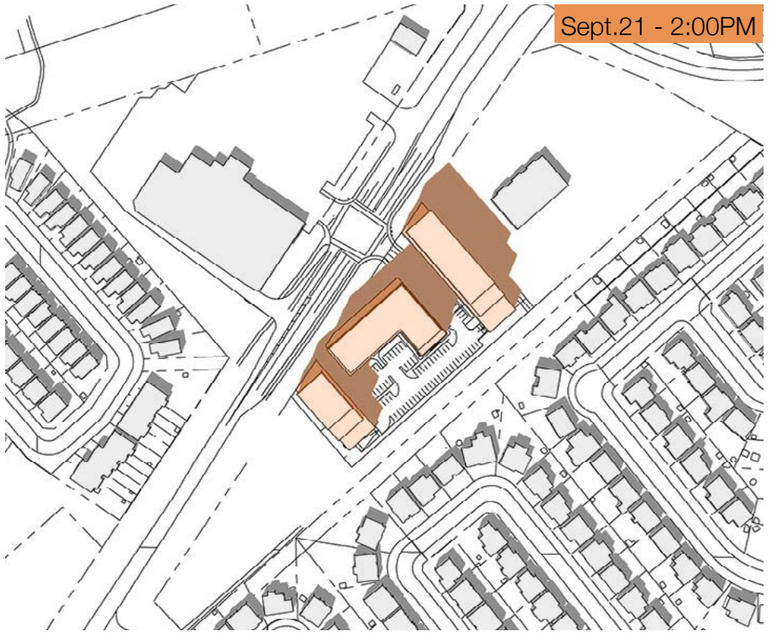
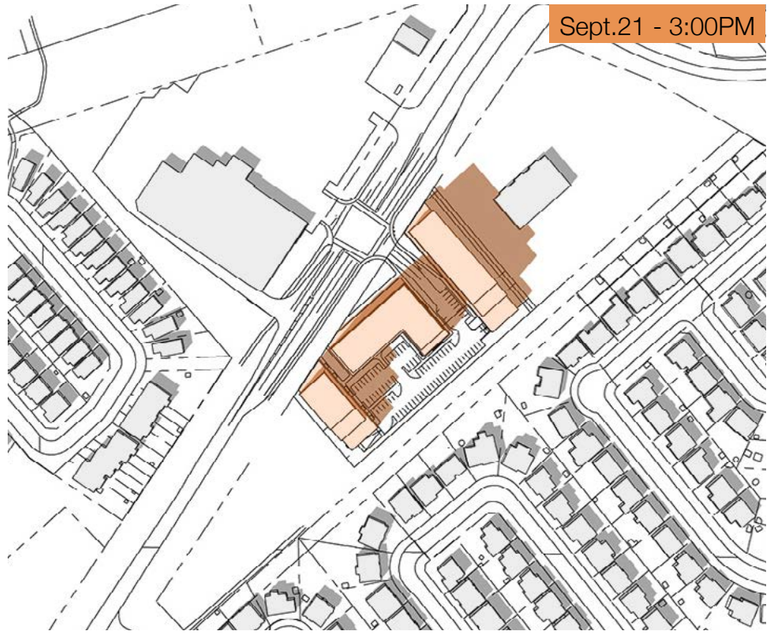
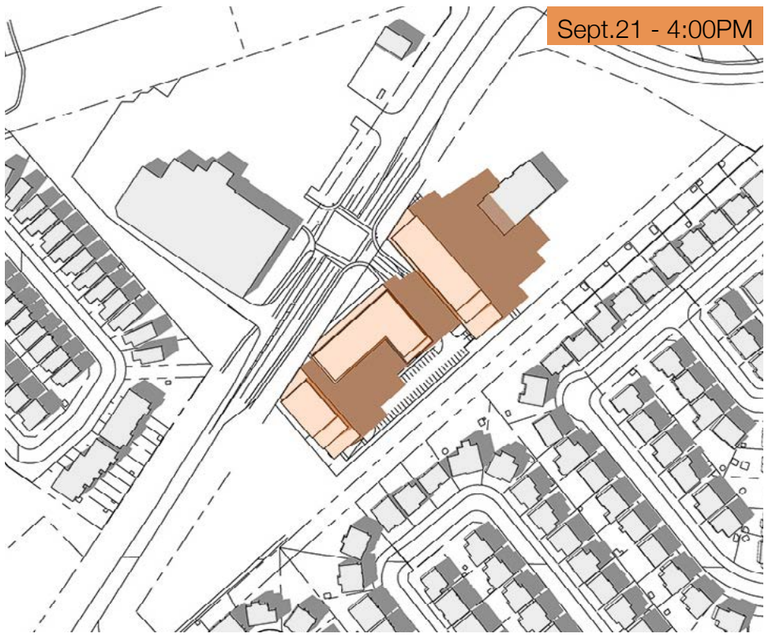
6310 Hazeldean Road
Shadow Analysis

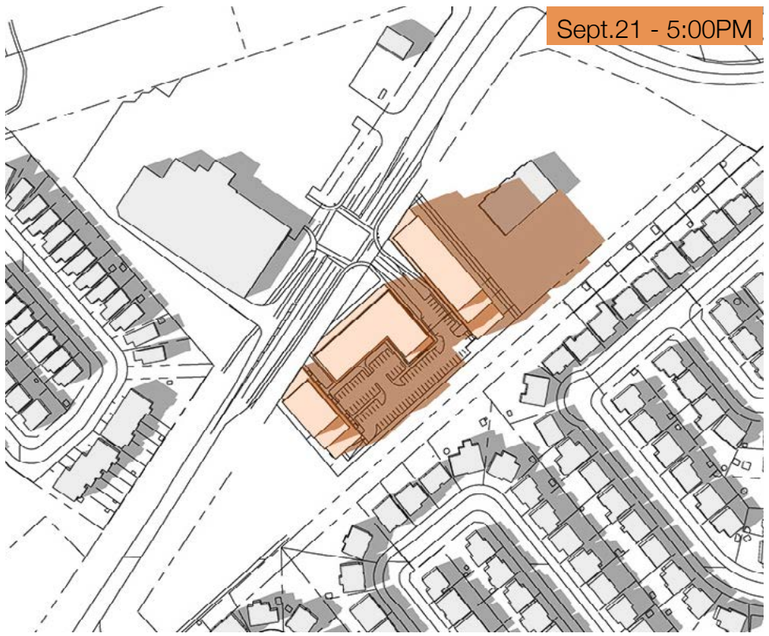
Shadow Analysis - Proposed

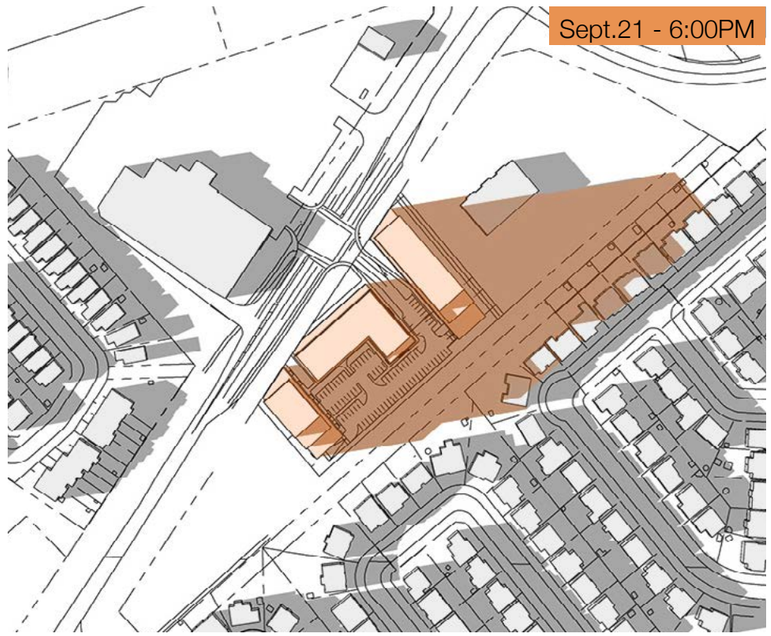












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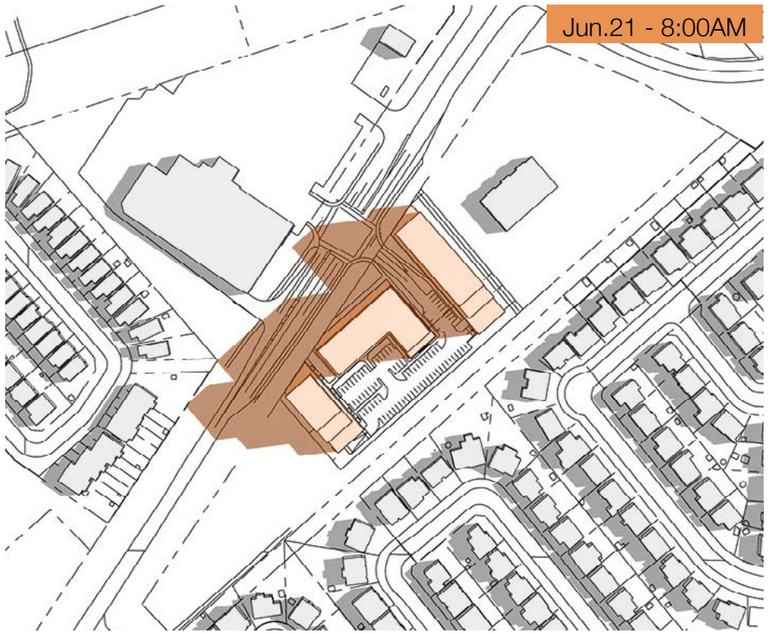
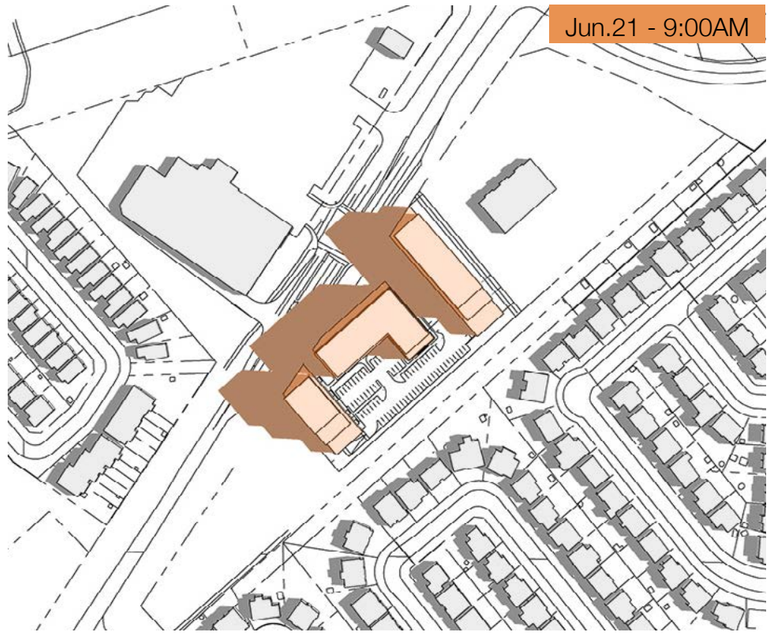
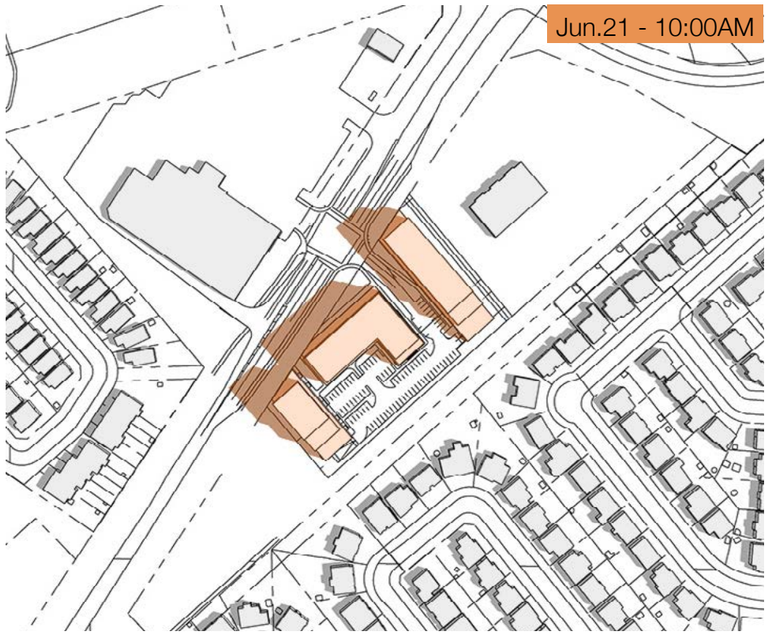
6310 Hazeldean Road
Shadow Analysis

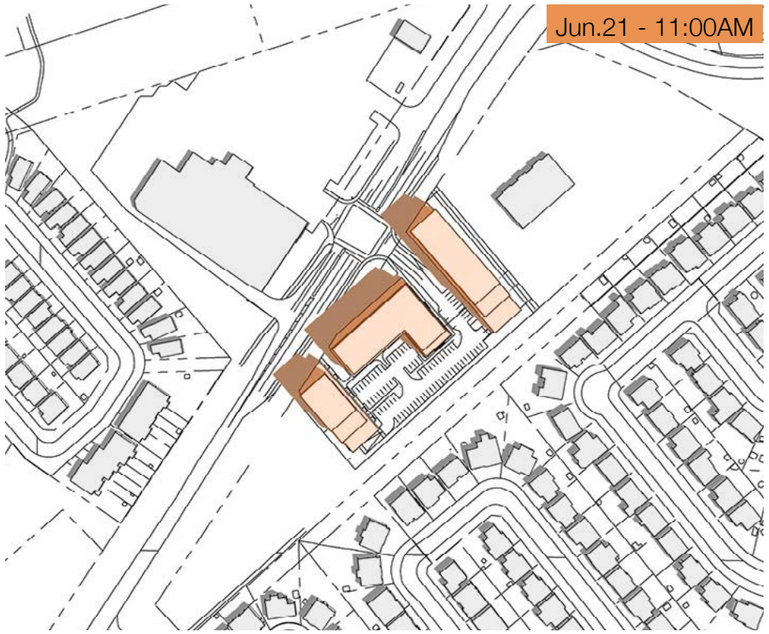
Shadow Analysis - Proposed

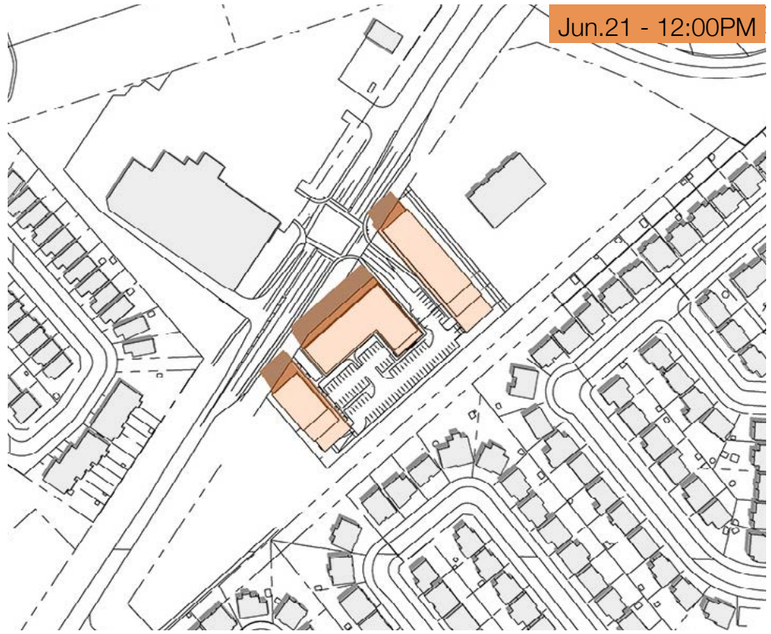
SUMMER SOLSTICE
June 21st, 8am – 8pm (EDT)











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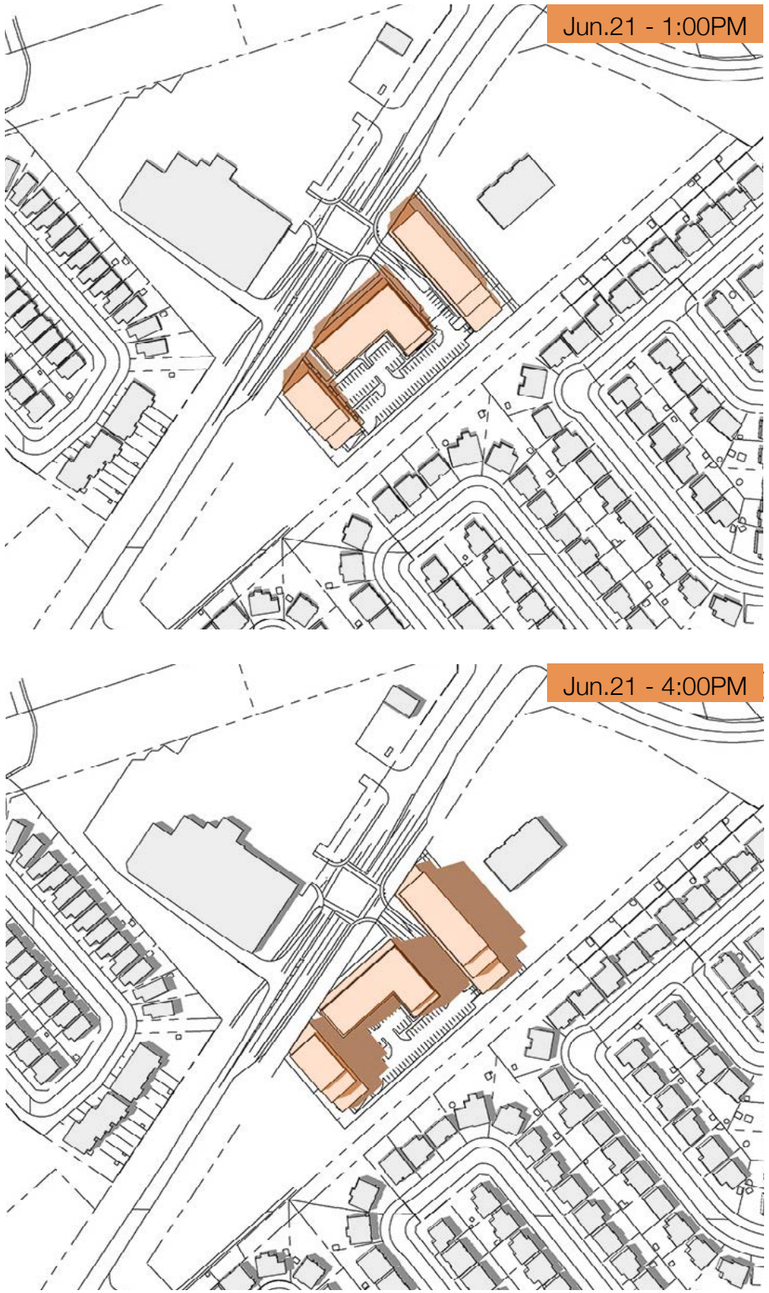
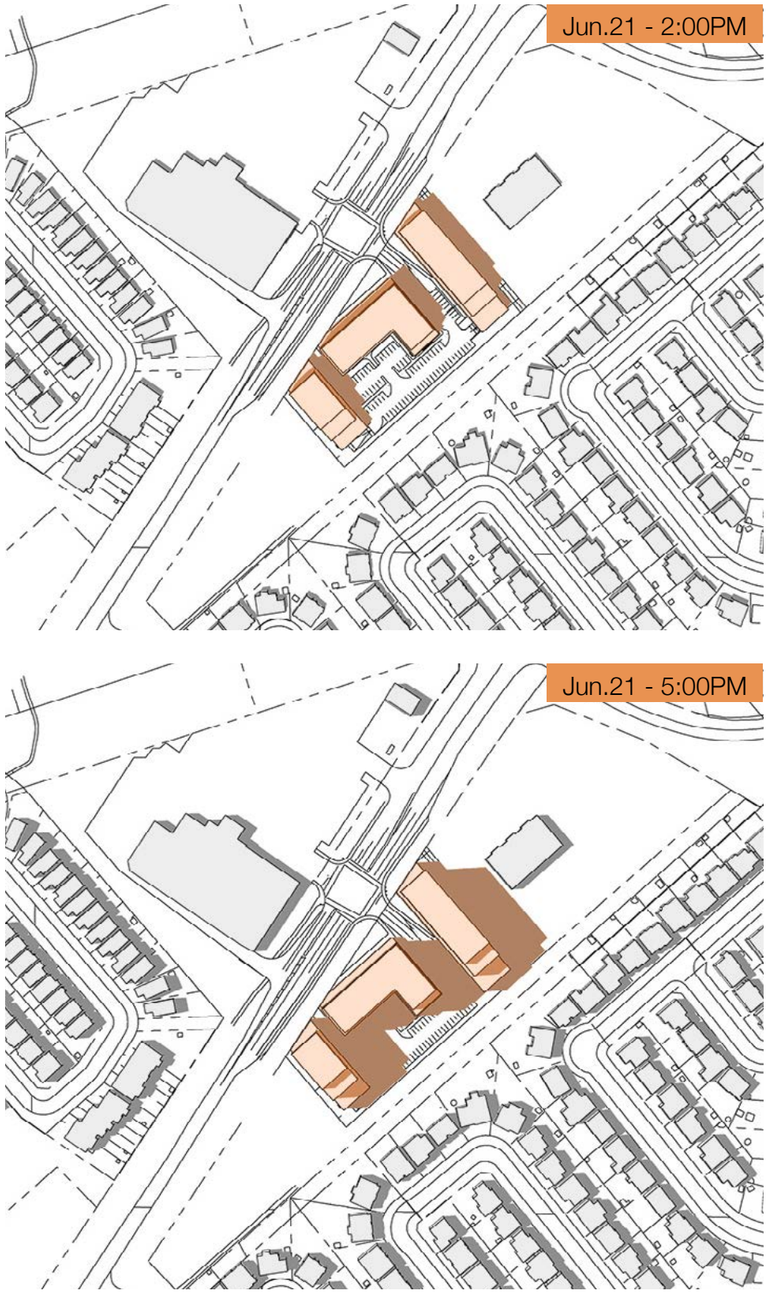
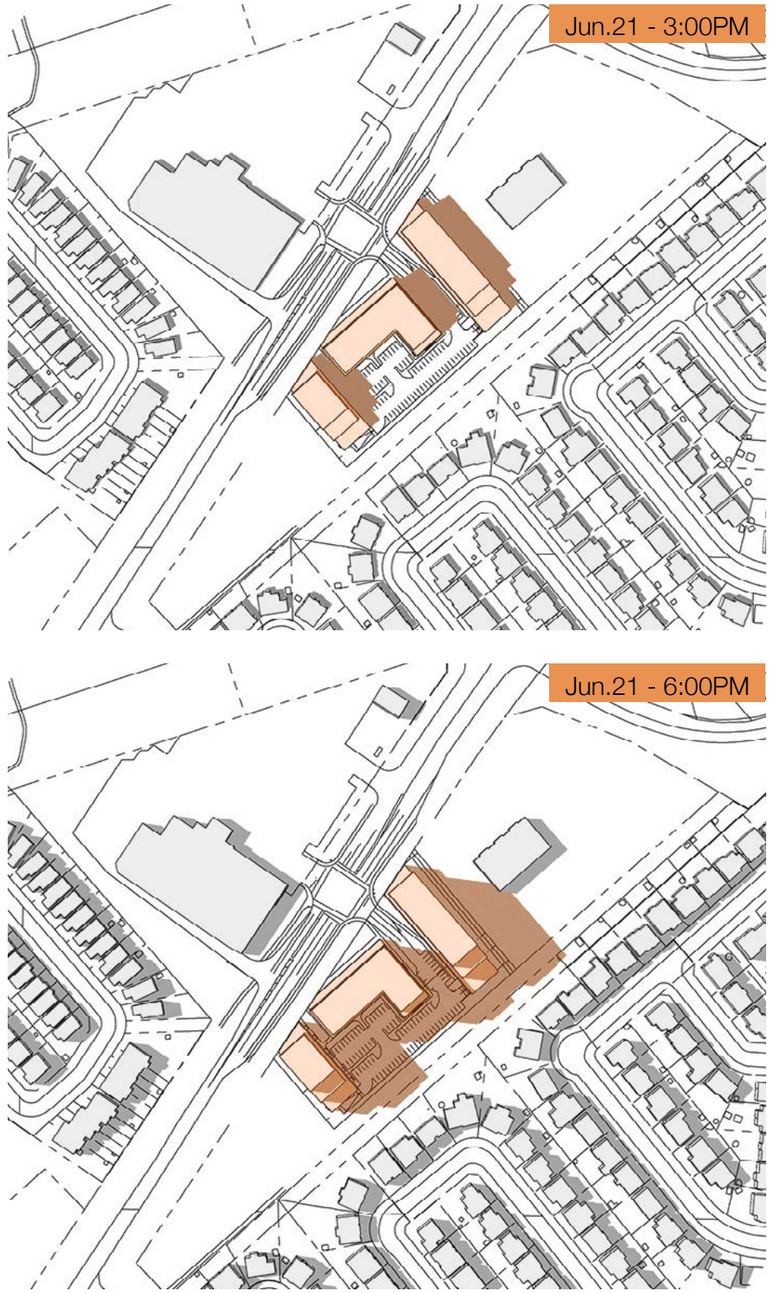
Shadow Analysis

Shadow Analysis - Proposed







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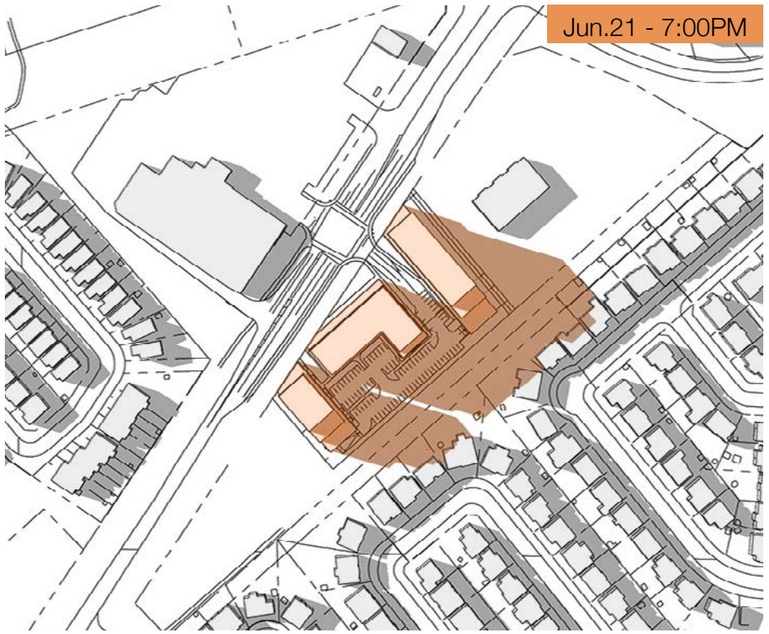
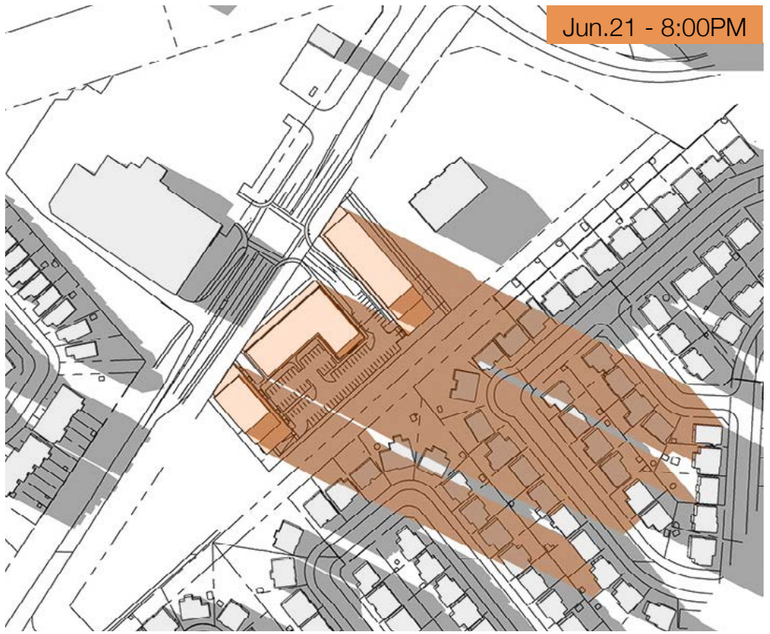
6310 Hazeldean Road
Shadow Analysis

Shadow Analysis - Proposed





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