

COREARCHITECTS

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31 May 2023

Re: Shadow Study Analysis
Project No. : 21-231_88 Park Street East, Mississauga

Latitude: N 43 degrees: 35'20"

Longitude: W 79 degrees: 38'40"

The shadow study was prepared by CORE Architects Inc. The proposed buildings were massed based on the Re-issued for OPA and ZBA drawing set dated 31 May 2023, also prepared by CORE. In the attached shadow study, the proposed buildings (42 and 40 storey towers) shadow is shown in yellow, and the existing shadows of the context buildings is shown in grey.

True North was determined from the site survey prepared by R. Avis Surveying Inc. dated February 11, 2022. The base plan was created by CORE Architects Inc. in sketch up using the survey for the immediate site context and google maps and street view to estimate the location and height of the extended context buildings.

The shadow study times, dates and impacts outlined below were completed in accordance with the *City of Mississauga Standards for Shadow Studies*.

3.1 Residential Private Outdoor Amenity Space

There is no shadow impact for more than 2 consecutive hours within the space between the exterior wall of a dwelling and the 7.5m line of impact assessment for any residential private outdoor amenity spaces adjacent to the site. The proposed building cast shadow onto the rear yards of single family dwellings to the northwest in the mornings. The shadow cast clears each yard in 2 hours or less.

3.2 Communal Outdoor Amenity Areas

There is very minimal shadow impact on the Forest Avenue Public School yard. The proposed building shadows a small portion of the school yard in the late afternoon on September and December 21. However the shadow moves quickly across the school and clears within a couple hours.

The Sun Access Factor has been calculated for both the proposed park @ the Lawn Bowling Site south of Park Street (figure 1) and for the proposed POPs space located between the buildings. (figure 2) For the Lawn Bowling Park, the proposed development does not provide and new net shadowing on the park in either September or December. This proposed park space does not meet the SAF criteria prior to the addition of the 88 Park Street proposal.

Because of the desire to locate the bulk of the proposed POPs space adjacent to the future LRT station and across the street from the Lawn Bowling Park, this results in the POPs space being shadowed by the proposed buildings for the majority of the afternoon and results in the SAF criteria not being met. Retail nodes, patio and gathering spaces have been located on the east side of the site, adjacent to the Future LRT stations, where there is continuous sun exposure from sunrise until 1pm.

PARK @ LAWN BOWLING SITE		
PARK AREA (m2) 1550		
June 21	Area in Sunshine (As)	
7:07 AM	0	
7:20 AM	269.7	
8:20 AM	1359.3	
9:20 AM	1550.00	
10:20 AM	1550.00	
11:20 AM	1500.00	
12:20 PM	1444.7	
1:20 PM	1283.30	
2:20 PM	794.10	
3:20 PM	433.70	
4:20 PM	124.60	
5:20 PM	0.00	
6:20 PM	0.00	
7:20 PM	0.00	
7:33 PM	0.00	
Average	Area in Sunshine	SUN ACCESS FACTOR
	687.29	0.44
September 21		
	Area in Sunshine (As)	
8:35 AM	372.60	
9:12 AM	132.10	
10:12 AM	1413.20	
11:12 AM	1446.50	
12:12 PM	1322.80	
1:12 PM	878.30	
2:12 PM	388.2	
3:12 PM	188.30	
4:12 PM	211.60	
5:12 PM	0.00	
5:48 PM	0.00	
Average	Area in Sunshine	SUN ACCESS FACTOR
	577.60	0.37
December 21		
	Area in Sunshine (As)	
9:19 AM	402.80	
10:17 AM	1115.7	
11:17 AM	808.3	
12:17 PM	436.90	
1:17 PM	249.00	
2:17 PM	96.90	
3:15 PM	101.1	
Average	Area in Sunshine	SUN ACCESS FACTOR
	458.67	0.30

FIGURE 1

PROPOSED POPs SPACE		
POPs AREA (m2) 1935		
June 21	Area in Sunshine (As)	
7:07 AM	1324.5	
7:20 AM	1314.3	
8:20 AM	1284	
9:20 AM	1137.60	
10:20 AM	973.90	
11:20 AM	887.90	
12:20 PM	614.7	
1:20 PM	228.00	
2:20 PM	547.70	
3:20 PM	642.80	
4:20 PM	557.50	
5:20 PM	170.60	
6:20 PM	23.80	
7:20 PM	8.70	
7:33 PM	5.80	
Average	Area in Sunshine	SUN ACCESS FACTOR
	648.12	0.33
September 21		
	Area in Sunshine (As)	
8:35 AM	648.60	
9:12 AM	635.30	
10:12 AM	540.80	
11:12 AM	291.10	
12:12 PM	152.90	
1:12 PM	242.40	
2:12 PM	28.5	
3:12 PM	0.00	
4:12 PM	276.20	
5:12 PM	279.90	
5:48 PM	80.10	
Average	Area in Sunshine	SUN ACCESS FACTOR
	288.71	0.15
December 21		
	Area in Sunshine (As)	
9:19 AM	25.70	
10:17 AM	98.1	
11:17 AM	0.0	
12:17 PM	0.00	
1:17 PM	44.50	
2:17 PM	30.20	
3:15 PM	0	
Average	Area in Sunshine	SUN ACCESS FACTOR
	28.36	0.01

FIGURE 2

3.3 Public Realm

Shadows from the proposed development shadow onto parts of Hurontario Street on September 21 between 12:12 and 2:12pm.

Shadows from the proposed development allow for a minimum of 4 hours of sunlight on Ann Street. No shadow from the proposal is cast on Ann Street including the full width of the sidewalk on September 21 from 10:12am onwards.

Sincerely,

A handwritten signature in black ink, appearing to read 'Deni Poletti', with a long, sweeping flourish extending to the right.

Deni Poletti, B.ARCH., OAA
Principal