

As per the standard requirements of shadow studies of the City of Mississauga, the analysis was conducted for the dates of March 21, June 21, September 21, and December 21 at all required reference times.

SHADOW MODELLING INFORMATION

- Site latitude and longitude of the subject site at 4099 Erin Mills Parkway, Mississauga, ON L5L 3P9 are as follows:

Latitude: 43° 33' 3.2148"
Longitude: -79° 41' 15.846"
- Time Zone: Eastern

Standard Time: UT – 5 hours (December 21st)
Daylight Time: UT – 4 hours (March 21, June 21st and September 21st)
- Astronomic North** was determined based on the North Arrow on Survey plan Block II Registered Plan M-247 prepared by J.D. BARNES Ltd. dated January 4, 2022.
- The **source of the base plan** is a combination of property data obtained from the City of Mississauga and the land survey by J.D. BARNES Ltd. 4099 Erin Mill's proposed and built massing provided by Turner Fleischer Architects Inc.

 Other existing surrounding building mass and heights were approximated based on Google Maps.
- The **source of the proposed building model** was provided by the architect, Turner Fleischer Architects Inc.
- Site Orientation:**
 The site is bound by :
 Erin Mills Pkwy and Folkway Dr Intersection on Northwest : N12°08'00"E
 Folkway Dr on North : N32°08'00"E , N28°55'35"E
 Folkway Dr Sawmill Valley Dr Intersection on Northeast : N63°45'40"E
 Sawmill Valley Dr on East : N75°25'35"W , N62°07'30"W , N41°07'20"E , N48°54'50"W
 Farrier Ct Townhouses on South : N31°55'15"E , N31°19'15"E
 Erin Mills Pkwy on West : N42°47'35"E , N47°07'05"W , N51°59'00"
- Shadow Studies are conducted assuming site is flat and is at +158.6M

REVIEW OF SHADOW CRITERIA

Review of Shadow Criteria

Criterion 3.1 - Residential Private Outdoor Amenity Spaces - Jun 21 and Sep 21

Proposed shadows reach no impact zone of private amenity spaces for the properties on northwest on June 21 at 08:20am and 09:20am, but they are not shadowed for more than two consecutive hourly test times*. See drawing SPA812.

Proposed shadows reach no impact zone of private amenity spaces for the townhouses on southeast on June 21 between 05:20pm to 07:33pm, and they are shadowed for more than two consecutive hourly test times*. See drawing SPA814 and SPA815.

Proposed shadows reach no impact zone of private amenity spaces for the properties on northwest on September 21 between 08:35am to 11:12 am and they are shadowed for more than two consecutive hourly test times*. See drawing SPA816.

Proposed shadows reach no impact zone of private amenity spaces for the townhouses on southeast on September 21 at 05:12pm and 05:48pm, but they are not shadowed for more than two consecutive hourly test times*. See drawing SPA818.

** 'Hourly test times' are assumed to be 1 hour in duration each.
 The 'Consecutive hourly test' period does not exceed two hours.*

Criterion 3.2 - Communal Outdoor Amenity Areas - Jun 21, Sep 21 and Dec 21

Refer to table on SPA811

1- Coppersmith Grove Park
 Proposed shadows shadow only a small corner of the south corner of the Coppersmith Grove Park on December 21 at 10:17am. But it still meets the criteria as the sunfactor is more than 0.5. (calculate sun factor, avg. of total area in sunshine at all times / total area of the park). See drawing SPA819.

2- Trapper's Green Park
 Proposed shadows shadow only a small corner of the south corner of the Trapper's Green Park on December 21 from 12:17pm to 03:15pm . But it still meets the criteria as the sun factor is more than 0.5. (calculate sun factor, avg. of total area in sunshine at all times / total area of the park). See drawing SPA819 and SPA820.

3- Dunn Park
 Proposed shadows do not affect Dunn Park area.

4- Proposed Outdoor Amenity Space.
 The criterion is met for the proposed Outdoor Amenity Area for June 21 and September 21, but not met for December 21. See drawing SPA819 and SPA820.

While the criterion is met for June 21 and September 21, but not for December 21, we believe the outdoor amenity area is at the most appropriate location. It could have been placed at the south corner of the subject site to gain daylight in the winter months. However, by placing it in the centre of the development, it's shielded from the traffic and the noise of the public streets and provides a safer gathering space for the community.

Criterion 3.3 - Public Realm - Sep 21

We identify Folkway Dr. as a low and medium-density residential street. Proposed shadows reach the opposite sidewalk and cover it from 09:12am to 11:12am on September 21, and therefore doesn't meet the criteria. The density has been adjusted in this scheme to mitigate shadow impact. We believe that Building A, positioned at the intersection with Erin Mills, is appropriate for higher density. Meanwhile, Building B's height and massing have been reduced to allow more sunlight to reach the eastern portion of the sidewalk along Folkway Dr. at 10:12am. See drawing SPA816.

We identify Sawmill Valley Dr. as a low and medium-density residential street. Proposed shadows do not affect the opposite sidewalk on Sawmill Valley Dr., and therefore meets the criteria.

We identify Erin Mills Pkwy as a high-density residential street. Proposed shadows do not reach the opposite boulevard or sidewalk at any of the time intervals and therefore meets the criteria.

Criterion 3.4 - Turf and flower gardens in public parks - Sep 21
 N/A.

Criterion 3.5 - Building Faces to allow for the possibility of using solar energy - Sep 21

Proposed shadows reaches the no impact zone of the townhouses on southeast, at just 05:48pm on September 21. See SPA818. But this still meets the criteria as these areas are not shadowed for more than two consecutive hourly test times.

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|---|------------|---------------------------------------|-----|
| 2 | 2024-09-19 | PARTIAL REZONING SUBMISSION | MRZ |
| 1 | 2023-06-22 | OFFICIAL PLAN AND REZONING SUBMISSION | AYU |
| # | DATE | DESCRIPTION | BY |

QUEENSCORP®

PROJECT
4099 Erin Mills Parkway, Mississauga, ON

DRAWING
SHADOW STUDY ANALYSIS

| | |
|--------------|------------|
| PROJECT NO. | 19.001 |
| PROJECT DATE | 2024-09-19 |
| DRAWN BY | JMS |
| CHECKED BY | AYU |
| SCALE | |

| | | | |
|-------------|--------|------|---|
| DRAWING NO. | SPA810 | REV. | 2 |
|-------------|--------|------|---|