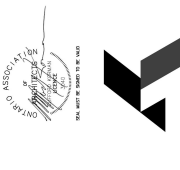


## Shadow Study

When the sun is in the sky, it casts shadows on the ground and buildings. The shadows cast by buildings and other structures can be used to determine the orientation and height of the sun. This information is useful for architects and engineers when designing buildings and structures. The sun's position in the sky is determined by its declination and the observer's latitude. The sun's declination is the angle between the sun's rays and the plane of the Earth's equator. The sun's declination varies throughout the year, reaching its maximum value of approximately 23.5 degrees in June and its minimum value of approximately -23.5 degrees in December. The sun's declination is zero on the equinoxes, which occur on approximately March 21 and September 21. The sun's declination is positive in the Northern Hemisphere and negative in the Southern Hemisphere. The sun's declination is a function of the Earth's axial tilt and its orbit around the Sun. The sun's declination is a key factor in determining the sun's position in the sky and the shadows it casts. The sun's declination is a key factor in determining the sun's position in the sky and the shadows it casts.



**KIRKOR ARCHITECTS AND PLANNERS**  
 20 De Lavey Dr. #400 Toronto ON M4J 1H1  
 Tel: 416 605 6000 kirkorarchitects.com

No. 1: Section  
 Date: \_\_\_\_\_  
 Title: NET NEW SHADOW

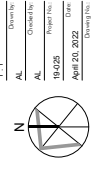
**GENERAL NOTES:**  
 SUNRISE: 6:28 am  
 SUNSET: 8:00 pm  
 TEST TIMES ARE TAKEN AT HOURLY INTERVALS FROM 15 MINUTES BEFORE SUNRISE AND ENDING 15 MINUTES AFTER SUNSET

Sheet No.	Section	Date
1	NET NEW SHADOW	2023.04.17
2	NET NEW SHADOW	2023.04.17
3	NET NEW SHADOW	2023.04.17
4	NET NEW SHADOW	2023.04.17
5	NET NEW SHADOW	2023.04.17
6	NET NEW SHADOW	2023.04.17
7	NET NEW SHADOW	2023.04.17
8	NET NEW SHADOW	2023.04.17
9	NET NEW SHADOW	2023.04.17
10	NET NEW SHADOW	2023.04.17

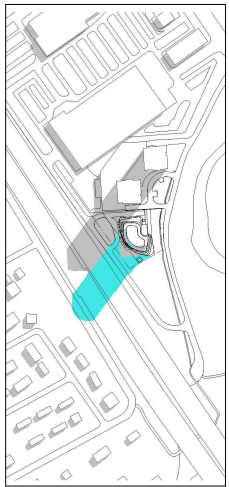
Client: MCM Development  
 Project: 627 Lyons Lane  
 Date: April 20, 2023

**Sun/Shadow Study - April**

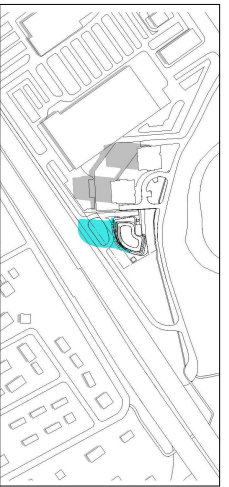
**627 Lyons Lane**  
 627 Lyons Lane, Cambridge, ON  
 1:1  
 Date: April 20, 2023



**dA5.10**



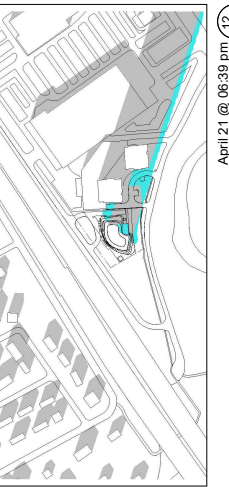
April 21 @ 09:56 am (03) NTS



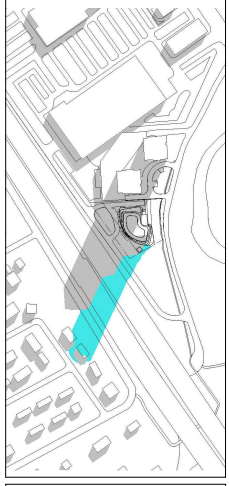
April 21 @ 12:56 pm (05) NTS



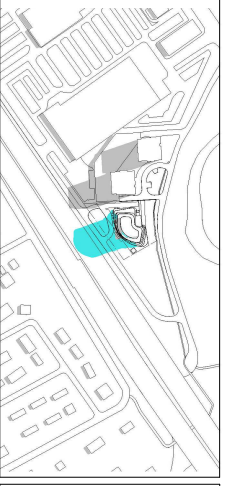
April 21 @ 03:56 pm (08) NTS



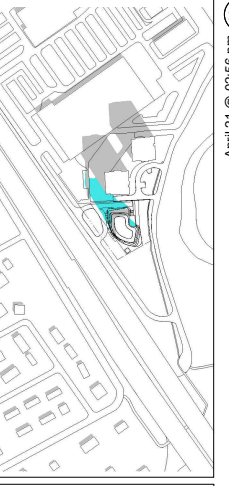
April 21 @ 06:39 pm (12) NTS



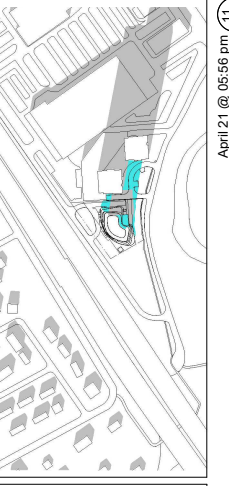
April 21 @ 08:56 am (07) NTS



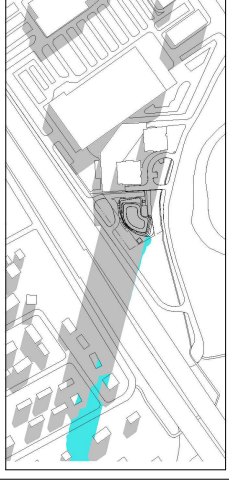
April 21 @ 11:56 am (06) NTS



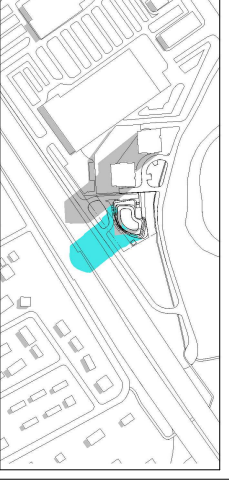
April 21 @ 02:56 pm (09) NTS



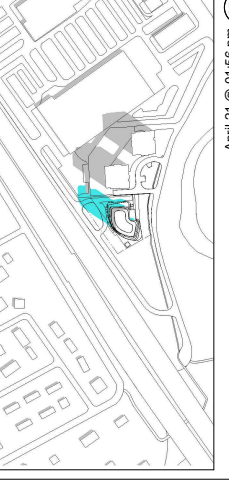
April 21 @ 05:56 pm (11) NTS



April 21 @ 07:56 am (01) NTS



April 21 @ 10:56 am (04) NTS

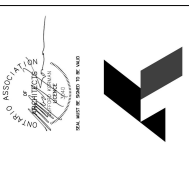


April 21 @ 01:56 pm (02) NTS



April 21 @ 04:56 pm (10) NTS

When the Architectural Board is notified of a proposed development, it will conduct a site visit to the site. The Architectural Board will conduct a site visit to the site to verify the information provided in the application. The Architectural Board will also conduct a site visit to the site to verify the information provided in the application. The Architectural Board will also conduct a site visit to the site to verify the information provided in the application.



**KIRKOR ARCHITECTS AND PLANNERS**  
 20 De Boven Dr. #400 Toronto ON M3J 1H1  
 Tel: 416 805 6000 kirkorarchitects.com

No. 1: Section  
 No. 2: Section  
 No. 3: Section

**NET NEW SHADOW**

**GENERAL NOTES:**  
 SUNRISE: 5:38 am  
 SUNSET: 9:33 pm

TEST TIMES ARE TAKEN AT HOURLY INTERVALS FROM 15 MINUTES BEFORE SUNRISE AND ENDING 15 HOURS AFTER SUNSET.

No.	Description	Date
1	Initial Development	2015/05/20
2	Revised Development	2015/05/20
3	Revised Development	2015/05/20

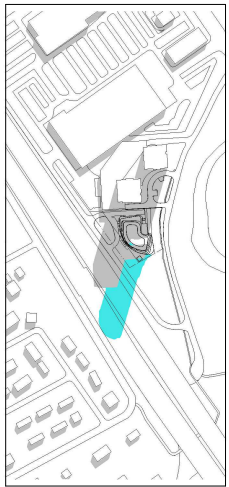
Drawing Title: Sun/Shadow Study - June

MEMO DEVELOPER  
**627 LYONS LAKE**  
 627 Lyons Lake, Cambridge, ON

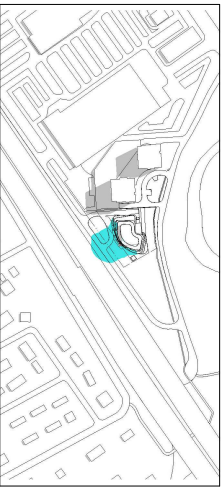
1:1  
 AL  
 AL  
 19/05/2015  
 19/05/2015



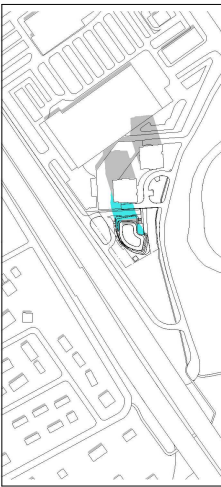
DATE: 19/05/2015  
 DRAWN BY: [Name]  
**dA5.2.1**



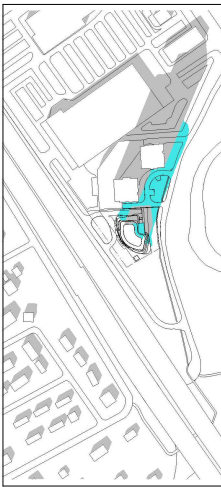
June 21 @ 9:08 am (03) NTS



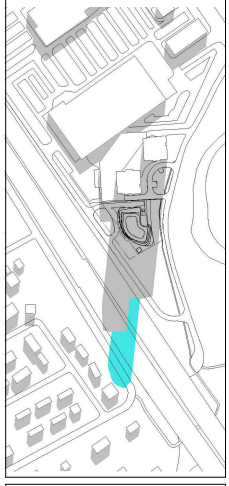
June 21 @ 12:08 pm (05) NTS



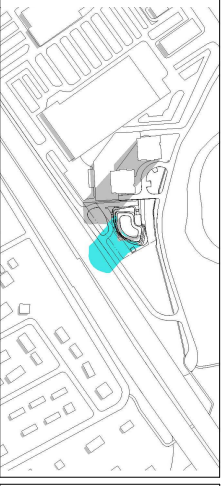
June 21 @ 03:08 pm (08) NTS



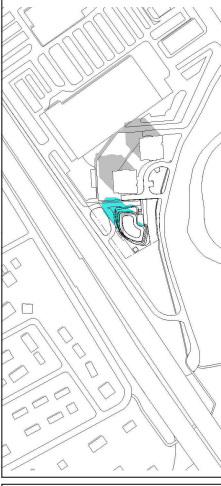
June 21 @ 06:08 pm (12) NTS



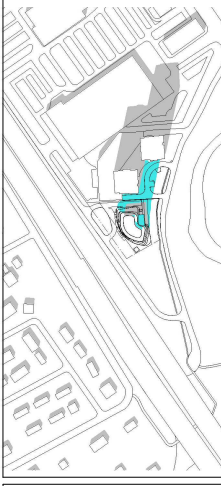
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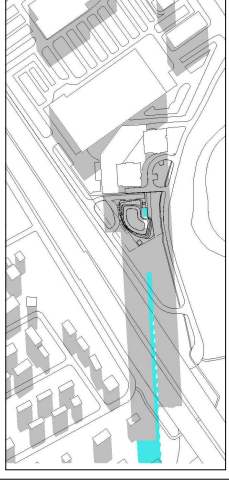
June 21 @ 11:08 am (09) NTS



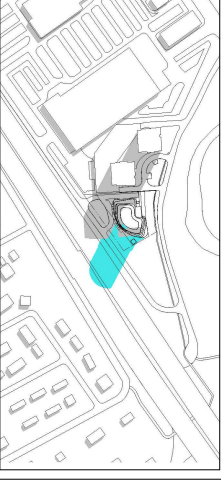
June 21 @ 02:08 pm (06) NTS



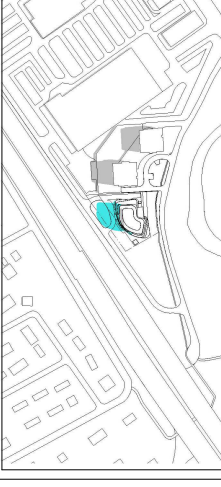
June 21 @ 05:08 pm (11) NTS



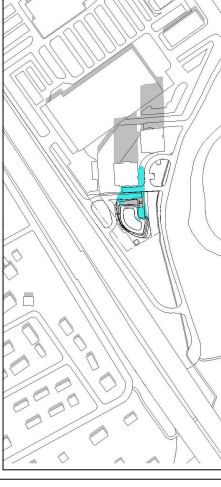
June 21 @ 07:08 am (01) NTS



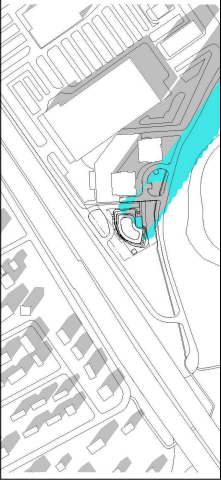
June 21 @ 10:08 am (04) NTS



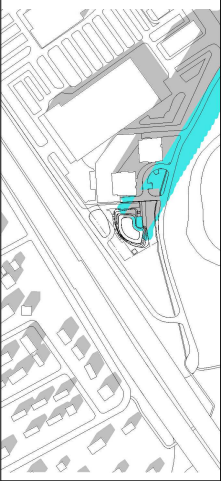
June 21 @ 01:08 pm (07) NTS



June 21 @ 04:08 pm (10) NTS



June 21 @ 07:33 pm **02**  
MS **04/21**



June 21 @ 07:08 pm **01**  
MS **04/21**

When the Architectural Association of Ontario is used, it is a condition of use that the user agrees to indemnify and hold harmless the Architectural Association of Ontario from and against all claims, damages, costs and expenses, including reasonable attorneys' fees, that may be asserted against or incurred by the Architectural Association of Ontario in connection with the use of the Association's logo, name or seal.



**KIRKOR ARCHITECTS AND PLANNERS**  
20 De Boven Dr. #403 Toronto ON M3J 1P1  
Tel: 416 885 6066 kirkorarchitects.com

No. \_\_\_\_\_ Revisions \_\_\_\_\_ Date \_\_\_\_\_

**NET NEW SHADOW**

**GENERAL NOTES:**  
SUNRISE: 5:38 am  
SUNSET: 9:03 pm

TEST TIMES ARE TAKEN AT HOURLY INTERVALS OF 15 MINUTES AFTER SUNRISE AND ENDING 15 HOURS BEFORE SUNSET

Title	Drawn By	Date

Client: \_\_\_\_\_  
Drawing Title: \_\_\_\_\_  
**Sun/Shadow Study - June**

Project: \_\_\_\_\_  
MGM Development

**627 Lyons Lane**

627 Lyons Lane, Oakville, ON

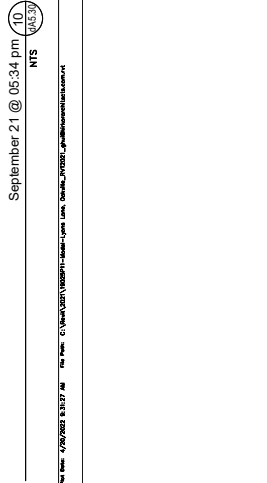
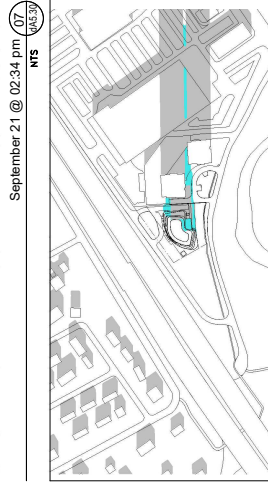
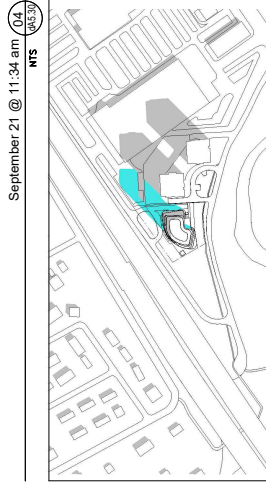
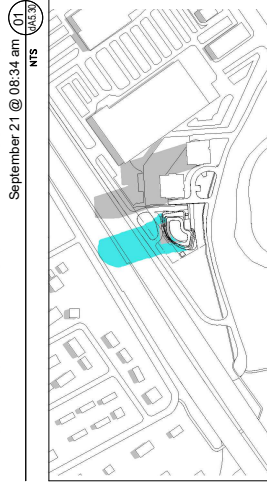
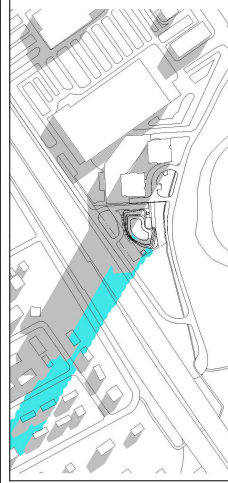
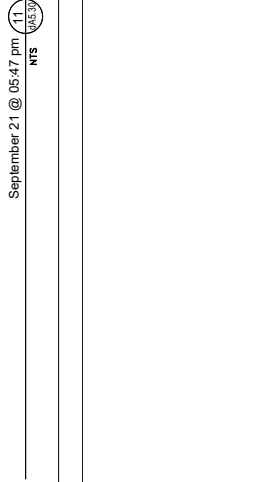
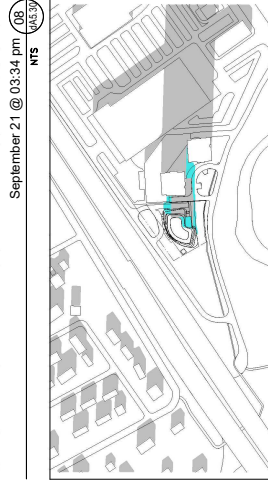
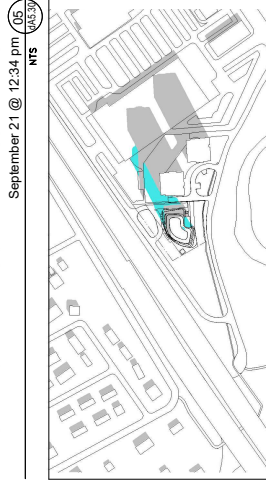
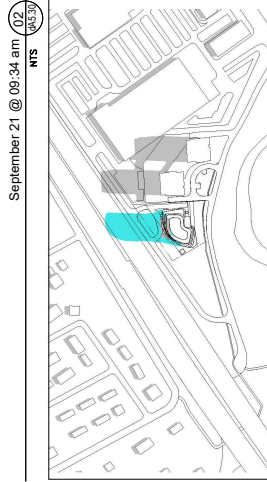
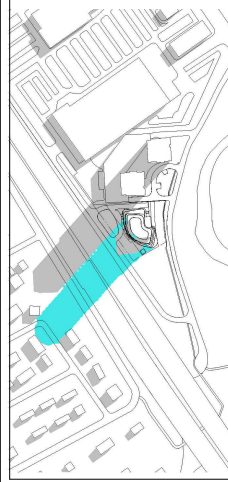
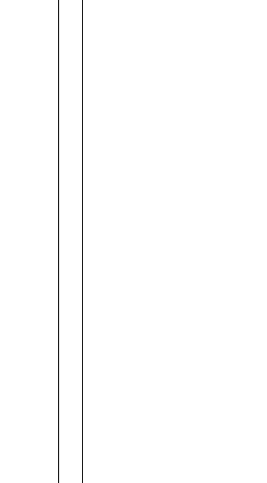
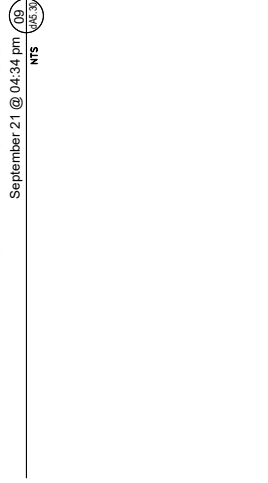
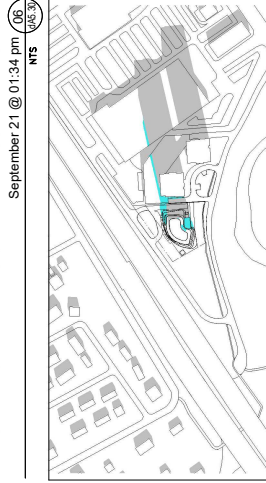
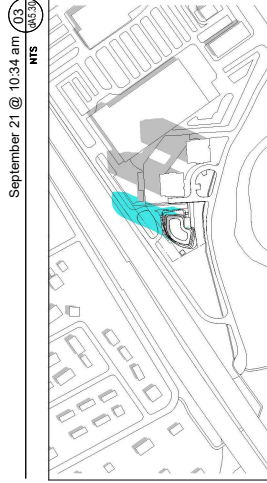
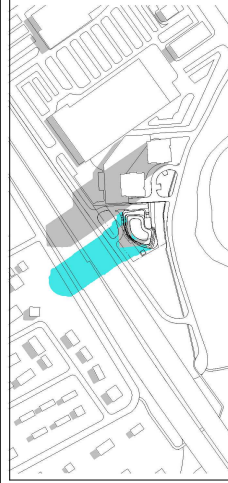
Scale: 1:1

Author: \_\_\_\_\_  
Designer: \_\_\_\_\_  
Checker: \_\_\_\_\_  
194708

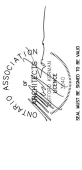
Project No.: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Client Name: \_\_\_\_\_



**dA5.22**



When the shadow is cast on the ground, the color of the shadow indicates the direction of the sun. The shadow is cast on the ground, the color of the shadow indicates the direction of the sun. The shadow is cast on the ground, the color of the shadow indicates the direction of the sun.



**MIRROR ARCHITECTS AND PLANNERS**  
20 De Lorge Dr. #400 Toronto ON M4J 1H1  
Tel: 416 885 8000 info@mirrorarchitects.com

No.	Revision	Date
1	NET NEW SHADOW	

**GENERAL NOTES:**  
SUNRISE: 7:04 am  
SUNSET: 7:17 pm  
TEST TIMES ARE TAKEN AT HOURLY INTERVALS FROM 15 MINUTES BEFORE SUNRISE AND 15 MINUTES AFTER SUNSET.

1	Project No.	1021153
2	Project Name	627 Lyons Lane
3	Client	MGM Development
4	Scale	1:1
5	Date	August 20, 2025

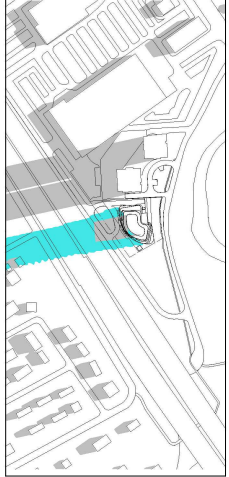
SunShadow Study -  
September



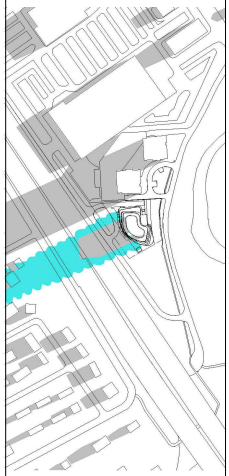
627 Lyons Lane  
627 Lyons Lane, Oakville, ON

Client: MGM Development  
Project No.: 1021153  
Date: August 20, 2025

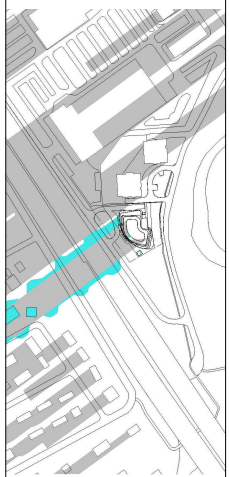
**dA5.30**



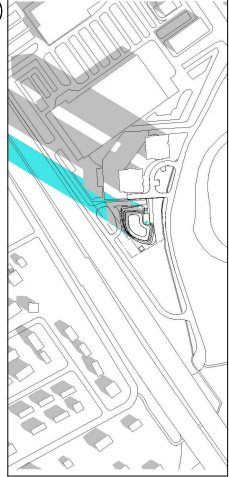
December 21 @ 11:18 am  
NTS  
03/18/21



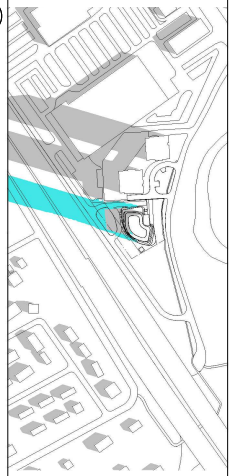
December 21 @ 10:18 am  
NTS  
02/18/21



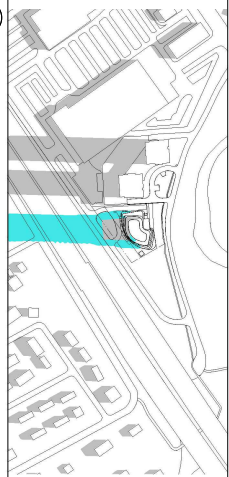
December 21 @ 09:18 am  
NTS  
01/18/21



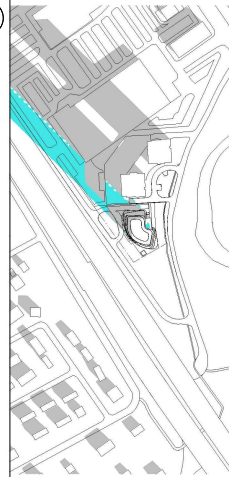
December 21 @ 02:18 pm  
NTS  
05/18/21



December 21 @ 01:18 pm  
NTS  
04/18/21



December 21 @ 12:18 pm  
NTS  
04/18/21



December 21 @ 03:15 pm  
NTS  
07/18/21

**SUMMARY:**  
SHADOW IMPACTS FROM THE PROPOSED DEVELOPMENT ON THE PROGRAMMED OUTDOOR AMENITY SPACE EXCEEDS THE SHADOW IMPACTS FROM THE EXISTING DEVELOPMENT ON THE PROGRAMMED OUTDOOR AMENITY SPACE (BEGINNING AT 3:38 PM UNTIL SUNSET) AND ON SEPTEMBER 21ST (BEGINNING AT 3:34 PM UNTIL SUNSET). PUBLIC SIDEWALKS AND PLAZAS RECEIVE AT LEAST 5 HOURS OF CONTINUOUS SUNLIGHT PER DAY ON APRIL 21, JUNE 21, AND SEPTEMBER 21.  
SHADOW IMPACTS FROM THE PROPOSED DEVELOPMENT ON BUILDING FACES AND ROOFS DOES NOT EXCEED THE SHADOW IMPACTS FROM THE EXISTING DEVELOPMENT ON BUILDING FACES AND ROOFS. SUNSHINE ENERGY CONSULTANTS CONDUCTED TEST TIMES ON DECEMBER 21ST, ALLOWING FOR THE POSSIBILITY OF USING SOLAR ENERGY BEFORE SUNSET.

**GENERAL NOTES:**  
SUNSET: 7:48 PM  
SUNRISE: 4:45 PM  
TEST TIMES ARE TAKEN AT HOURLY INTERVALS FROM 09:18 AM TO 03:15 PM. SUNSHINE ENERGY CONDUCTED TEST TIMES ON DECEMBER 21ST, ALLOWING FOR THE POSSIBILITY OF USING SOLAR ENERGY BEFORE SUNSET.

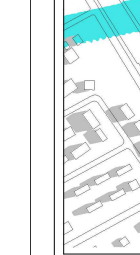
**NET NEW SHADOW**

No.	Description	Date
1	Initial Development	April 18, 2021
2	Proposed Development	April 18, 2021

No.	Description	Date
1	Initial Development	April 18, 2021
2	Proposed Development	April 18, 2021

No.	Description	Date
1	Initial Development	April 18, 2021
2	Proposed Development	April 18, 2021

**KIRKOR ARCHITECTS AND PLANNERS**  
20 De Looze Dr. #1400 Toronto ON M4J 1H1  
Tel: 416 865 6000 kirkorarchitects.com



627 Lyons Lane  
627 Lyons Lane, Oshawa, ON  
L1L 1L1  
AL  
194205  
April 20, 2025  
dA5.40

**SunShadow Study -**  
**December**

MEMO DEVELOPMENT

627 Lyons Lane  
627 Lyons Lane, Oshawa, ON  
L1L 1L1  
AL  
194205  
April 20, 2025  
dA5.40

4/20/2025 8:31:58 AM  
C:\Users\jason\OneDrive\Documents\Projects\627 Lyons Lane\627 Lyons Lane.dwg  
User: jason