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2-20 Parramatta Road, Columbia Precinct

Solar Access Report

Report Number 610.10150-R3

30 June 2011

PD Mayoh Pty Ltd Architects
60 Strathallen Ave
Northbridge NSW 2063

Version: Revision 3

2-20 Parramatta Road, Columbia Precinct

Solar Access Report

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DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
610.10150-R3	Revision 3	30 June 2011	Peter Hayman	Neihad Al-Khalidy	Neihad Al-Khalidy
610.10150-R3	Revision 2	28 June 2011	Peter Hayman	Neihad Al-Khalidy	Neihad Al-Khalidy
610.10150-R3	Revision 1	23 June 2011	Peter Hayman	Neihad Al-Khalidy	Neihad Al-Khalidy
610.10150-R3	Revision 0	31 May 2011	Peter Hayman	Sophie Wong Kai In	Neihad Al-Khalidy

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EXECUTIVE SUMMARY

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by PD Mayoh Pty Ltd to prepare a daylighting study for the proposed development at 2-20 Parramatta Road (also known as the Columbia Precinct), Homebush.

The proposed development site is bounded by Parramatta Road to the north and the railway line on the east through to the south of the site. The area surrounding the development site comprises:

- The Bakehouse Quarter heritage precinct along George Street to the north of Parramatta Road.
- Proposed Part 3A Major Project Application for a 13 storey hotel/function development between the Bakehouse Quarter and the Parramatta road (north to the site)
- A group of 6-storey to 12-storey residential flat buildings to the immediate west of the development site and east across the Northern Rail Line.
- Low-rise residential flat premises through to the south and further west.

The Proposed Columbia Precinct development consists of a number of residential towers (some connected) on a series of typically 3-storey podiums. The concept design proposes a range of building heights, from the podiums to 21-storey residential buildings. There is an increase in building height from the north (facing Parramatta Road) towards the south. It is proposed to extend George Street towards the south so that it runs through the proposed development and to create public parks with pedestrian and bicycle links throughout the development site.

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

> *Living rooms and private open spaces for at least 70 % in a development should receive a minimum of three hours of direct sunlight between 9.00 am and 3.00 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable.*

Specific interest therefore lies in the solar access through the living areas windows and balconies of residential apartment of the proposed development during the winter solstice, June 21 between the hours of 9.00 am and 3.00 pm.

On the basis of the current Solar Access Analysis of the development, SLR has concluded the following:

- Between 9.00 am and 3.00 pm inclusive, on the Winter Solstice 21st June
    - % Apartments with 3 hrs of sunlight = **70.3%**
    - % Apartments with 2 hrs of sunlight = **83.1%**

- Compliance with SEPP 65 supported by the Residential Flat Design Code - Part 03 Building Design is achieved.

1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) has been engaged by PD Mayoh to assess the environmental impact of a proposed new development at 2-20 Parramatta Road, Columbia Precinct, Homebush with respect to the natural lighting of the residential apartments.

1.1 Site location

The proposed development site is bounded by Parramatta Road to the north and the railway line on the east through to the south of the site. The proposed development site is surrounded by low and medium rise residential and commercial buildings. The area surrounding the development site comprises:

- The Bakehouse Quarter heritage precinct along George Street to the north of Parramatta Road.
- Proposed Part 3A Major Project Application for a 13 storey hotel/function development between the Bakehouse Quarter and the Parramatta road (north to the site)
- A group of 6-storey to 12-storey residential flat buildings to the immediate west of the development site and east across the Northern Rail Line.
- Low-rise residential flat premises through to the south and further west.

Figure 1 Site Location

1.2 Proposed development description

The Proposed Columbia Precinct development consists of a number of residential towers (some connected) on a series of typically 3-storey podiums). The concept design proposes a range of building heights, from the podiums to 21-storey residential buildings. There is an increase in building height from the north (facing Parramatta Road) towards the south. It is proposed that there will be 600-700 residential dwellings on the site.

The following assessment is based on drawings (Dwg No. A.002, A.103 to A.108) provided by PD Mayoh, dated 20 May 2011. Whilst floor plan drawings A.103 to A1.08 are noted as "indicative design" they provide the best available information for this assessment at this concept plane stage. The indicative design drawings show 629 residential dwellings. Future project applications will provide solar access assessments based on complete floor plans and 3-D modelling inclusive of the units internal layout.

2 SOLAR ACCESS TO RESIDENTIAL BULIDINGS

2.1 Daylighting Considerations

In terms of the considerations relevant to the assessment of the daylight access of the proposed residential components of the development, the following regulations are relevant.

- State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, Rules of Thumb.

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

> *Living rooms and private open spaces for at least 70 % in a development should receive a minimum of three hours of direct sunlight between 9.00 am and 3.00 pm in mid winter. In dense urban areas a minimum of two hours may be acceptable.*

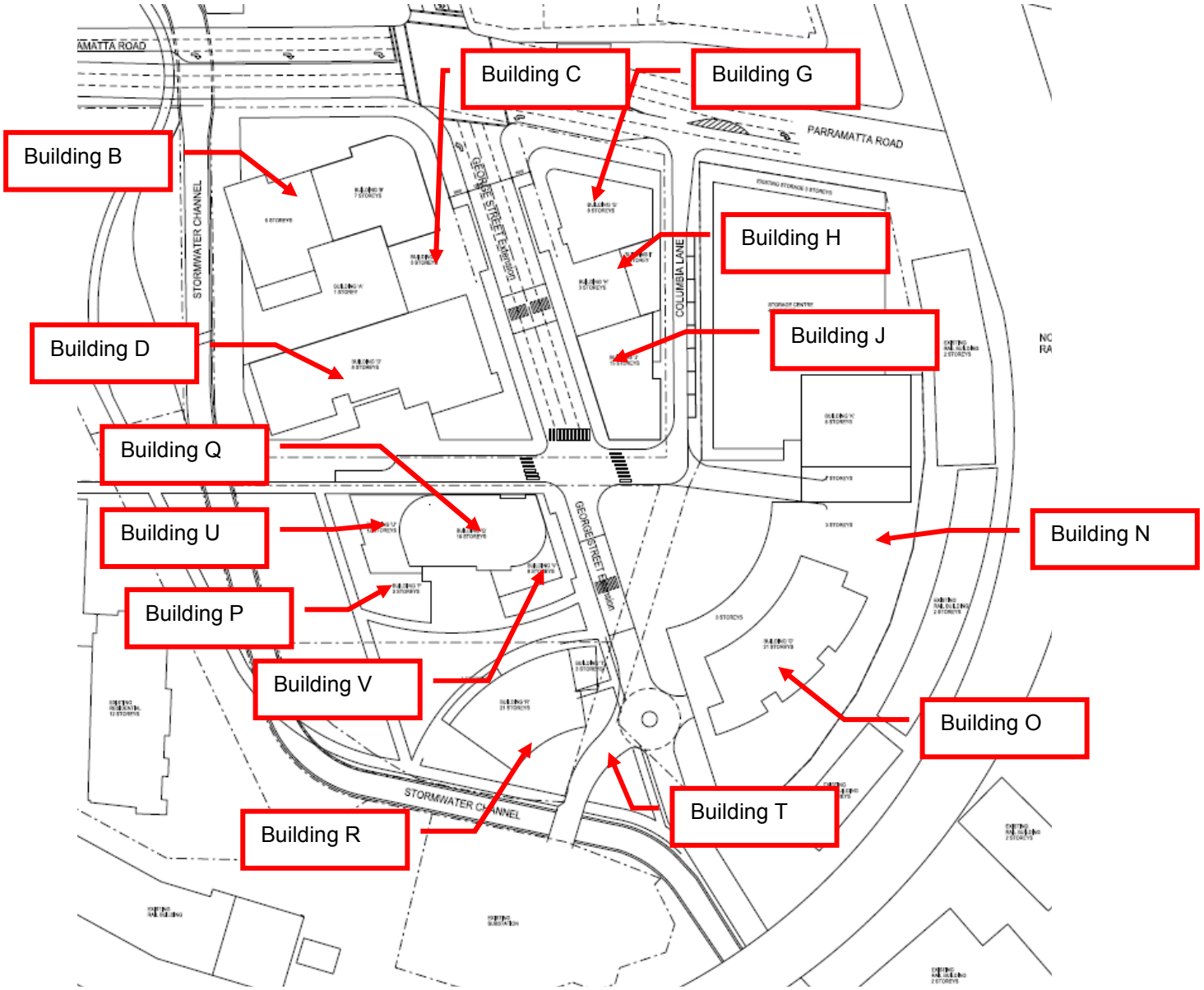
Specific interest therefore lies in the solar access through the living areas windows and balconies of the residential apartments of the proposed development during the winter solstice, 21 June, between the hours of 9.00 am and 3.00 pm.

Due to the location of the proposed development the two hour criteria will be used.

2.2 Solar Access Analysis

From the site plans provided (shown in **Figure 2**) an approximate 3D model was generated using the latest 3D AutoCAD drawings package. The assumed heights used were four metres for each commercial level and three metres for each residential level. Sun's eye view diagrams were generated for each 15 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21 June).

Figure 2 Site Plan



2.3 Summary of Daylighting Results

Table 1 provides a summary of the unit counts that comply with the minimum of 2 hours and 3 hours solar access on June 21, within the hours of 9.00 am to 3.00 pm for each residential building within the development.

Table 1 Solar Access Summary for each Residential Building within the Development between 9.00 am and 3.00 pm on June 21

Block	Level	Number of apartments	Number of Apts with 3 hours of direct sunlight	Number of Apts with 2 hours of direct sunlight	Percentage of Apts with 3 hours of direct sunlight	Percentage of Apts with 2 hours of direct sunlight
B	3	11	9	11	81.8%	100.0%
	4	11	9	11	81.8%	100.0%
	5	11	9	11	81.8%	100.0%
	6	6	6	6	100.0%	100.0%
C	1 & 2	38	29	34	76.3%	89.5%
D	3	12	9	11	75.0%	91.7%
	4	12	10	11	83.3%	91.7%
	5	12	10	11	83.3%	91.7%
	6	12	10	11	83.3%	91.7%
	7	12	10	11	83.3%	91.7%
G	3	4	3	4	75.0%	100.0%
	4	4	3	4	75.0%	100.0%
	5	4	3	4	75.0%	100.0%
	6	4	3	4	75.0%	100.0%
	7	4	3	4	75.0%	100.0%
H	1 & 2	20	4	16	20.0%	80.0%
J	3	4	3	4	75.0%	100.0%
	4	4	3	4	75.0%	100.0%
	5	4	3	4	75.0%	100.0%
	6	4	3	4	75.0%	100.0%
	7	4	3	4	75.0%	100.0%
	8	4	3	4	75.0%	100.0%
	9	4	3	4	75.0%	100.0%
	10	4	3	4	75.0%	100.0%
	11	4	3	4	75.0%	100.0%

Block	Level	Number of apartments	Number of Apts with 3 hours of direct sunlight	Number of Apts with 2 hours of direct sunlight	Percentage of Apts with 3 hours of direct sunlight	Percentage of Apts with 2 hours of direct sunlight
	12	4	3	4	75.0%	100.0%
	13	4	3	4	75.0%	100.0%
	14	4	3	4	75.0%	100.0%
L	1	5	5	5	100.0%	100.0%
	2	5	5	5	100.0%	100.0%
O	3	8	3	6	37.5%	75.0%
	4	8	5	6	62.5%	75.0%
	5	8	5	6	62.5%	75.0%
	6	8	6	7	75.0%	87.5%
	7	8	6	7	75.0%	87.5%
	8	8	6	7	75.0%	87.5%
	9	8	7	7	87.5%	87.5%
	10	8	7	7	87.5%	87.5%
	11	8	7	7	87.5%	87.5%
	12	8	7	7	87.5%	87.5%
	13	8	7	7	87.5%	87.5%
	14	8	7	7	87.5%	87.5%
	15	8	7	7	87.5%	87.5%
	16	8	7	7	87.5%	87.5%
	17	8	7	7	87.5%	87.5%
	18	8	7	7	87.5%	87.5%
	19	8	7	7	87.5%	87.5%
	20	8	7	7	87.5%	87.5%
T	1	6	2	2	33.3%	33.3%
	2	6	2	3	33.3%	50.0%
R	3	6	1	3	16.7%	50.0%
	4	6	1	3	16.7%	50.0%
	5	6	1	3	16.7%	50.0%
	6	6	2	3	33.3%	50.0%
	7	6	2	3	33.3%	50.0%
	8	6	3	3	50.0%	50.0%
	9	6	3	4	50.0%	66.7%
	10	6	4	4	66.7%	66.7%

Block	Level	Number of apartments	Number of Apts with 3 hours of direct sunlight	Number of Apts with 2 hours of direct sunlight	Percentage of Apts with 3 hours of direct sunlight	Percentage of Apts with 2 hours of direct sunlight
	11	6	4	4	66.7%	66.7%
	12	6	4	5	66.7%	83.3%
	13	6	5	5	83.3%	83.3%
	14	6	5	5	83.3%	83.3%
	15	6	5	5	83.3%	83.3%
	16	6	5	5	83.3%	83.3%
	17	6	5	5	83.3%	83.3%
	18	6	5	5	83.3%	83.3%
	19	6	5	5	83.3%	83.3%
	20	6	5	5	83.3%	83.3%
P	1	14	2	4	14.3%	28.6%
	2	14	2	4	14.3%	28.6%
Q	12	5	4	4	80.0%	80.0%
	13	5	4	4	80.0%	80.0%
	14	5	4	4	80.0%	80.0%
	15	5	4	4	80.0%	80.0%
U	8	8	7	8	87.5%	100.0%
	9	8	7	8	87.5%	100.0%
	10	8	7	8	87.5%	100.0%
	11	8	7	8	87.5%	100.0%
V	3	10	5	8	50.0%	80.0%
	4	10	6	8	60.0%	80.0%
	5	10	7	8	70.0%	80.0%
	6	10	8	9	80.0%	90.0%
	7	10	8	9	80.0%	90.0%
Total		**629**	**442**	**523**	**70.3%**	**83.1%**

3 CONCLUSION

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by PD Mayoh Pty Ltd to prepare a day lighting study for the proposed development on 2-20 Parramatta Rd and 11-13 Columbia Lane, Homebush. 3D AutoCAD software is utilised to produce the daylight access diagrams used for this study. The proposed development site is bounded by Parramatta Rd on the north side. The proposed development site is surrounded by low and medium rise residential and commercial buildings.

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

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On the basis of the current Solar Access Analysis of the development, SLR has concluded the following:

- Between 9.00 am and 3.00 pm inclusive, on the Winter Solstice 21st June
    - % Apartments with 3 hrs of sunlight = **70.3%**
    - % Apartments with 2 hrs of sunlight = **83.1%**

- Compliance with SEPP 65 supported by the Residential Flat Design Code - Part 03 Building Design is achieved.

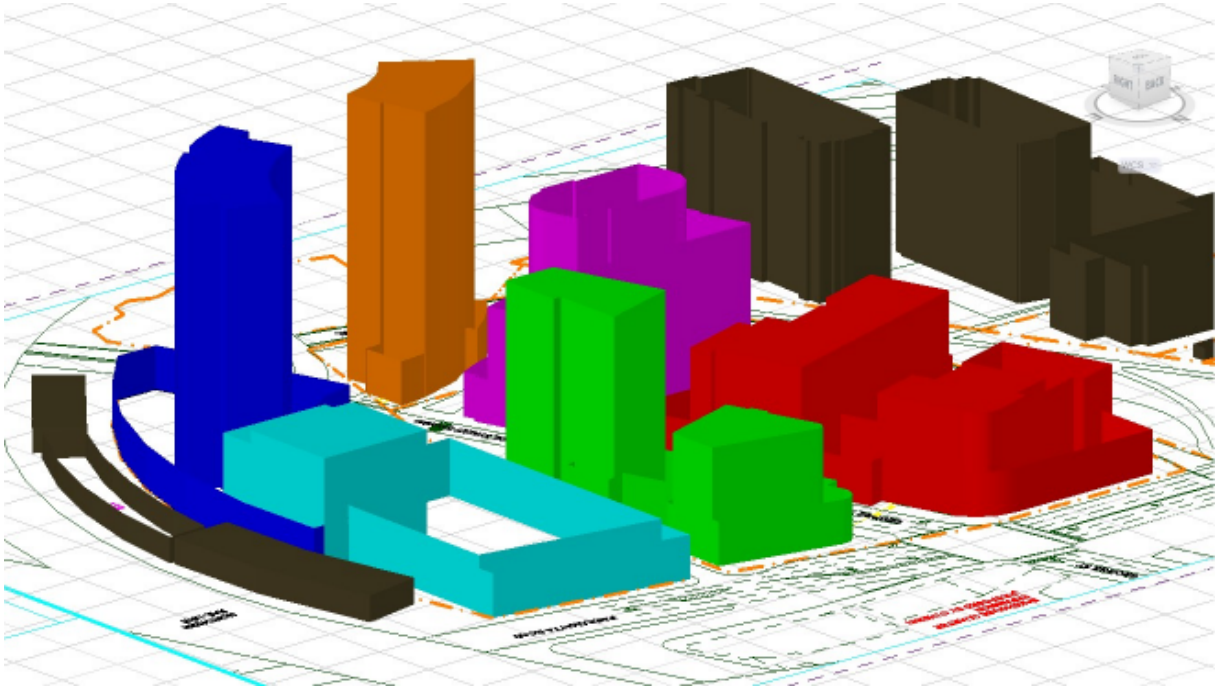
4 CLOSURE

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

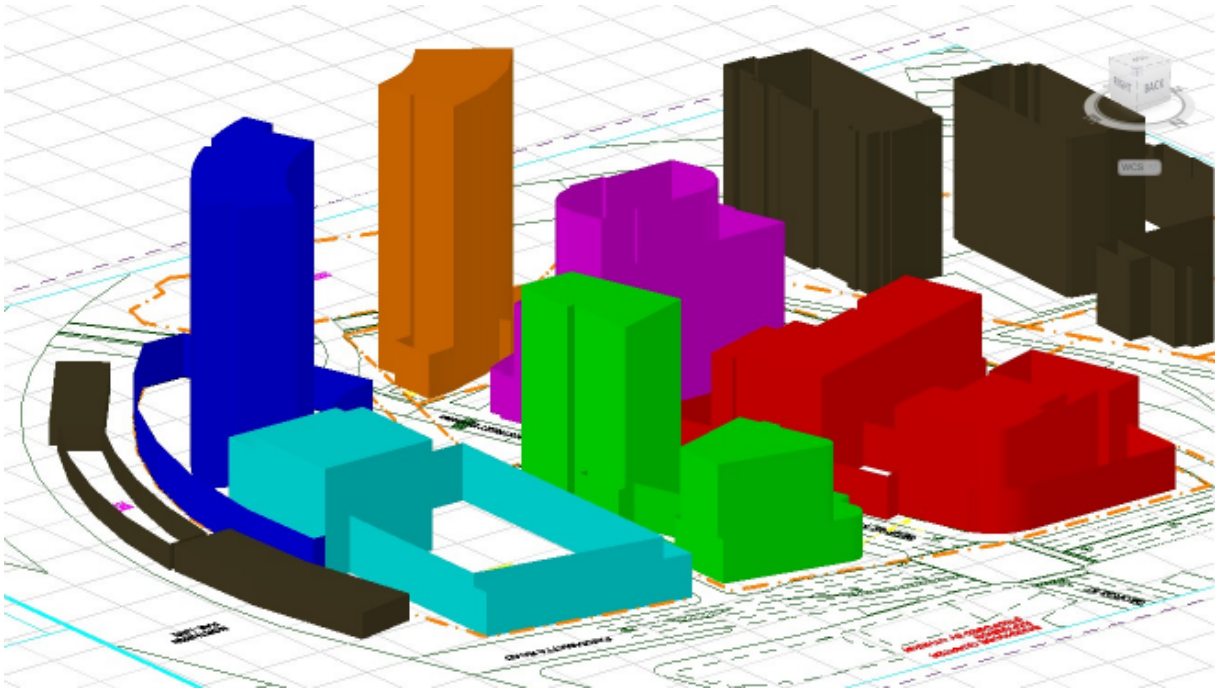
This report is for the exclusive use of PD Mayoh Pty Ltd Architects. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

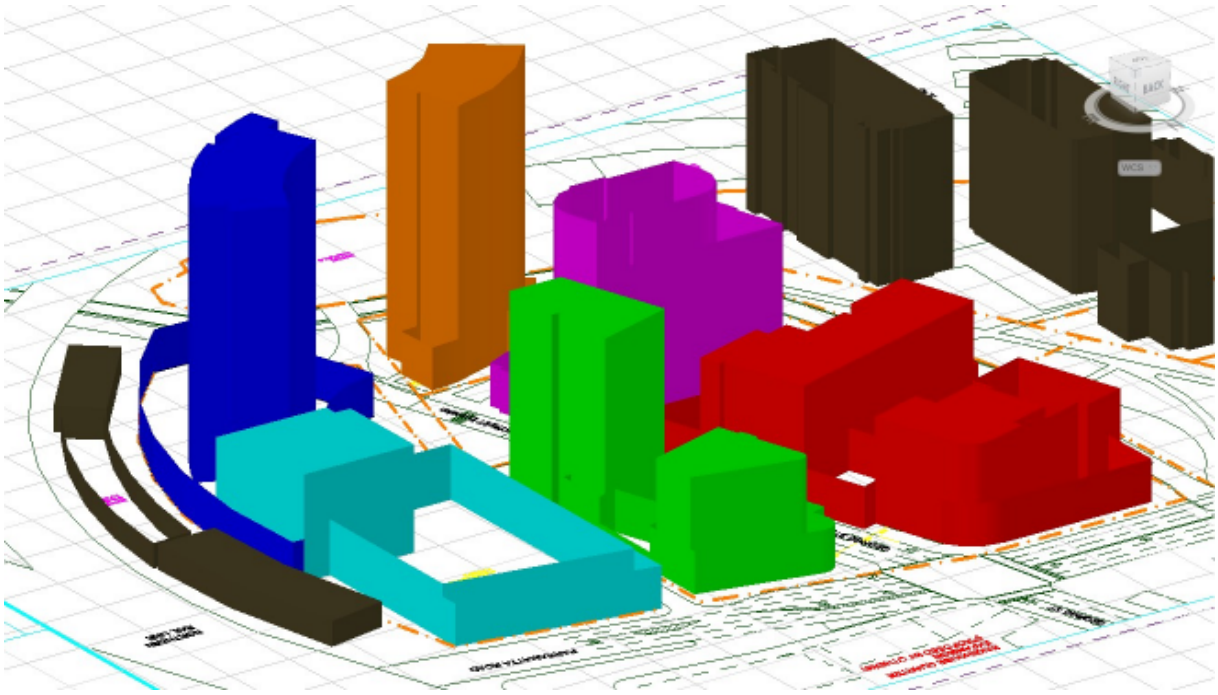
Sun Eye View - June 21st – 9.00 am



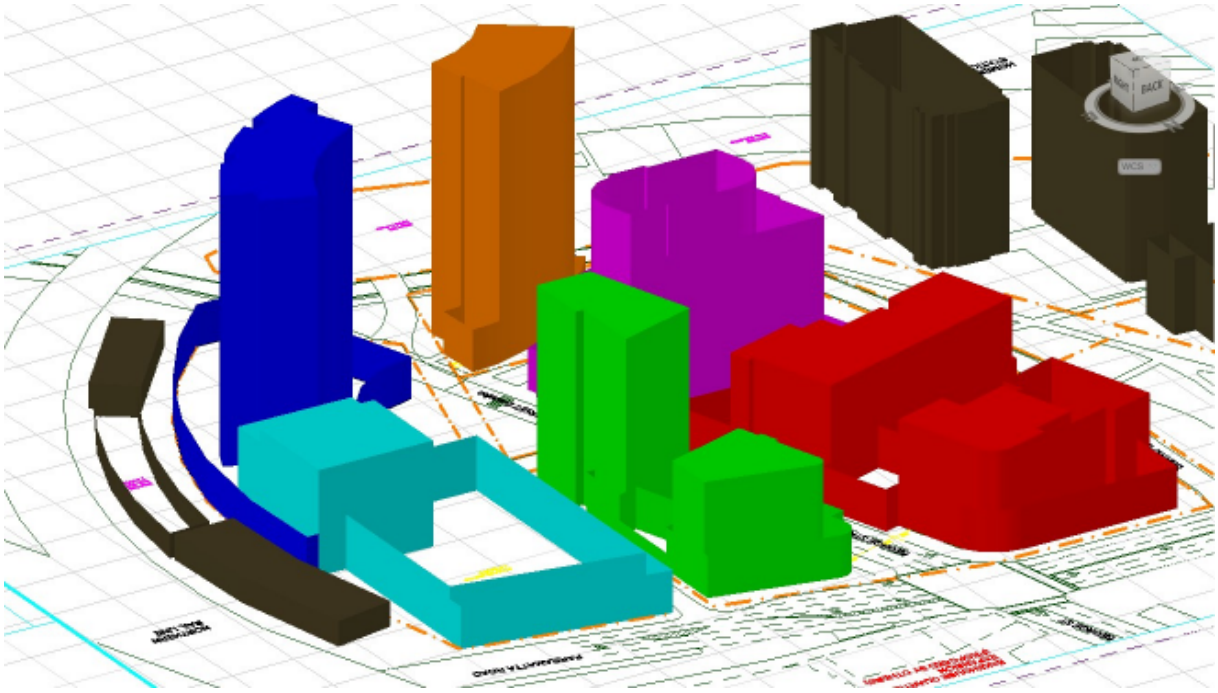
Sun Eye View - June 21st – 9.15 am



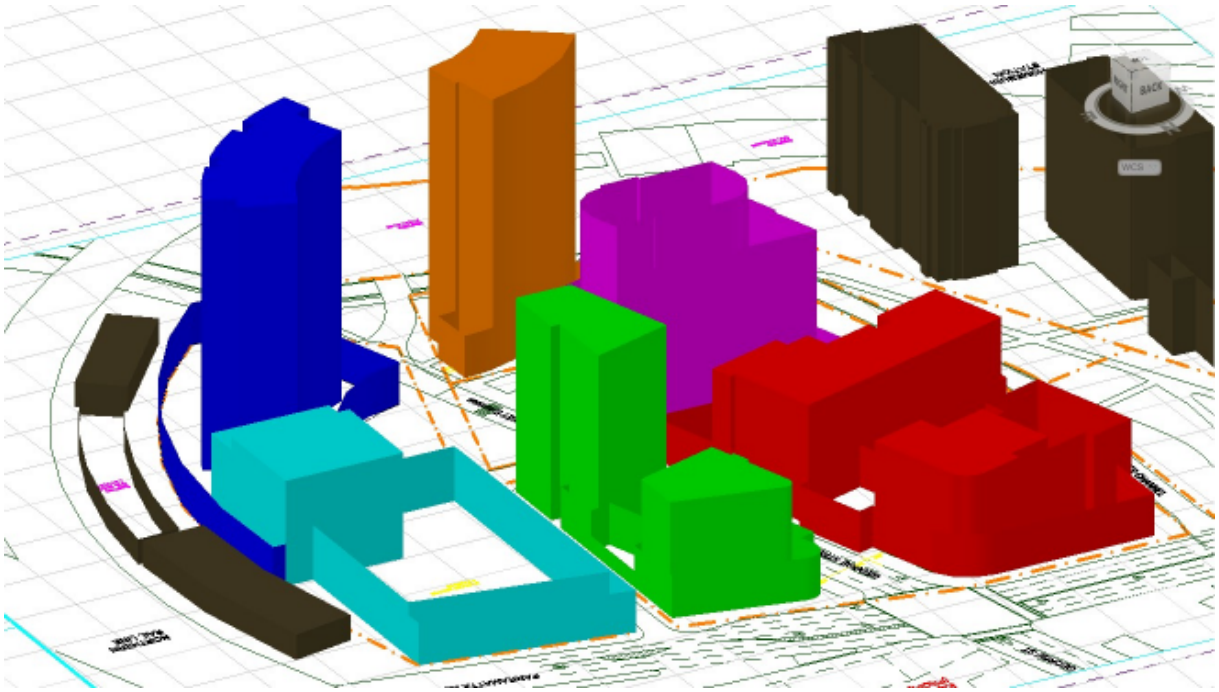
Sun Eye View - June 21st – 9.30 am



Sun Eye View - June 21st – 9.45 am



Sun Eye View - June 21st – 10.00 am



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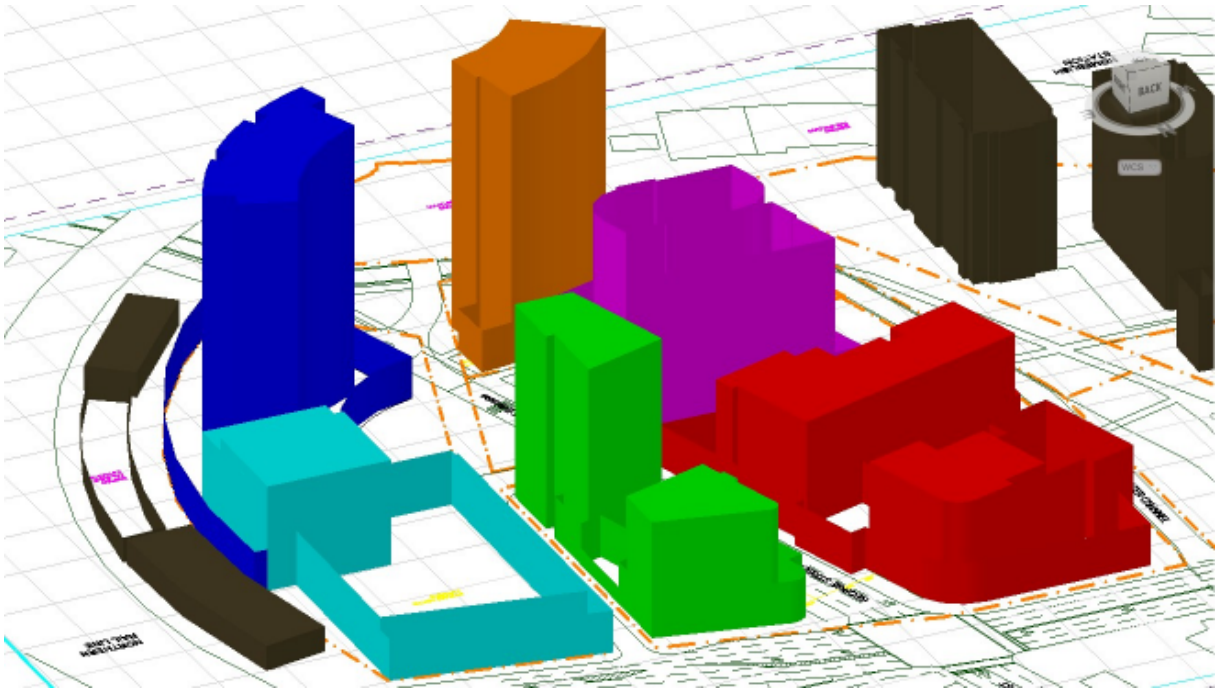

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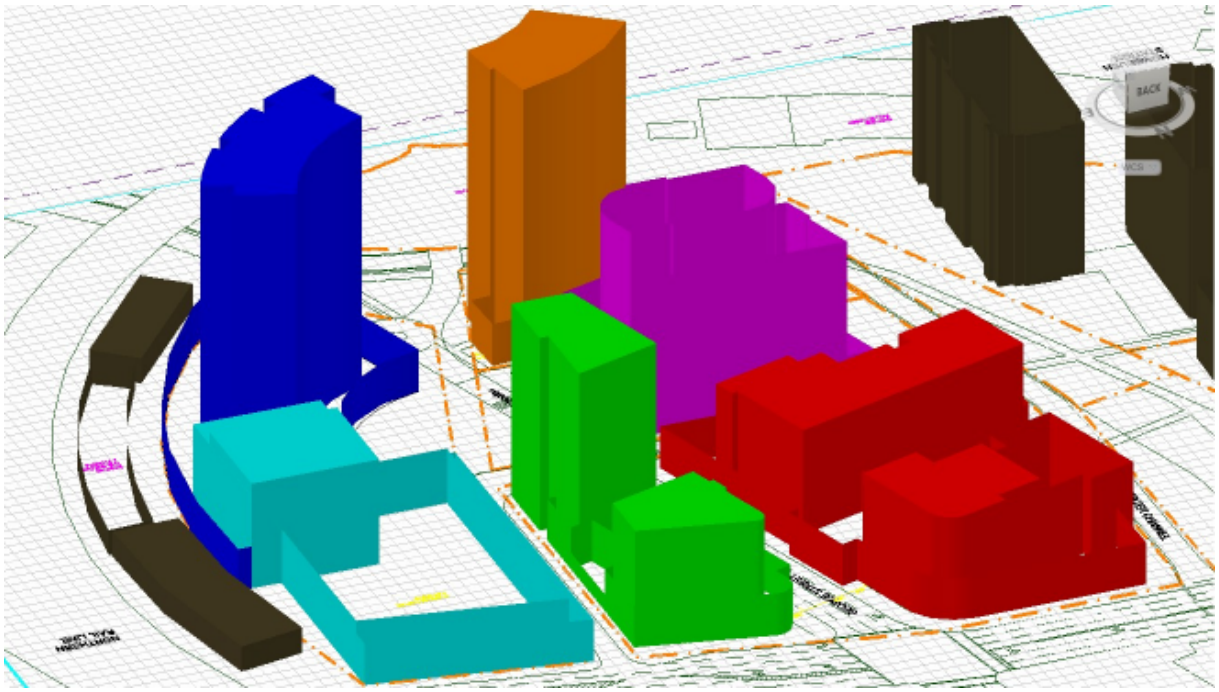
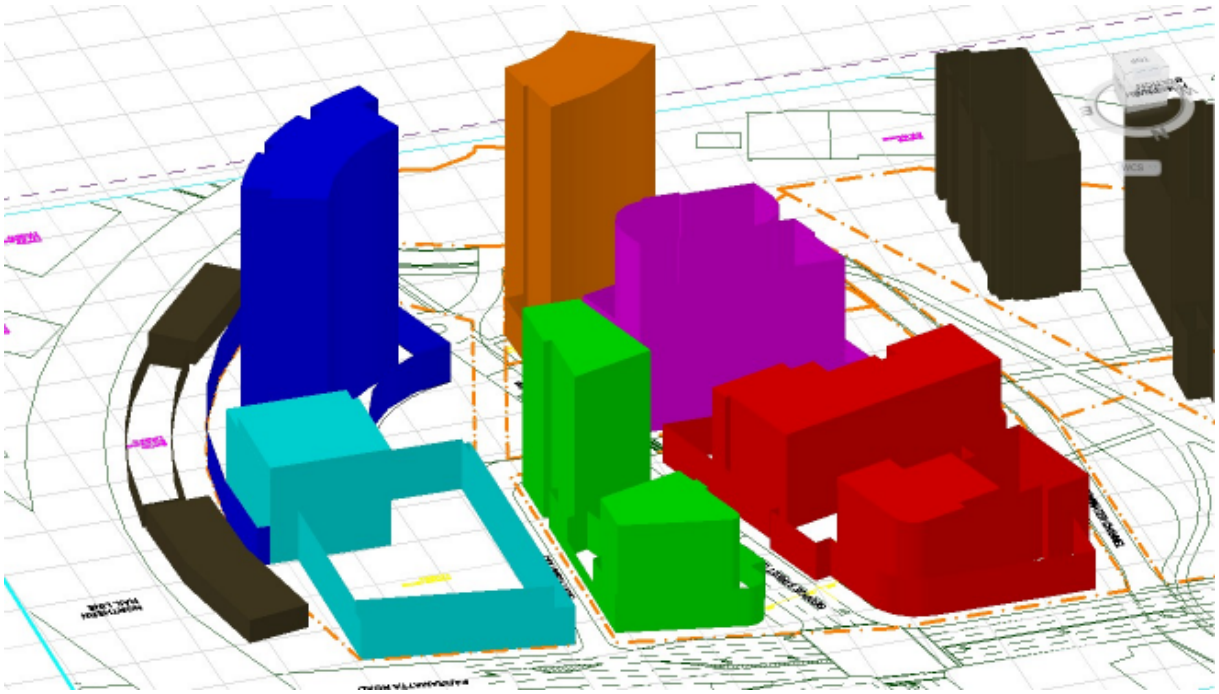
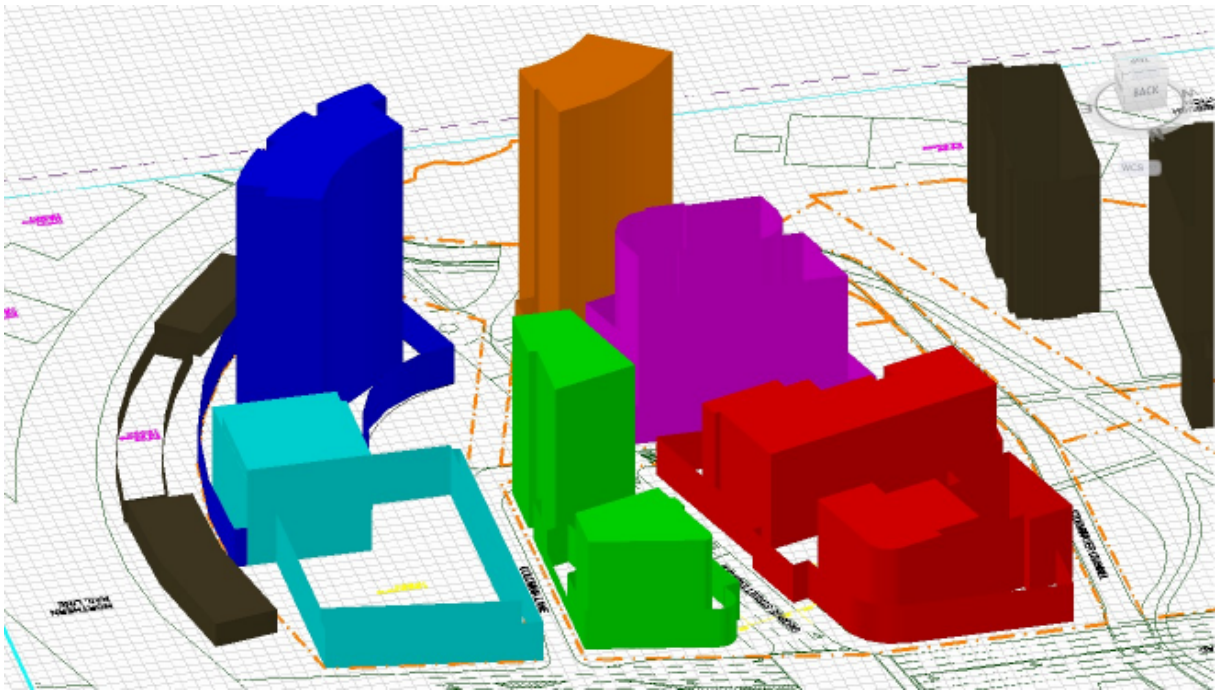


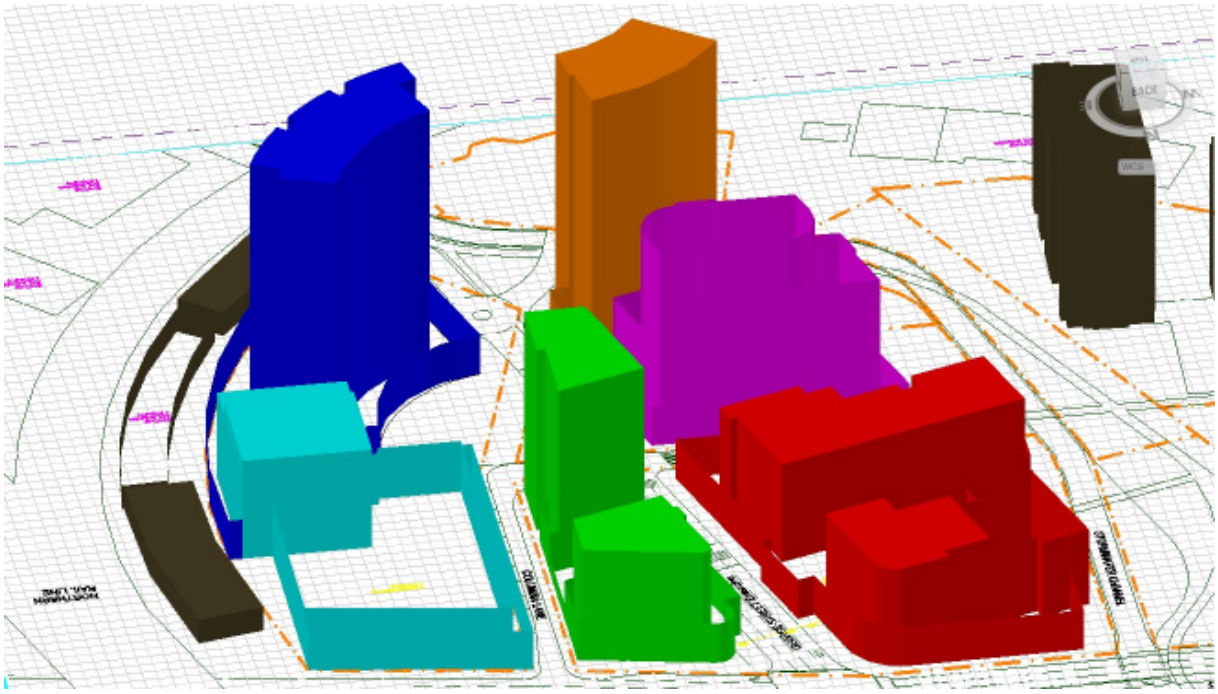
Sun Eye View - June 21st – 10.45 am



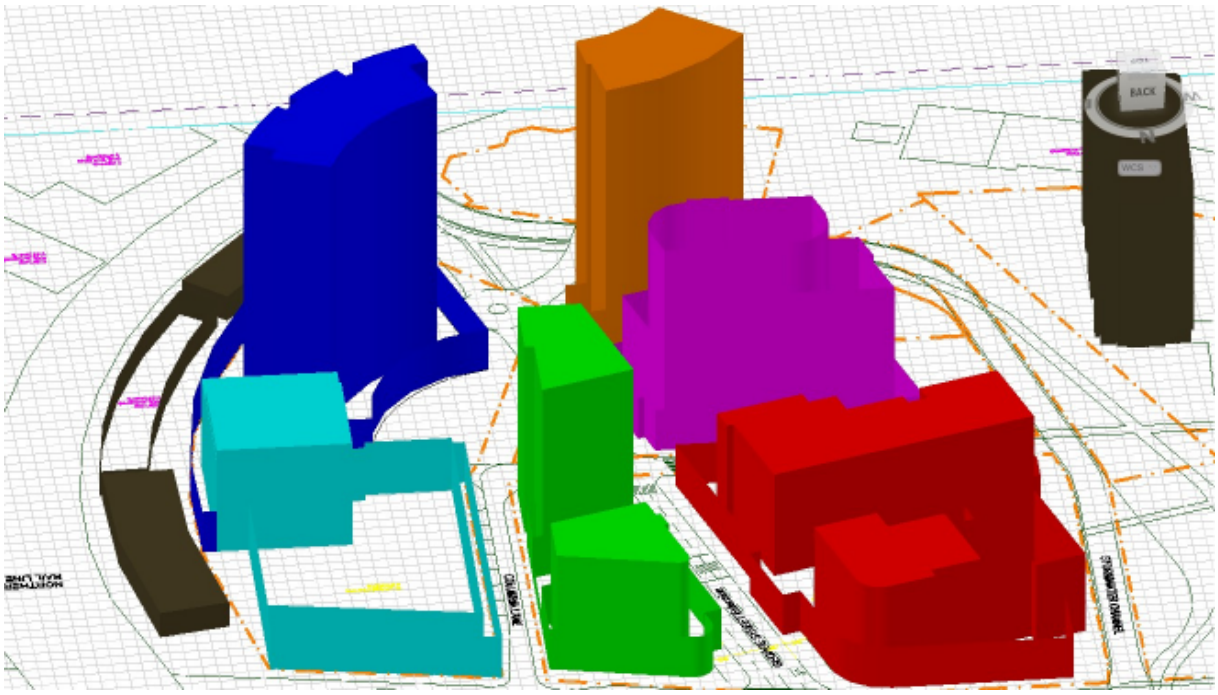
Sun Eye View - June 21st – 11.00 am



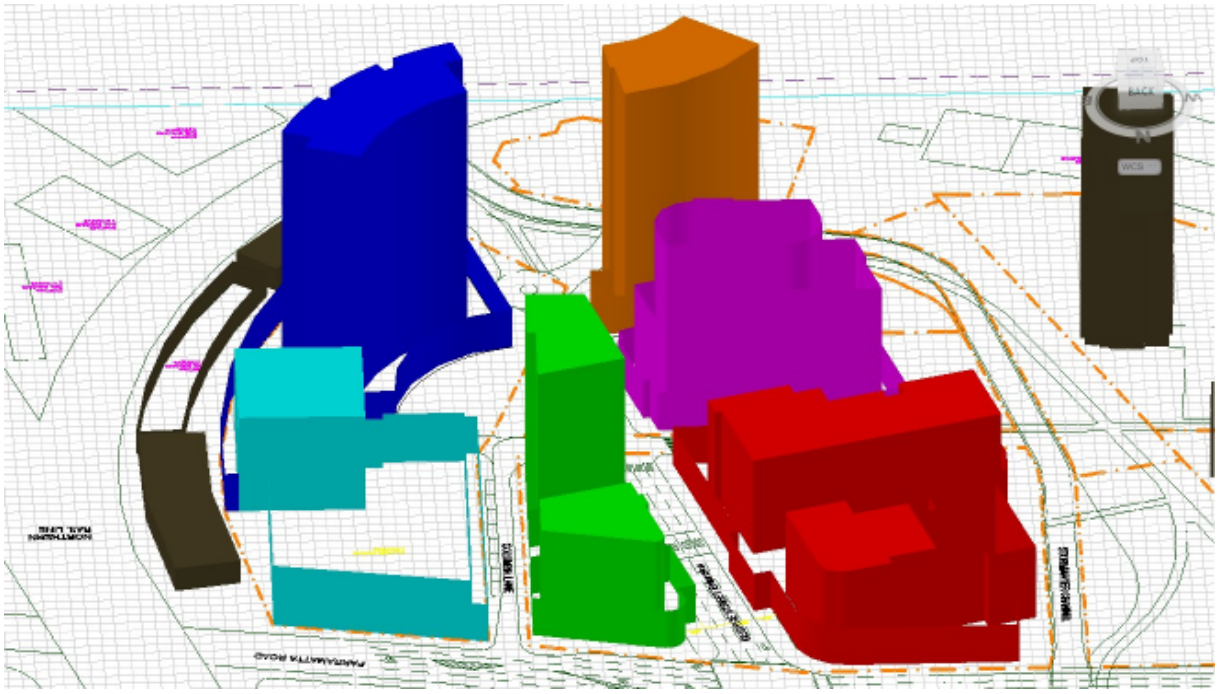
Sun Eye View - June 21st – 11.15 am



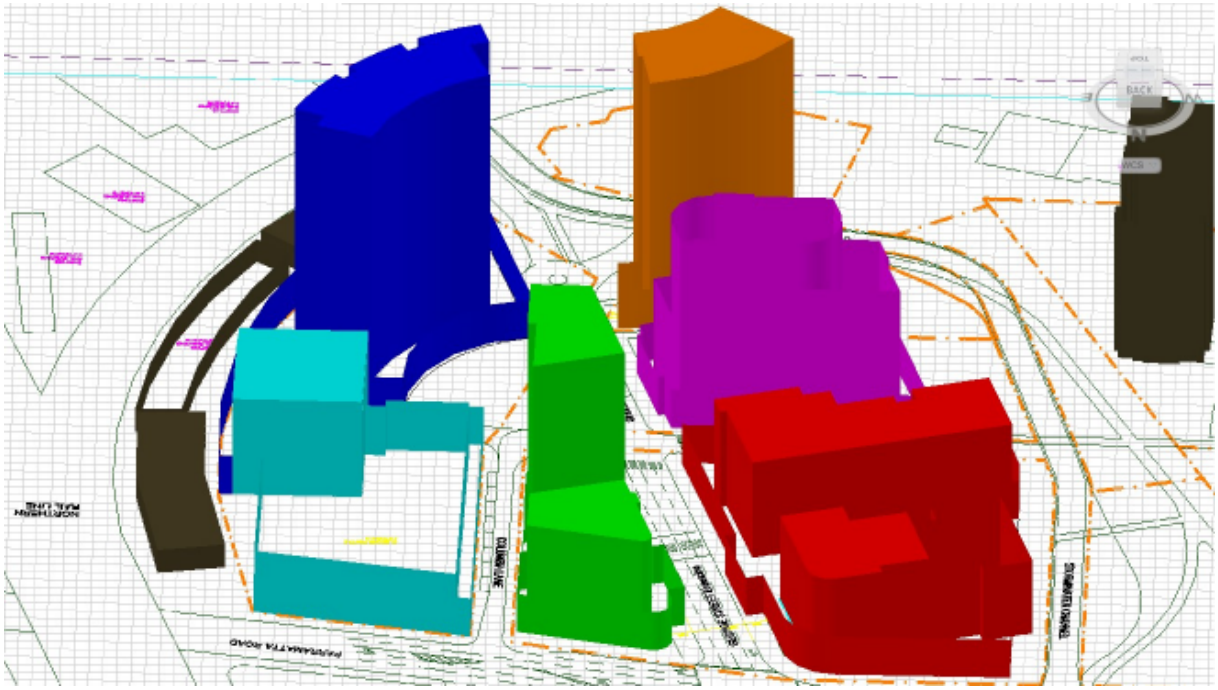
Sun Eye View - June 21st – 11.30 am



Sun Eye View - June 21st – 11.45 am



Sun Eye View - June 21st – 12.00 pm



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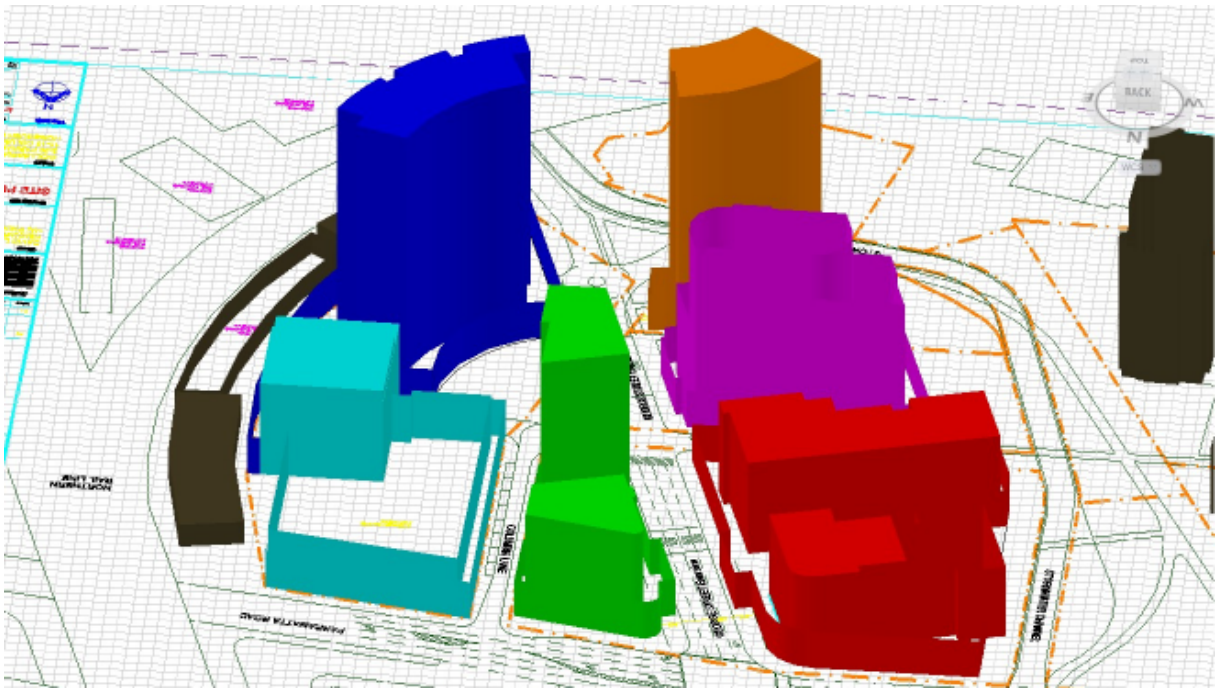
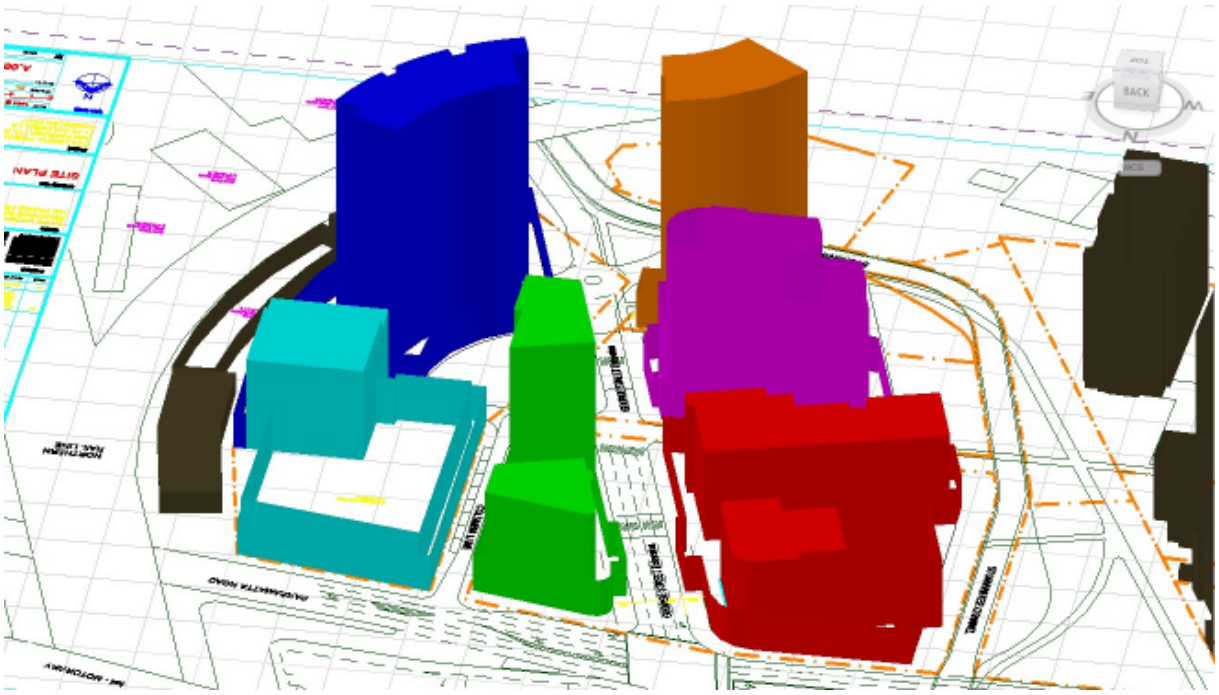
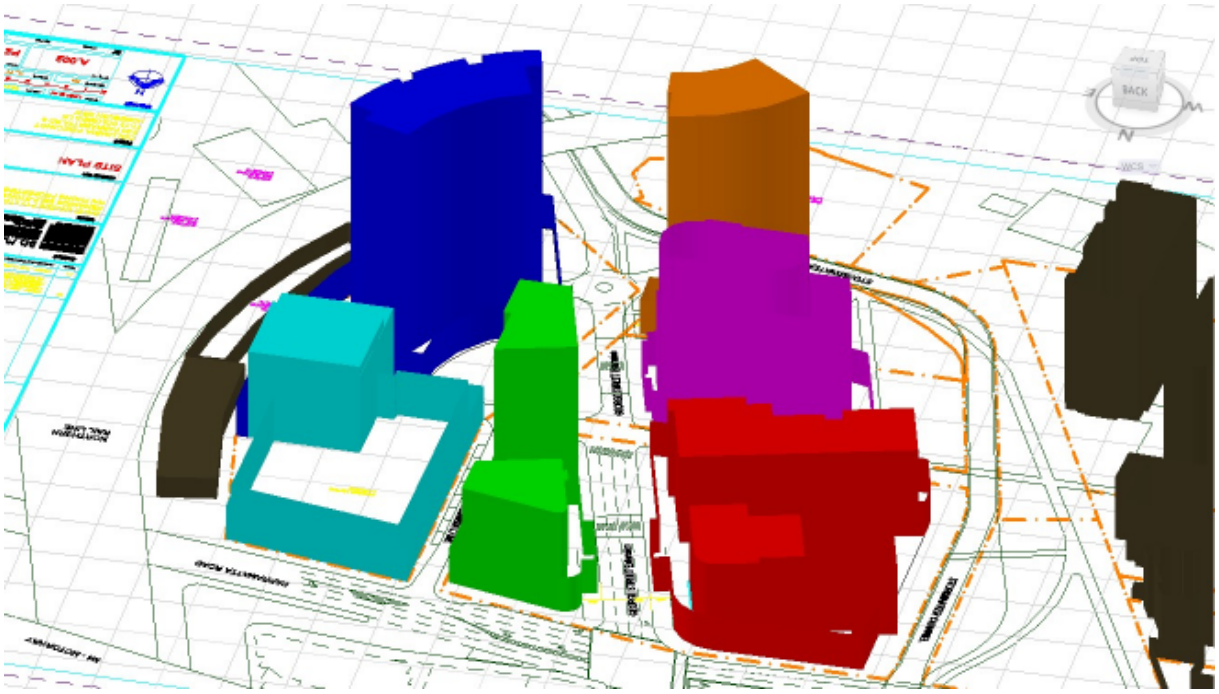


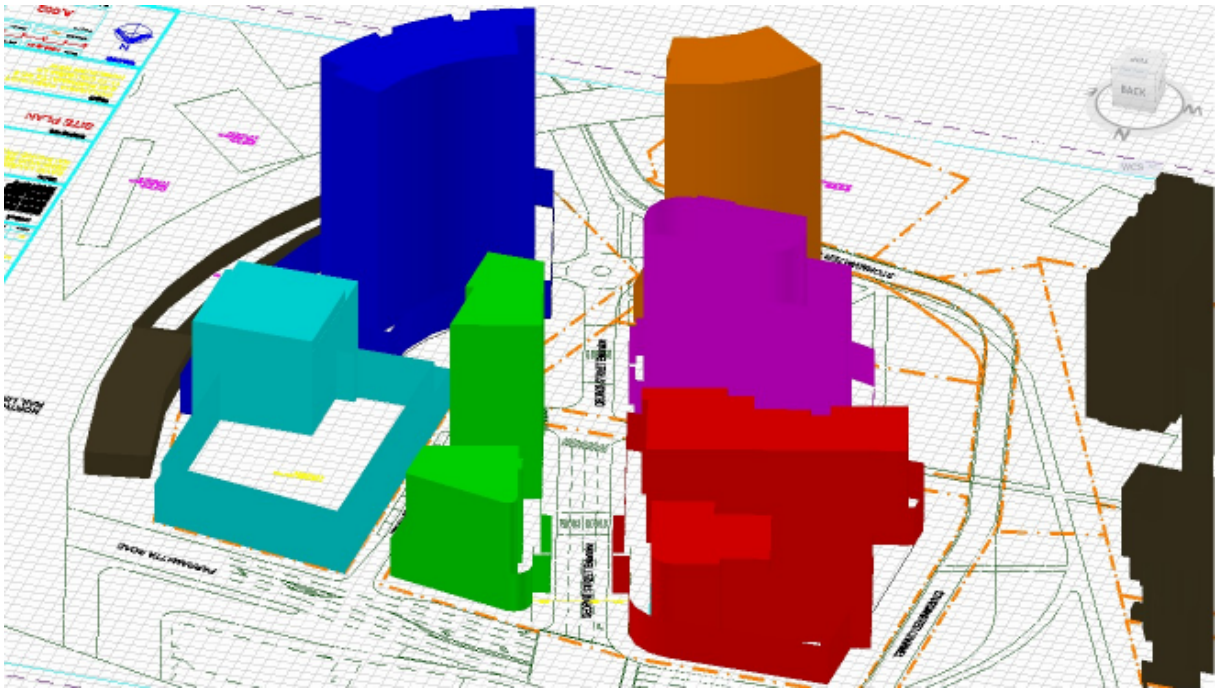
Sun Eye View - June 21st – 12.30 pm



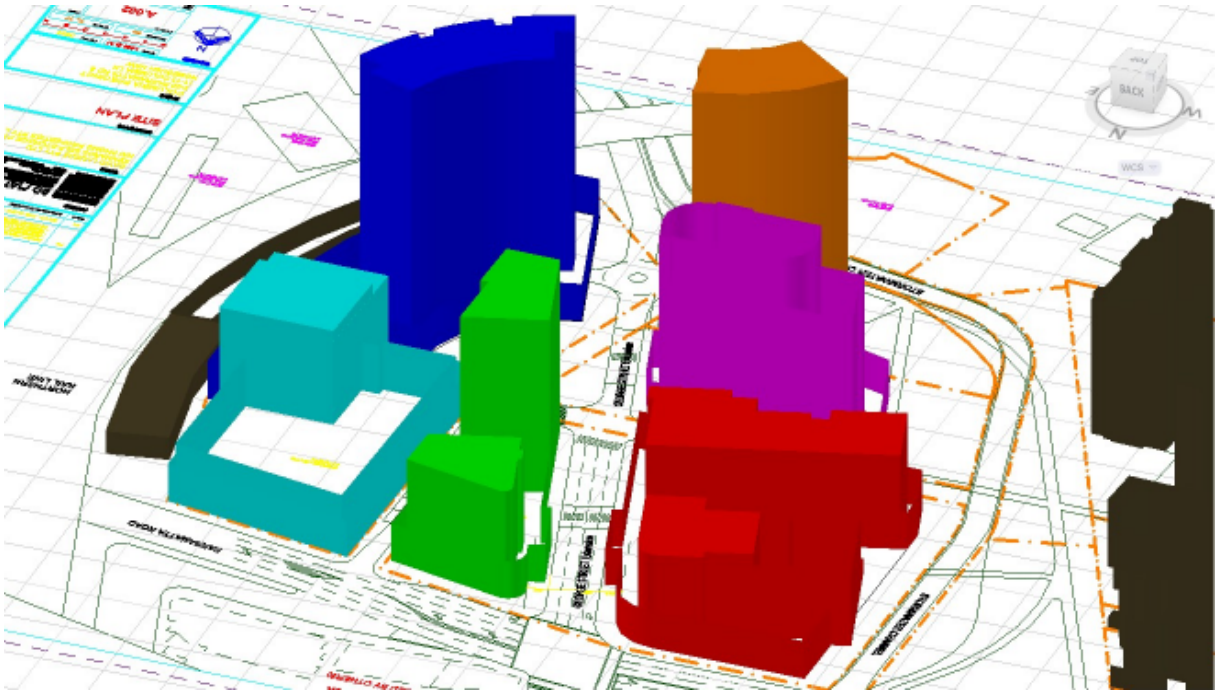
Sun Eye View - June 21st – 12.45 pm



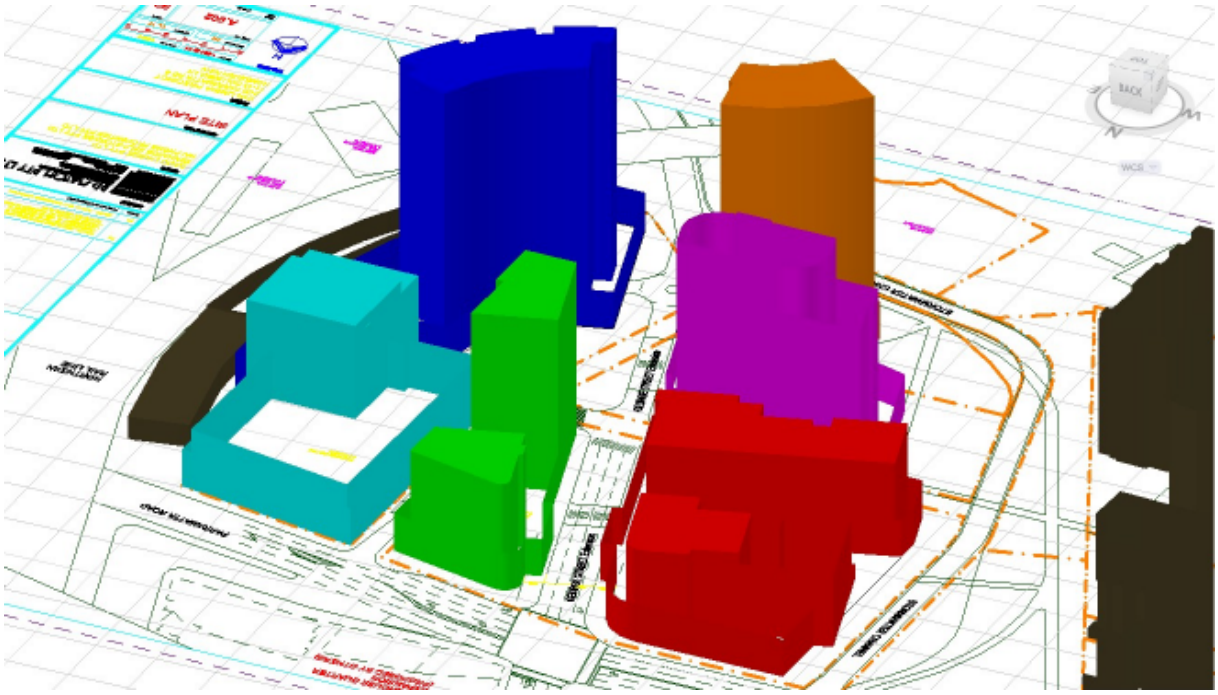
Sun Eye View - June 21st – 1.00 pm



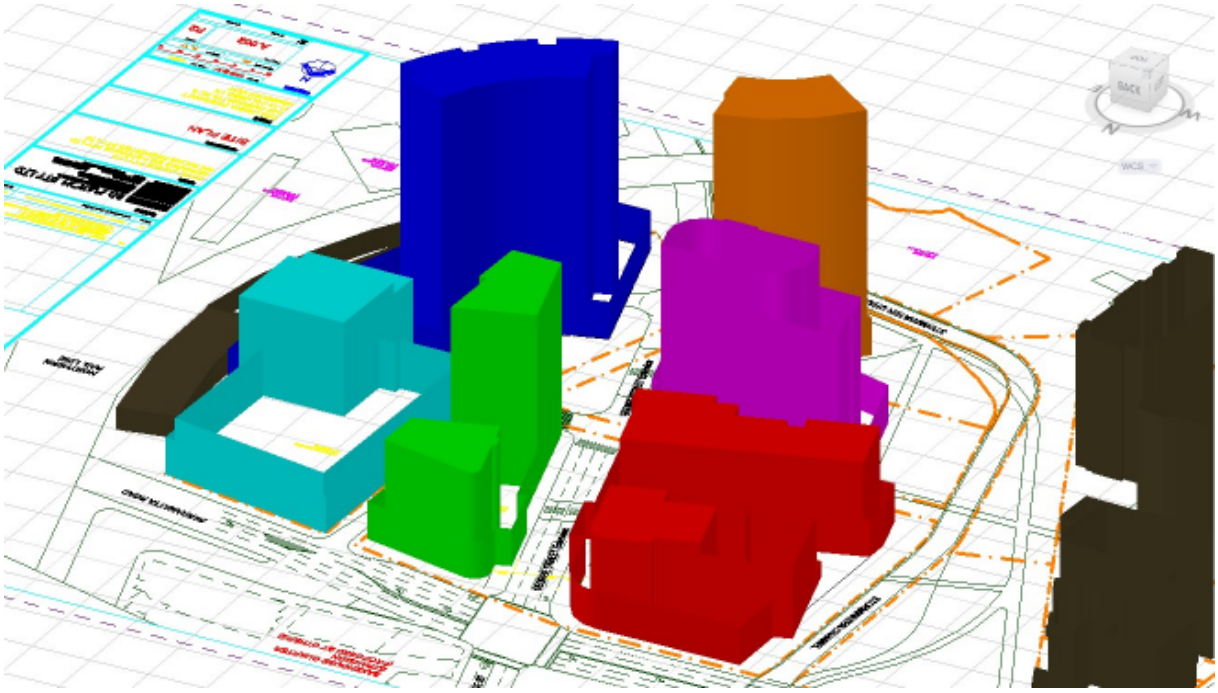
Sun Eye View - June 21st – 1.15 pm



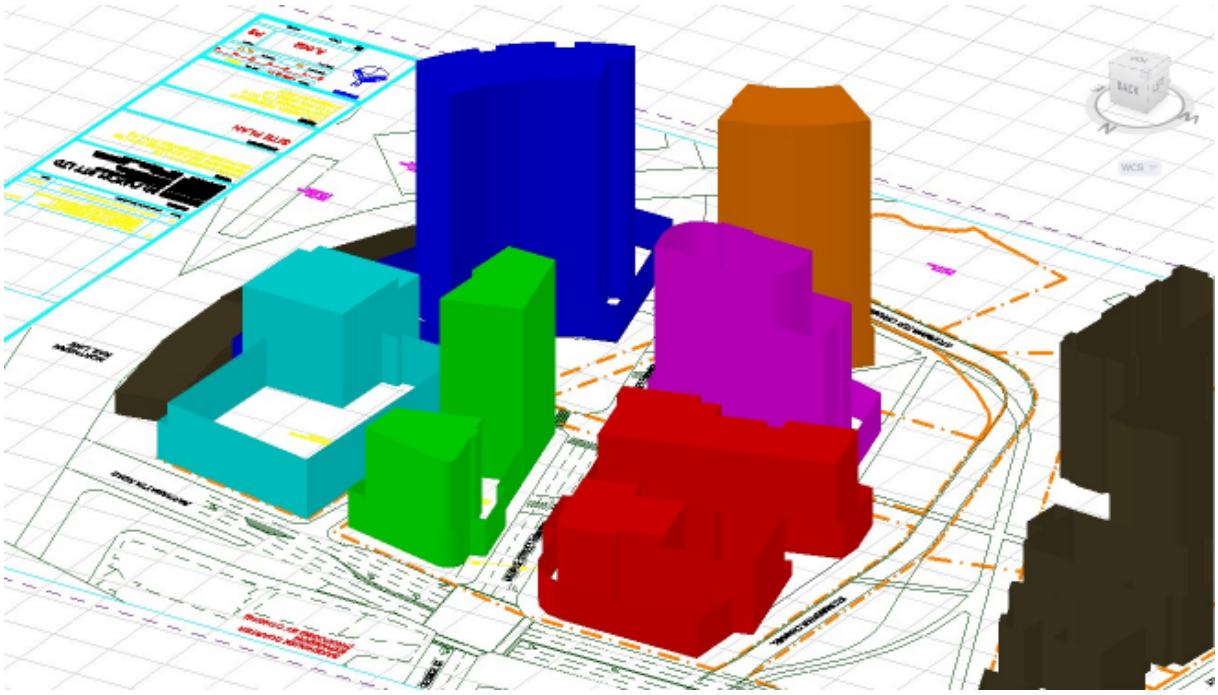
Sun Eye View - June 21st – 1.30 pm



Sun Eye View - June 21st – 1.45 pm



Sun Eye View - June 21st – 2.00 pm



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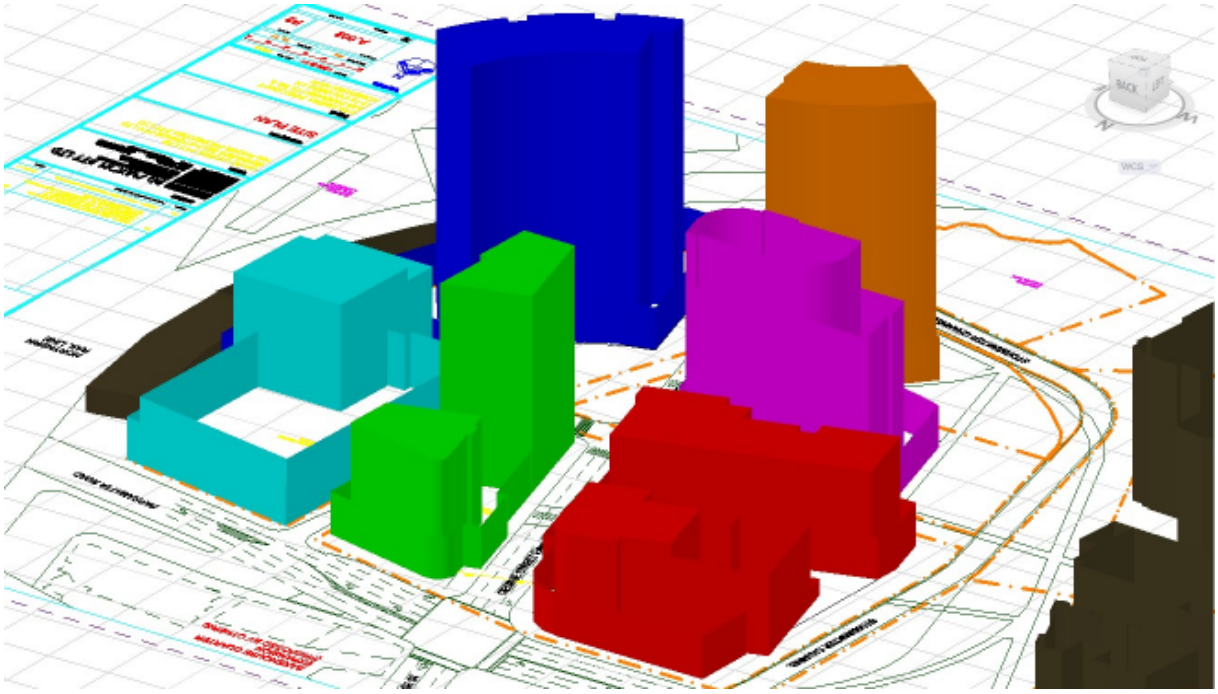
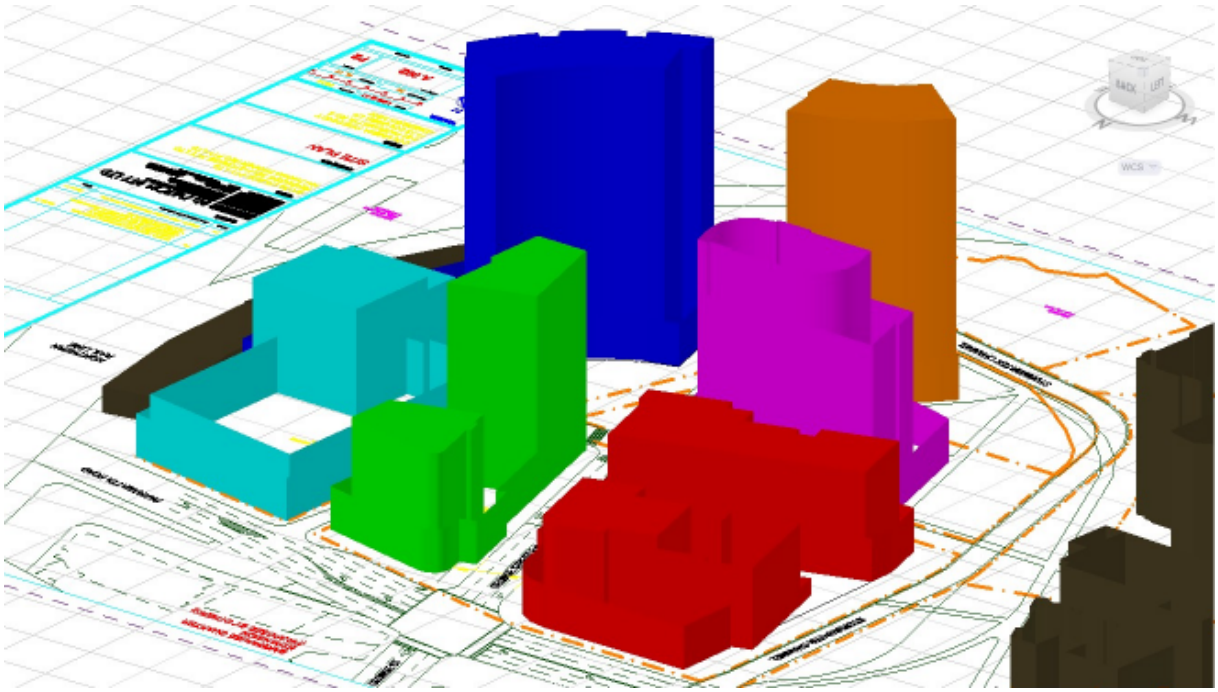


Sun Eye View - June 21st – 2.30 pm



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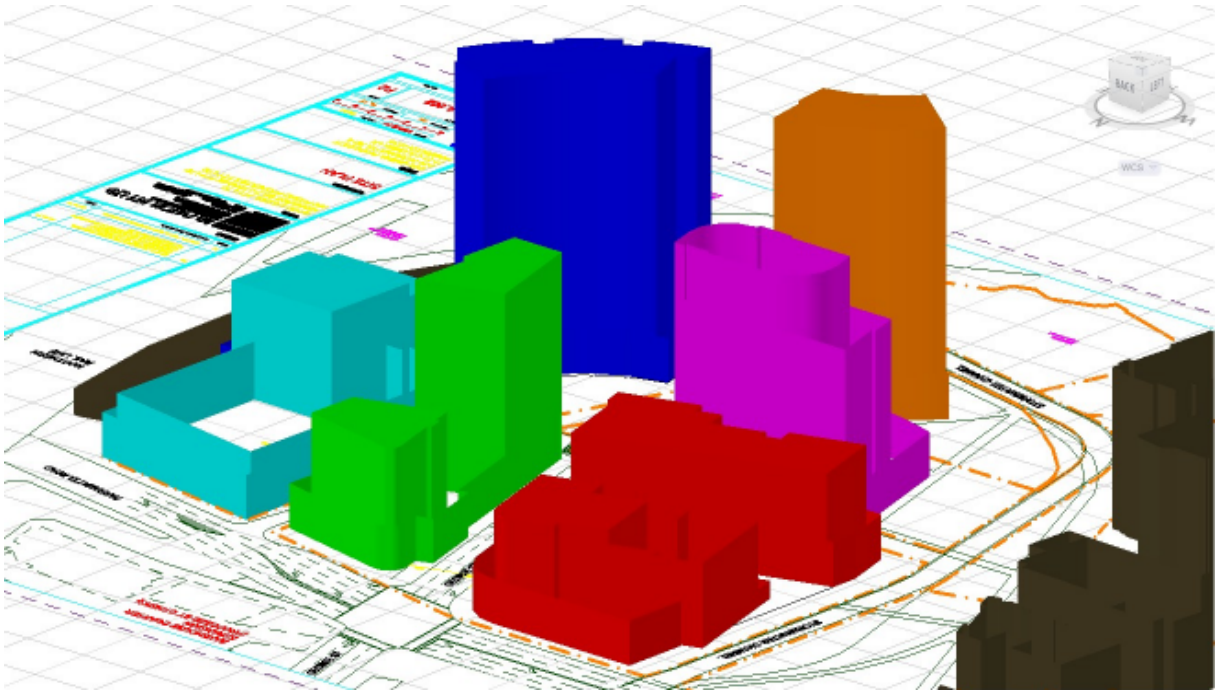

Sun Eye View - June 21st – 3.00 pm