SHADOW IMPACT STUDY
REV 1

5 PROPOSED 5 STOREY BUILDINGS
98 KING ST. & 143 TILLSON AVE., TILLSONBURG, ONTARIO
Mr. Gilbert

Strik, Baldinelli, Moniz Ltd, on behalf of JLC Homes & Escalade Properties has prepared the following Shadow Impact Study, in support of zoning amendments in accordance with the submitted Site Plan application.

1 **BUILDING DESCRIPTION (98 KING ST.)**
   - 5 Storey (49 Unit) Apartment Building
   - 991m$^2$ Building Area
   - ~51m x 20m Building Footprint

2 **BUILDING DESCRIPTION (143 TILLSON AVE.)**
   - 5 Storey (49 Unit) Apartment Building
   - 991m$^2$ Building Area
   - ~51m x 20m Building Footprint

3 **PROJECT OVERVIEW**
   Our understanding is the Town of Tillsonburg does not have formal Shadow Impact Study guidelines in place. As a result, Strik, Baldinelli, Moniz Ltd. (SBM) has employed the City of Waterloo Shadow Study guidelines as the basis for this report. The City of Waterloo’s guidelines have been widely accepted in many other municipalities, including *The City of London*, *The City of St. Thomas*, and *The Municipality of Central Elgin*. As per the City of Waterloo Shadow Study guidelines, the subject sites at **98 King St. & 143 Tillson Ave. Tillsonburg ON**, have been analyzed to ensure:
   - As a principle, at least 50% or more of any property should not be shaded for more than two interval times (a 4-hour equivalency); or
   - As a principle, at least 50% of any property should be in full sun for at least two interval times (a 4-hour equivalency)

The Shadow Study was prepared to reflect the proposed building massing as described in Section 1, and the latest concept site plan which depicts the building location & orientation. The following includes an assessment of the shadows cast by the proposed development in consideration of the guidelines and the existing permissions (existing zoning).
4 SOLAR STUDY OVERVIEW

4.1 Spring/Fall Equinox (March/September)

During the Spring/Fall Equinox the shade impact of the proposed building masses will be contained to less than 50% of the proposed site at 98 King St. & 143 Tillson Ave. However, it will impact the adjacent property to the east of Tillson Ave. For one-time interval, and the impact during that interval will result in more than 50% of the aforementioned site being shaded for no more than two consecutive time intervals. This is consistent and falls within the acceptable guidelines stated in Section 2. Other impacts will include a portion of Tillson Ave. being covered during the time intervals just prior to sunset (~3:00pm-7:00pm)

March 21 – 10am
March 21 – 12pm
March 21 – 4pm
March 21 – 6pm
March 21 - 6pm (Expanded)
4.2 Summer Solstice (June)

During the Summer Solstice the shade impact of the proposed building mass will be contained to less than 50% of the proposed site at 98 King St. & 143 Tillson Ave. However, it will impact the adjacent property to the east of Tilson Ave. For one-time interval, and the impact during that interval is less than 50% of the aforementioned site being shaded for no more than two consecutive time intervals. This is consistent and falls within the acceptable guidelines stated in section 2. Similar to the Spring/Fall Equinox, a portion of Tilson Ave. will be impacted during the time intervals just prior to sunset (~4-8pm).
4.3 Winter Solstice (December)

During the Winter Solstice the shade impact of the proposed building mass will be at its peak due to the minimal available daylight and lower solar apex. The shade impact of the proposed building mass will be contained to less than 50% of the proposed site at 98 King St. & 143 Tillson Ave. However, it will impact the adjacent residential properties to the North-East on Tilson Ave. will be affected and contained to less than 50% of the aforementioned site for no more than two consecutive time intervals. This is consistent and falls within the acceptable guidelines stated in section 2. Similar to the Spring/Fall Equinox & Summer Solstice a portion of Tilson Ave. will be impacted during the time intervals just prior to sunset (~2:00pm-6:00pm). An hourly breakdown during the Winter solstice has been provided, as requested by the County of Oxford. As shown below, the shade on the residential properties to the North-East is limited to a time of approximately 1 hour prior to sunset (sunset occurring at approximately 4:50pm) during the lowest solar apex in this limited window. Shade impacts beyond sunset (between 4:50pm to 6:00pm) should not be considered as a result.”
5 **CONCLUSION**

Due to the size of the buildings, site, and orientation of the proposed buildings, the Shade Impact to adjacent properties is minimal and generally bounded to the confines of the proposed sites as well as portions of Tilson Ave. Therefore, based on our analysis of the buildings shadowing, the impact of the proposed massing on adjacent properties appears to fall within acceptable limits, as per *The City of Waterloo Shadow Study Guidelines* as previously stated in Section 3 of this report.

Respectfully submitted,

**Strik, Baldinelli, Moniz Ltd.**

Civil • Structural • Mechanical • Electrical

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