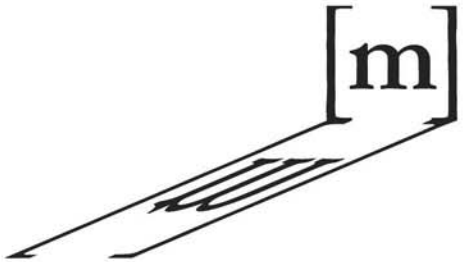
SOLAR IMPACT REPORT
100 Mount Street, North Sydney, NSW



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August 11th, 2011

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[PSN matter]

Project Information

Project:	100 Mount Street, North Sydney
Site Address:	86-96 and 100 Mount Street, North Sydney
Date:	August, 10th, 2011
File Ref:	4124/4151
Client:	Laing O'Rourke Pty Ltd
Statutory Address:	100 Arthur Street, North Sydney
Date:	10/08/2011
Co-ordinate system name:	Integrated Survey Grid (ISG)
Orientation:	True North
Level Datum	Australian Height Datum

Process Parameters

Geographic Co-ordinates:	Long (DMS) 151° 12' 26' Lat (DMS) -33° -50' 26'
Average Height above Sea Level	70 metres
Base year for solar analysis:	2006
Solar Parameters Source:	NOAA Surface Radiation Research Branch
Ooffset to UTC	UTC +10
Correction for Daylight Saving Time	No
Solar Verification Procedure:	Comparative inspection
Proposed Development Model Config	AutoCad three dimensional digital model
PD Model Source:	Skidmore Owings Merrill/Architectus
Existing Environment Model:	PSN Matter North Sydney Digital Model
Existing Model Data Source:	Leica Aerial Camera System linked to Ground Survey Ground Survey - SCIMS Based Control 2nd and 3rd Order Australian Navy 1st order GPS Verification Leica HDS Laser Scanning linked to ground control British Aerspace Socet Set Recitified Aerial Photo Overlay

Note: This analysis is based upon received drawings and/or digital information

Assessment Parameters

Assessment Dates:	Summer Solstice - December 21st Winter Solstice - June 21st Autumn Equinox - March 21st Spring Equinox - September 21st
Assessment Times:	9AM Eastern Standard Time 12pm Eastern Standard Time 3PM Eastern Standard Time

Base year for solar analysis:	2006
Correction for Daylight Saving Time	No
Offset to UTC	UTC + 10

Study Notes

Solar Parameters

Typical solar parameters have been used. Whilst different international agencies have fairly consistent agreement with sun prediction angles such as altitude and azimuth angles there is marginal variation. This variation in angles creates significantly different predicted shadow results especially at the winter solstice. Angles used in this study are typical of most agencies.

Basis of Study

The study is a comparative study between the previously approved development proposal under the Statement of Environmental Effects prepared by Urbis dated July 2009 using architectural design prepared by Rice Daubney Pty Ltd and the present proposal known as an S75W proposal using architectural design prepared by Skidmore Owings and Merrill (SOM)

Solar Impact Conclusion

Upon Residential Areas

Using the abovementioned solar parameters there is a minor amount of overshadowing predicted as the time approaches 3 pm at Winter Solstice. This overshadowing on the western walls of the western most buildings in in Whaling Street does not cause these residential buildings to receive less than three hours of sunlight at Winter Solstice.

No other residential buildings are affected by the proposed development

Comparative study of predicted solar impact upon residential buildings to the south east of the proposed development.

The solar analysis for the approved development showed that there would be minimal shadow increase at midwinter over the western walls of residential buildings in High Street (shown below) which will be shaded in midwinter for approximately an additional five minutes at 2:55pm. As part of this comparative analysis the impact study has been carried out to determine if there will be a further increas in shadow as a result of SOM design proposal.

The buildings presently affected consist of the property known as 26B High Street on the northern side of High Street and a residential apartment building on the south side of High Street known as 49-51 High Street.

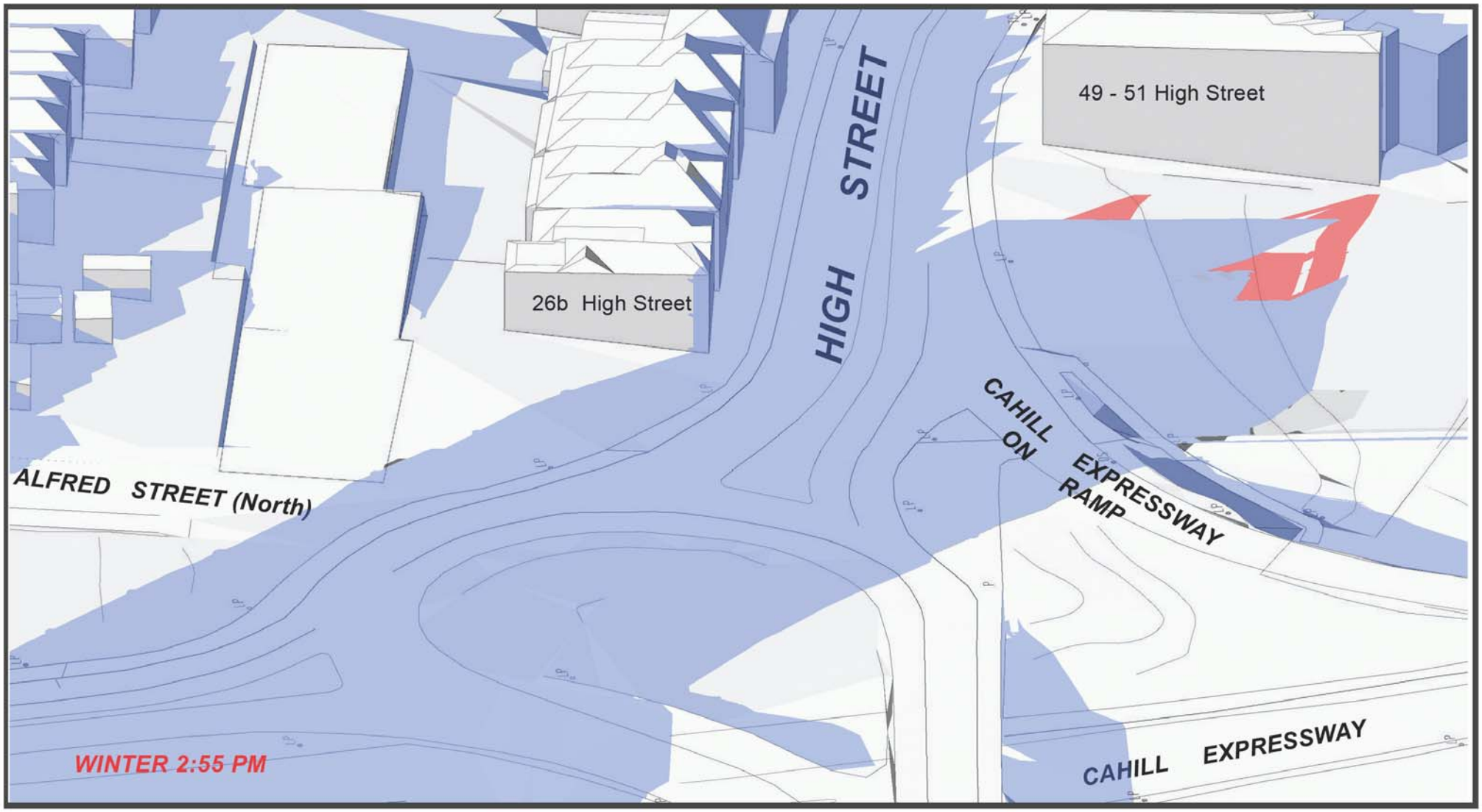
It was found (refer to following diagrams) that there was no additianl shadow of a measurable nature upon the buildings discussed. It is also noted that whilst there is an increase in shadow between 2:55 pm and 3:00 pm midwinter the extent of the shadow dissipates to zero impact within three weeks on either side of the midwinter epoch. Sunlight to both buildings during this time is already severely limited due to the existing large trees in front of both properties. Sunlight to 26b is limited by two very large ficus (probably macrophylla) and sunlight to 49-51 is impaired by several tlarge trees which although deciduous are substantial in nature.

Conclusion

Solar analysis for the proposed development at 100 Mount Street, North Sydney has been carried out as a comparative study between the already approved proposal submitted by Rice Daubney architects and the proposed 20110810 Section 75W application. Whilst the 75W building envelope is very similar to the approved scheme there are minor variations which will show correspondingly minor variations to the predicted shadow impact. The accompanying diagrams show that whilst the the proposed building envelope is slightly different these proposed changes show no measurable additional shadow to that proposed by the previous development..

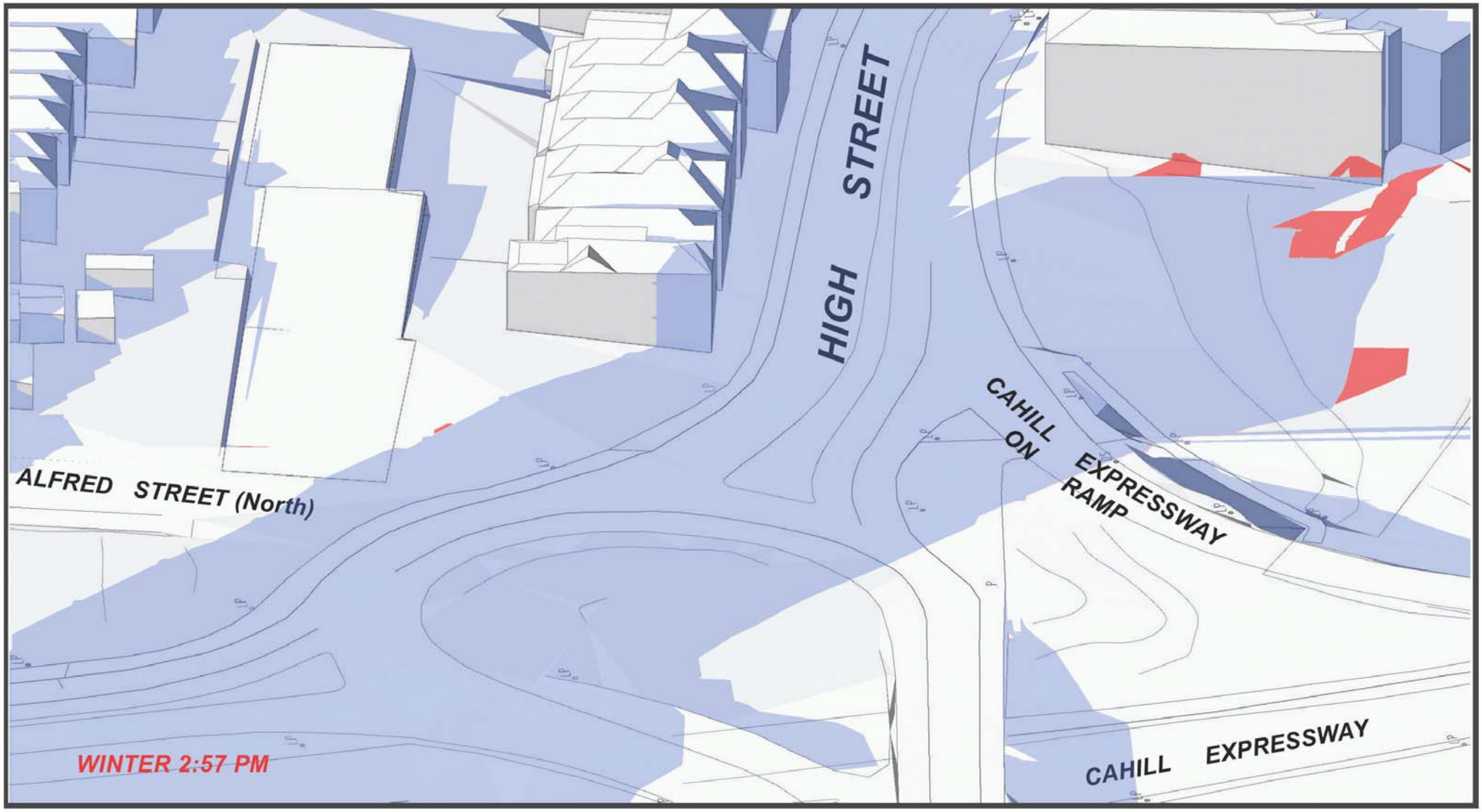
26B High Street

49-51 High Street showing western elevation



shadow from existing buildings and shadow from the approved 100 Mount St proposal

additional new shadow from the S75W proposal



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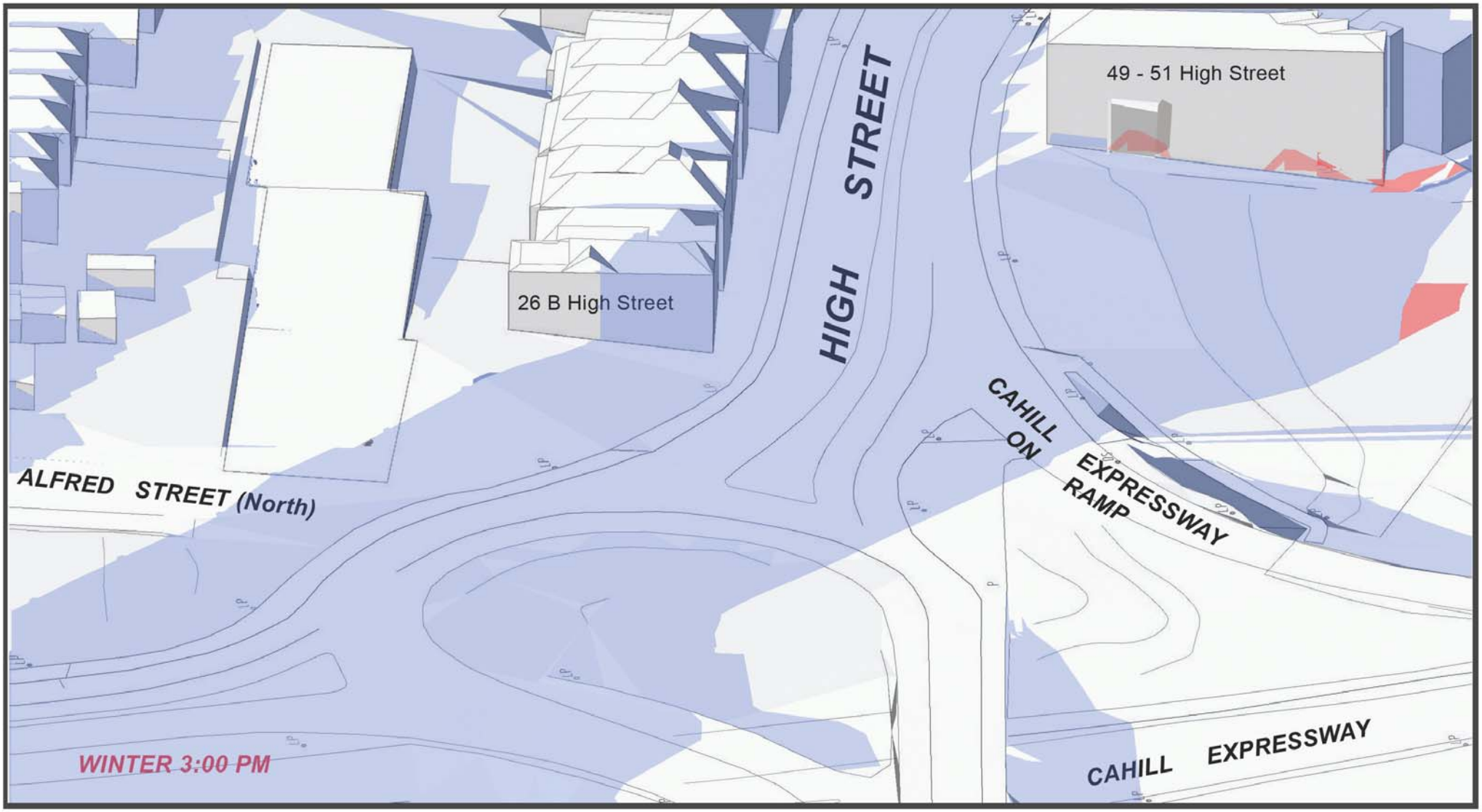

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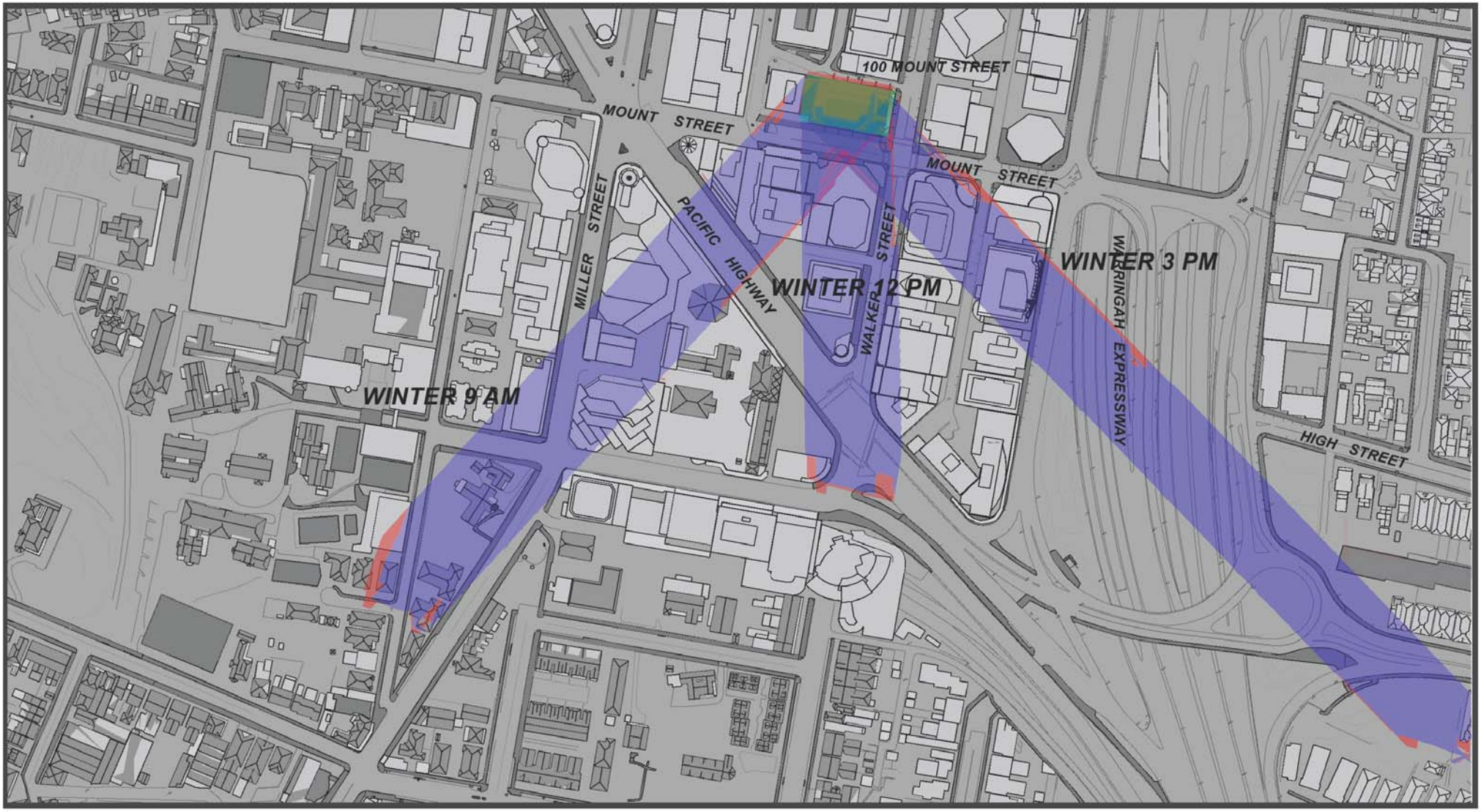
COMPARATIVE ANALYSIS - NEW SHADOW



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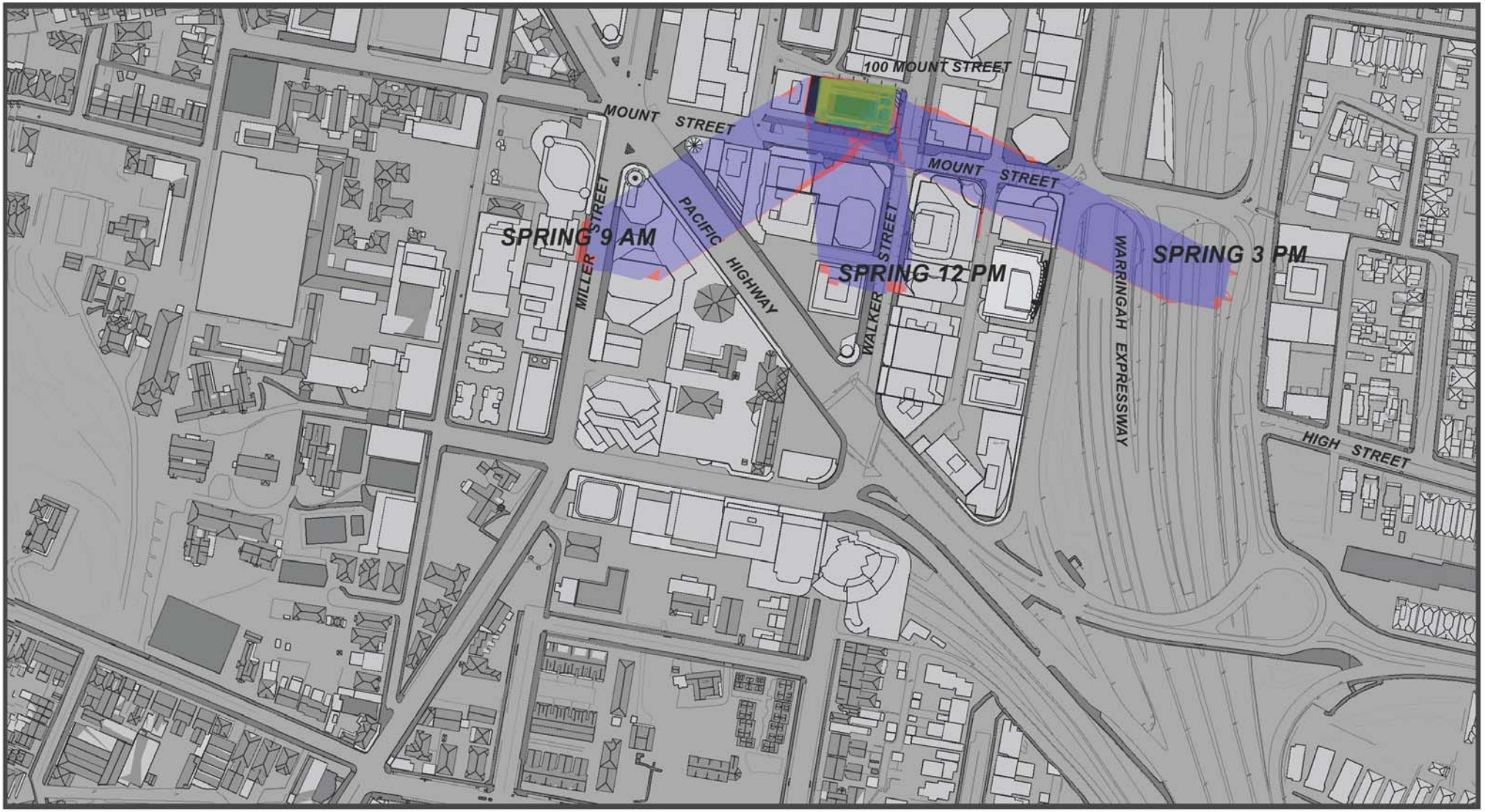

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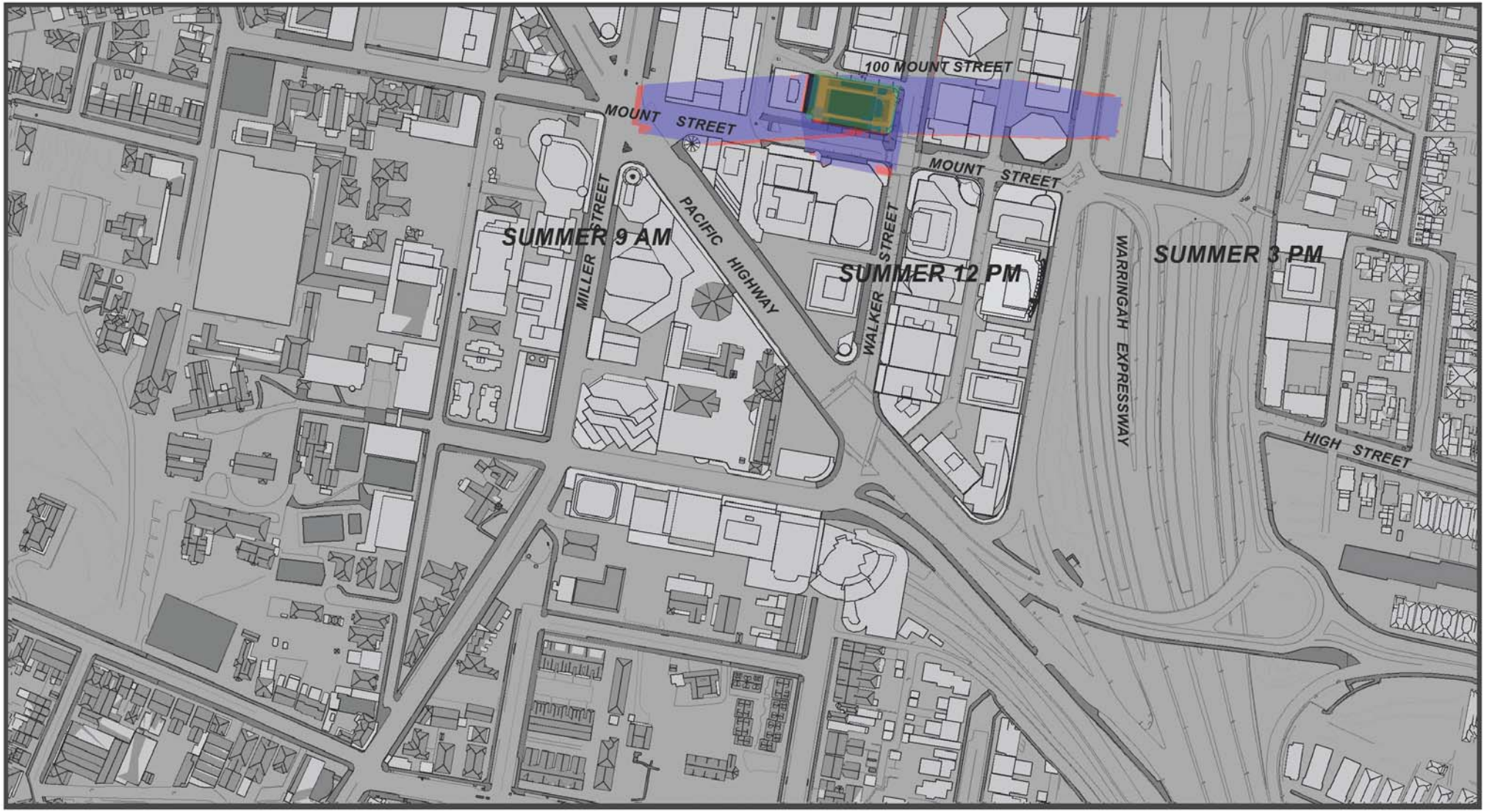
SPRING EQUINOX

COMPARATIVE ANALYSIS - NEW SHADOW



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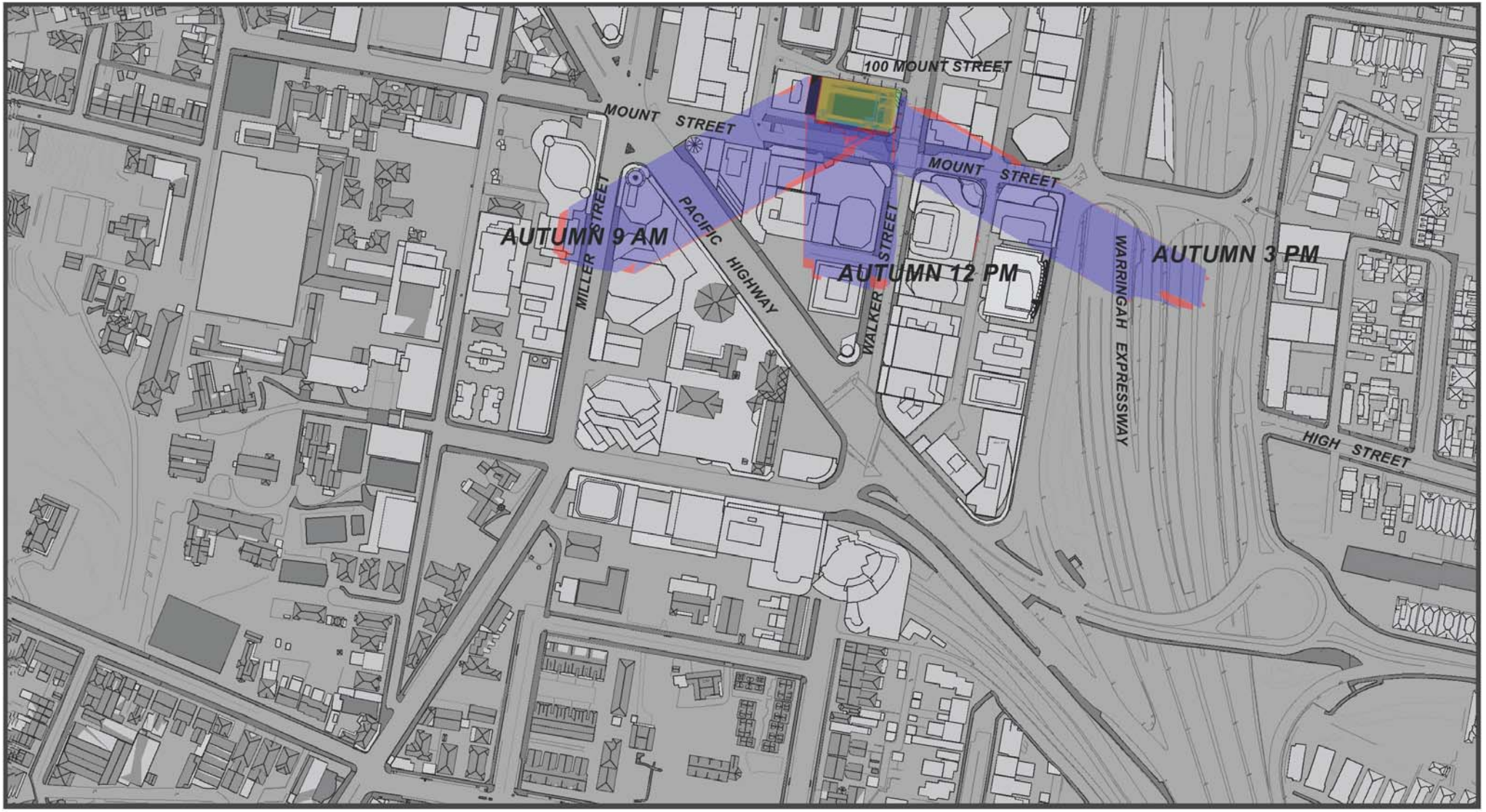
SUMMER SOLSTICE

COMPARATIVE ANALYSIS - NEW SHADOW



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AUTUMN EQUINOX