

1 North Front St., Belleville

Shadow study

In support of OPA and Rezoning application for a new development
at 1 North Front St. in Belleville



Alexander Wilson Architect Inc
Admiralty Place
103-20 Gore Street
Kingston Ontario, K7L 2L1

March 21 (EQUINOX), June 21 (SUMMER SOLSTICE), December 21(WINTER SOLSTICE)

MARCH 21- 9:00AM



MARCH 21- 10:00AM



MARCH 21 – 11:00AM



MARCH 21- 12:00 PM



MARCH 21- 1:00 PM



MARCH 21- 2:00 PM



MARCH 21- 3:00 PM



MARCH 21- 4:00 PM



MARCH 21- 5:00 PM



JUNE 21- 9:00 AM



JUNE 21- 10:00 AM



JUNE 21- 11:00 AM



JUNE 21- 12:00 PM



JUNE 21- 1:00 PM



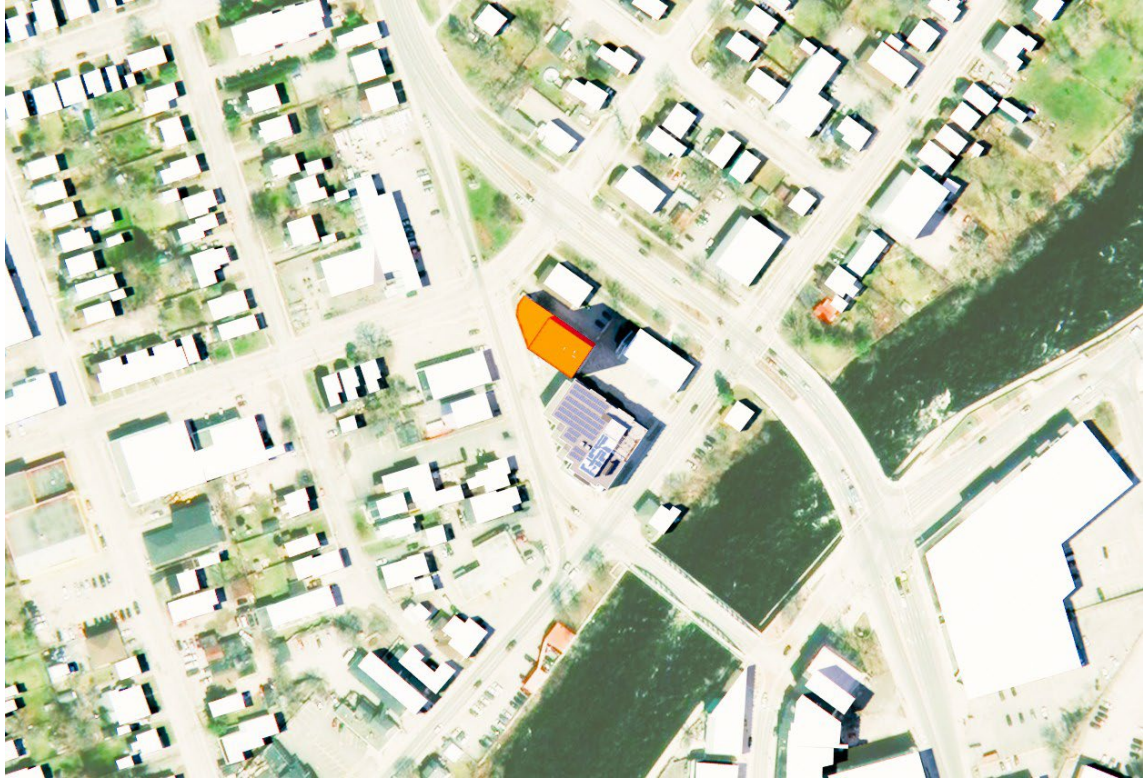
JUNE 21- 2:00 PM



JUNE 21- 3:00 PM



JUNE 21- 4:00 PM



JUNE 21- 5:00 PM



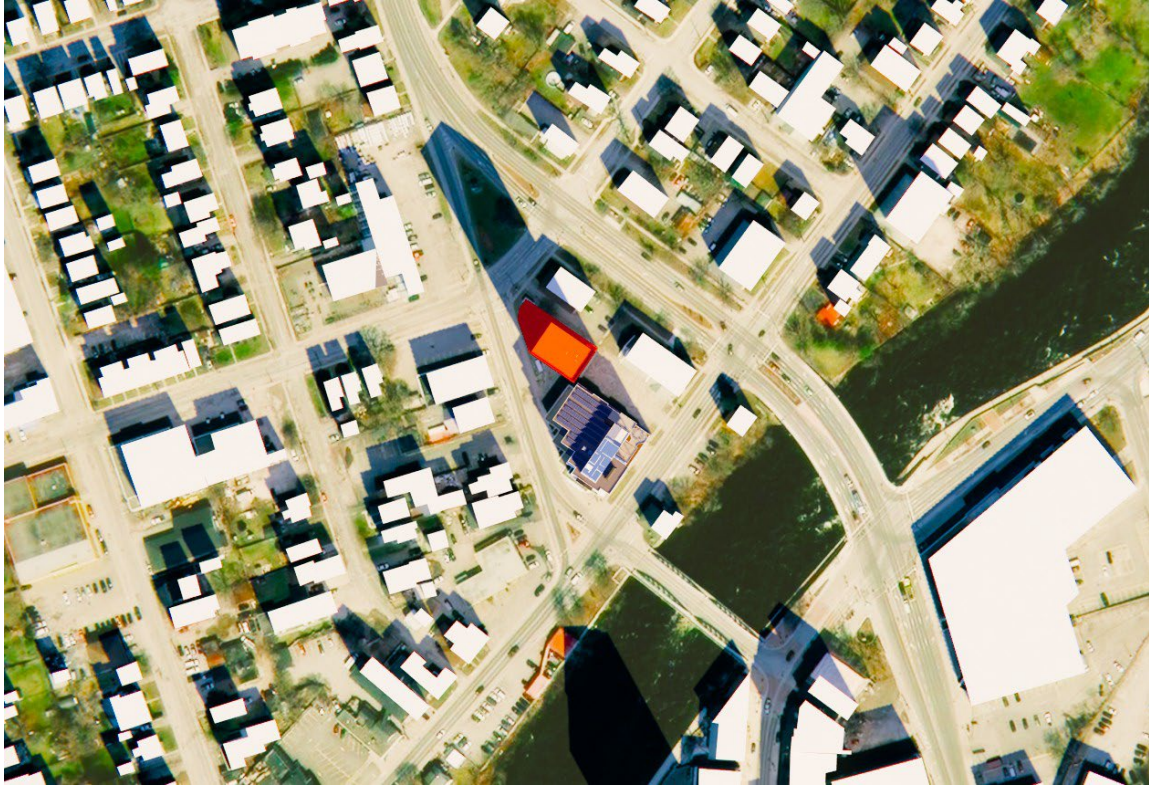
DECEMBER 21- 9:00 AM



DECEMBER 21- 10:00 AM



DECEMBER 21- 11:00 AM



DECEMBER 21- 12:00 PM



DECEMBER 21- 1:00 PM



DECEMBER 21- 2:00 PM



DECEMBER 21- 3:00 PM



DECEMBER 21- 4:00 PM



DECEMBER 21- 5:00 PM



Shadow Impact Rationale

The shadow study prepared for the proposed nine-storey residential development at 1 North Front Street evaluates shadow conditions during the spring equinox (March 21), summer solstice (June 21), and winter solstice (December 21), at hourly intervals between 9:00 AM and 5:00 PM.

The results indicate that the proposed development does not generate significant adverse shadow impacts on surrounding properties throughout the year.

- **West Side (Front Street):**
The properties across Front Street consist primarily of one- to two-storey commercial buildings. These buildings experience minimal shadowing, limited to brief periods (approximately one to two hours) during the summer months. No meaningful impact occurs during the remainder of the year.
- **East Side (Waterfront and adjacent commercial uses):**
The eastern exposure toward the waterfront and nearby commercial buildings remains largely unobstructed. Minor shadowing may occur during late afternoon hours in the summer months; however, these impacts are limited in duration and do not result in full or prolonged shading at any time of the year.

- **South Side (On-site commercial buildings):**
Existing commercial buildings located to the south on the same property are not impacted by shadowing from the proposed development at any time of the year.
- **North Side (Grove Street and adjacent residential uses):**
No shadow impacts extend across Grove Street to properties north of the site for most of the year. Limited shadowing may occur on the adjacent apartment building during afternoon hours in the summer and may extend slightly further north in the winter; however, these conditions are short in duration and seasonally constrained.

Conclusion

Overall, the shadow study demonstrates that shadow impacts associated with the proposed development are minor, limited in duration, and primarily confined to the summer months. No significant or prolonged shadowing is anticipated on surrounding public streets, commercial properties, or waterfront areas. As such, the proposed development is anticipated to result in shadow impacts that do not give rise to undue adverse effects within the surrounding urban context.



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