

Appendix 13.1

Solar Glare Results



DAYLIGHT & SUNLIGHT

SOLAR GLARE ASSESSMENT

Trinity Islands

18 October 2021

GIA No: **17554**

PROJECT DATA:

Client **Renaker Build**
Architect **Simpson Haugh**
Project Title **Trinity Islands**
Project Number **17554**

REPORT DATA:

Report Title **Solar Glare Assessment**
GIA Department **Daylight & Sunlight**
Dated **18 October 2021**

Prepared by **KST**
Checked by **-**
Type **ES APPENDIX**

Revisions	No:	Date:	Notes:	Signed:

SOURCES OF INFORMATION:

Information Received **IR-08/09-17554**
Release Number **Rel_06_17554_DSD**
Issue Number **04**
Site Photos **GIA**
3D models **VERTEX**
OS Data **FIND Maps**



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1 INTRODUCTION

GIA have assessed the proposed scheme in order to ascertain whether solar reflections given off the proposed building's facade will be visible from sensitive viewpoints which may affect road users and train drivers.

1.1 GLARE

Glare is a phenomenon occurring in the eye that is caused by the presence of bright light sources within the visual field. It can lead to visual discomfort and, if the glare source is very bright compared to its surrounding, even be disabling in the sense that objects become hard or impossible to see. This is because they are cloaked by the high intensity glare source, whose light gets scattered within the eye.

The CIE 146:2002 Collection on Glare expresses the latter type of glare more formally as:

"Disability glare is glare that impairs vision (CIE, 1987). It is caused by scattering of light inside the eye [...]. The veiling luminance of scattered light will have a significant effect on visibility when intense light sources are present in the peripheral visual field and the contrast of objects to be seen is low."

"Disability glare is most often of importance at night when contrast sensitivity is low and there may well be one or more bright light sources near to the line of sight, such as car headlights, streetlights or floodlights. But even in daylight conditions disability glare may be of practical significance: think of traffic lights when the sun is close to them, or the difficulty viewing paintings hanging next to windows."

Glare is of particular concern if it affects drivers of motor vehicles or trains, since it might impair the visibility of signals and traffic signs, potentially putting the driver, passengers or other parties at risk.

1.2 GLARE FROM REFLECTED SUNLIGHT

Whether or not a sun reflection will cause an instance of glare depends upon a number of factors, these are summarised below:

- The location of the observer and his view direction;
- The sun's position in the sky, which changes not only with the hour of the day, but with the seasons too;
- The location and orientation of the reflective surface, e.g. a glazed facade, in relation to the observer's view direction;
- The specific quality of the reflective surface, e.g. sheen, specularity, etc.;
- The observer's physiology, e.g. age and eye pigmentation; and
- The background brightness defining the state of adaptation in the observer's eye;

This final point is an important one as the same brightness which could cause glare against a dark background may be perfectly acceptable when looked against a light one. A typical example of adaptation is illustrated in Fig. 01 and Fig. 02 where the same headlights cause glare at night whereas they do not during daytime hours.

Understanding whether solar glare is likely to occur is based on the observer's position and view direction. Given the transitory nature of the phenomenon, due to the sun's constant movement, any glare assessment should be carried out for a number of representative locations and view directions.

Such studies are often carried out with the help of sun path protractors, as depicted in Fig. 03 opposite, or with the aid of a full 3 dimensional computer simulation.

When a large number of locations need to be looked at, studies involving solar protractors become rather impractical. Computer software allows multiple view points to be assessed with greater ease so that it has even become feasible to render video sequences showing when and where reflections may become an issue.

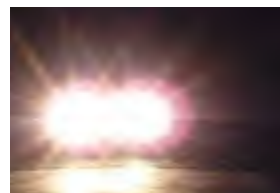


Fig. 01: Headlights at night



Fig. 02: Headlights during day

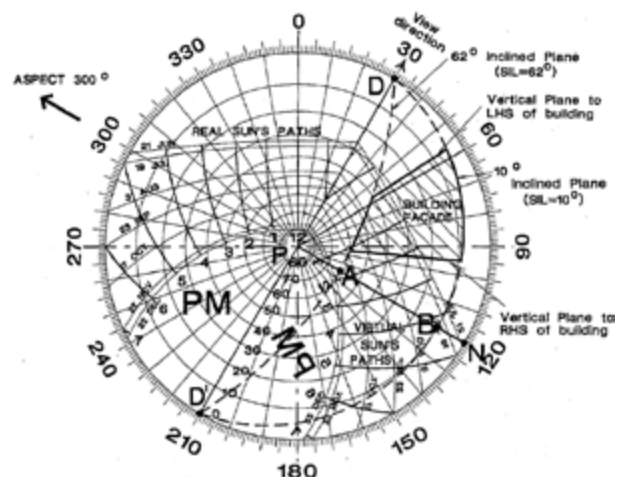


Fig. 03: Hassall's Protractor

1.3 EXISTING GUIDANCE

In the UK, guidance that is relevant to glare assessments is limited to a short section in Littlefair's Site Layout Planning for Daylight and Sunlight published by the BRE in 2011. This document is commonly referred to as BR 209. It suggests that:

"If it is likely that a building may cause solar dazzle the exact scale of the problem should be evaluated. This is done by identifying key locations such as road junctions and windows of nearby buildings, and working out the number of hours of the year that sunlight can be reflected to these points. BRE Information Paper IP 3/87 gives details."

BR IP3/87 provides more detailed instructions on why and how solar dazzle can be calculated:

"Glare or dazzle can occur when sunlight is reflected from a glazed facade. For vertical facades this problem usually occurs only when the sun is low in the sky; but some types of modern design incorporate sloping glazed facades which can, under certain circumstances, reflect unwanted high altitude sunlight into the eyes of motorists, pedestrians and people in nearby buildings."

Both BR 209 and BR IP3/87 only deal with geometrical considerations of glare by identifying when and where reflections occur. However, neither pieces of guidance suggest any threshold values above which reflected sunlight may give rise to an instance of glare. That such a threshold exists in theory becomes clear from the guidance in BR 209:

"... Substituting clear or absorbing glass for reflective glass can also help although sometimes even clear glass may cause reflected glare if, eg, a motorist has the reflected sun close to the centre of their line of sight."

Recommendations on acceptable limits for solar glare is equally sparse in other countries. The only document dealing with the subject is Hassall's Dealing with Rogue Solar Reflections from 1996. Although published in Australia, the theory, methodology and recommendations it introduced are equally applicable in other countries such as the UK.

The severity of glare can be calculated as the equivalent veiling luminance which is caused by the excess light being scattered in the eye thereby creating a 'veil' through which objects are seen. If the

brightness of the veil is sufficiently high compared to that of the actual object, the latter becomes less visible. In very severe cases of disability glare, the object cannot be seen at all.

The veiling luminance can be calculated with a simple empirical formula first proposed by Holladay:

$$L_{\text{seq}} [\text{cd/m}^2] = K \cdot E_{\text{gl}} / Q^n < \text{threshold}$$

The Holladay glare formula depends on four variables, namely:

- **K**, which is a factor accounting for the observer's sensitivity to glare (eg. age);
- **E_{gl}**, which is the illuminance from the glare source, measured at the eye of the observer;
- **Q**, the angle between the line of sight and the glare source;
- **n**, indicating the power with which Q affects the outcome;

An individual's sensitivity to glare is affected primarily by age. We used a K factor of 17.5 in our calculations, which represents a 65-year old driver.

According to CIE 146:2002, the n power in Holladay's equation has three angular domains:

- Q3 for angles between 0.1° and 1°;
- Q2 for angles between 1° and 30°; and
- Q for angles beyond 30°;

This angular dependency means that a glare source close to the object being looked at has a much more severe impact upon the visibility of that object than a glare source at the periphery of the observer's visual field.

As stated in CIE 146:2002, occurrences at angles beyond 30° would be of little significance in most situations, but may be relevant in exceptional circumstances. When seated in a driving seat of a typical car, for example, the limits of the windscreen would generally obstruct the driver's view at angles beyond 30° from the line of sight. We have therefore adopted the 1° to 30° domain as a reference for our calculations.

Hassall in his paper proposes a threshold value of 500 cd/m², which we have adopted as a threshold in our assessments.

2 GIA'S APPROACH

Following the guidance documents referenced above, GIA have developed specialised computer software in order to undertake reflected glare assessments.

The preparation of reflected solar glare assessments is based upon the approach described below, which entails:

- The construction of a three-dimensional computer model that includes the proposed building and its relevant setting;
- Rendering of stills of the solar reflections;
- Masking the images to represent the human field of view; and
- Image analysis.

The individual steps of our work flow are further explained below.

2a 3D COMPUTER MODELLING

Detailed geometry of the proposed building, specifically of its facade and glazing configuration is provided by the project architects either in 2d format i.e. plans, sections and elevation drawings, or 3d format as a computer model. The received information is processed by GIA and prepared for assessment with our proprietary software.

A computer model of the proposed building's context is built from high resolution stereoscopic aerial photographs, examples of which are shown in Fig. 04 and Fig. 05.

This includes rail tracks, sleepers, gantries and signals as well as relevant neighbouring buildings. An example is provided in Fig. 06.



Fig. 04: High-resolution aerial photograph



Fig. 05: High-resolution aerial photograph (close-up)



Fig. 06: Computer model of train tracks & signals from photogrammetry

3 METHODOLOGY

The methodology described below is not aimed at addressing the intensity of an instance of reflected solar glare, but its occurrence and duration throughout the year and the location of this occurrence in respect of a driver's line of sight.

This will inform the necessity of implementing mitigations at either early or detailed design stage.

For this purpose the glazed facade of the proposed development is assumed to have the same properties of a mirror i.e. it is fully reflective and all of its reflected component is specular. This therefore portrays a worst-case scenario.

The potential for reflected solar glare or dazzle from the glazed or reflective façades of the development are assessed using specialist lighting software.

Potentially sensitive viewpoints around the site are selected. These viewpoints representing locations where reflected solar glare may cause adverse impacts to those travelling towards the development, such as road users or train drivers. The viewpoints are generally located at the minimum stopping distance and at the driver's eye height. The focal point is a relevant traffic element, such as signals or incoming traffic.

The stopping distance is calculated as the combination of thinking and breaking distances $D_{\text{total}} = D_{\text{thinking}} + D_{\text{breaking}} = V \cdot T + V^2 / (2\mu \cdot g)$, where each component is:

V = Relevant vehicle speed, typically the road speed limit.

T = Thinking time (0.67 sec)

μ = Breaking effort (considered 0.65 for cars, 0.5 for buses and 0.031 for trains)

g = Gravity acceleration.

The height of the viewpoint is considered to be 1.5 m for cars, 2.0 m for buses and 2.75 m for trains.

I.e. A viewpoint for car driving at 30 mph would be placed at 23 m (see Figure 4) from a traffic light and at 1.5 m above the ground.

2.3 FIELD OF VIEW

"The field of view (also field of vision) is the angular extent of the observable world that is seen at any given moment."

"Different animals have different fields of view, depending on the placement of the eyes. Humans have an almost 180-degree forward-facing field of view[...]."

(http://en.wikipedia.org/wiki/Field_of_view)

"The normal human visual field extends to approximately 60° nasally (toward the nose, or inward) in each eye, to 100° temporally (away from the nose, or outwards), and approximately 60° above and 75° below the horizontal meridian. In the United Kingdom, the minimum field requirement for driving is 60° either side of the vertical meridian, and 20° above and below horizontal. The macula corresponds to the central 13° of the visual field; the fovea to the central 3°."

(http://en.wikipedia.org/wiki/Visual_field)

"The fovea centralis, also generally known as the fovea, is a part of the eye, located in the centre of the macula region of the retina. The fovea is responsible for sharp central vision (also called foveal vision), which is necessary in humans for reading, watching



Fig. 07: Typical car stopping distances for various speed limits

television or movies, driving, and any activity where visual detail is of primary importance.”

(http://en.wikipedia.org/wiki/Fovea_centralis_in_macula)

2.4 RENDERING OF STILLs

As mentioned above, glare is a phenomenon that depends on the observer’s location, but also on his view direction. In the case of a train driver the view direction is defined by the rail tracks. UK recommendations set the eye level of the driver at 2.75 m above the rails. The view point is centred between the tracks for ease of reference. Although train drivers sit slightly to the left within the cabin, this bears no material effect on the analysis of the images as the signals are visible at a distance of hundreds of metres at which point the slight shift in the cabin equates to a very small angular change. Fig. 09 shows the typical set up of our viewpoints. Actual trains and driver’s cabin are not included in our 3d computer model.

Individual virtual cameras located accordingly in our 3d computer model placed in the direction of travel. A human field of view mask is overlaid onto them in order to define the angular distance between the instance of reflection and the observer’s line of sight.

This procedure allows for the assessment of entire stretches of railway tracks providing a complete overview of potential risks as well as information about signal sighting.

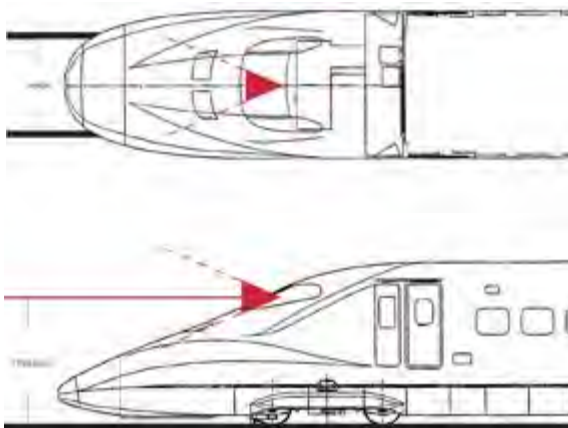


Fig. 08: Driver Viewpoint

2.5 IMAGE ANALYSIS

The assessment shows the path of the sun for the entire year around the development. Two computer generated angular images are produced for each selected viewpoint, indicating the area which sees the reflection of the sunpath at any point during the year. A modified diagram portraying a standardised extent of human vision (Fig. 09) is then overlaid onto the image.

The image highlights the degrees of vision corresponding to the foveal view with a red circle of 3° of angle in order to identify the area most sensitive to reflected solar glare.

Another red circle represents the incidence of the 30° radius of our typical field of view in order to identify a secondary area of sensitivity to potential reflected glare instances.

As stated in the CIE 146:2002 occurrences at angles beyond 30° would be of little significance in most situations, but may be relevant in exceptional circumstances. When seated in a driving seat of a typical car, for example, the limits of the windscreen would generally obstruct the driver’s view at angles beyond 30° from the line of sight.

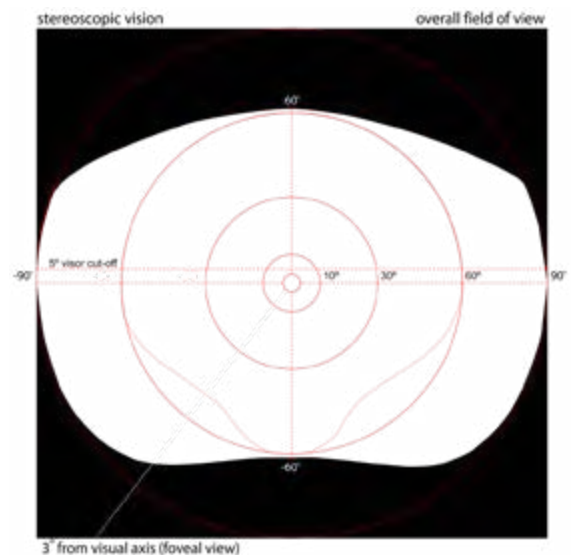


Fig. 09: Typical human field of view

2.6 STAGE 1

In order to establish the potential for the occurrence of reflected sunlight with regards to the times of the year and hours of the day when this may happen, as well as its relative location to the observer's line of sight, the yearly sun path is mapped onto the sky and colour-coded so that the hours of the day and the period of the year can be distinguished. This sun path is picked up by the reflective elements of the proposed buildings in our rendered stills.

Fig. 10 shows the colour coded sunpaths projected onto the sky dome to visualise the time of day and season during which solar reflections occur.

Two identical viewpoints are rendered, shown in Figs. 11 and 12, one focussing on the times of the day when the reflection would be visible, and the second looking at the months throughout the year.

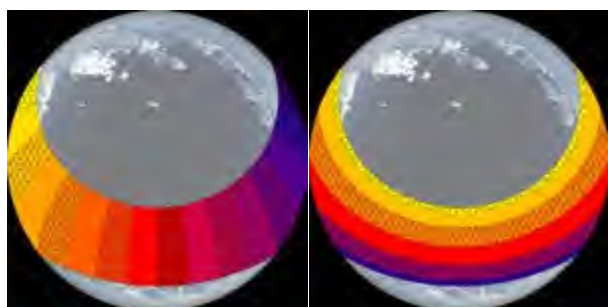


Fig. 10: Stage 2 - Colour coded sunpath for time of day and seasons

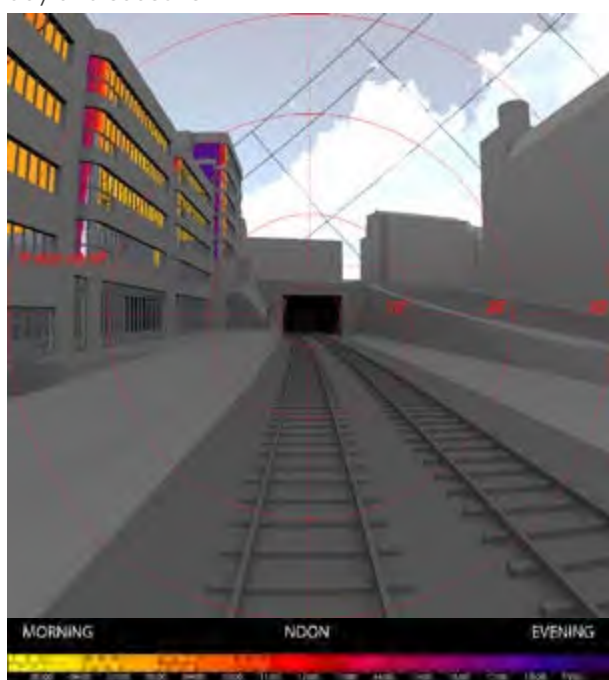


Fig. 11: Stage 1 Example - Hours

2.7 LIMITATIONS

Although great care is taken in identifying typical viewpoints around a new development this does not guarantee that there are no further sensitive locations where reflected solar glare could present a particular risk. This assessment is based on the assumption that in an urban environment moving traffic represents the biggest risk factor and so viewpoints and focus points are selected accordingly.

For practical reasons the area of the assessment is limited to the vicinity of a new development. The occurrence of reflected solar glare at greater distances is not subject of this assessment.

IMPORTANT: The hours shown in the diagrams and described in the text reflect solar time and therefore do not take Daylight Saving Hours into account.

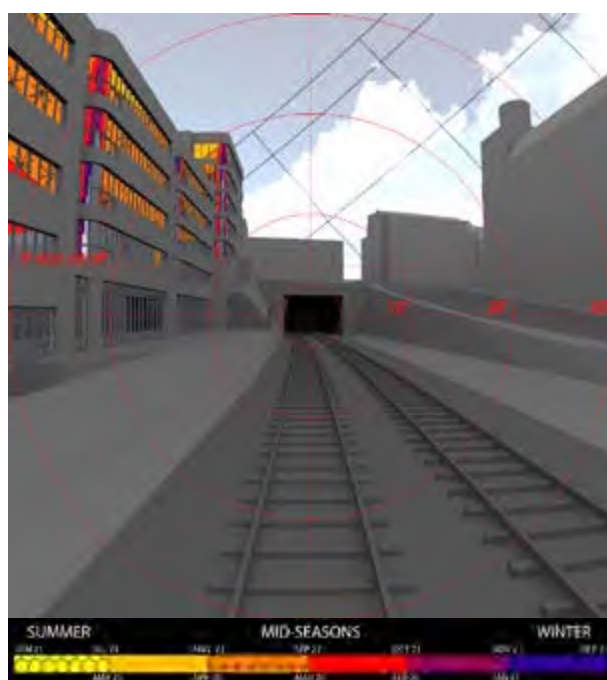


Fig. 12: Stage 1 Example - Months

4 PROPOSED DEVELOPMENT OVERVIEW

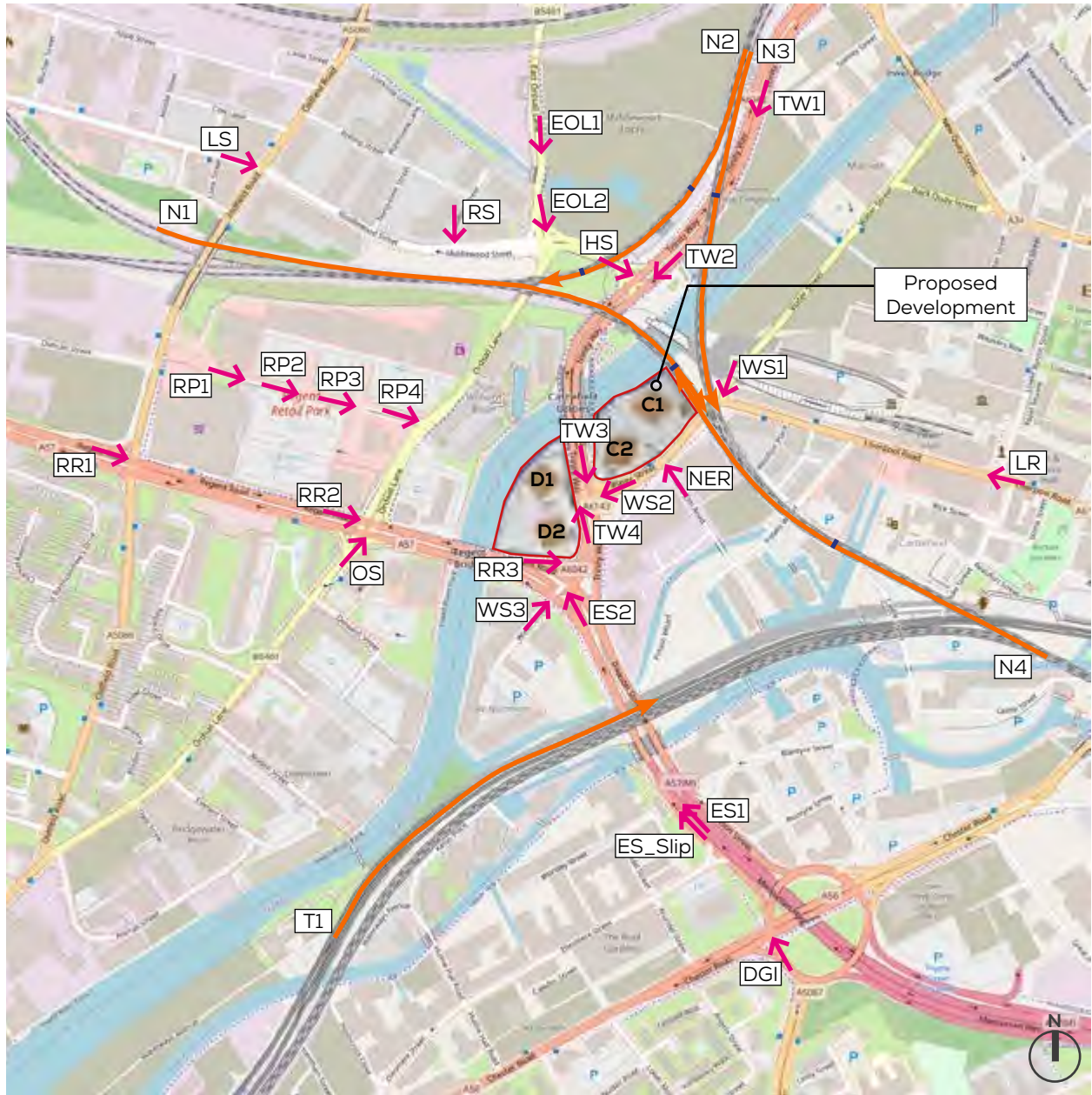


Fig. 13: Site Overview Perspective - Proposed Development



Fig. 14: Site Plan - Top - Proposed Development

5 SENSITIVE RECEPTOR LOCATIONS



- Train/Tram tracks assessed
- Train/Tram Signal Location
- Road Junctions - Proposed Development is Visible
- Road Junctions - Proposed Development is not Visible

Fig. 15: Site Plan - Junctions

Viewpoint Key

Road

LS - Liverpool Street junction with Oldfield Road (page 14 - 23)

RS - Rolling Street junction with Middlewood Street (page 26 - 31)

EOL1 - East Ordsall Lane pedestrian crossing (page 34 - 49)

EOL2 - East Ordsall Lane junction with Middlewood Street/Hampson Street (page 52 - 69)

HS - Hampson Street junction with Trinity Way/Inner Ring Road (page 72 - 81)

TW2 - Trinity Way/Inner Ring Road junction with Hampson Street (page 84 - 101)

TW1 - Trinity Way/Inner Ring Road pedestrian crossing (page 104 - 121)

WS1 - Water Street junction with Liverpool Road (page 124 - 127)

LR - Liverpool Road pedestrian crossing (page 130 - 139)

NER - New Elm Road junction with Water Street (page 142 - 151)

TW3 - Trinity Way/Inner Ring Road junction with Water Street - Southbound (page 154 - 159)

WS2 - Water Street junction with Trinity Way/Inner Ring Road (page 162 - 171)

TW4 - Trinity Way/Inner Ring Road junction with Water Street - Northbound (page 174 - 199)

ES2 - Egerton Street/Inner Ring Road junction with Regent Road (page 202 - 225)

WS3 - Water Street junction with Regent Road & Egerton Street/Inner Ring Road (page 228 - 237)

RR3 - Regent Road junction with Egerton Street/Inner Ring Road (page 240 - 245)

RR1 - Regent Road junction with Oldfield Road (page 248 - 273)

RR2 - Regent Road junction with Ordsall Lane (page 276 - 299)

OS - Ordsall Lane junction with Regent Road (page 302 - 319)

RP1 - Regent Retail Park pedestrian crossing (page 322 - 331)

RP2 - Regent Retail Park junction 1 (page 334 - 343)

RP3 - Regent Retail Park junction 2 (page 346 - 355)

RP4 - Regent Retail Park junction with Ordsall Lane (page 358 - 361)

ES1 - Egerton Street/Inner Ring Road junction with Deansgate Interchange on-ramp (page 364 - 371)

ES_Slip - Deansgate Interchange on-ramp junction with Egerton Street/Inner Ring Road junction (page 374 - 381)

DGI - Deansgate Interchange junction with Chester Road (page 384 - 391)

Rail

N1 - Northern Line - Southbound from Salford Crescent to Deansgate (page 394 - 475)

N2 - Northern Line - Southbound from Salford Central to Salford Crescent (page 478 - 571)

N3 - Northern Line - Southbound from Salford Central to Deansgate (page 574 - 687)

N4 - Northern Line - Northbound from Deansgate to Salford Crescent/Eccles (page 690 - 859)

T1 - Tram Line - Eastbound from Cornbrook to Deansgate-Castlefield (page 862 - 903)

6 **SOLAR GLARE ASSESSMENT**

LS - LIVERPOOL STREET

LS - Liverpool Street Eastbound Junction (with Oldfield Road)



Fig. 16: Junction Location



Fig. 17: Traffic Light Location



Fig. 18: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD

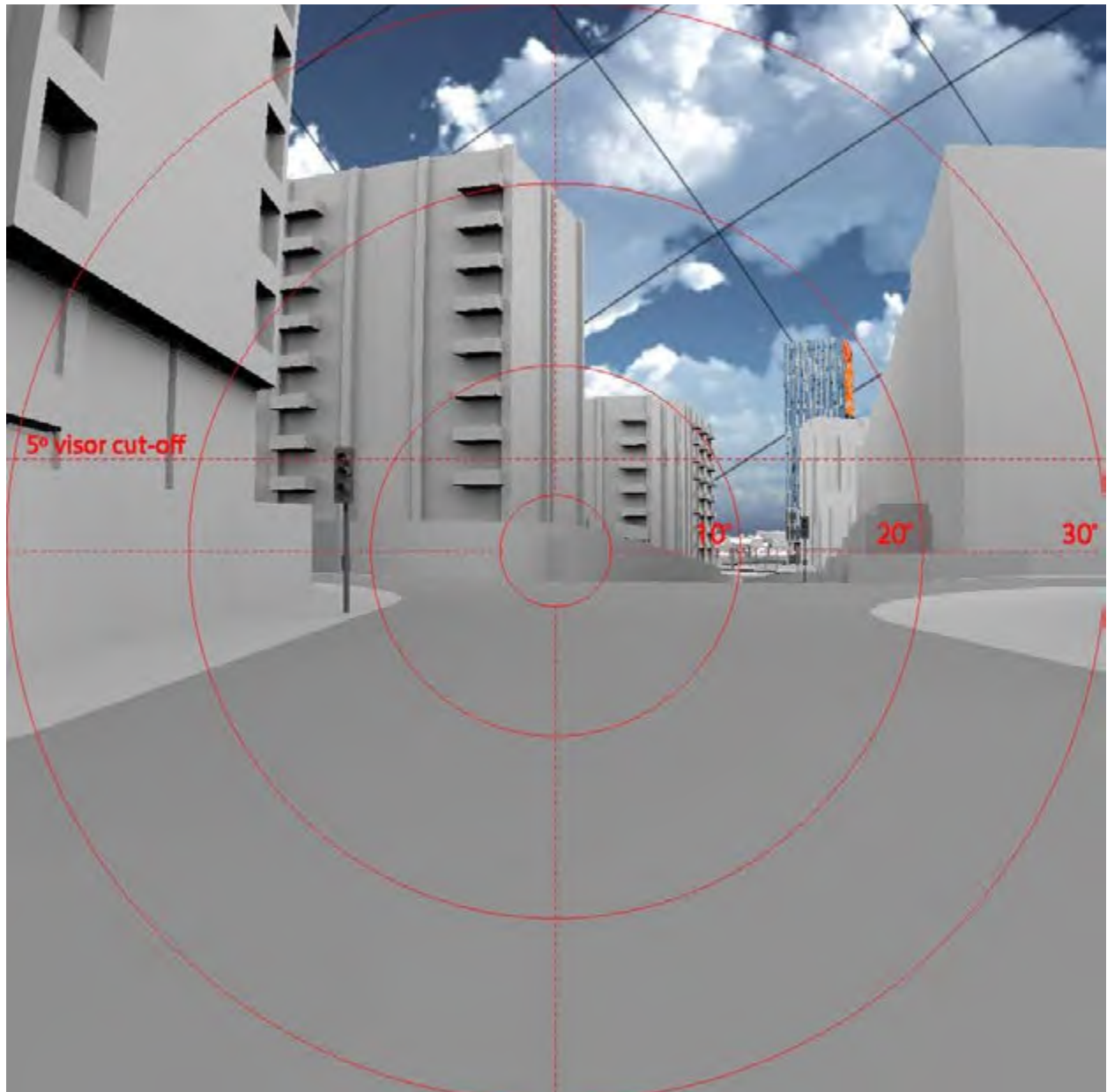
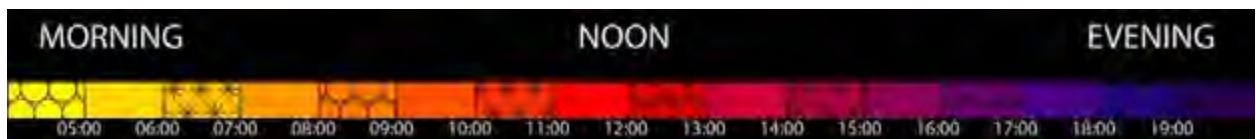


Fig. 19: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD**

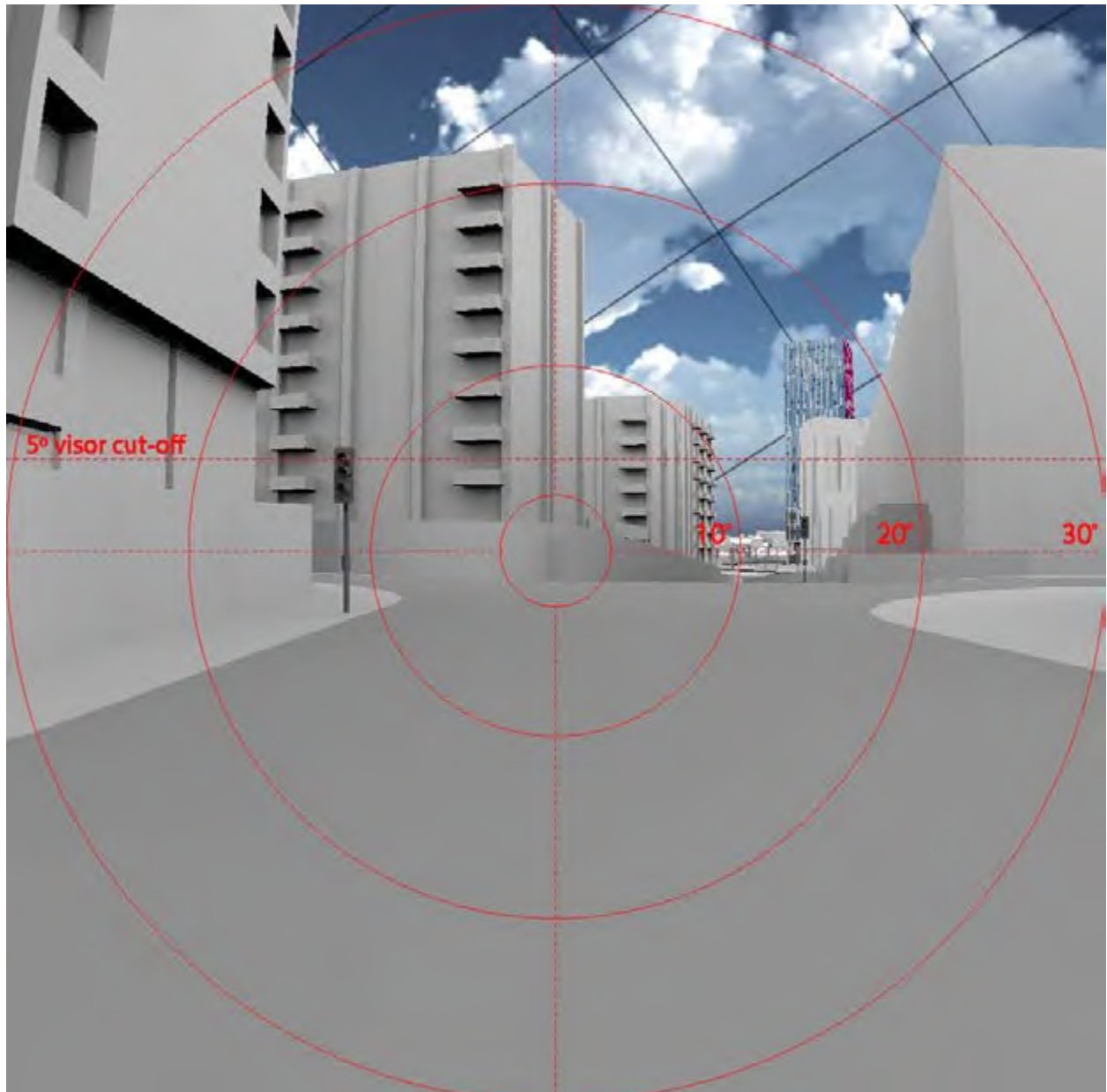


Fig. 20: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD

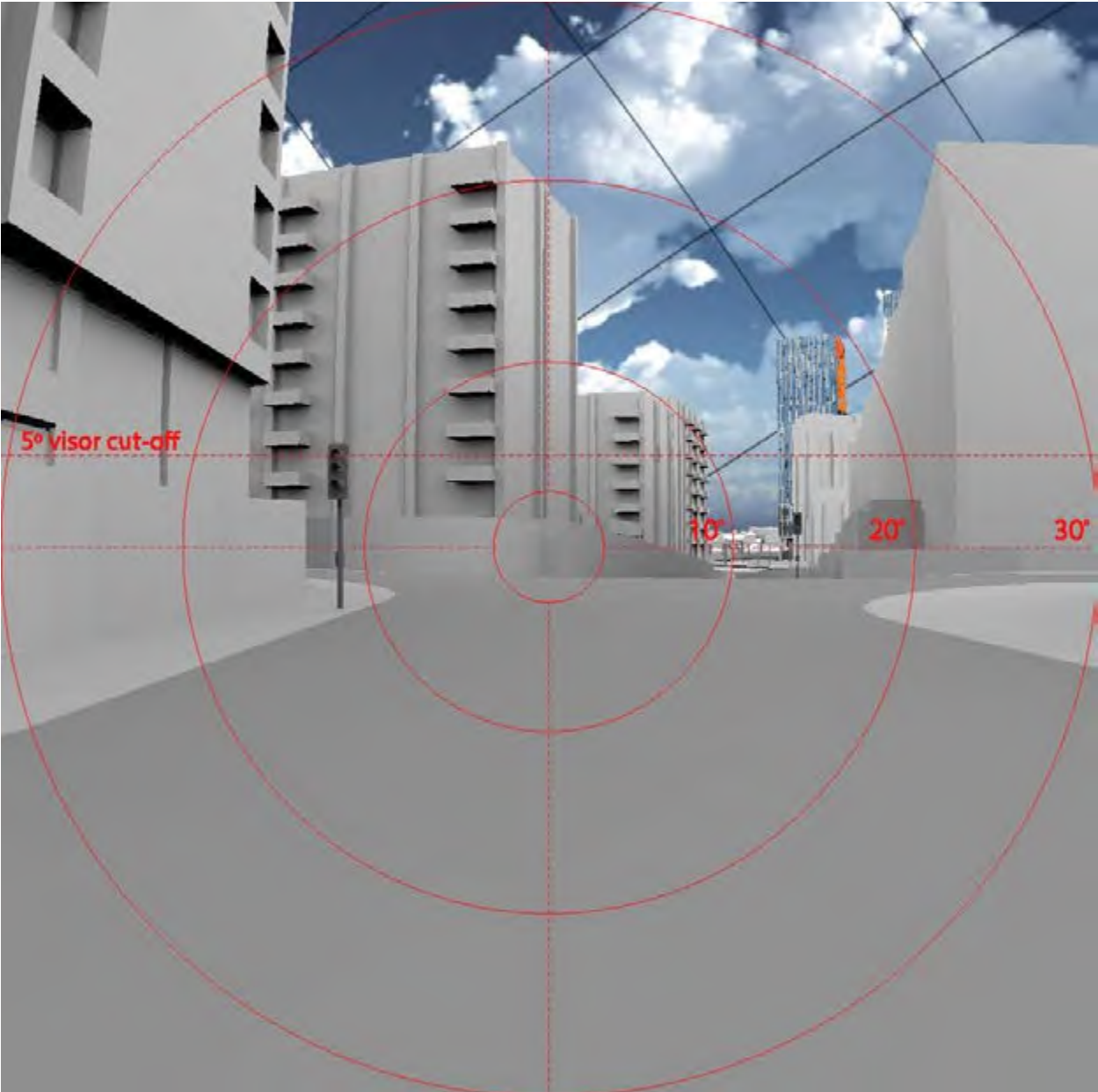


Fig. 21: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD**

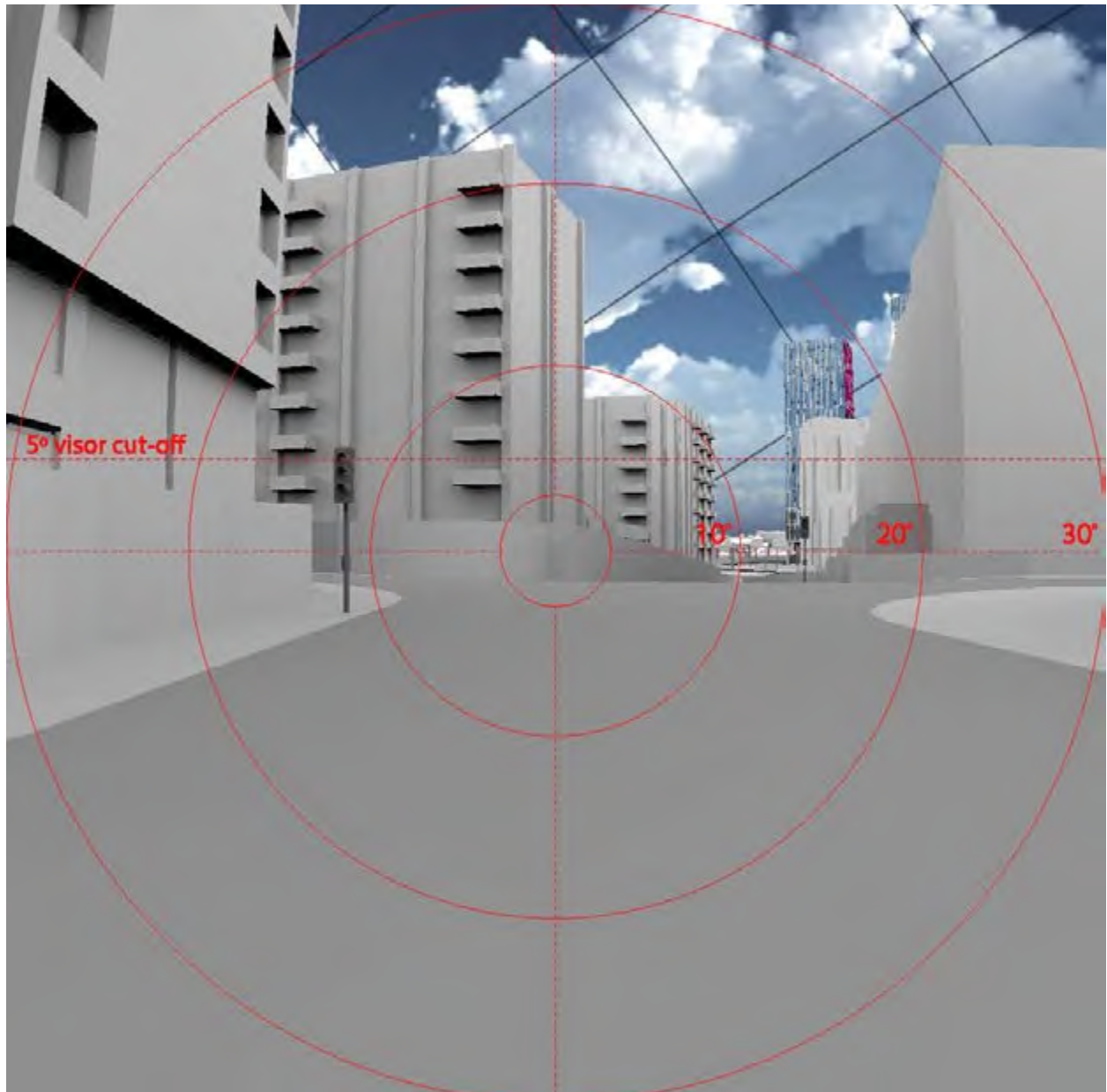


Fig. 22: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD

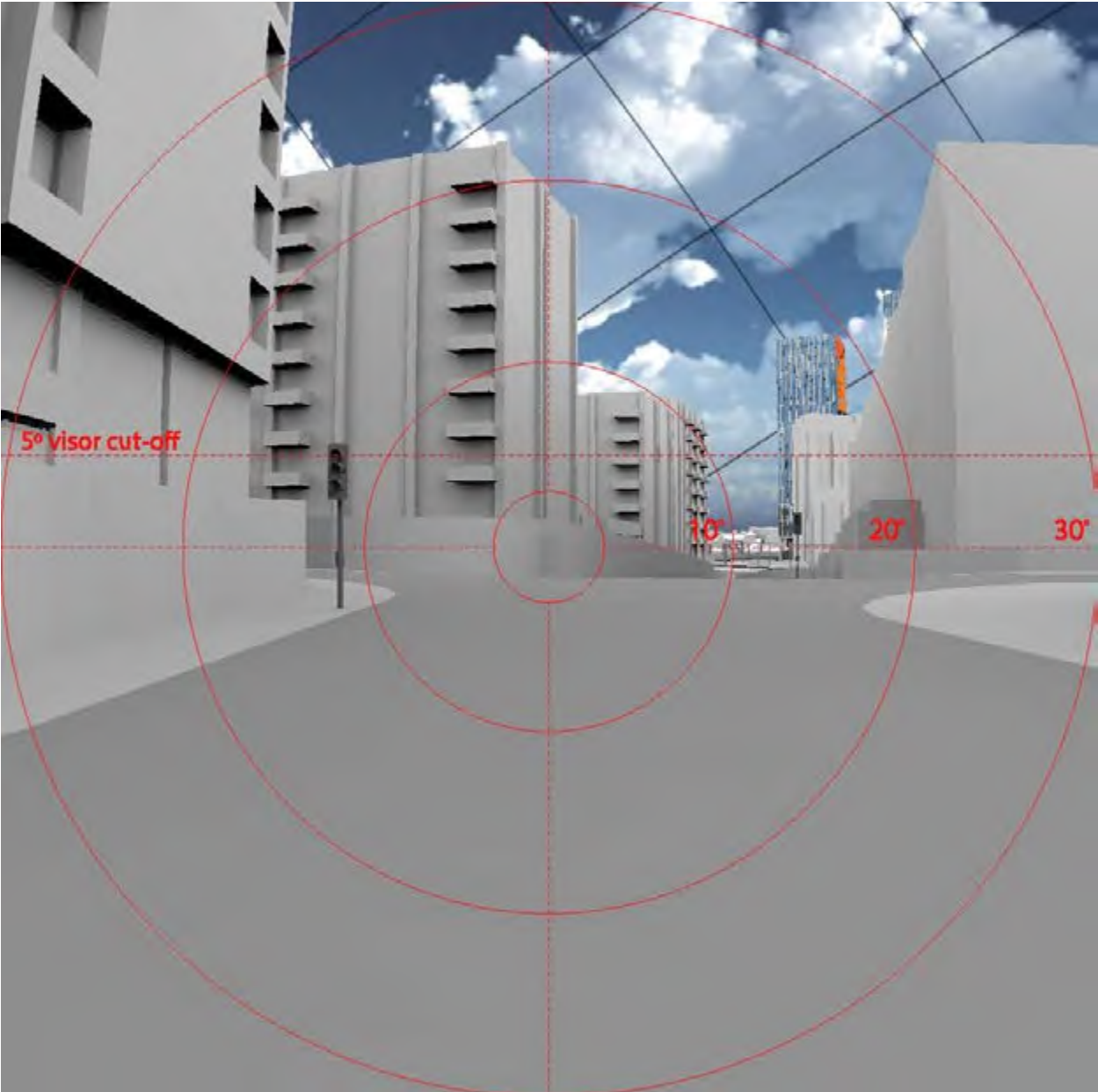


Fig. 23: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD**

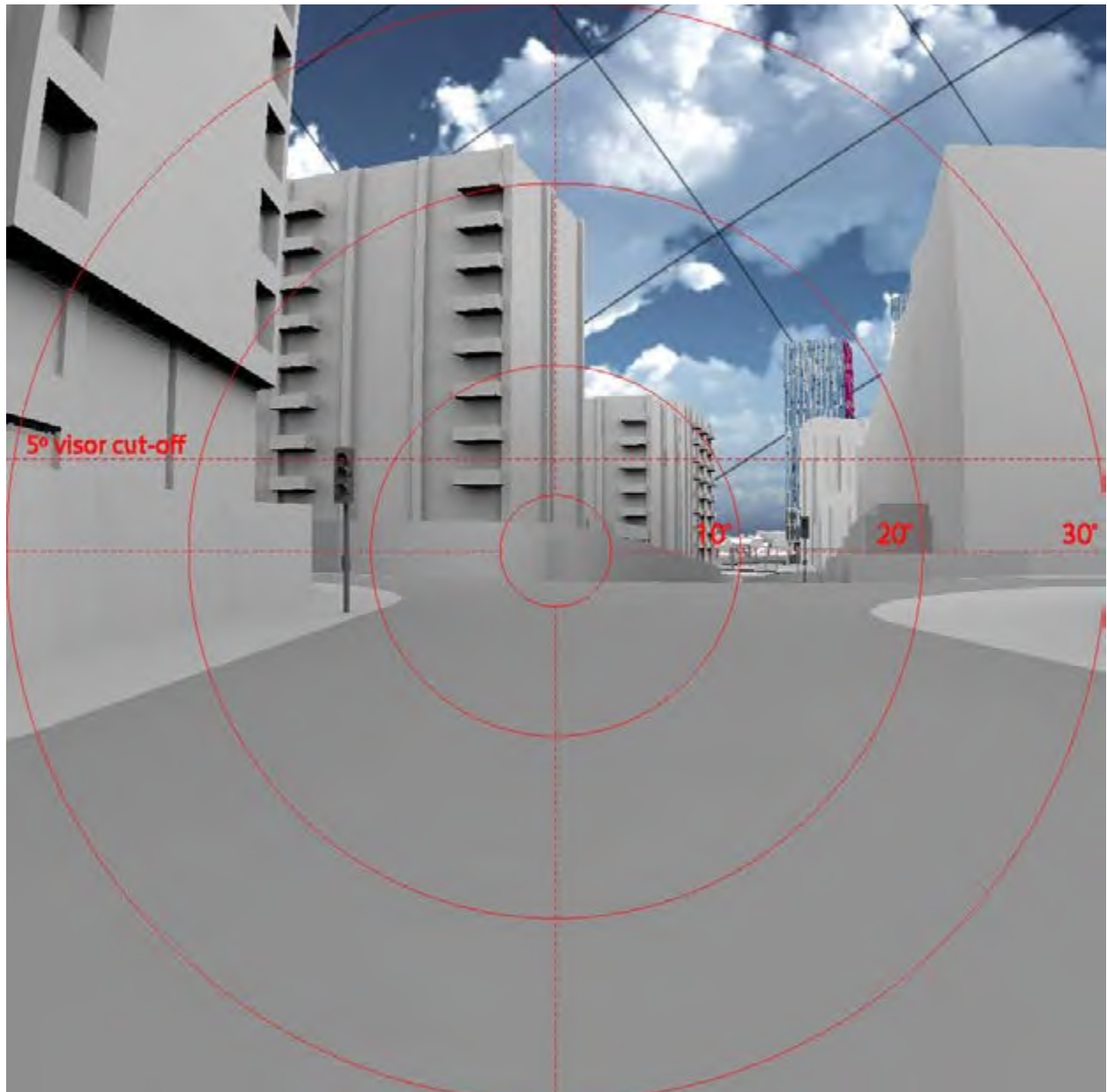


Fig. 24: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD

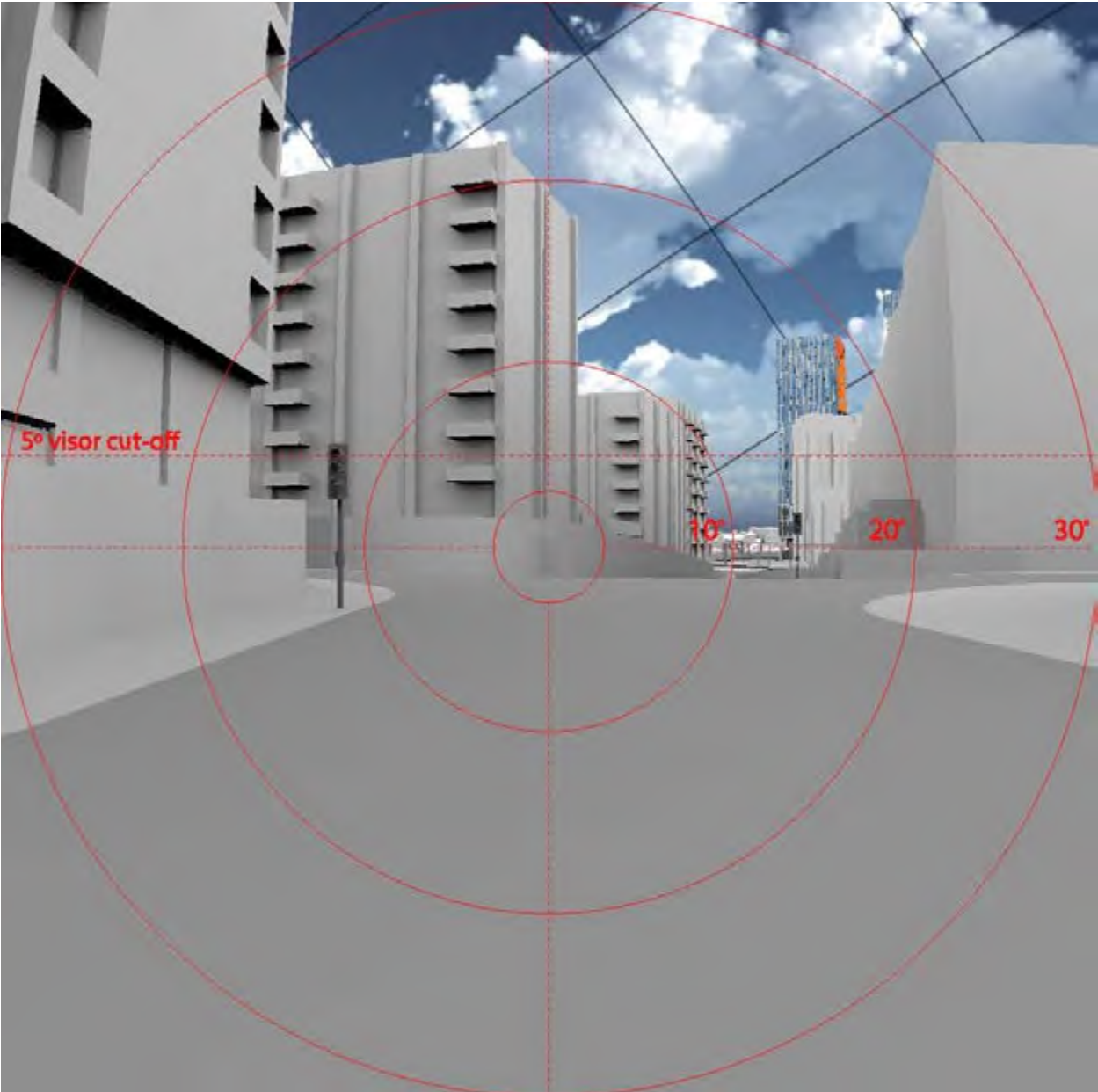


Fig. 25: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT LS - LIVERPOOL STREET JUNCTION (WITH OLDFIELD ROAD)
RIGHT LANE, LOOKING FORWARD**

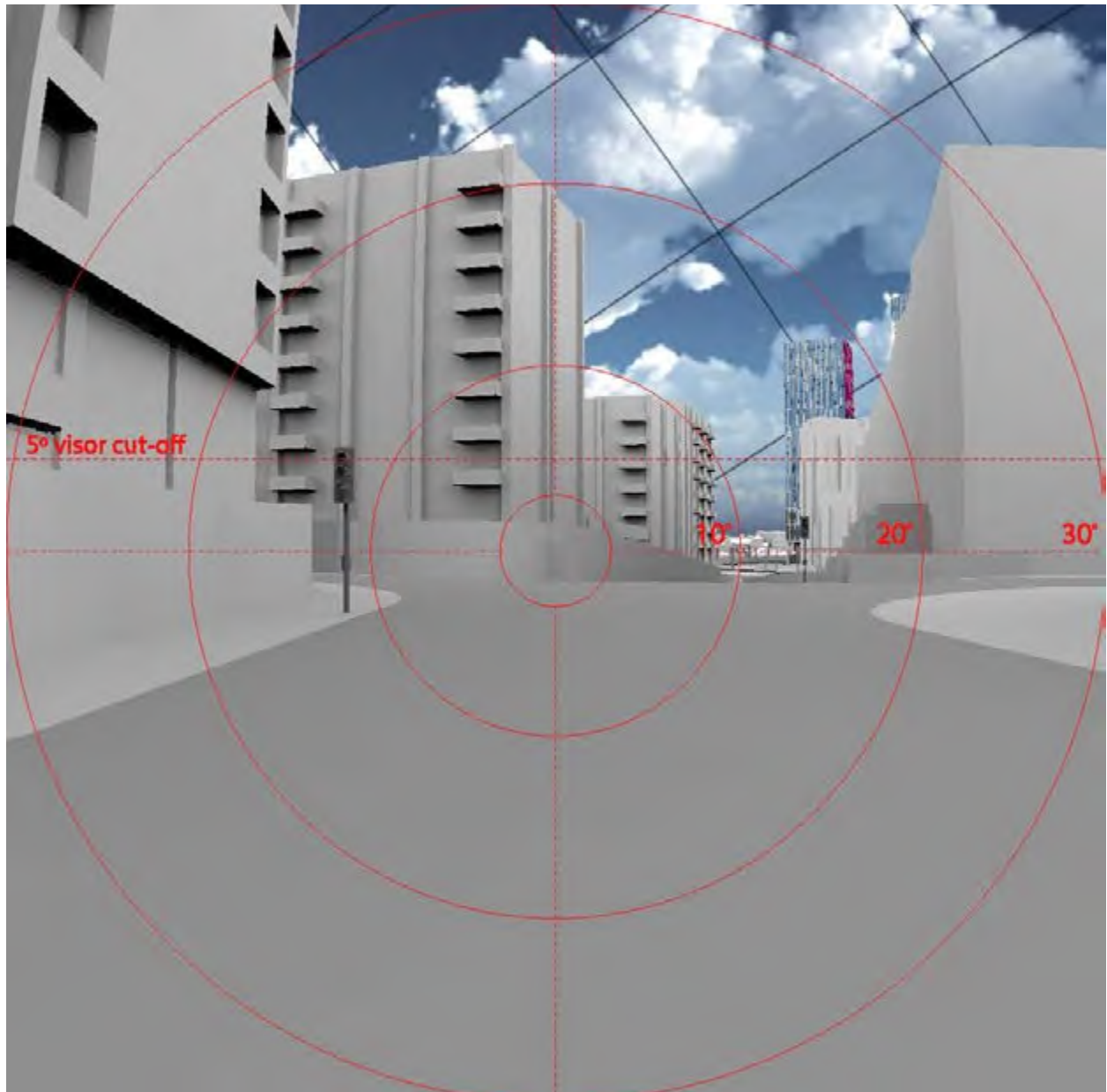


Fig. 26: Solar reflections



7 **SOLAR GLARE ASSESSMENT**

RS - ROLLING STREET

RS - Rolling Street Southbound Junction (with Middlewood Street)



Fig. 27: Junction Location



Fig. 28: Junction view



Fig. 29: Viewpoints

Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RS - ROLLING STREET JUNCTION (WITH MIDDLEWOOD STREET)
LOOKING FORWARD

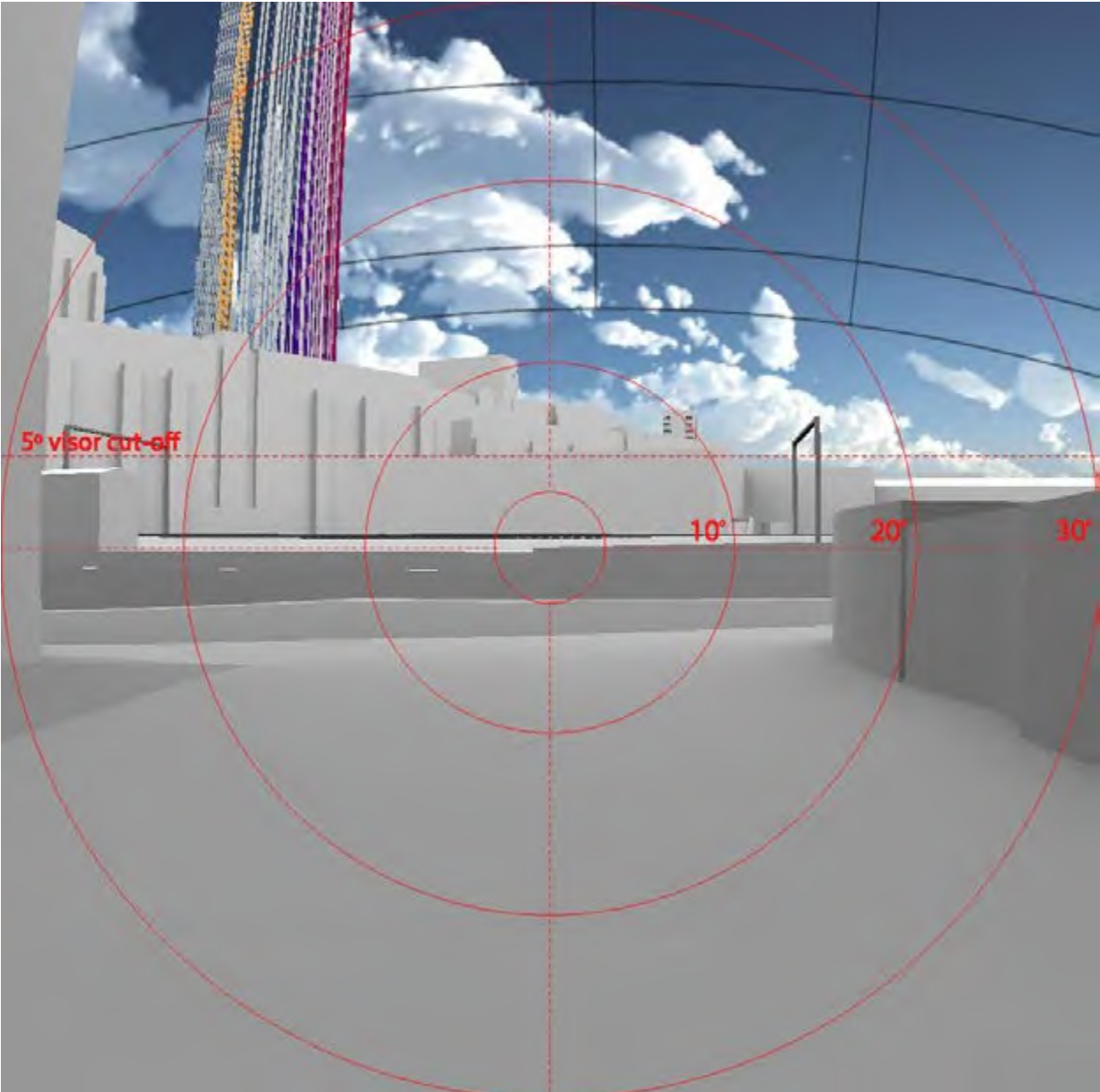


Fig. 30: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RS - ROLLING STREET JUNCTION (WITH MIDDLEWOOD STREET)
LOOKING FORWARD

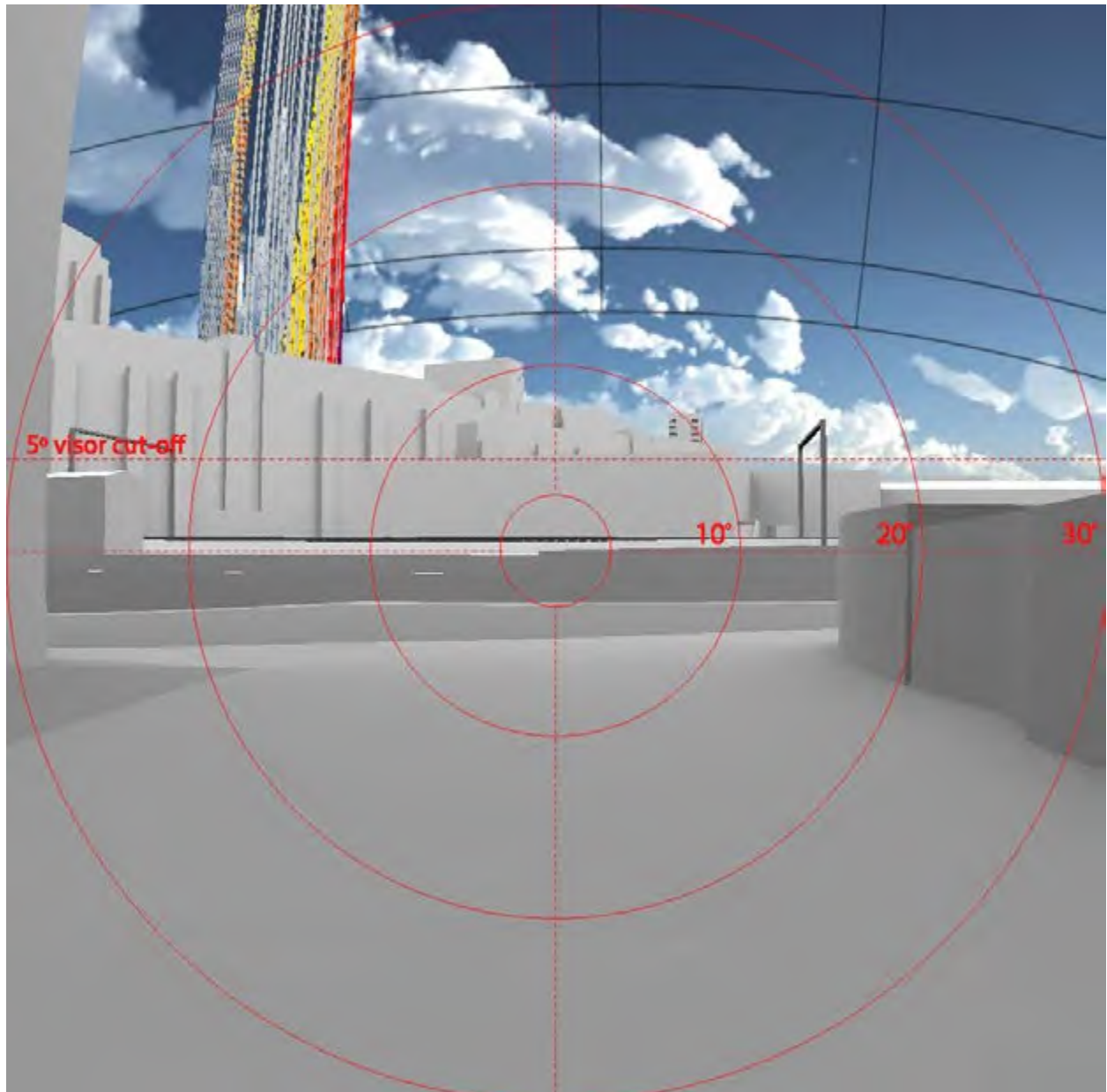


Fig. 31: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RS - ROLLING STREET JUNCTION (WITH MIDDLEWOOD STREET)
LOOKING FORWARD

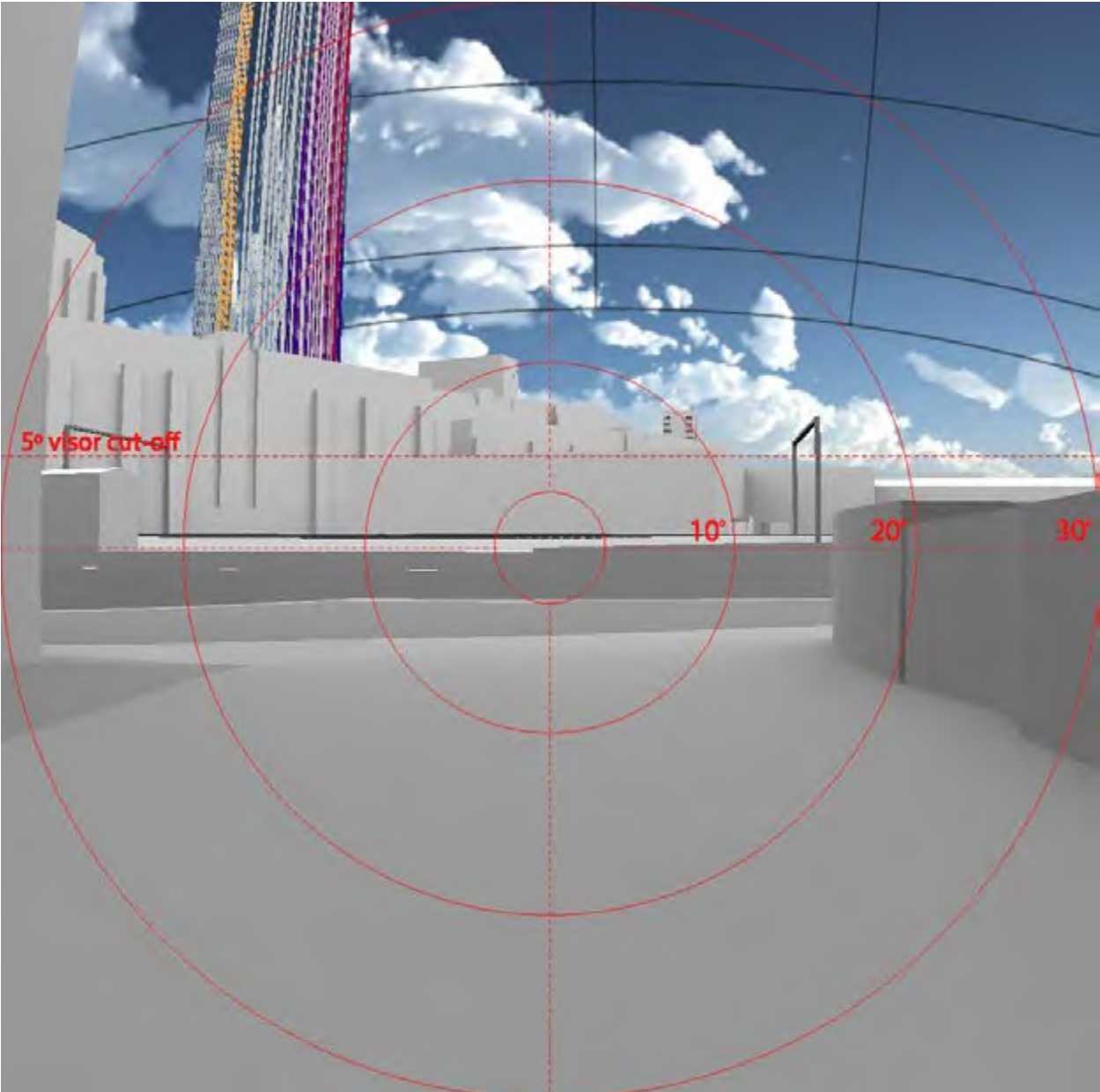
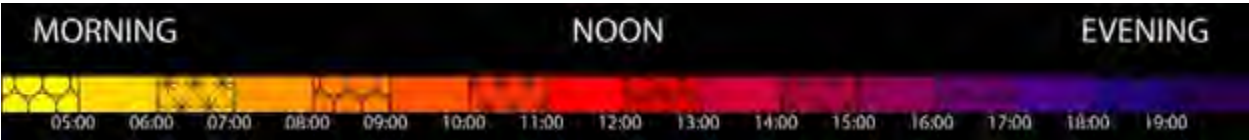


Fig. 32: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RS - ROLLING STREET JUNCTION (WITH MIDDLEWOOD STREET)
LOOKING FORWARD

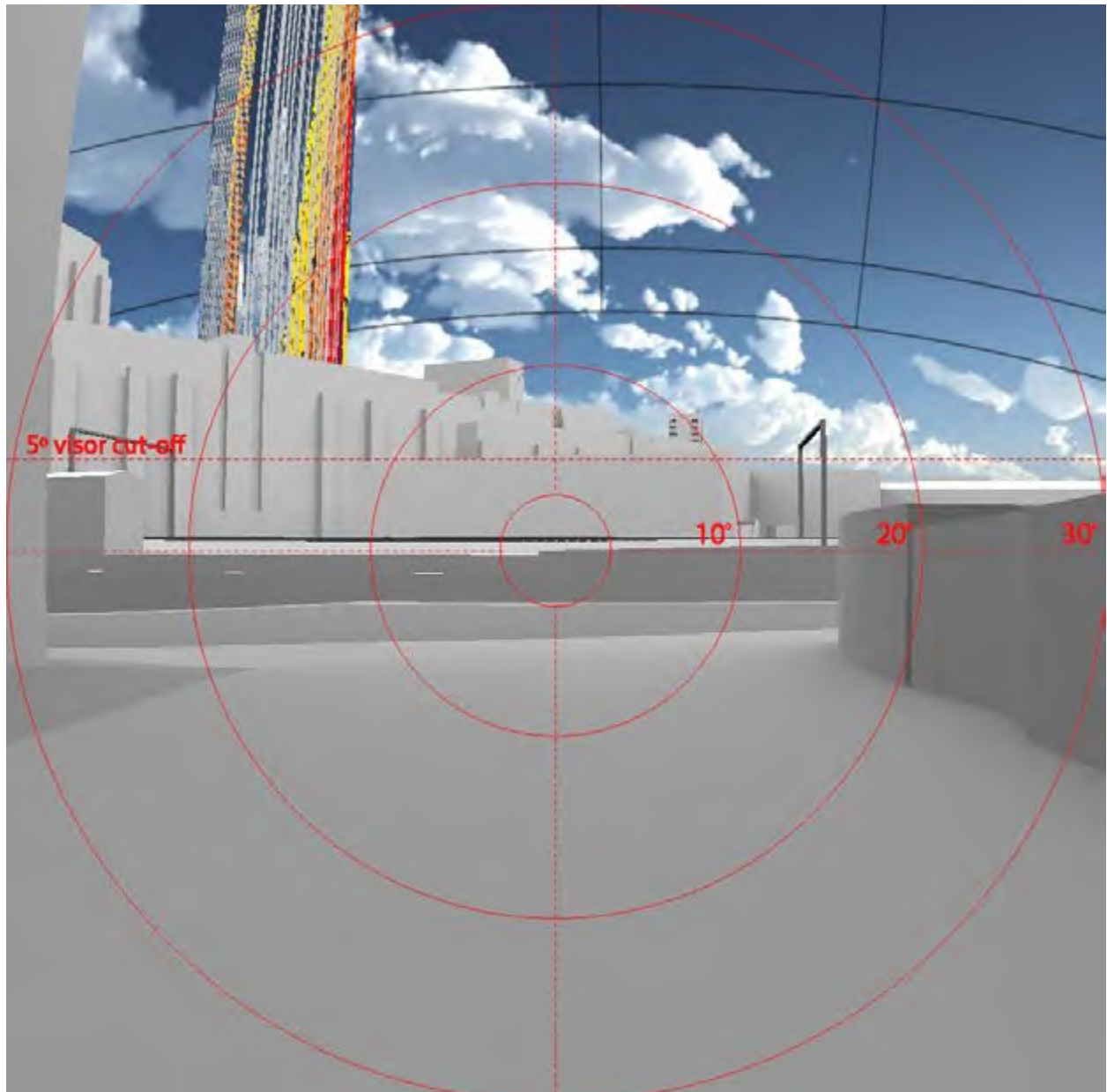


Fig. 33: Solar reflections



8 **SOLAR GLARE ASSESSMENT**

EOL1 - EAST ORDSALL LANE 1

EOL1 - East Ordsall Lane Southbound Pedestrian Cross



Fig. 34: Junction Location



Fig. 35: Traffic Light Location



Fig. 36: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT

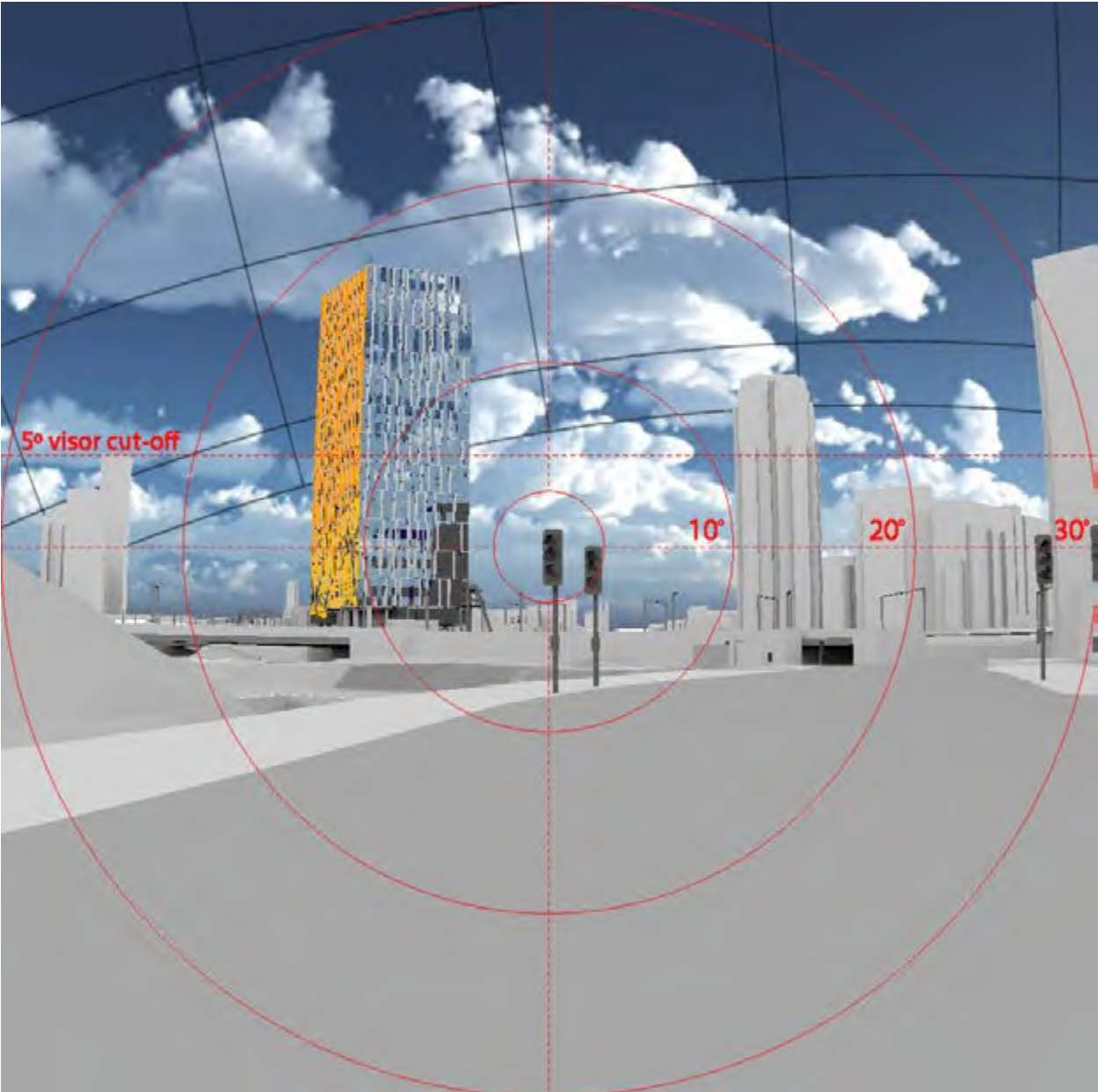


Fig. 37: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT**

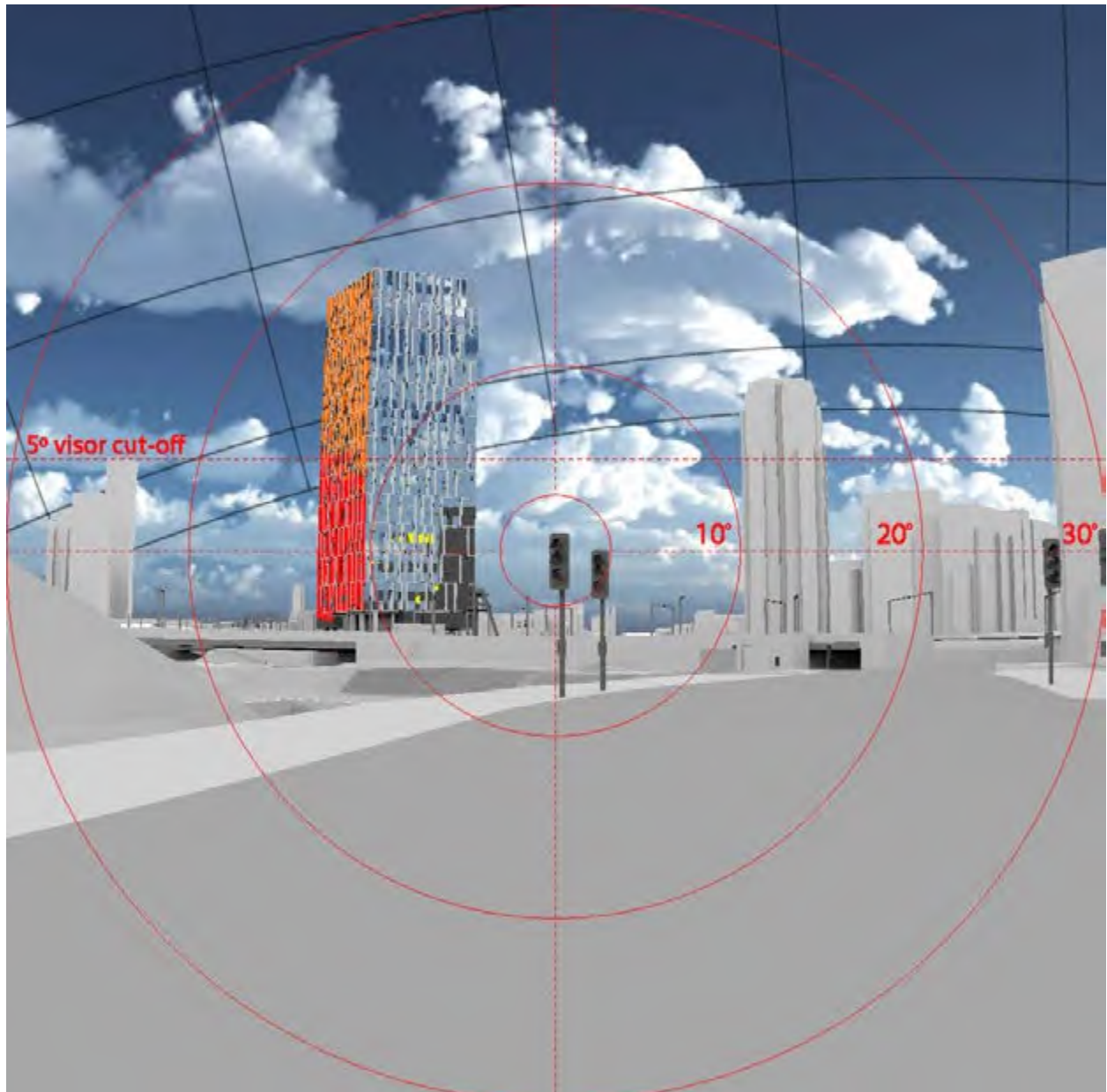


Fig. 38: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT



Fig. 39: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT

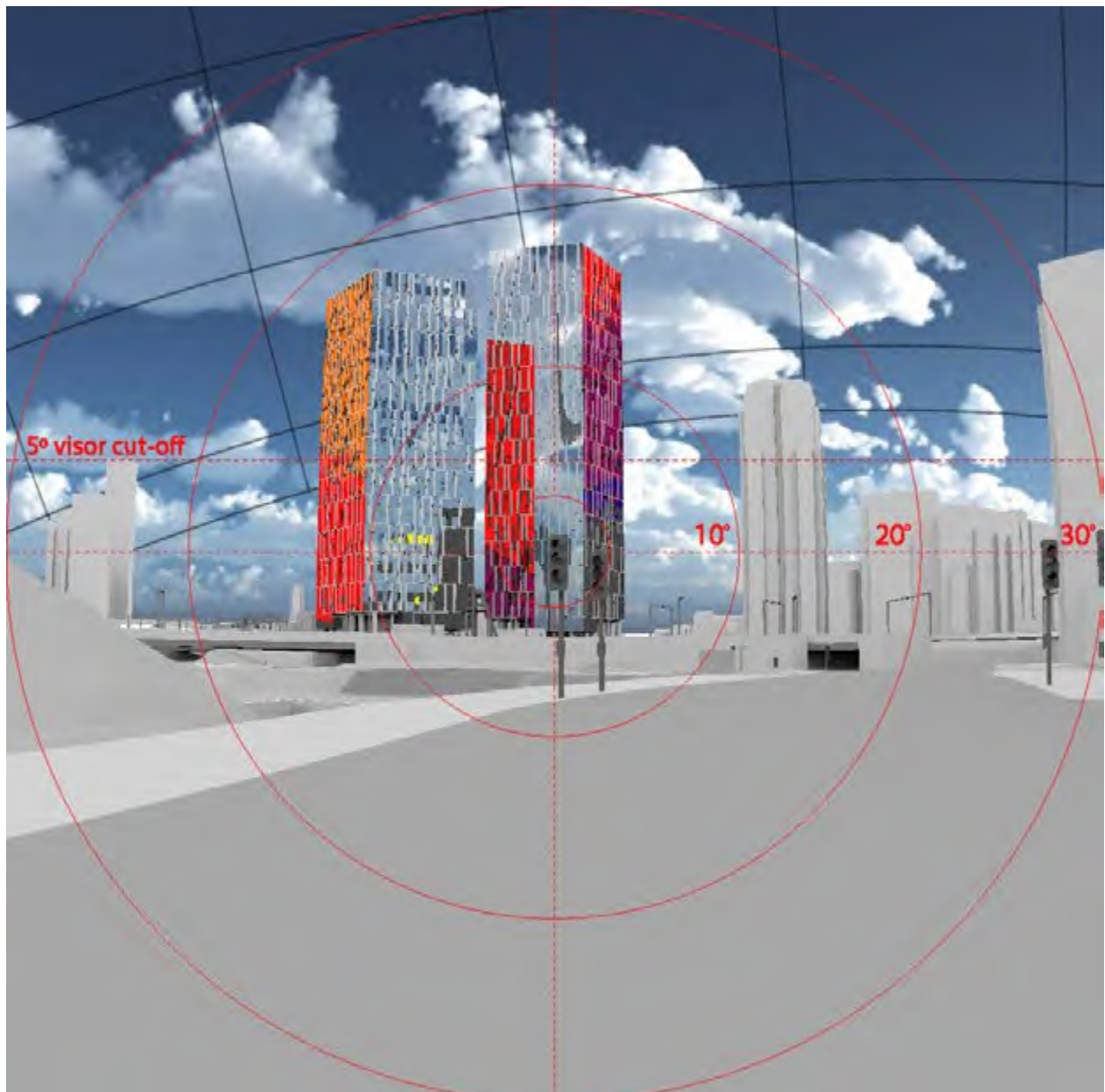


Fig. 40: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL1B - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT RIGHT TRAFFIC LIGHT

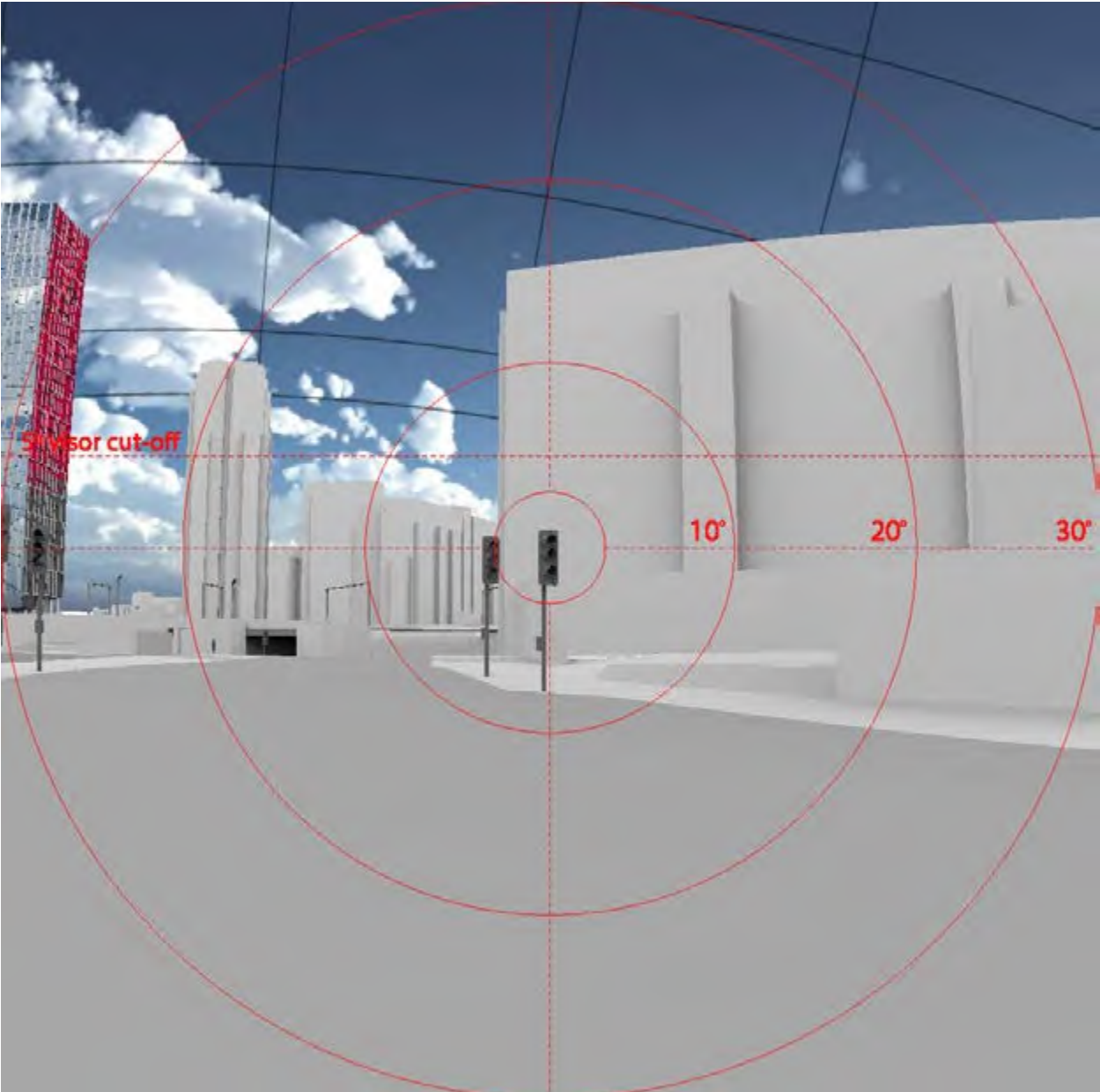


Fig. 41: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL1B - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT RIGHT TRAFFIC LIGHT

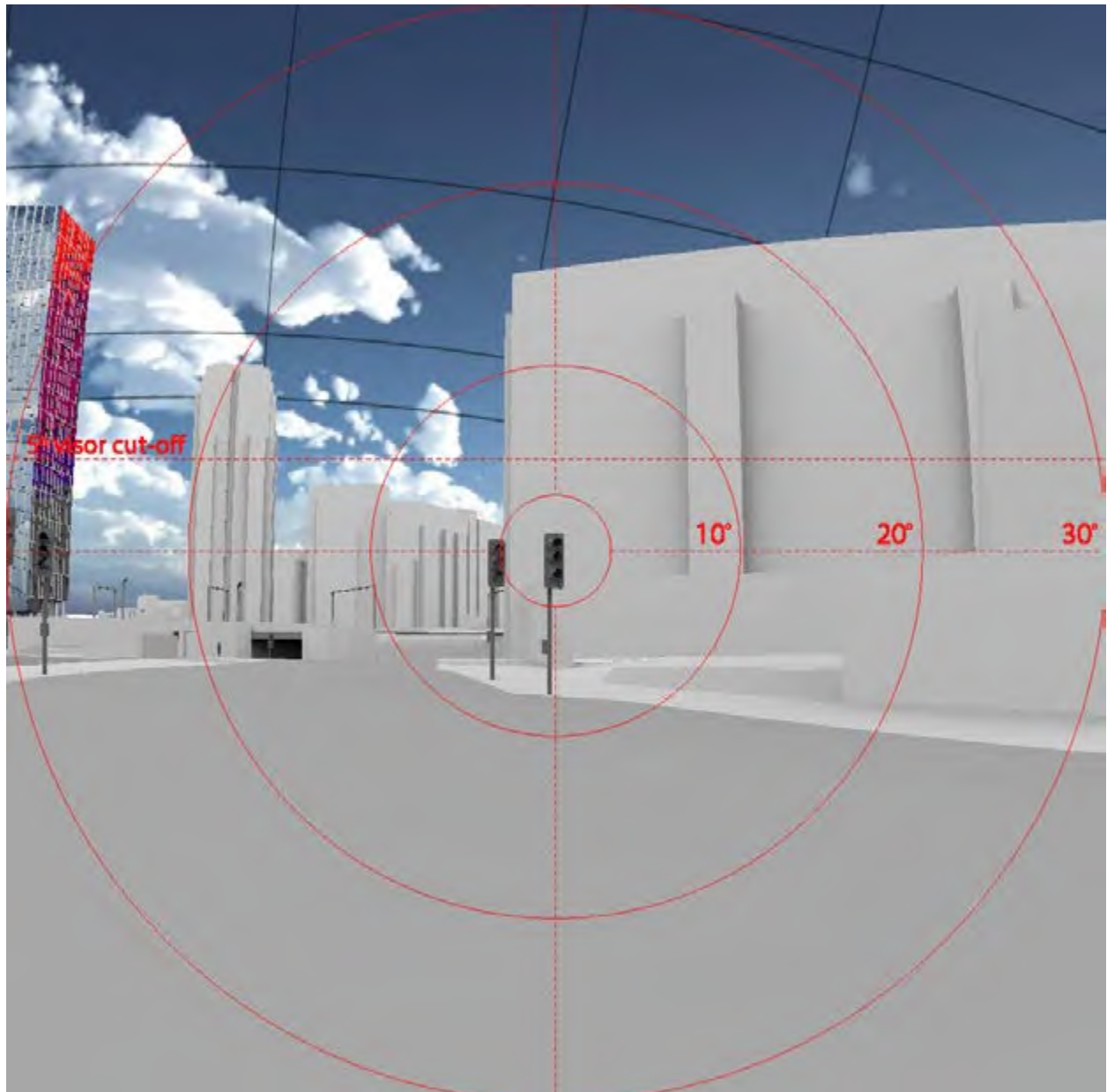


Fig. 42: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT

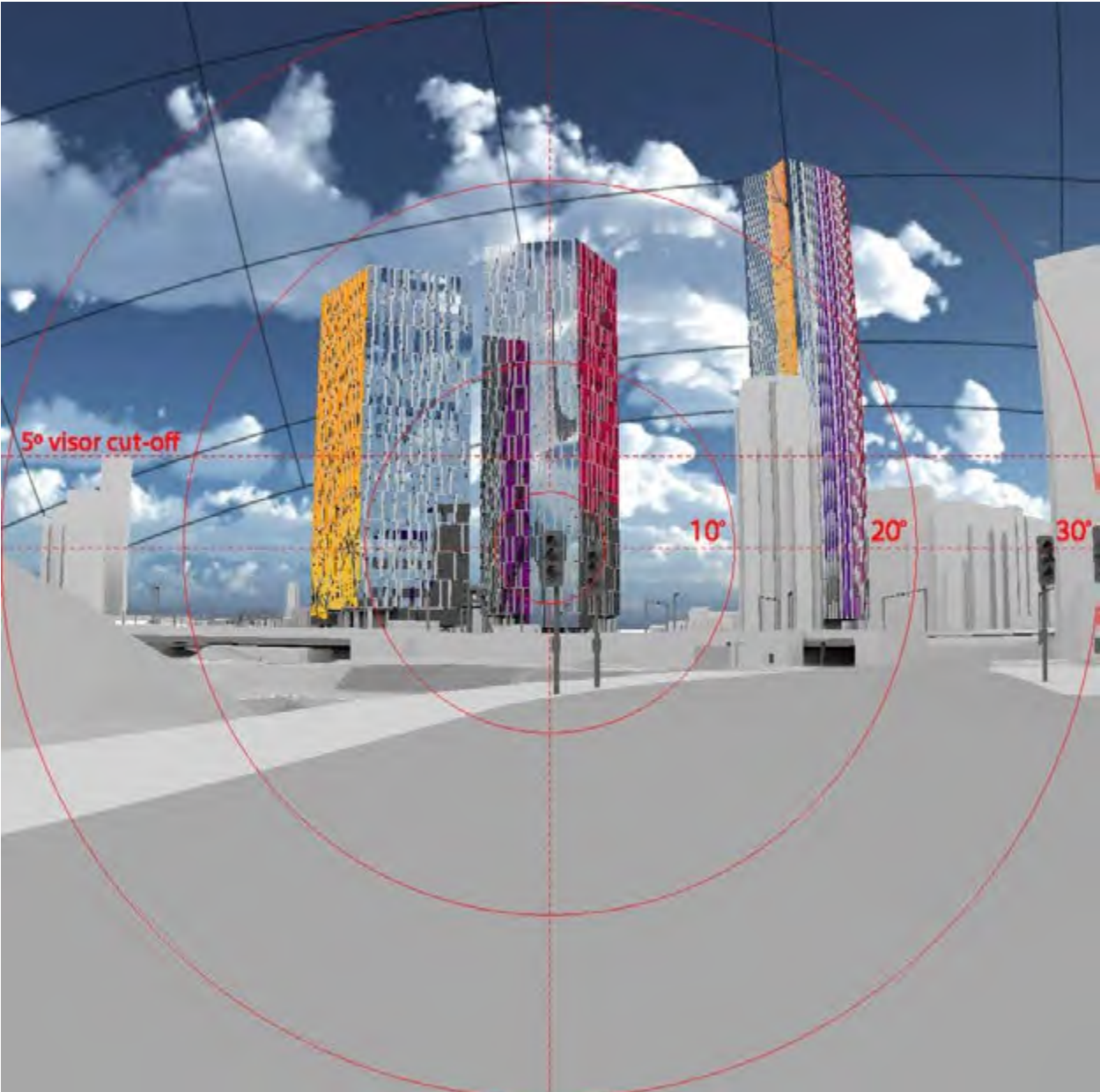
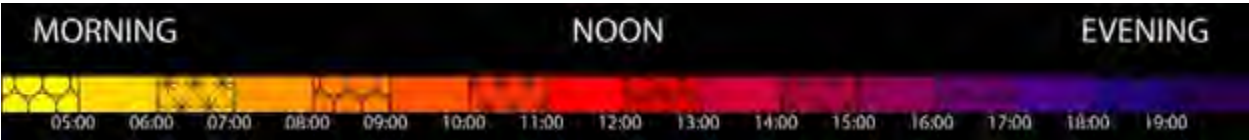


Fig. 43: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT

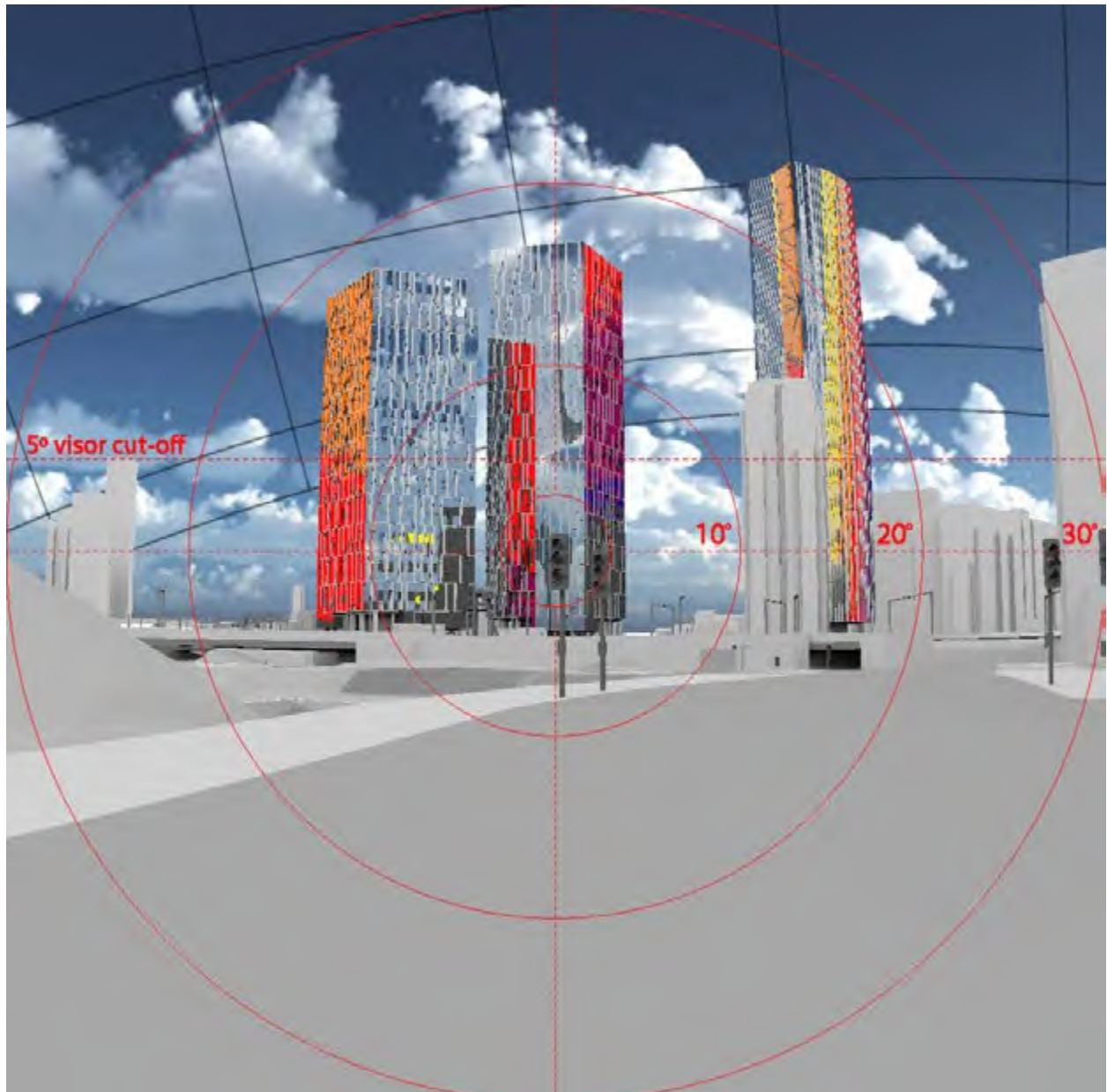


Fig. 44: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL1B - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT RIGHT TRAFFIC LIGHT

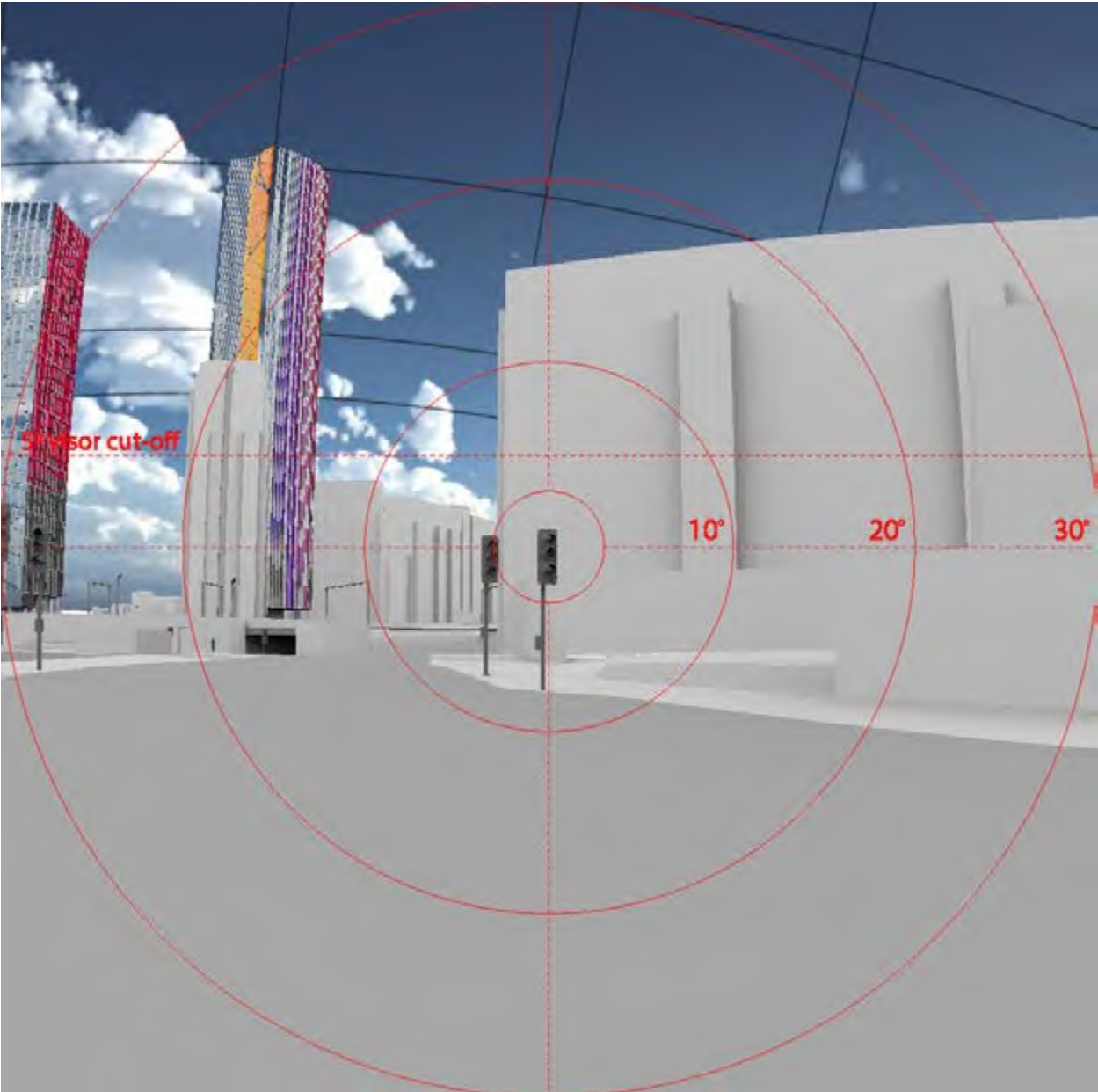


Fig. 45: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT EOL1B - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT RIGHT TRAFFIC LIGHT**

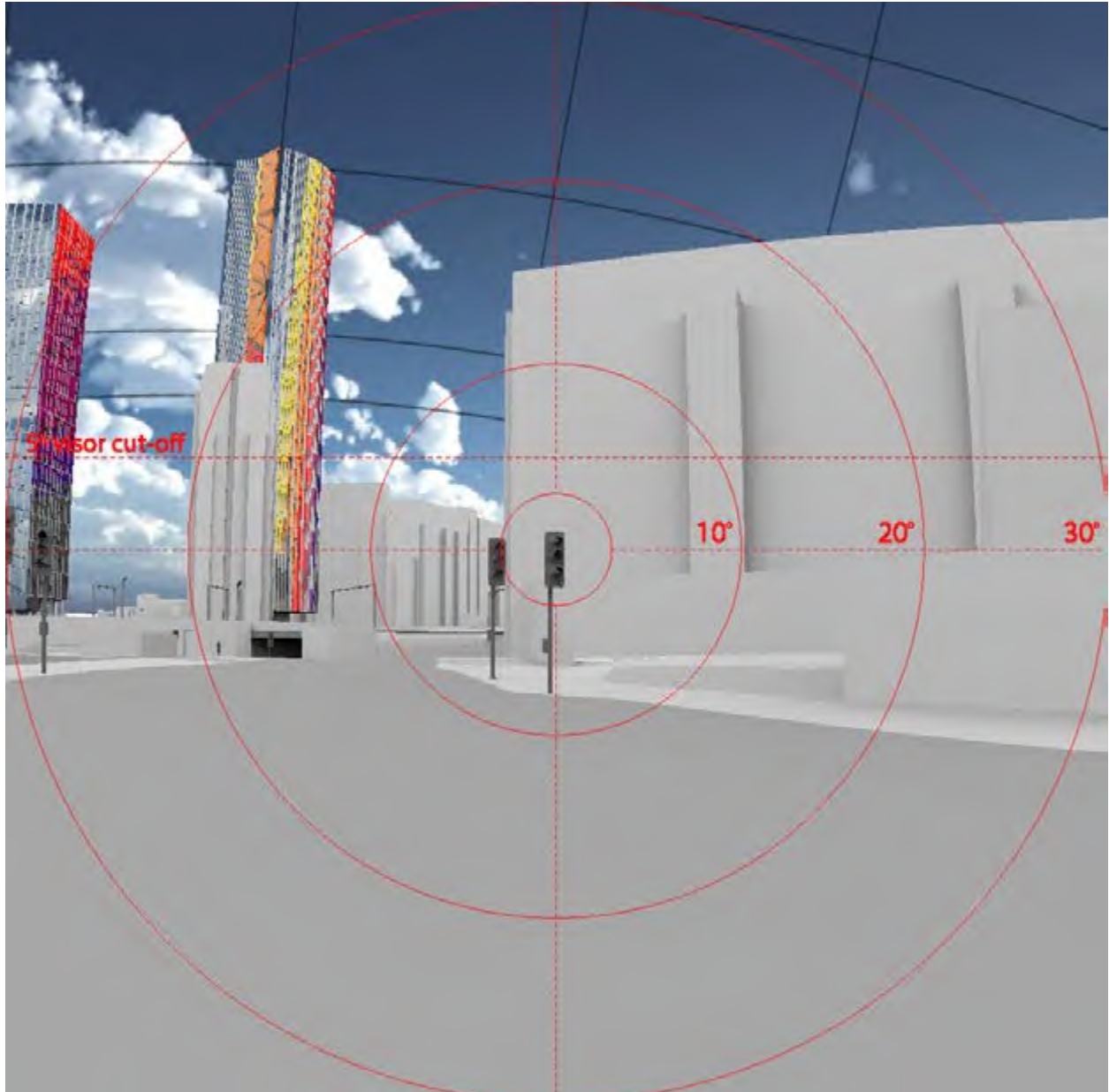


Fig. 46: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT

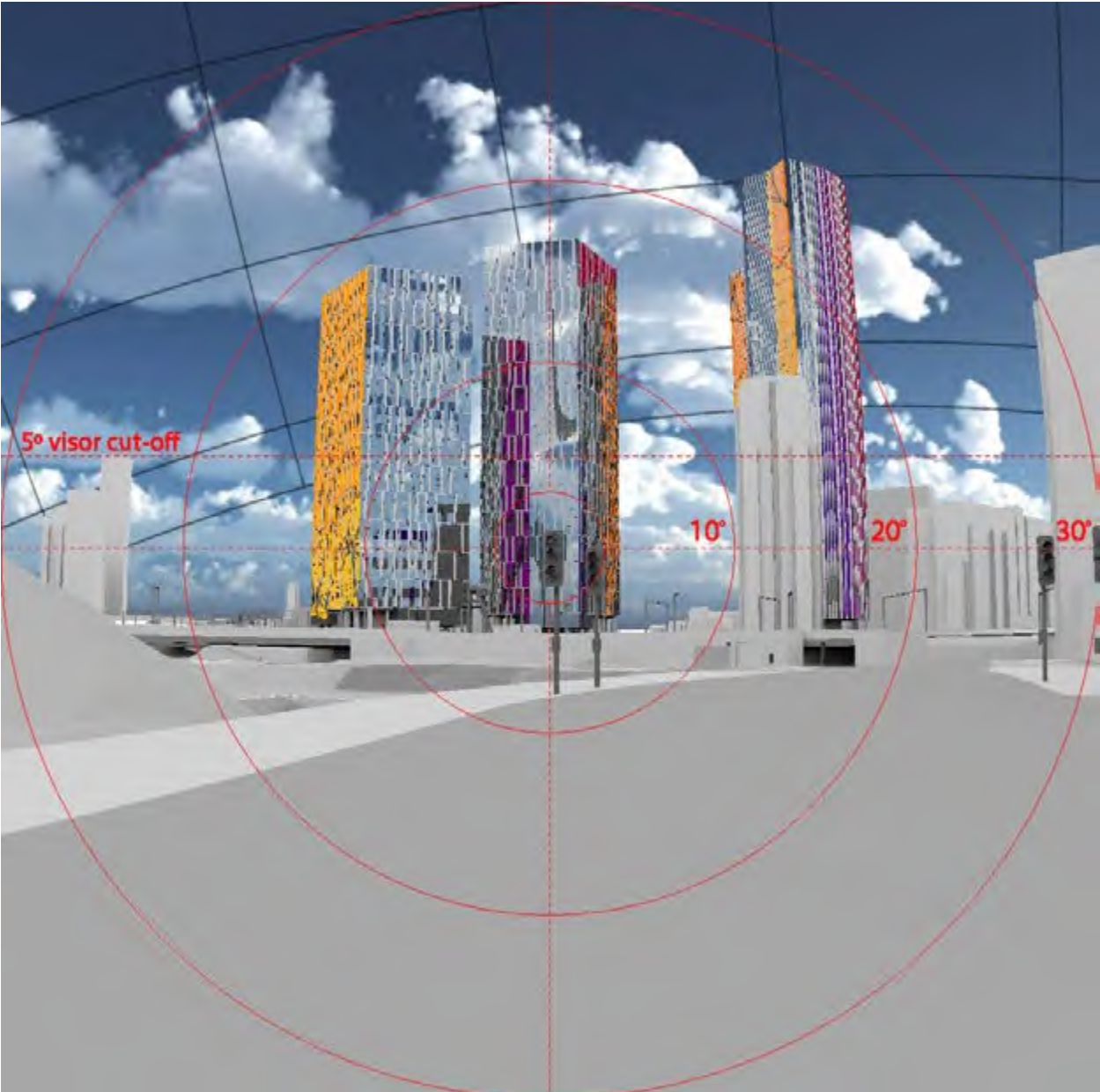
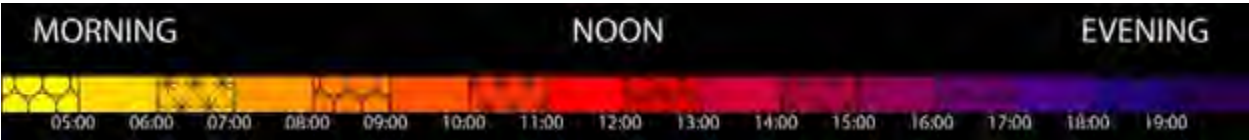


Fig. 47: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL1A - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT LEFT TRAFFIC LIGHT

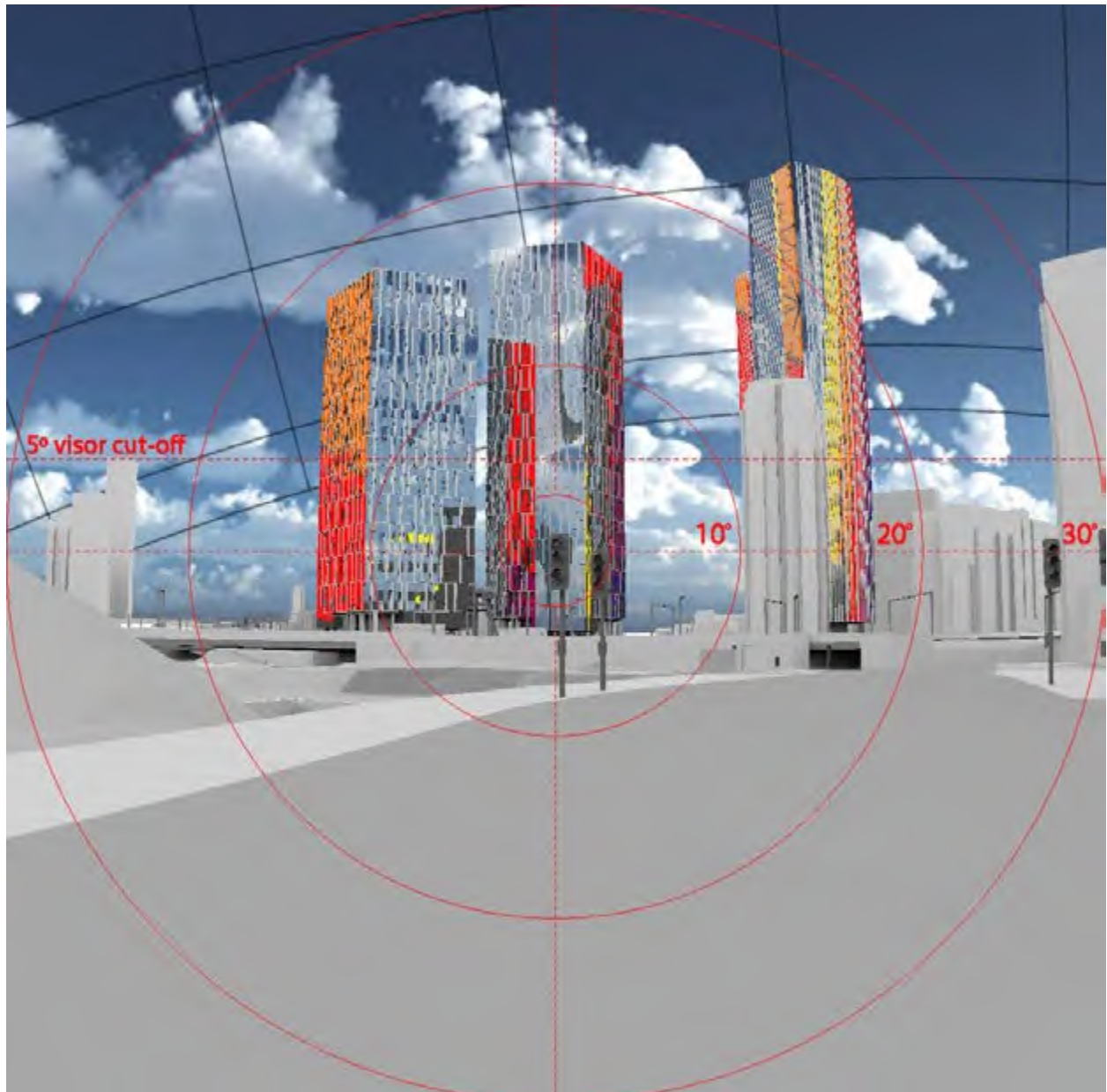


Fig. 48: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL1B - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT RIGHT TRAFFIC LIGHT

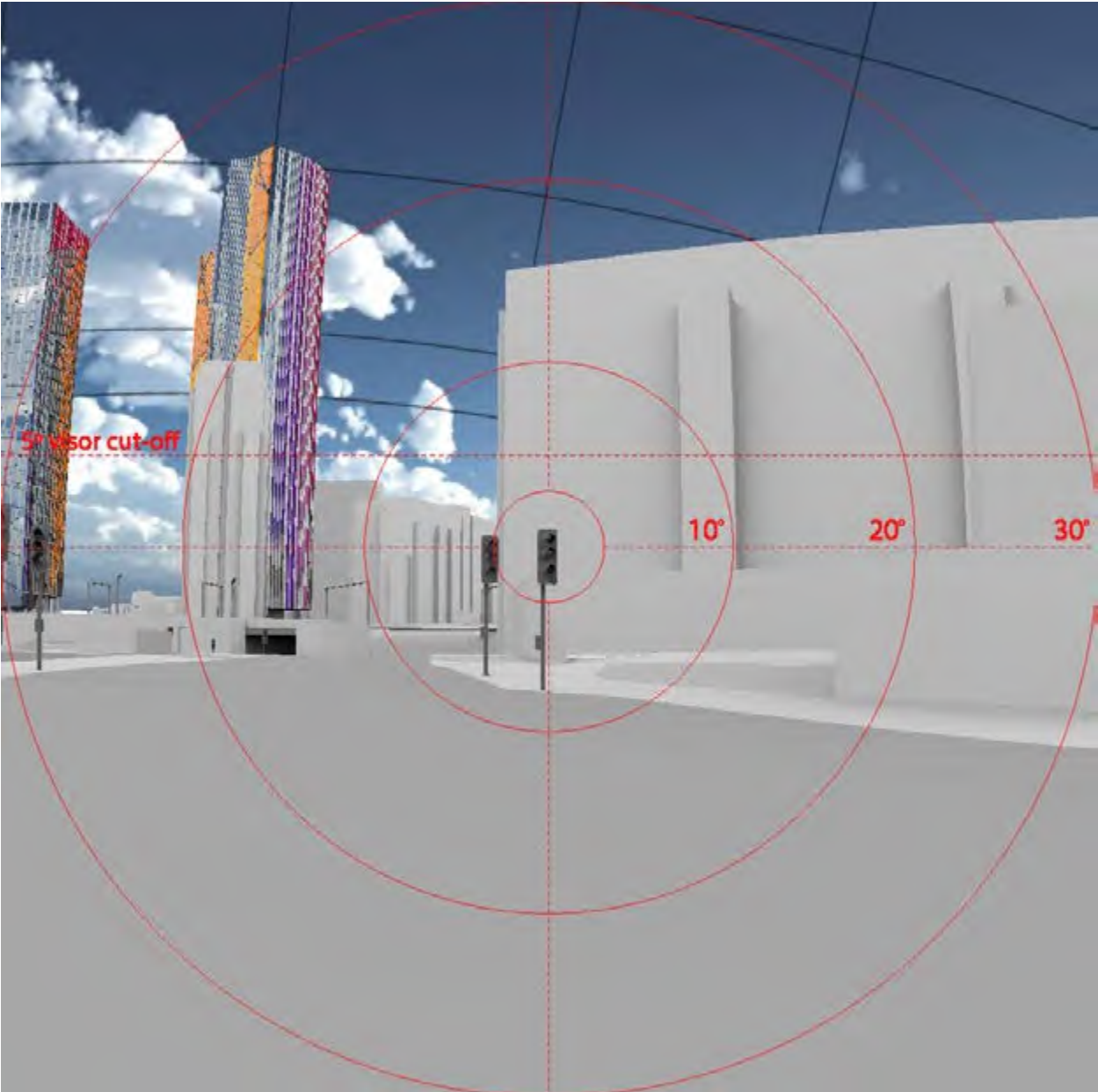


Fig. 49: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL1B - EAST ORDSALL STREET PEDESTRIAN CROSSING
LOOKING AT RIGHT TRAFFIC LIGHT

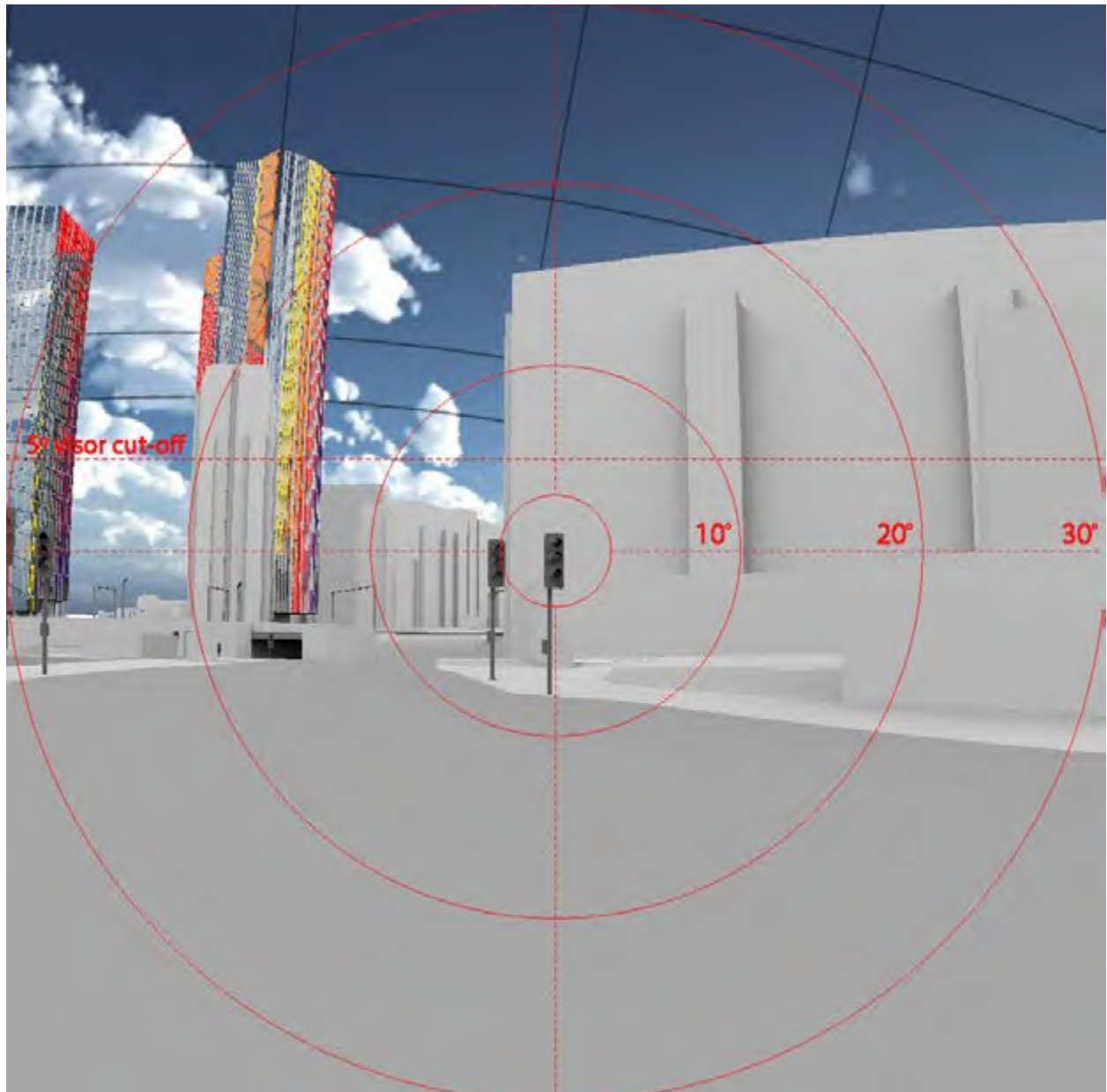


Fig. 50: Solar reflections



9 **SOLAR GLARE ASSESSMENT**
EOL2 - EAST ORDSALL LANE 2

EOL2 - East Ordsall Land Southbound Junction (with Middlewood Street/
Hampson Road)



Fig. 51: Junction Location



Fig. 52: Traffic Light Location

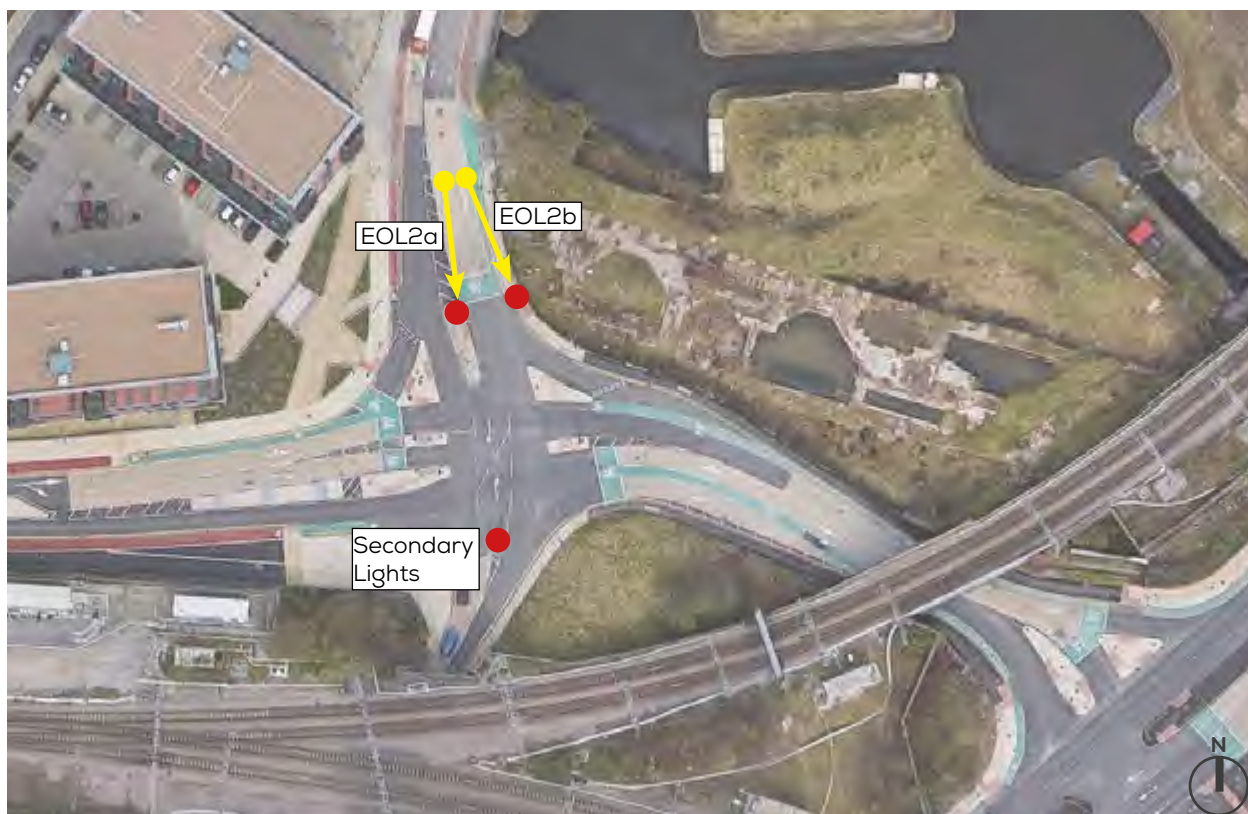


Fig. 53: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

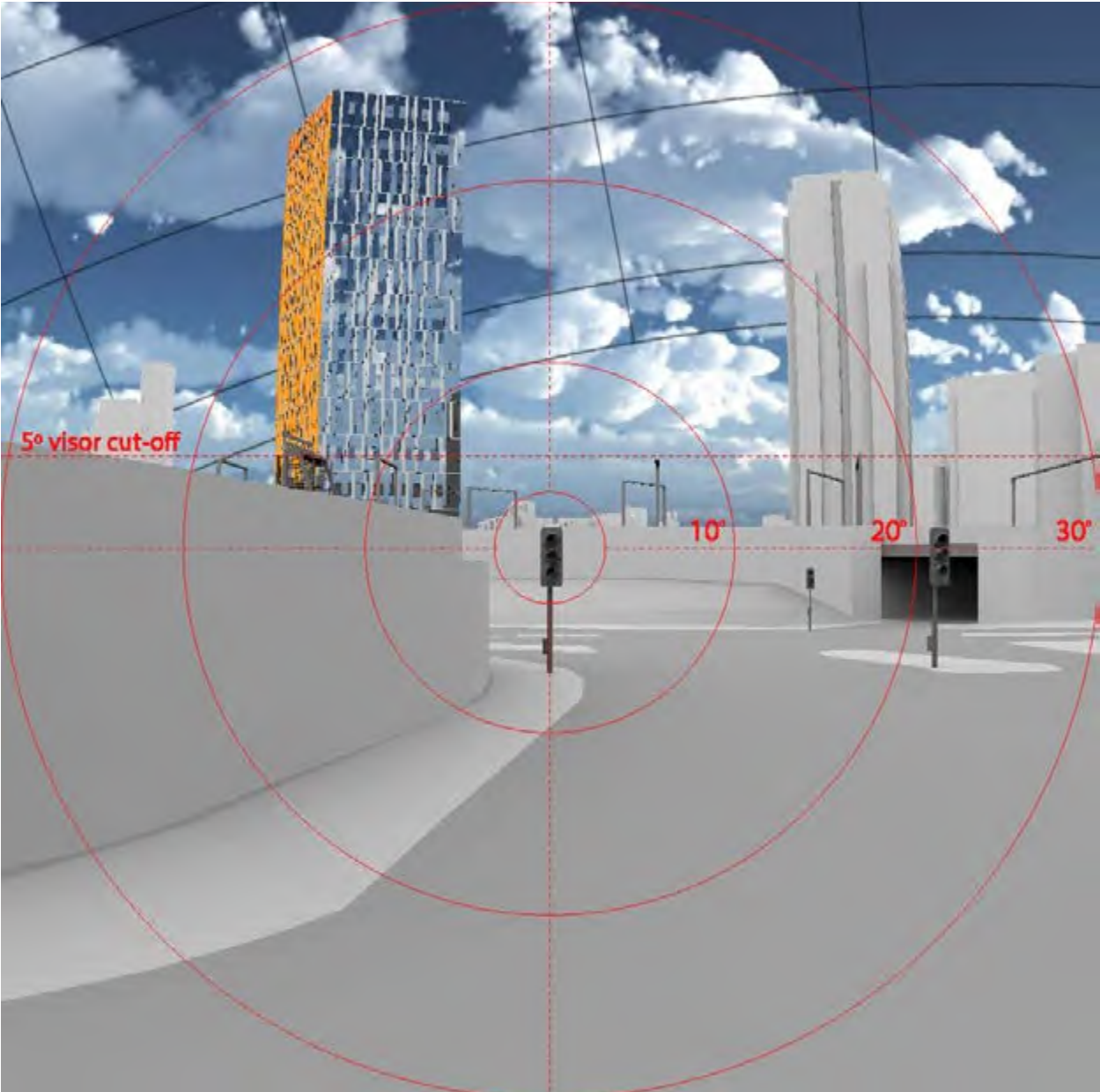


Fig. 54: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

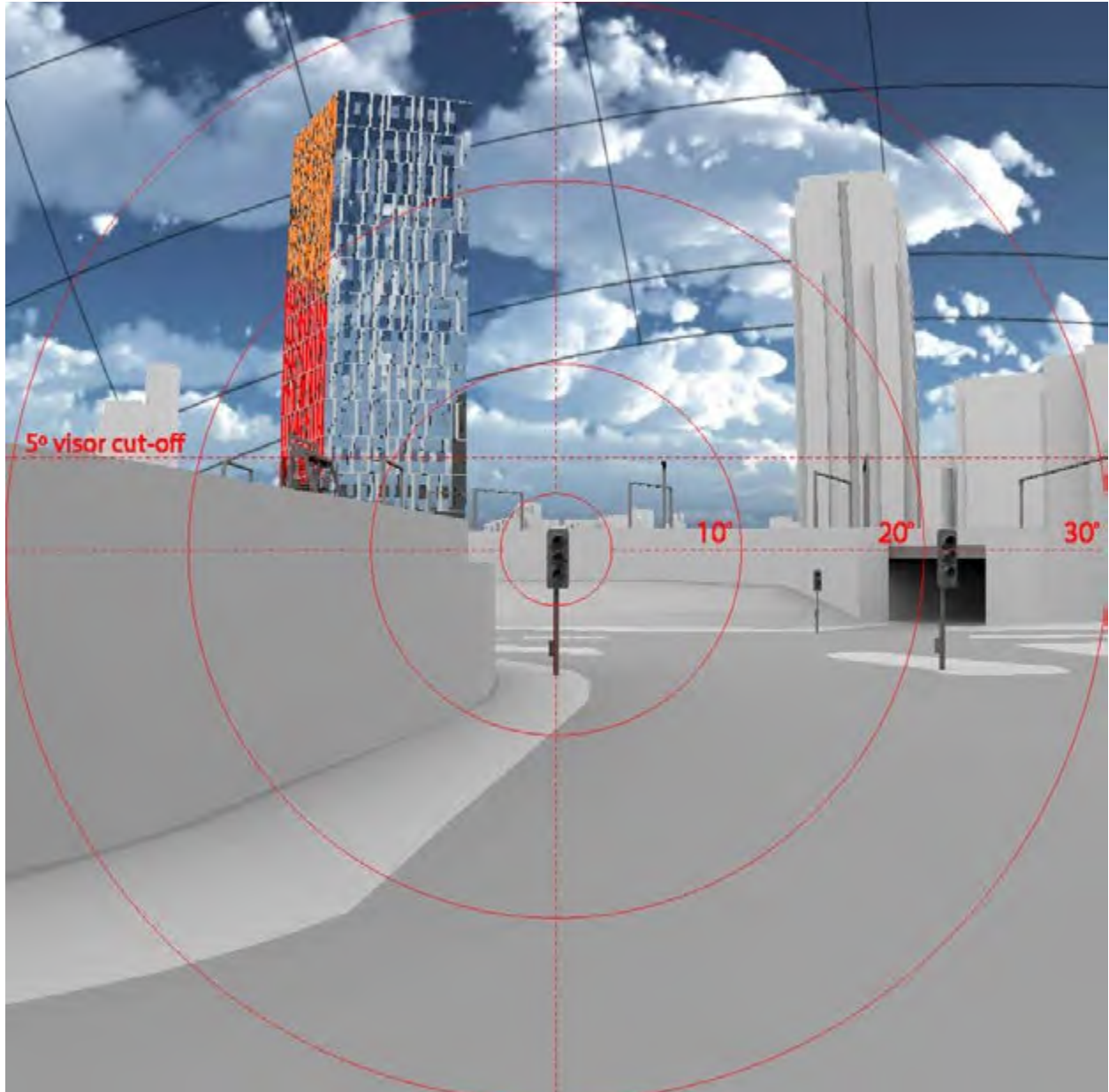


Fig. 55: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

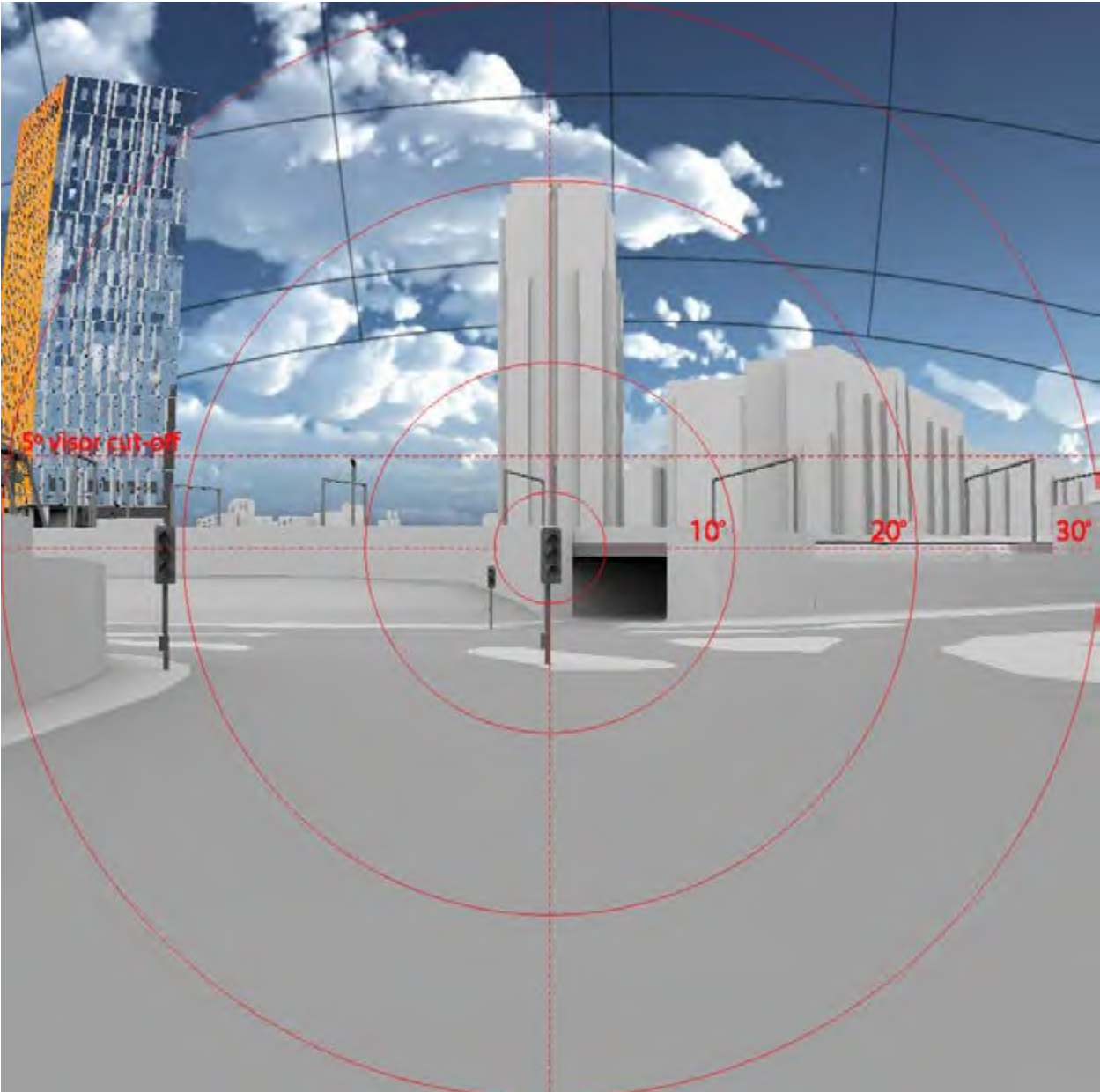


Fig. 56: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

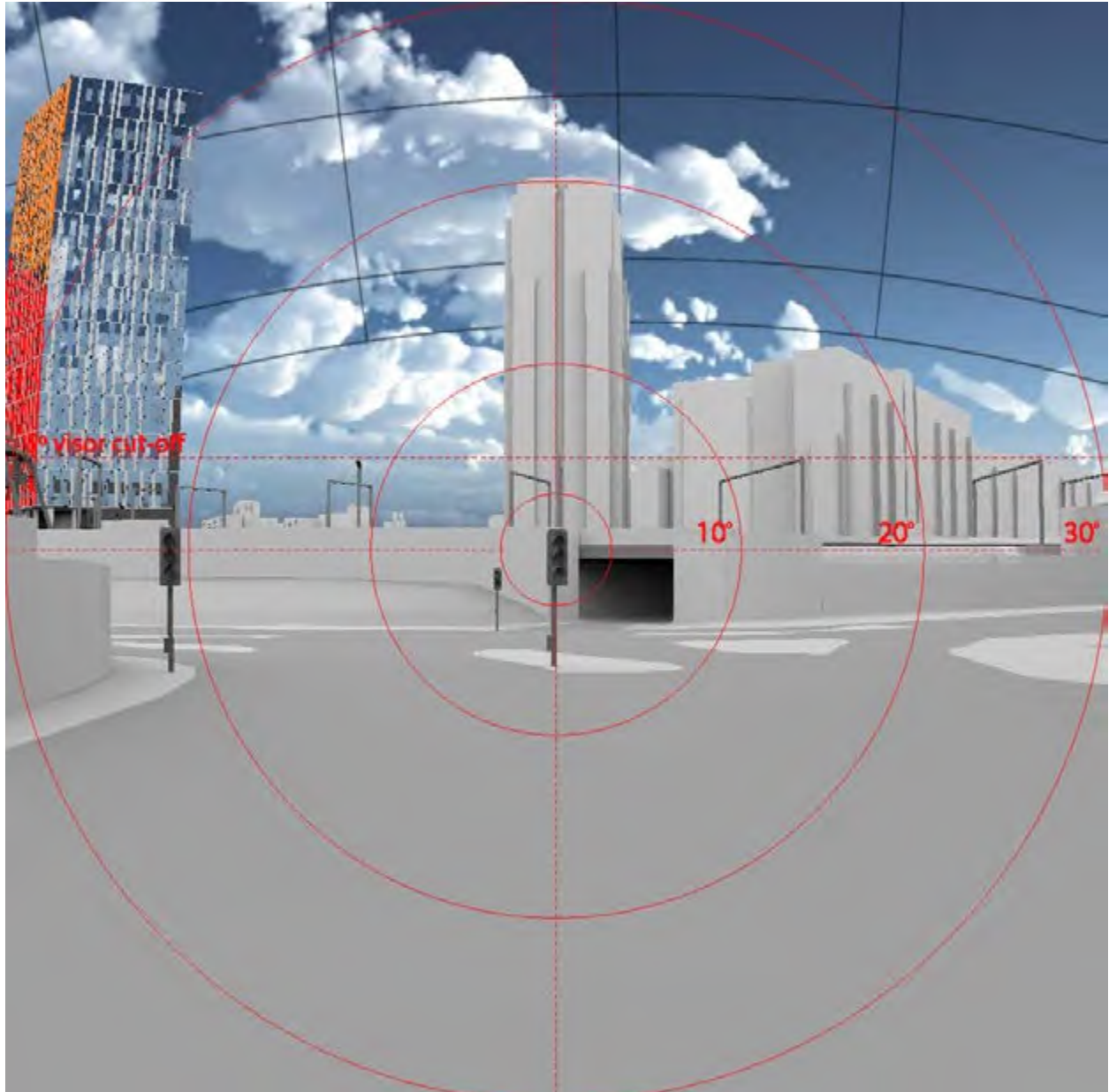


Fig. 57: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

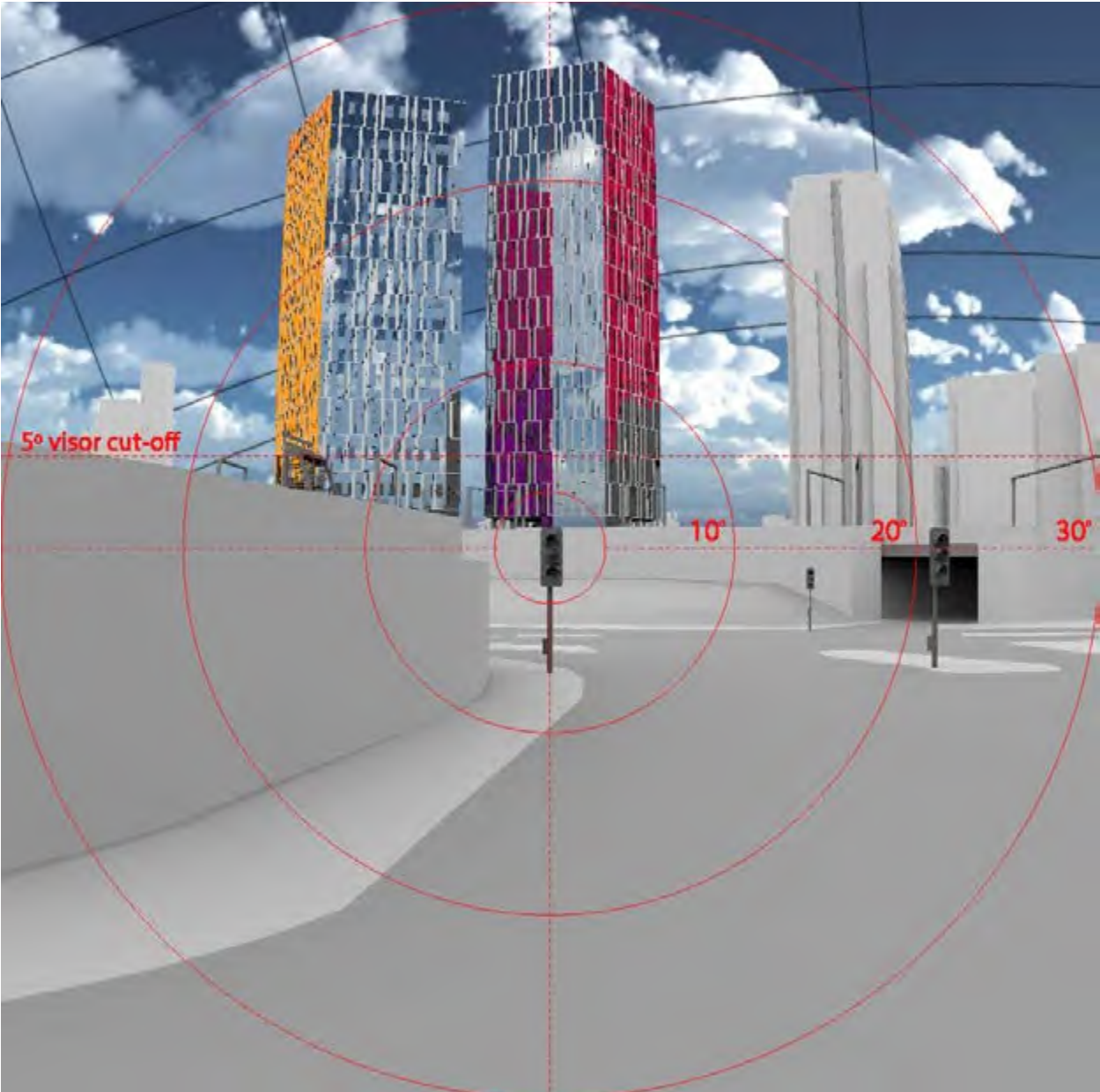
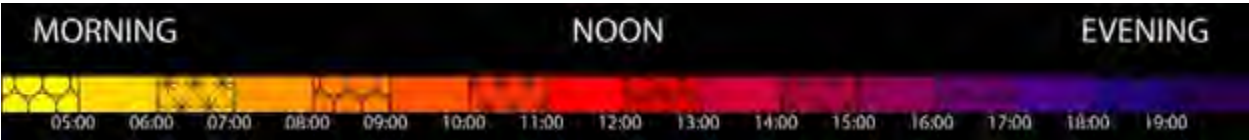


Fig. 58: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

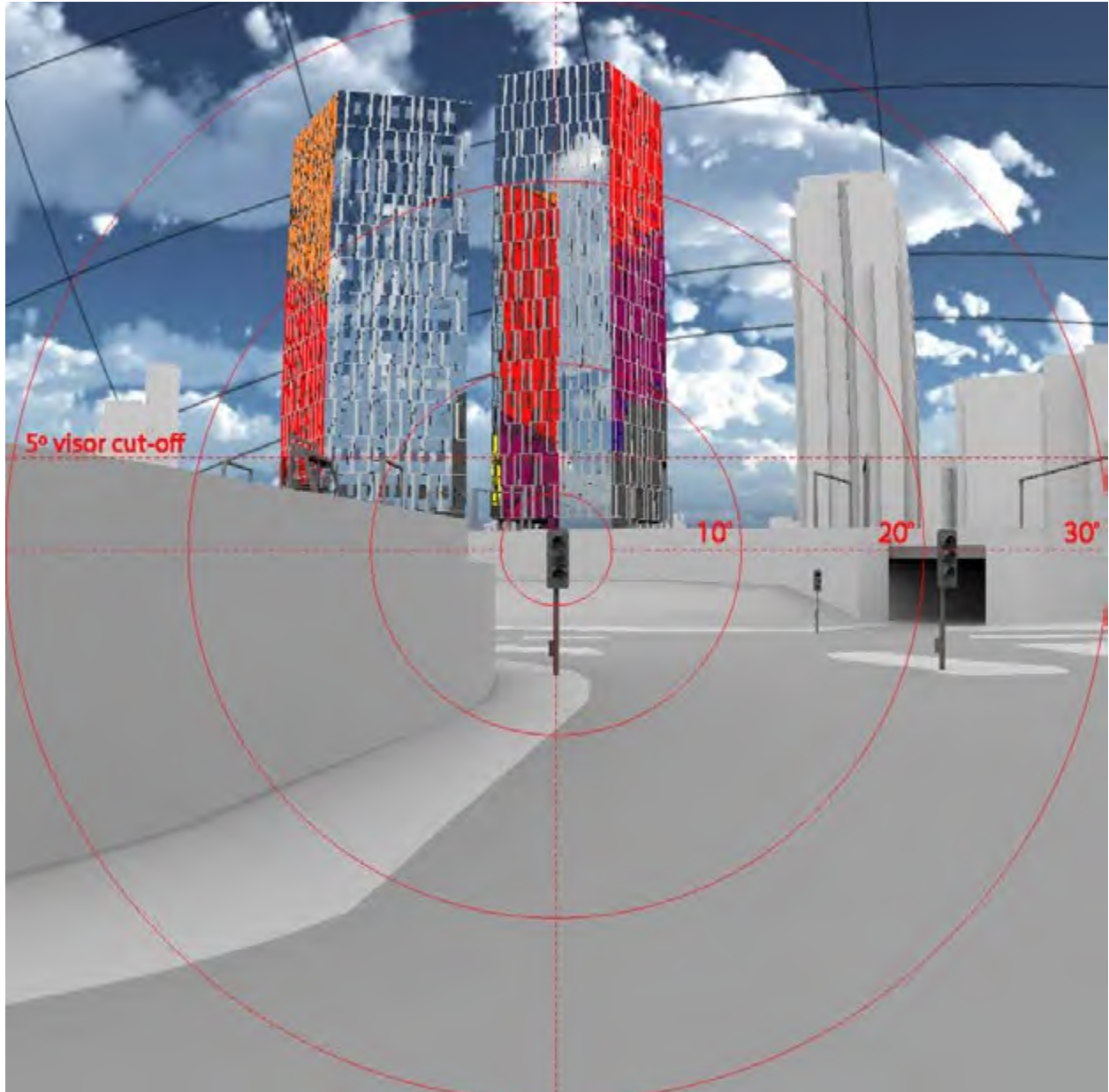


Fig. 59: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

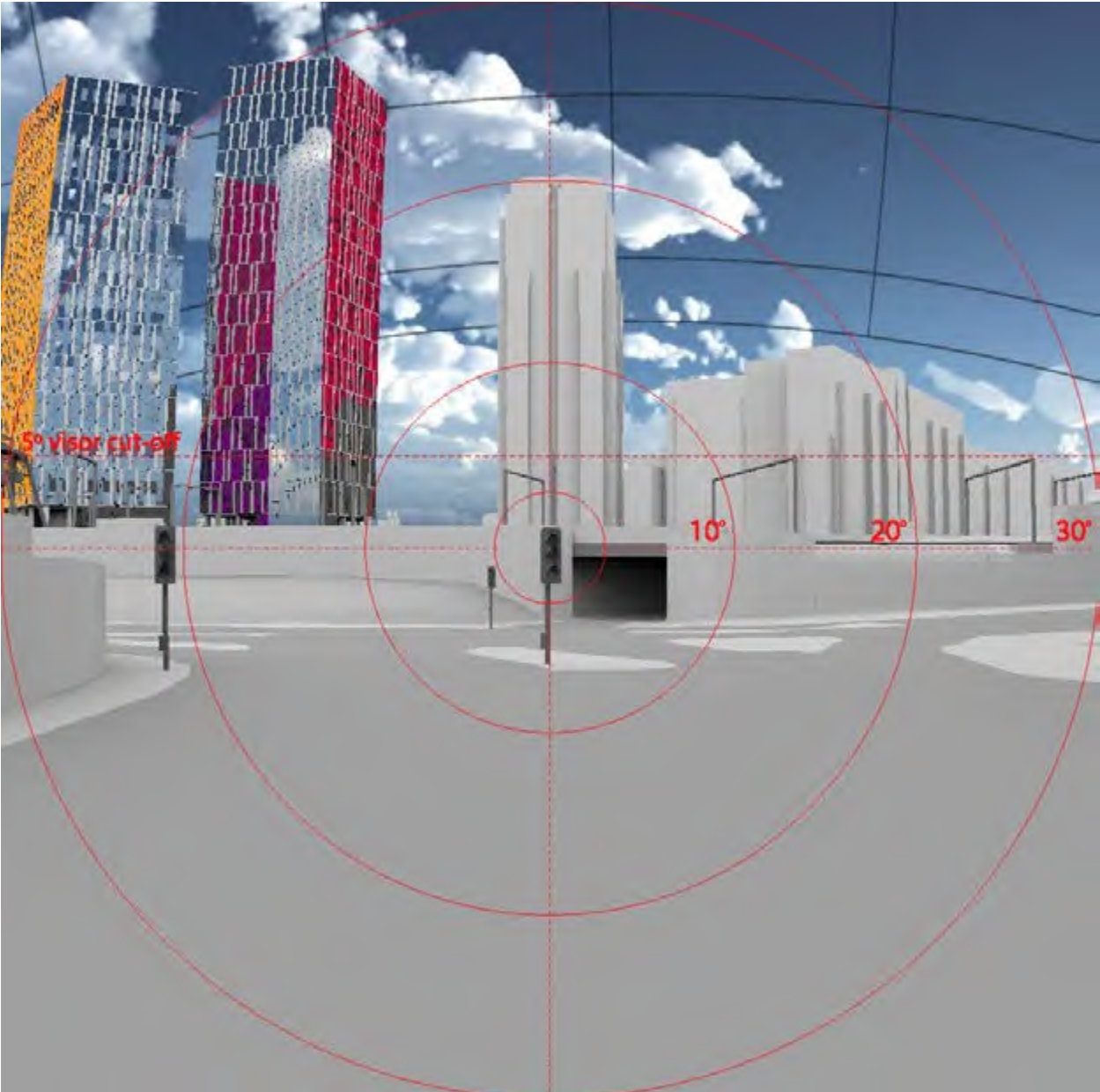


Fig. 60: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

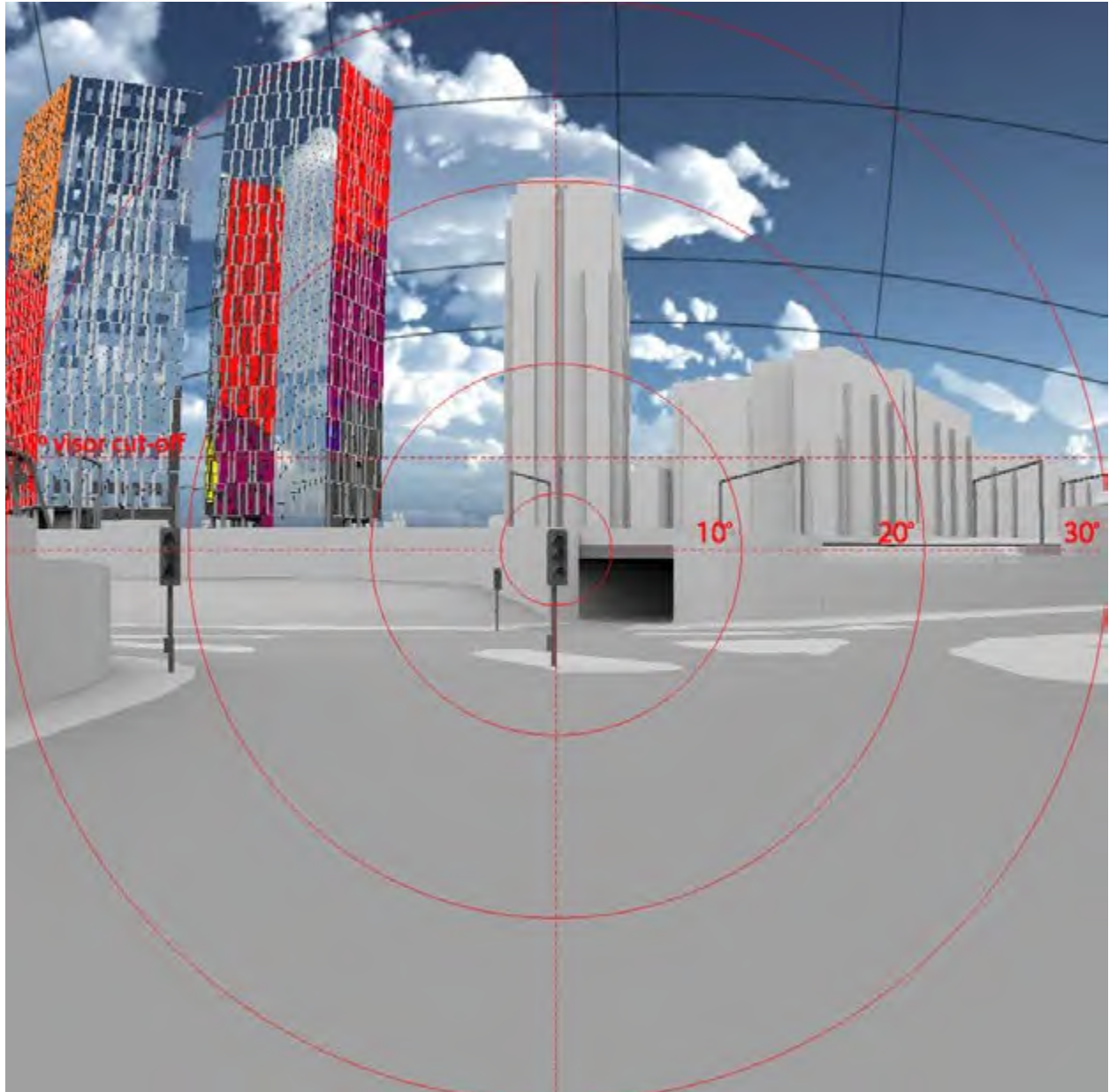


Fig. 61: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

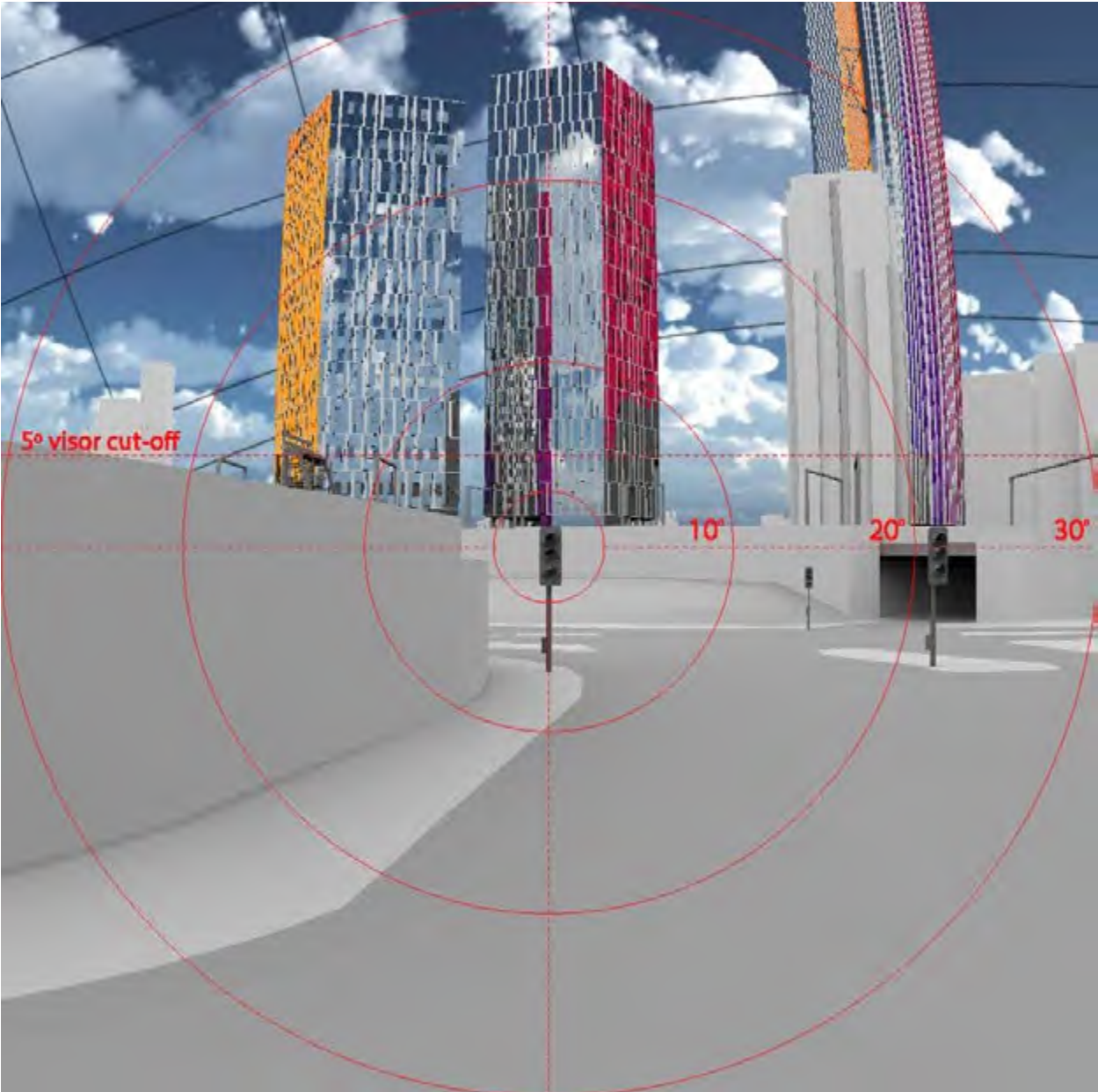


Fig. 62: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

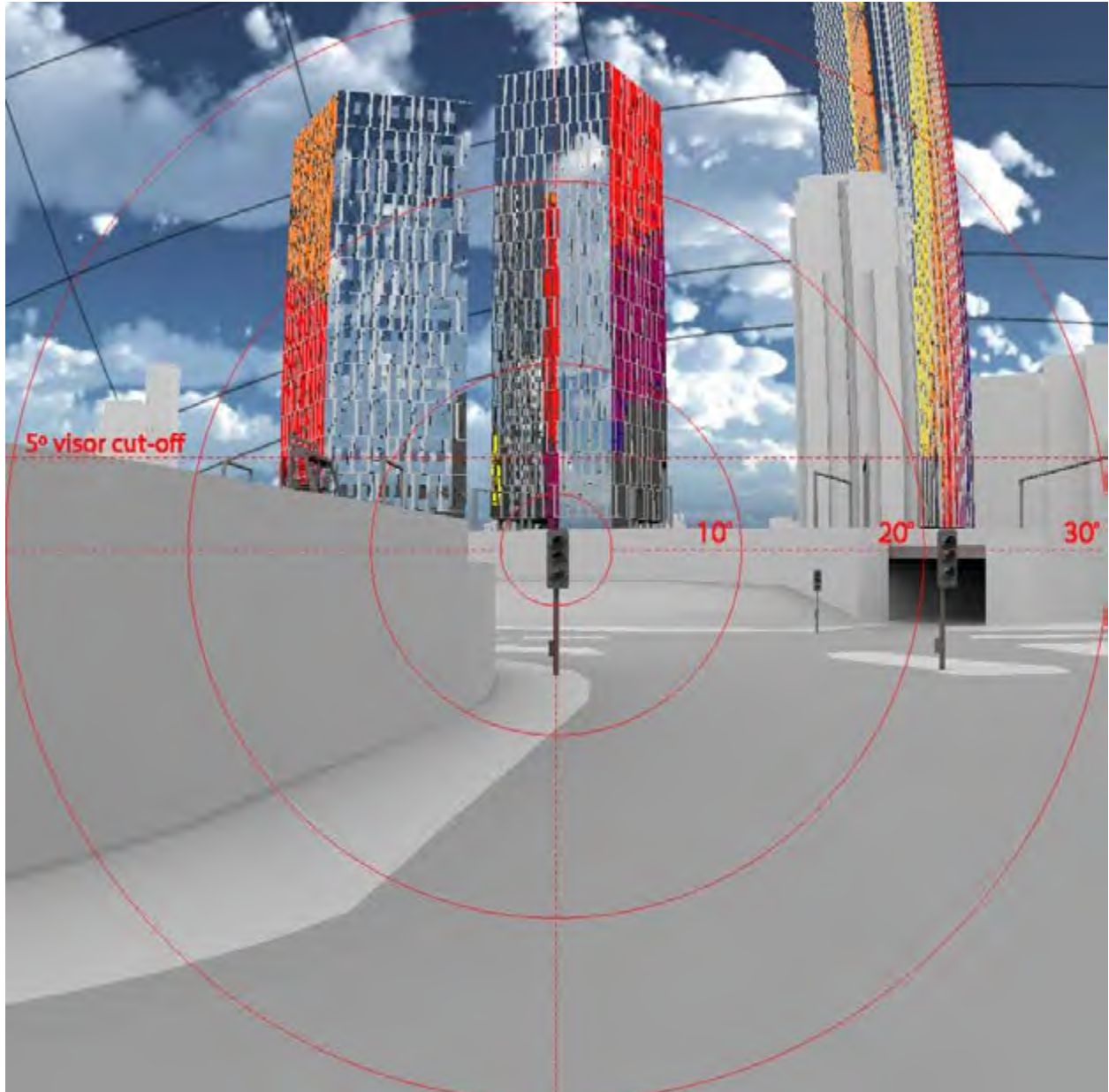


Fig. 63: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

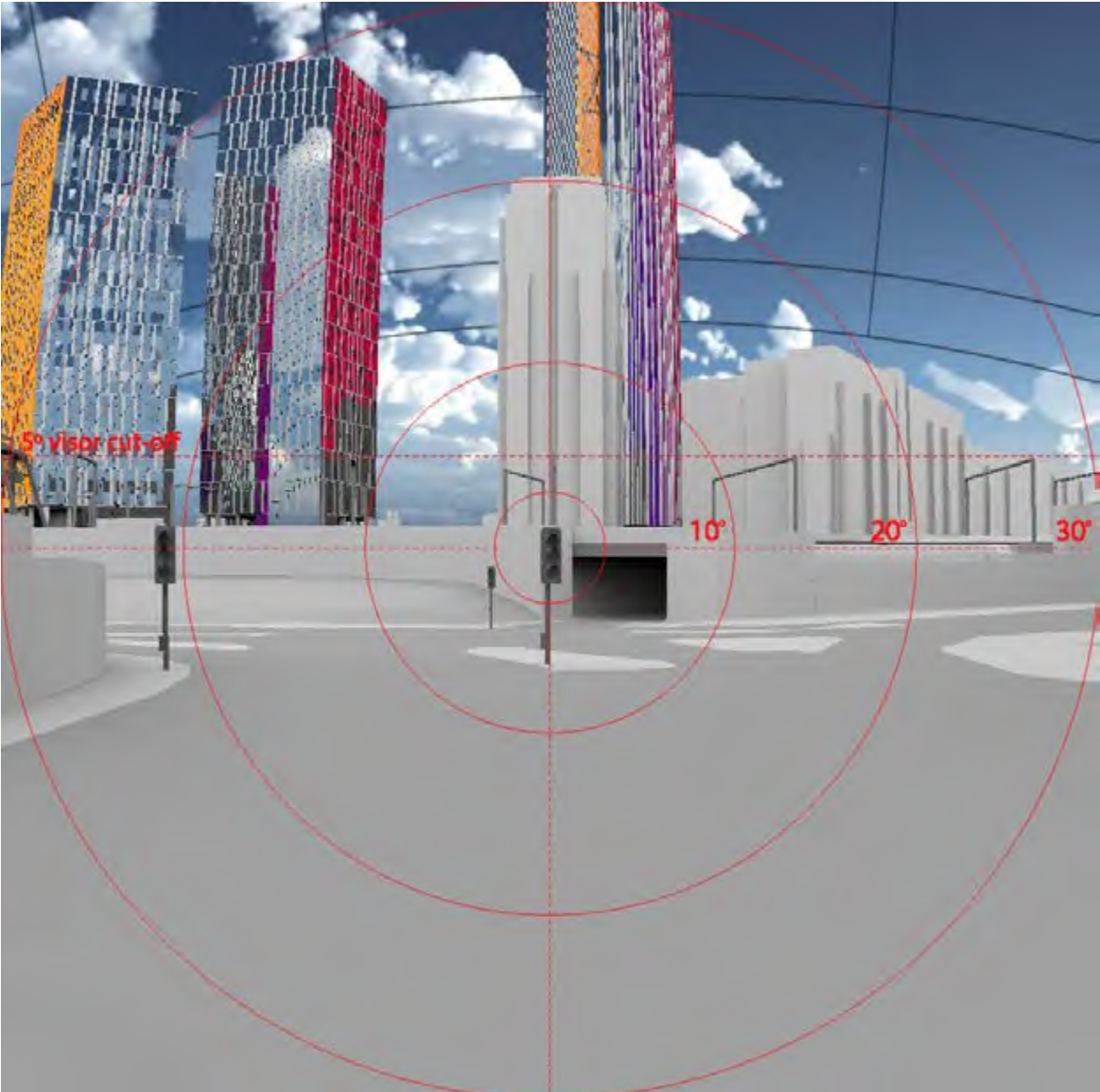


Fig. 64: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

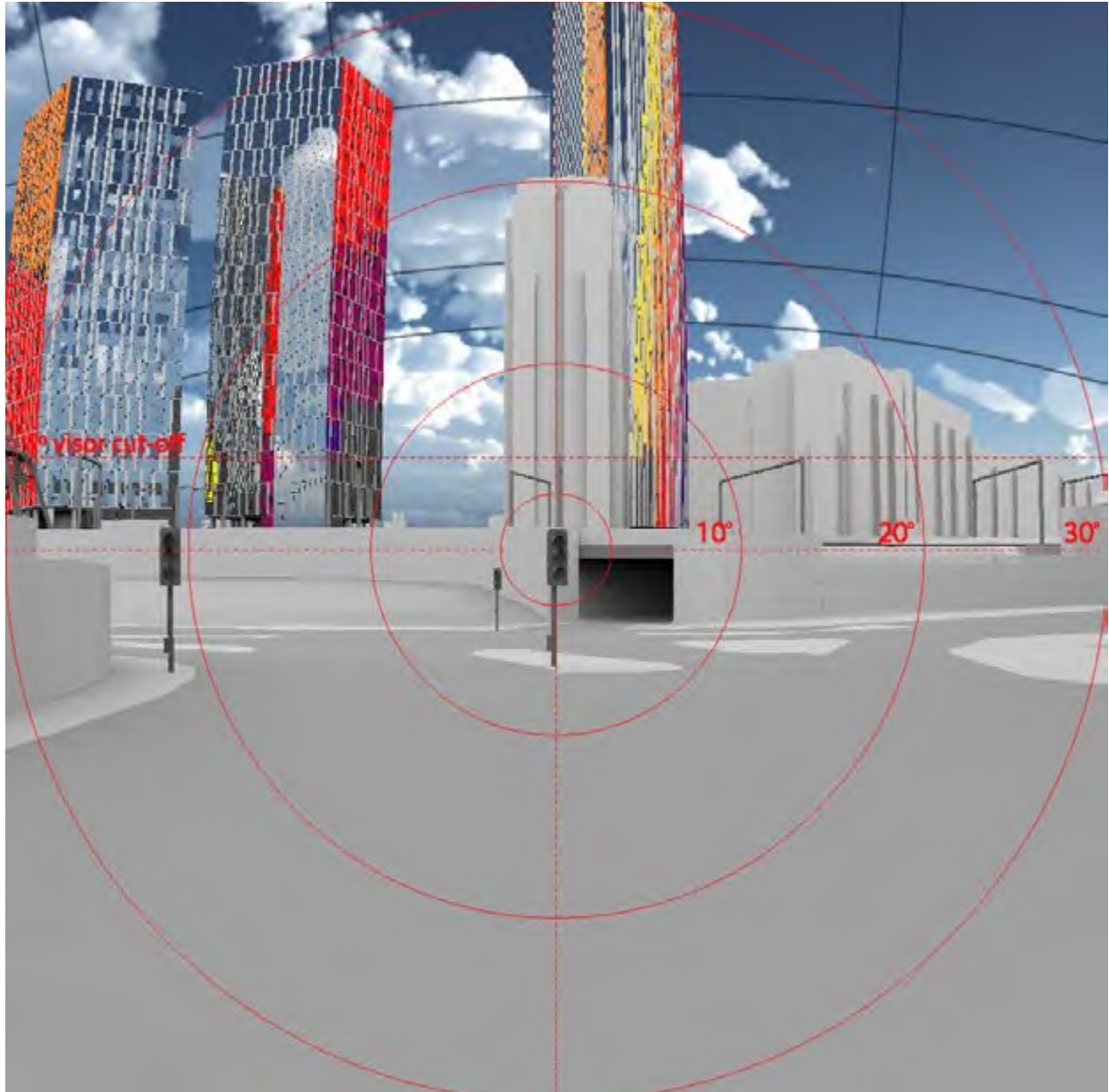


Fig. 65: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

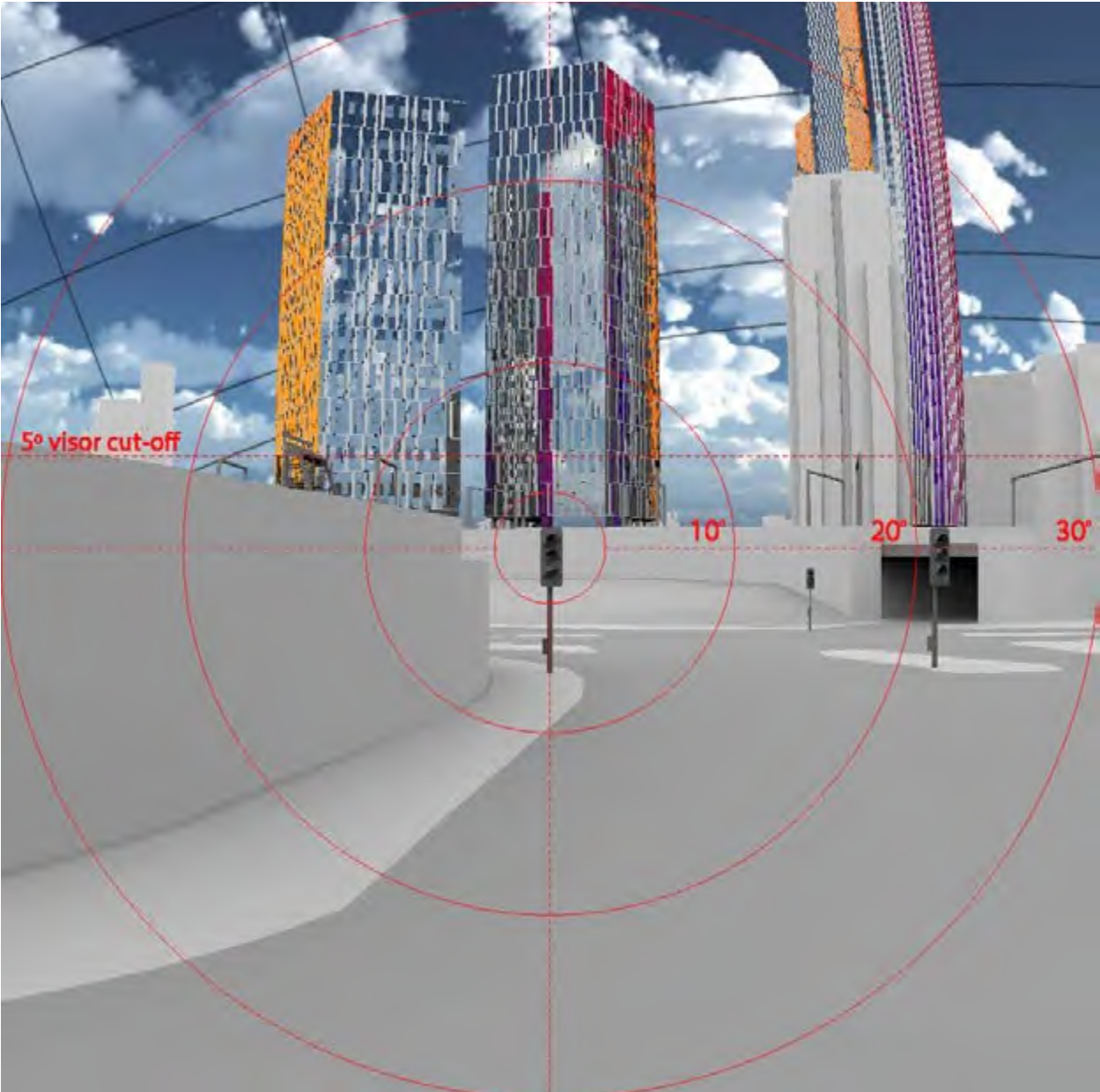
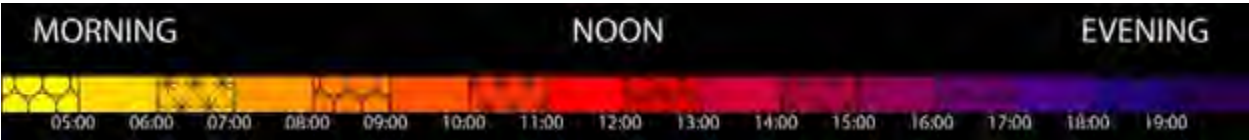


Fig. 66: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT EOL2A - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

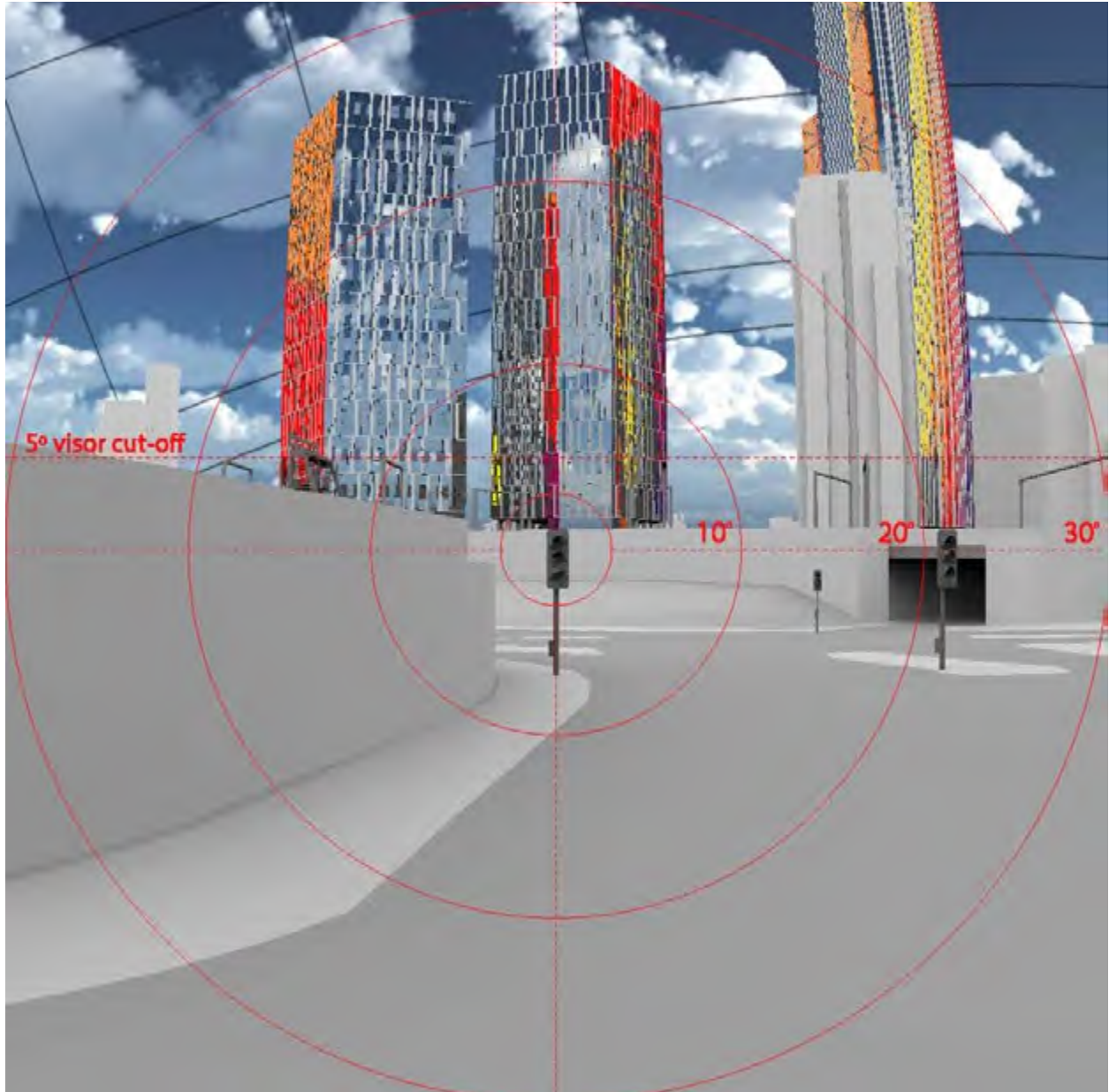


Fig. 67: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

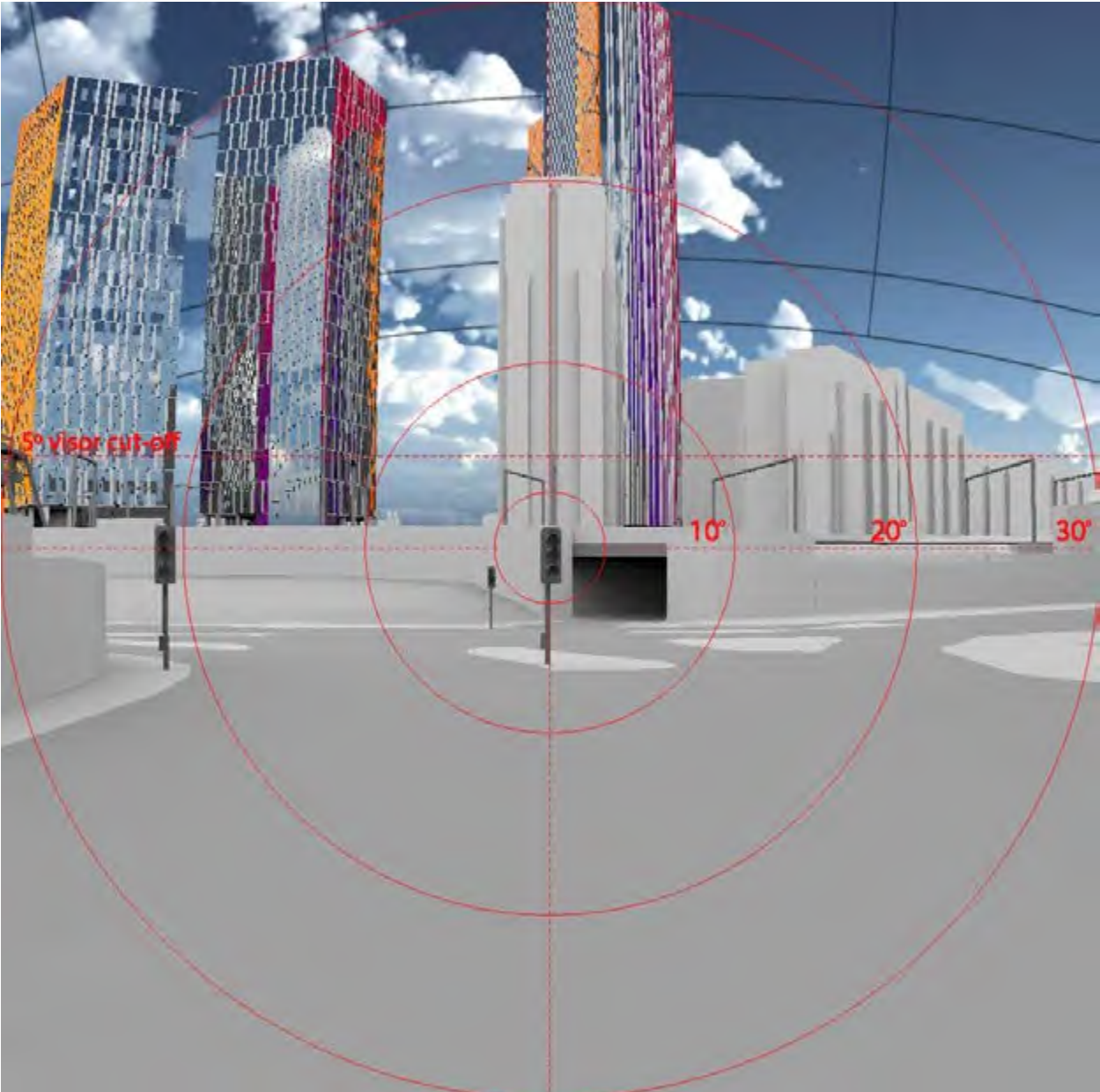


Fig. 68: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT EOL2B - EAST ORDSALL STREET JUNCTION
(WITH MIDDLEWOOD ST/HAMPSON ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

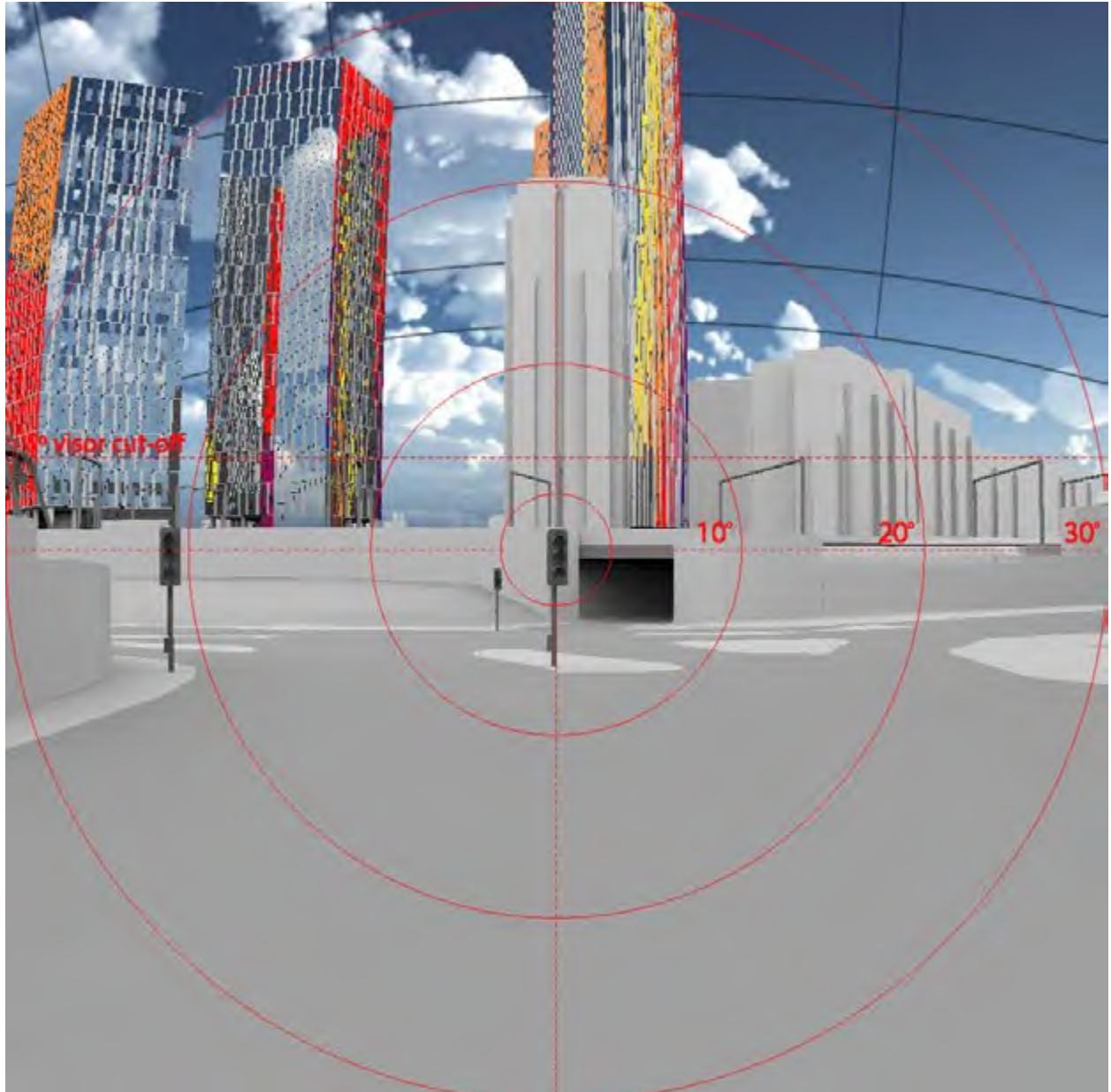


Fig. 69: Solar reflections



10 **SOLAR GLARE ASSESSMENT**
HS - HAMPSON STREET

HS - Hampson Street Eastbound Junction (with Trinity Way/Inner Ring Road)



Fig. 70: Junction Location

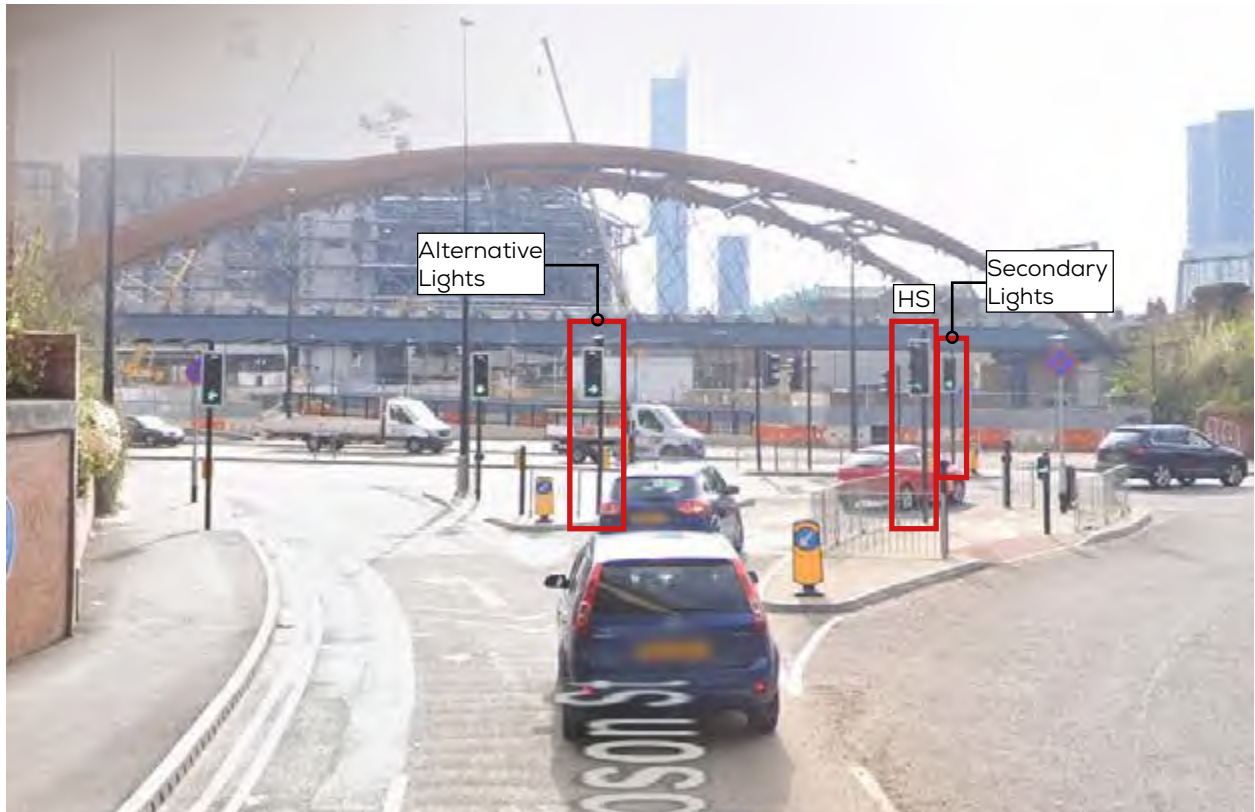


Fig. 71: Traffic Light Location



Fig. 72: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

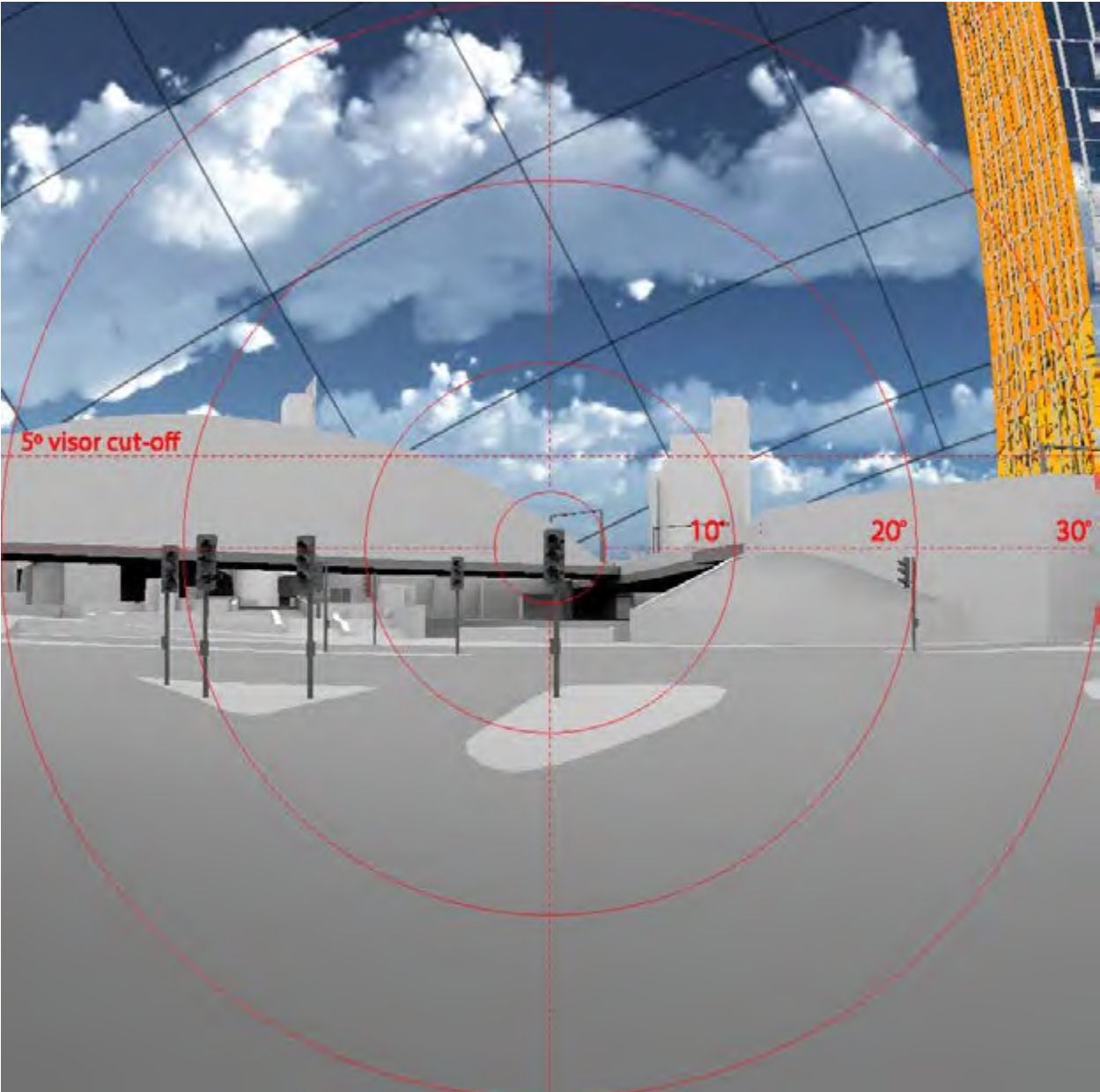


Fig. 73: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT**

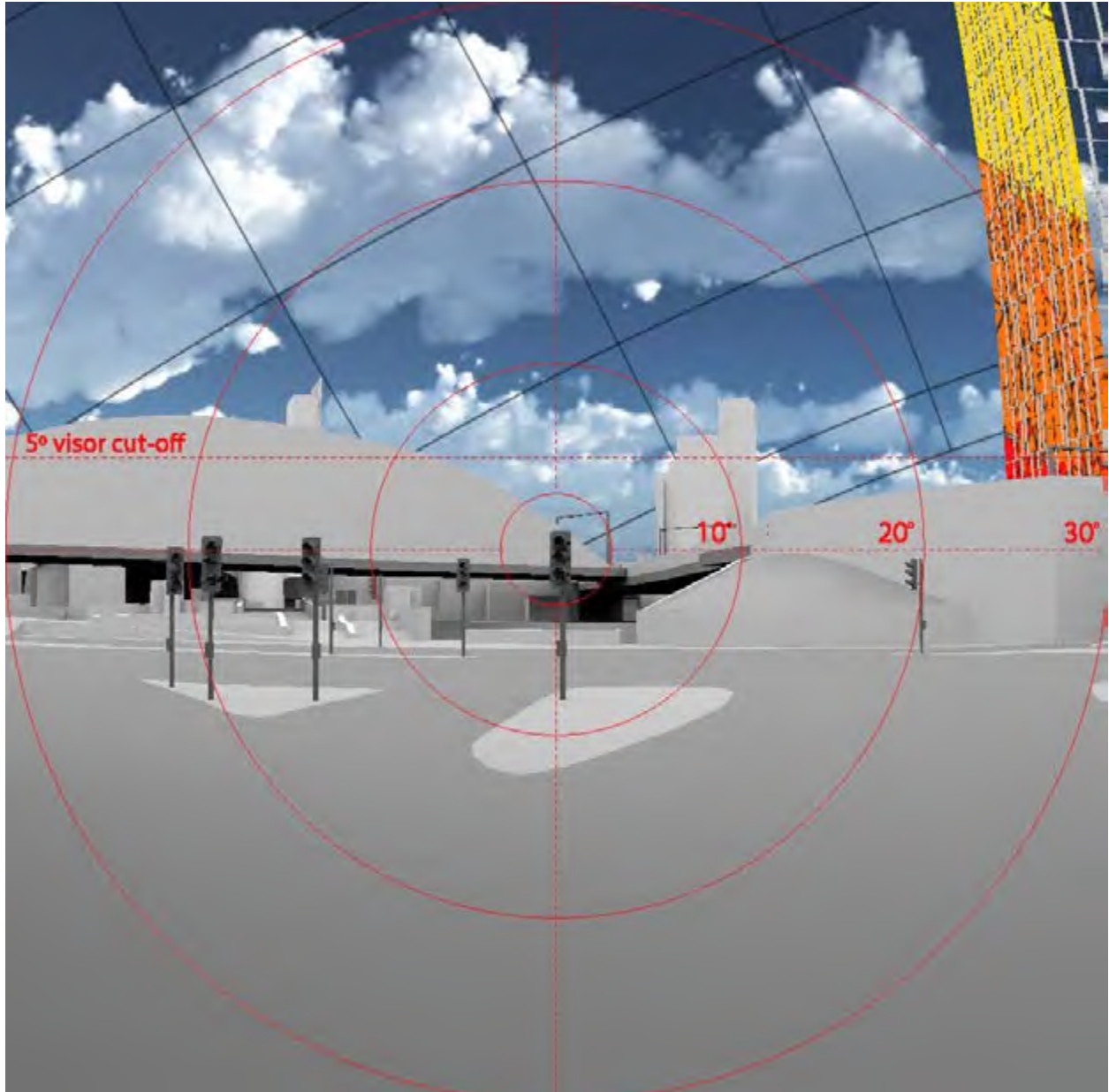


Fig. 74: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

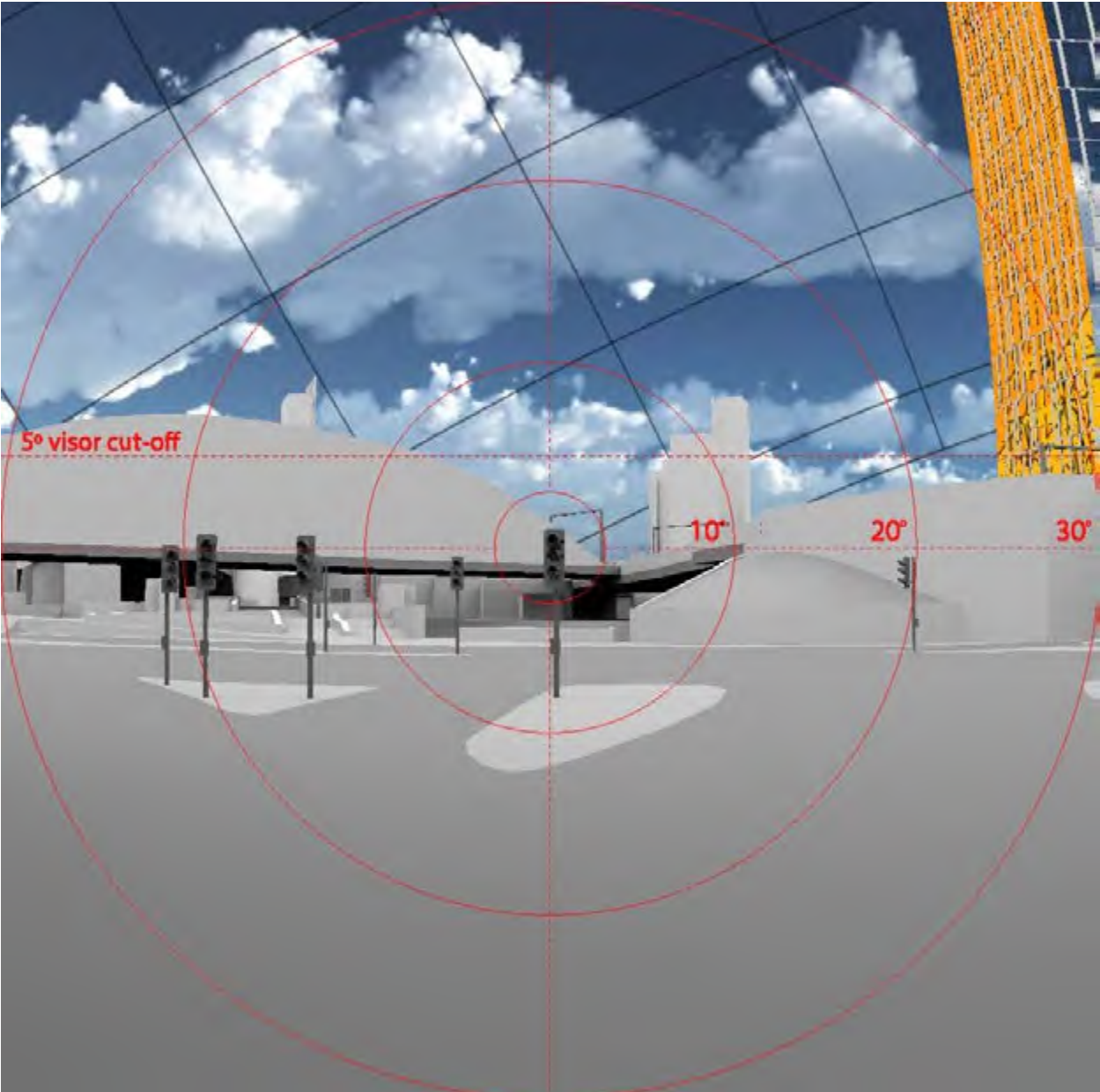


Fig. 75: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT**

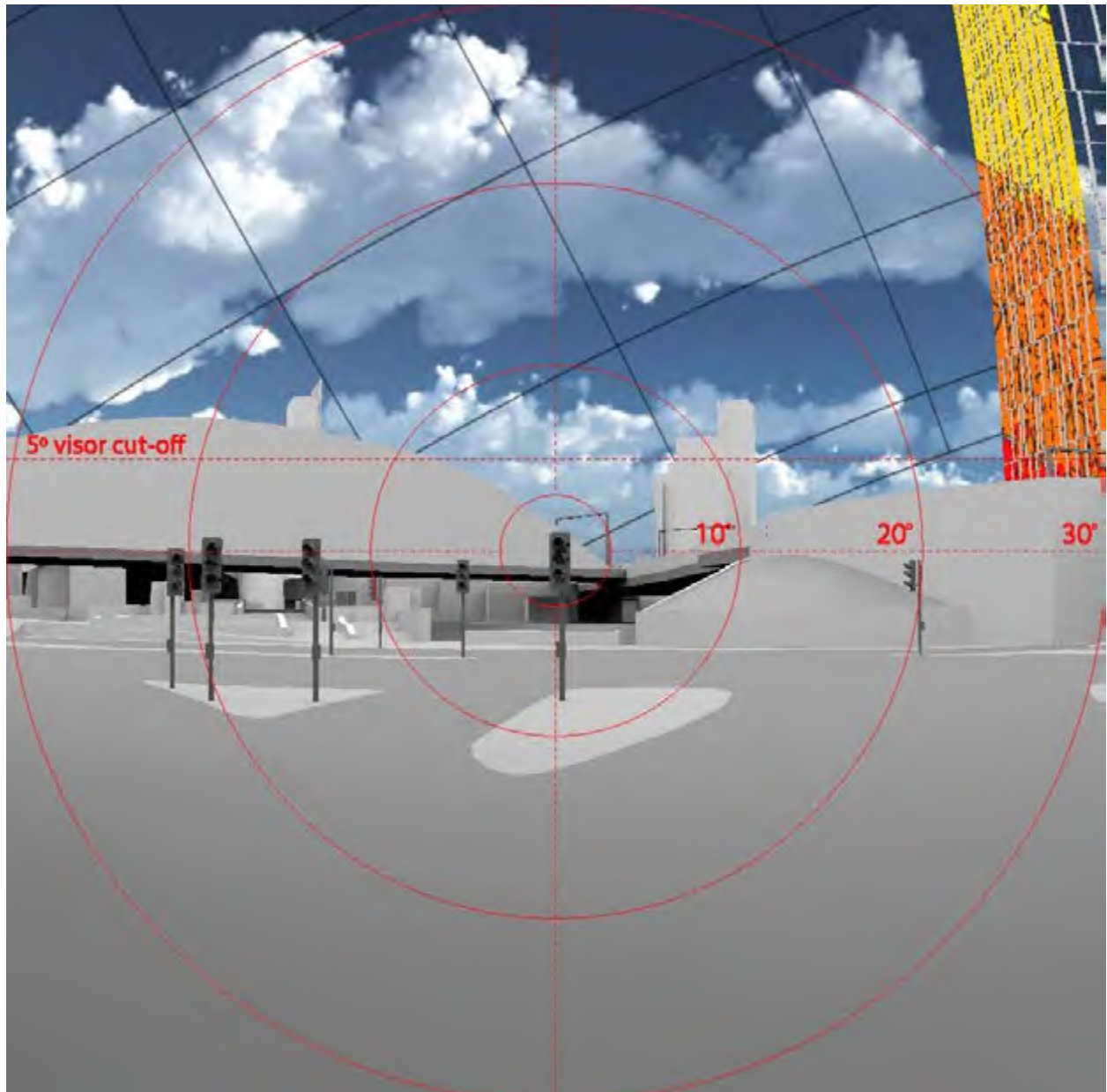


Fig. 76: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

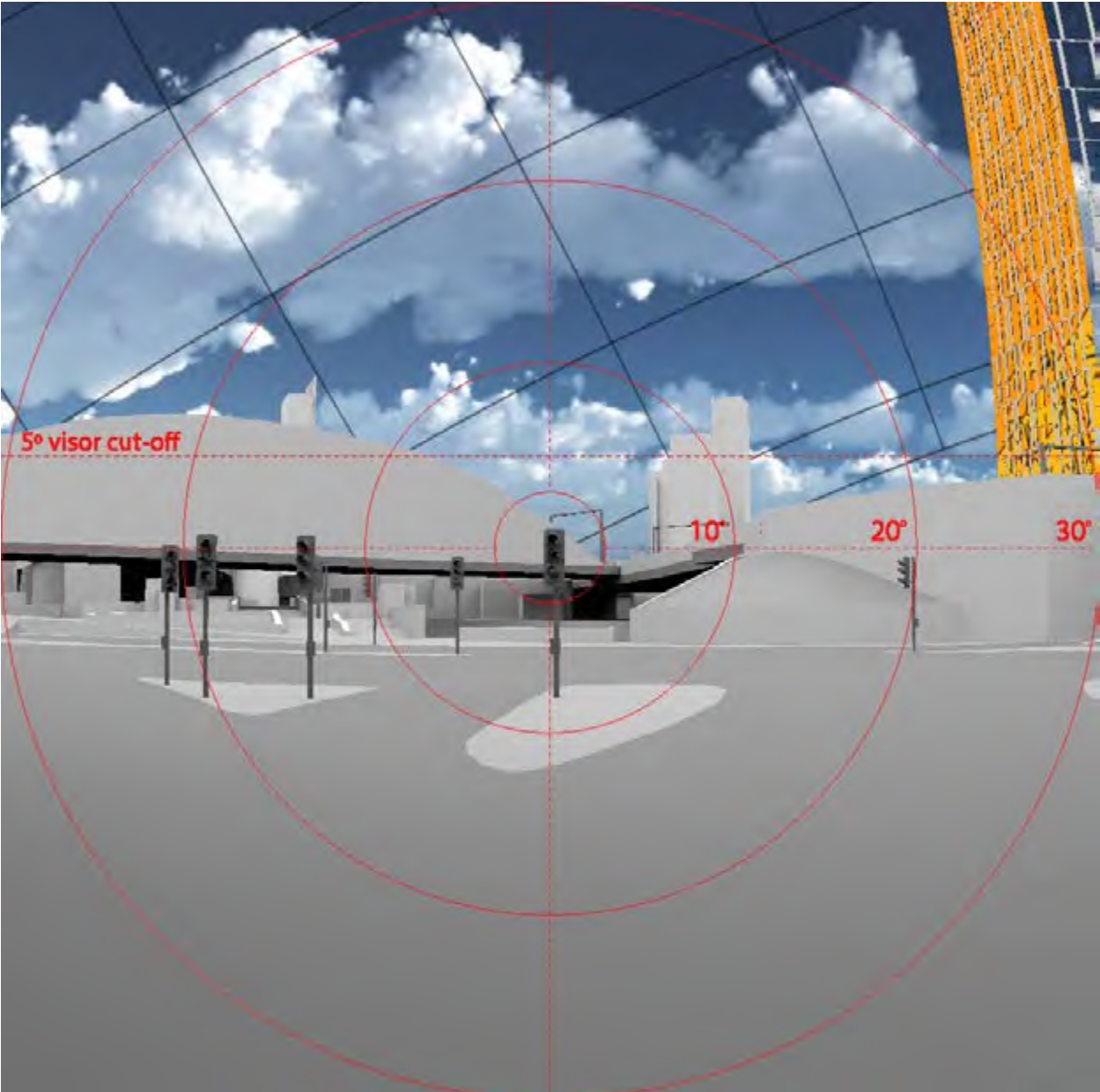
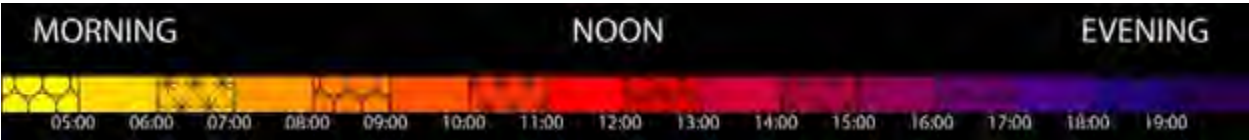


Fig. 77: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT**

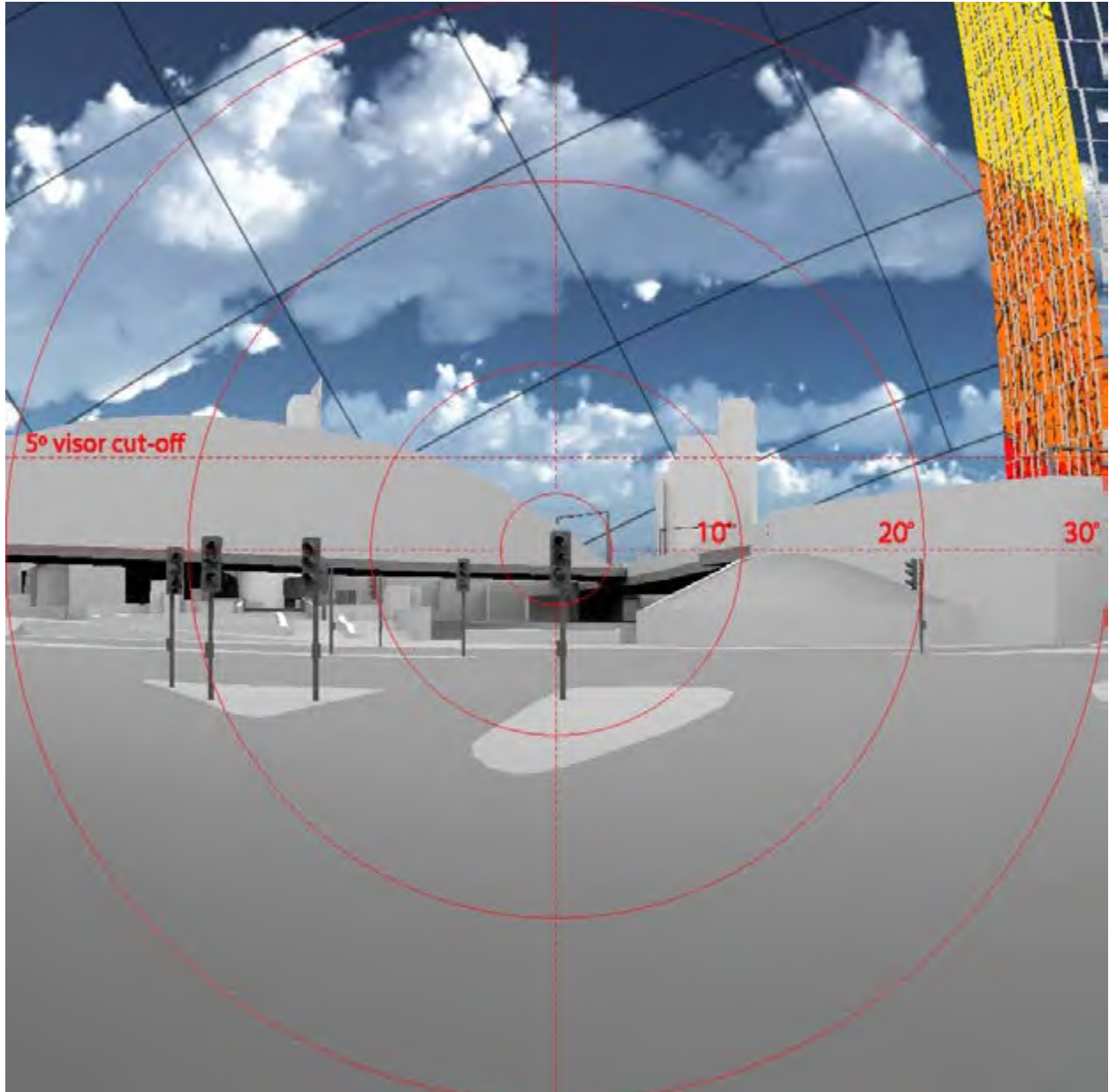


Fig. 78: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

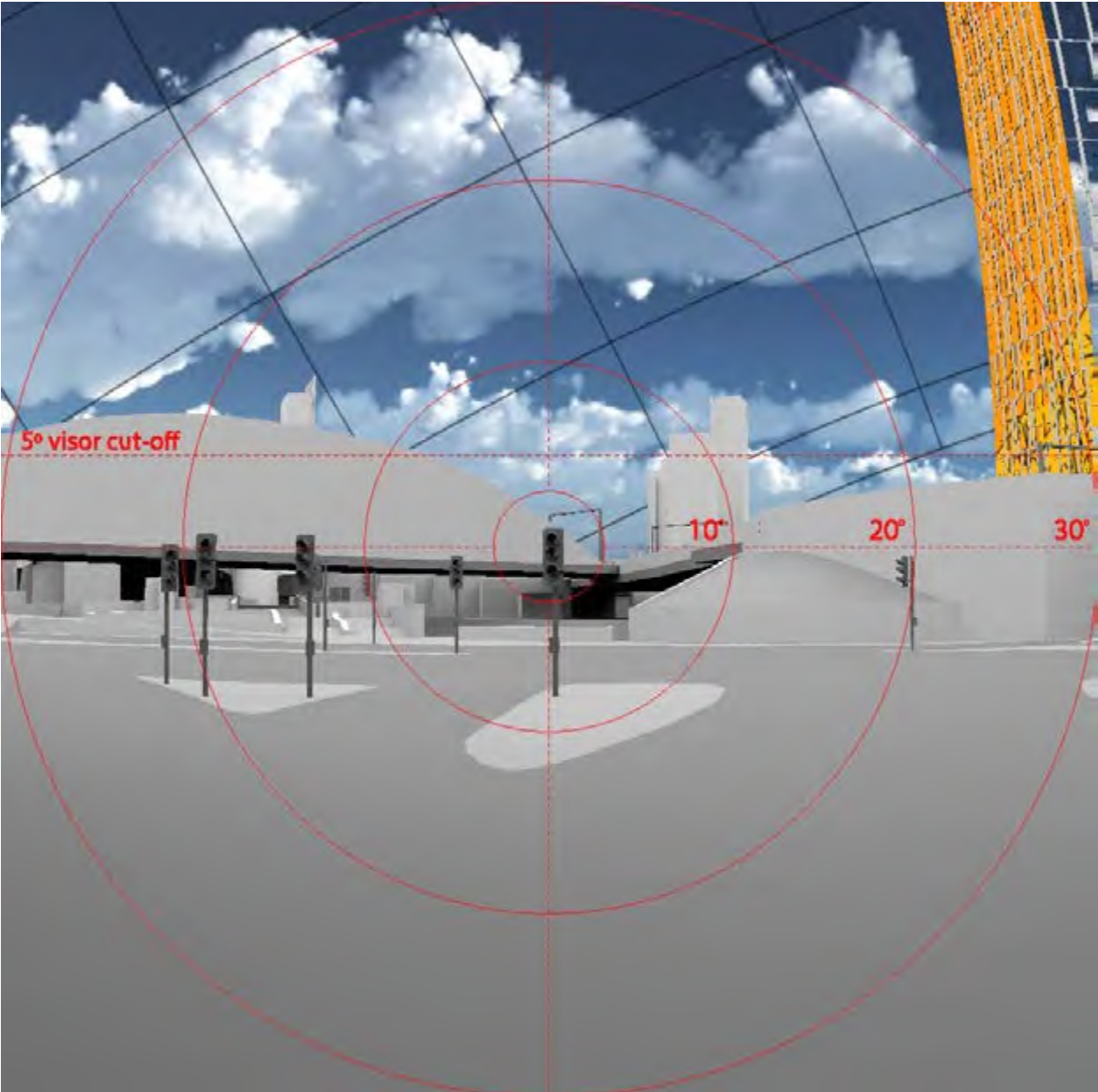


Fig. 79: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT HS - HAMPSON STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT**

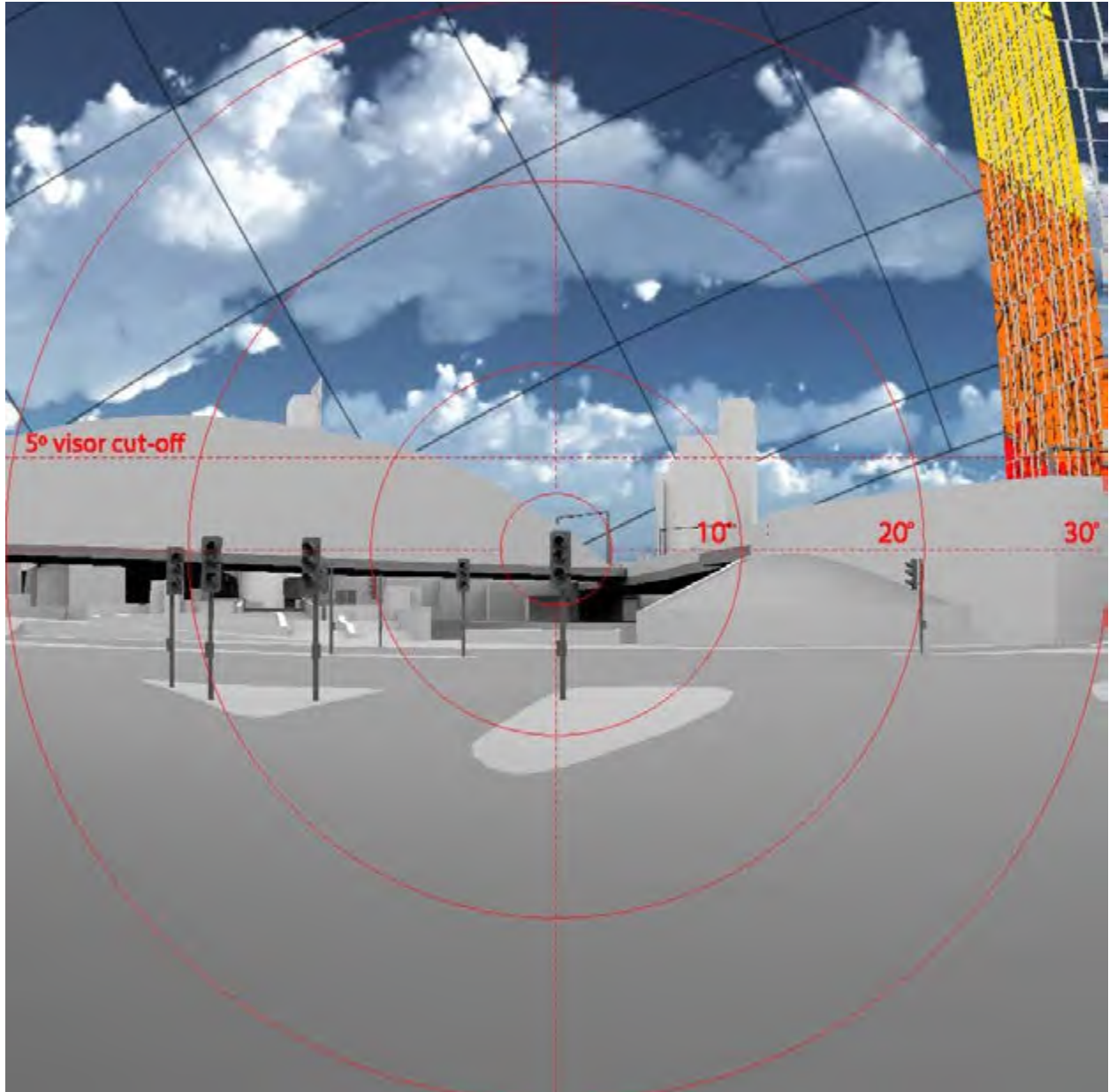


Fig. 80: Solar reflections



11 SOLAR GLARE ASSESSMENT

TW2 - TRINITY WAY/INNER RING ROAD 2

TW2 - Trinity Way/Inner Ring Road Southbound Junction (with Hampson Street)



Fig. 81: Junction Location

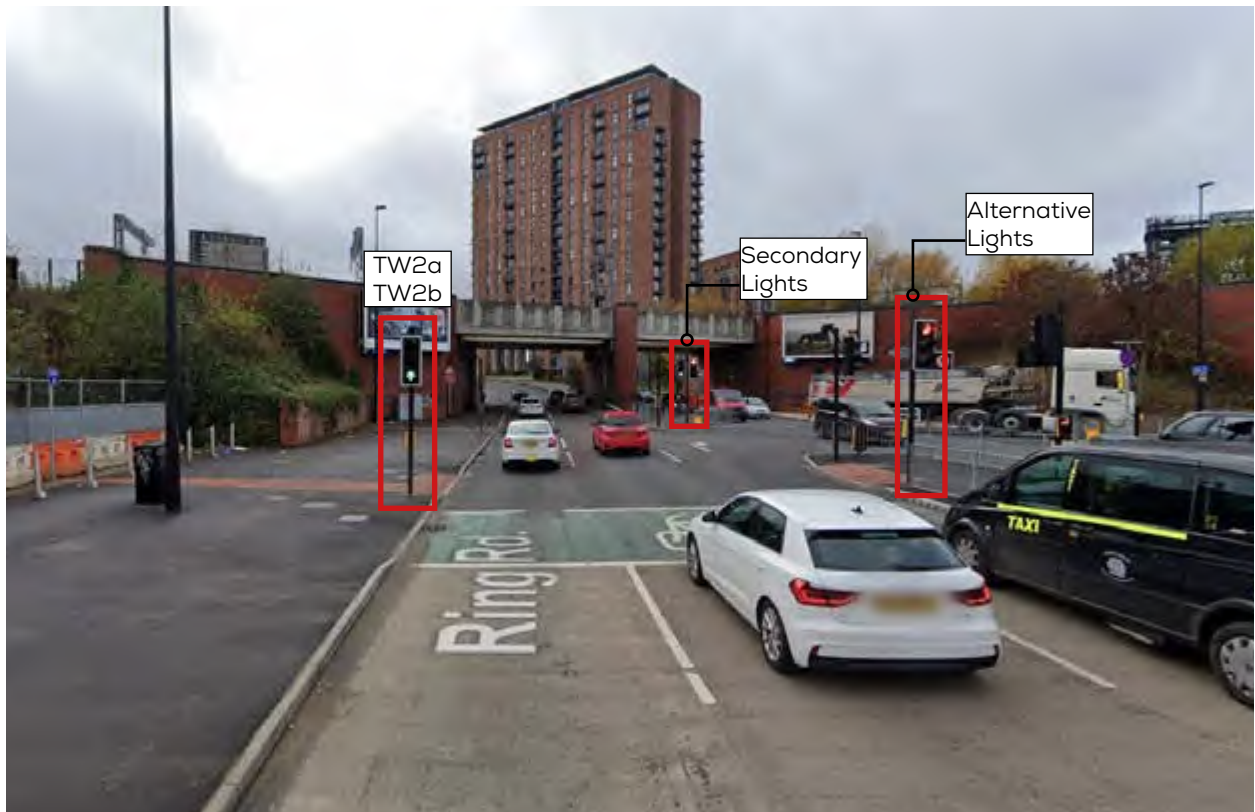


Fig. 82: Traffic Light Location



Fig. 83: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

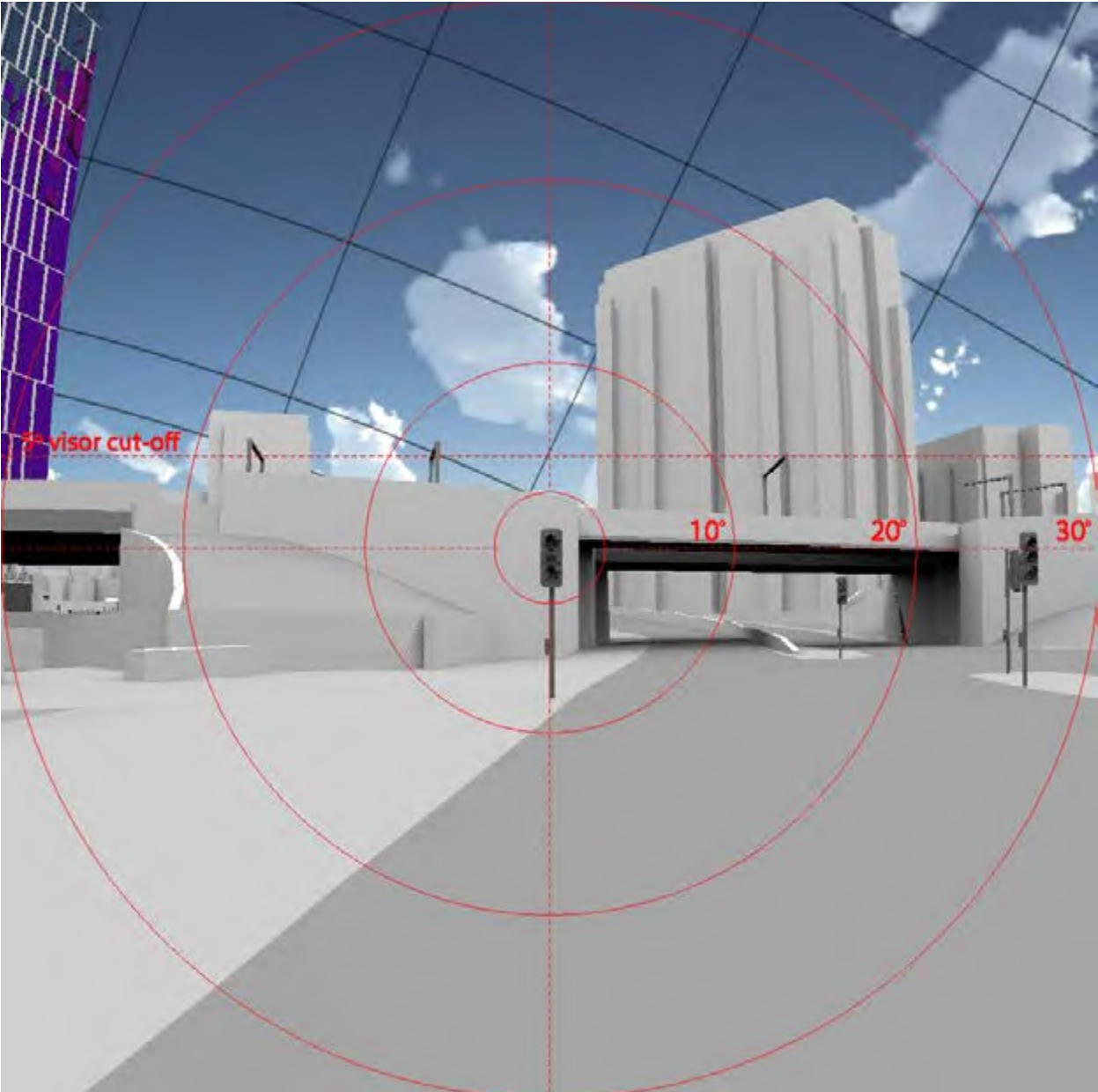
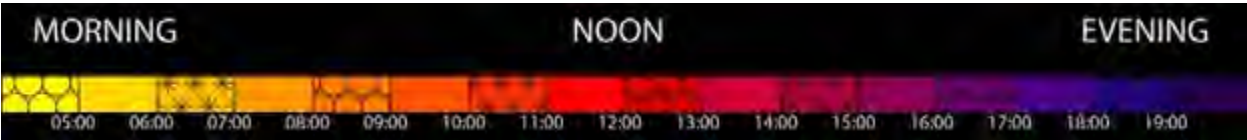


Fig. 84: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

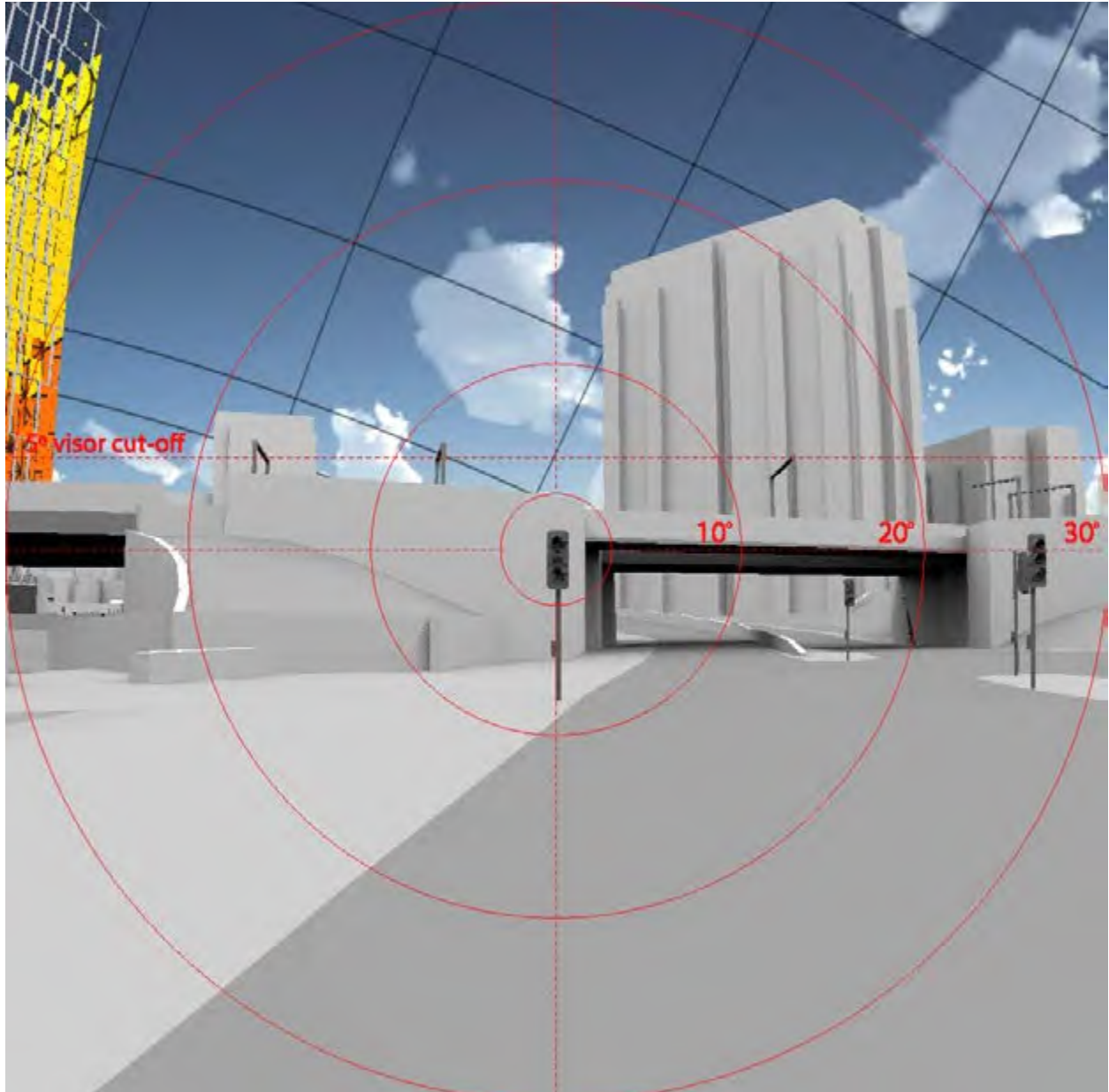


Fig. 85: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

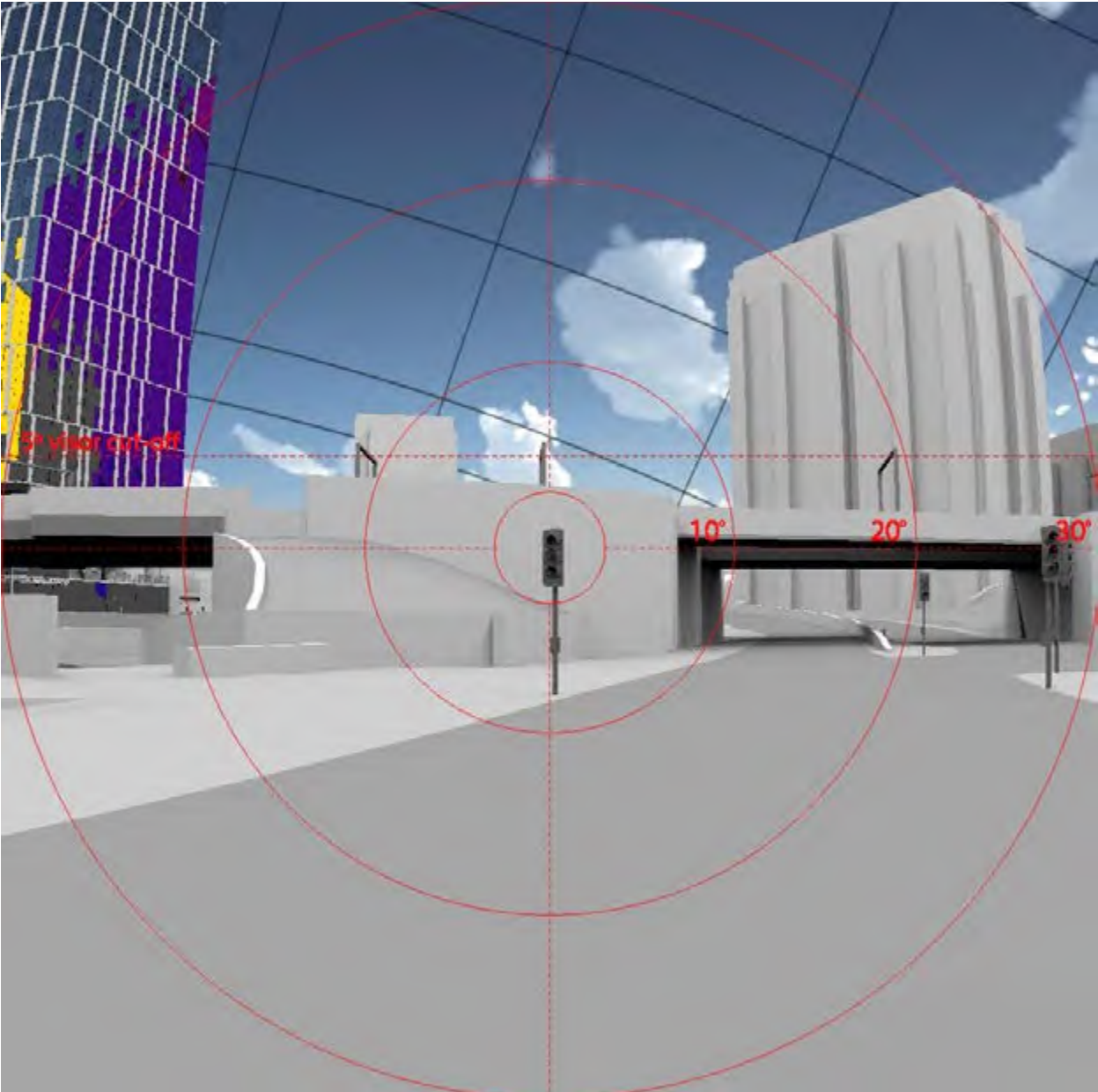
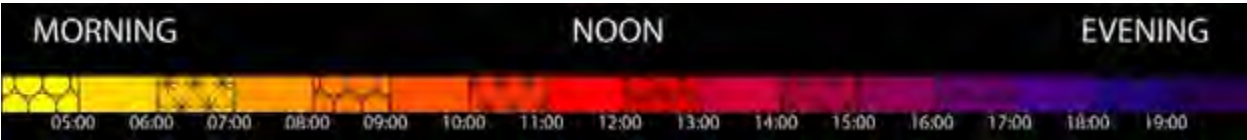


Fig. 86: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

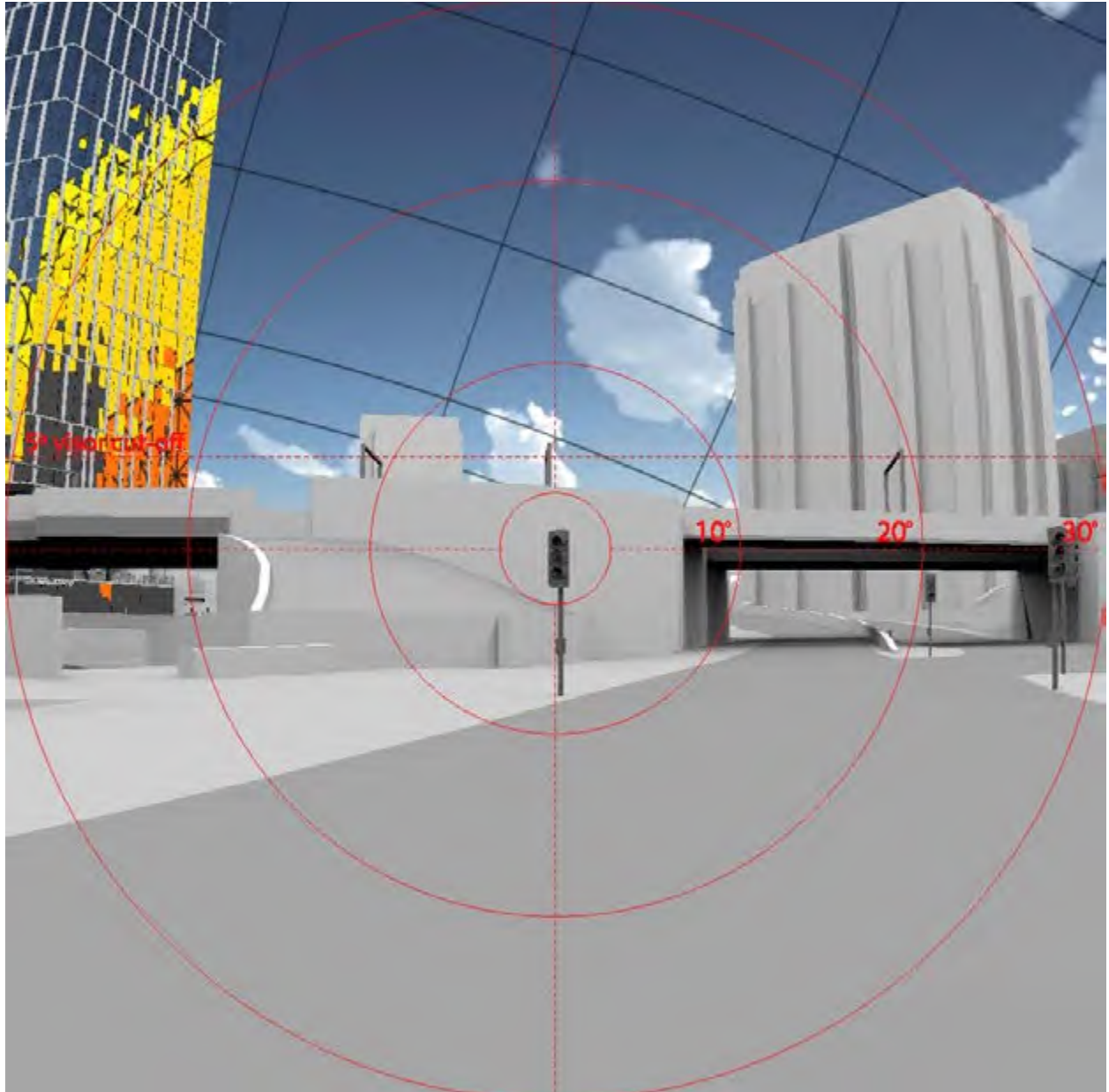


Fig. 87: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY

VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

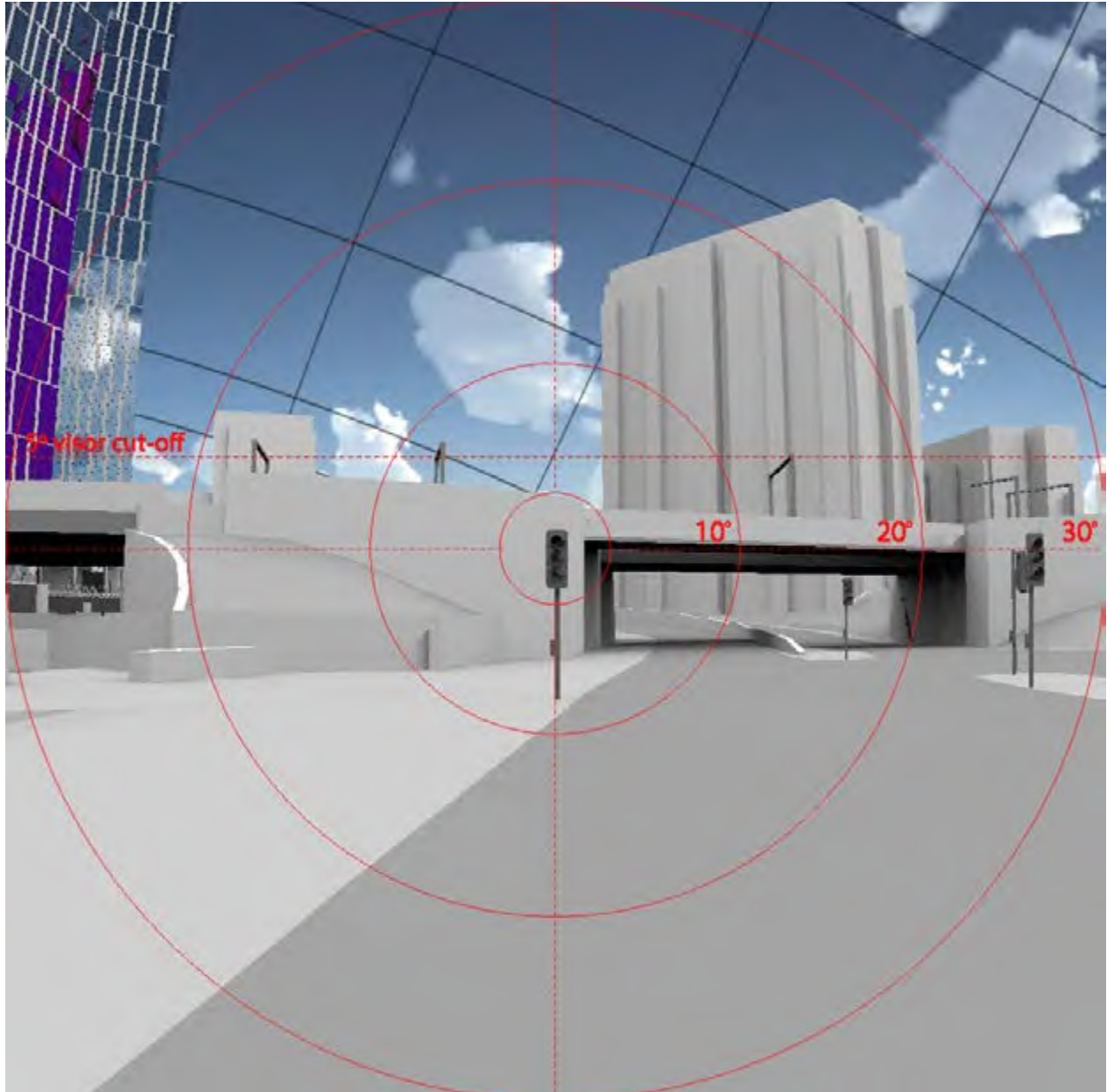
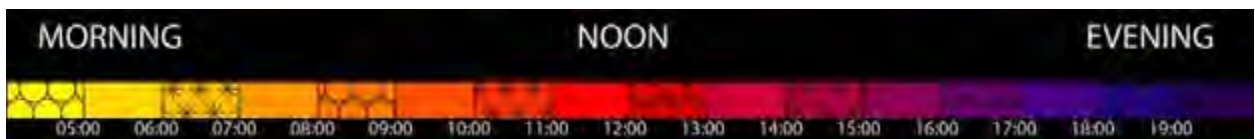


Fig. 88: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

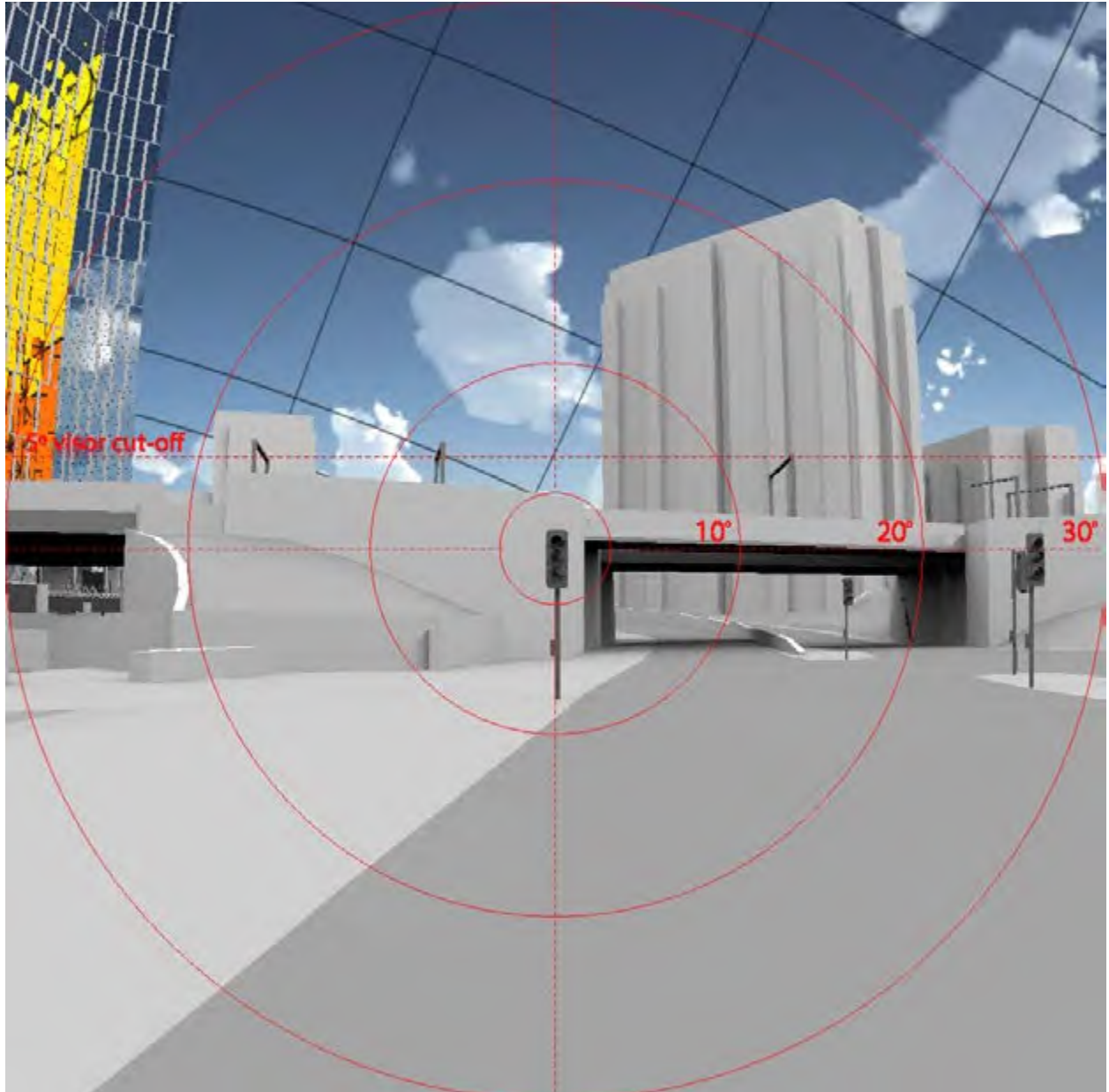


Fig. 89: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

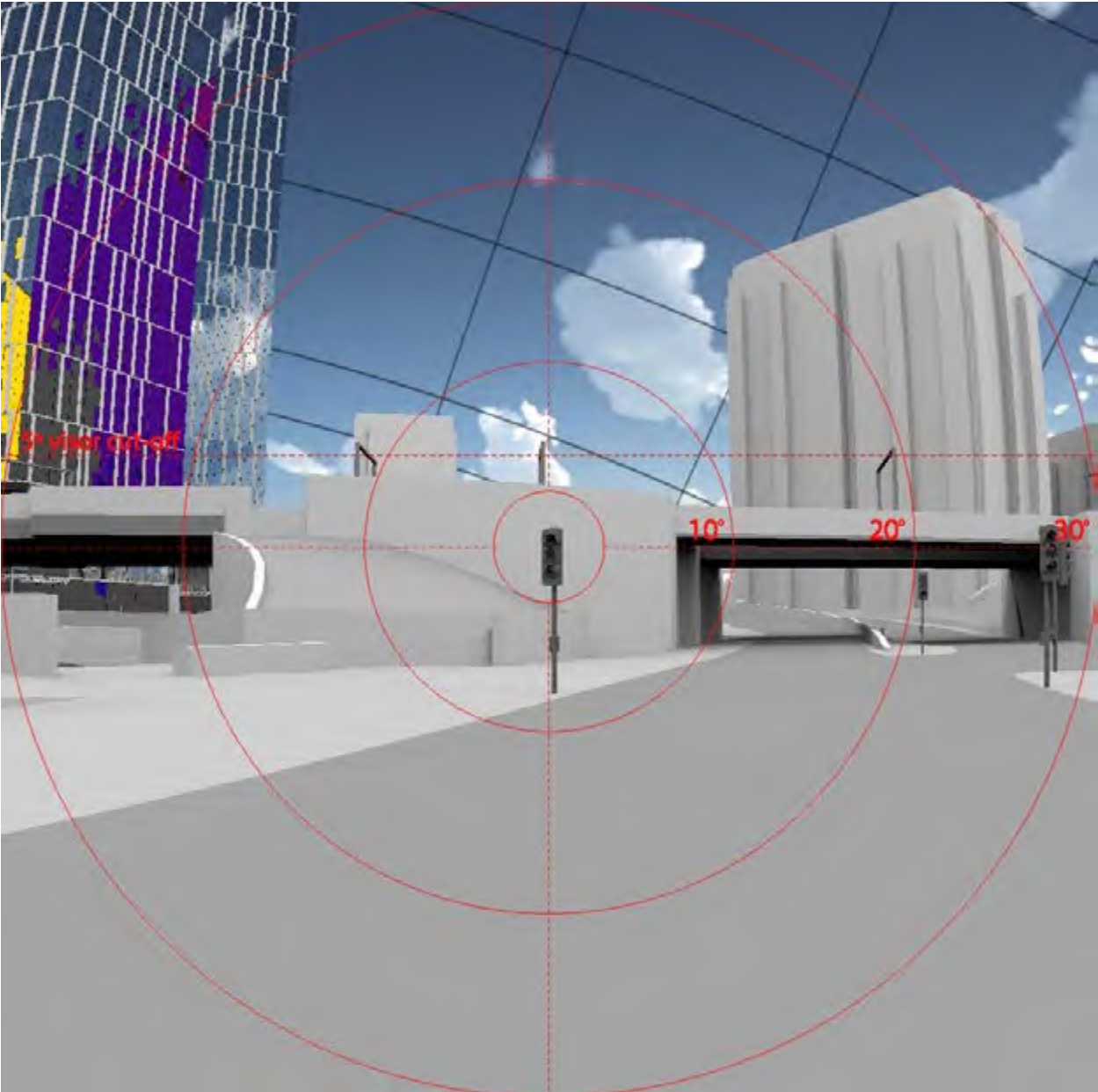


Fig. 90: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

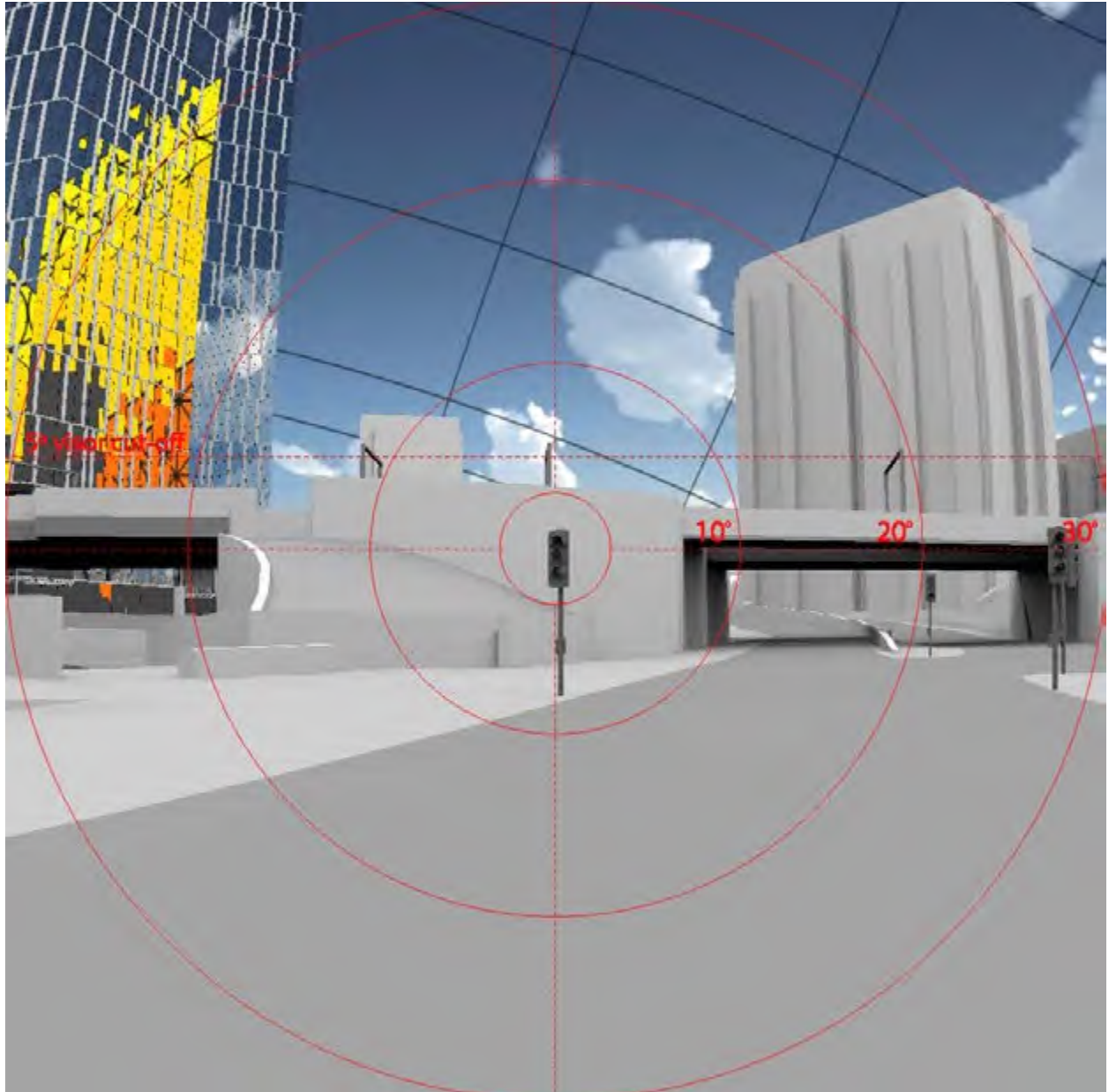


Fig. 91: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY

VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

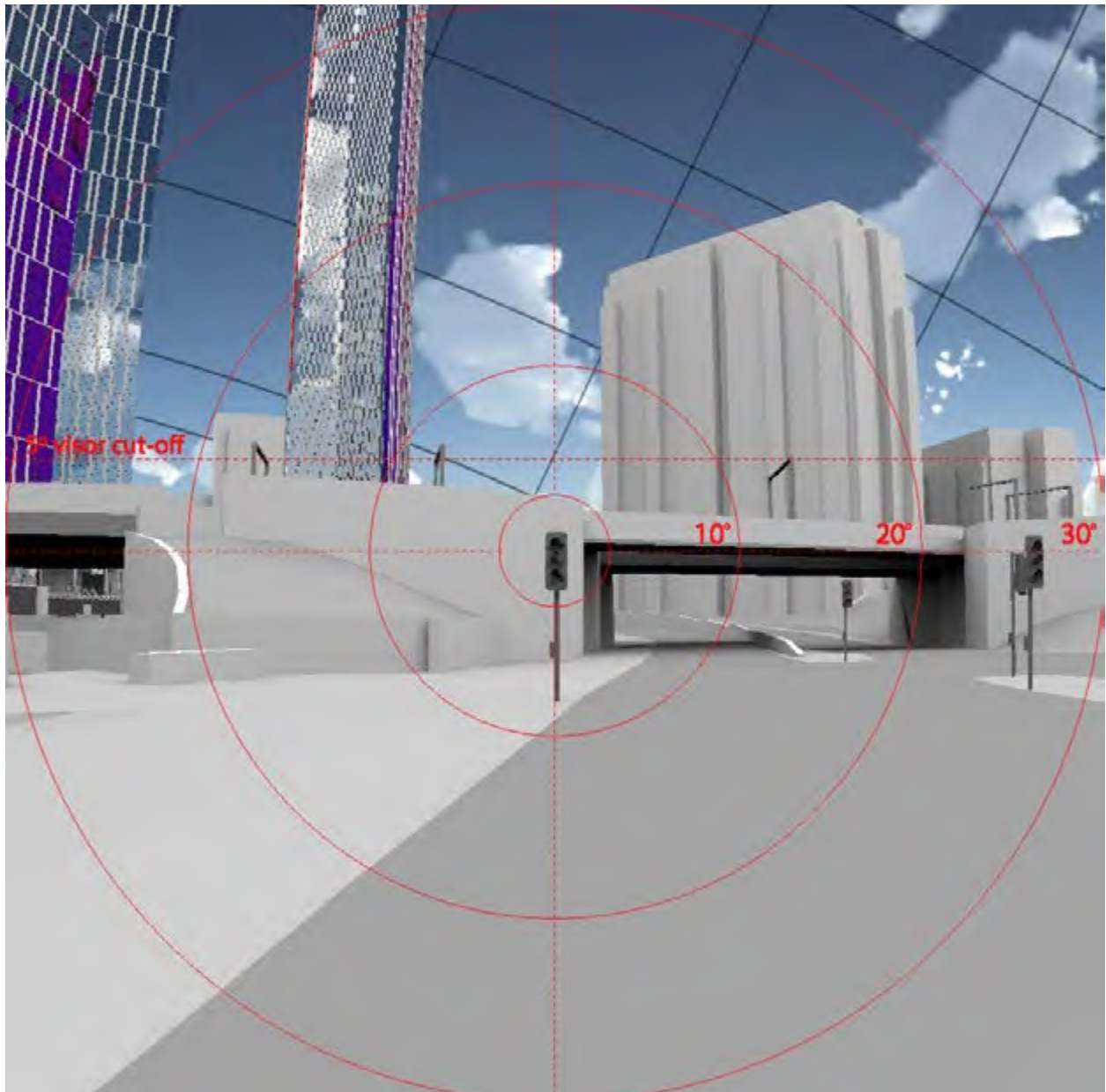
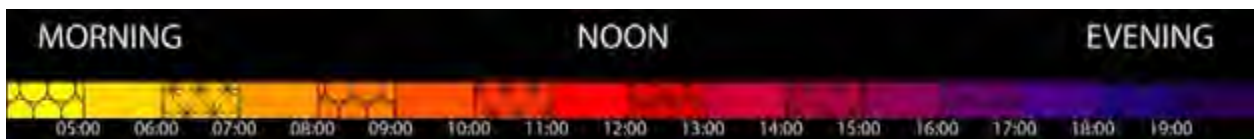


Fig. 92: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

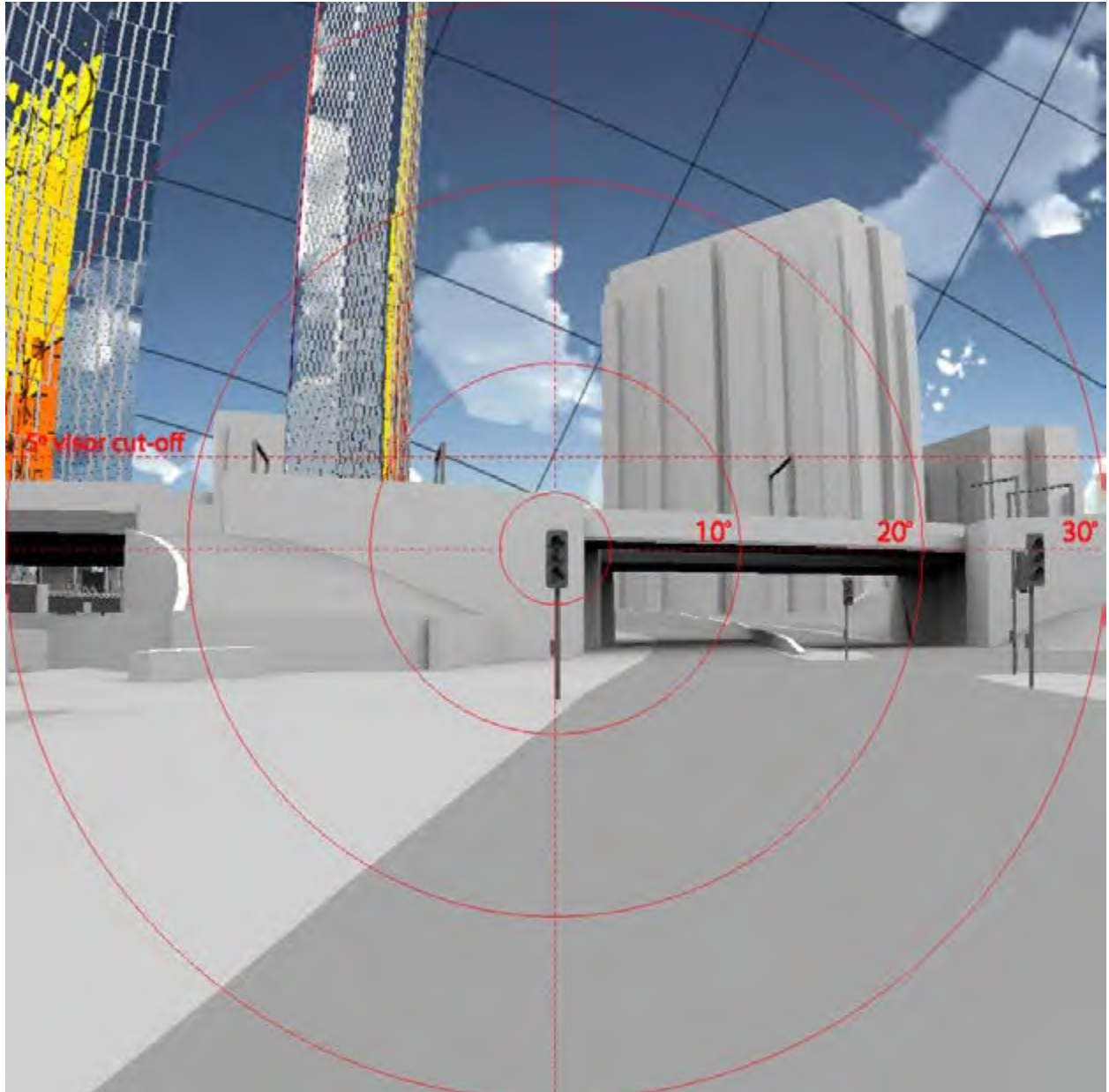


Fig. 93: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY

VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

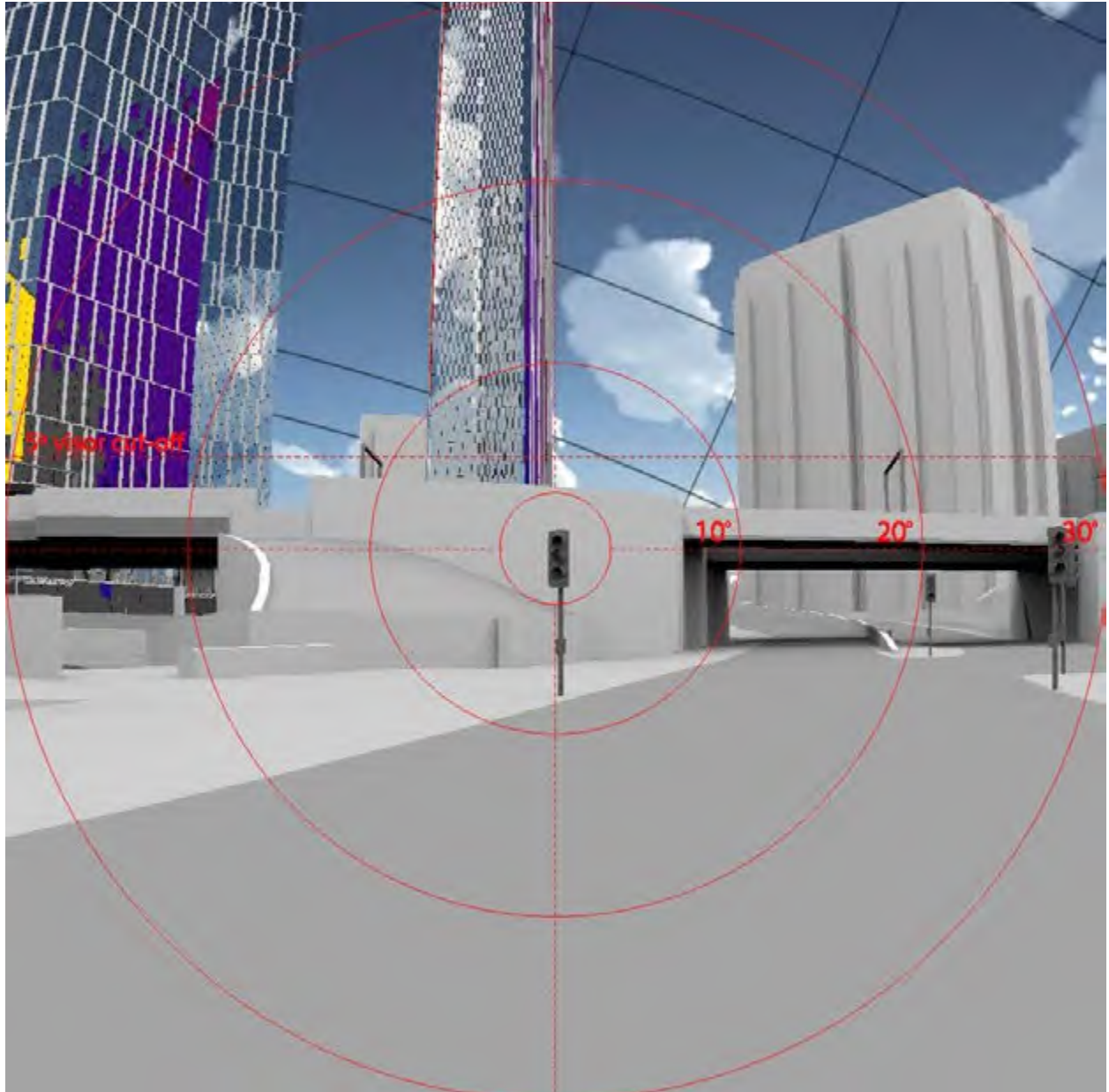
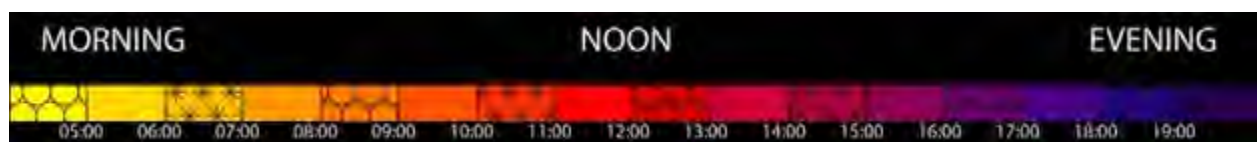


Fig. 94: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

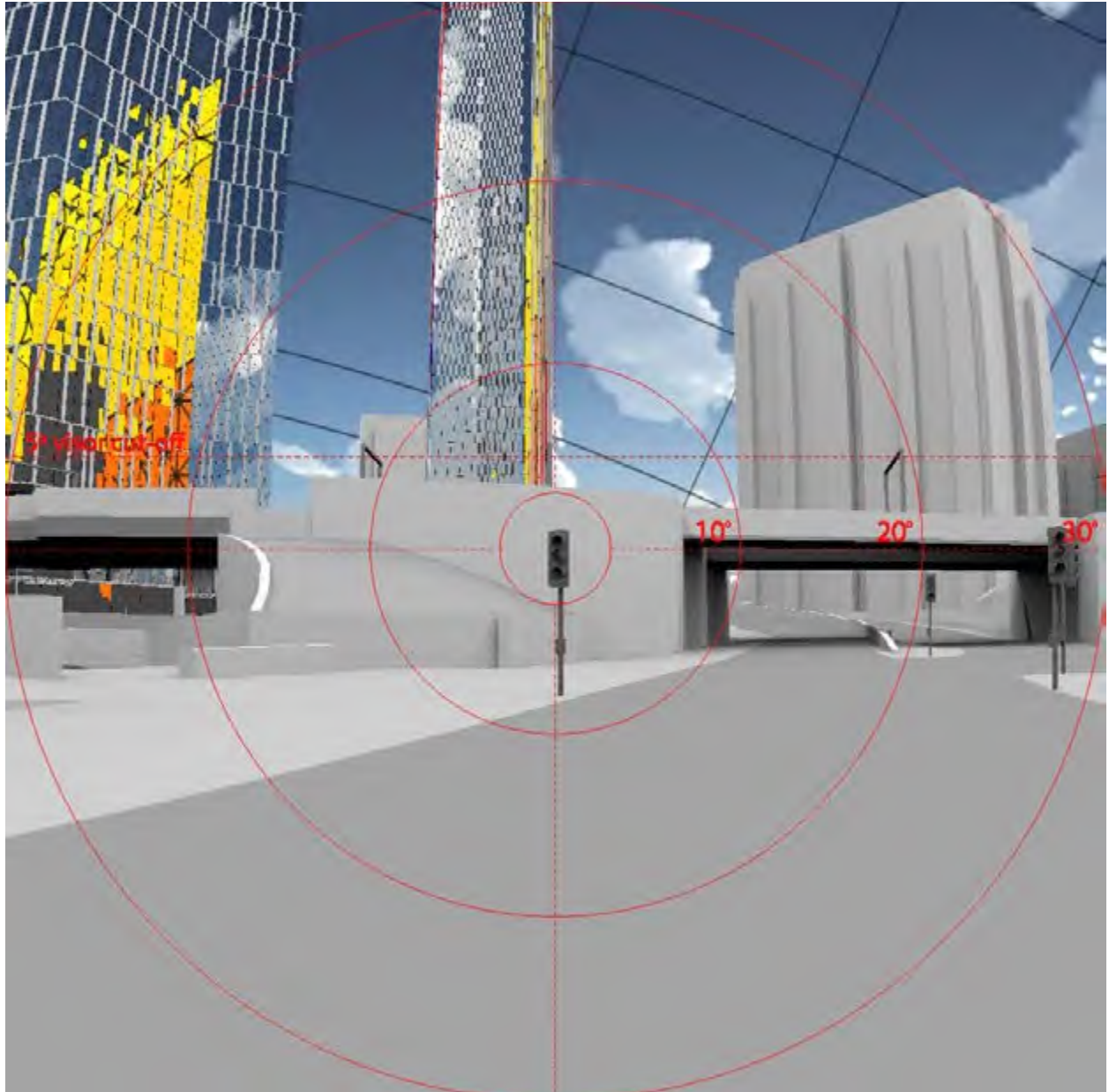


Fig. 95: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY

VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

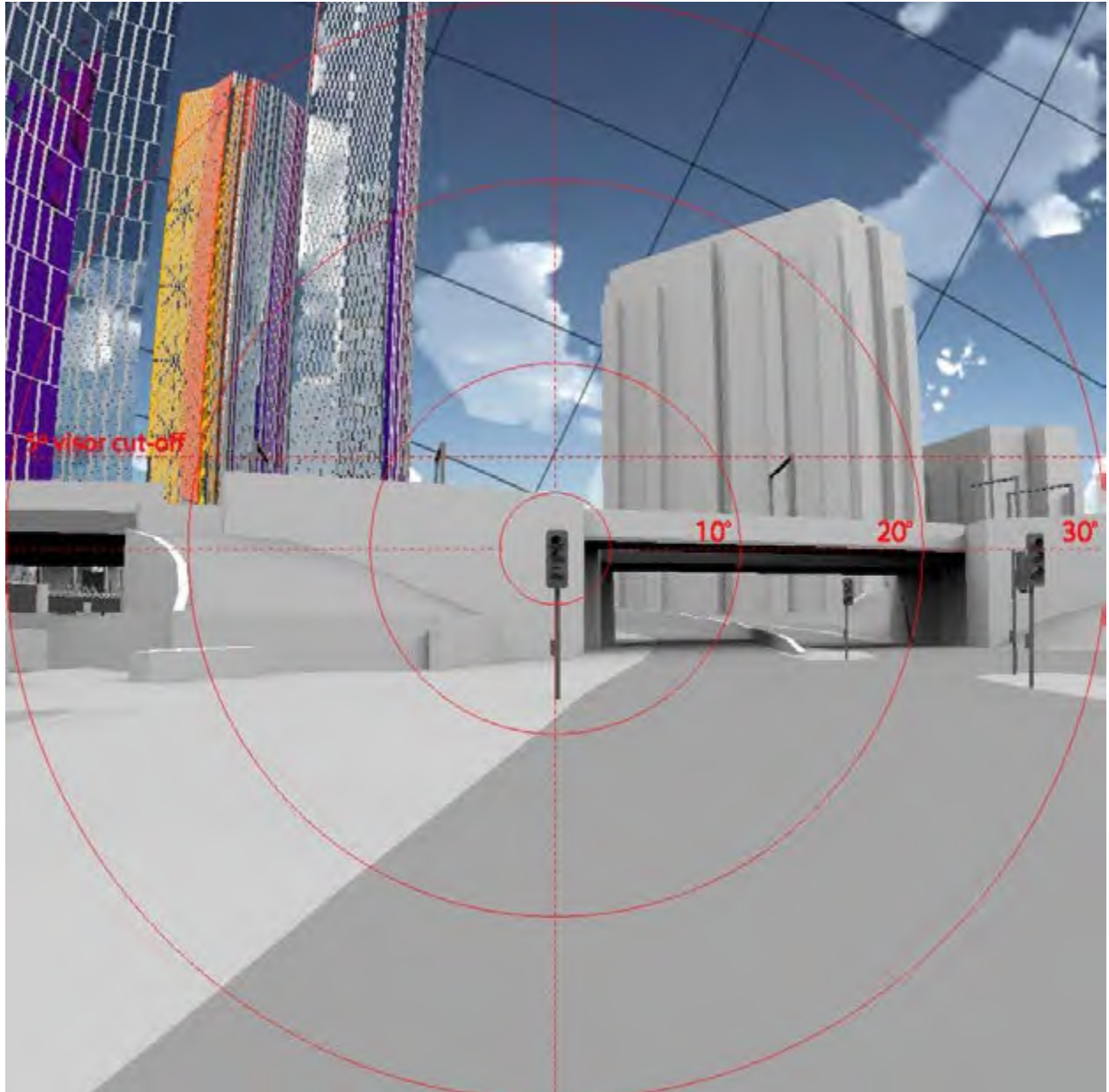
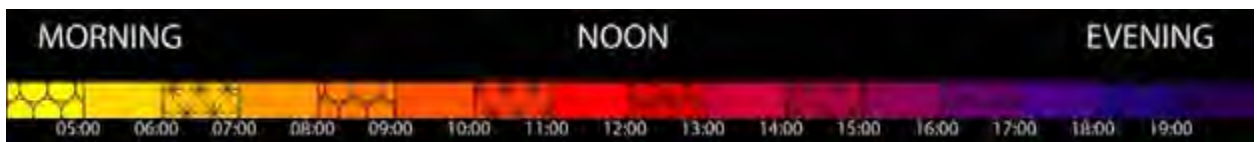


Fig. 96: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

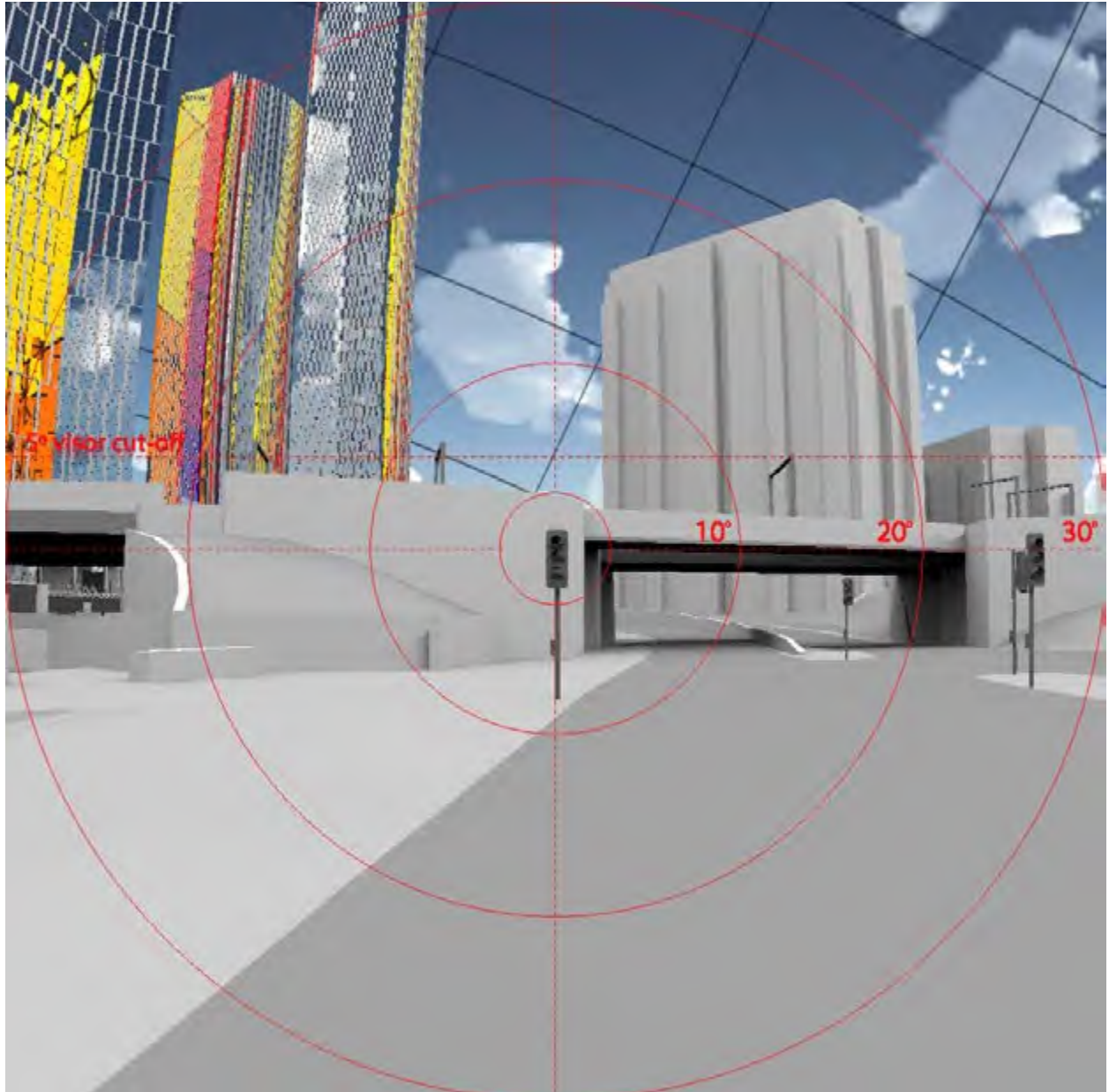


Fig. 97: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

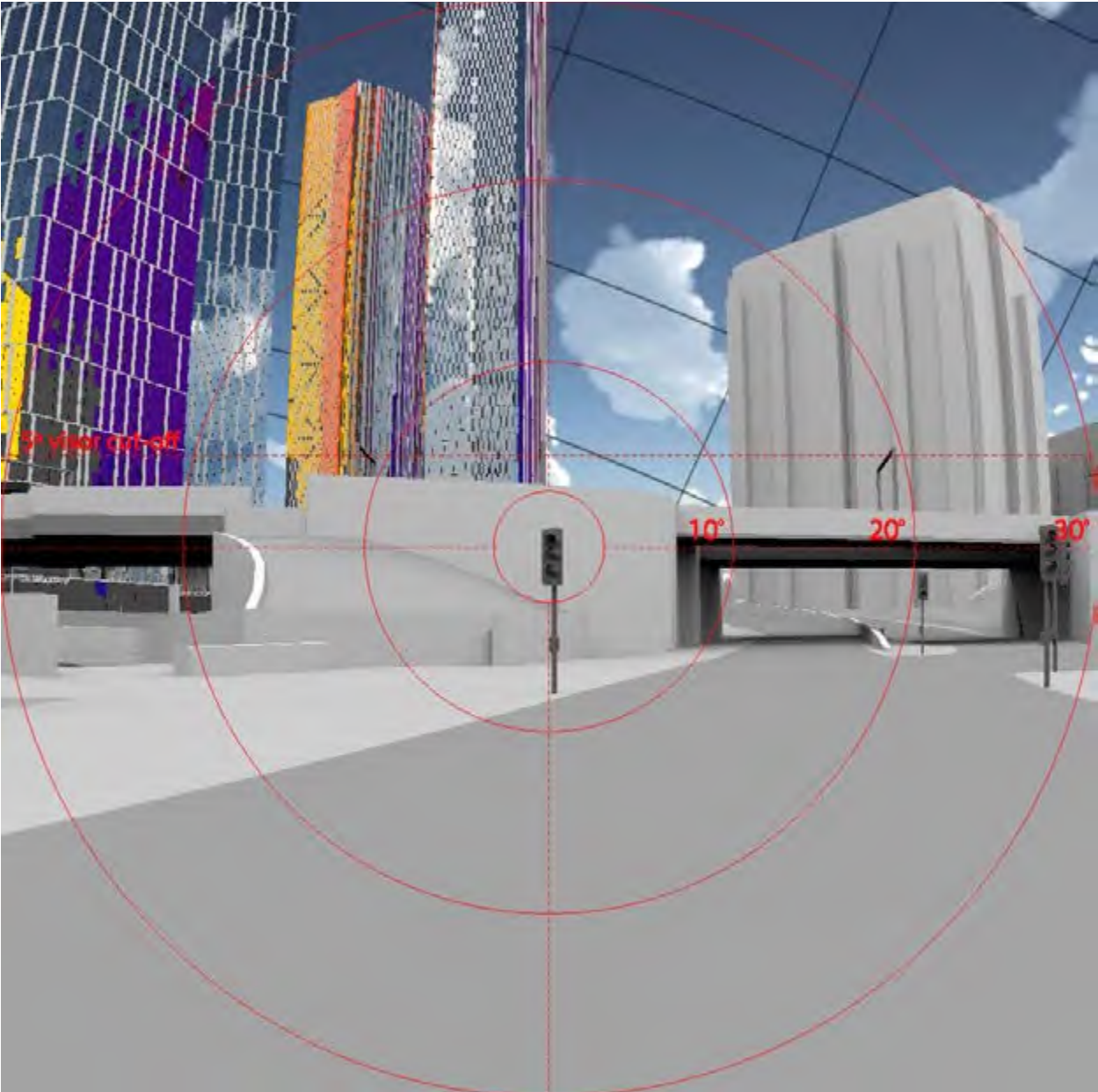


Fig. 98: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW2B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH HAMPSON STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

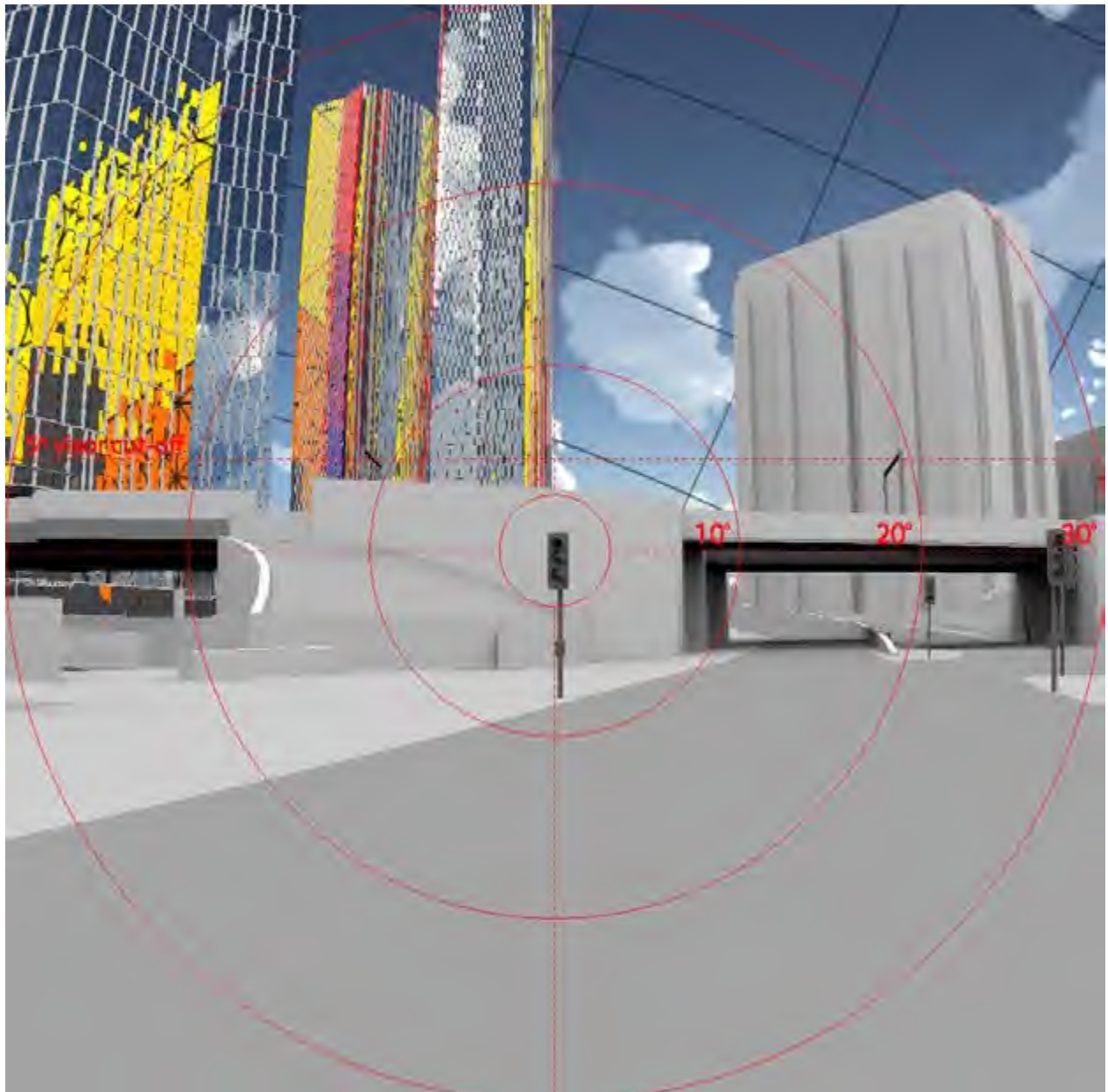


Fig. 99: Solar reflections



¹² **SOLAR GLARE ASSESSMENT**

TW1 - TRINITY WAY/INNER RING ROAD 1

TW1 - Trinity Way/Inner Ring Road Southbound Pedestrian Crossing

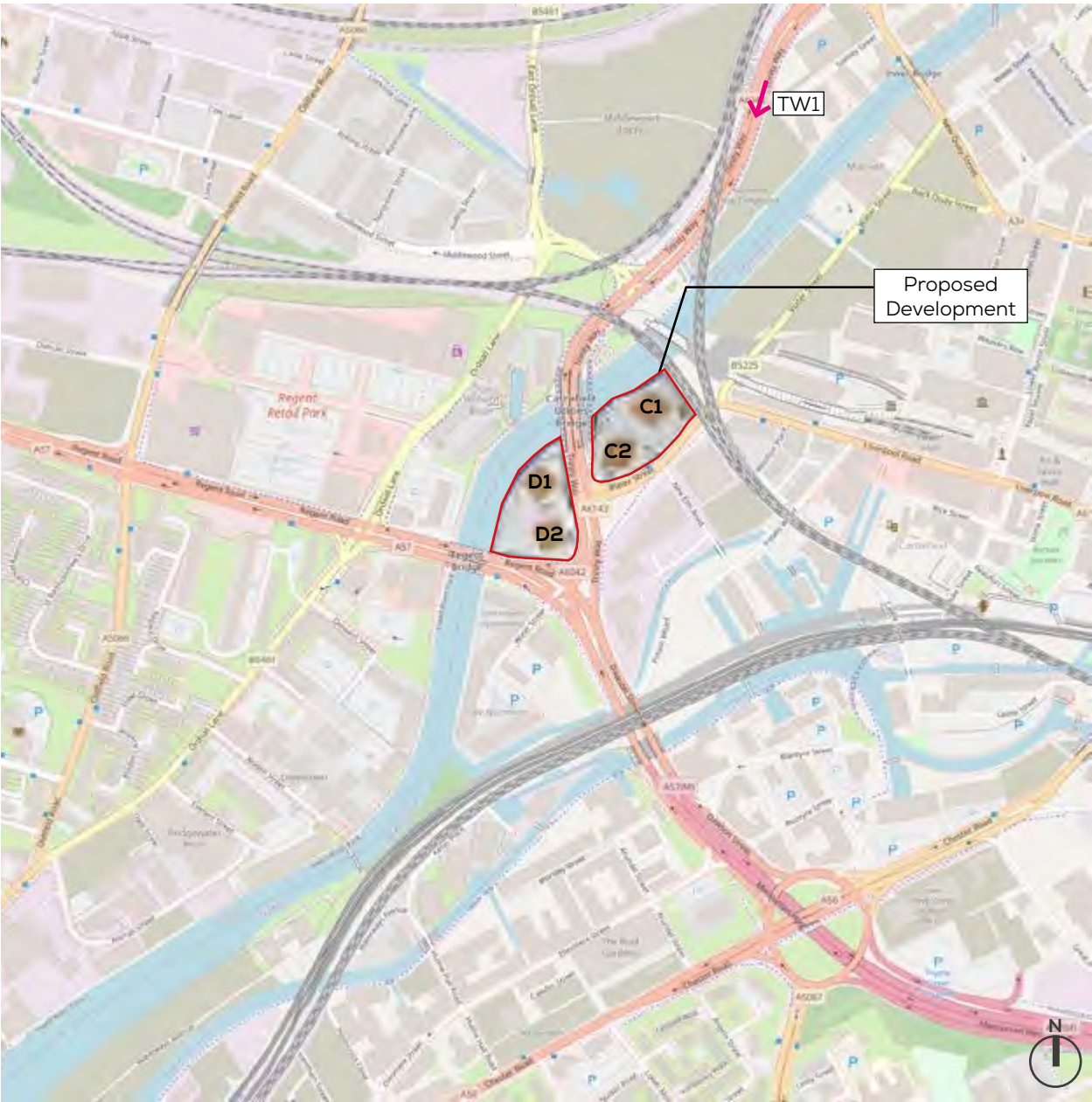


Fig. 100: Junction Location

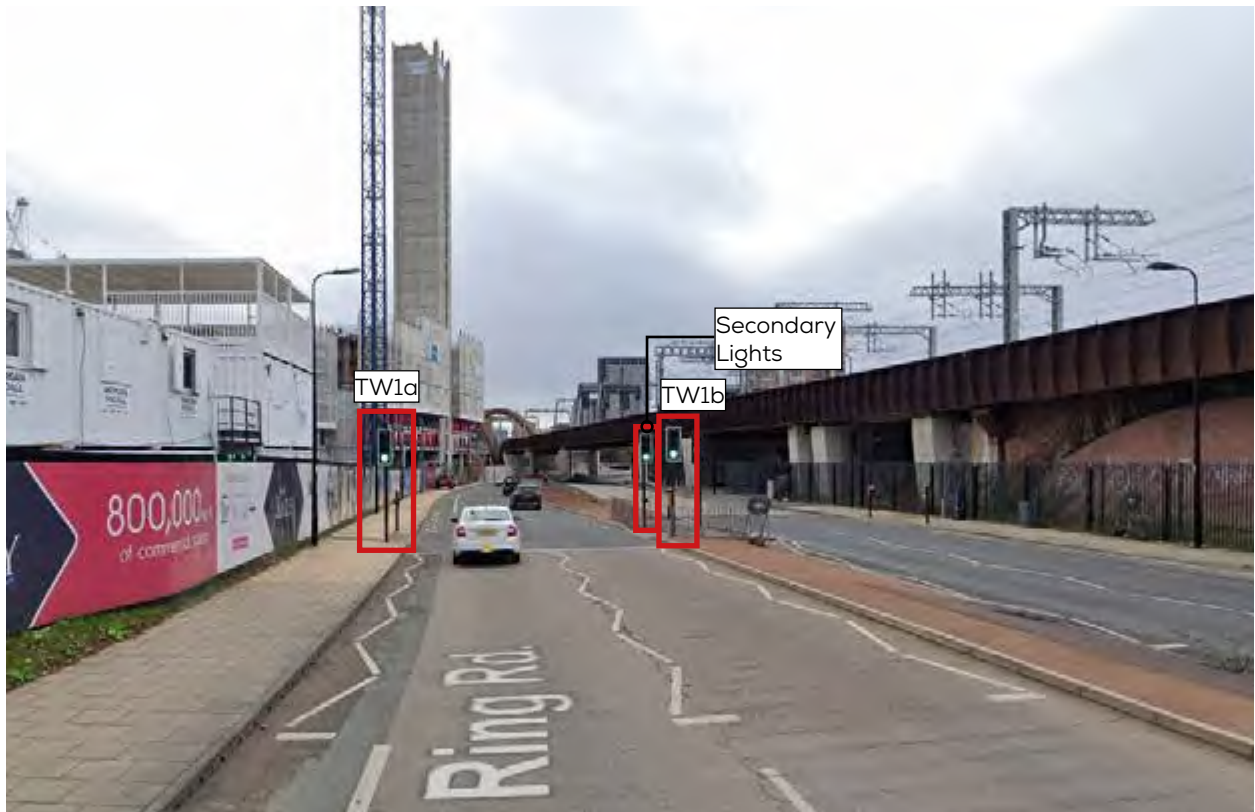


Fig. 101: Traffic Light Location



Fig. 102: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

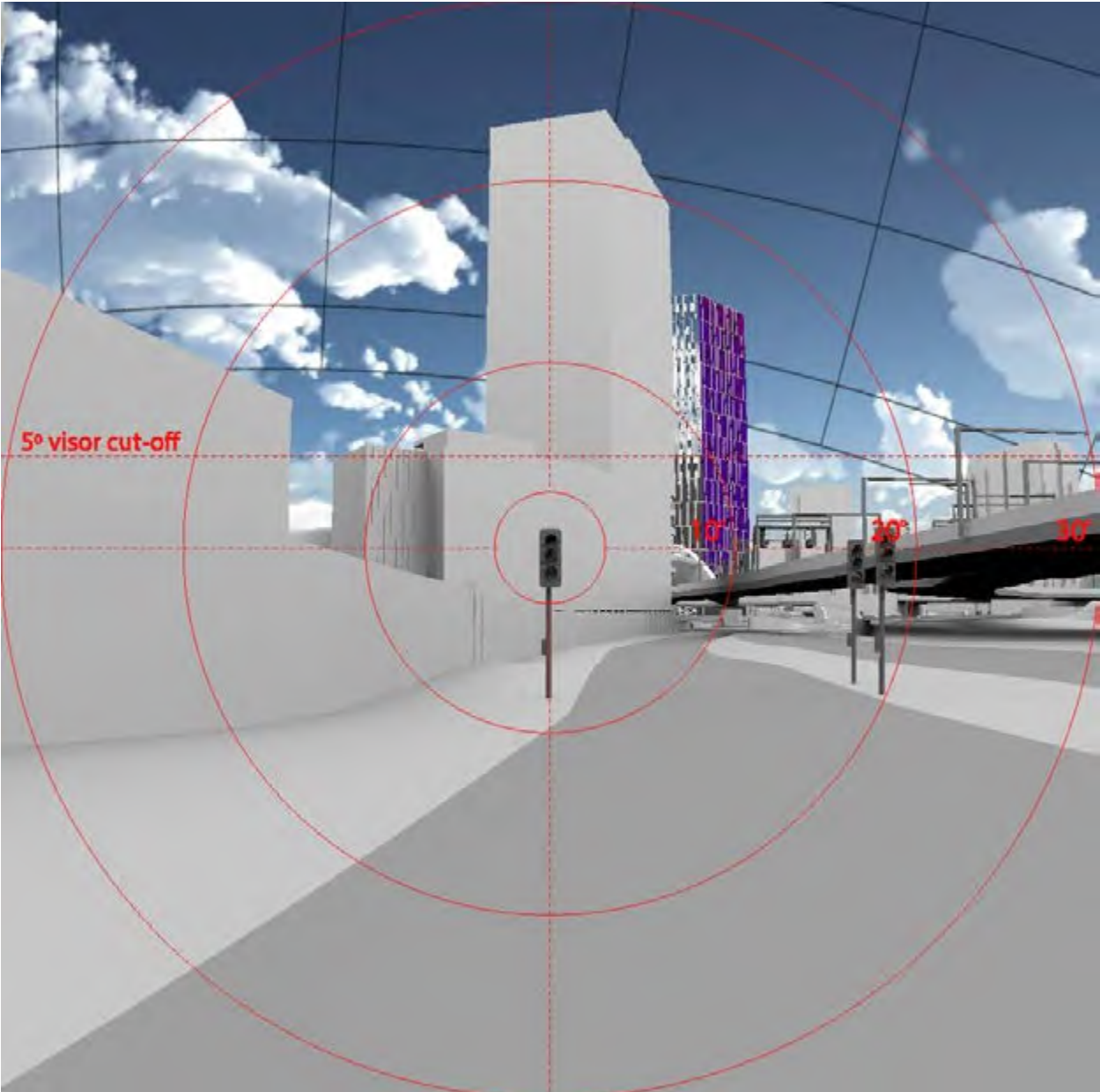


Fig. 103: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

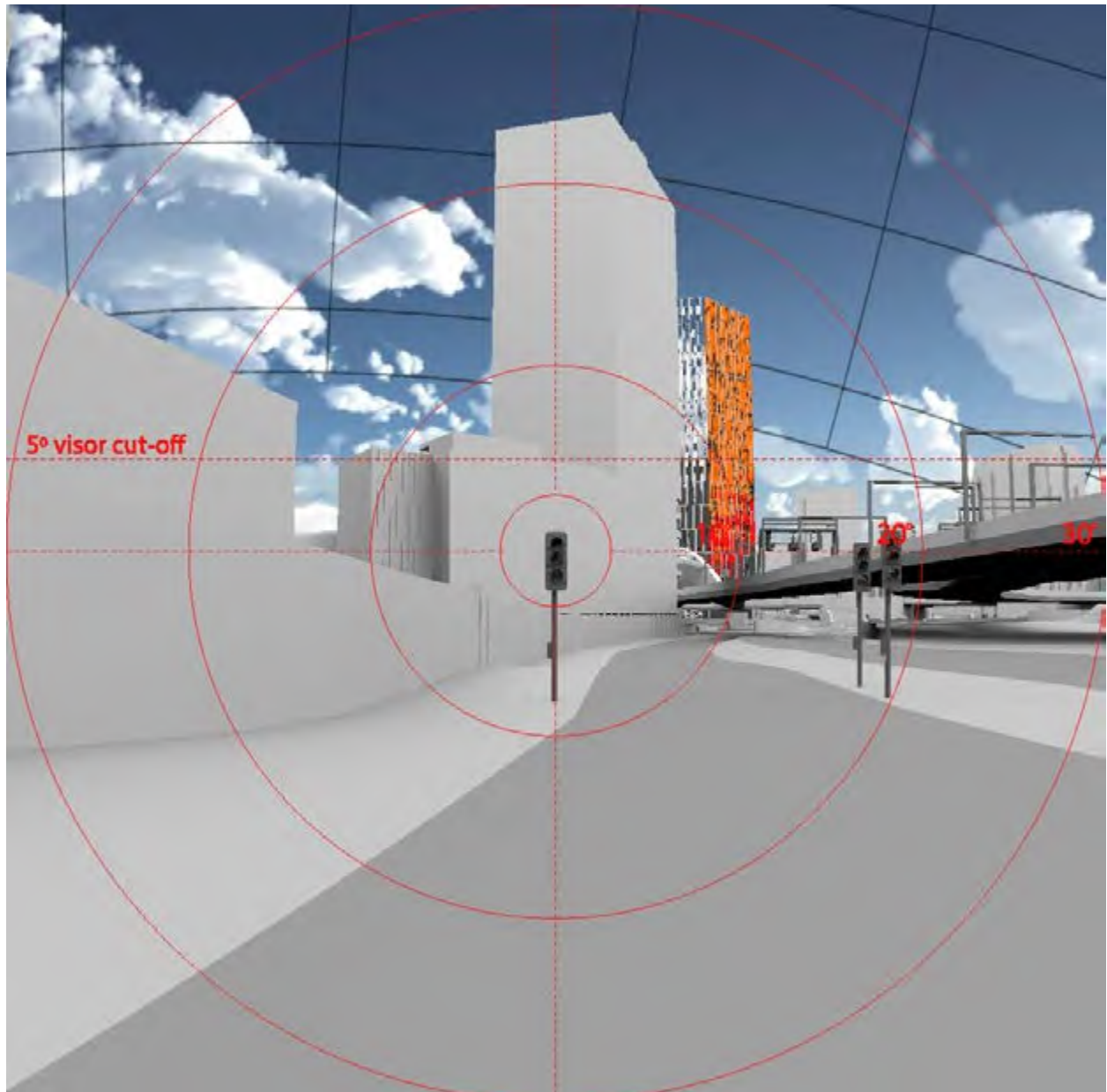


Fig. 104: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

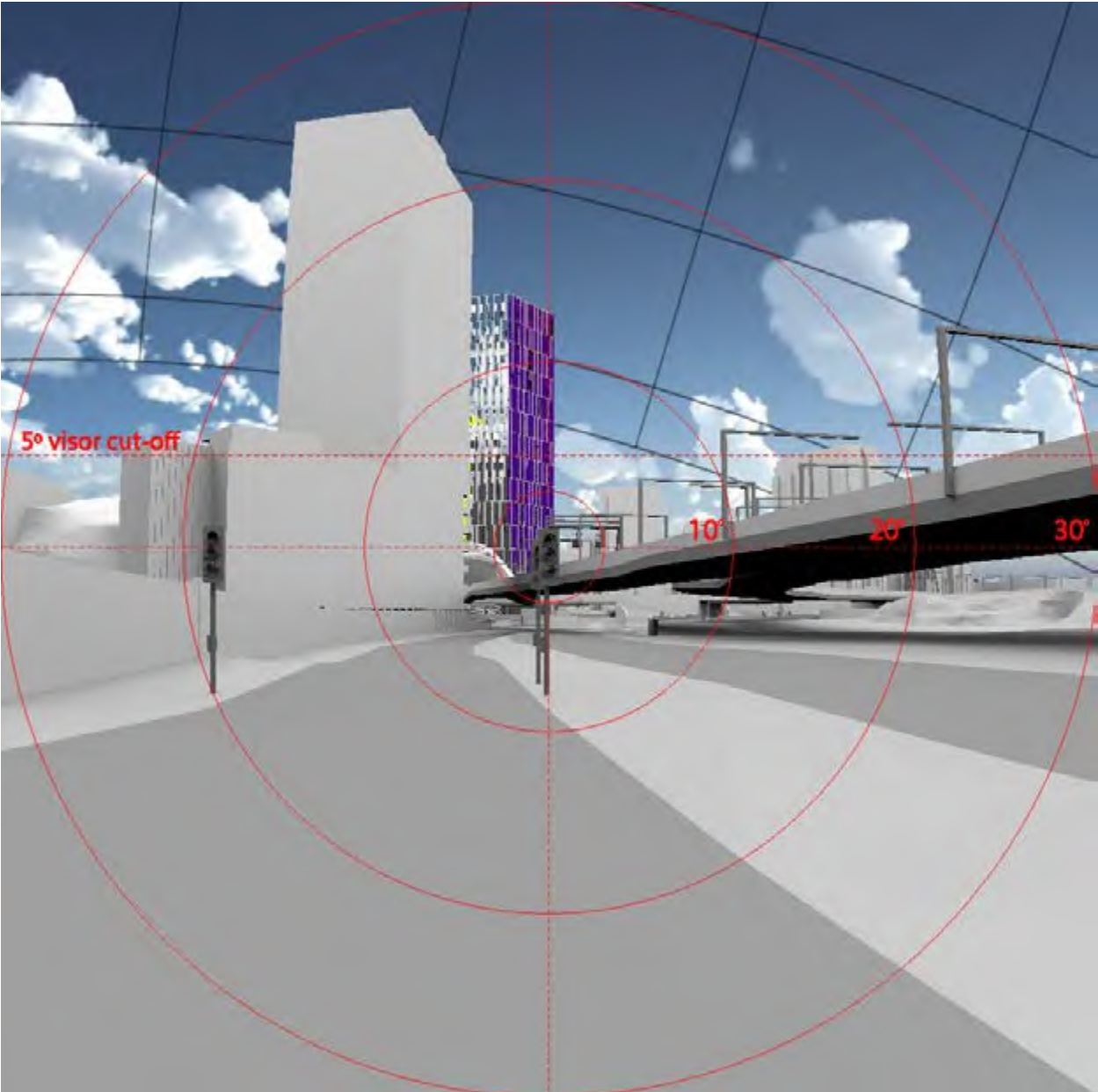


Fig. 105: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

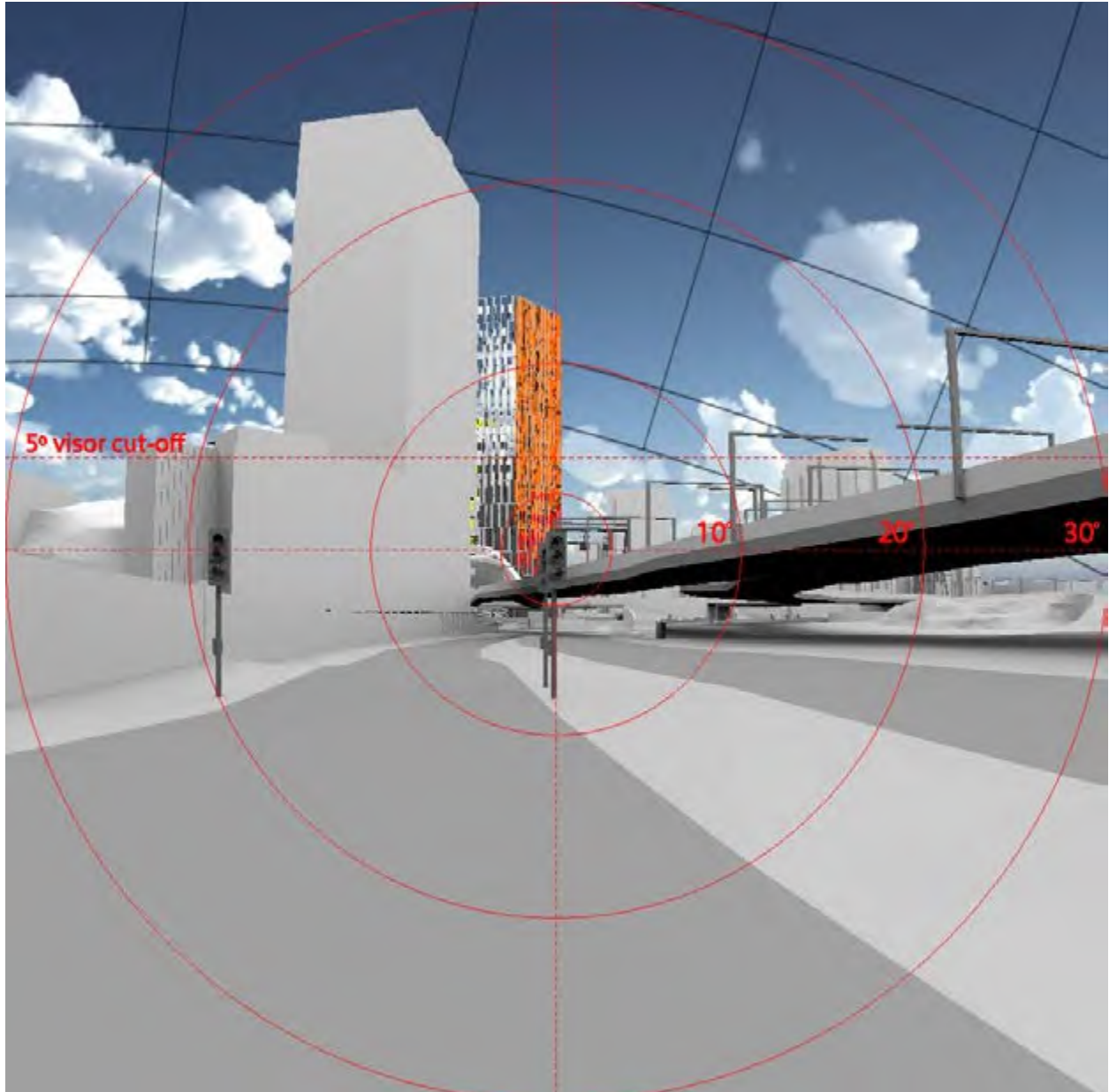


Fig. 106: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

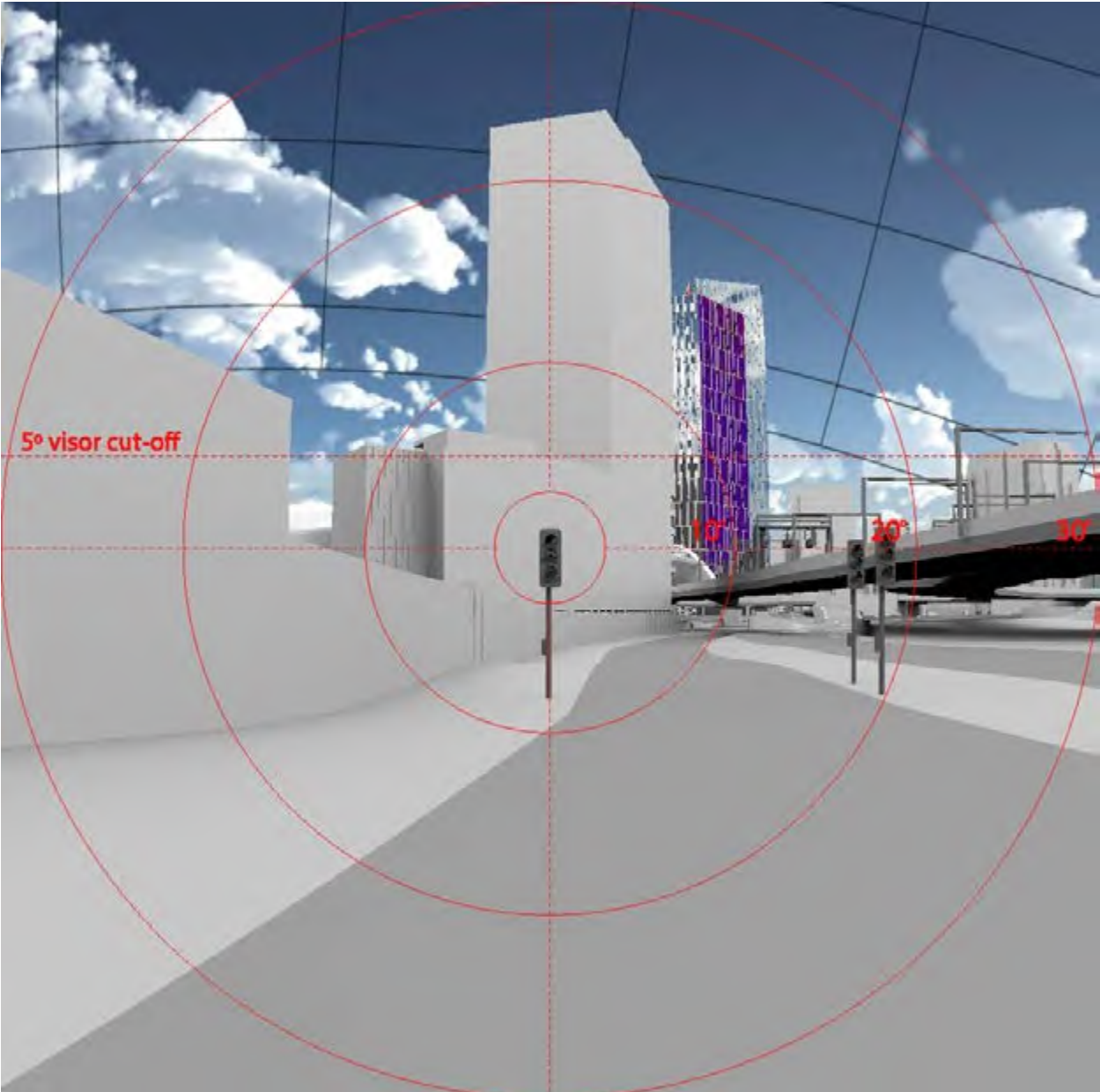


Fig. 107: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

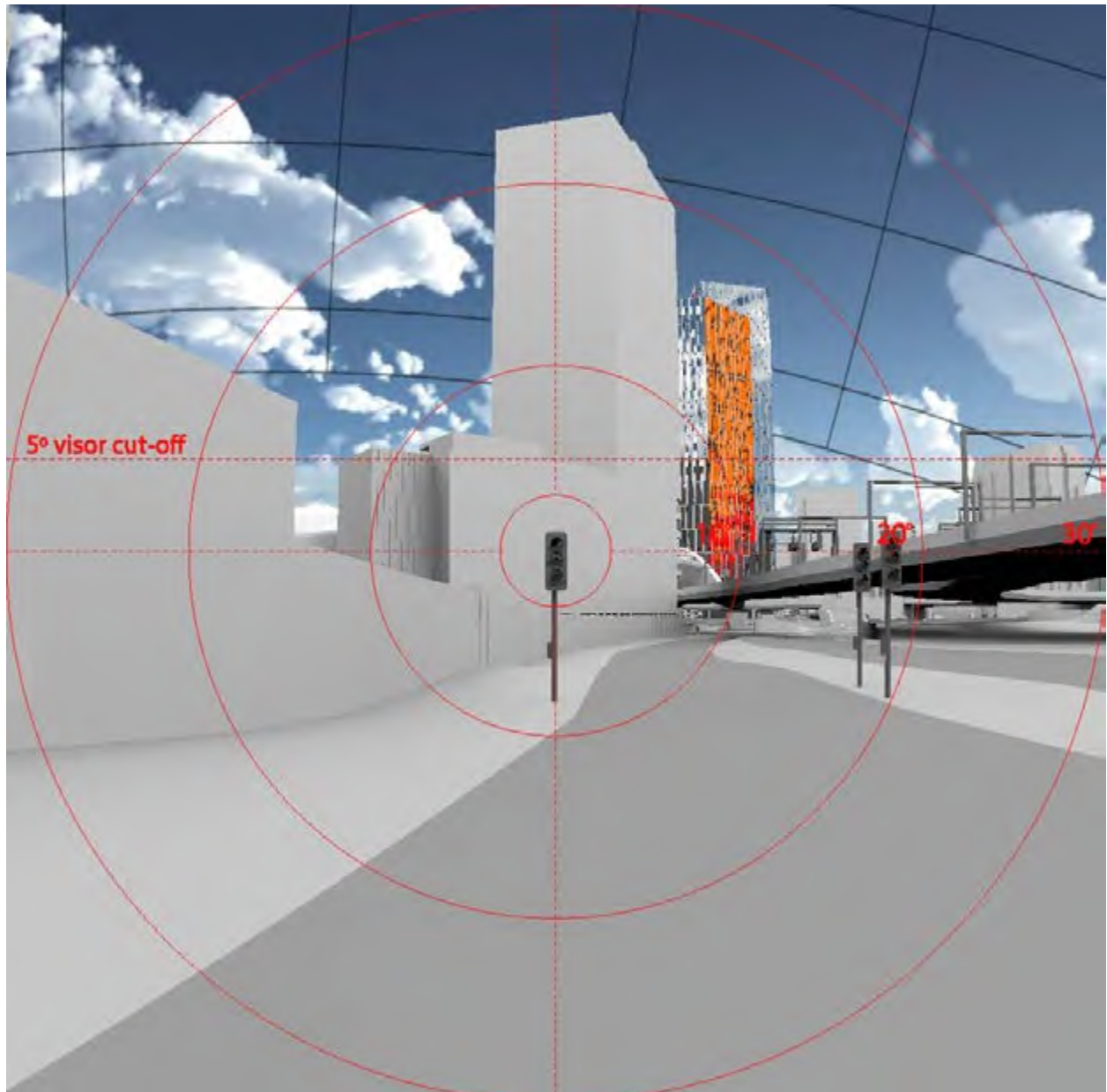


Fig. 108: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

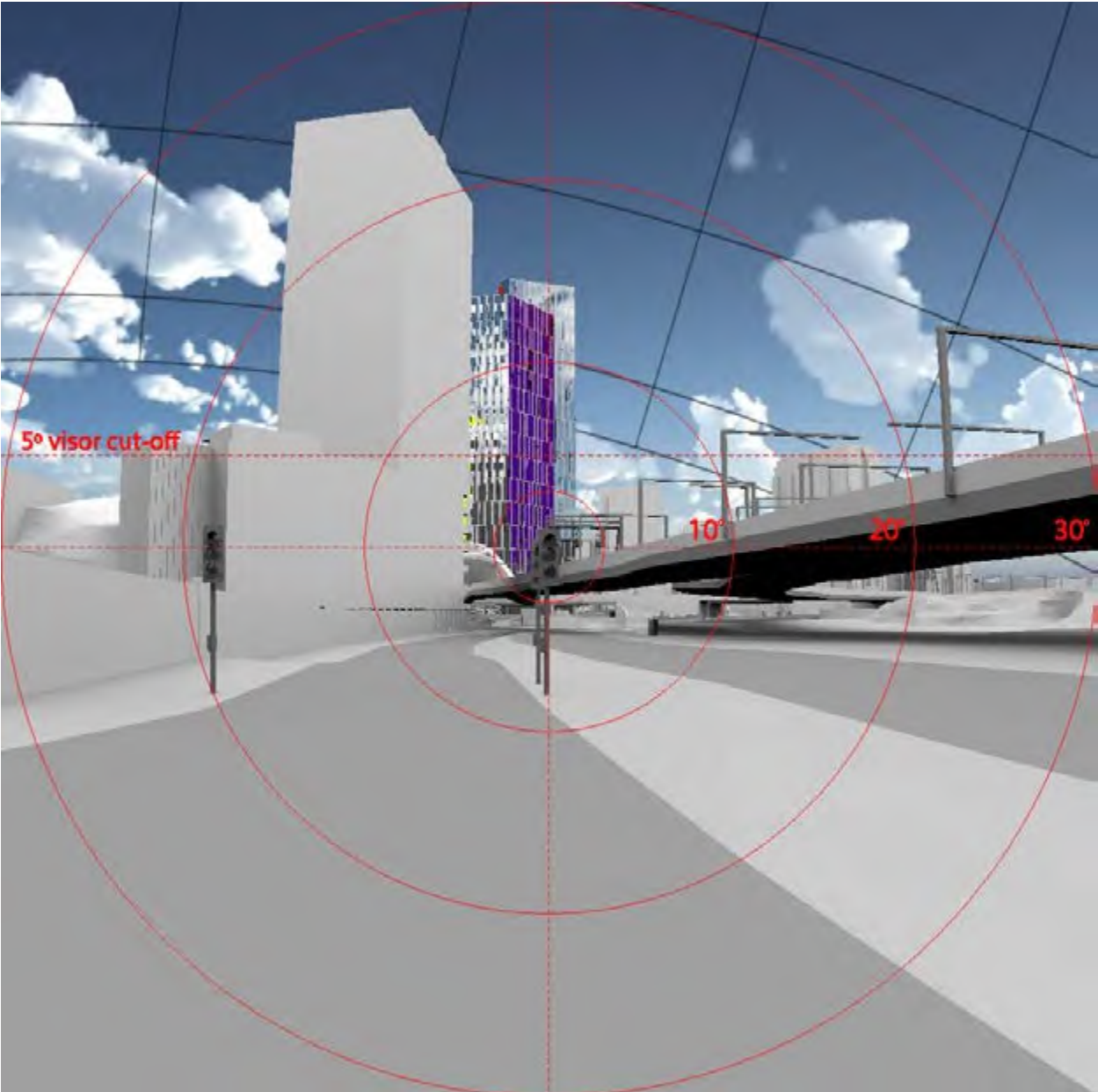


Fig. 109: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

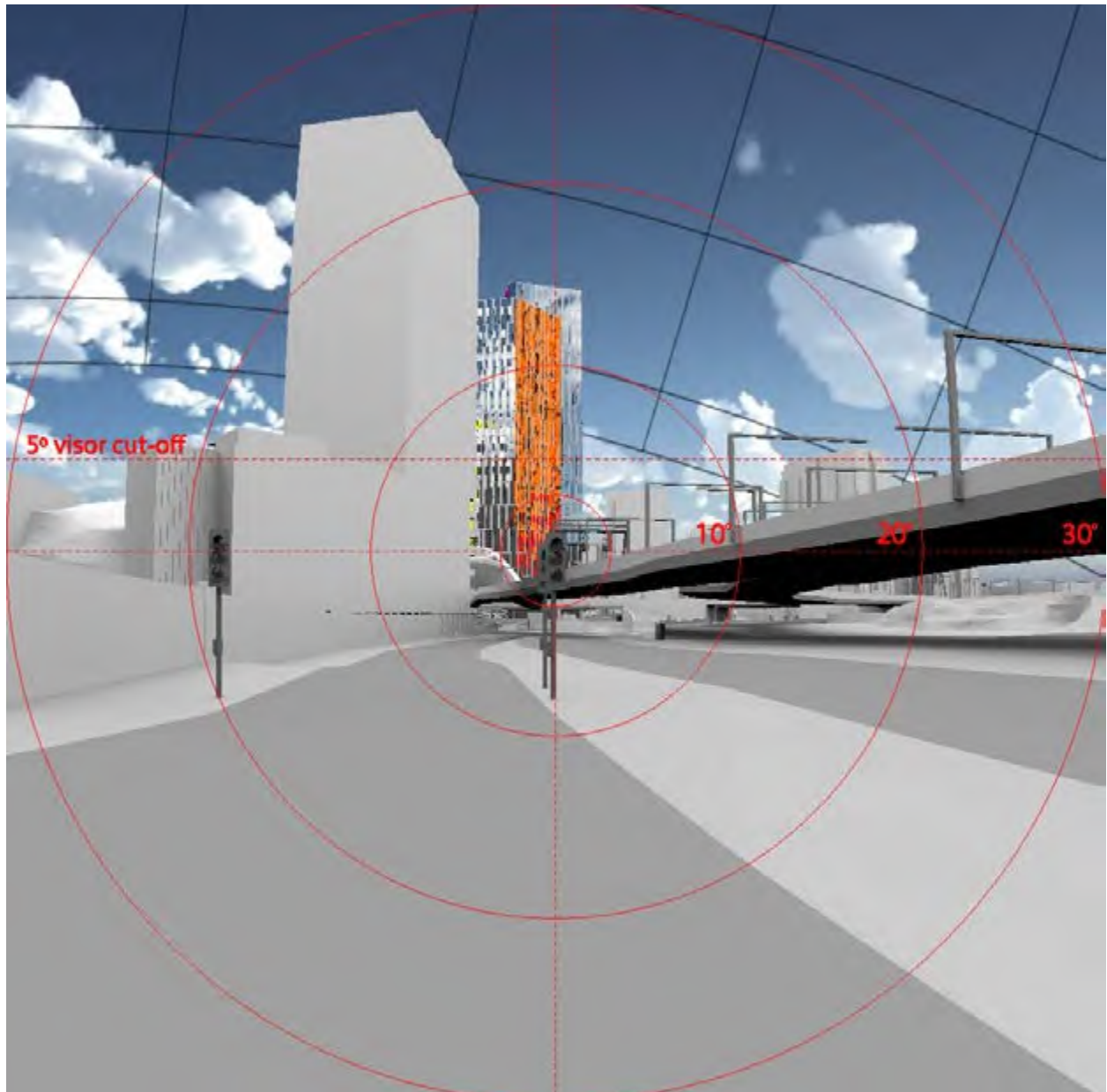


Fig. 110: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

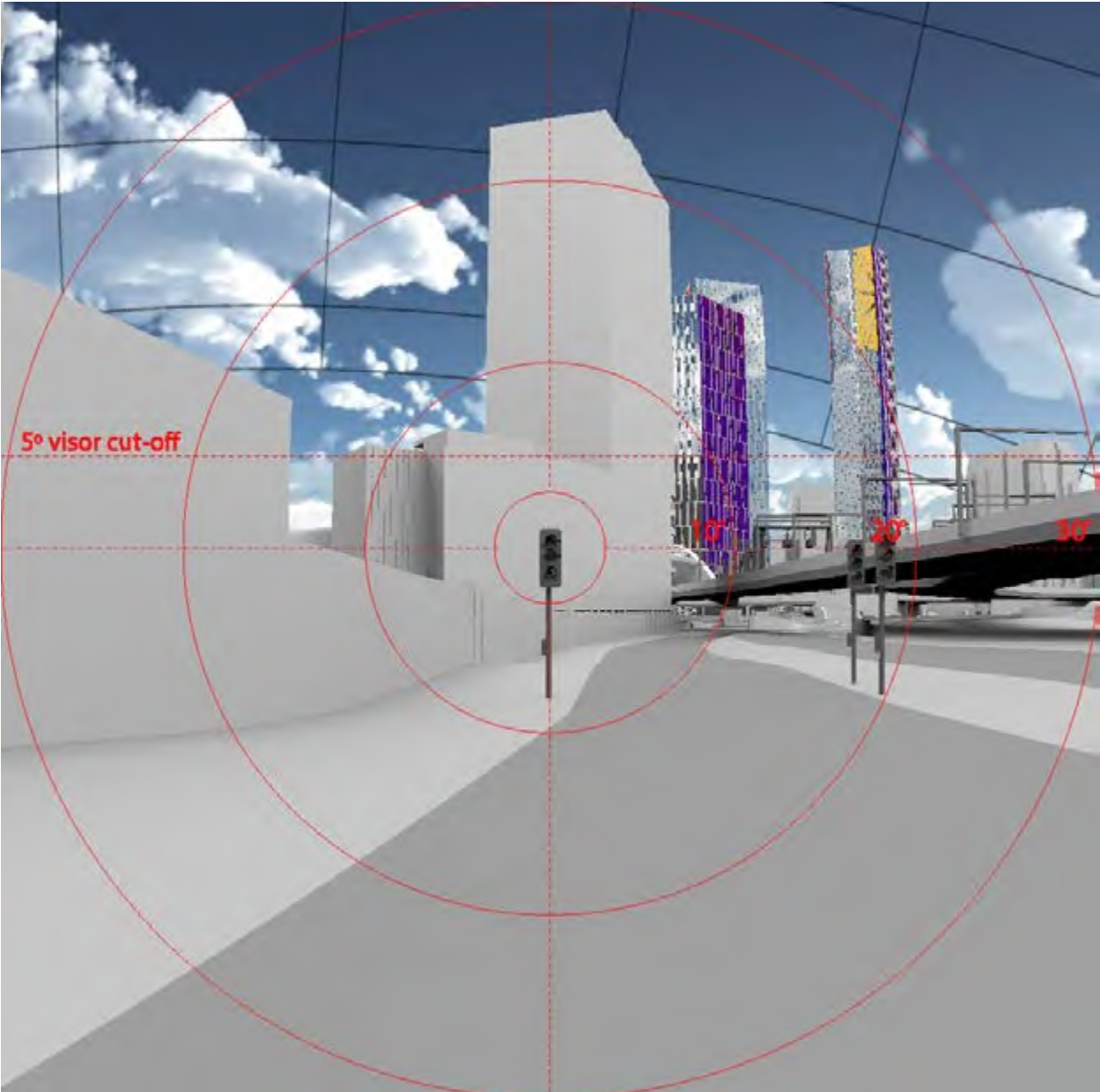
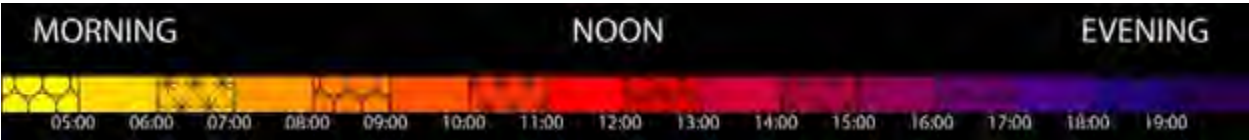


Fig. 111: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

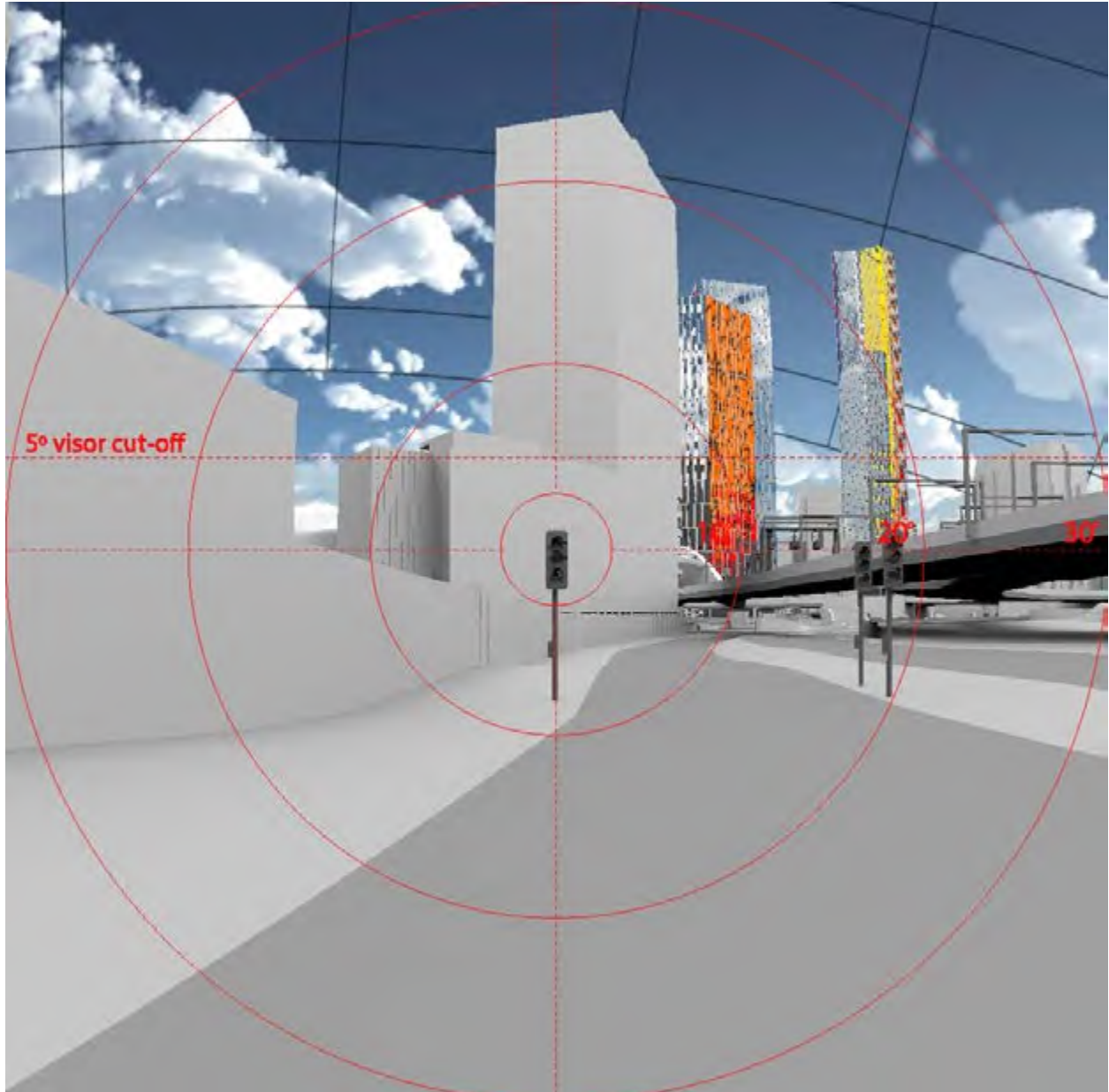


Fig. 112: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

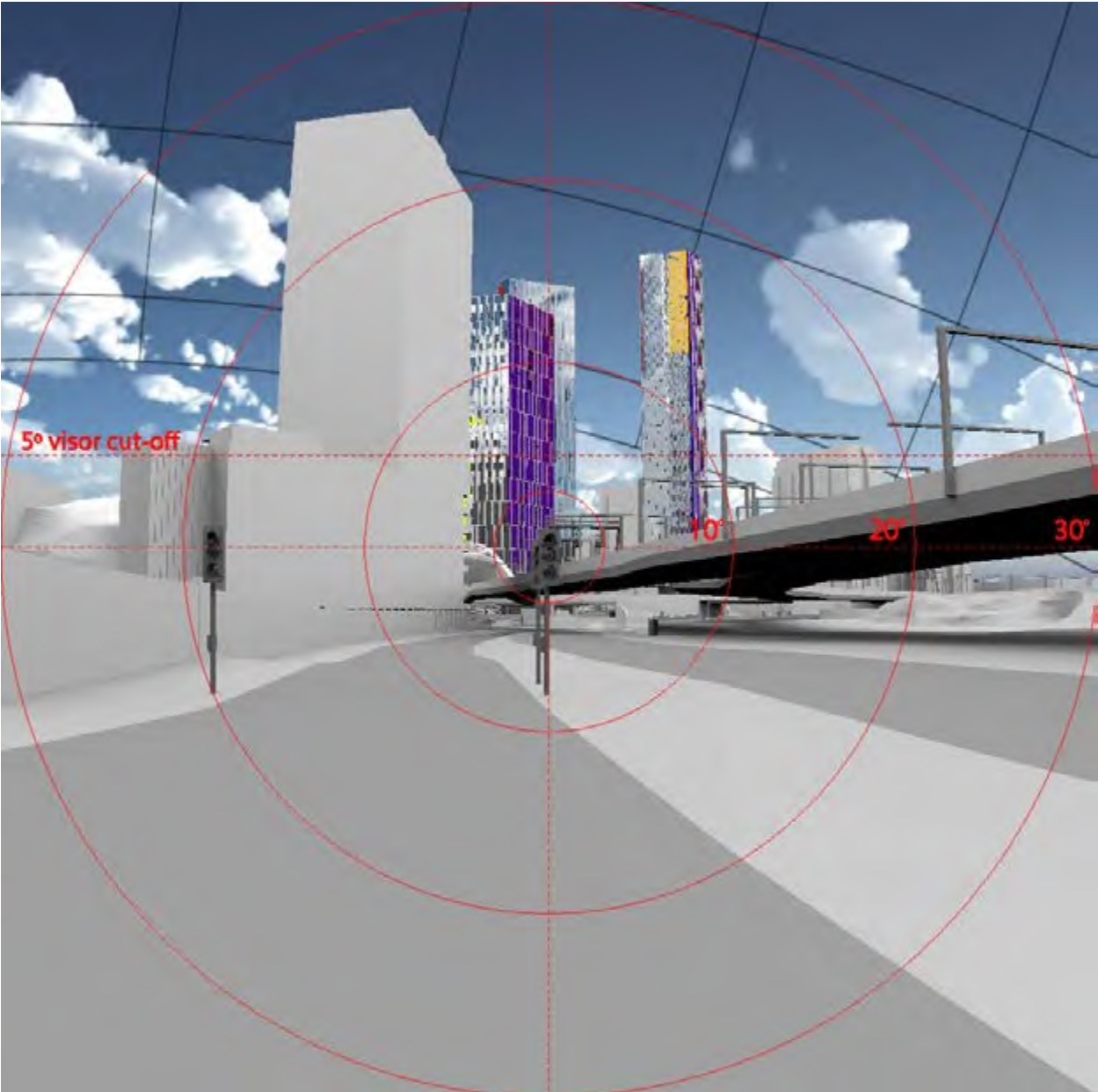


Fig. 113: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

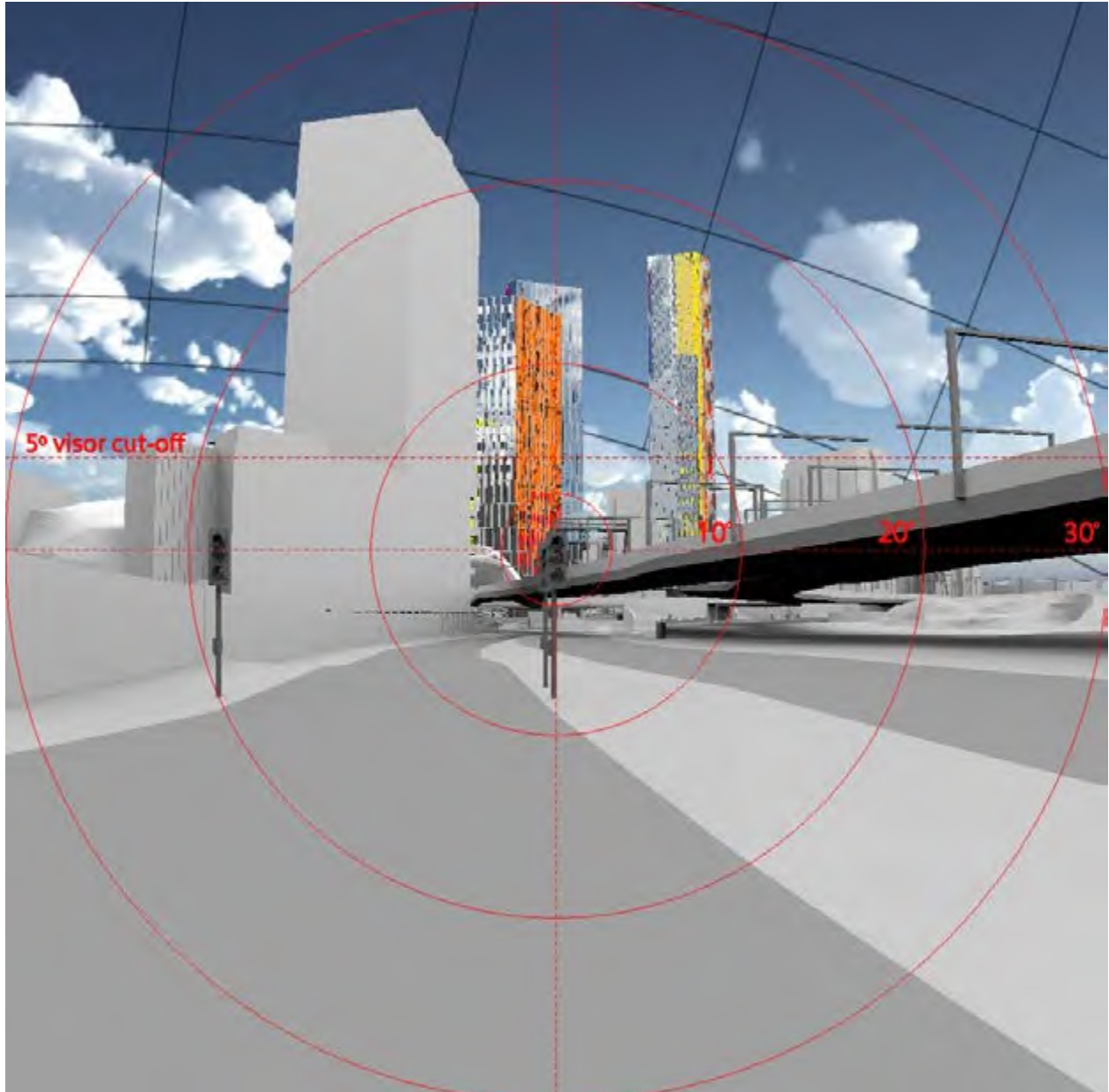


Fig. 114: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

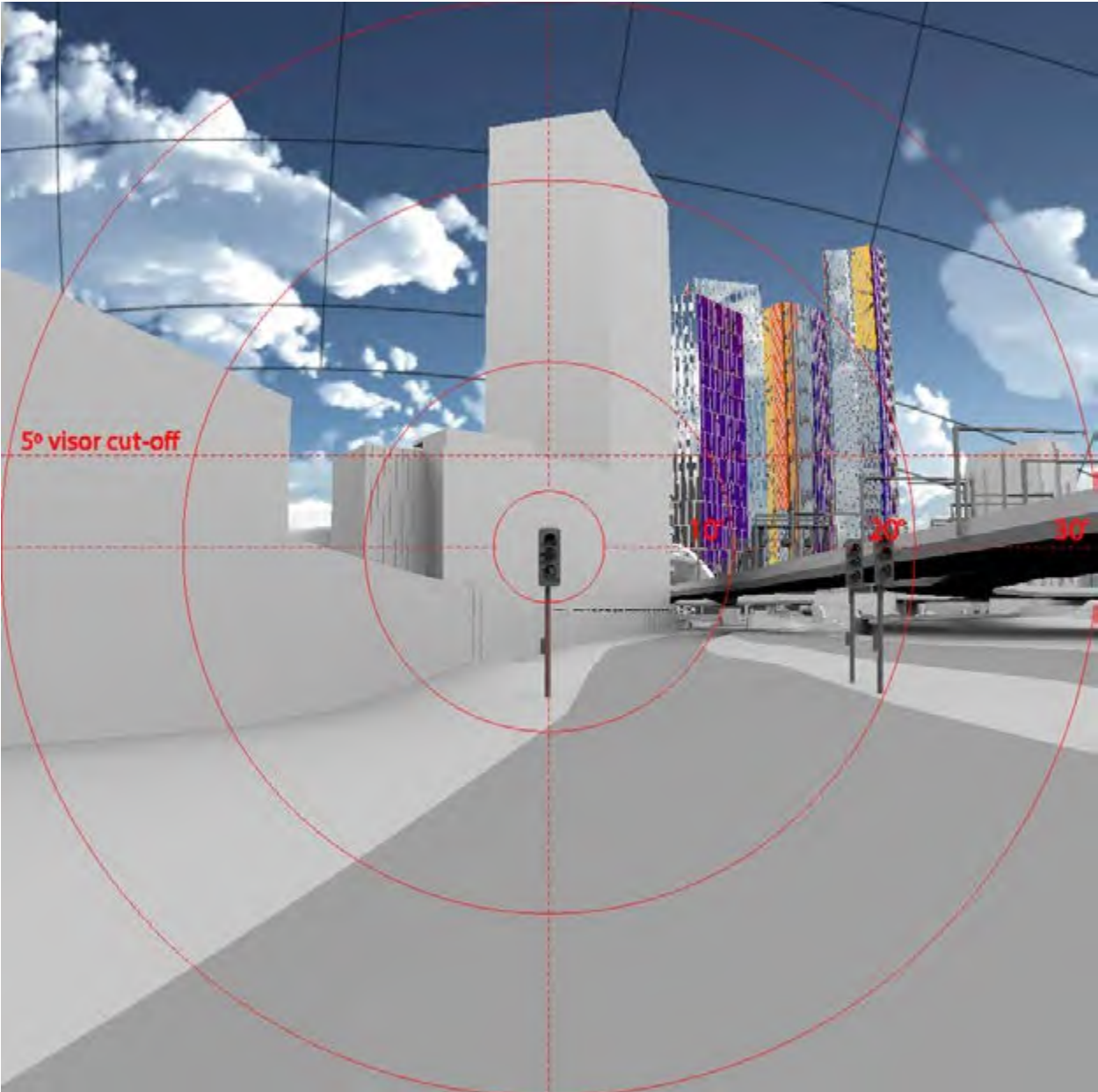


Fig. 115: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1A - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

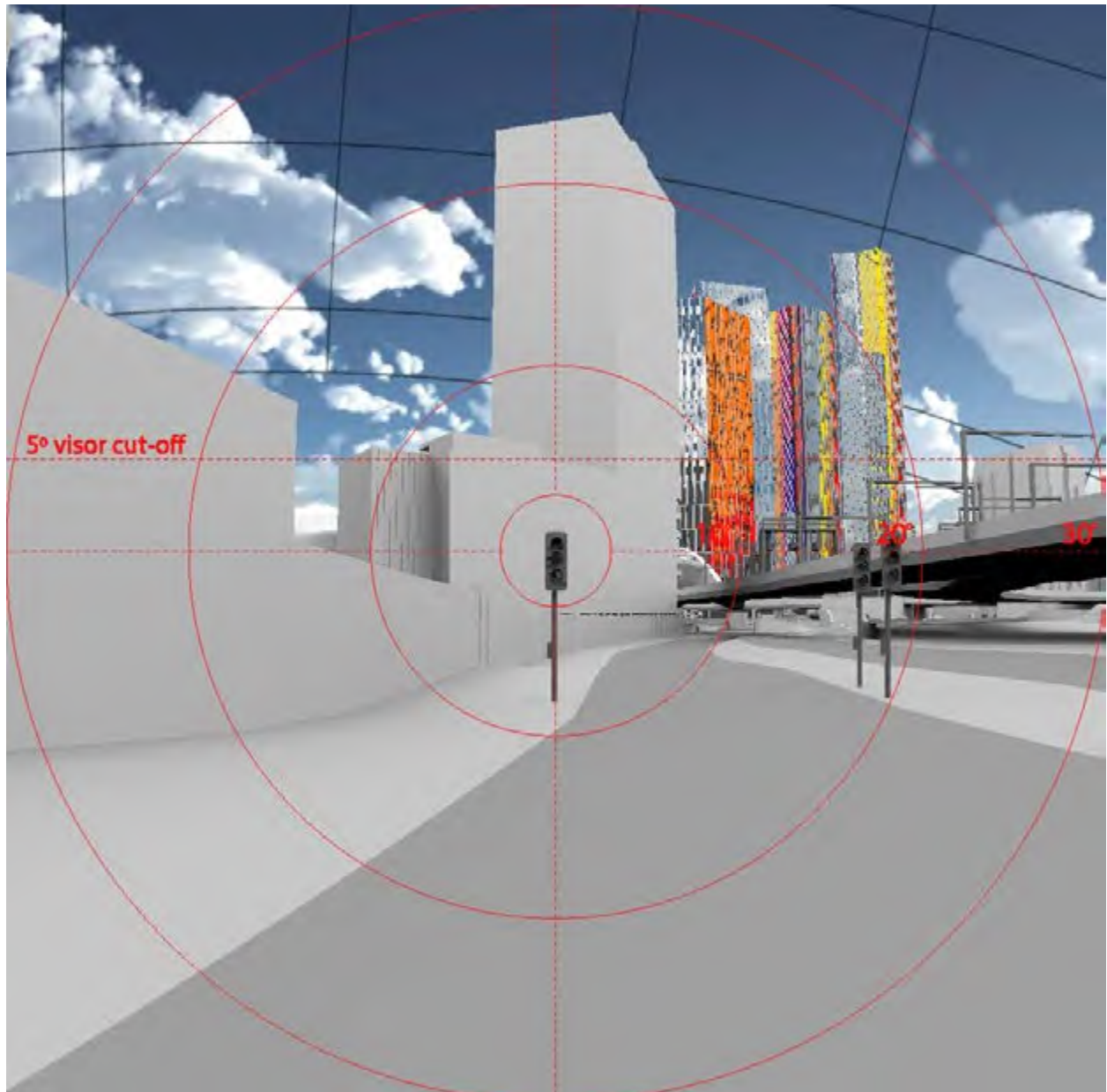


Fig. 116: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

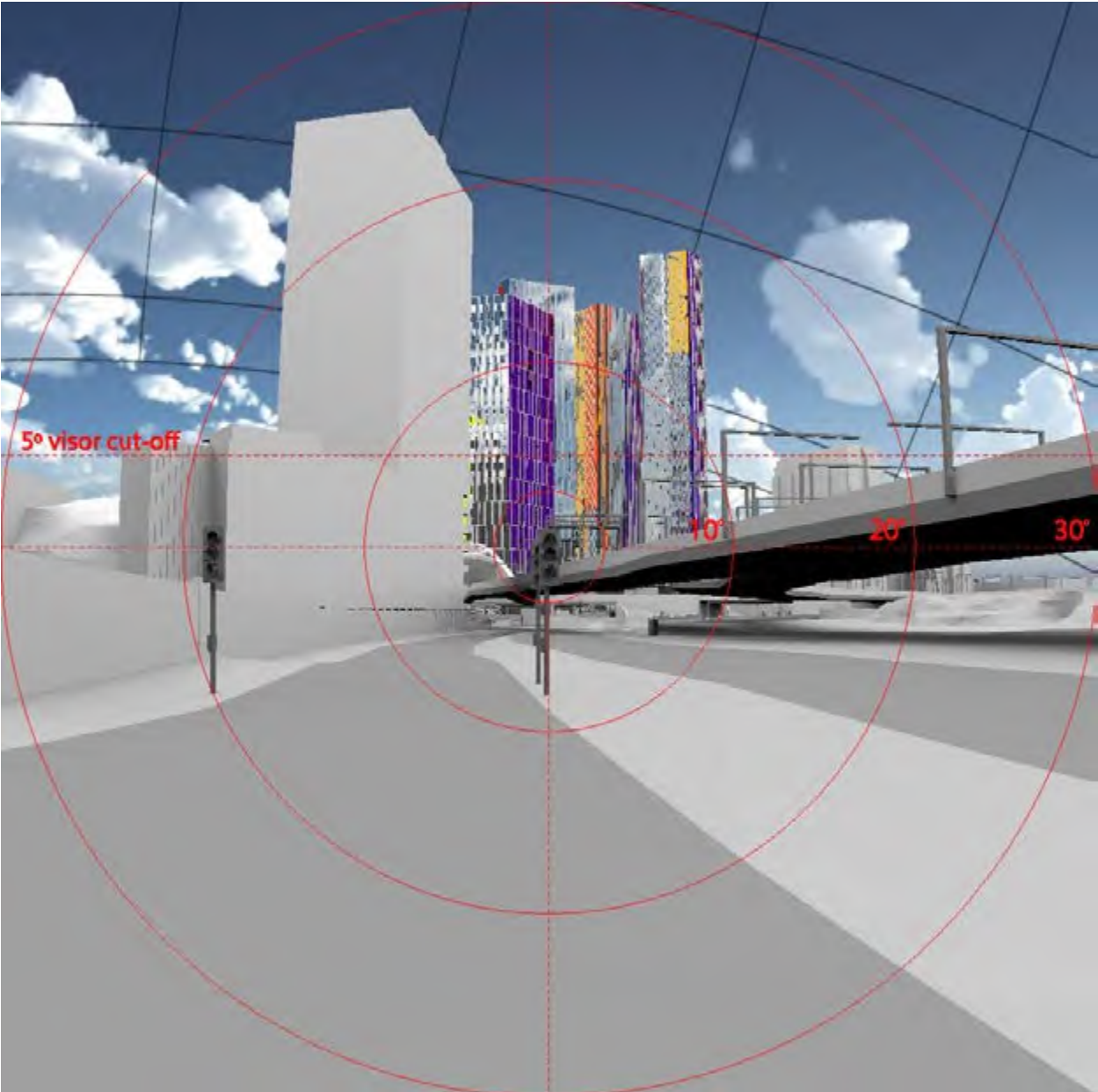


Fig. 117: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW1B - TRINITY WAY/INNER RING ROAD PEDESTRIAN CROSSING
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

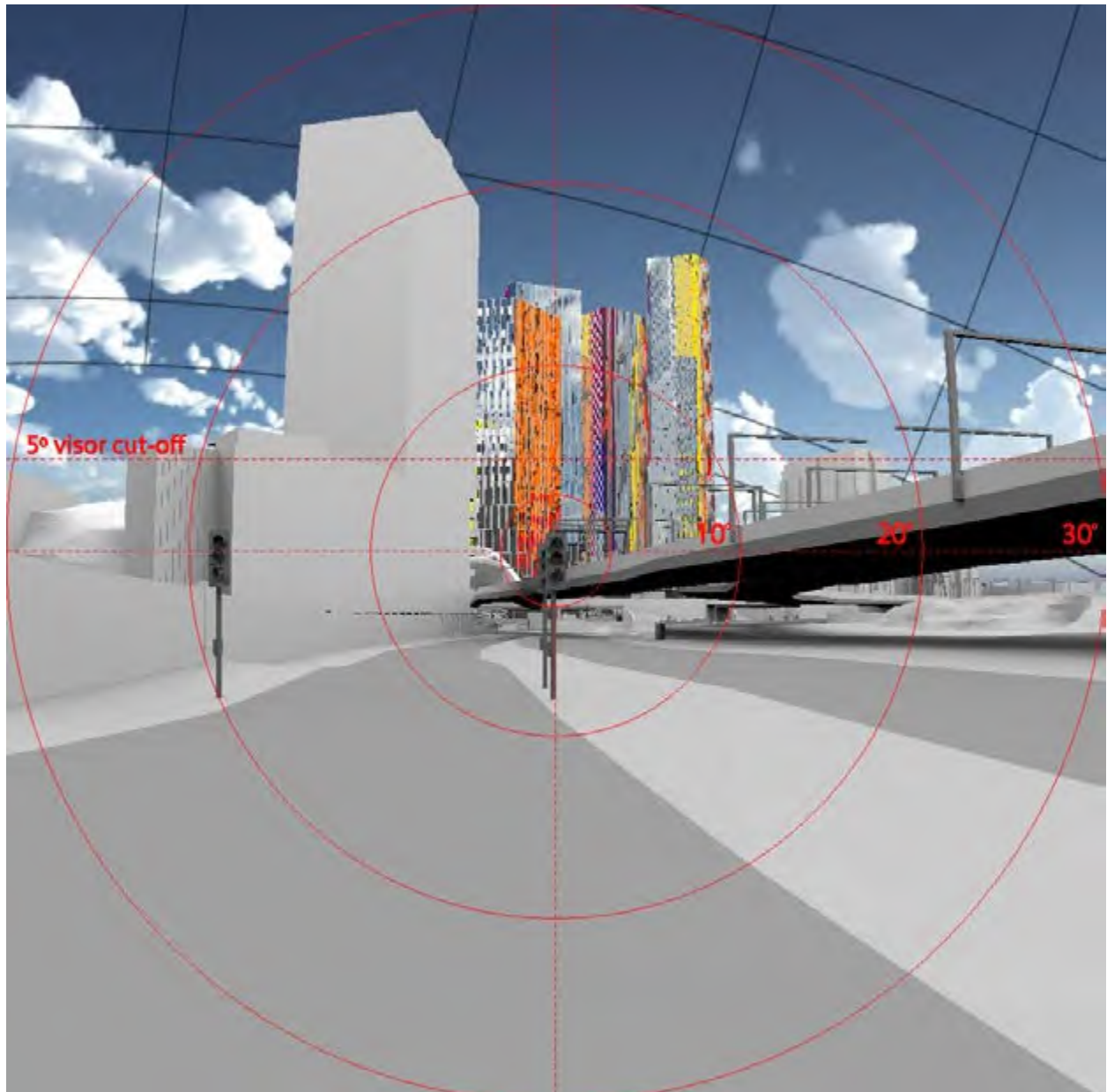


Fig. 118: Solar reflections



13 **SOLAR GLARE ASSESSMENT**
WS1 - WATER STREET 1

WS1 - Water Street Westbound Junction (with Liverpool Road)

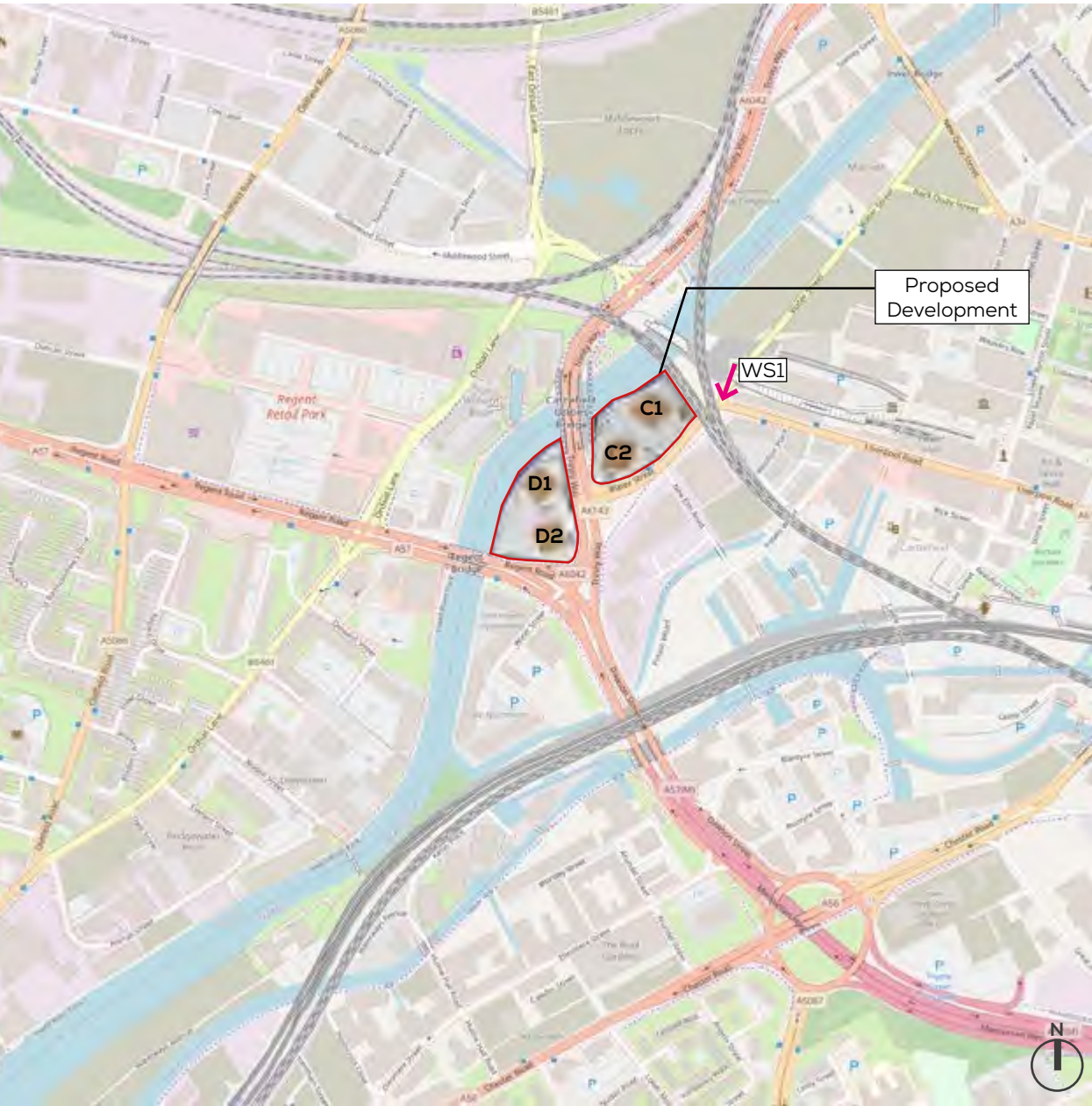


Fig. 119: Junction Location



Fig. 120: Junction view



Fig. 121: Viewpoints

Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS1 - WATER STREET JUNCTION (WITH LIVERPOOL ROAD)
LOOKING STRAIGHT

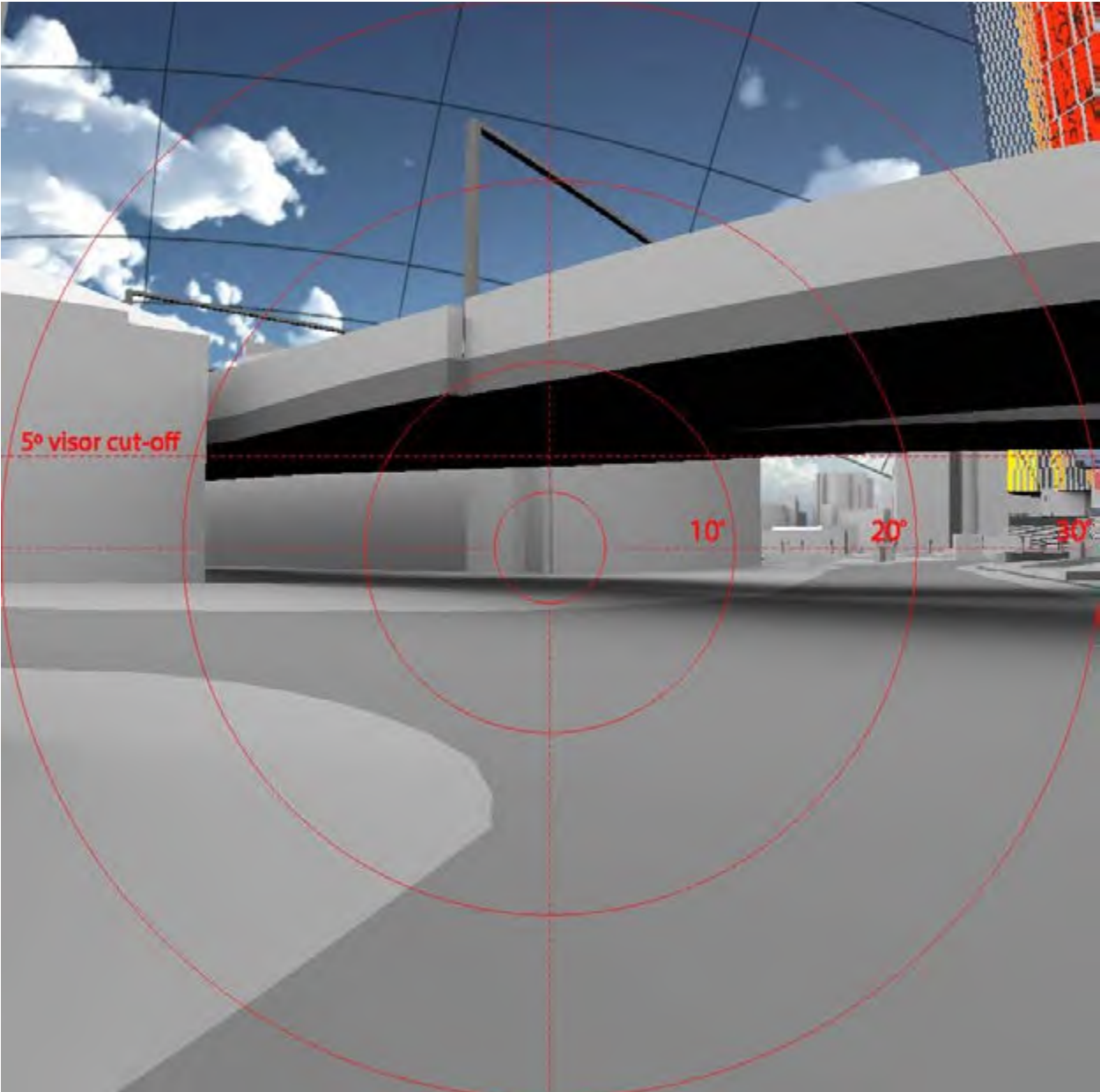


Fig. 122: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT WS1 - WATER STREET JUNCTION (WITH LIVERPOOL ROAD)
LOOKING STRAIGHT

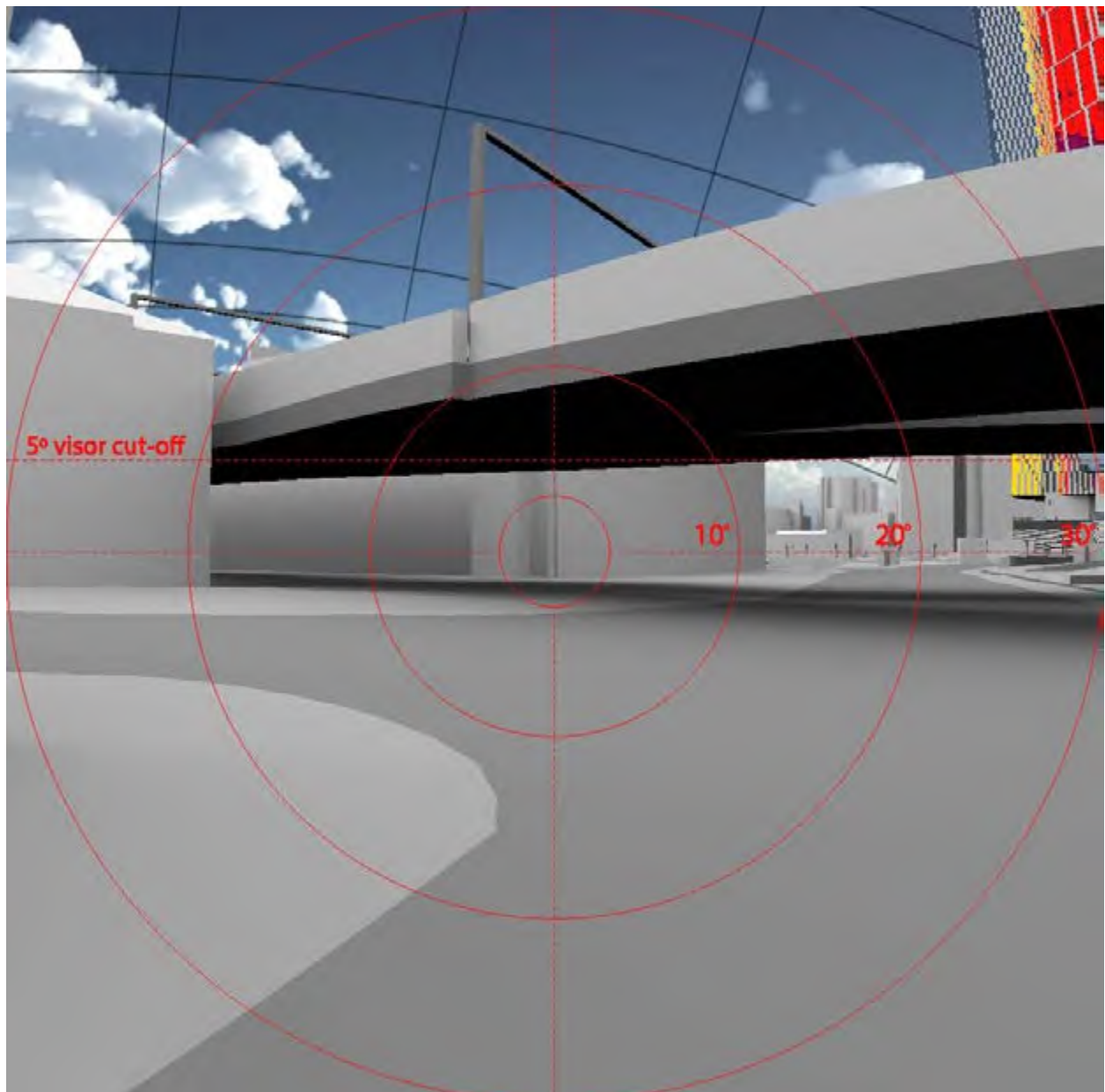


Fig. 123: Solar reflections



14 **SOLAR GLARE ASSESSMENT**
LR - LIVERPOOL ROAD

LR - Liverpool Road Westbound Pedestrian Crossing



Fig. 124: Junction Location



Fig. 125: Junction view



Fig. 126: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT

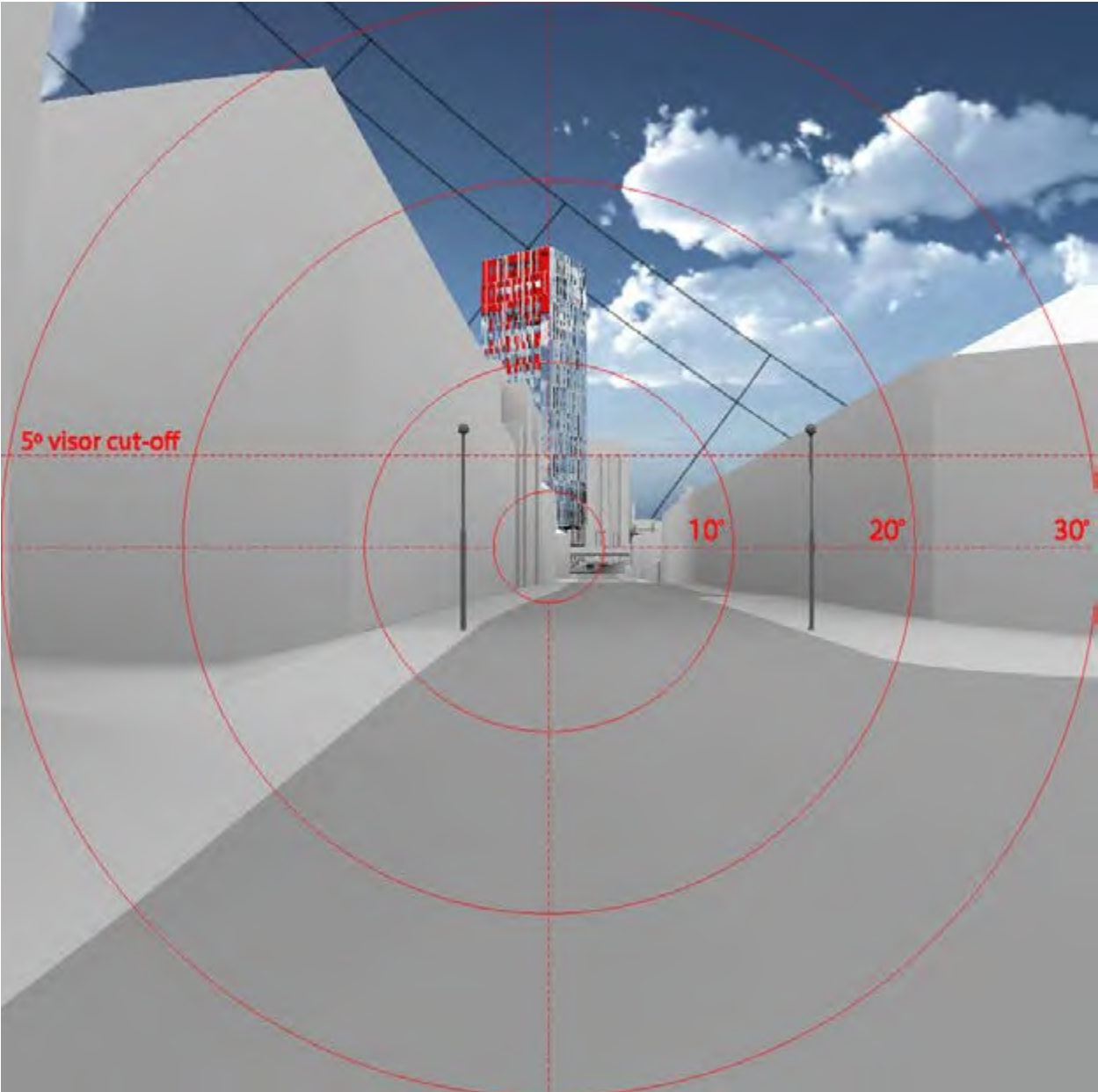


Fig. 127: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT**

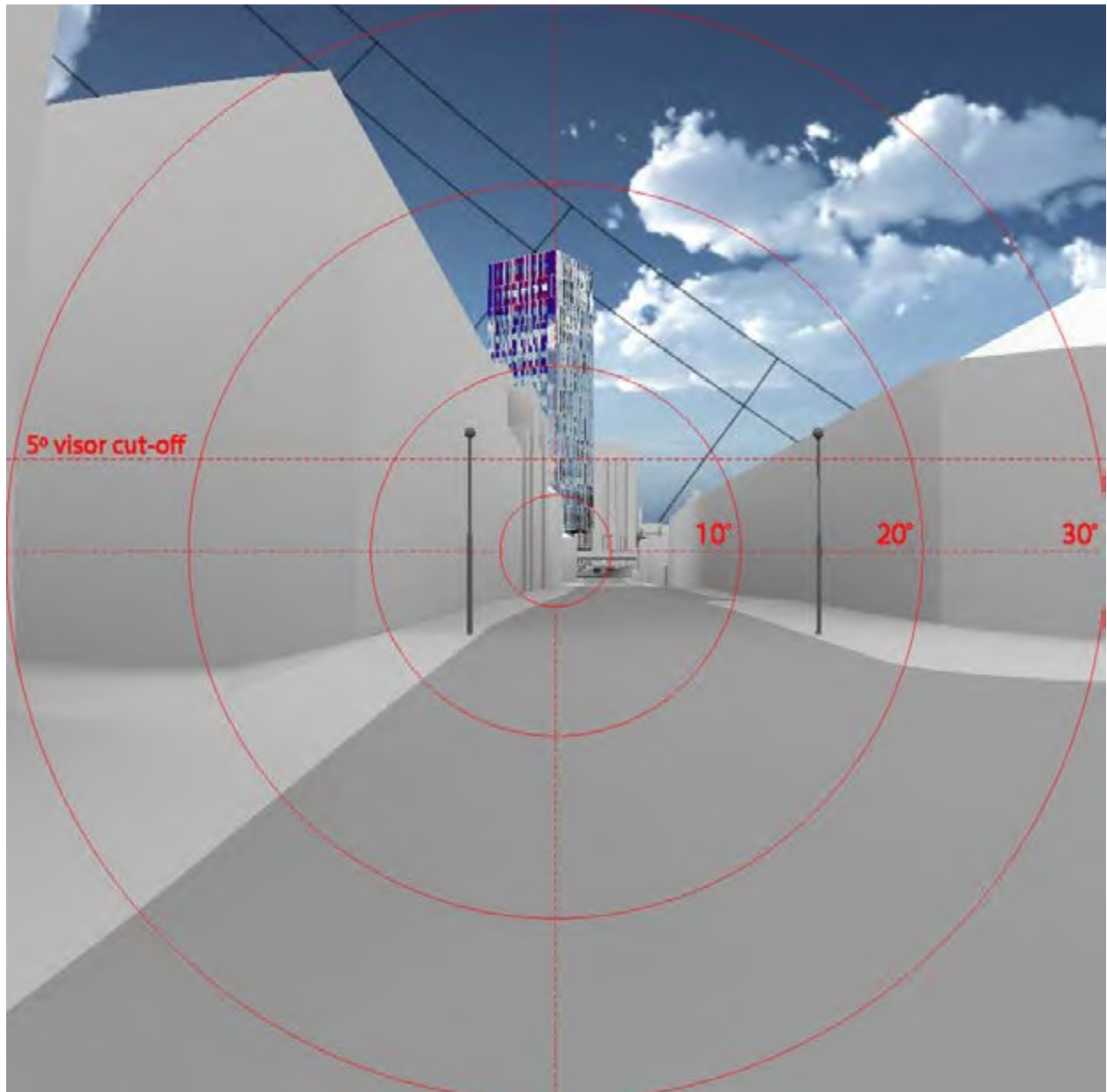


Fig. 128: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT

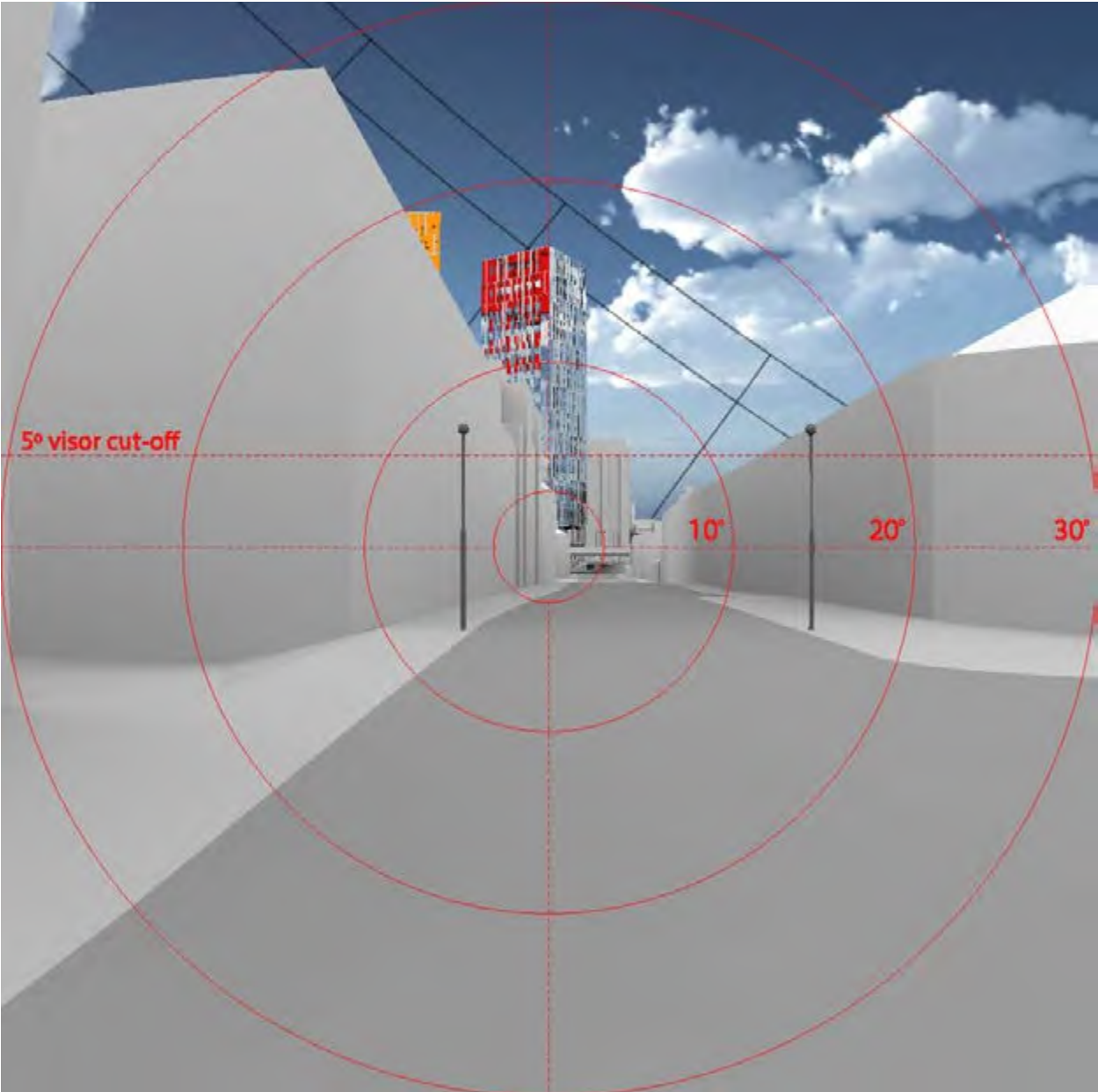


Fig. 129: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT

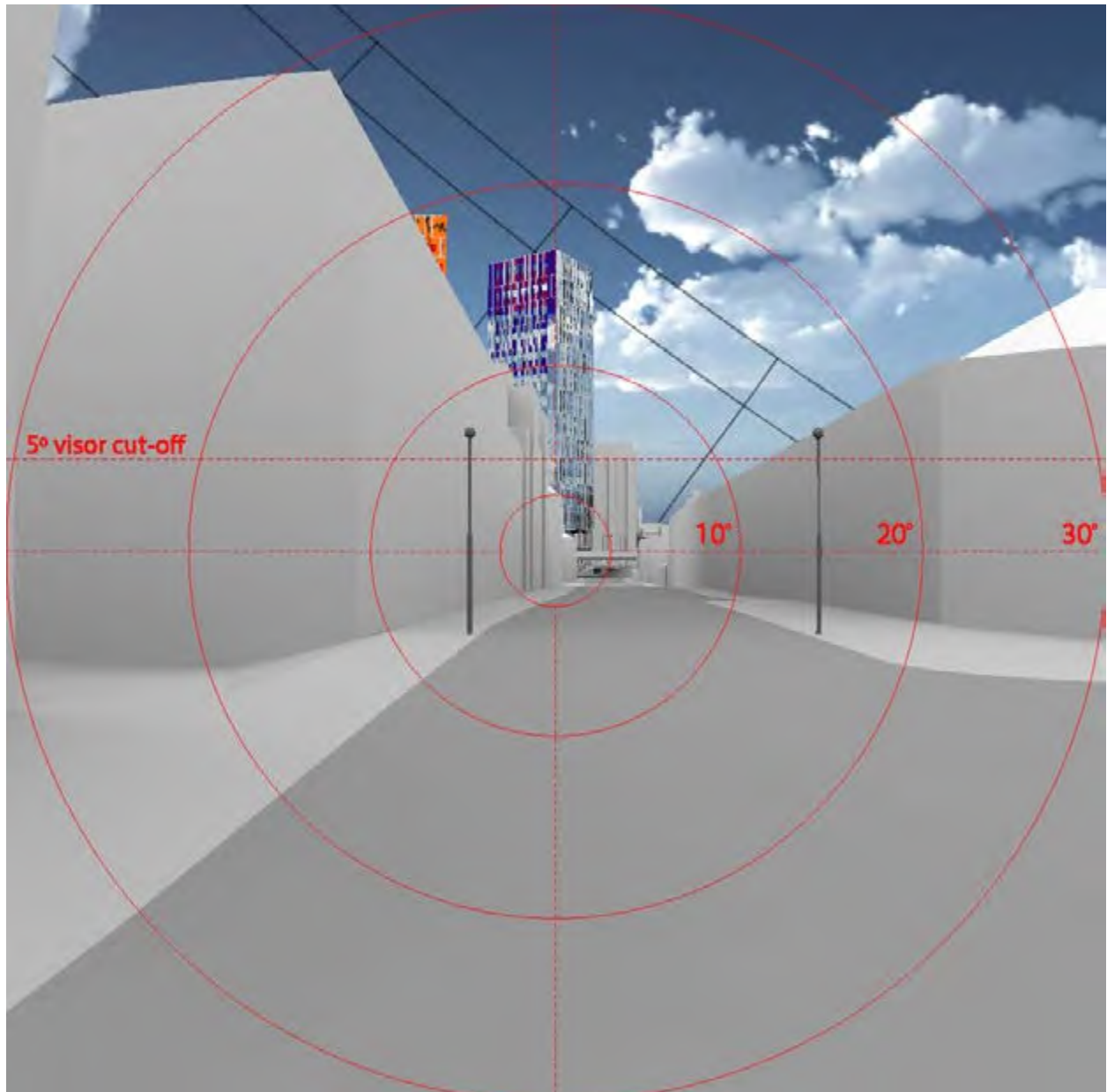


Fig. 130: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT

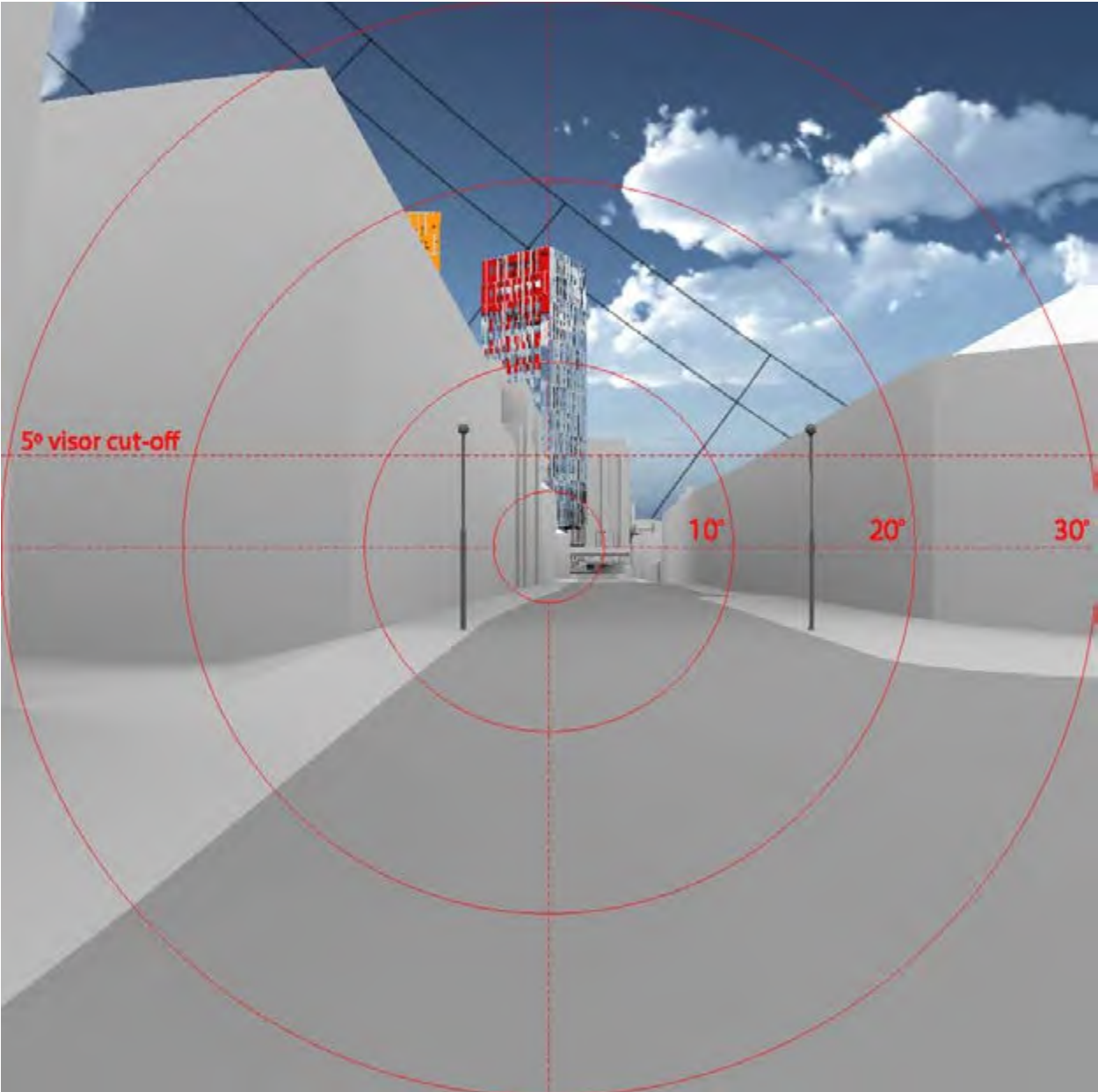


Fig. 131: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT**

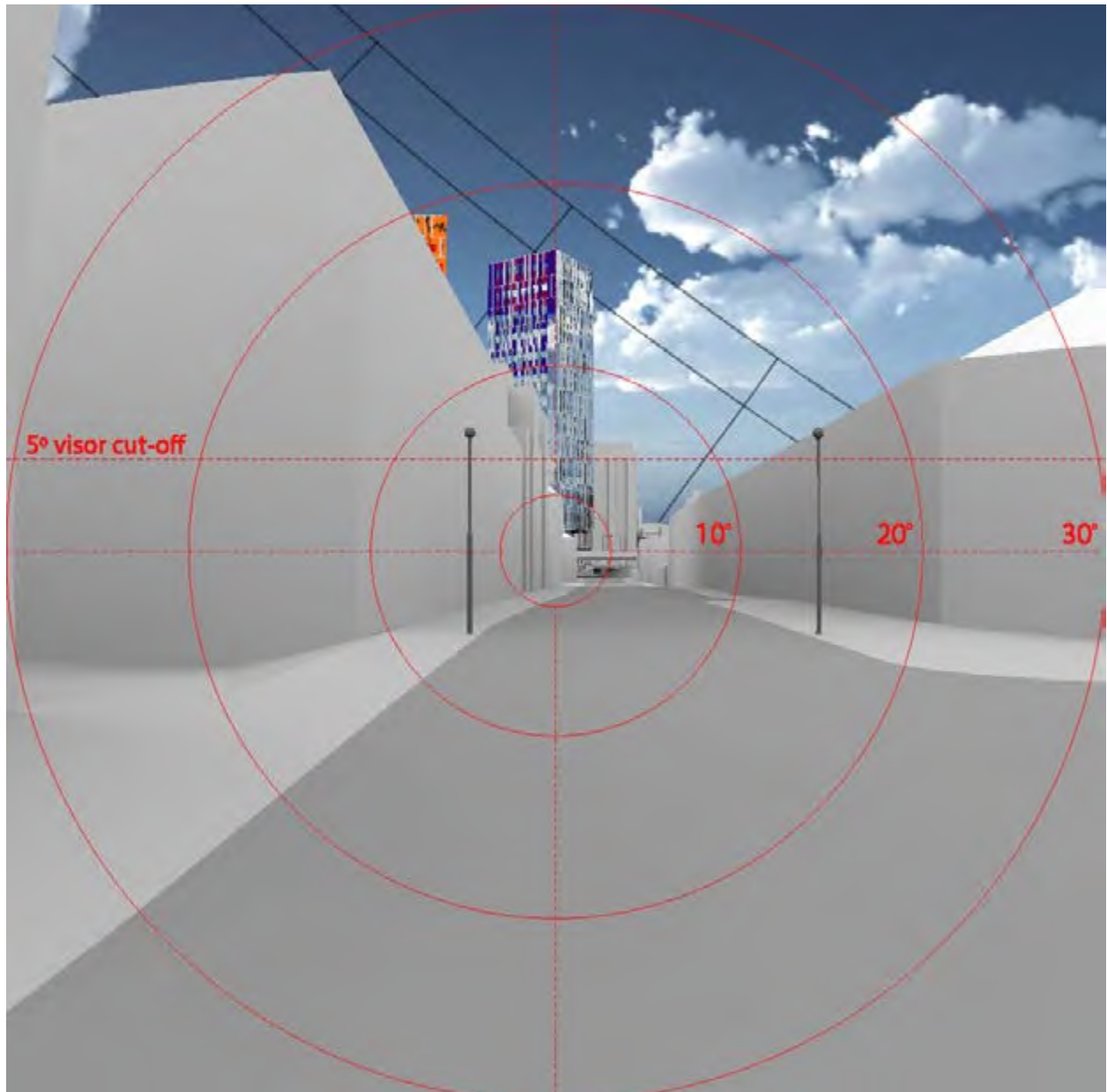


Fig. 132: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT

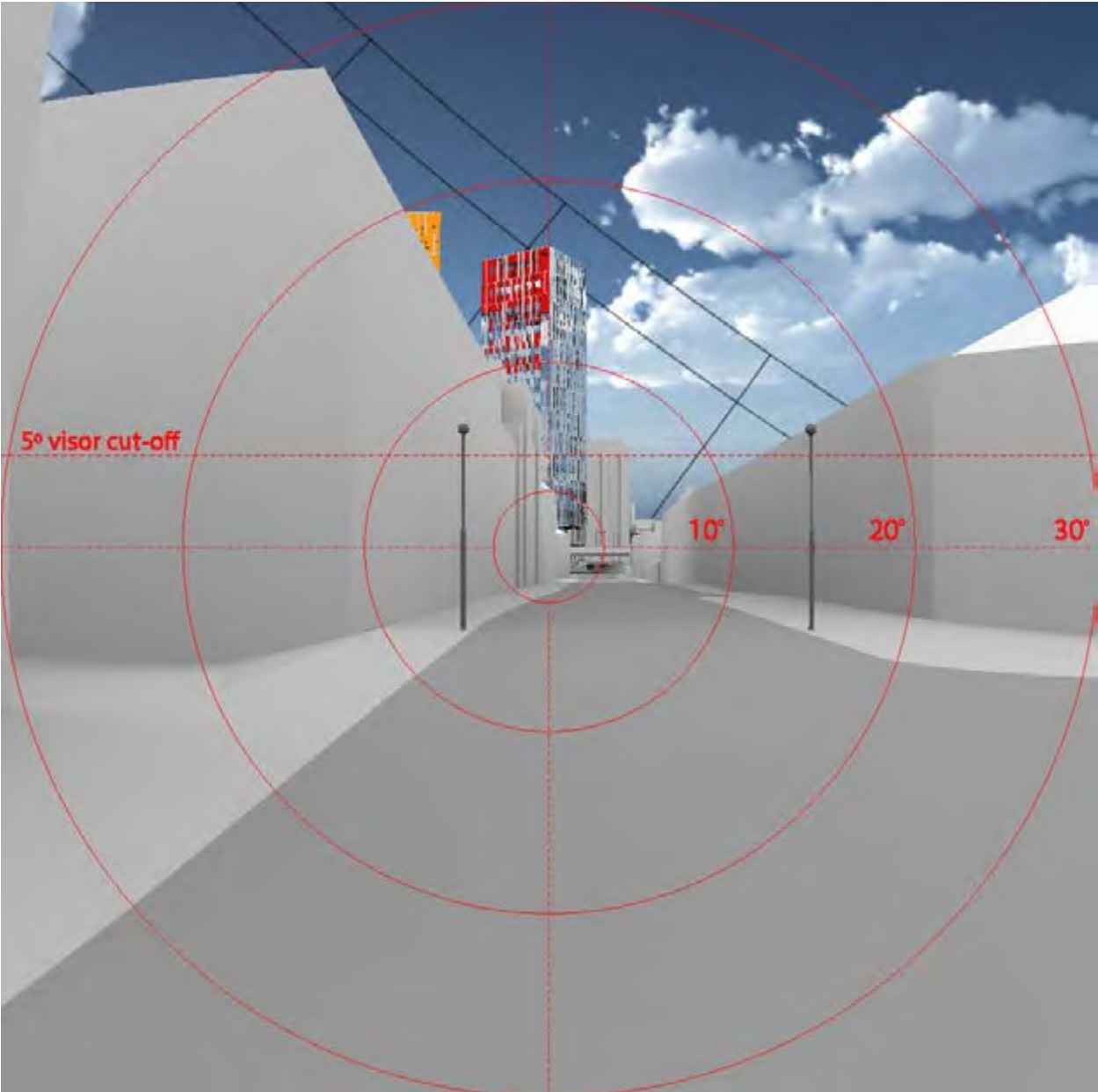


Fig. 133: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT LR - LIVERPOOL ROAD PEDESTRIAN CROSSING
LOOKING STRAIGHT

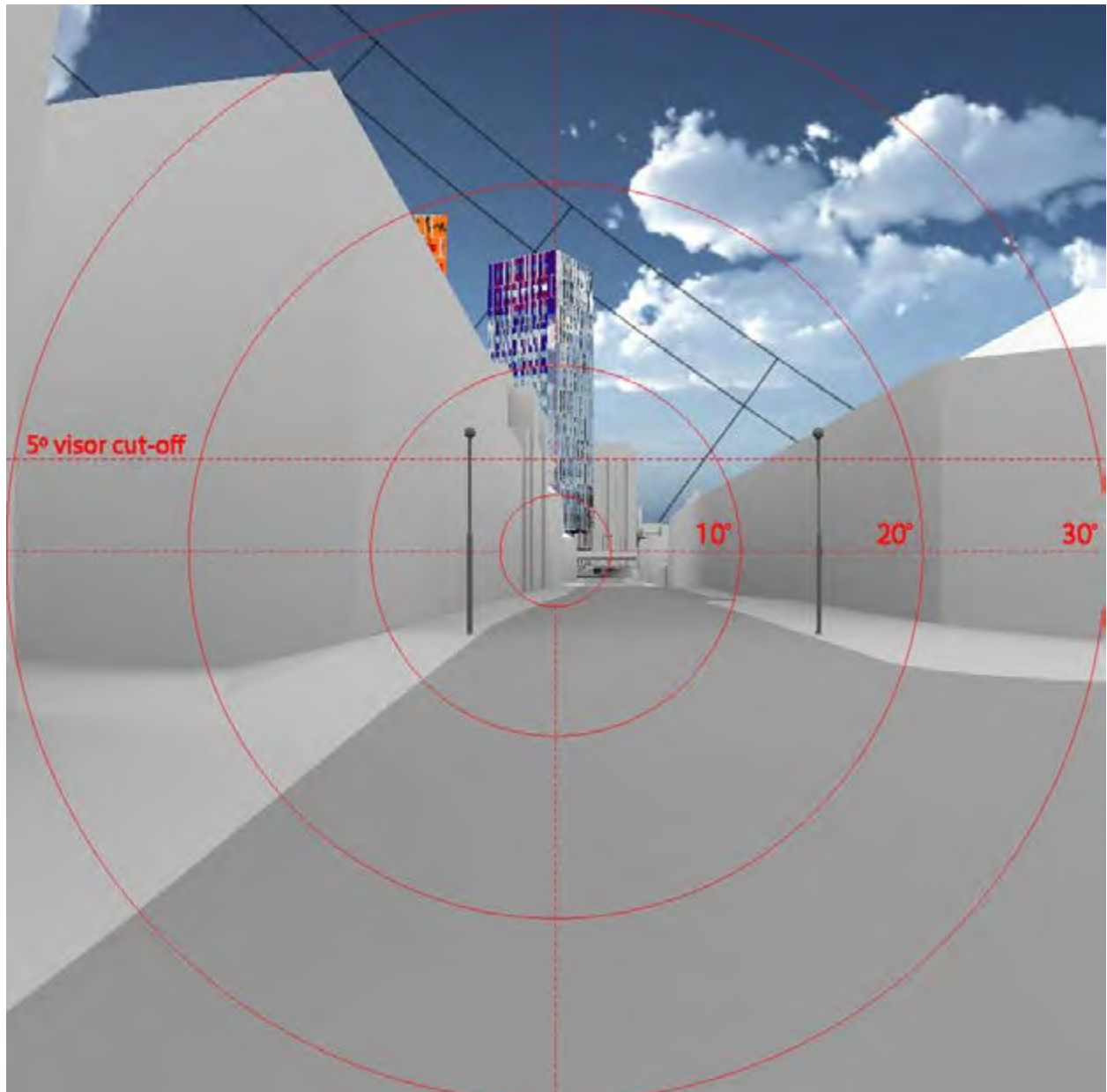


Fig. 134: Solar reflections



15 **SOLAR GLARE ASSESSMENT**
NER - NEW ELM ROAD

NER - New Elm Road Northbound Junction (with Water Street)



Fig. 135: Junction Location



Fig. 136: Junction view

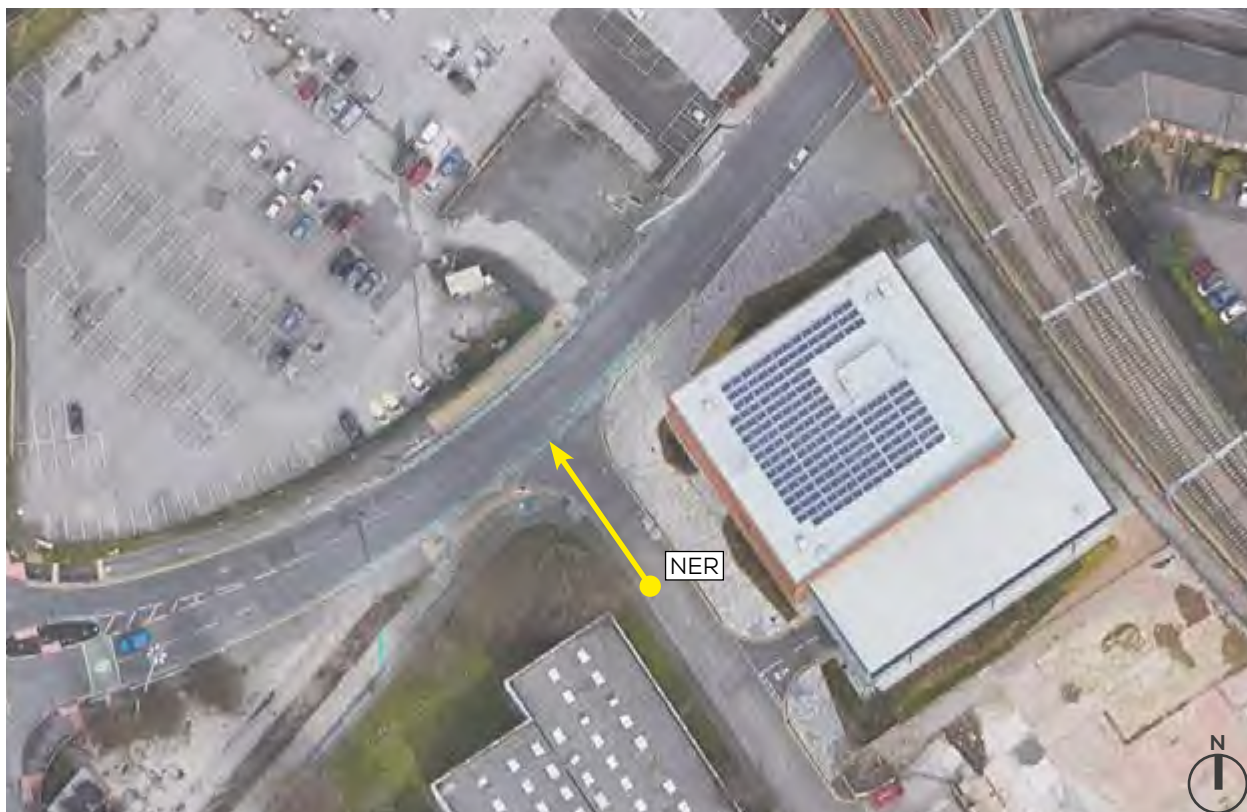


Fig. 137: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT



Fig. 138: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT

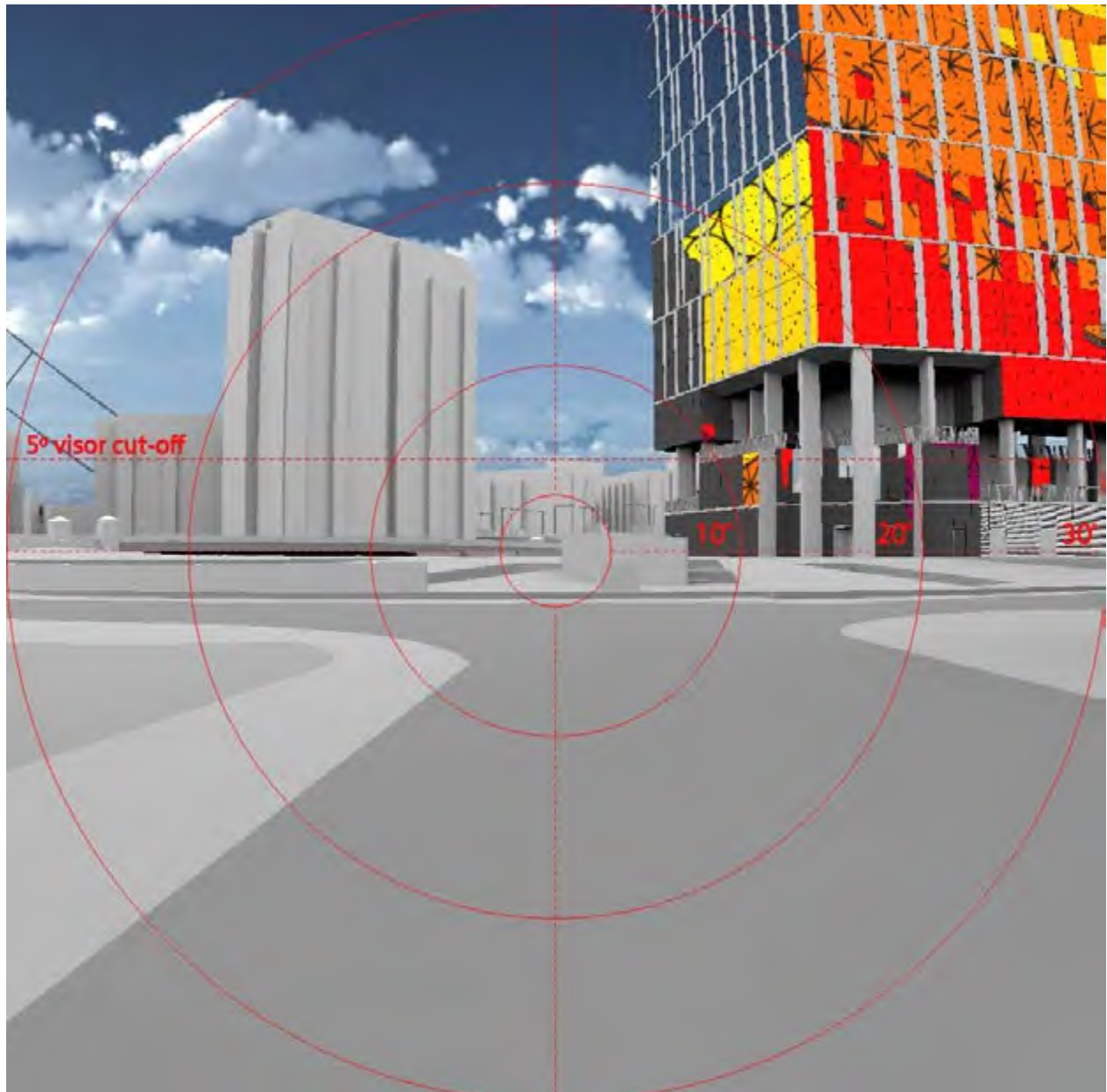


Fig. 139: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT



Fig. 140: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT

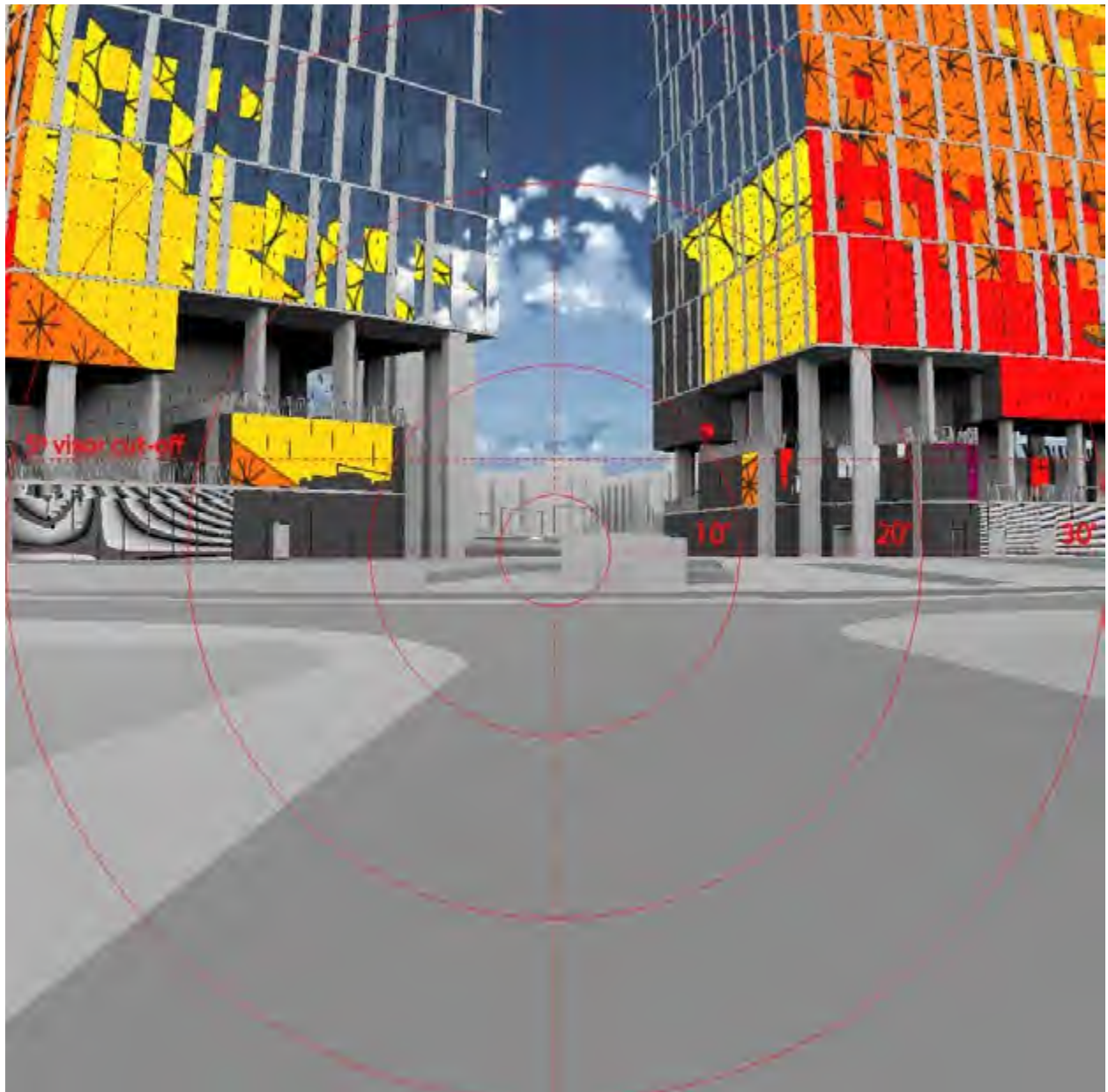


Fig. 141: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT



Fig. 142: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT

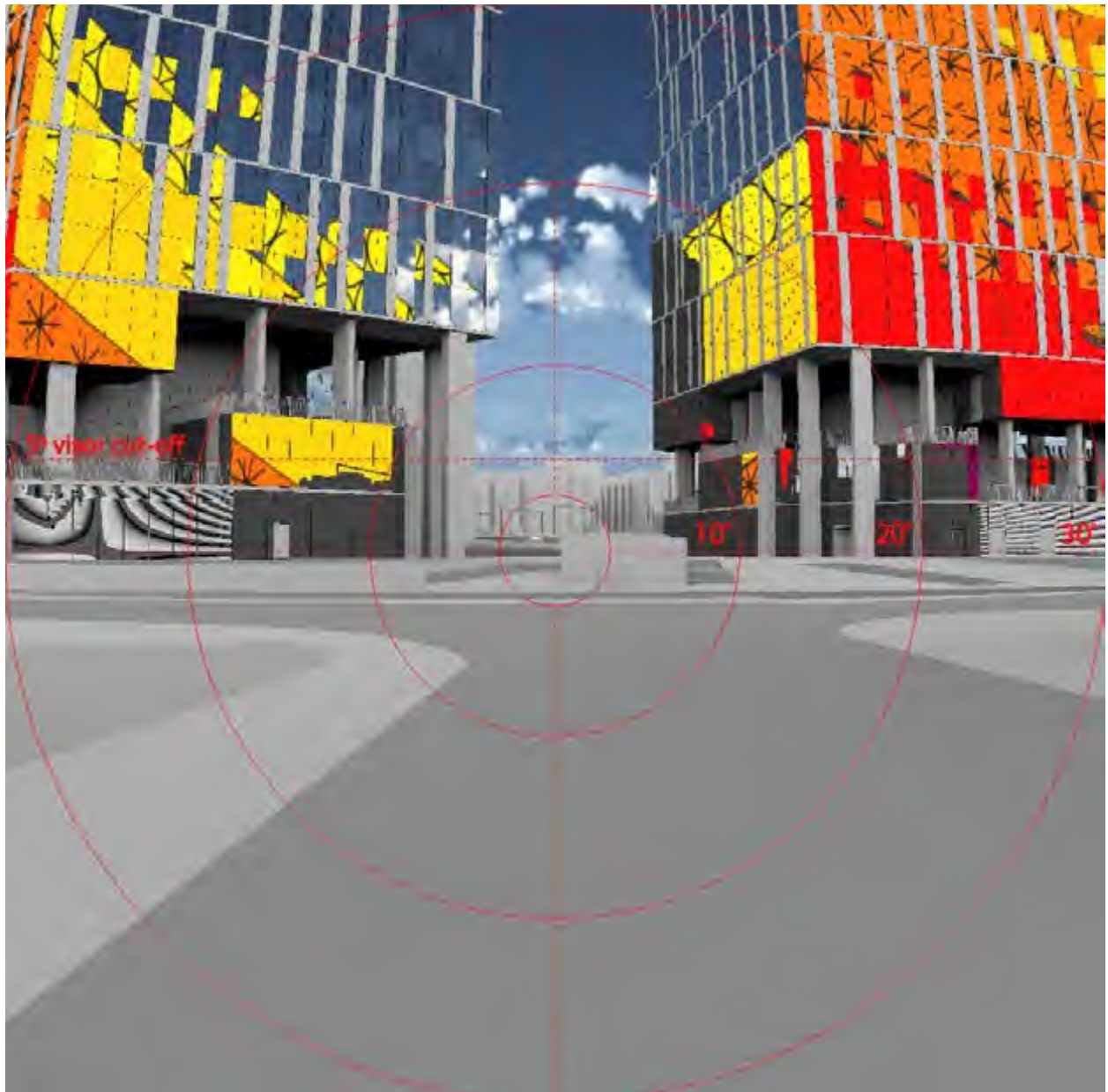


Fig. 143: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT



Fig. 144: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT NER - NEW ELM ROAD JUNCTION (WITH WATER STREET)
LOOKING STRAIGHT

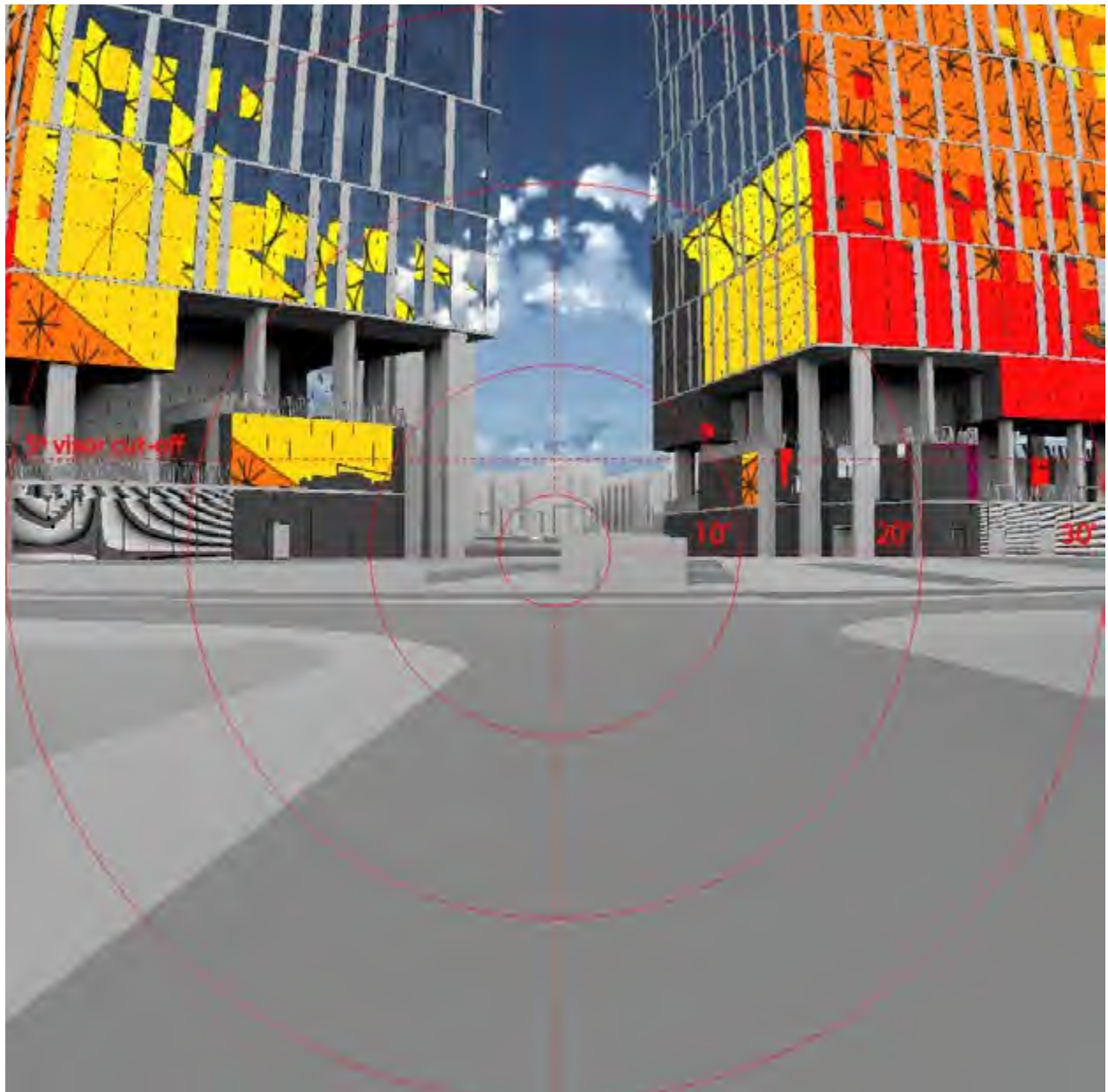


Fig. 145: Solar reflections



16 **SOLAR GLARE ASSESSMENT**

TW3 - TRINITY WAY/INNER RING ROAD 3

TW3 - Trinity Way/Inner Ring Road Southbound Junction (with Water Street)



Fig. 146: Junction Location

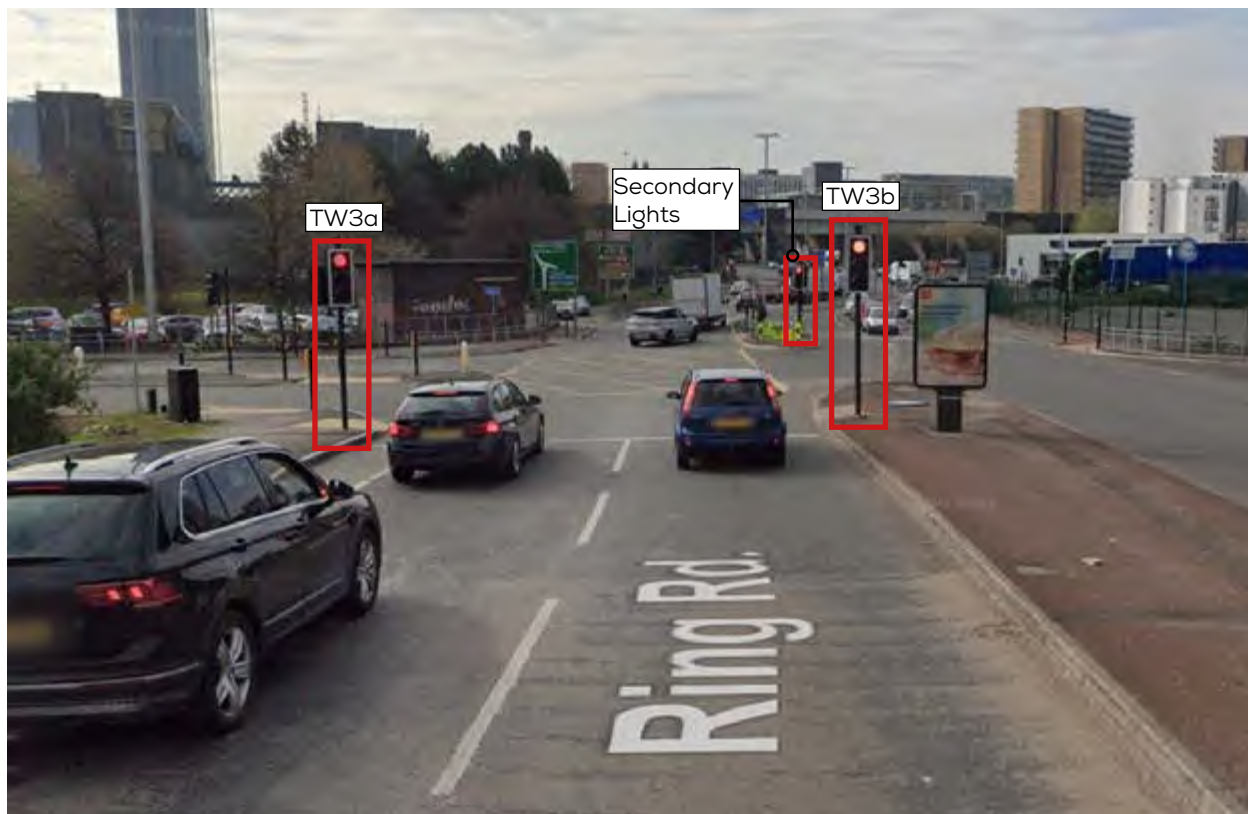


Fig. 147: Traffic Light Location

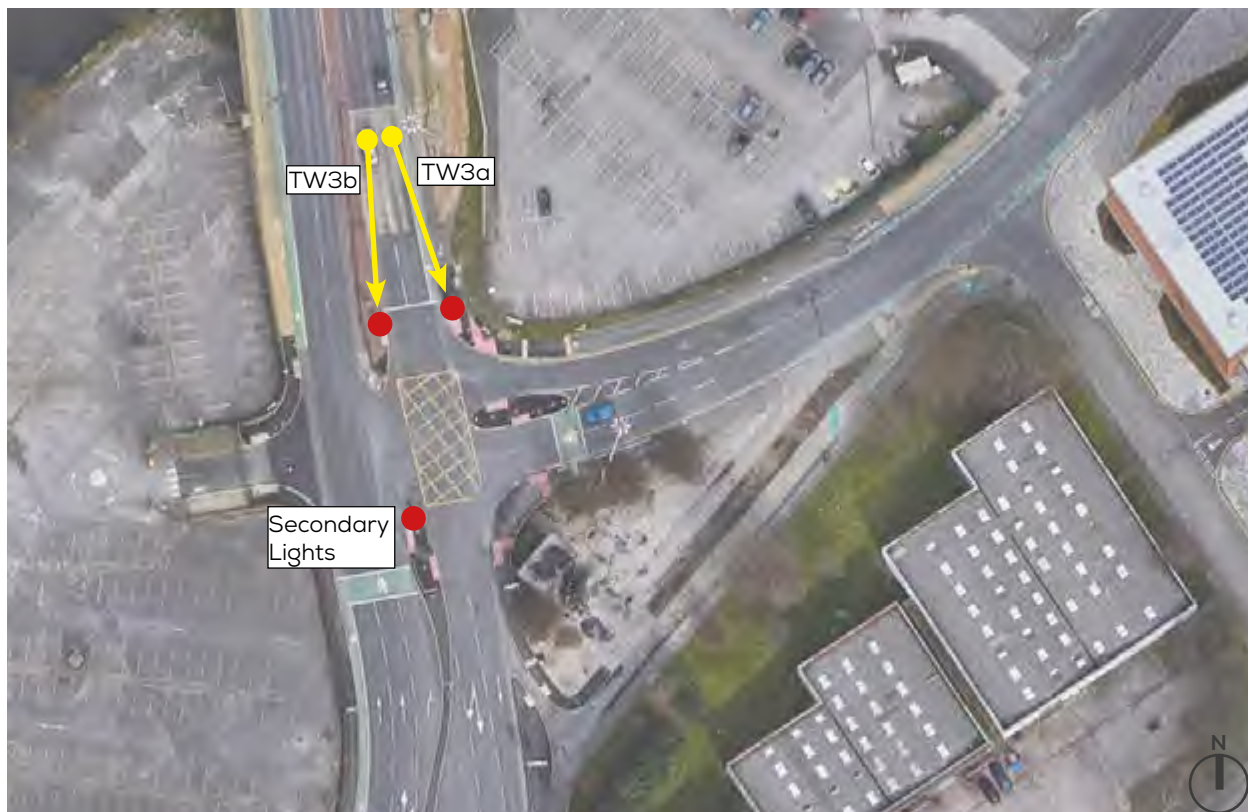


Fig. 148: Viewpoints

Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW3A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

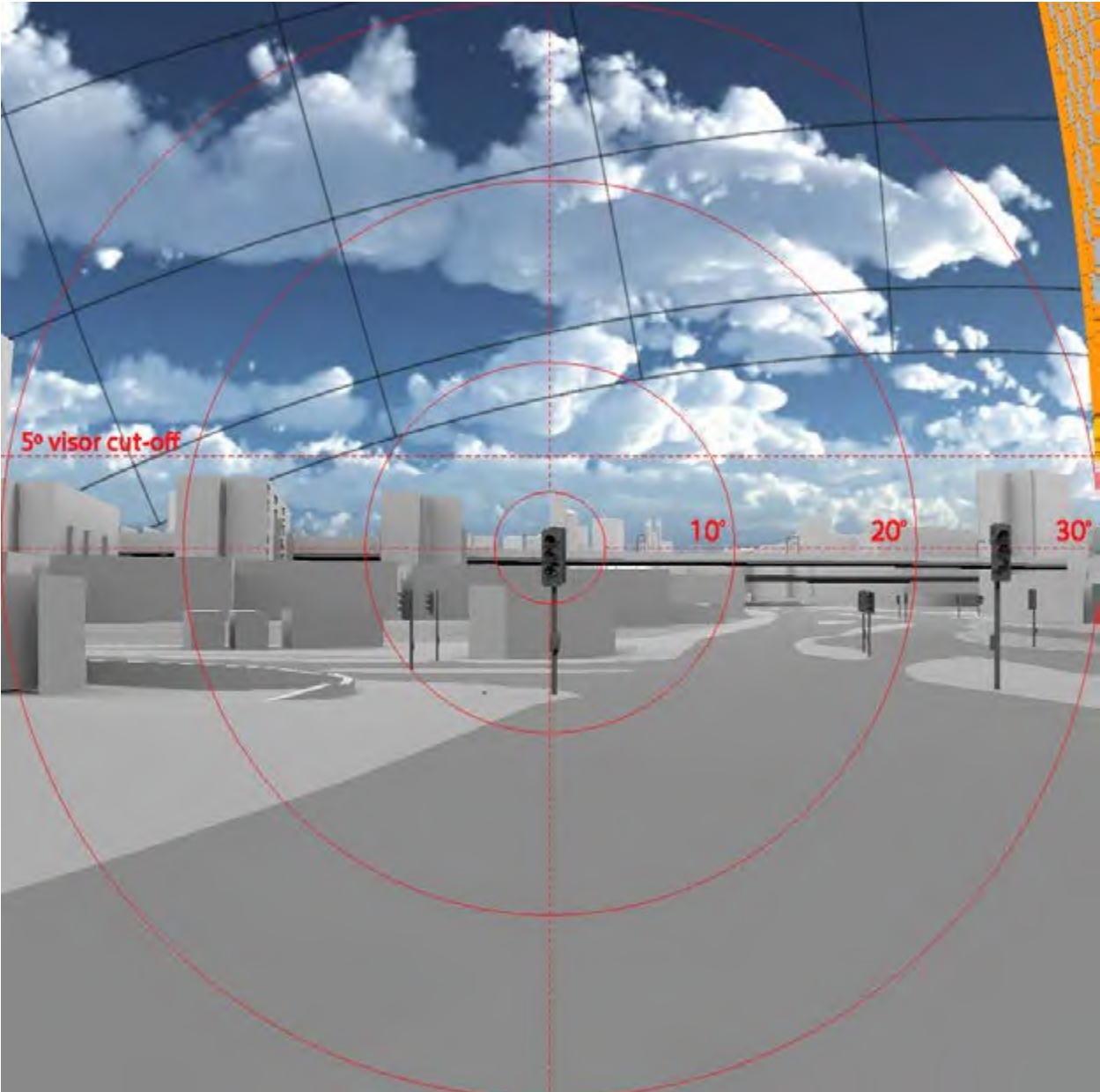


Fig. 149: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW3A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

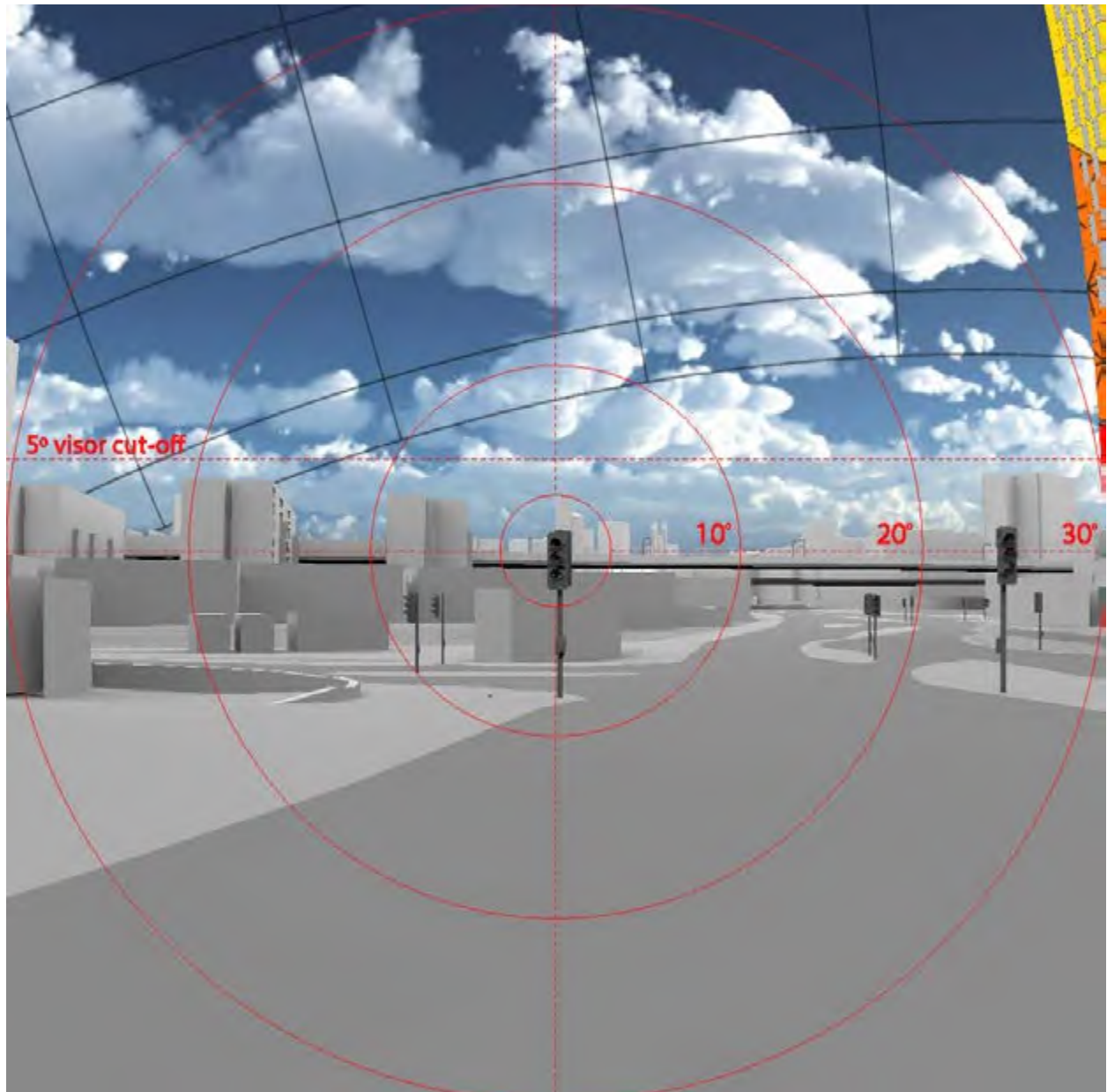


Fig. 150: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW3B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

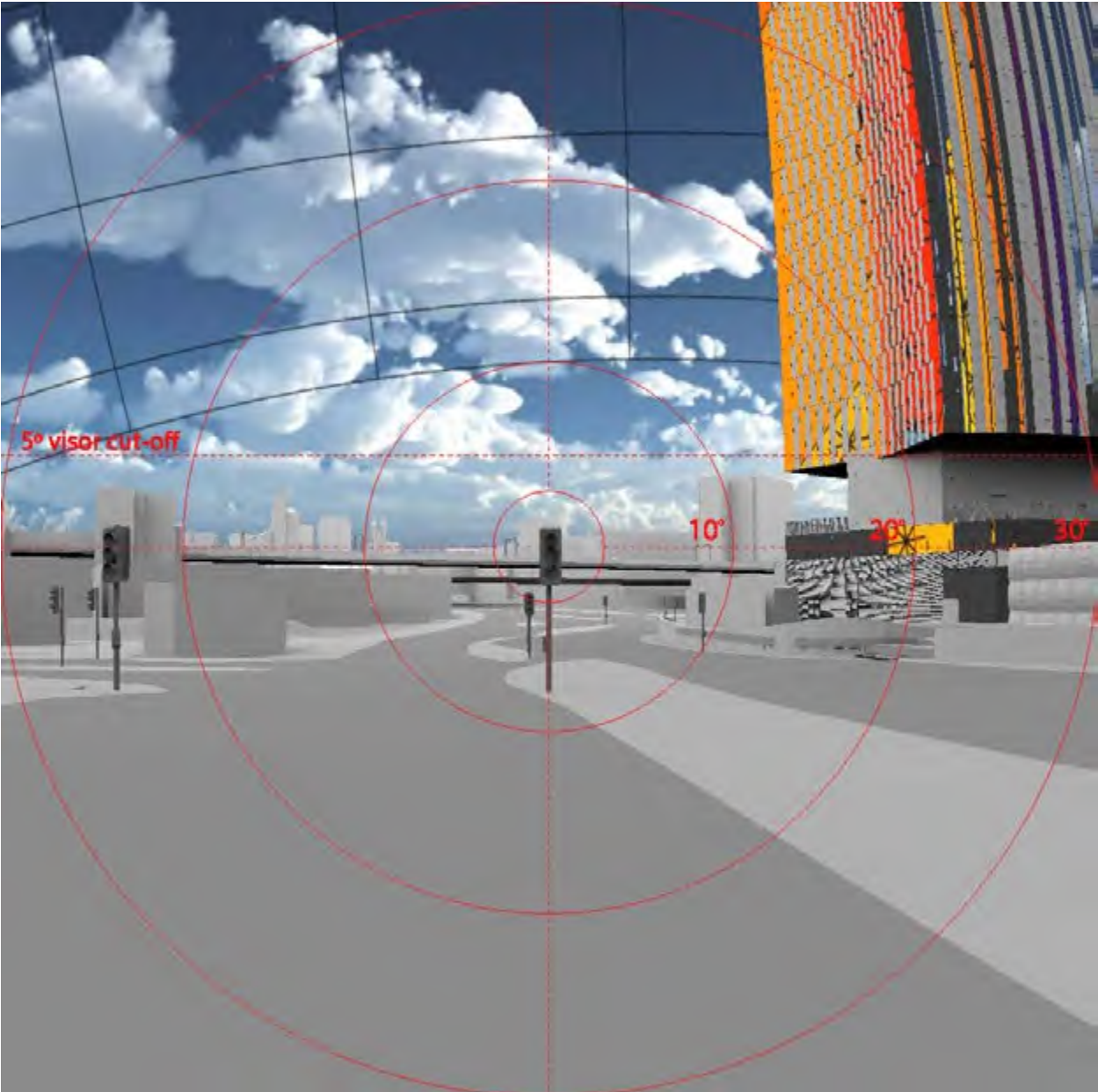


Fig. 151: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW3B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

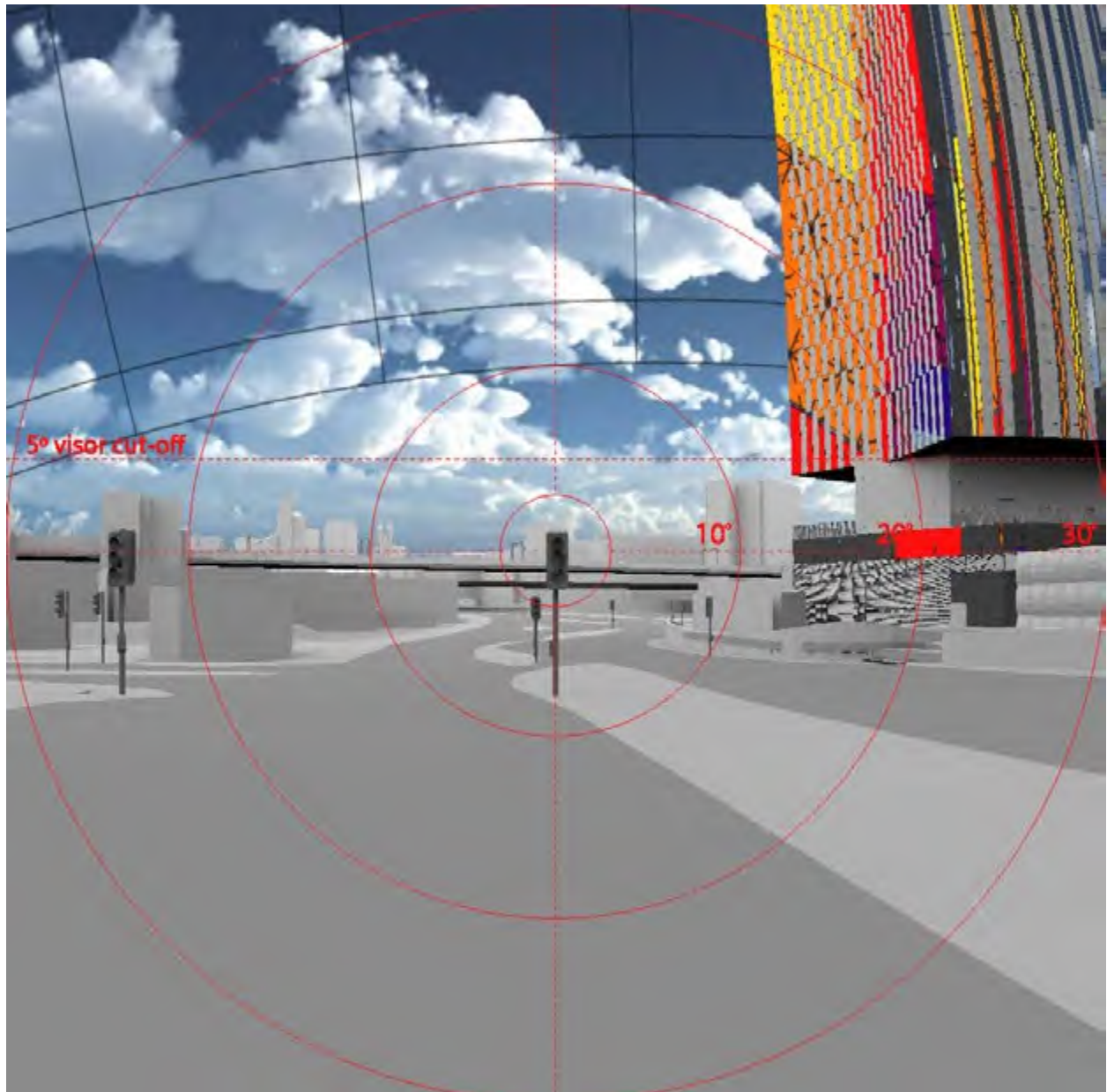


Fig. 152: Solar reflections



17 **SOLAR GLARE ASSESSMENT**
WS2 - WATER STREET 2

WS2 - Water Street Westbound Junction (with Trinity Way/Inner Ring Road)



Fig. 153: Junction Location



Fig. 154: Traffic Light Location



Fig. 155: Viewpoints

Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS2A - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT LEFT TRAFFIC LIGHT

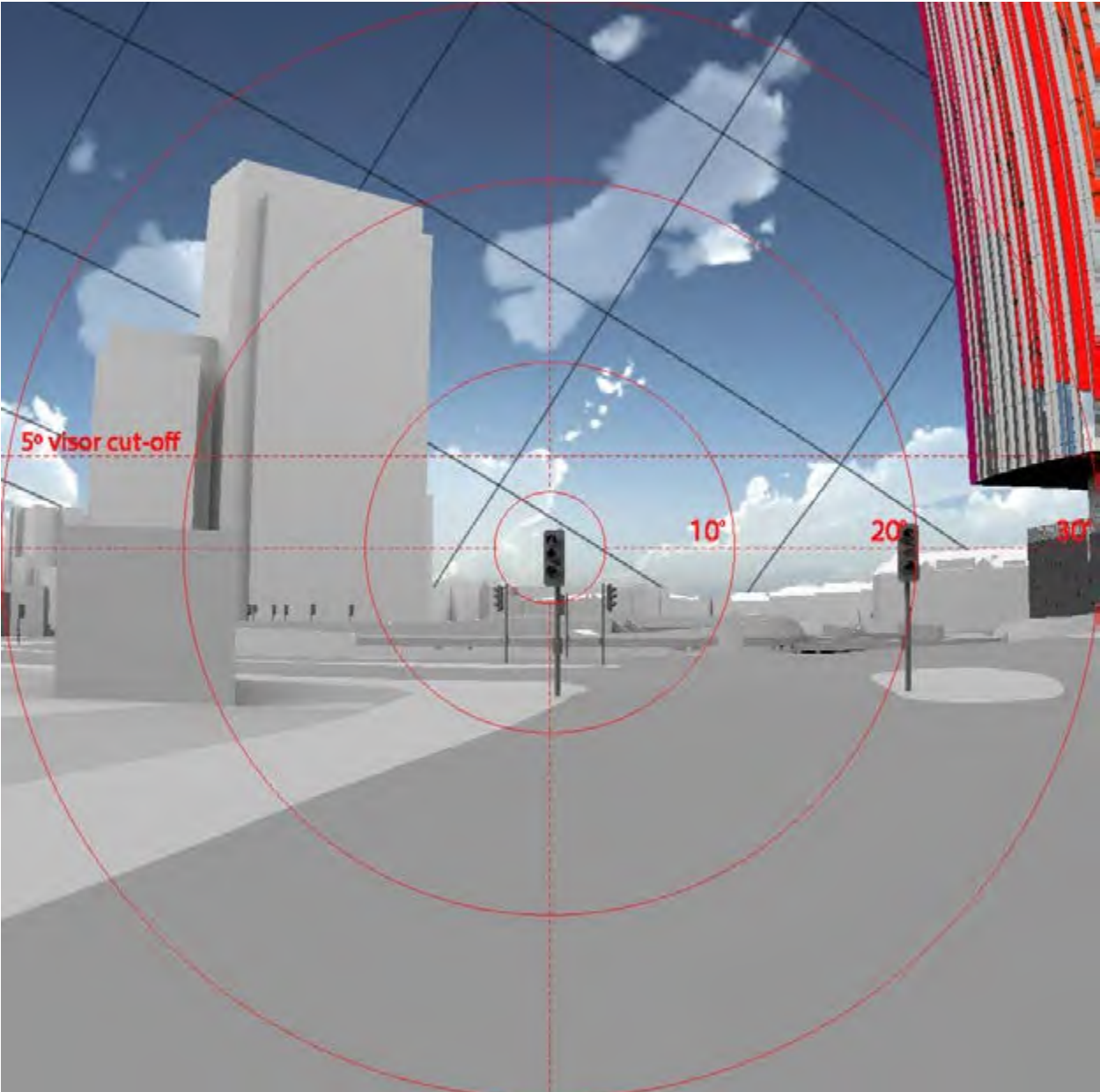


Fig. 156: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT WS2A - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT LEFT TRAFFIC LIGHT

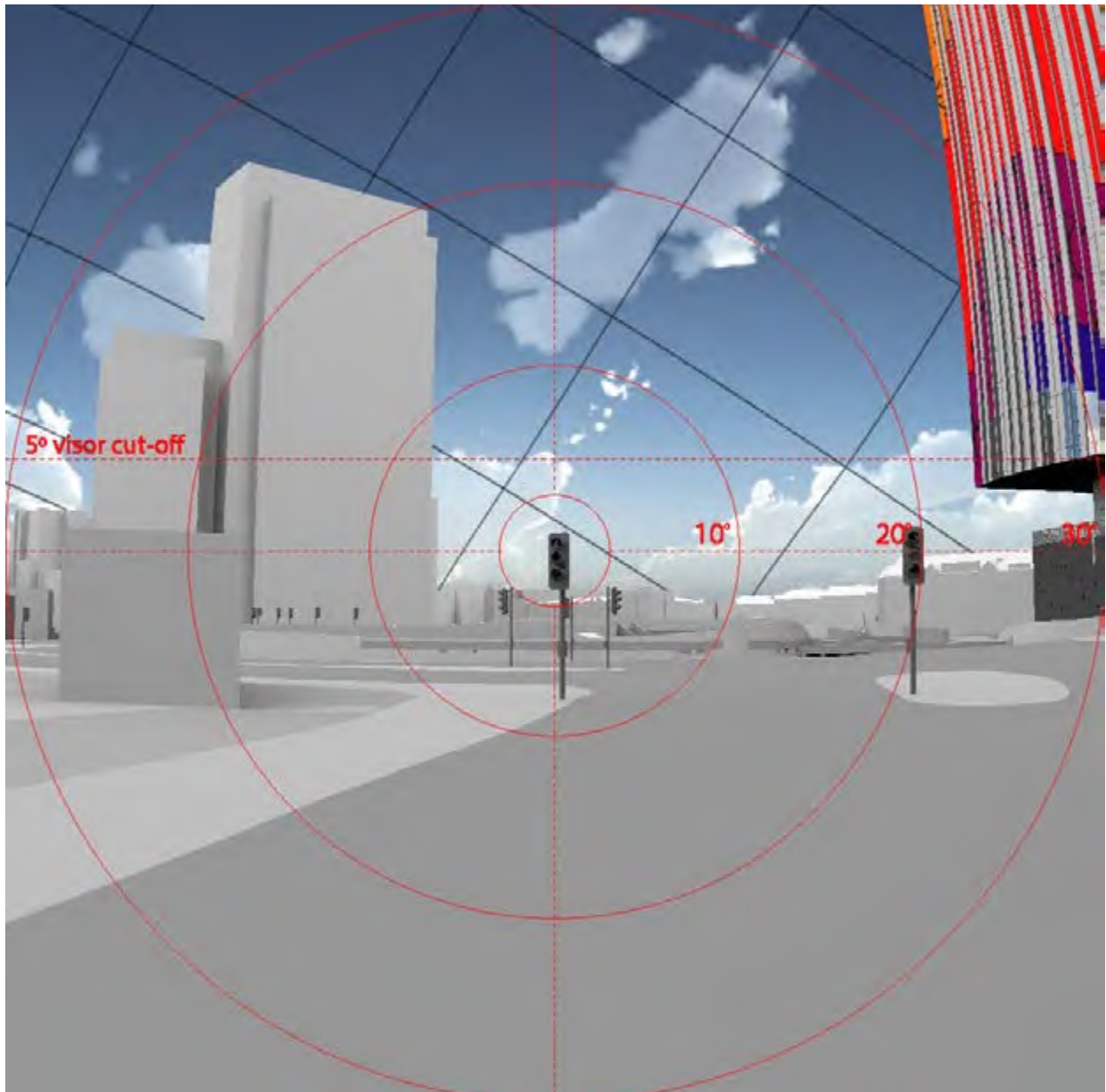


Fig. 157: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS2B - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

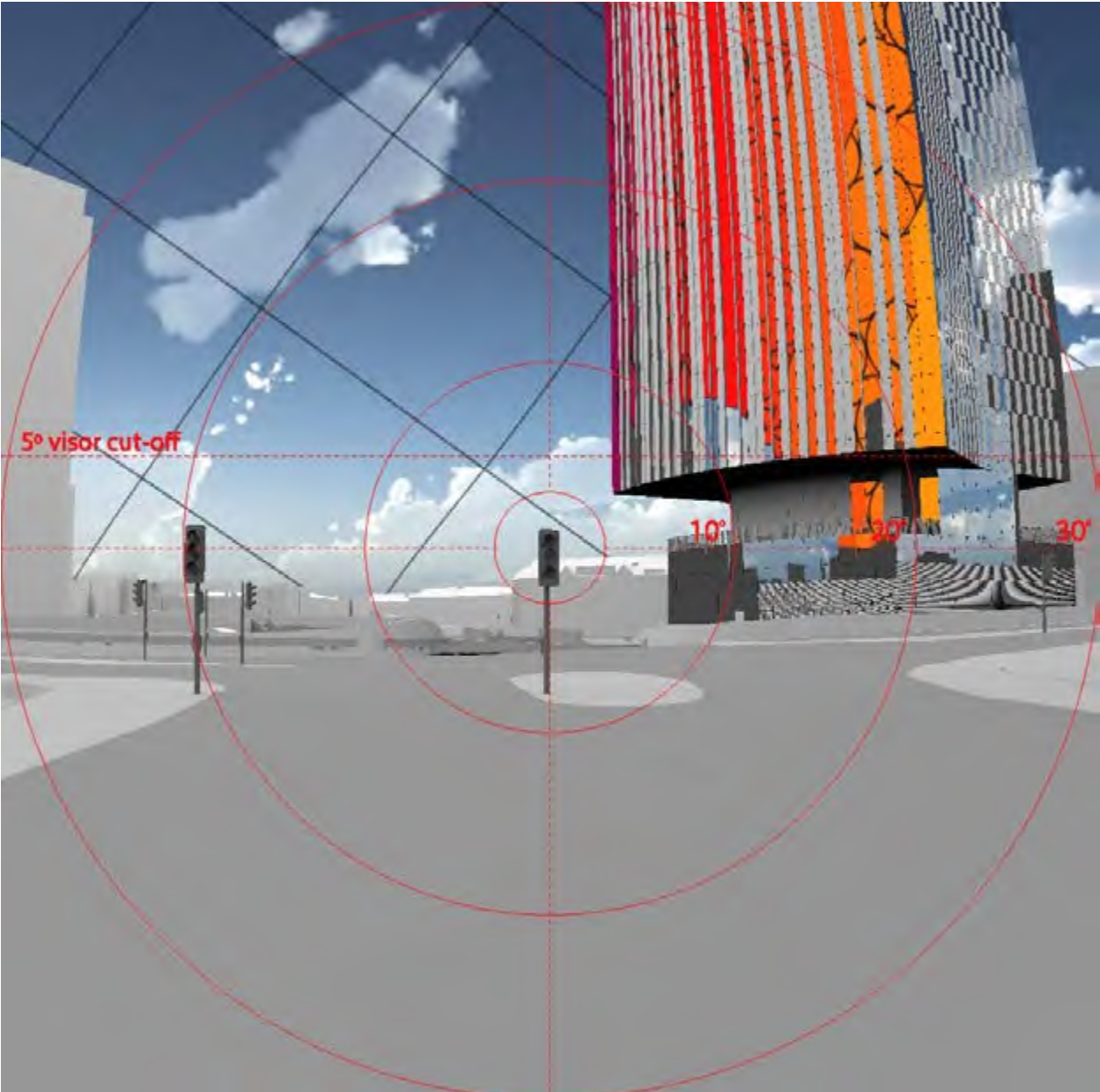


Fig. 158: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT WS2B - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

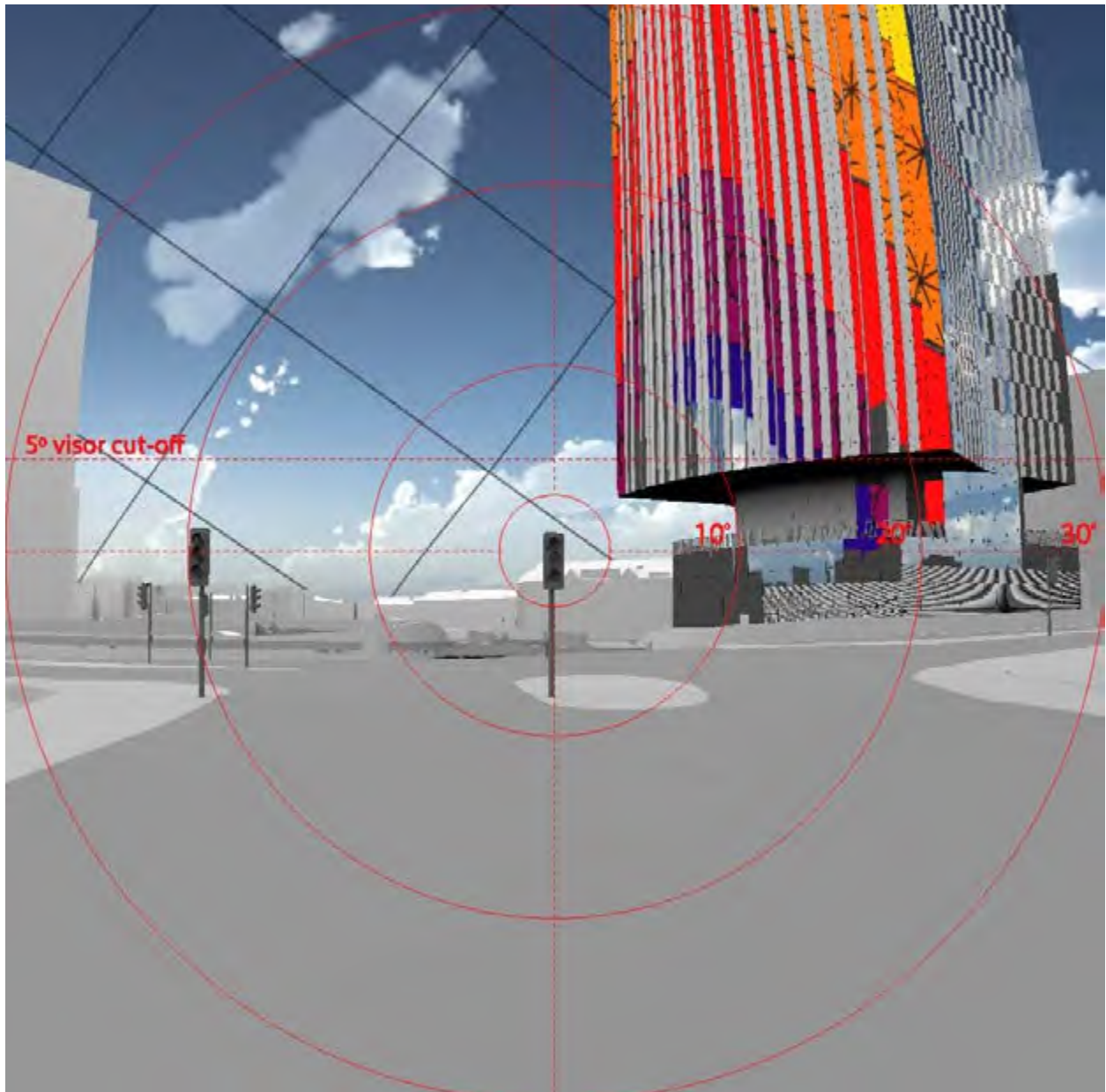


Fig. 159: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS2A - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT LEFT TRAFFIC LIGHT

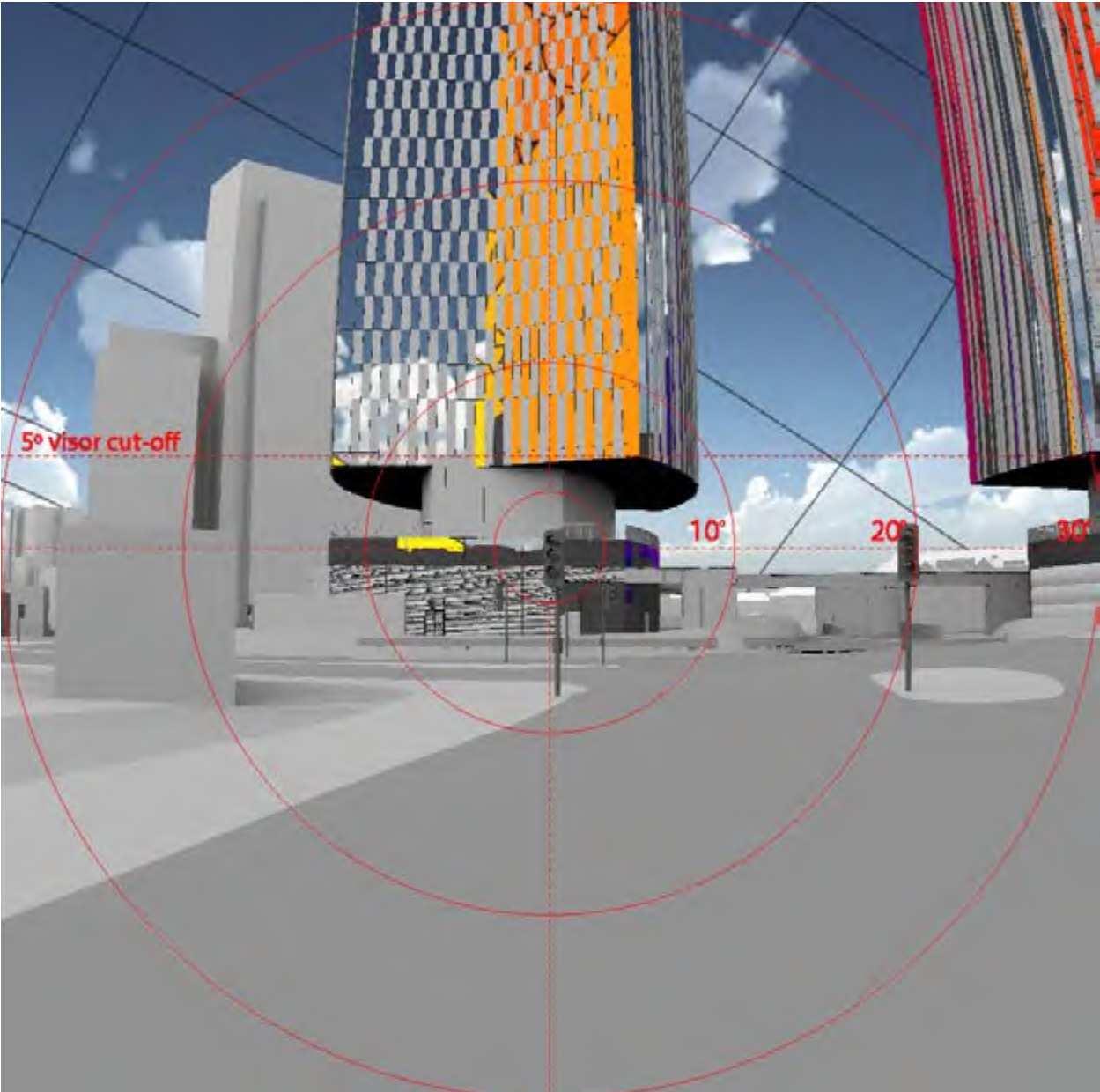
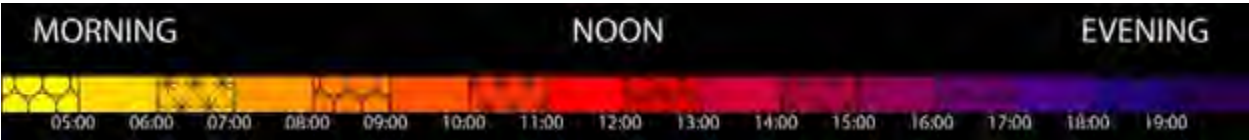


Fig. 160: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT WS2A - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT LEFT TRAFFIC LIGHT

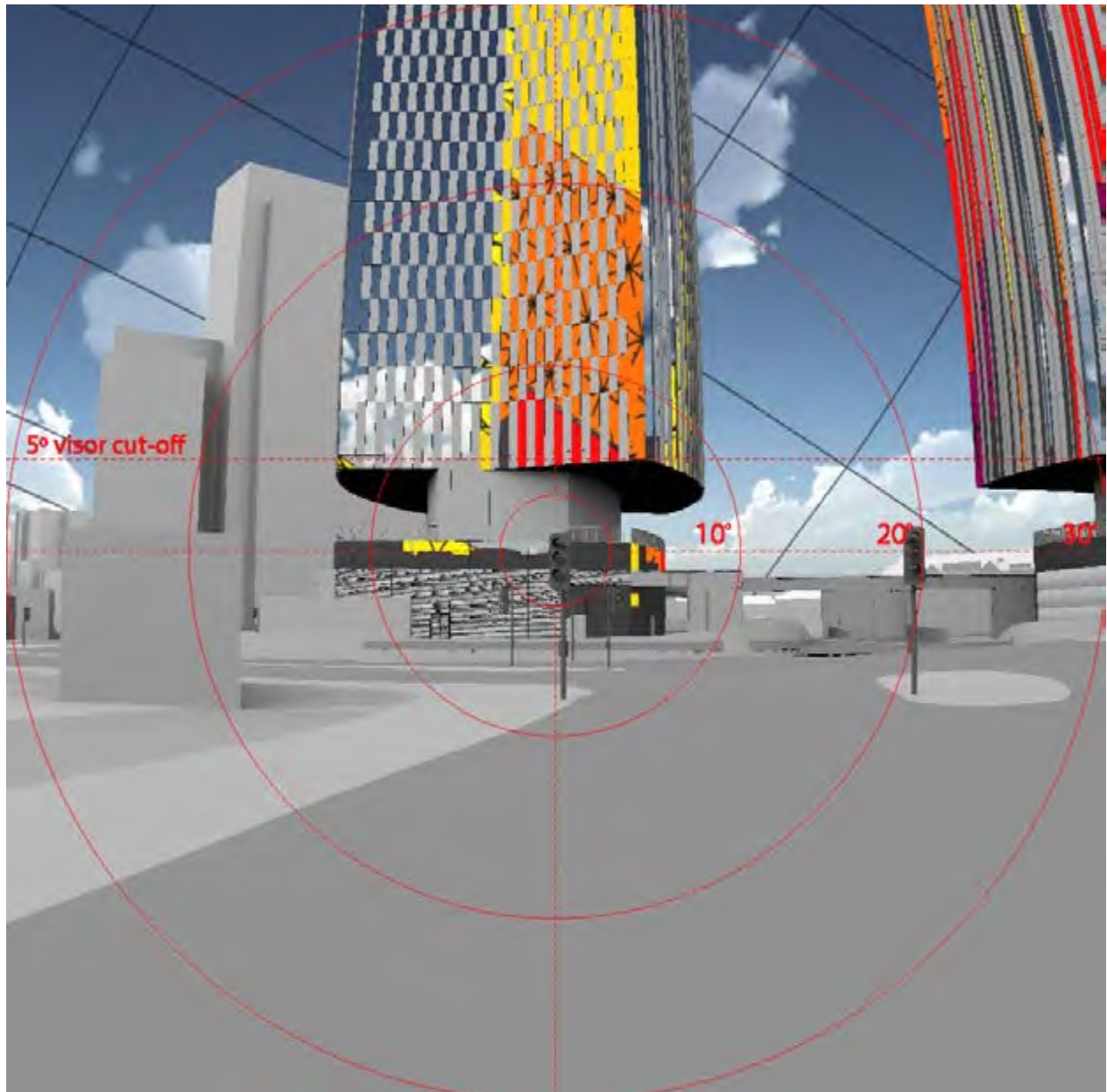


Fig. 161: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS2B - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

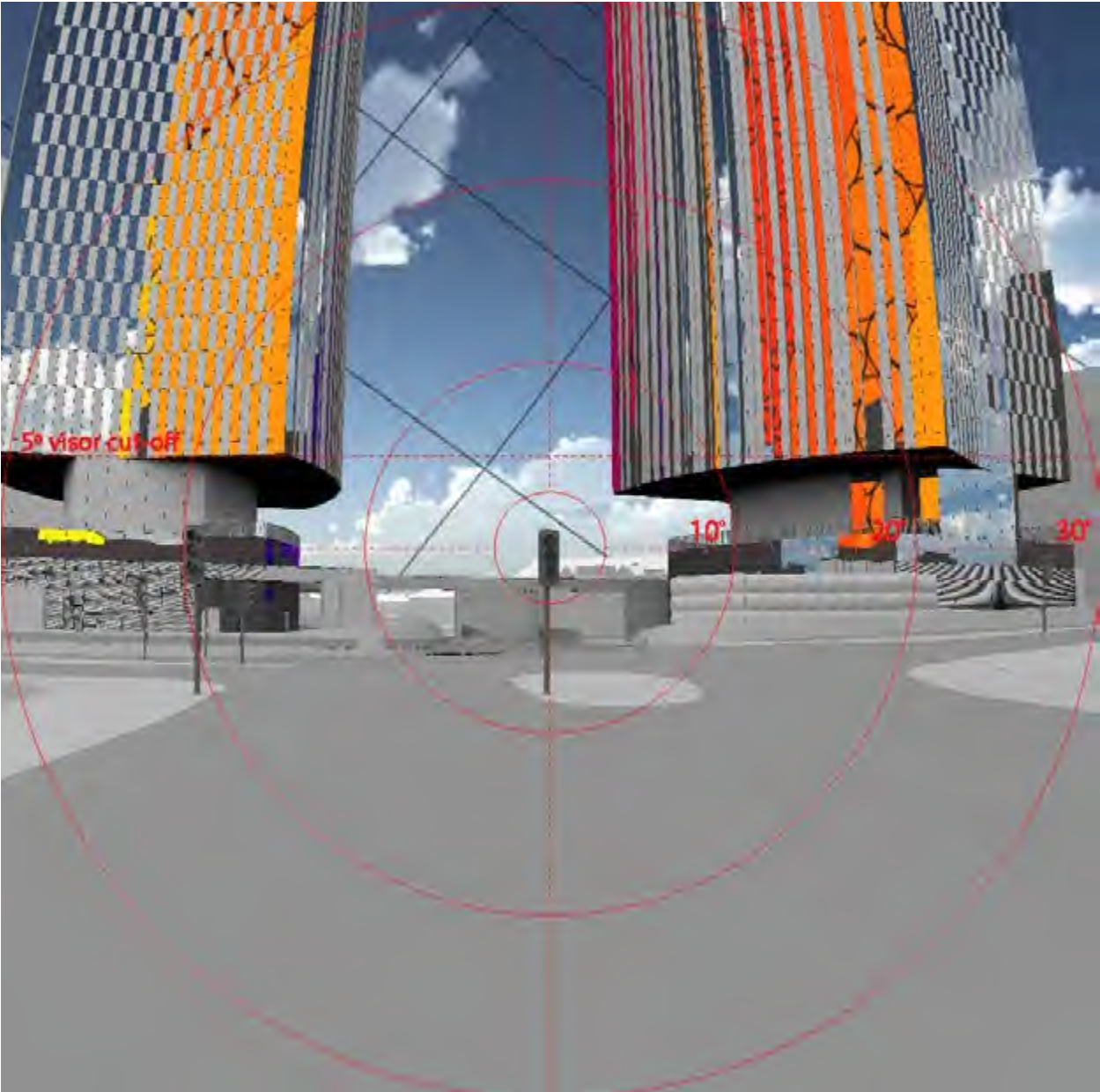


Fig. 162: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT WS2B - WATER STREET JUNCTION (WITH TRINITY WAY/INNER RING ROAD)
LOOKING AT RIGHT TRAFFIC LIGHT

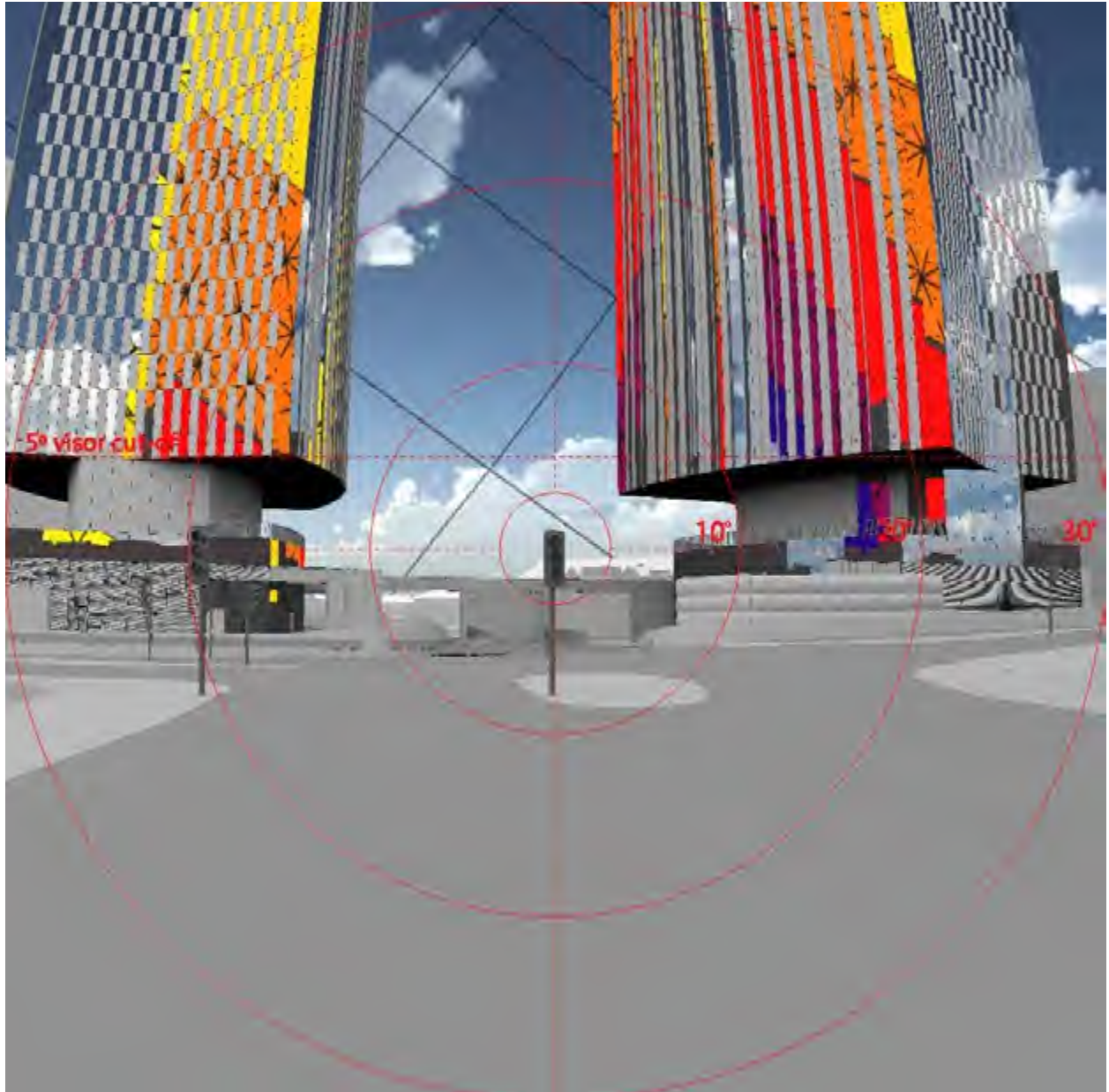


Fig. 163: Solar reflections



18 **SOLAR GLARE ASSESSMENT**

TW4 - TRINITY WAY/INNER RING ROAD 4

TW4 - Trinity Way/Inner Ring Road Northbound Junction (with Water Street)



Fig. 164: Junction Location

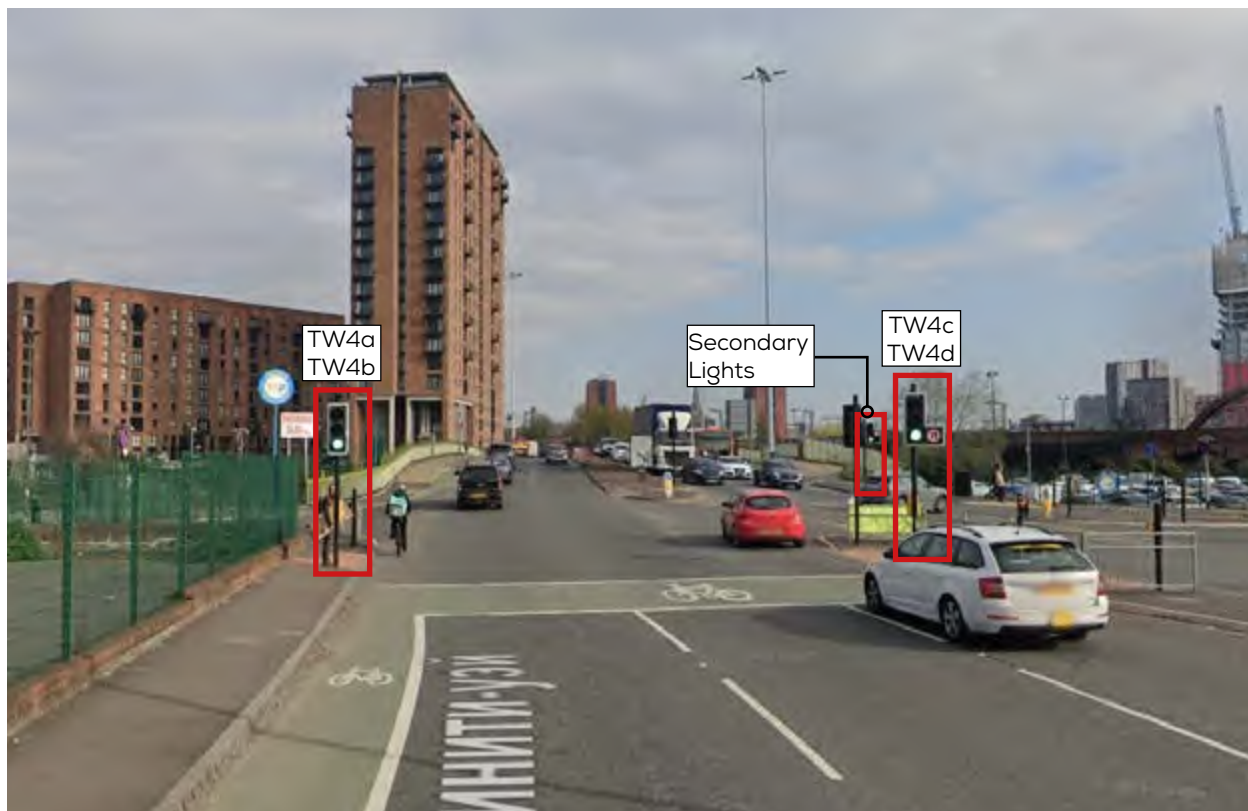


Fig. 165: Traffic Light Location



Fig. 166: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

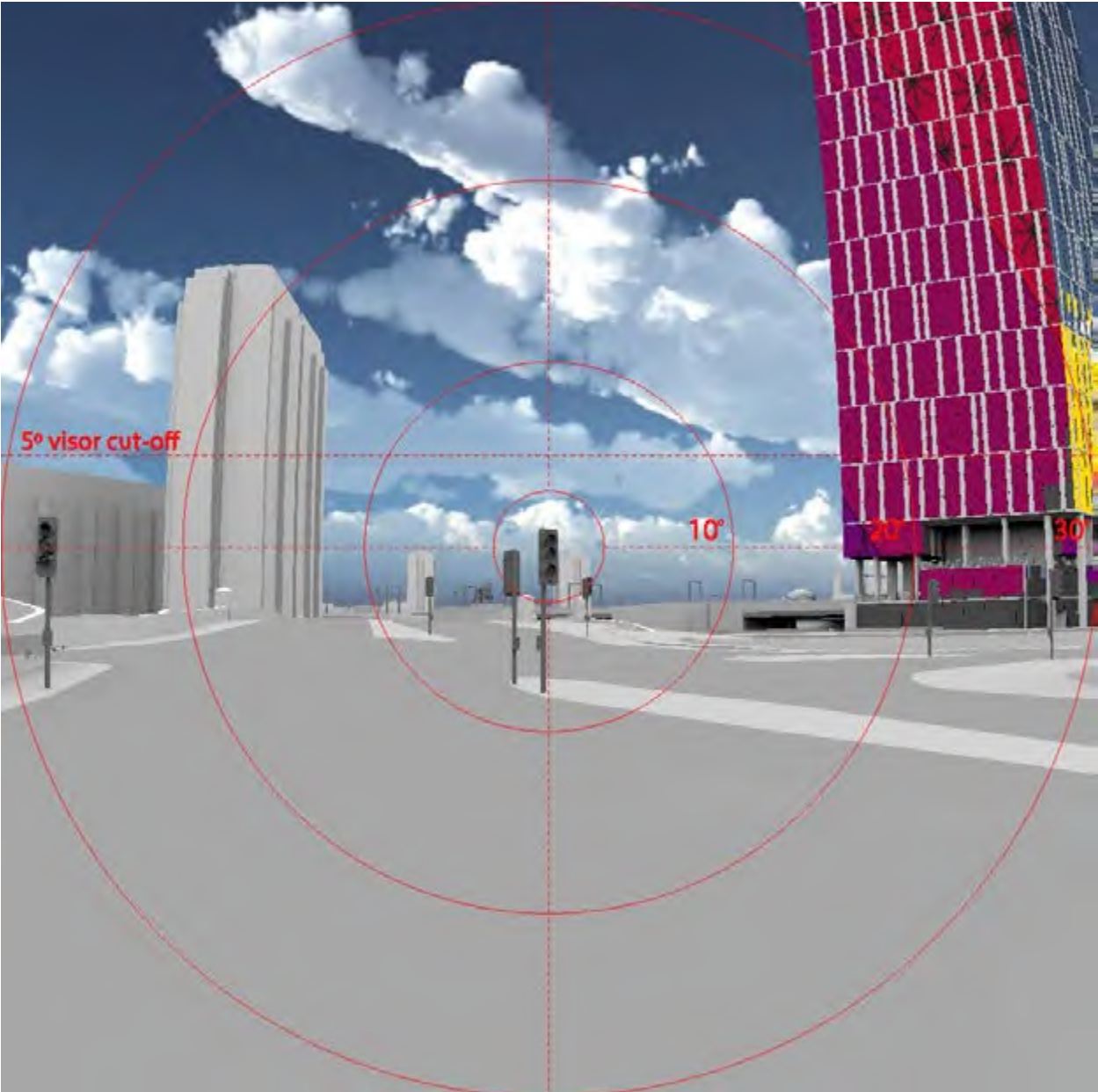


Fig. 167: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

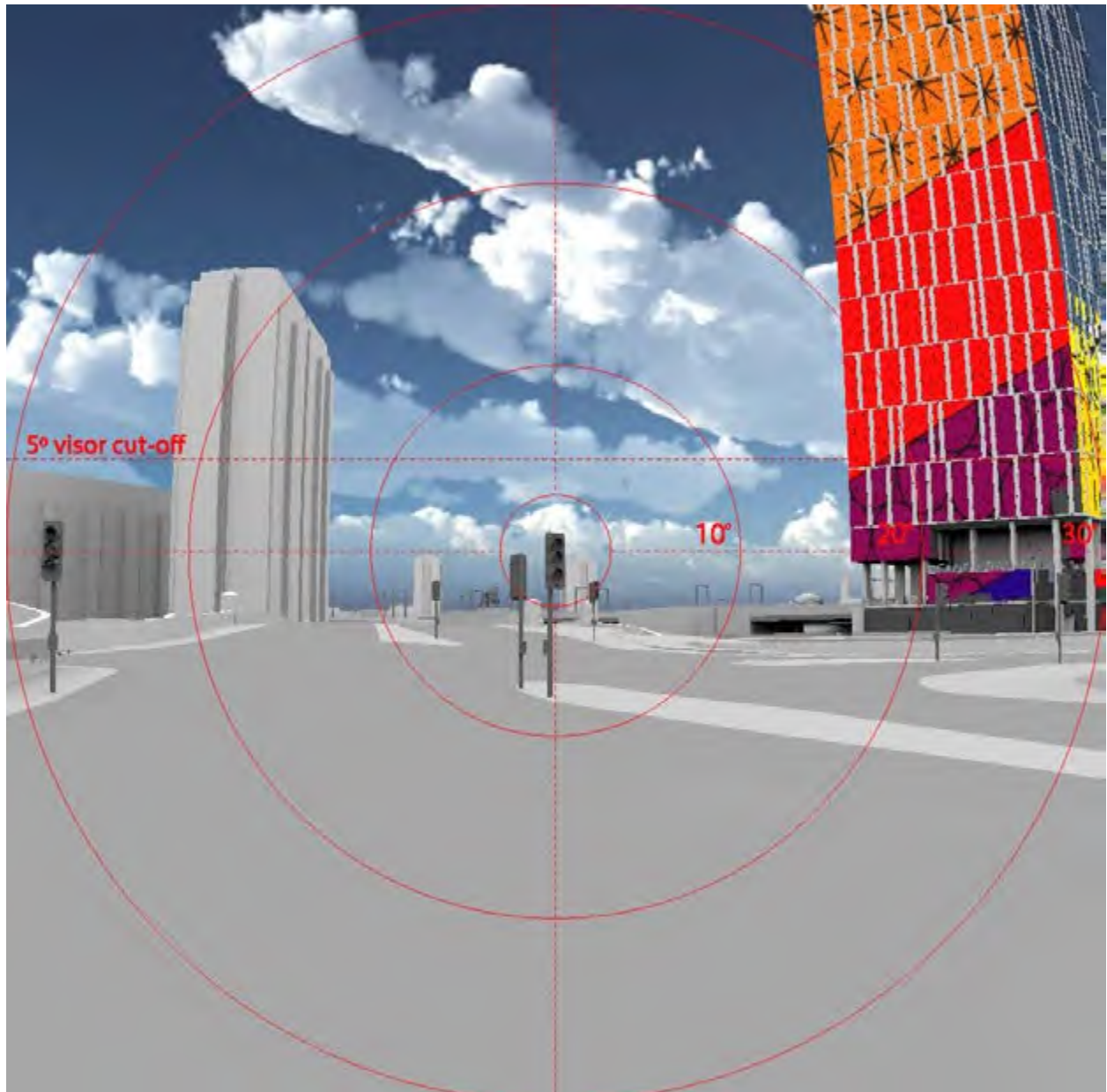


Fig. 168: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

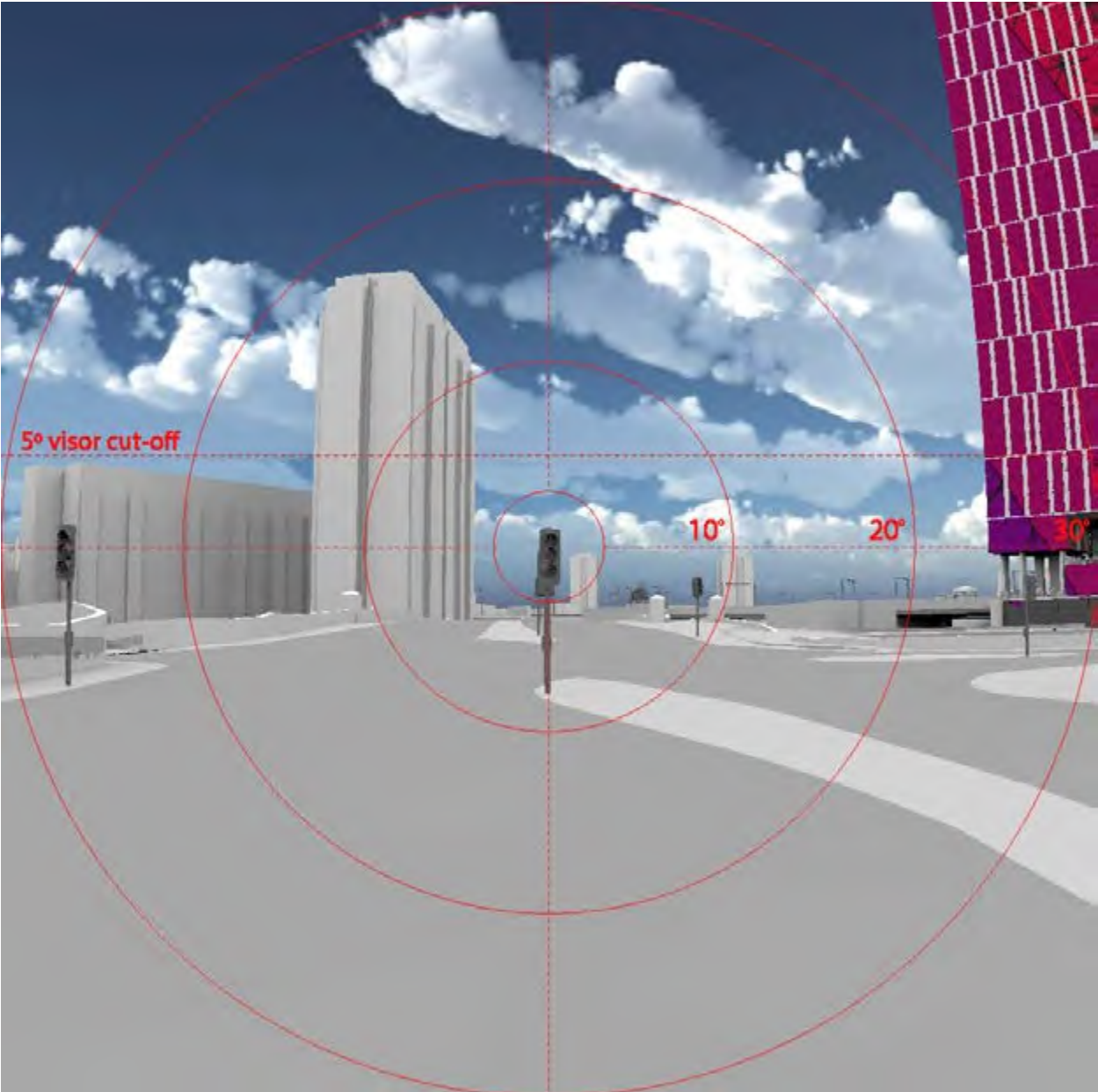


Fig. 169: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

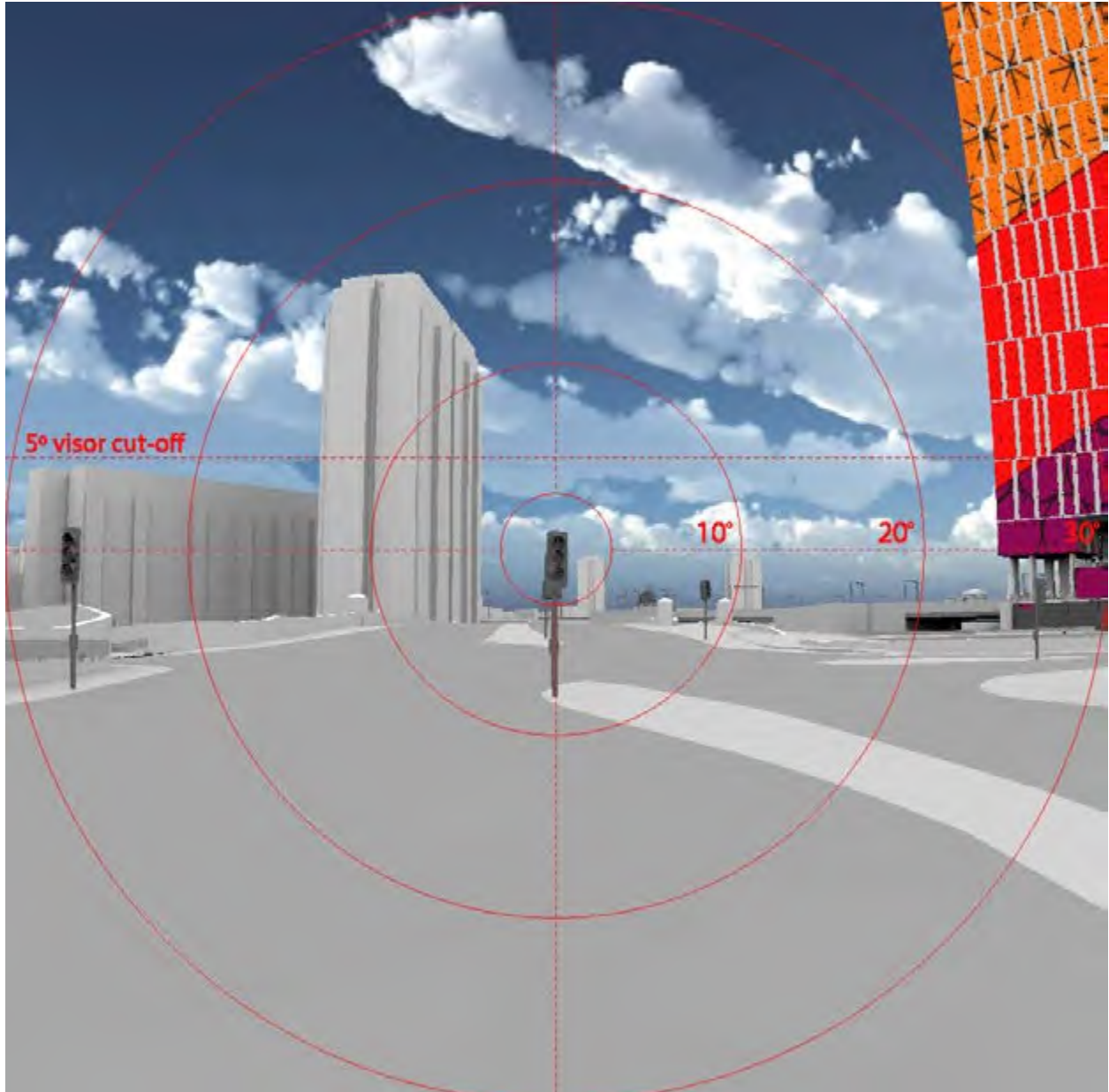


Fig. 170: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

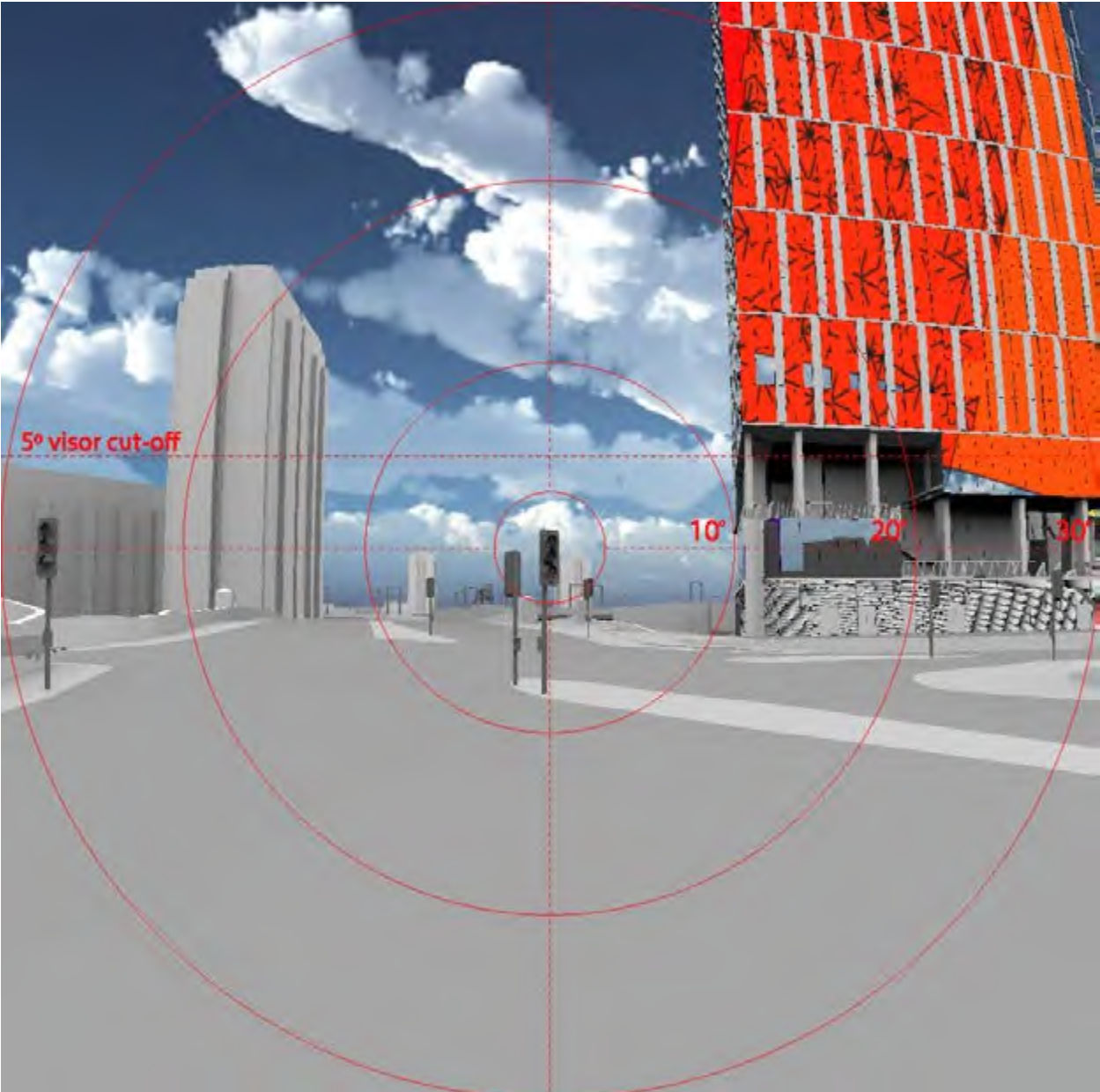
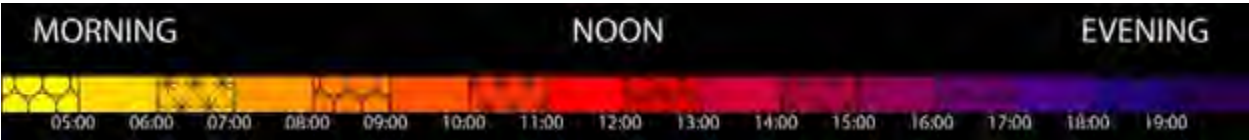


Fig. 171: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

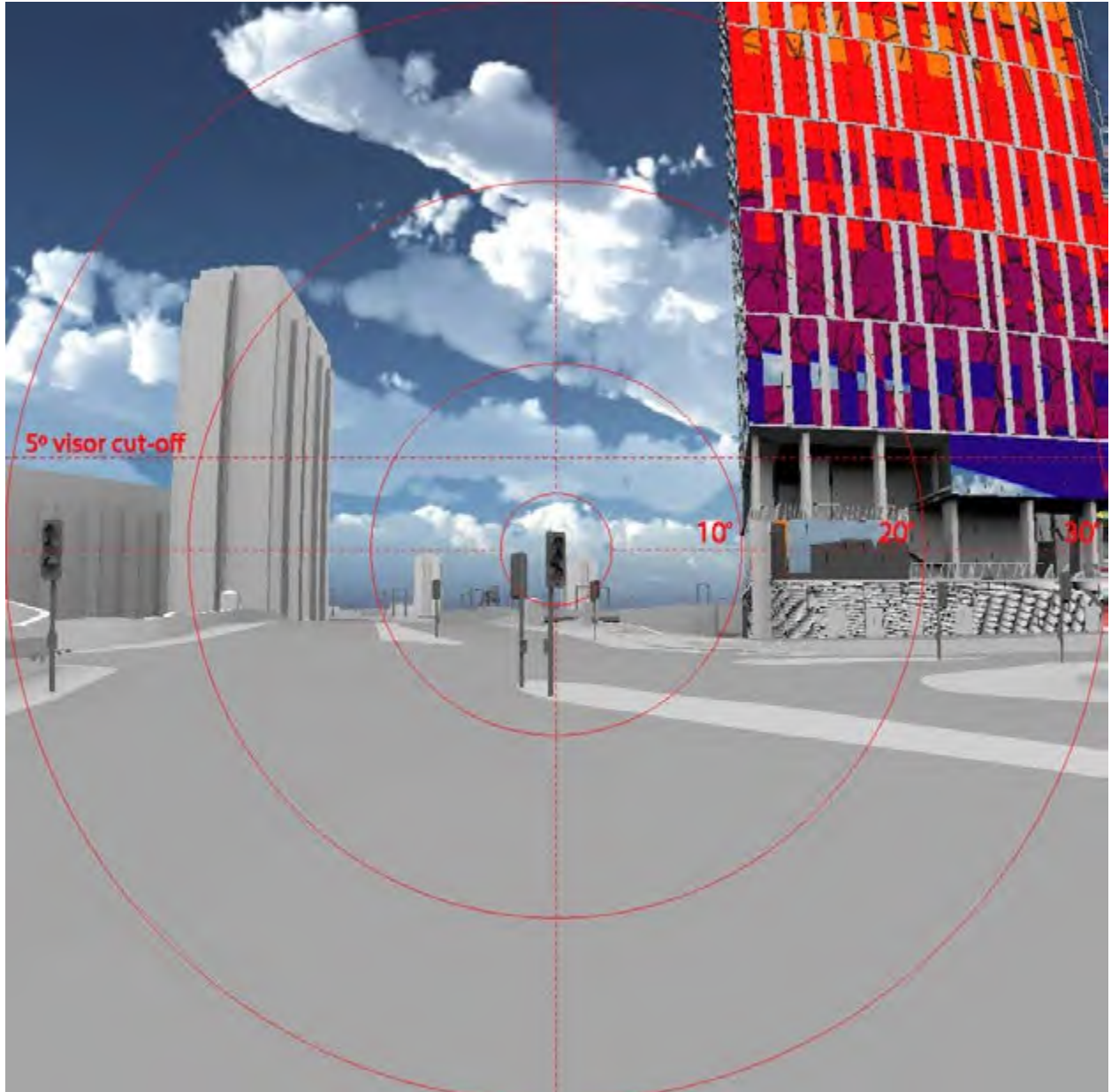


Fig. 172: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

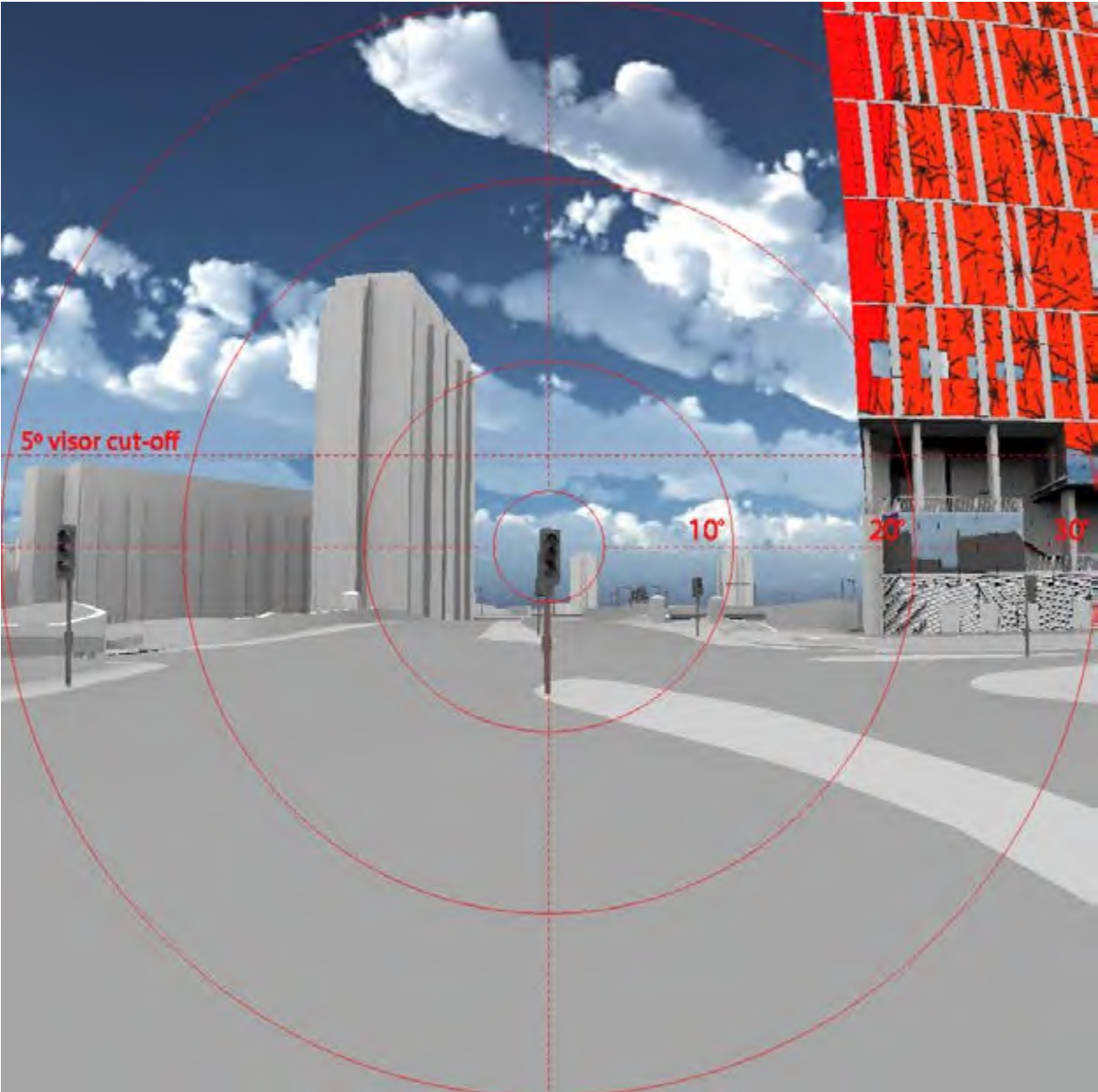


Fig. 173: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

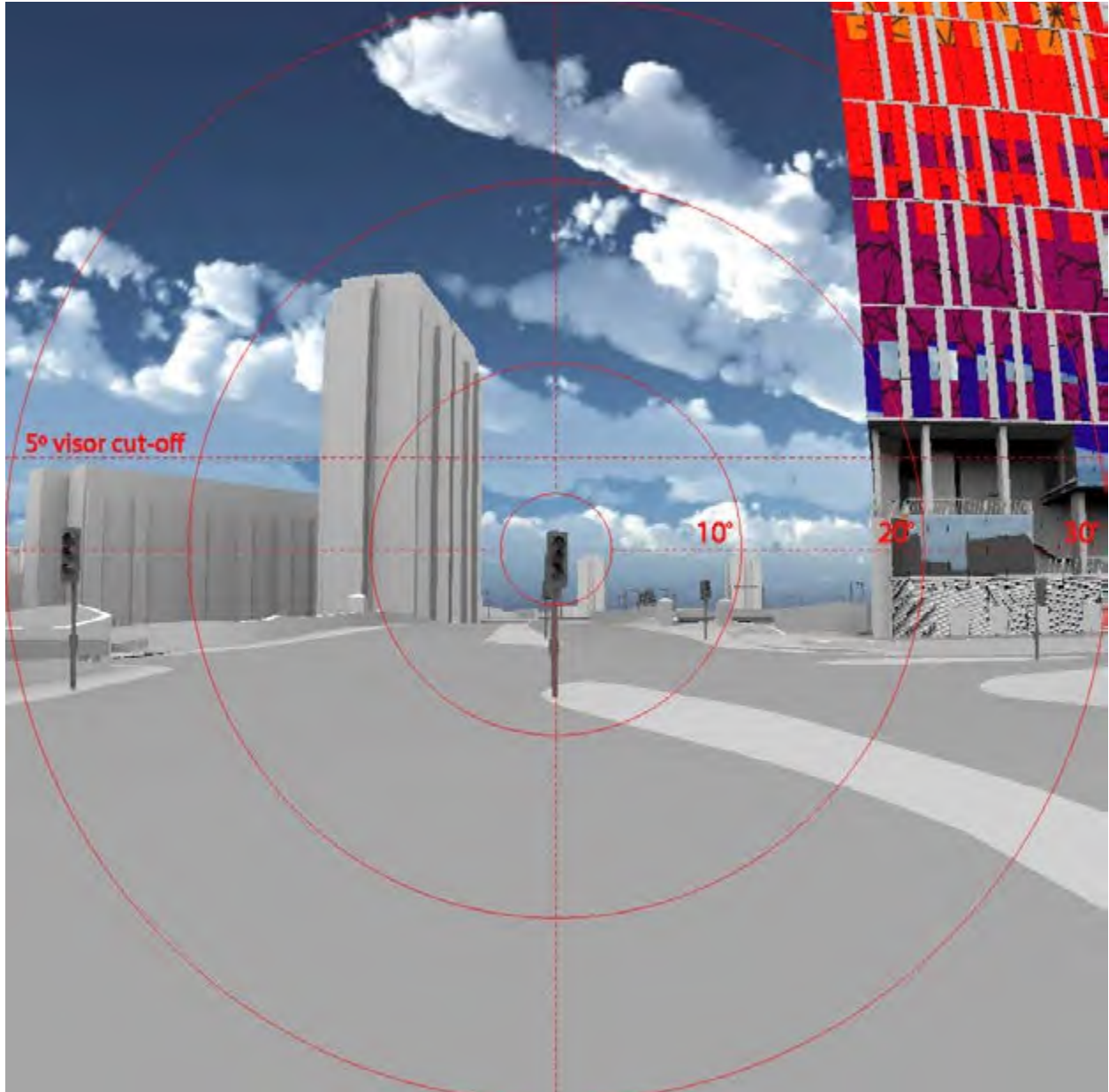


Fig. 174: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

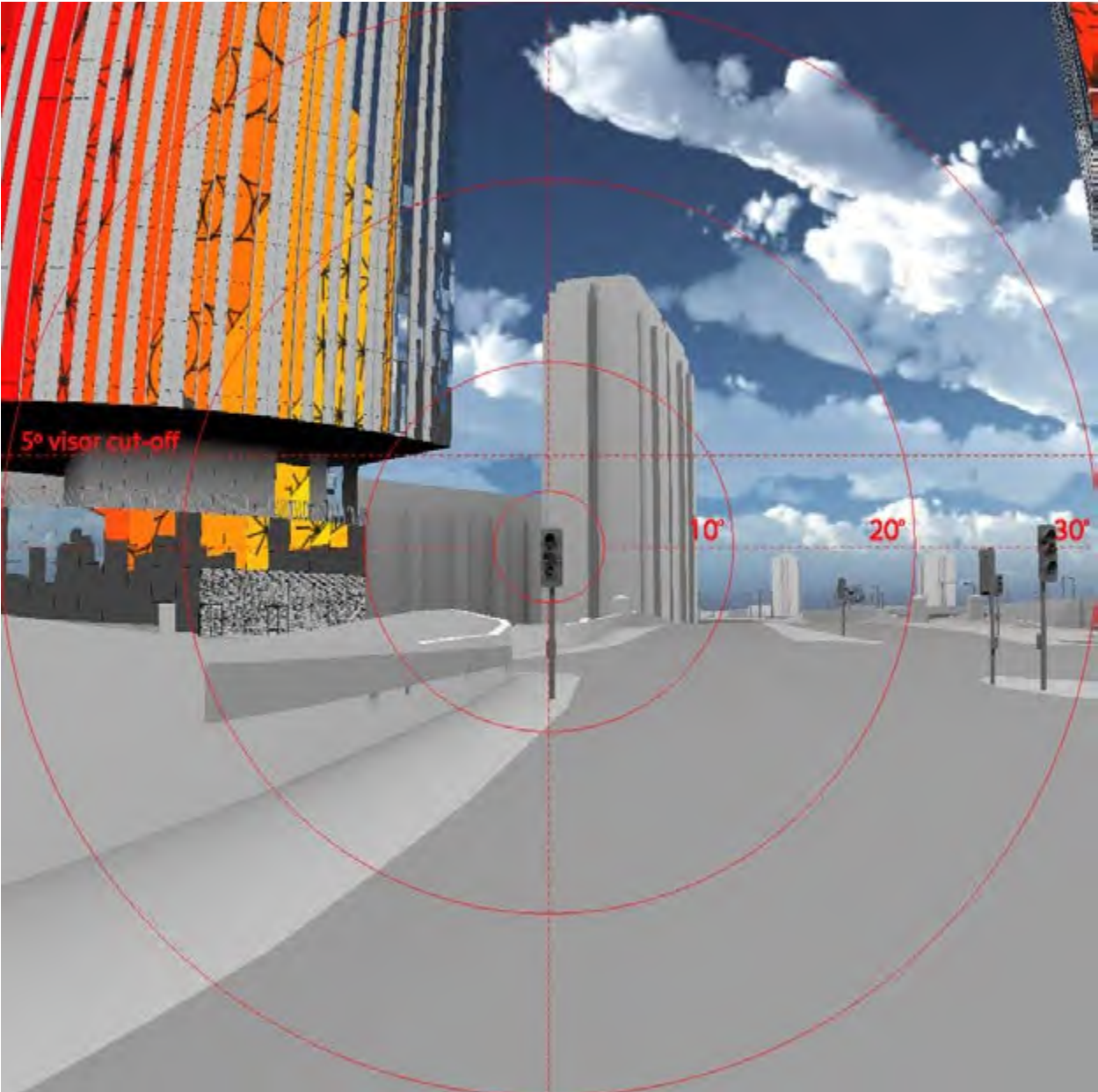


Fig. 175: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

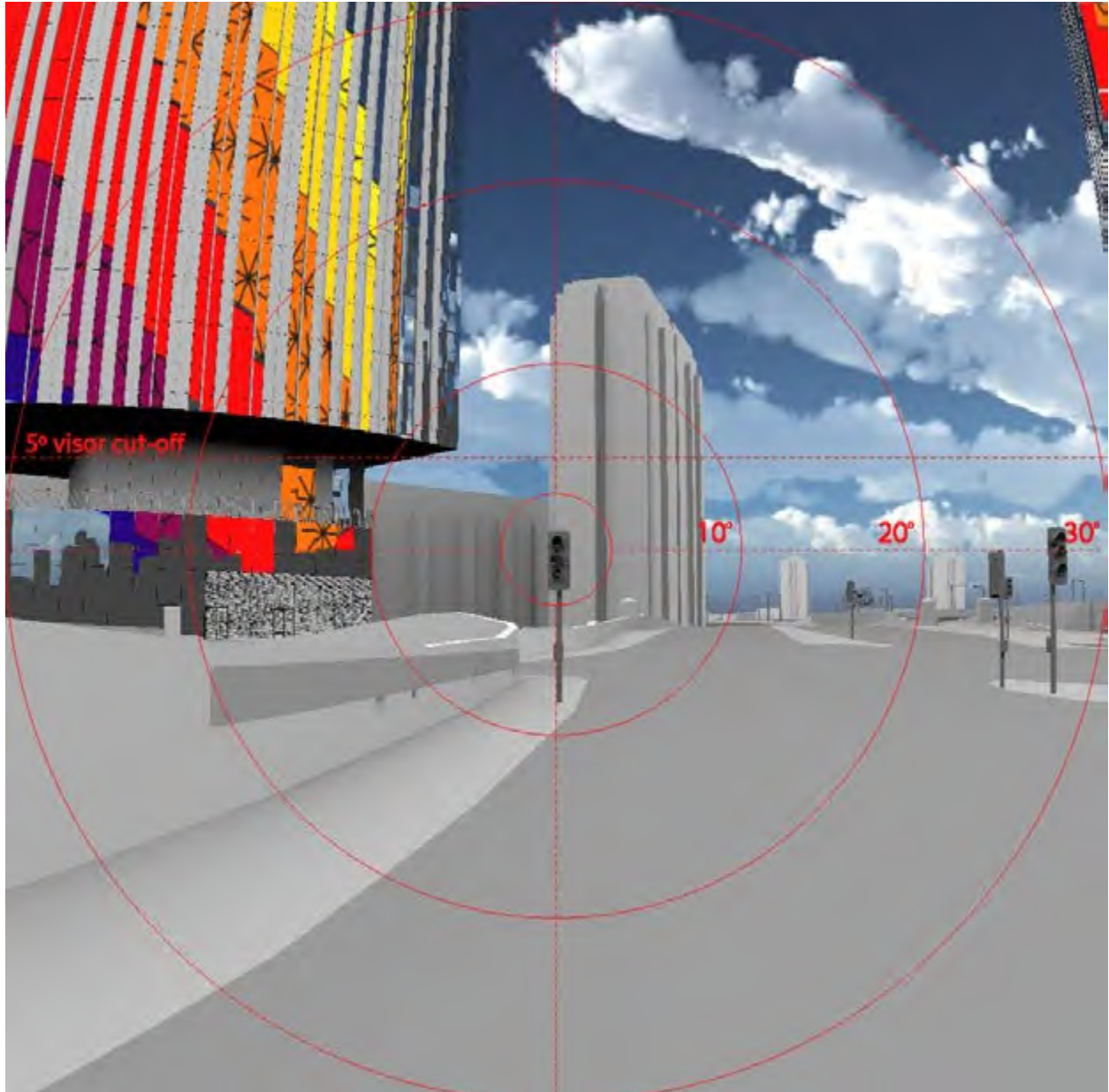


Fig. 176: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

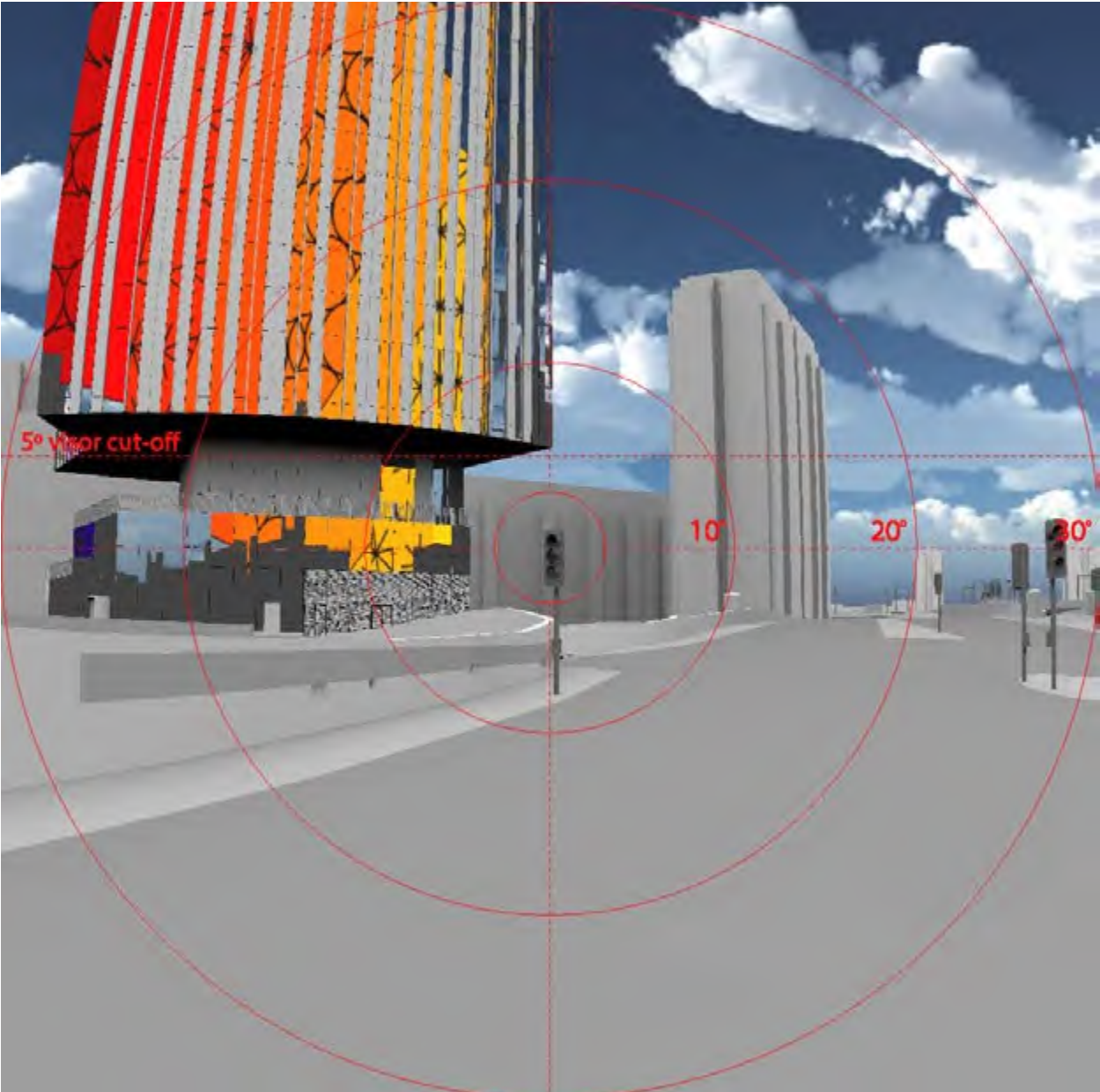


Fig. 177: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

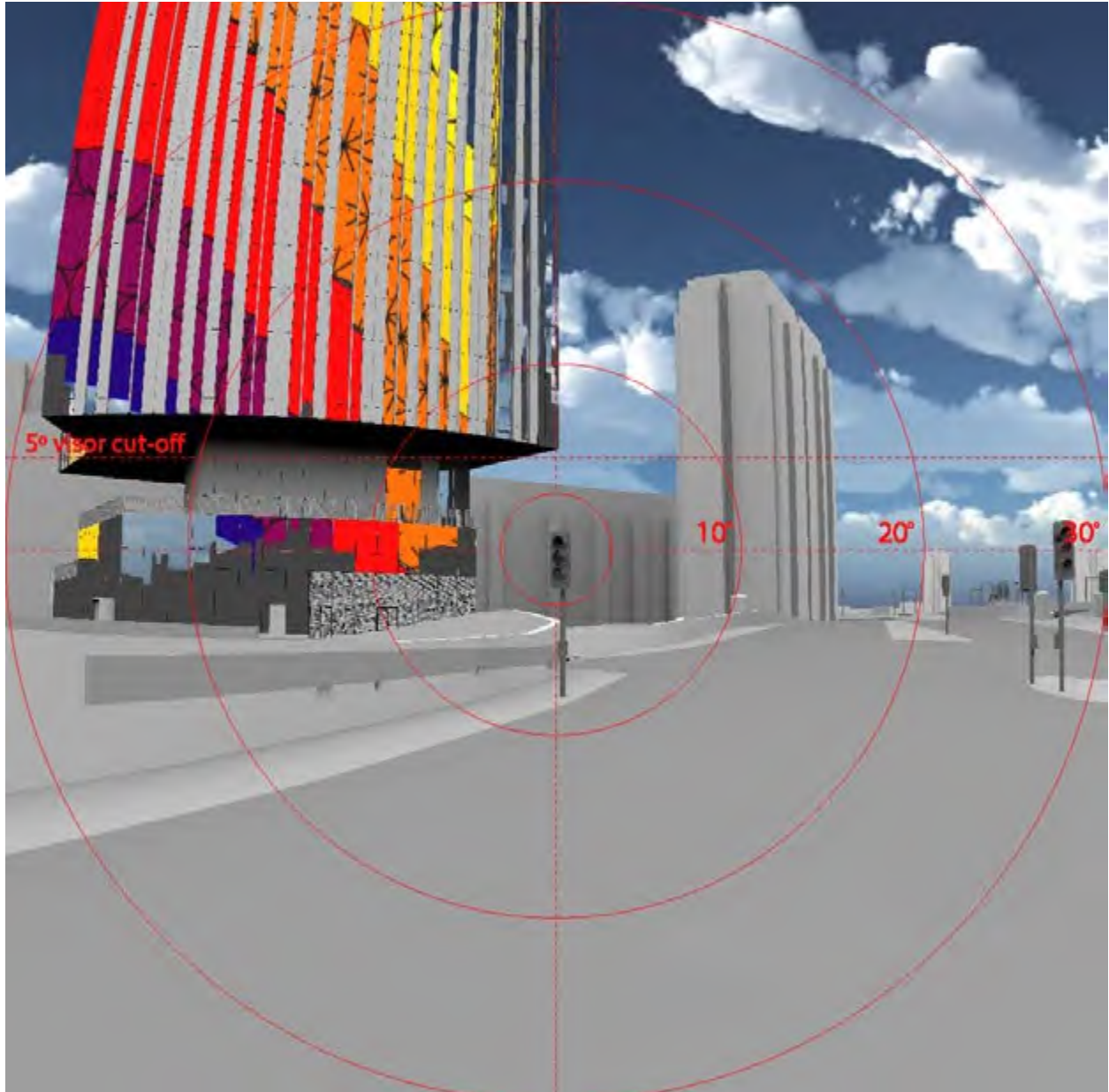


Fig. 178: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

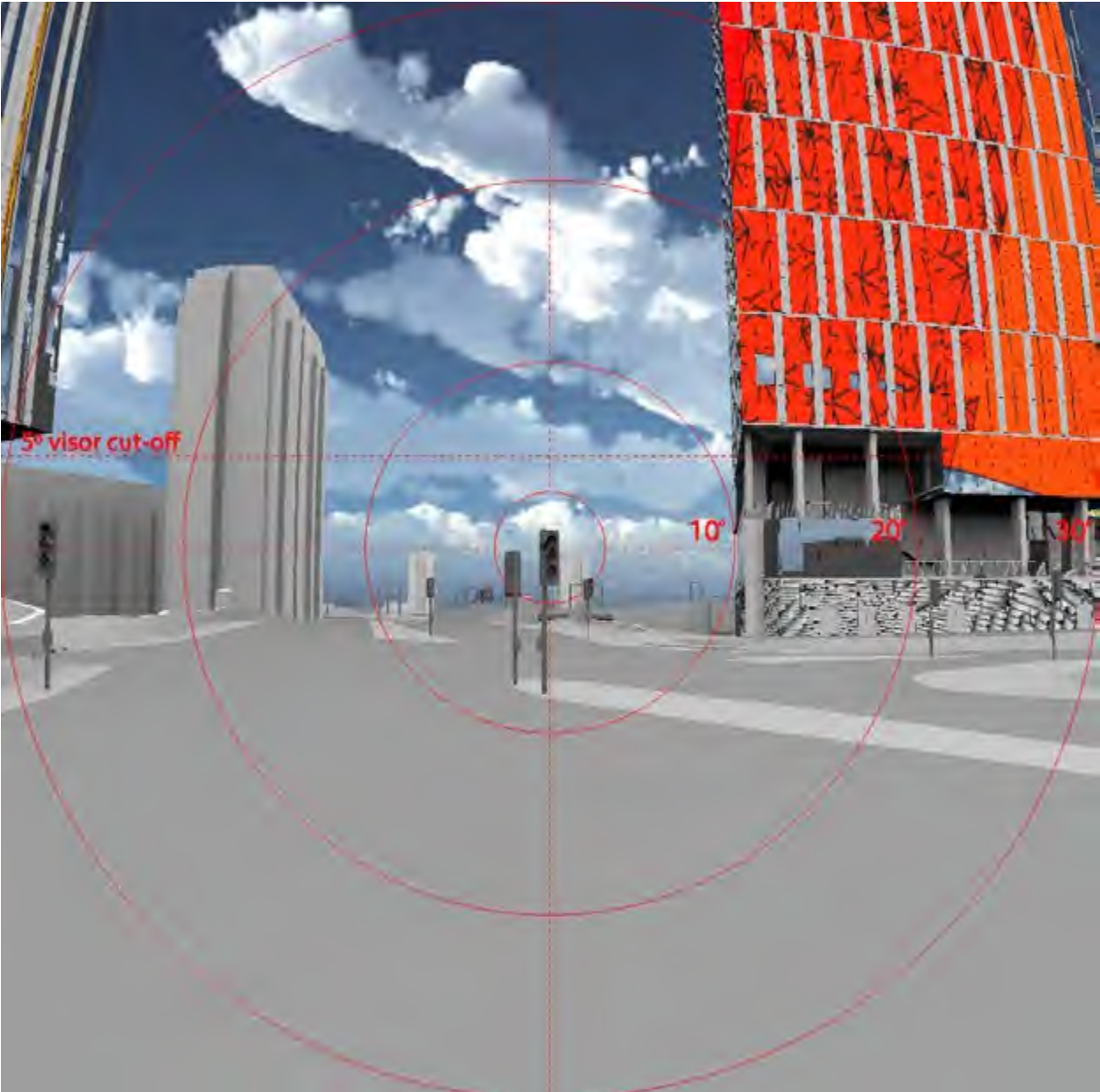


Fig. 179: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

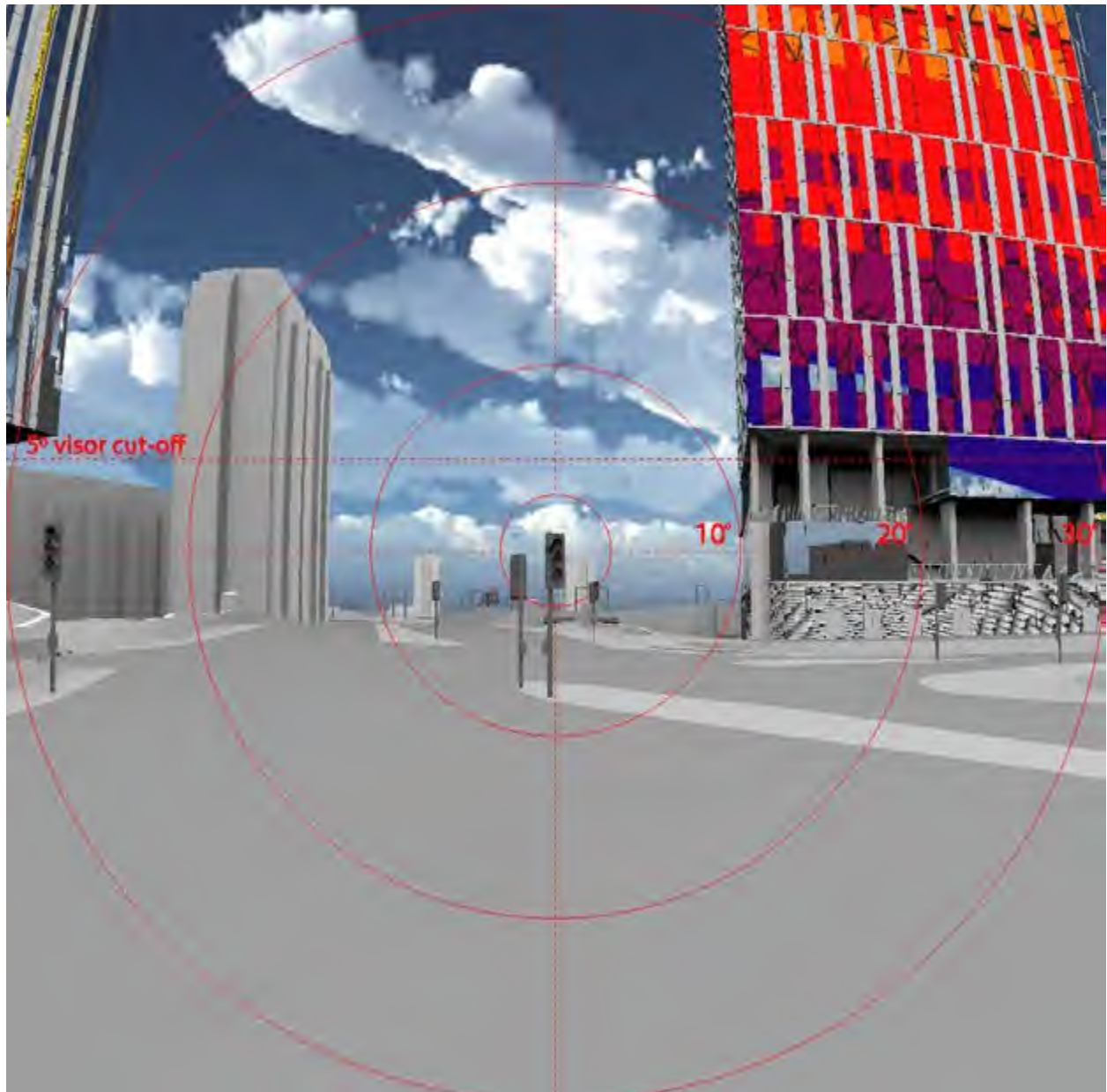


Fig. 180: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT



Fig. 181: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

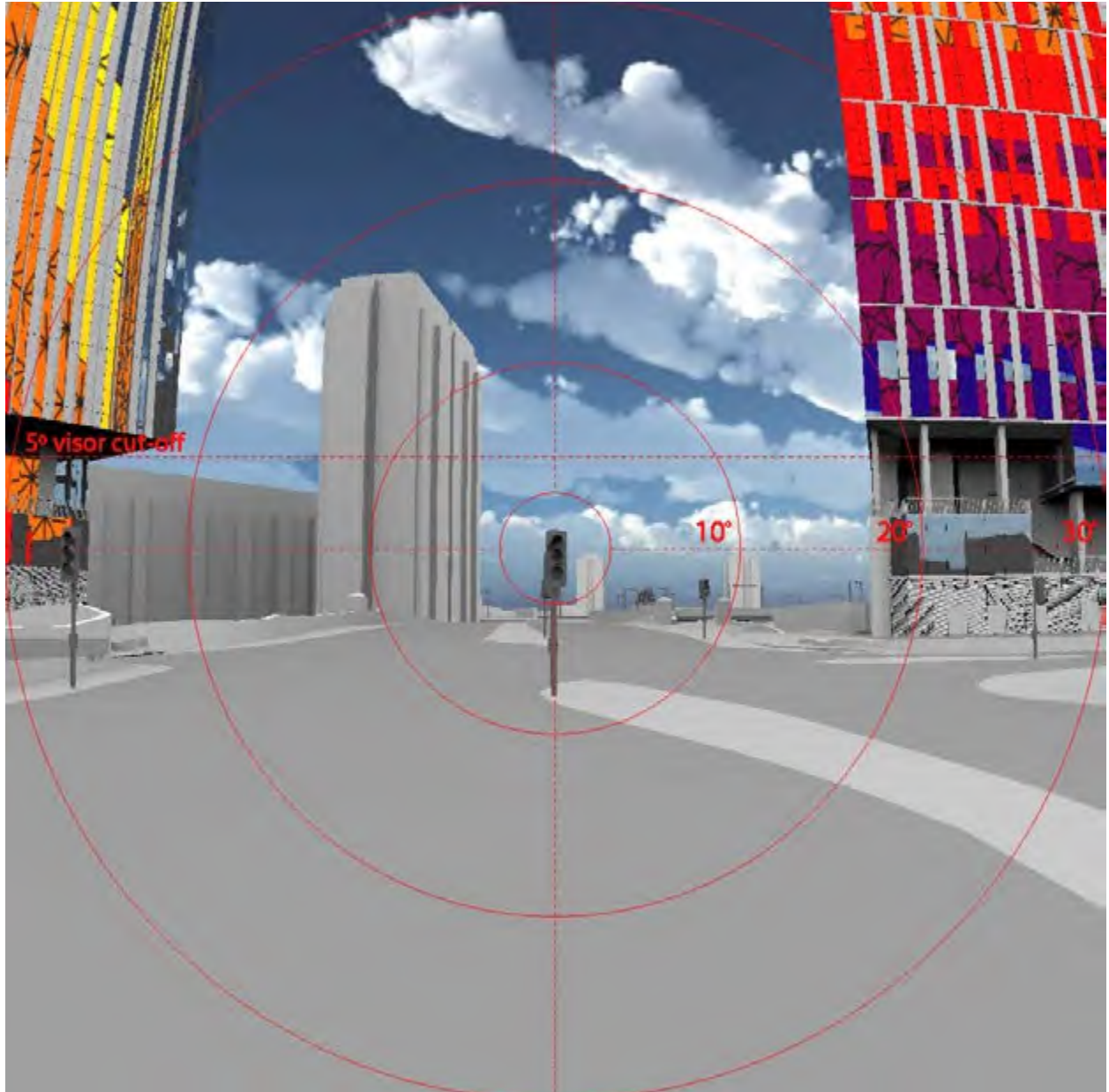


Fig. 182: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

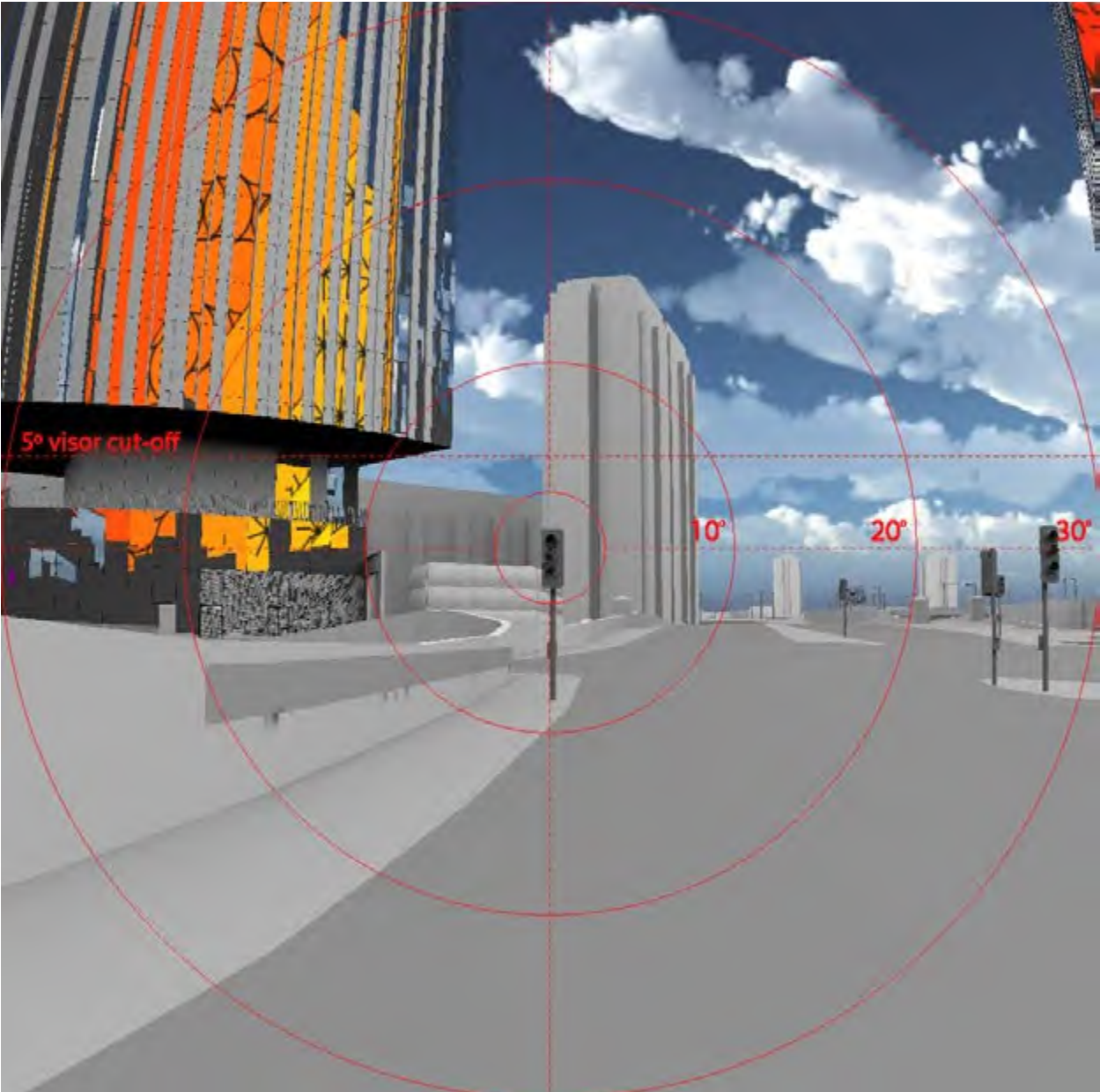


Fig. 183: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4A - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

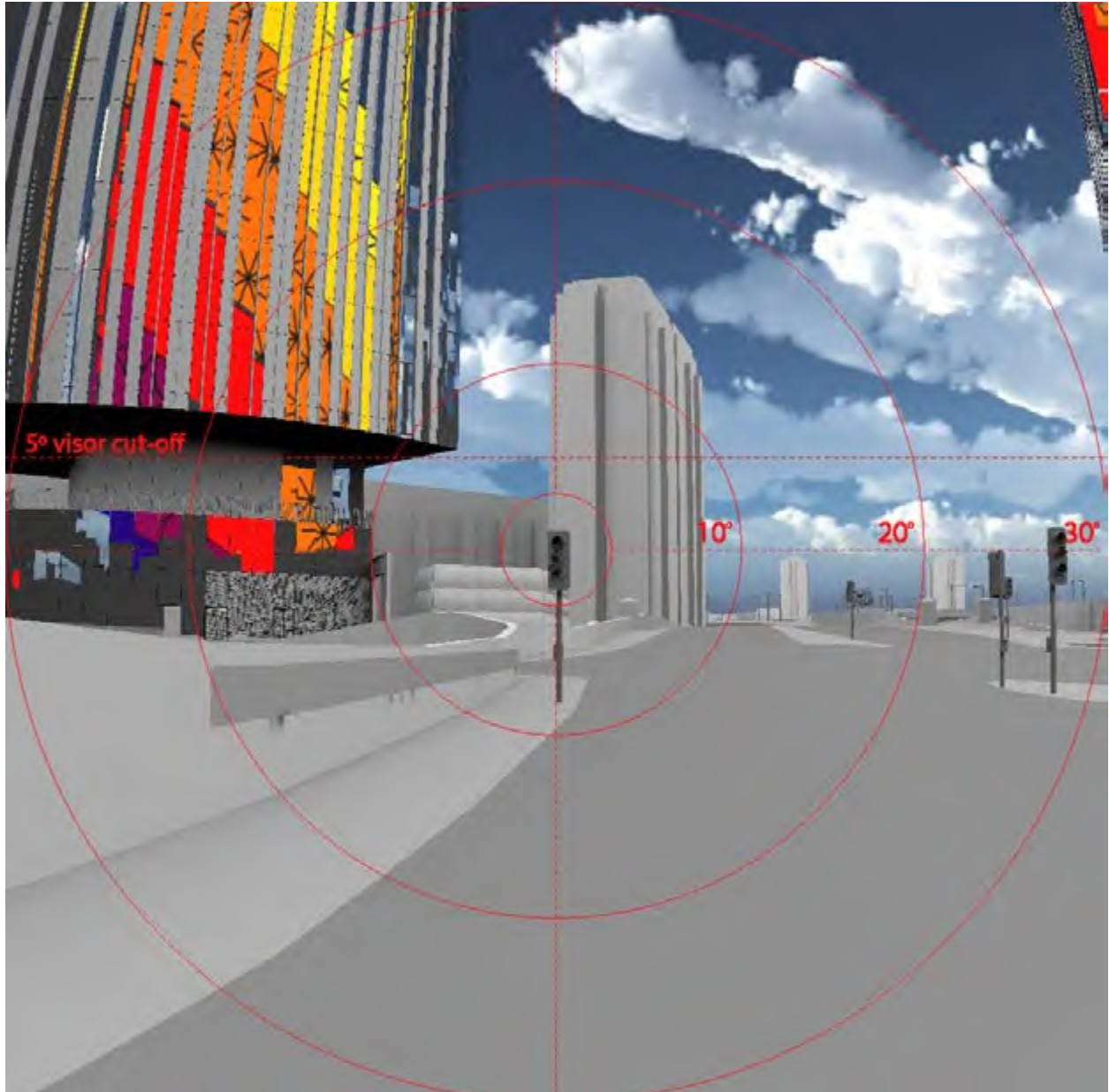


Fig. 184: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

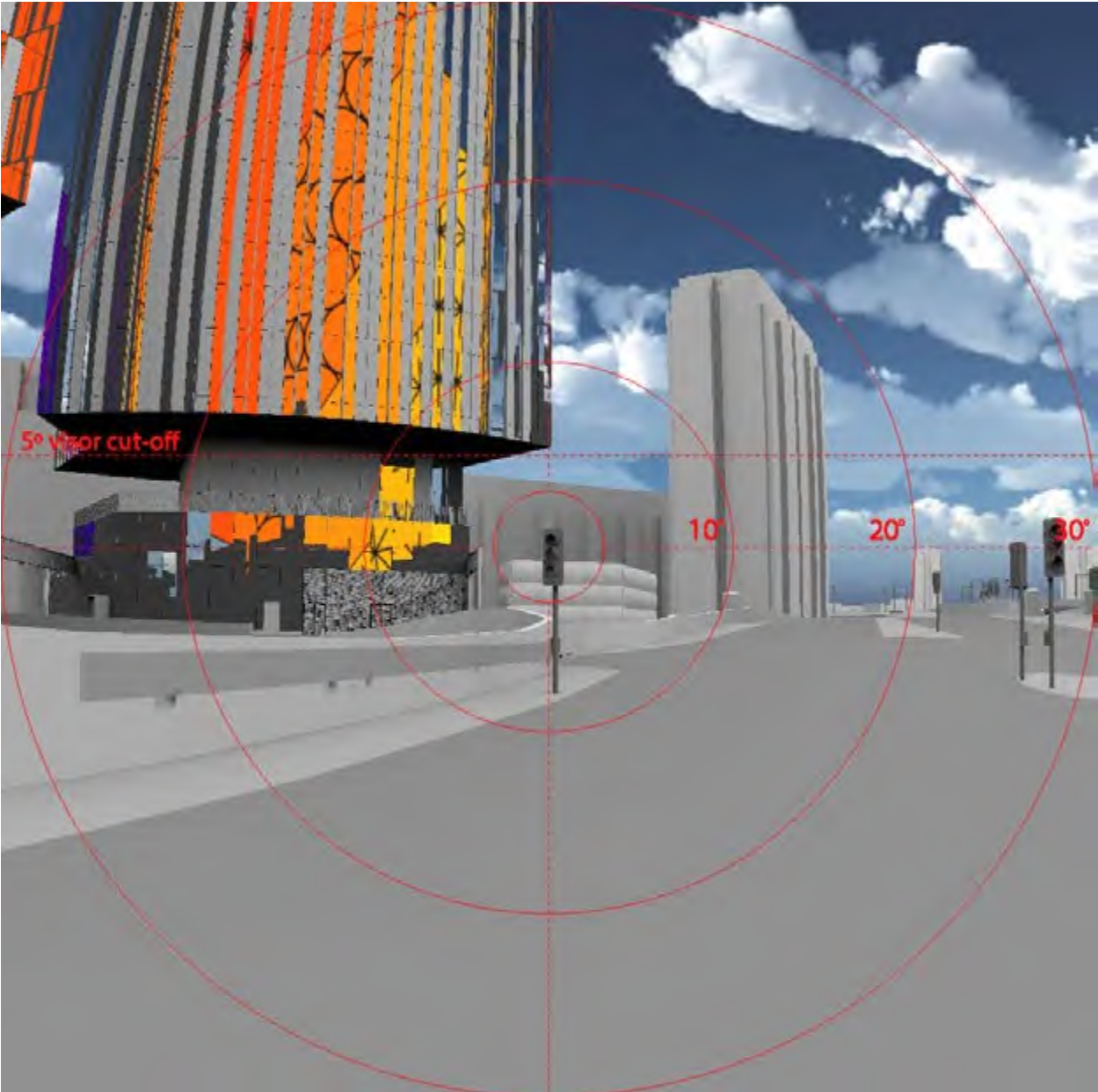


Fig. 185: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4B - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

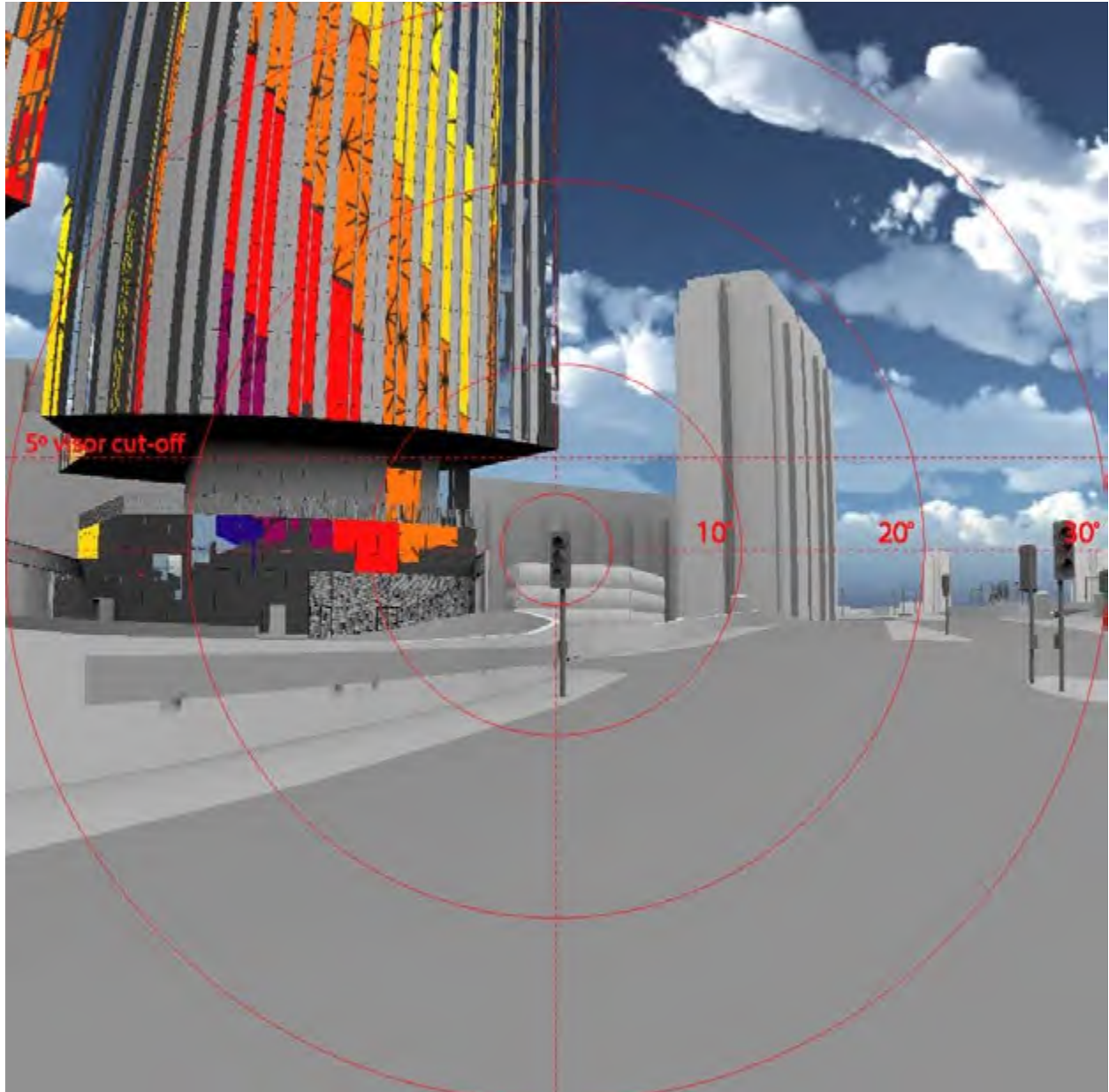


Fig. 186: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

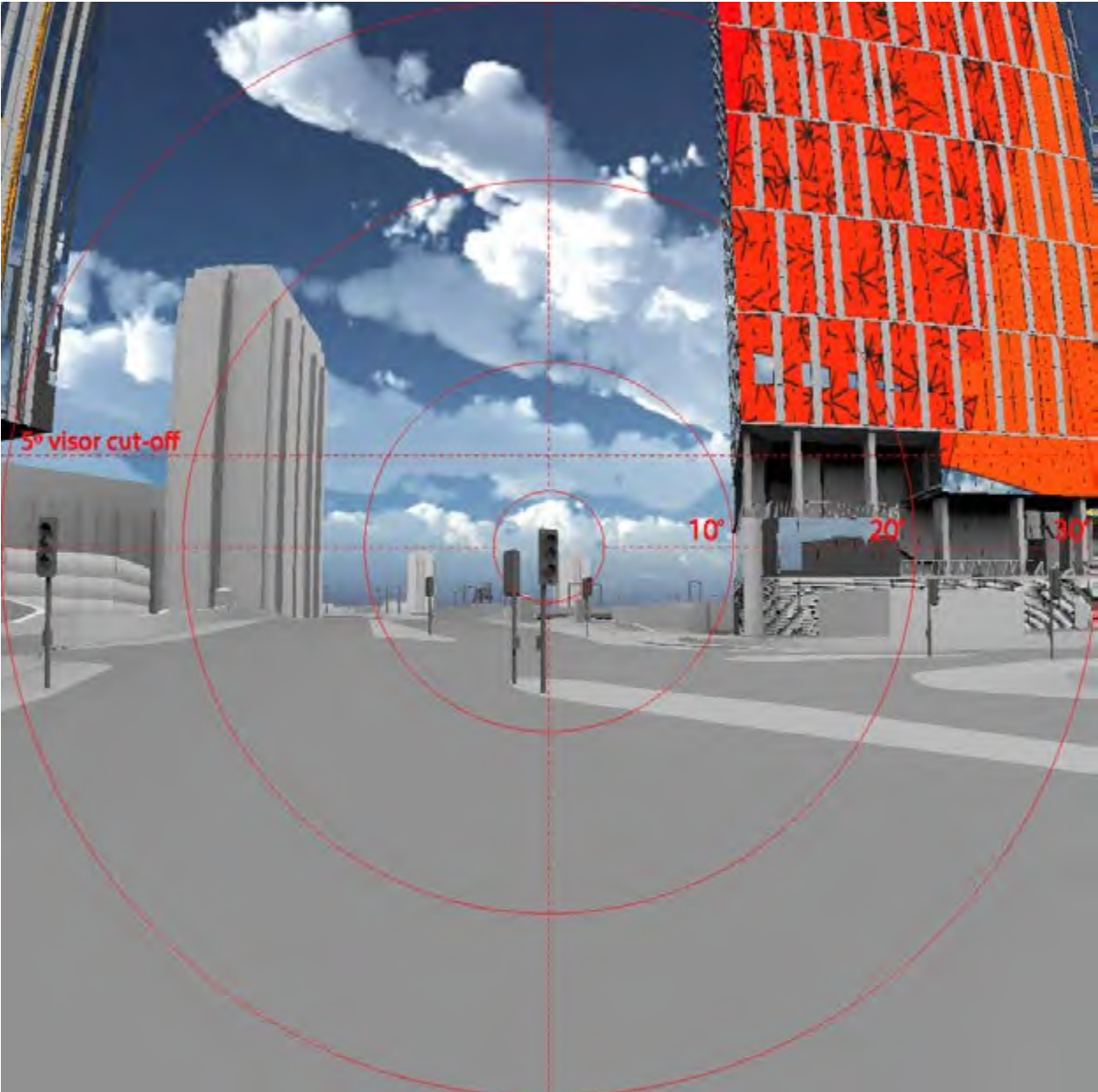


Fig. 187: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4C - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

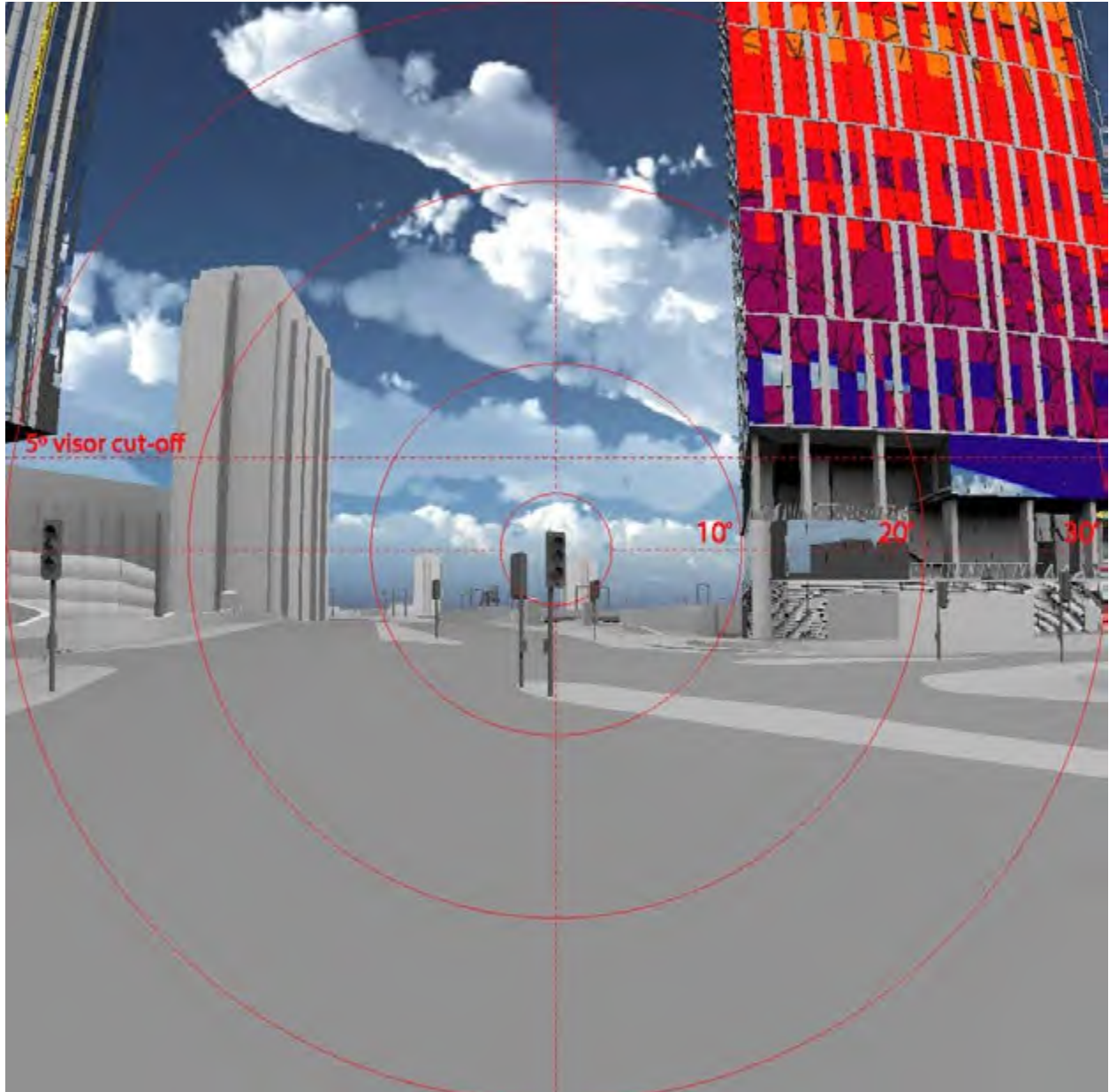


Fig. 188: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

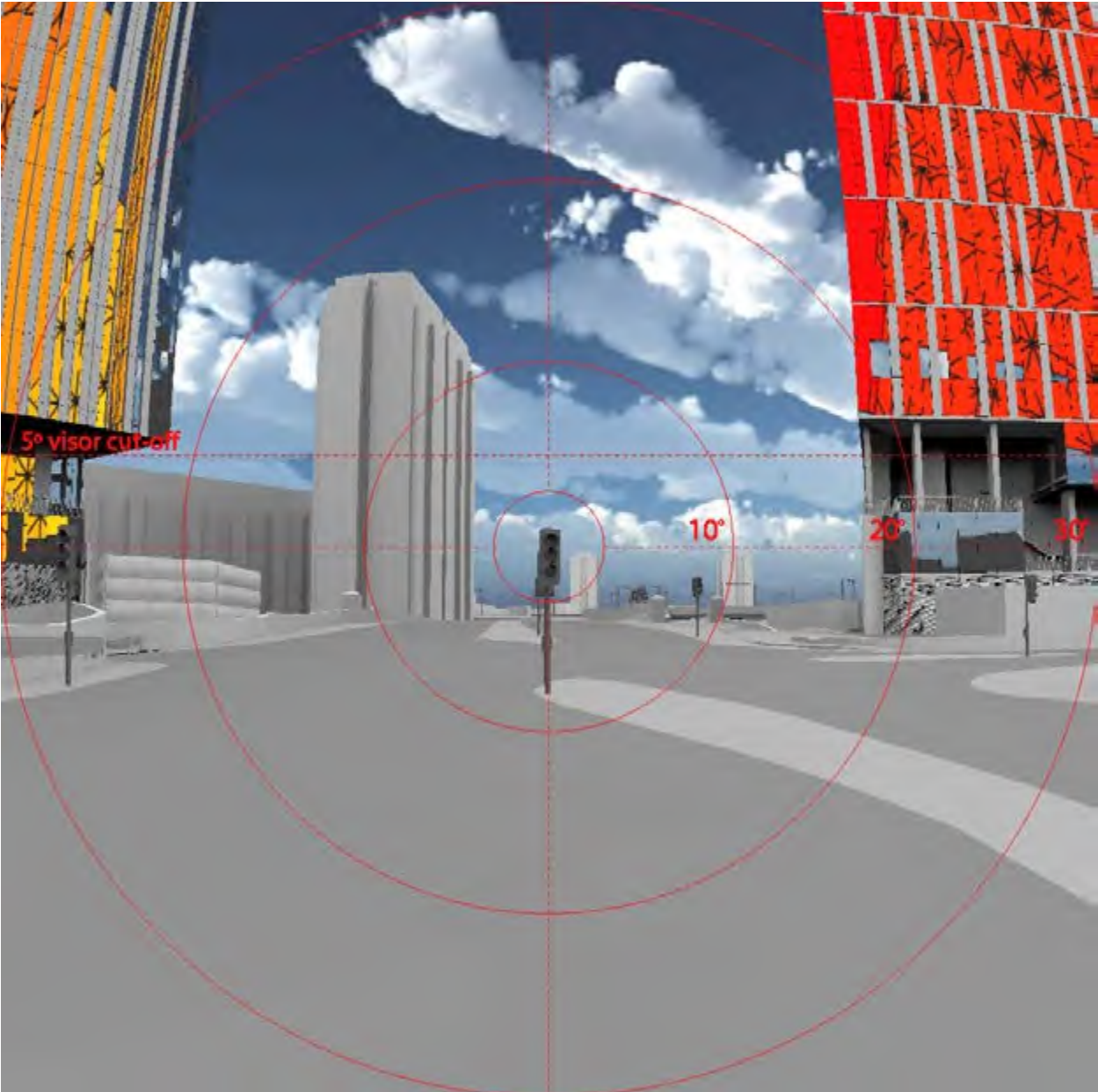


Fig. 189: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT TW4D - TRINITY WAY/INNER RING ROAD JUNCTION (WITH WATER STREET)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

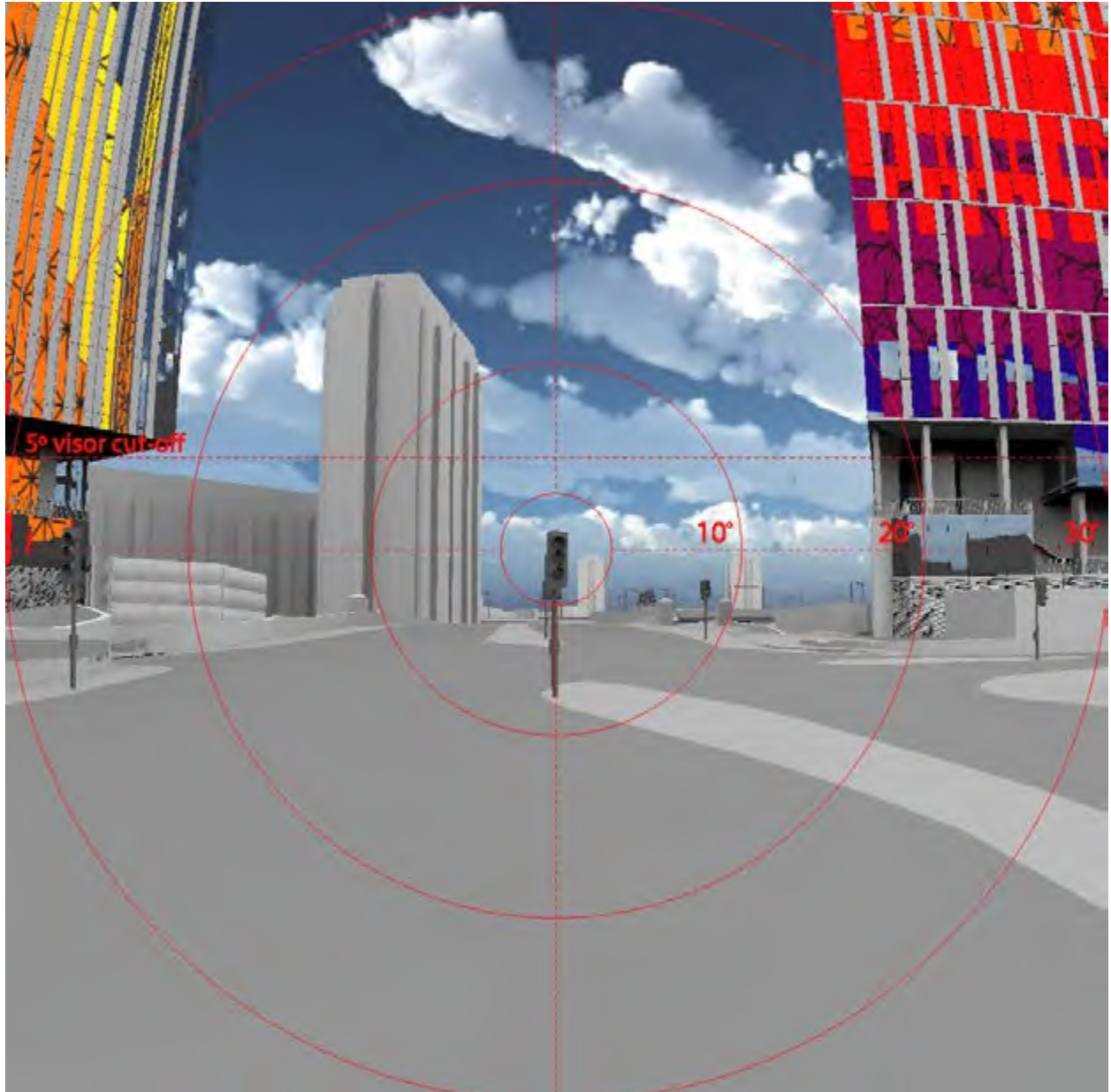


Fig. 190: Solar reflections



19 **SOLAR GLARE ASSESSMENT**
ES2 - EGERTON/INNER RING ROAD 2

ES2 - Egerton Street/Inner Ring Road Northbound Junction (with Regent Road)



Fig. 191: Junction Location



Fig. 192: Traffic Light Location

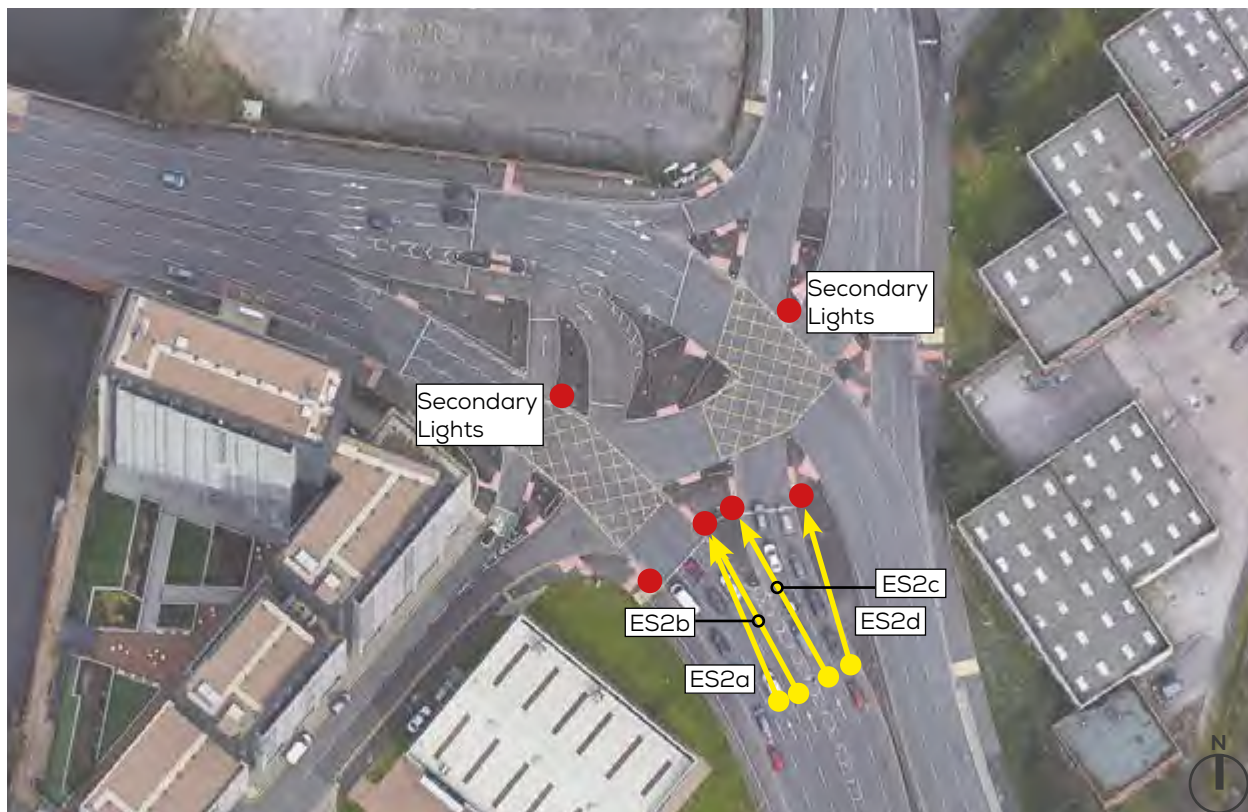


Fig. 193: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

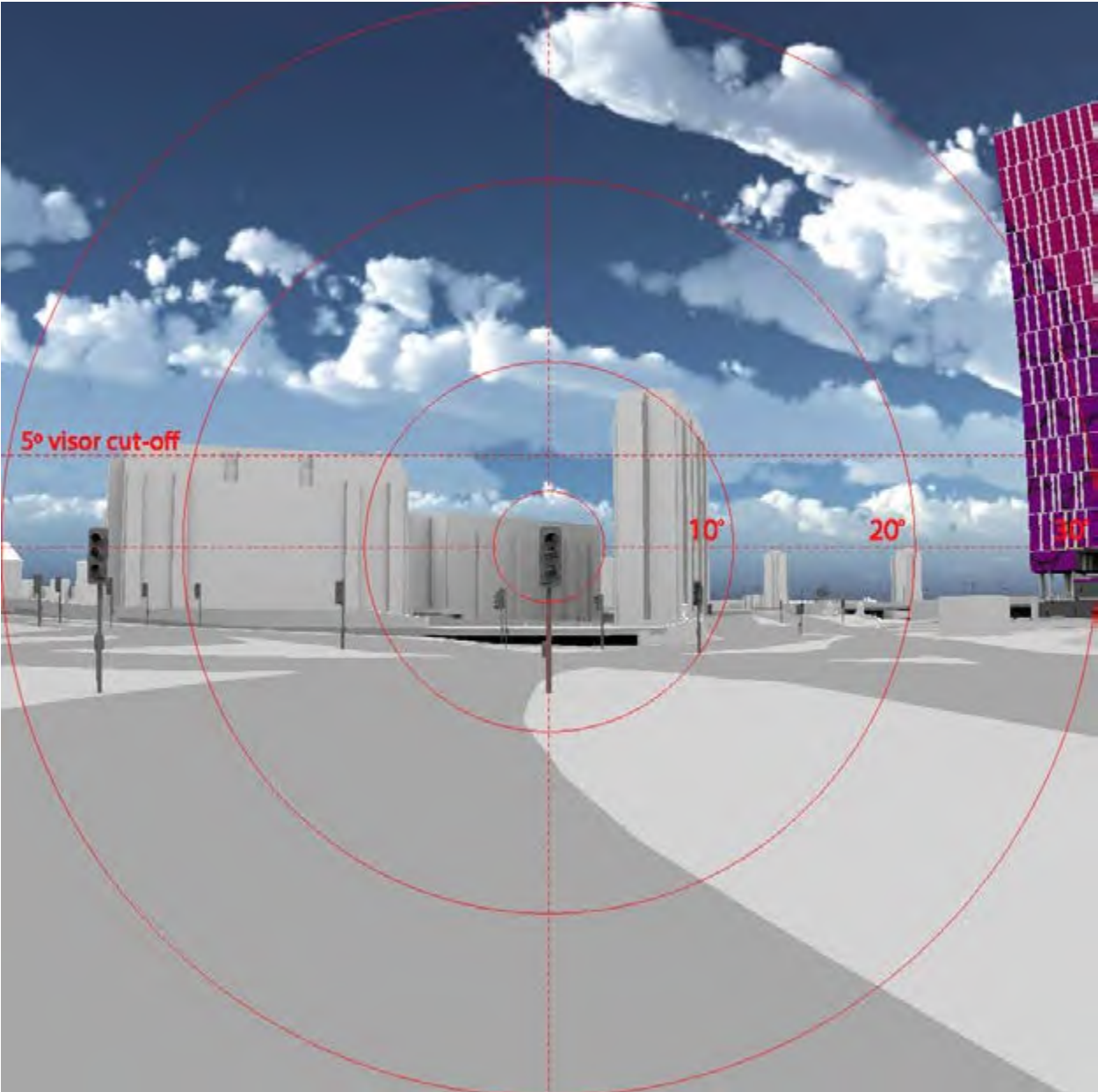


Fig. 194: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

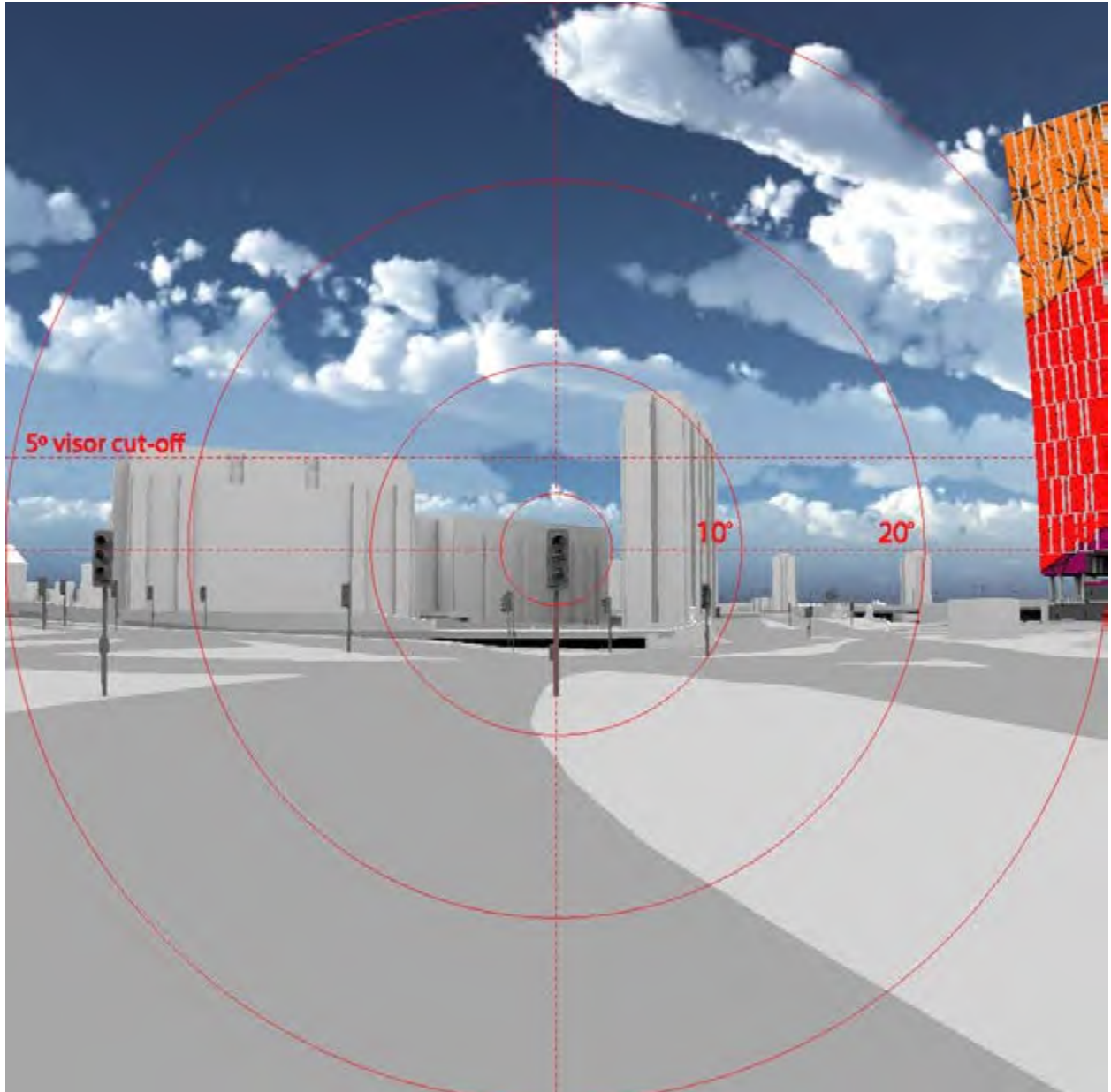


Fig. 195: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2A - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

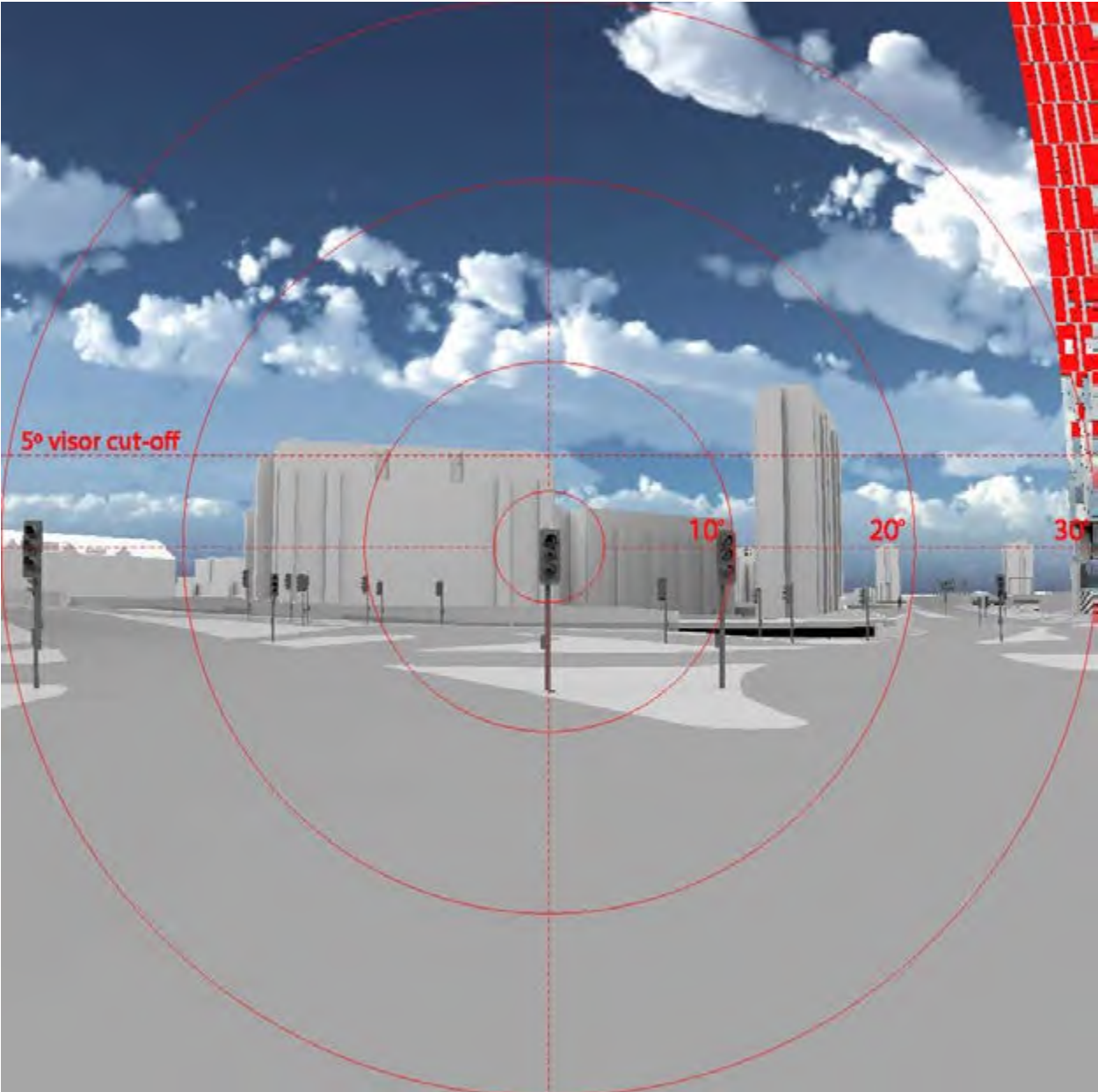


Fig. 196: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2A - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

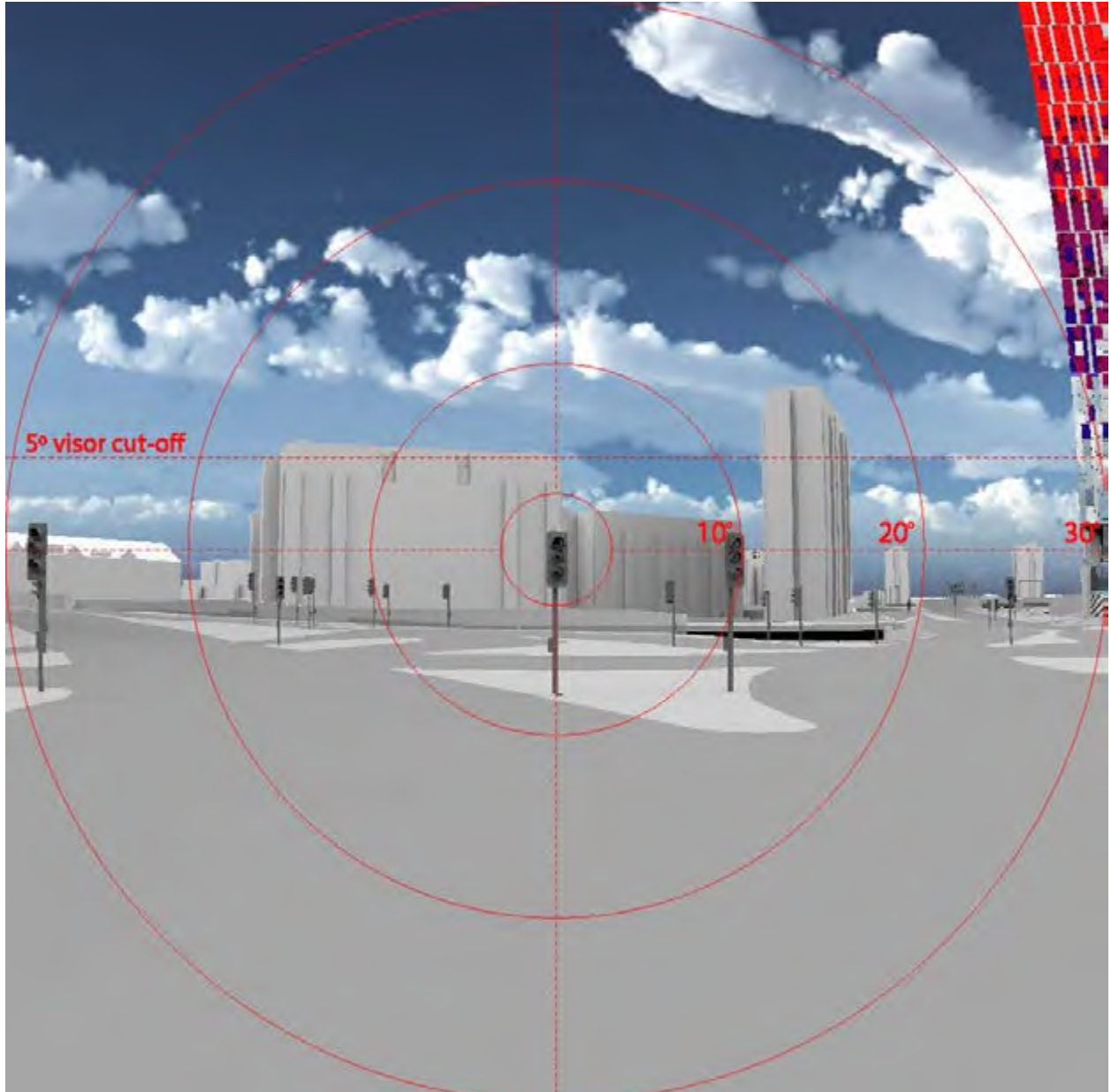


Fig. 197: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

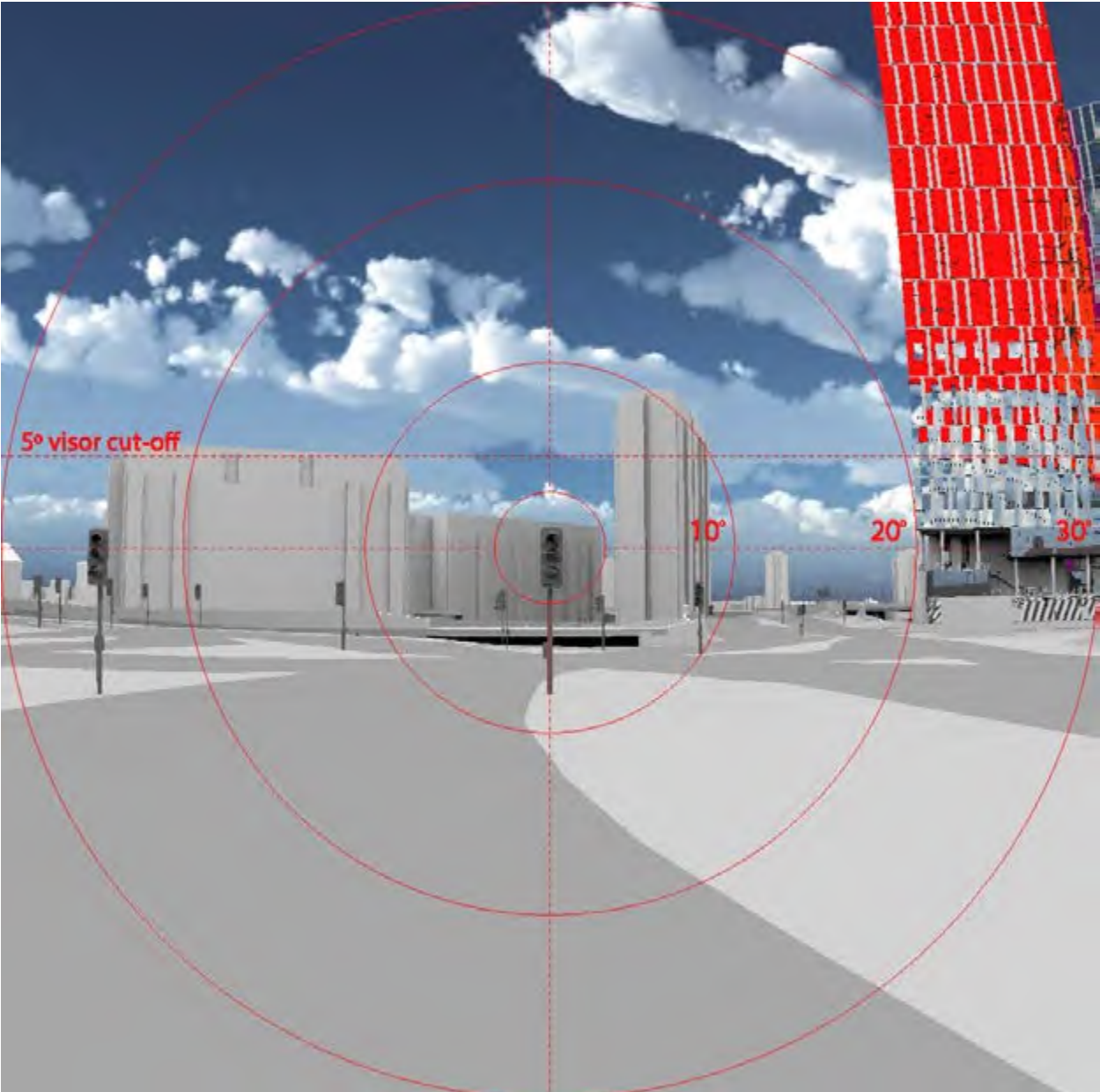


Fig. 198: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

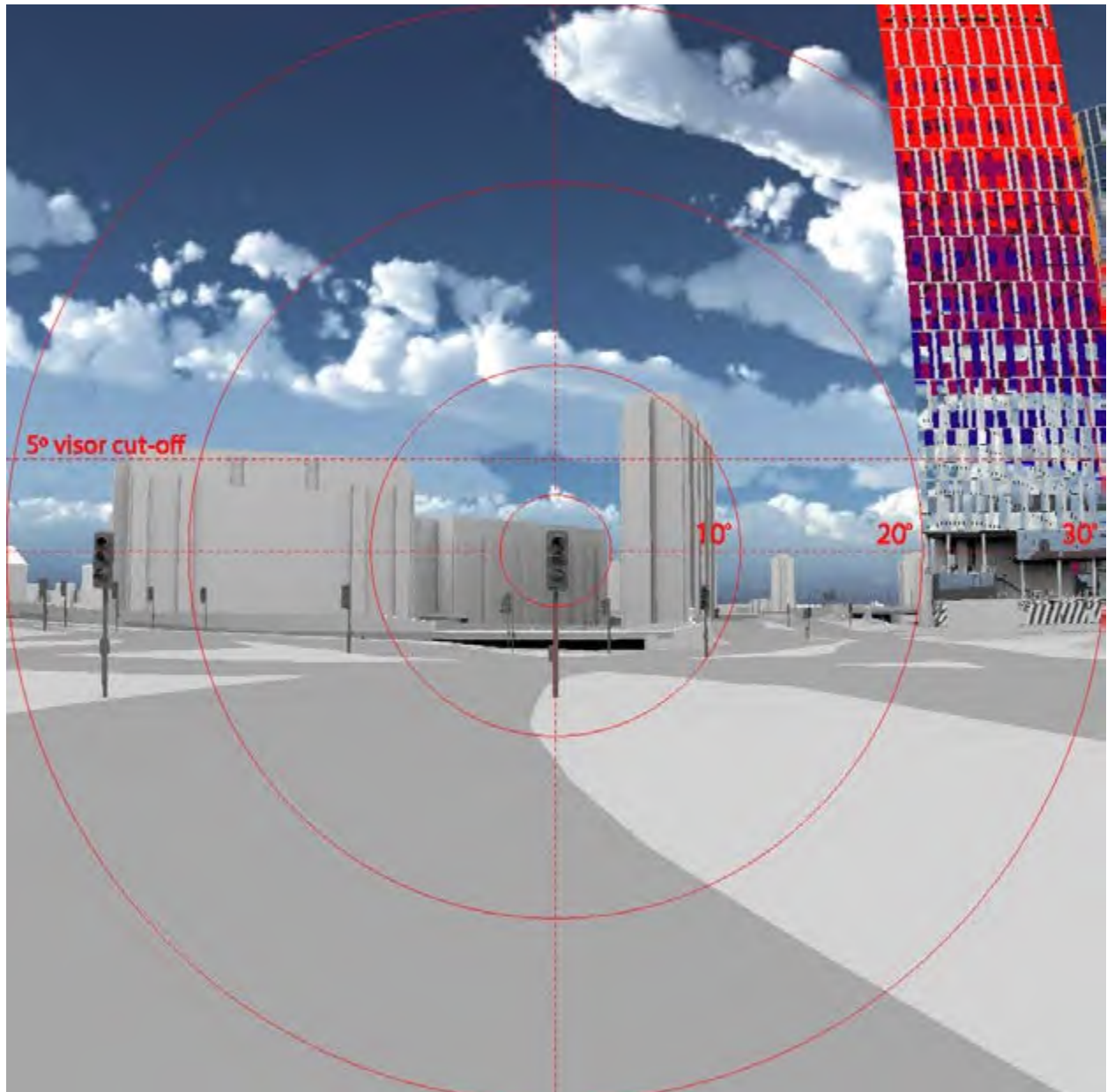


Fig. 199: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2A - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

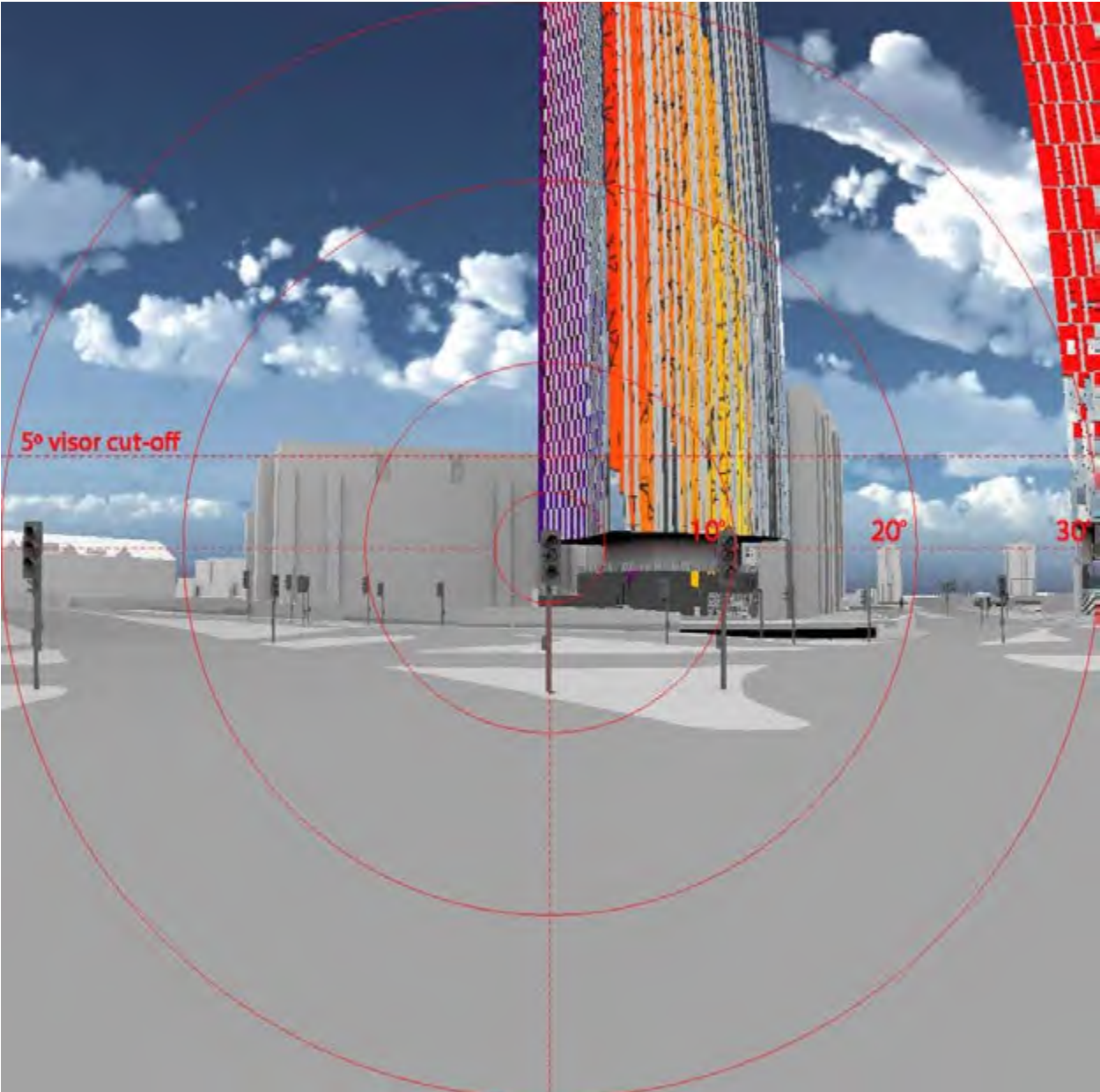
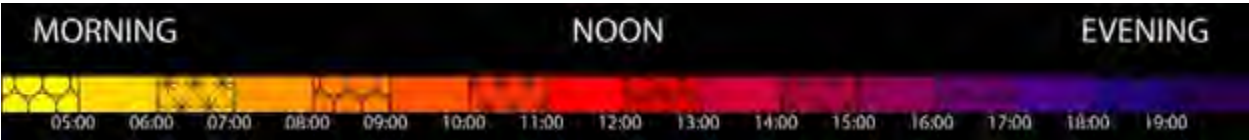


Fig. 200: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2A - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

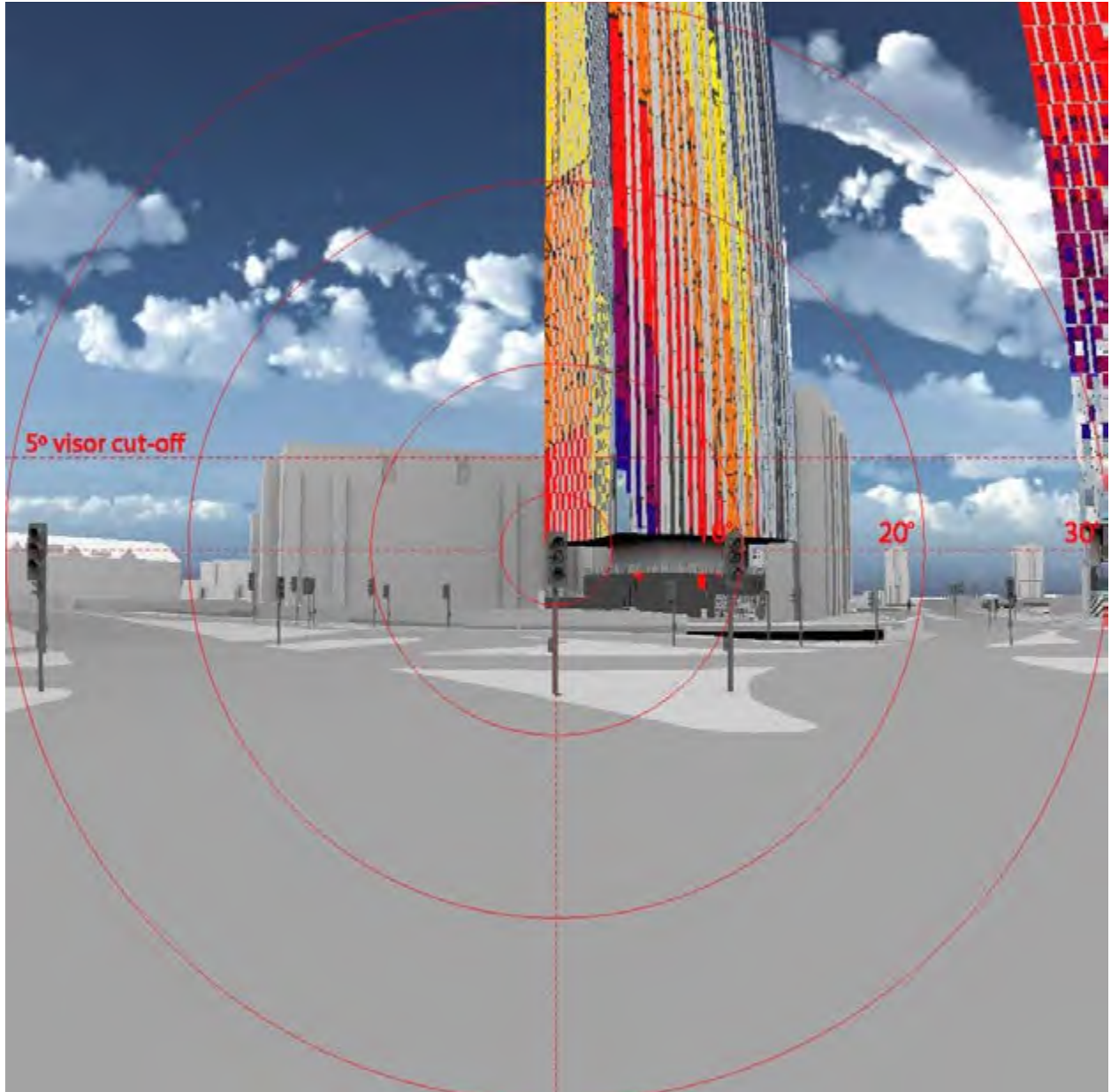


Fig. 201: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ESB - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

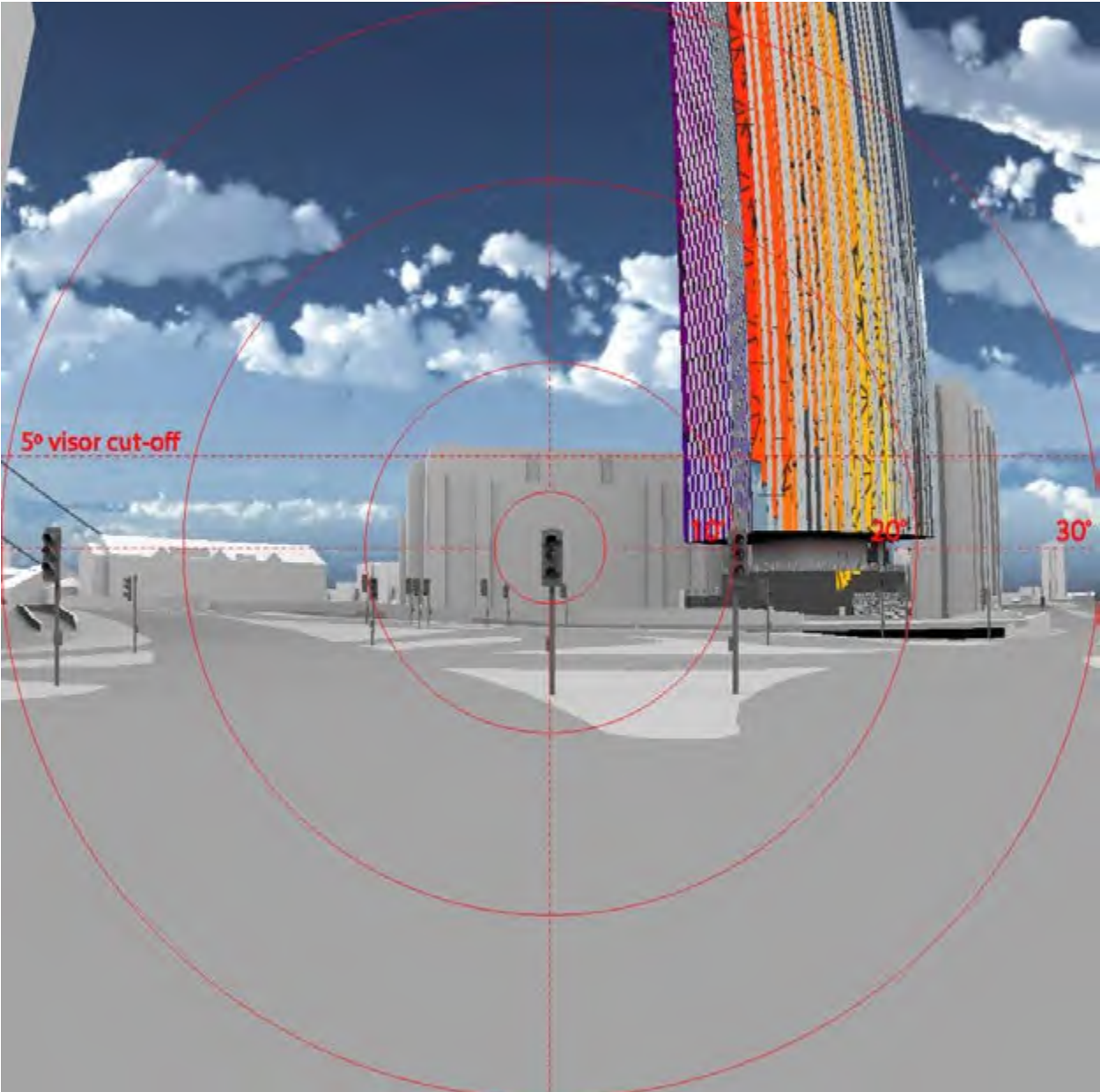


Fig. 202: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2B - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

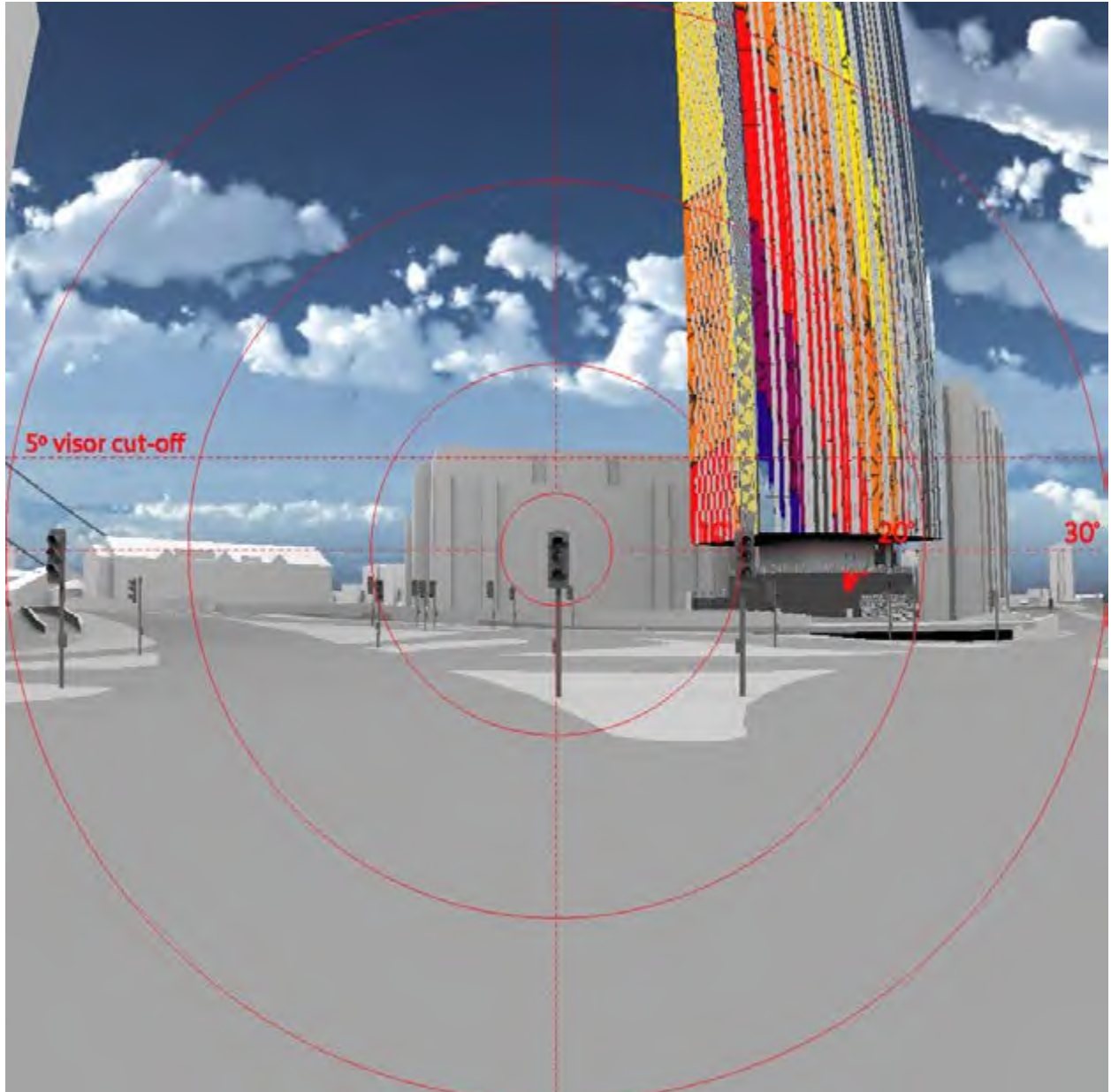


Fig. 203: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2C - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

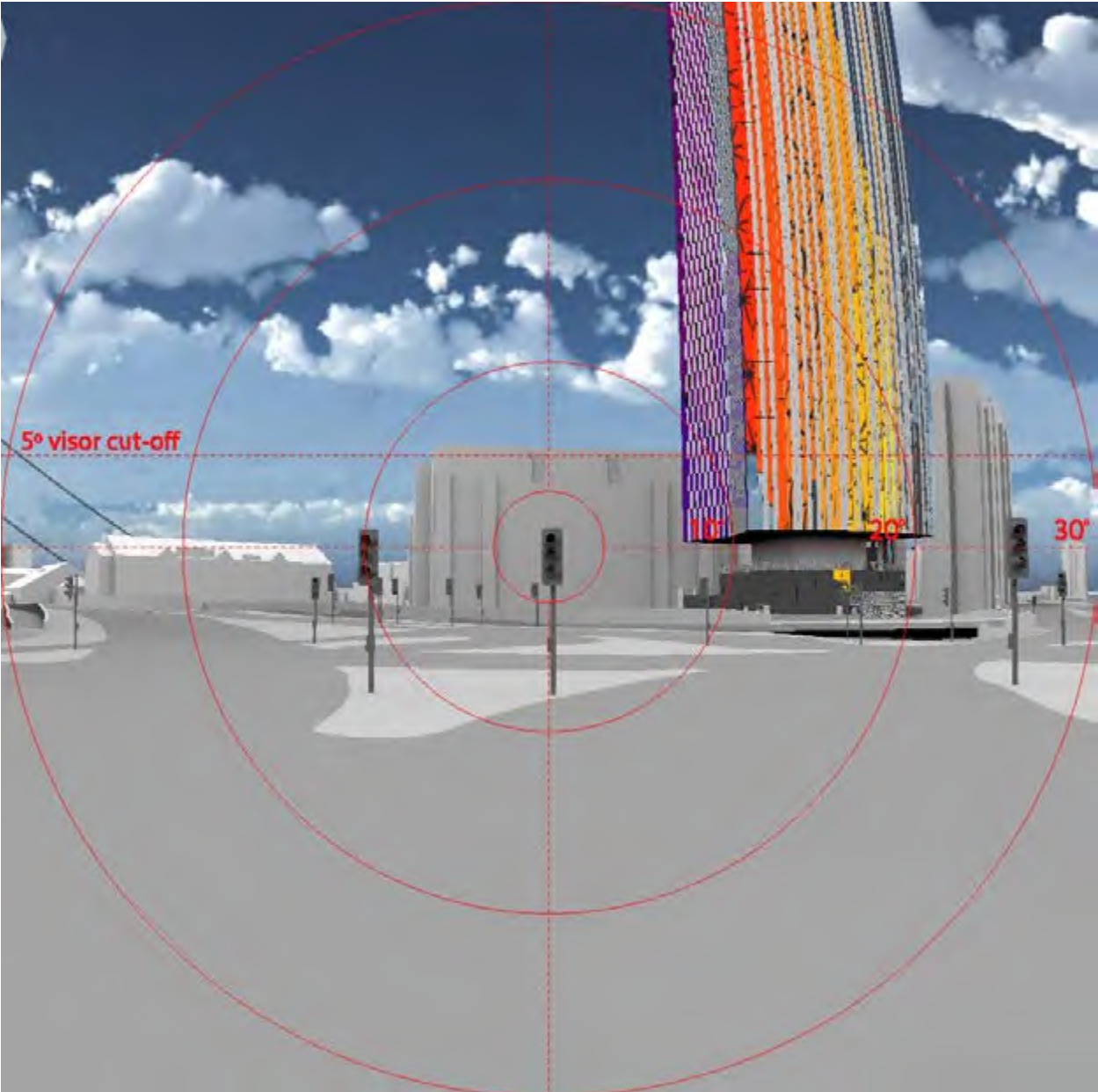


Fig. 204: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2C - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

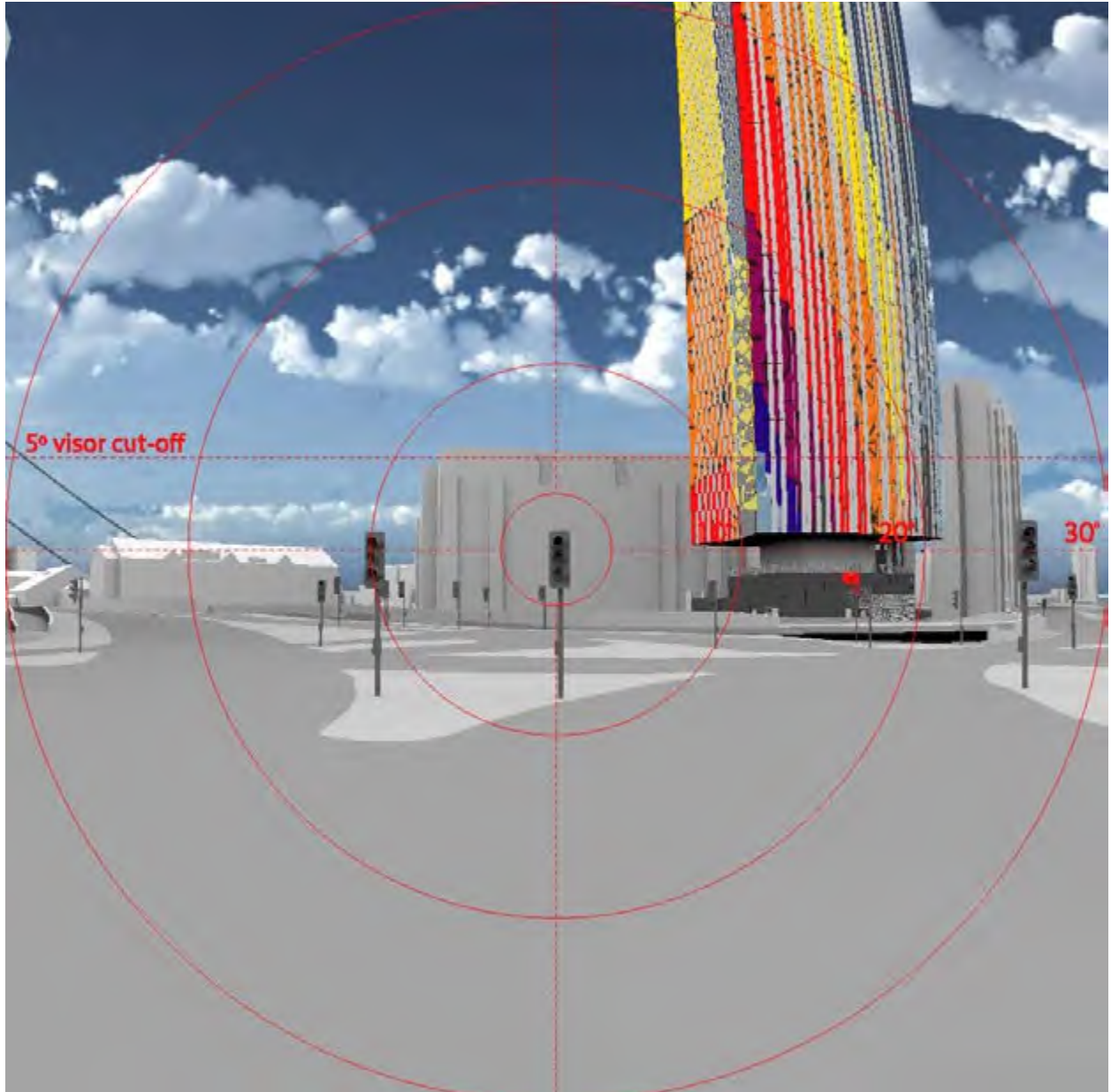


Fig. 205: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

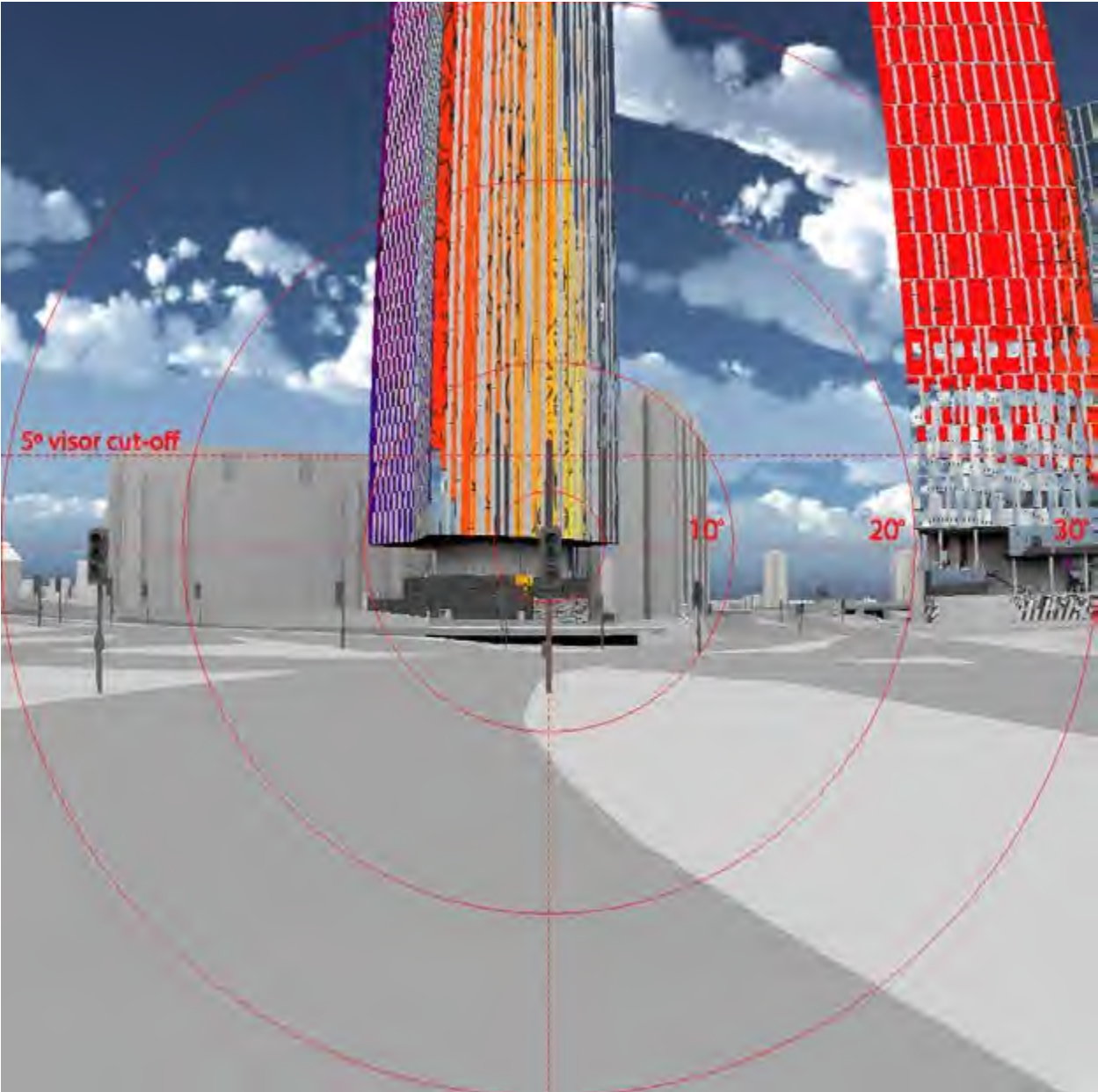


Fig. 206: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

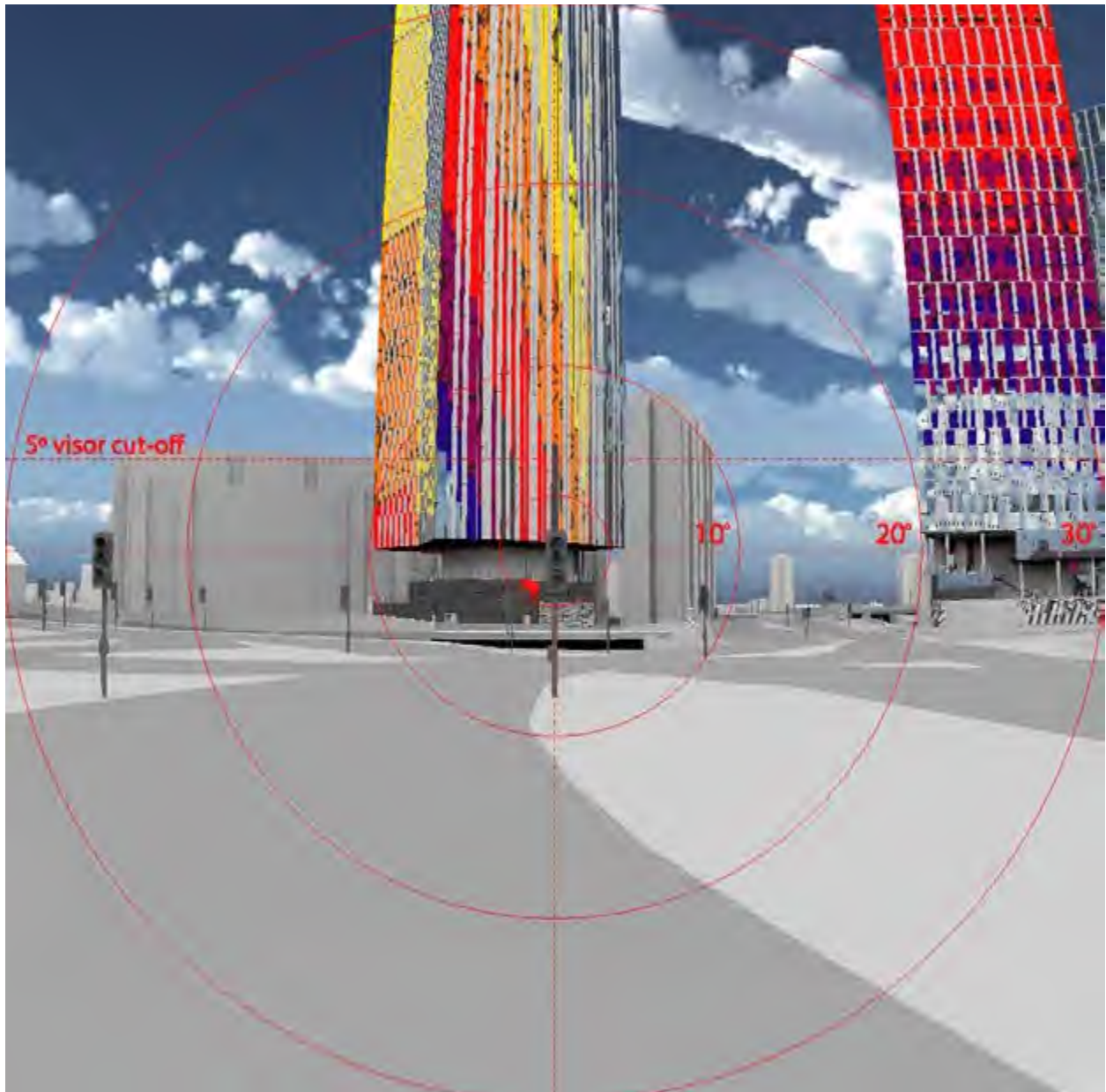


Fig. 207: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2A - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

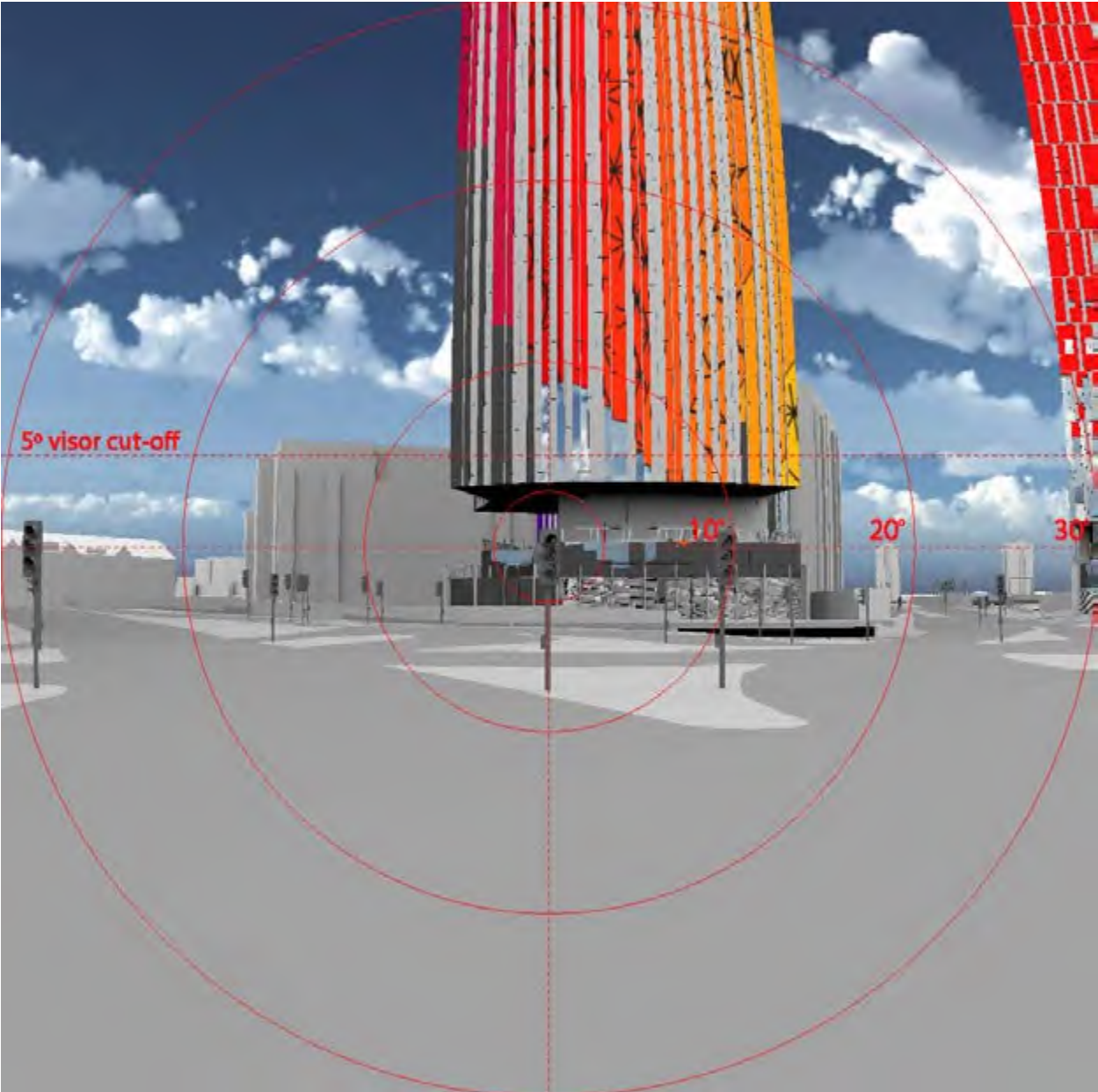


Fig. 208: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2A - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

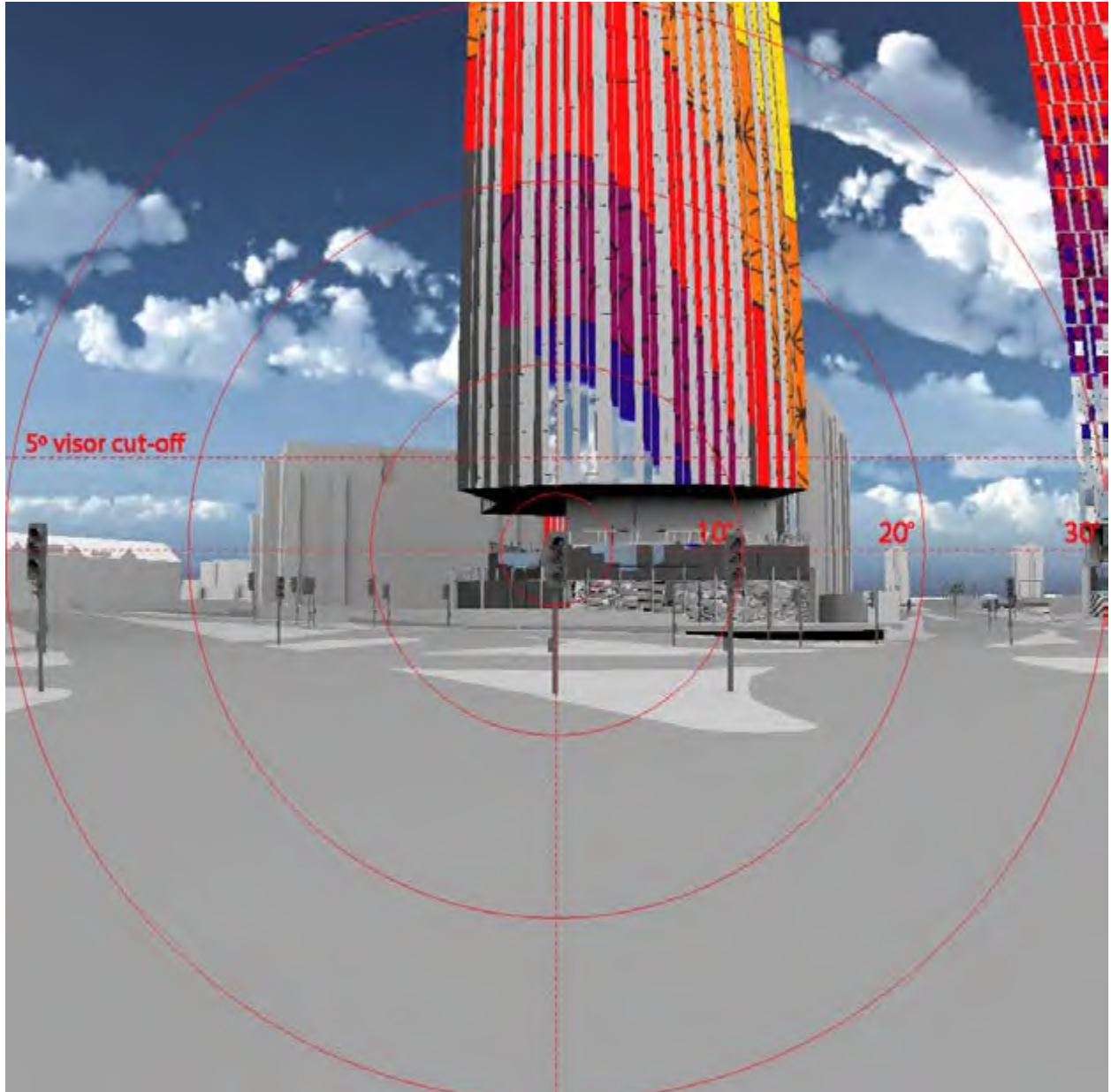


Fig. 209: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2B - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

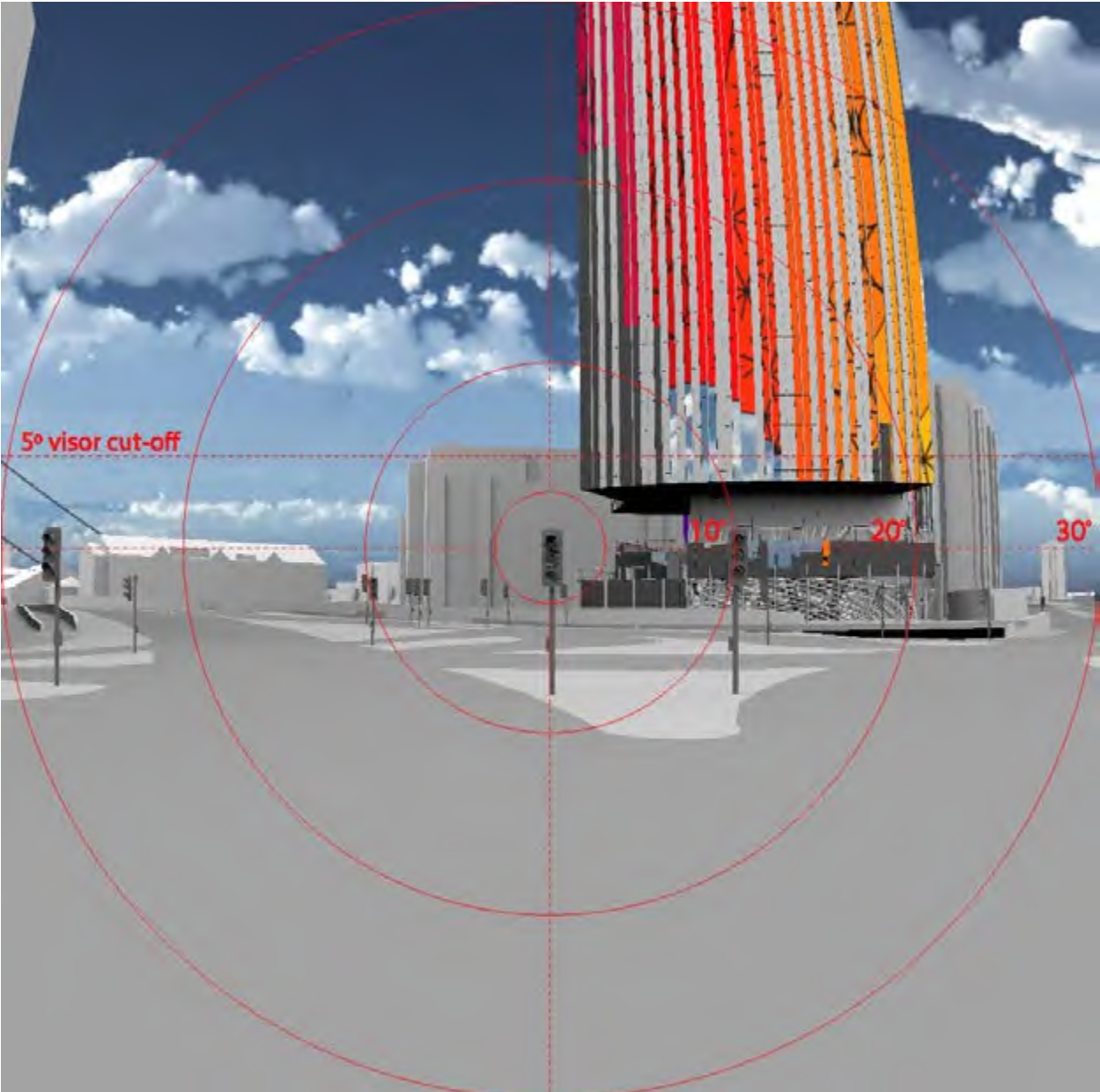


Fig. 210: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2B - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
TURNING RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

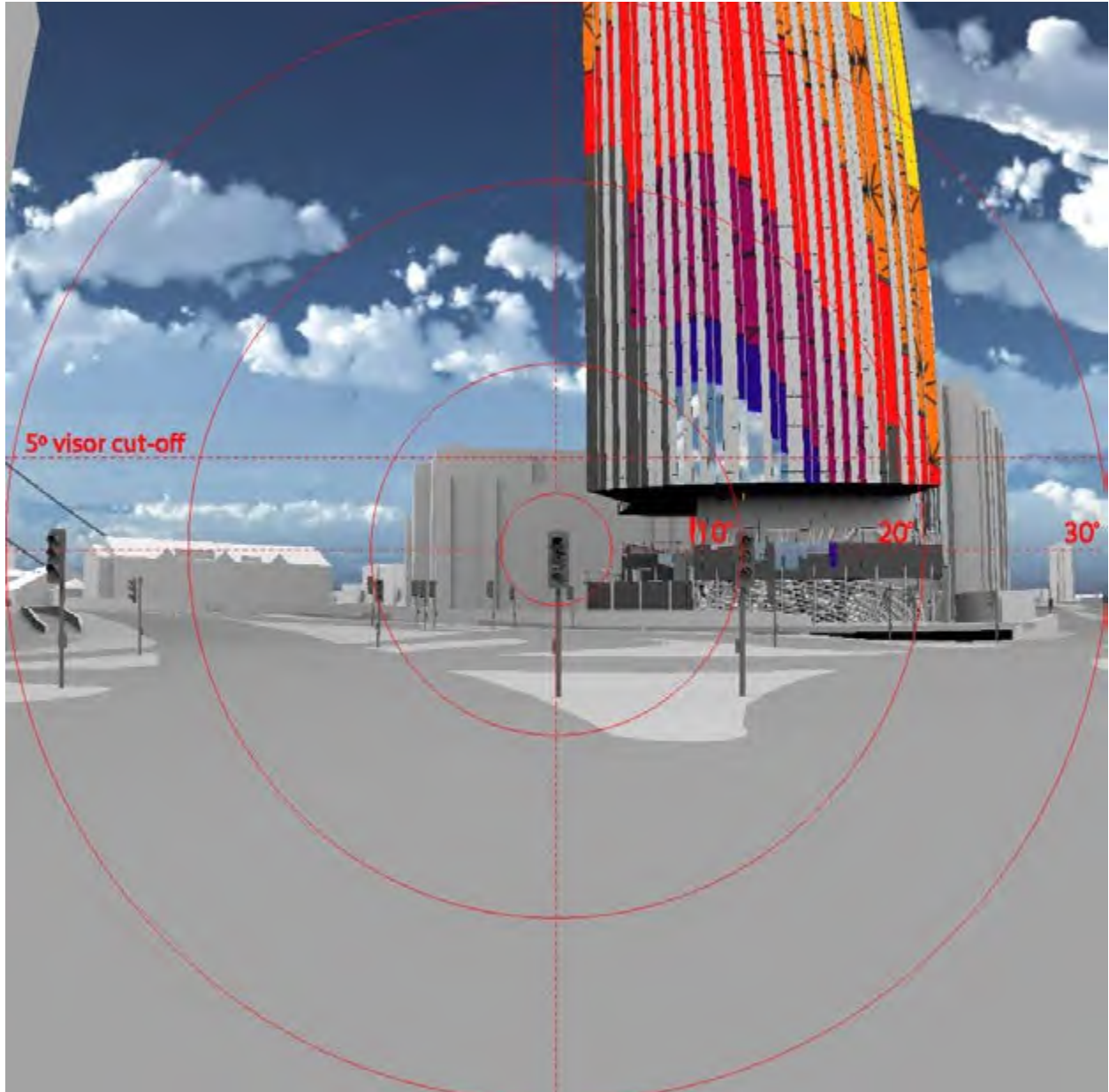


Fig. 211: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2C - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

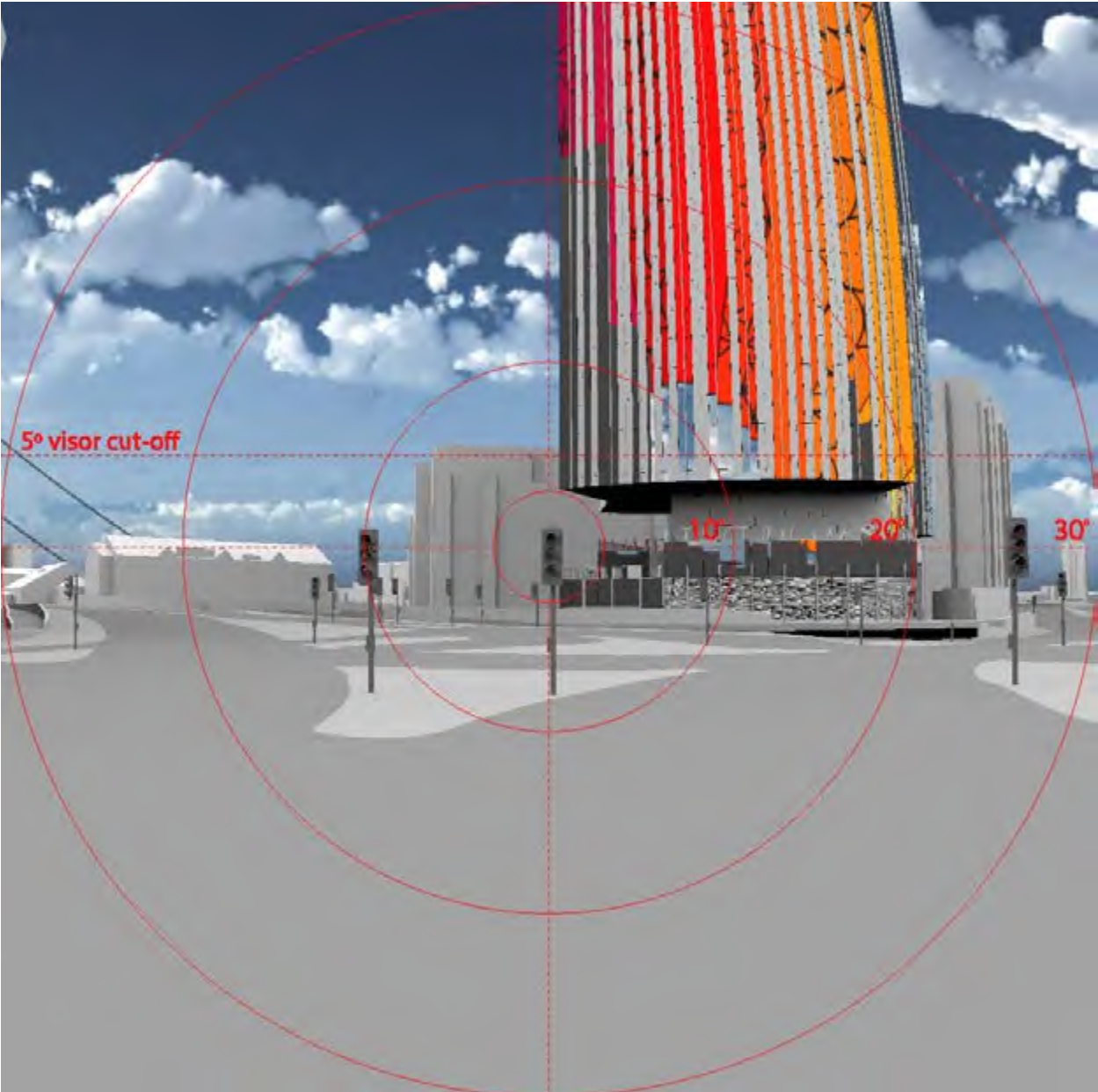


Fig. 212: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2C - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

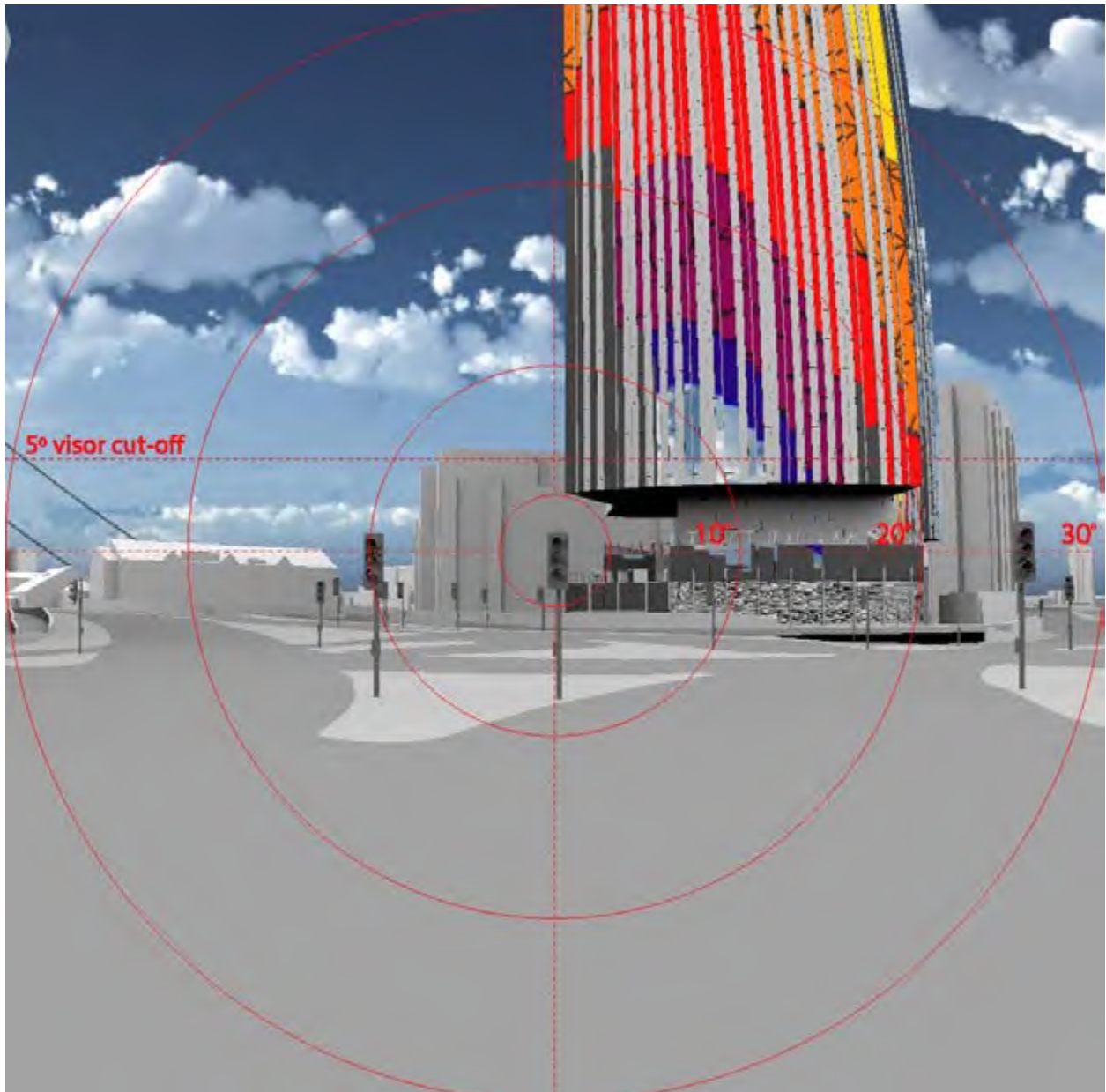


Fig. 213: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

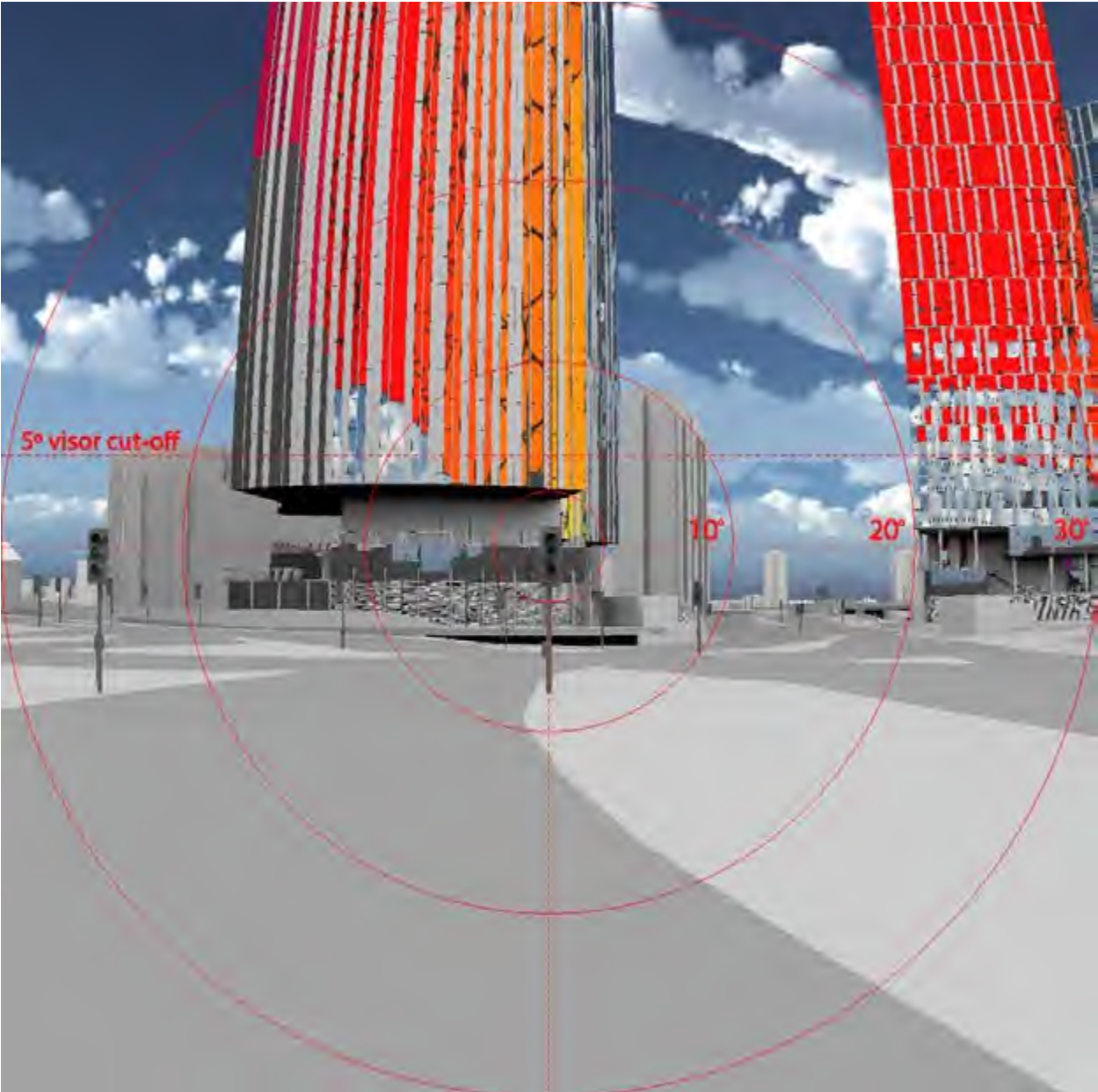


Fig. 214: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES2D - EGERTON STREET/INNER RING ROAD JUNCTION (WITH REGENT ROAD)
STRAIGHT RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

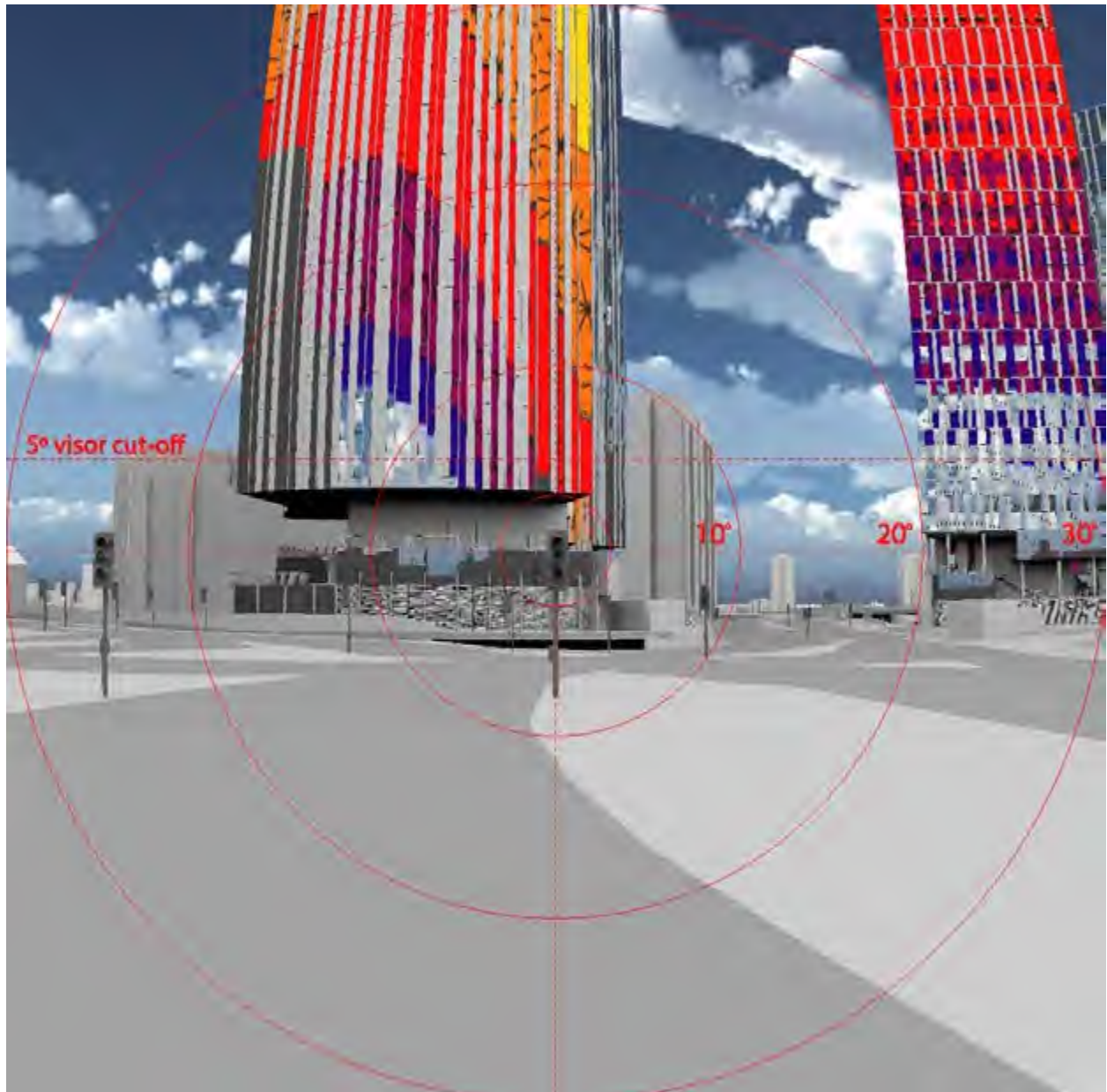


Fig. 215: Solar reflections



20 **SOLAR GLARE ASSESSMENT**
WS3 - WATER STREET 3

WS3 - Water Street Northbound Junction (with Regent Road & Egerton Street/
Inner Ring Road)



Fig. 216: Junction Location

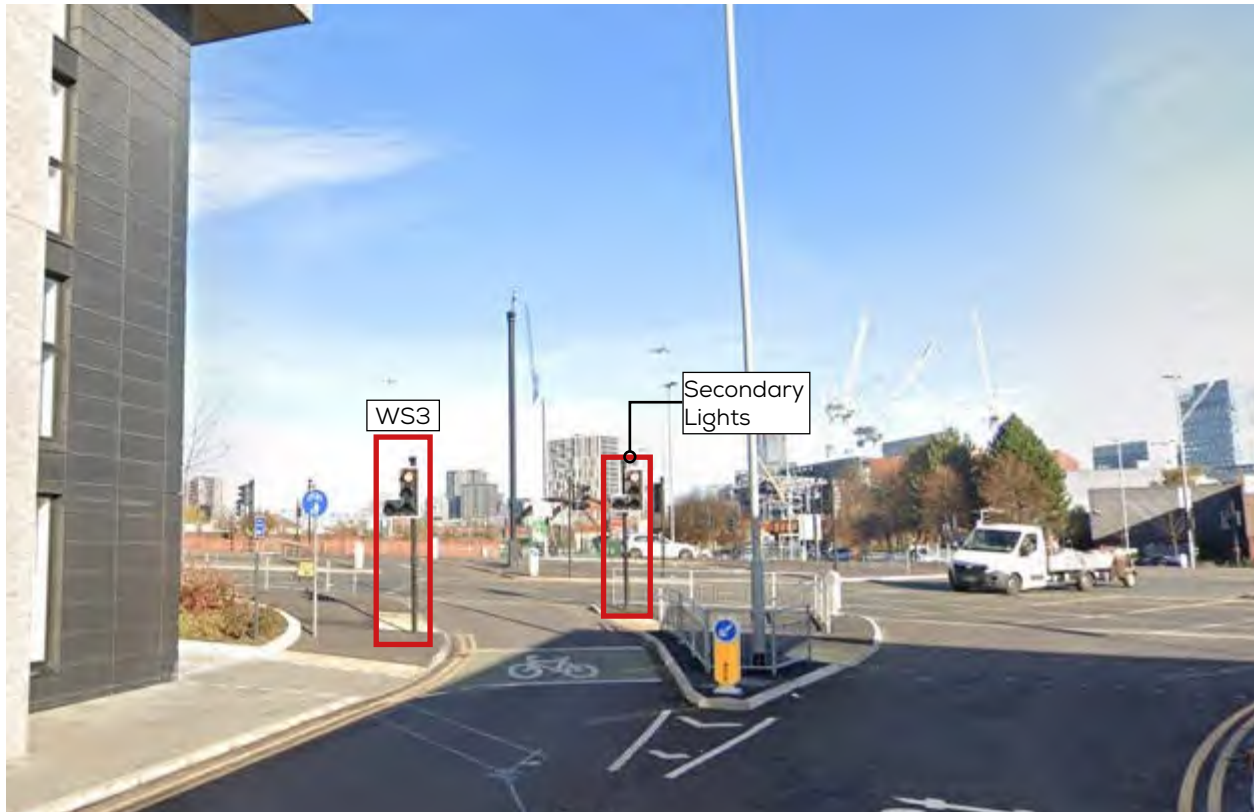


Fig. 217: Traffic Light Location



Fig. 218: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

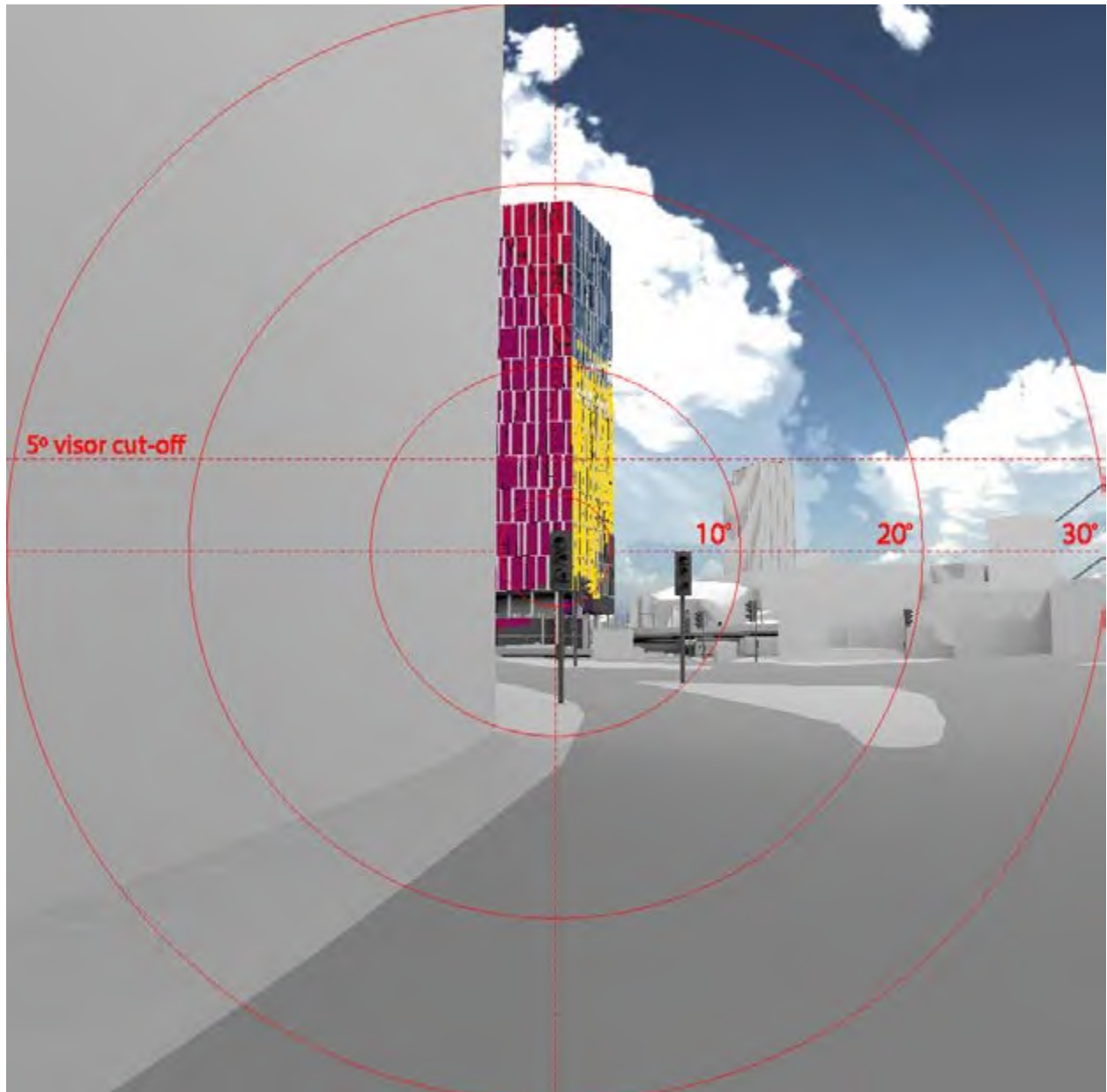
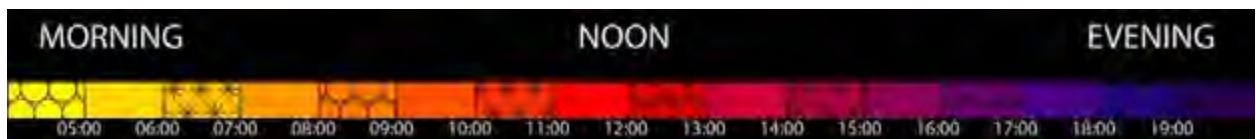


Fig. 219: Solar reflections



60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

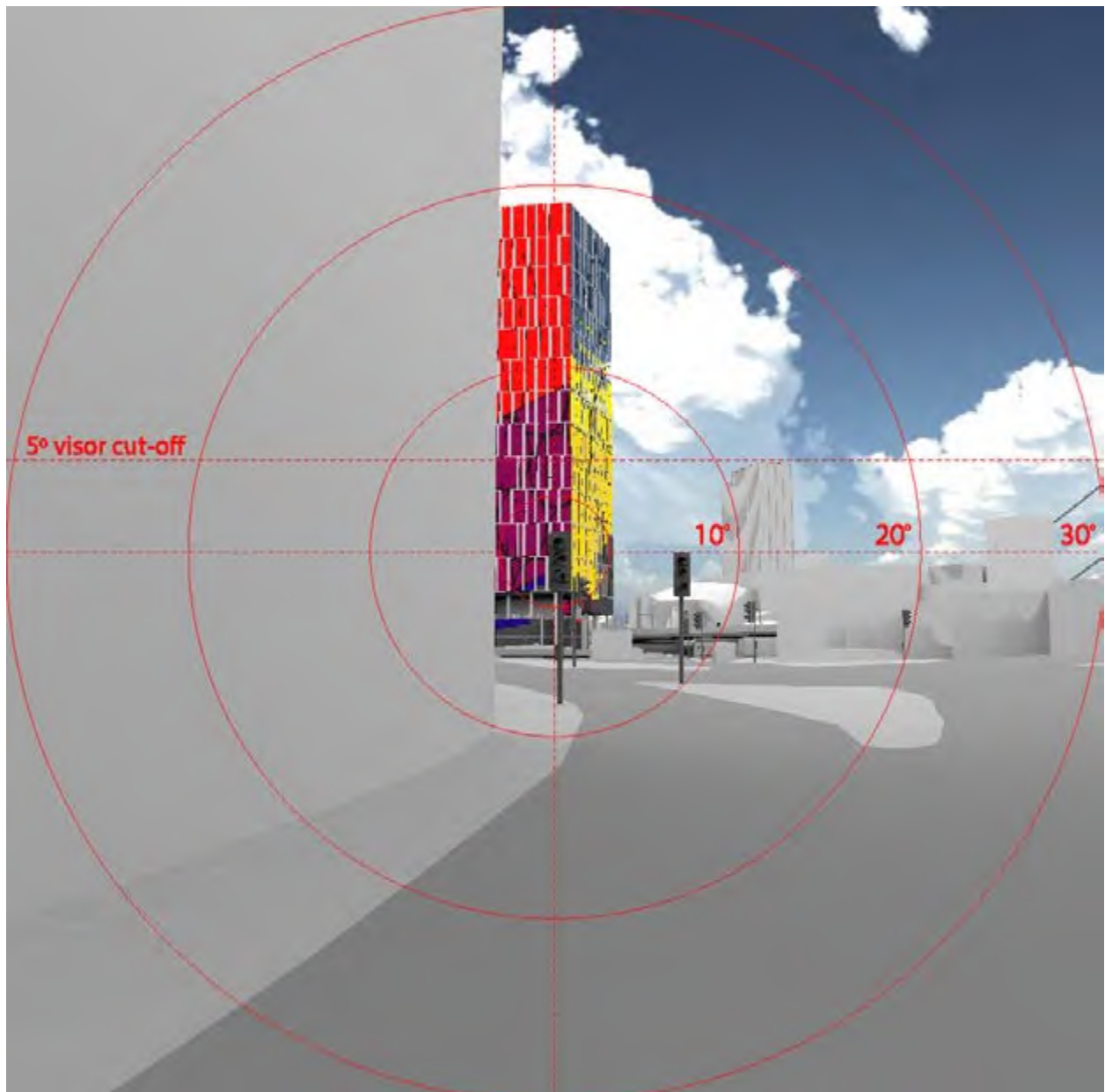


Fig. 220: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

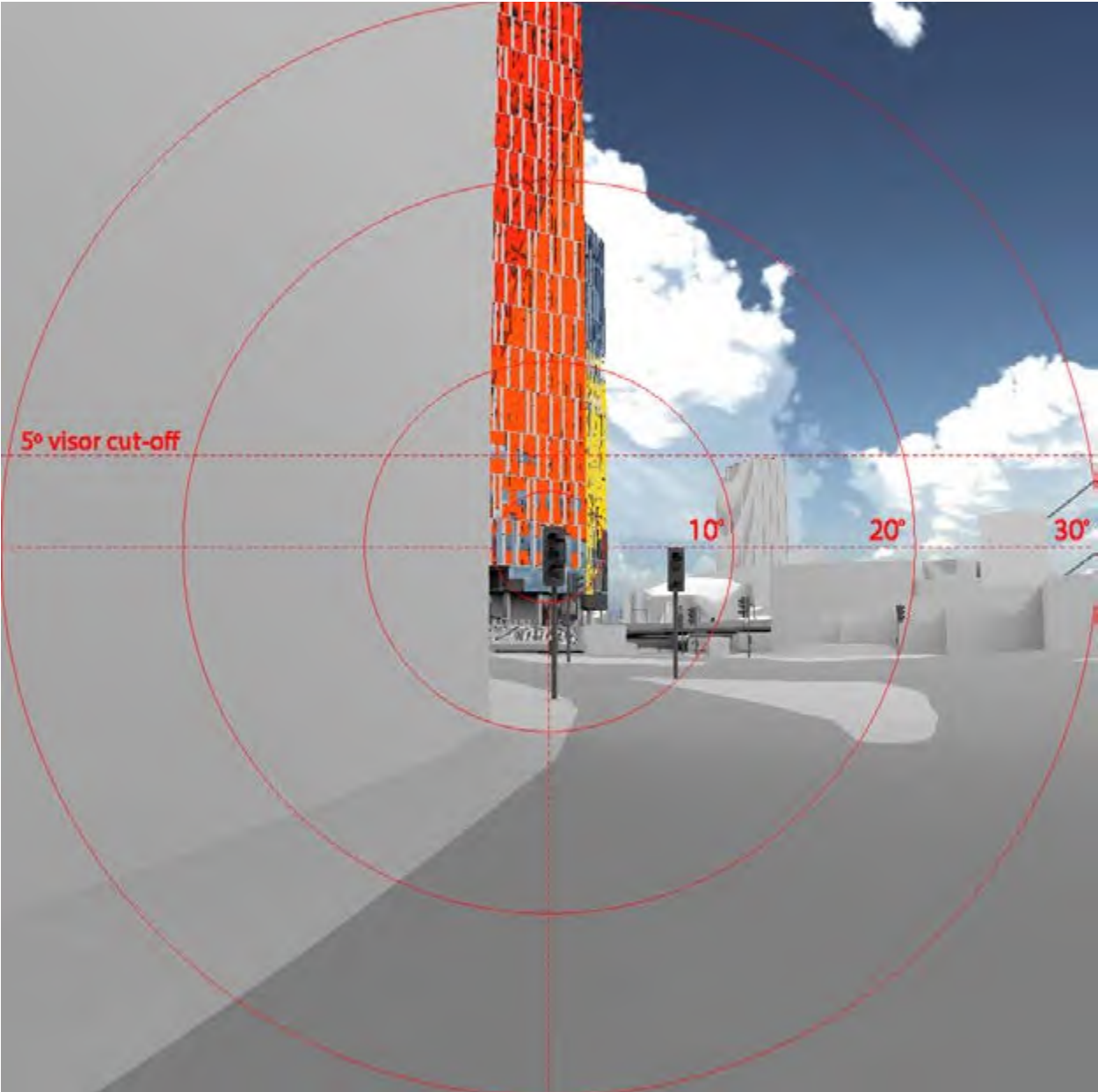


Fig. 221: Solar reflections



60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

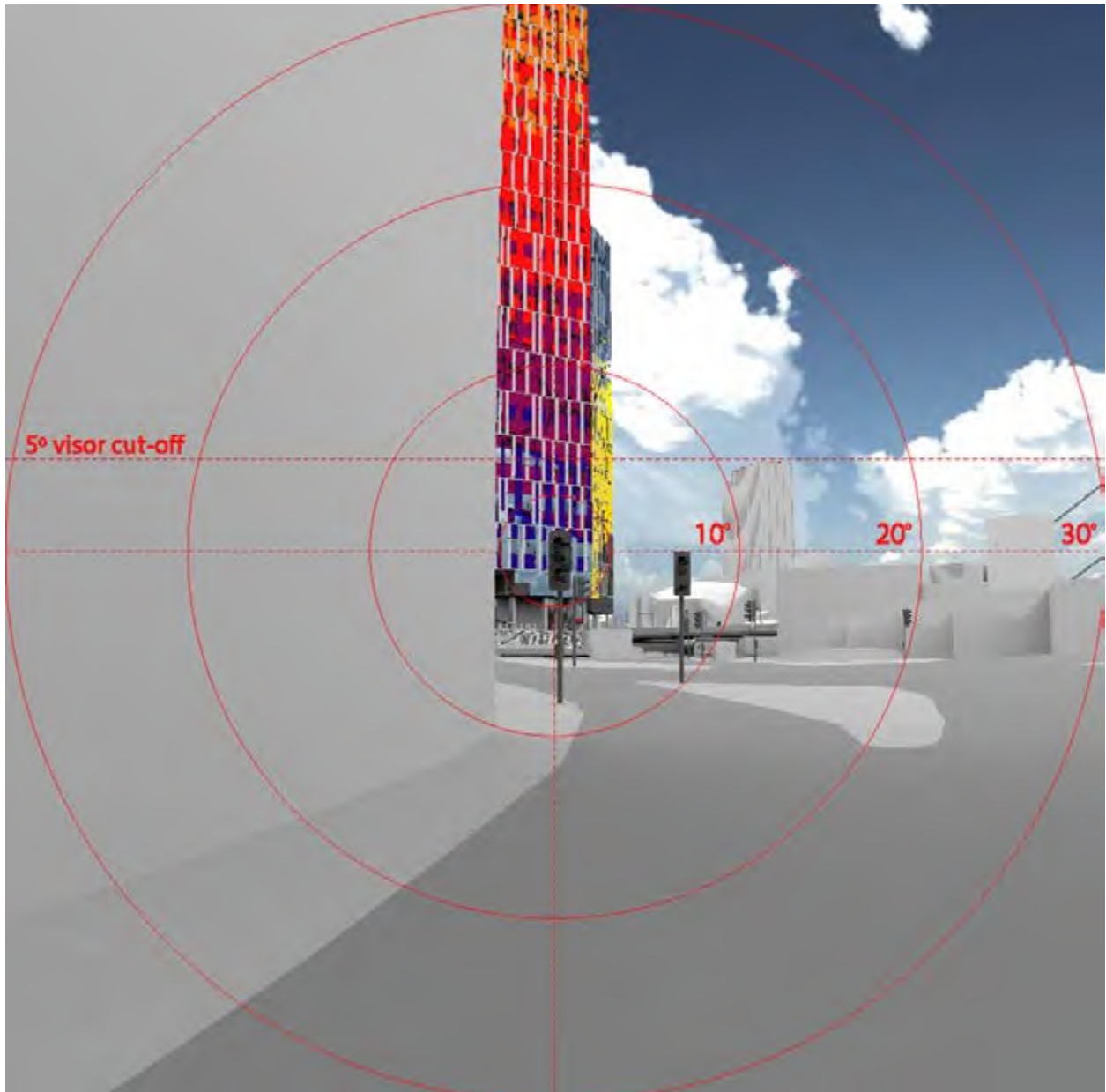


Fig. 222: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

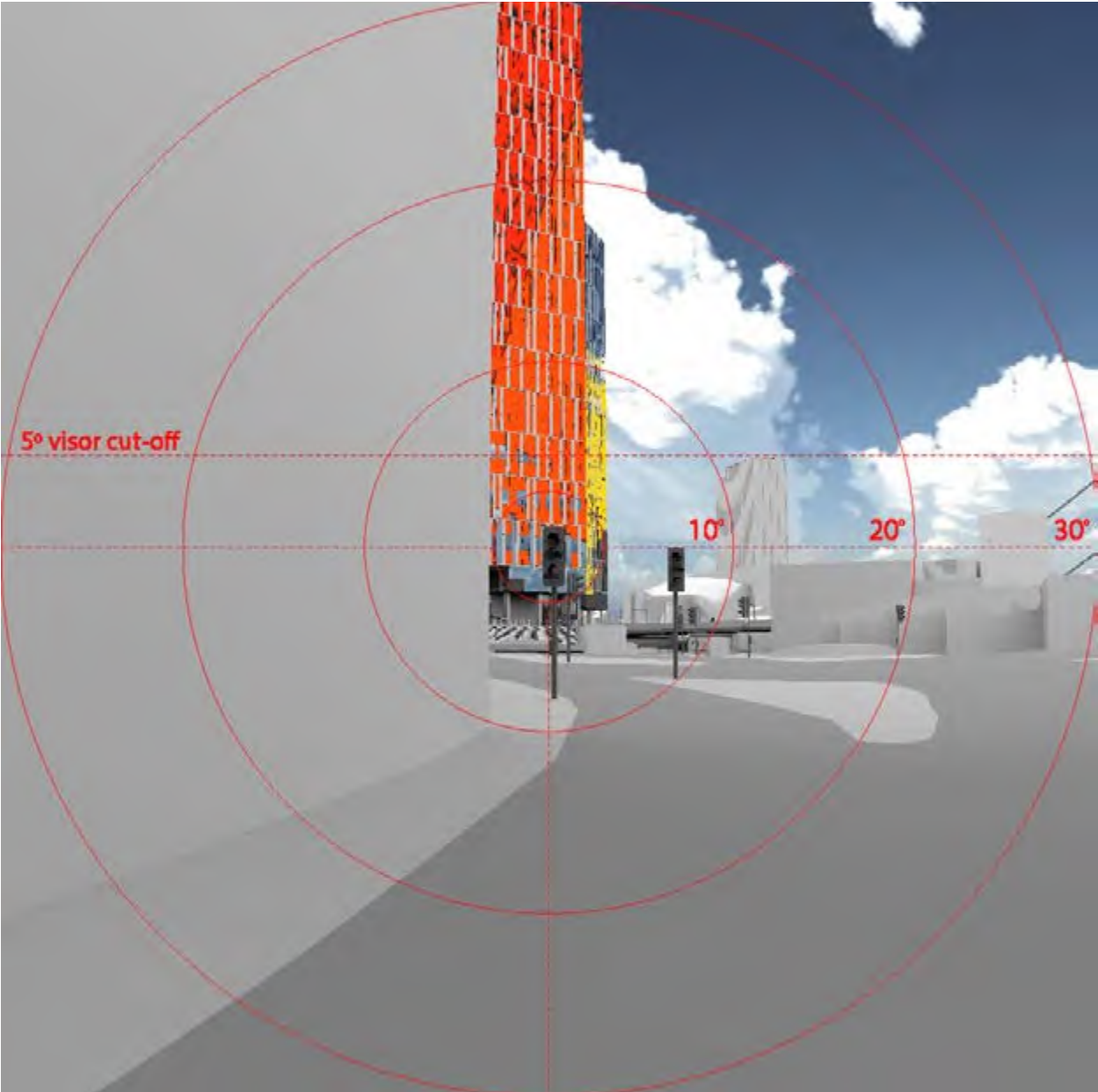


Fig. 223: Solar reflections



60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

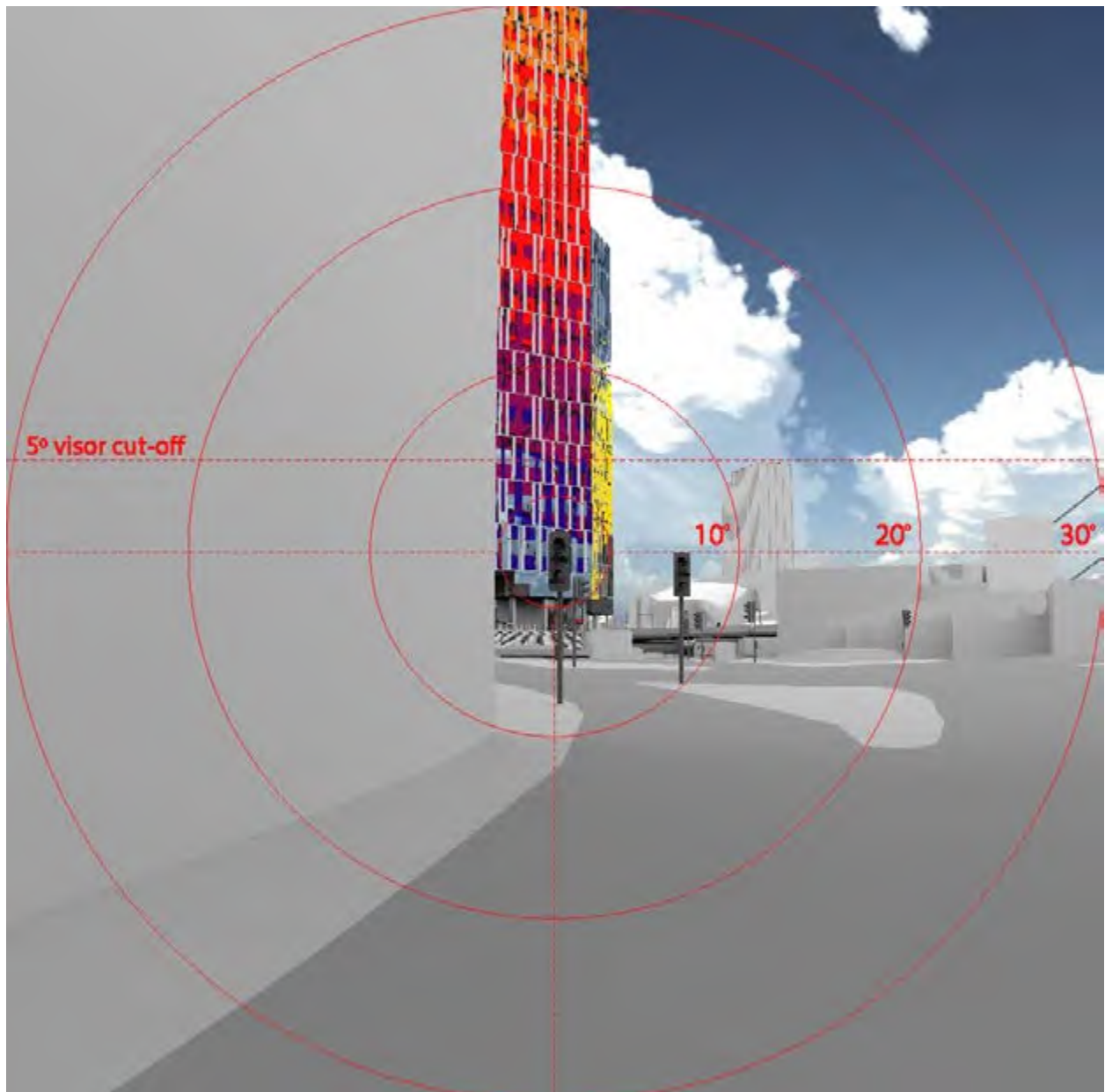


Fig. 224: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

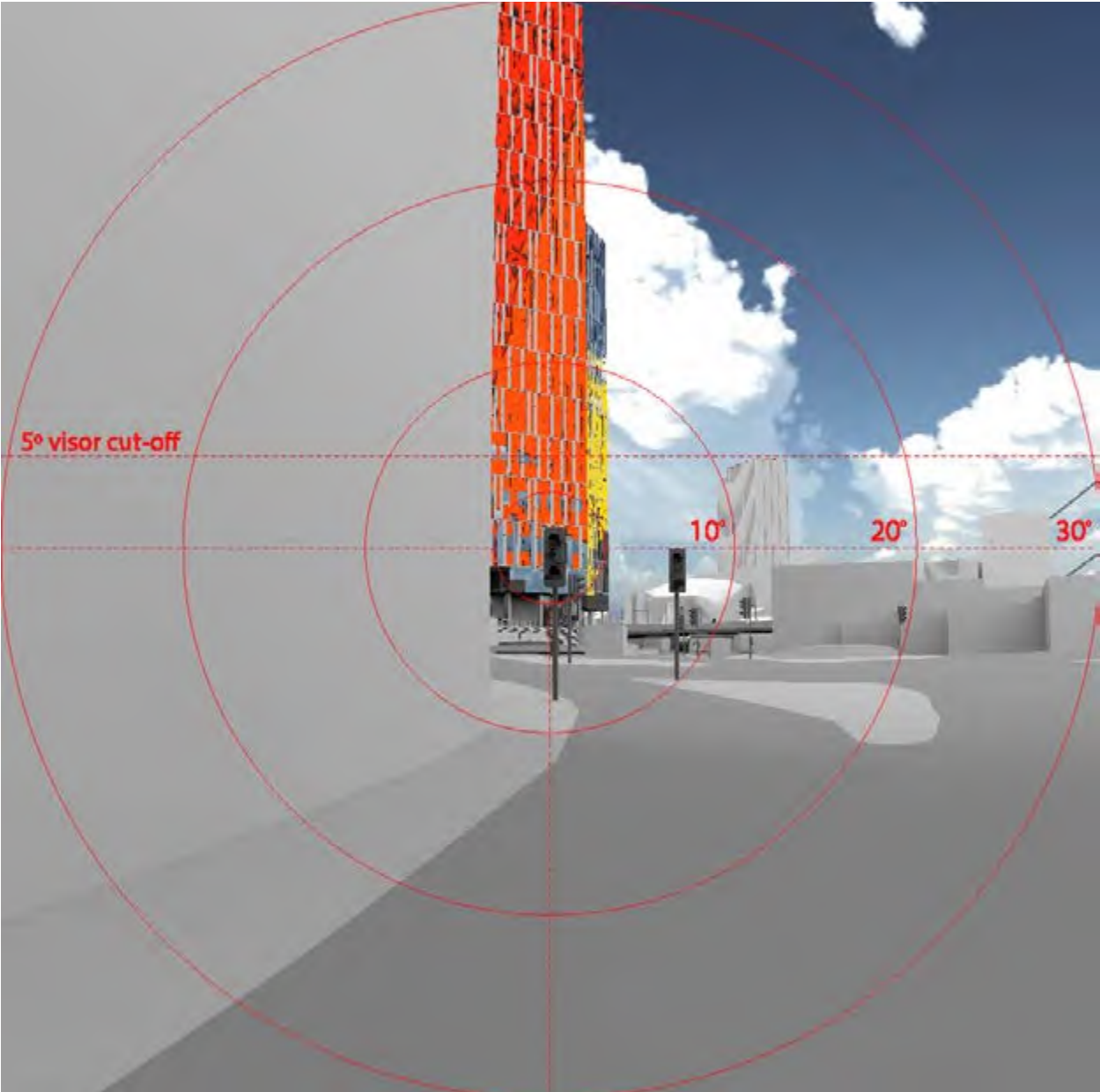


Fig. 225: Solar reflections



60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT WS3 - WATER STREET JUNCTION (WITH REGENT ROAD & EGERTON STREET)
LOOKING AT LEFT TRAFFIC LIGHT

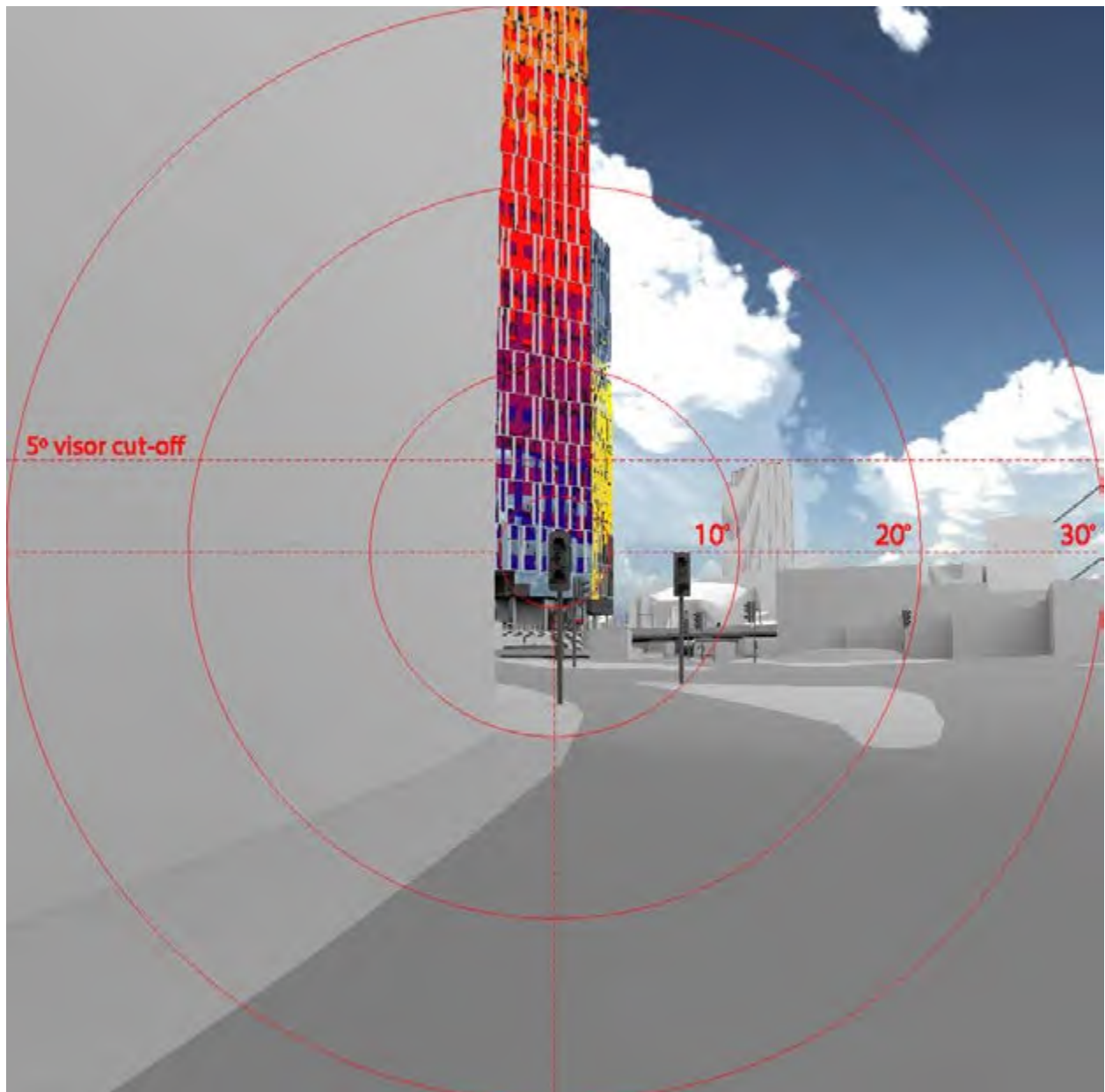


Fig. 226: Solar reflections



21 **SOLAR GLARE ASSESSMENT**
RR3 - REGENT ROAD 3

RR3 - Regent Road Eastbound Junction (with Egerton Street/Inner Ring Road)

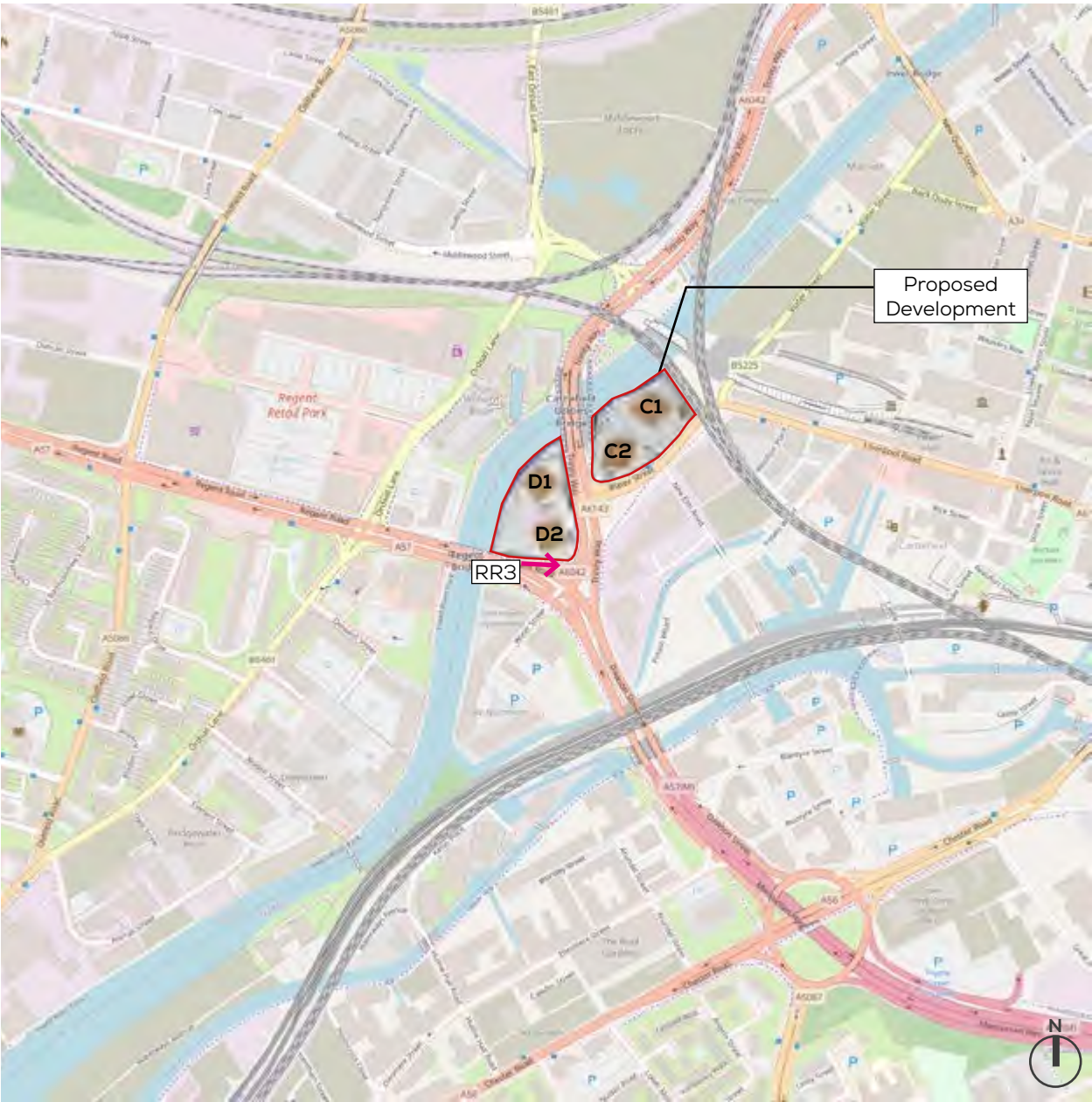


Fig. 227: Junction Location

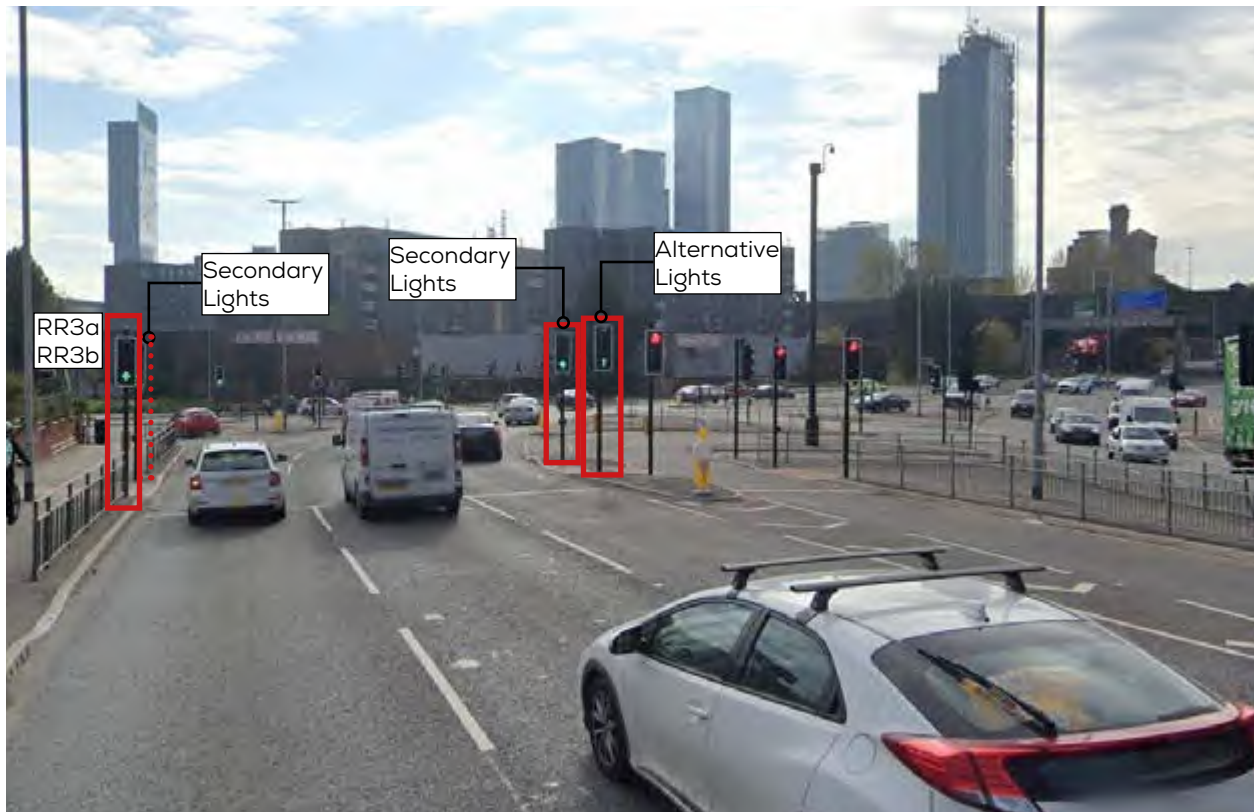


Fig. 228: Traffic Light Location

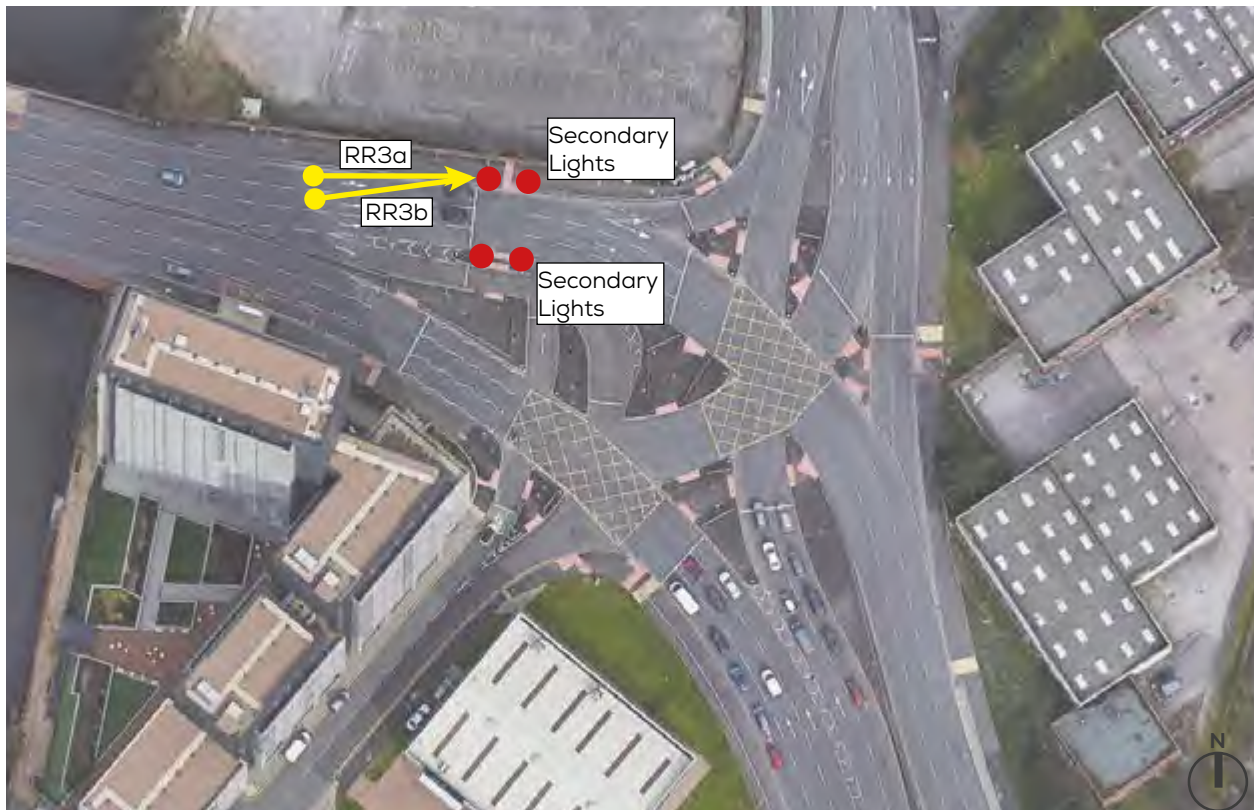


Fig. 229: Viewpoints

Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR3A - REGENT ROAD JUNCTION (WITH EGERTON STREET/INNER RING ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

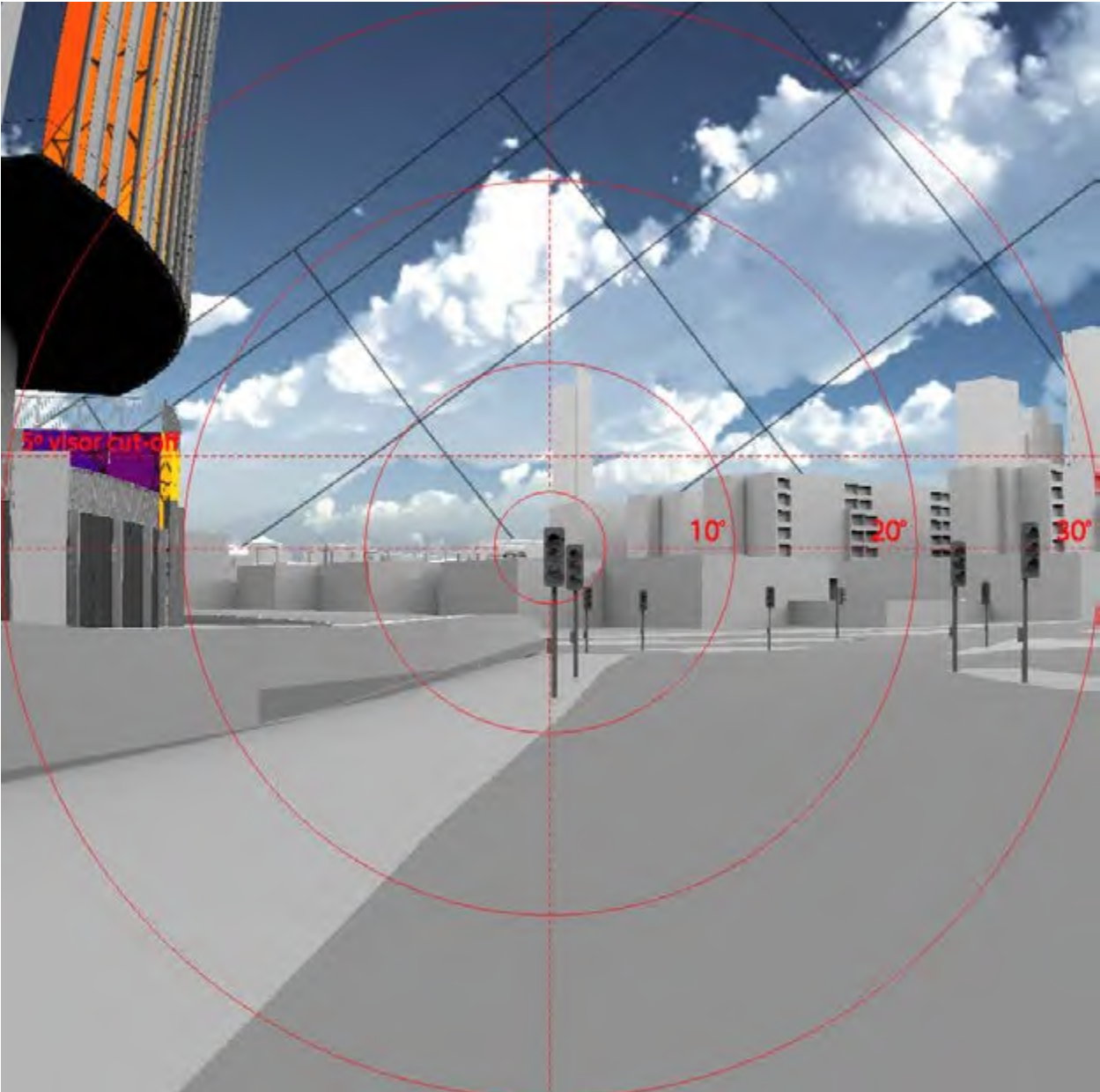


Fig. 230: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR3A - REGENT ROAD JUNCTION (WITH EGERTON STREET/INNER RING ROAD)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

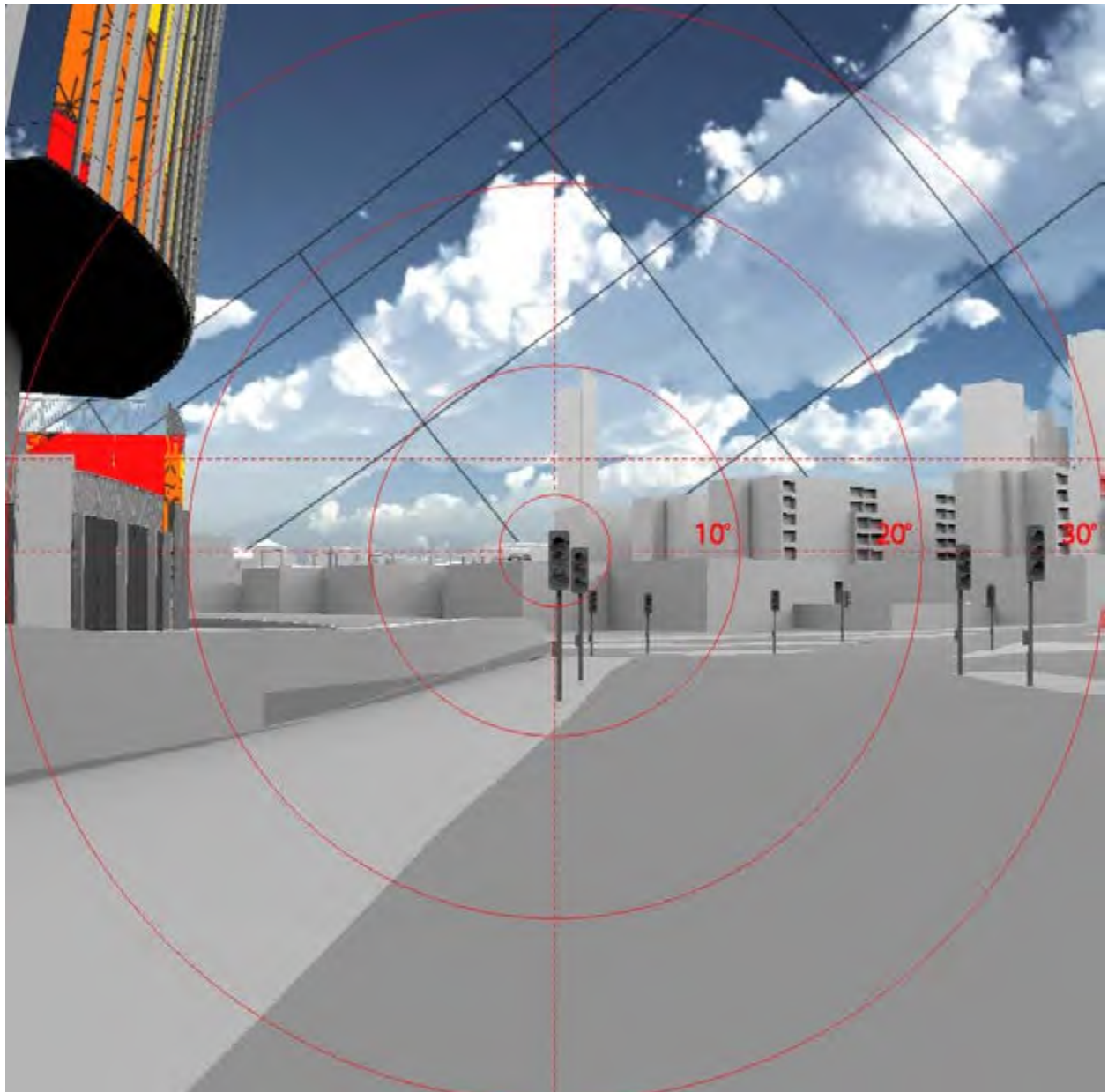


Fig. 231: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR3B - REGENT ROAD JUNCTION (WITH EGERTON STREET/INNER RING ROAD)
CENRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

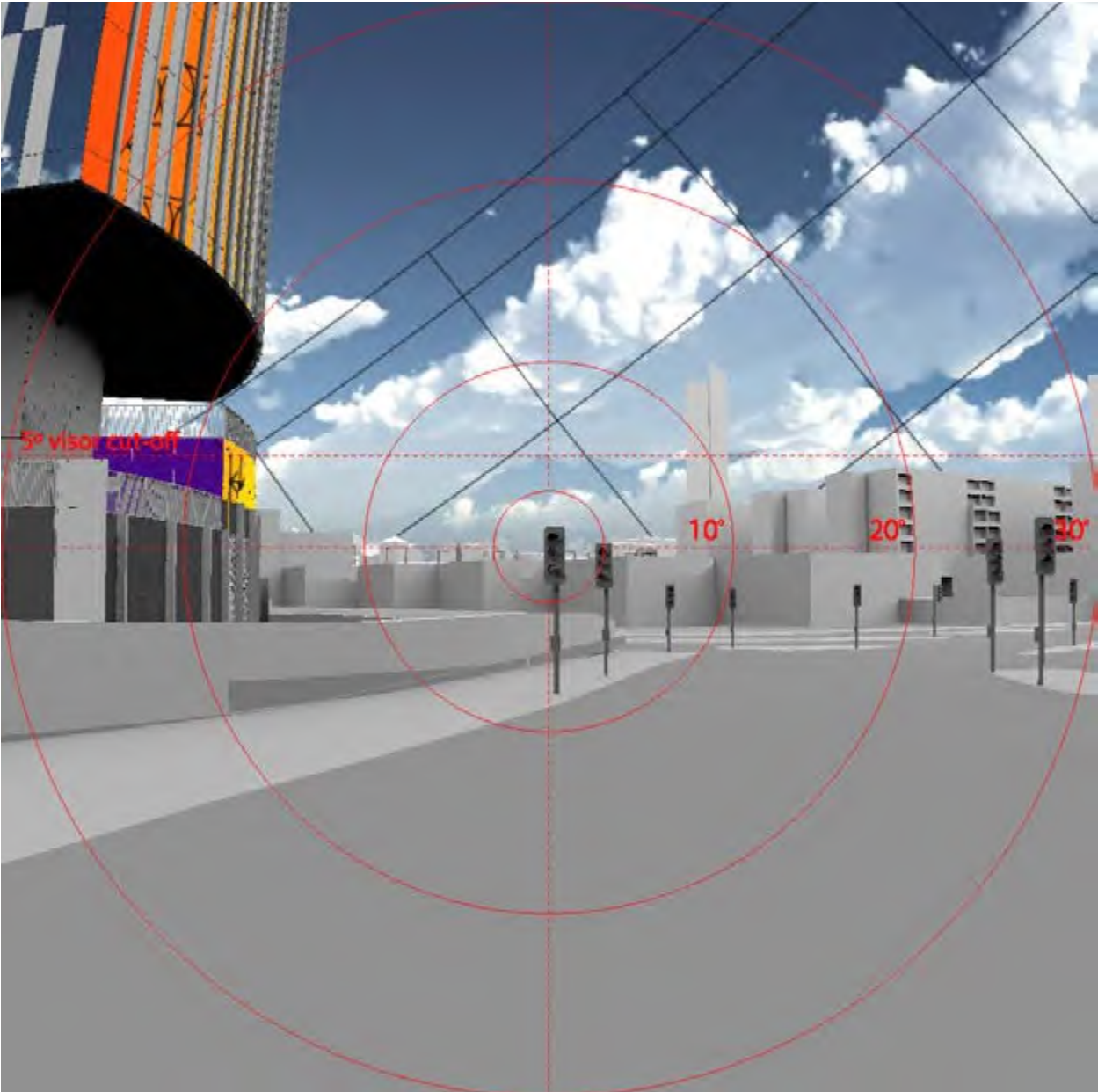


Fig. 232: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR3B - REGENT ROAD JUNCTION (WITH EGERTON STREET/INNER RING ROAD)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

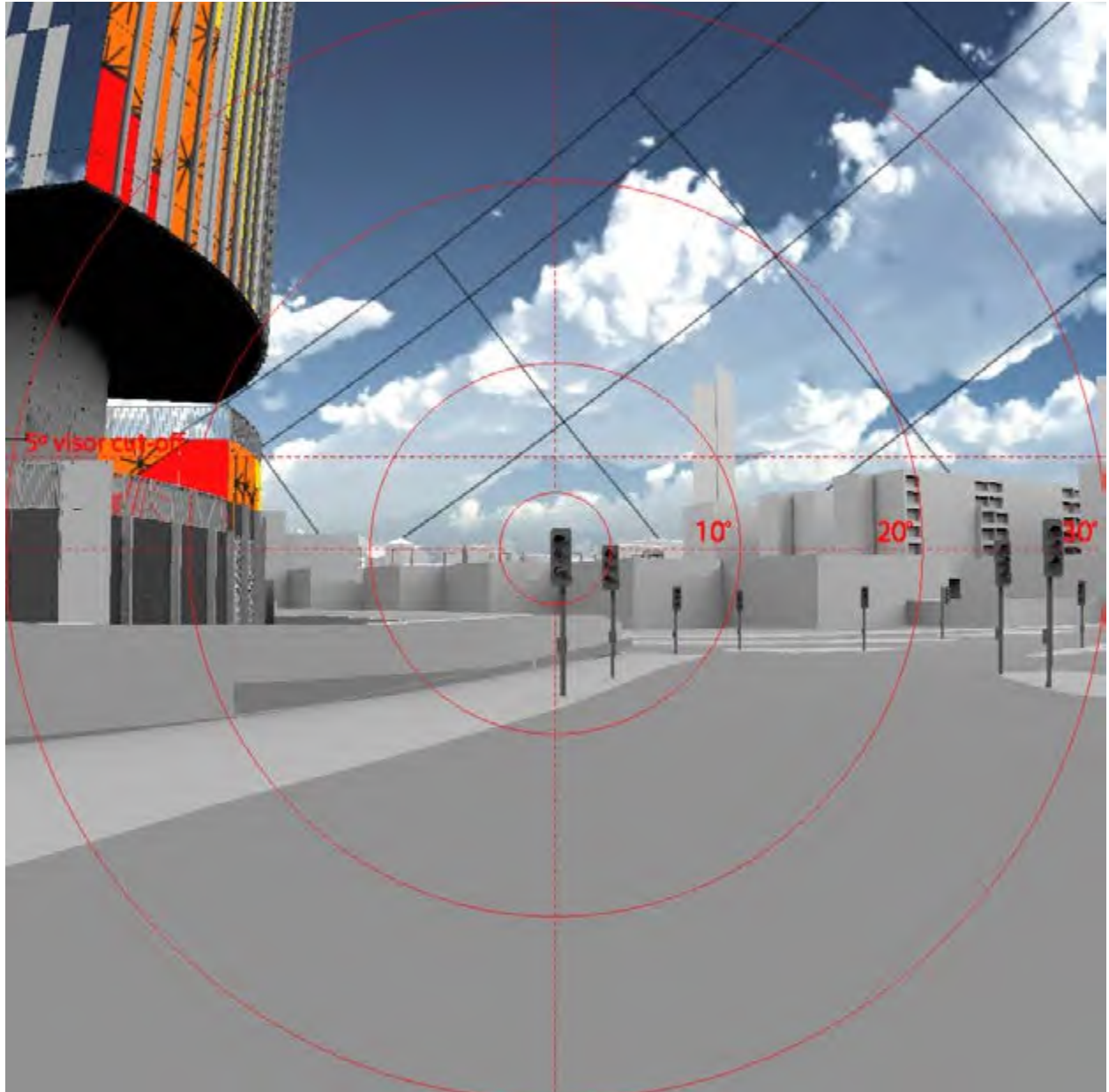


Fig. 233: Solar reflections



22 **SOLAR GLARE ASSESSMENT**
RR1 - REGENT ROAD 1

RR1 - Regent Road Eastbound Junction (with Oldfield Road)



Fig. 234: Junction Location

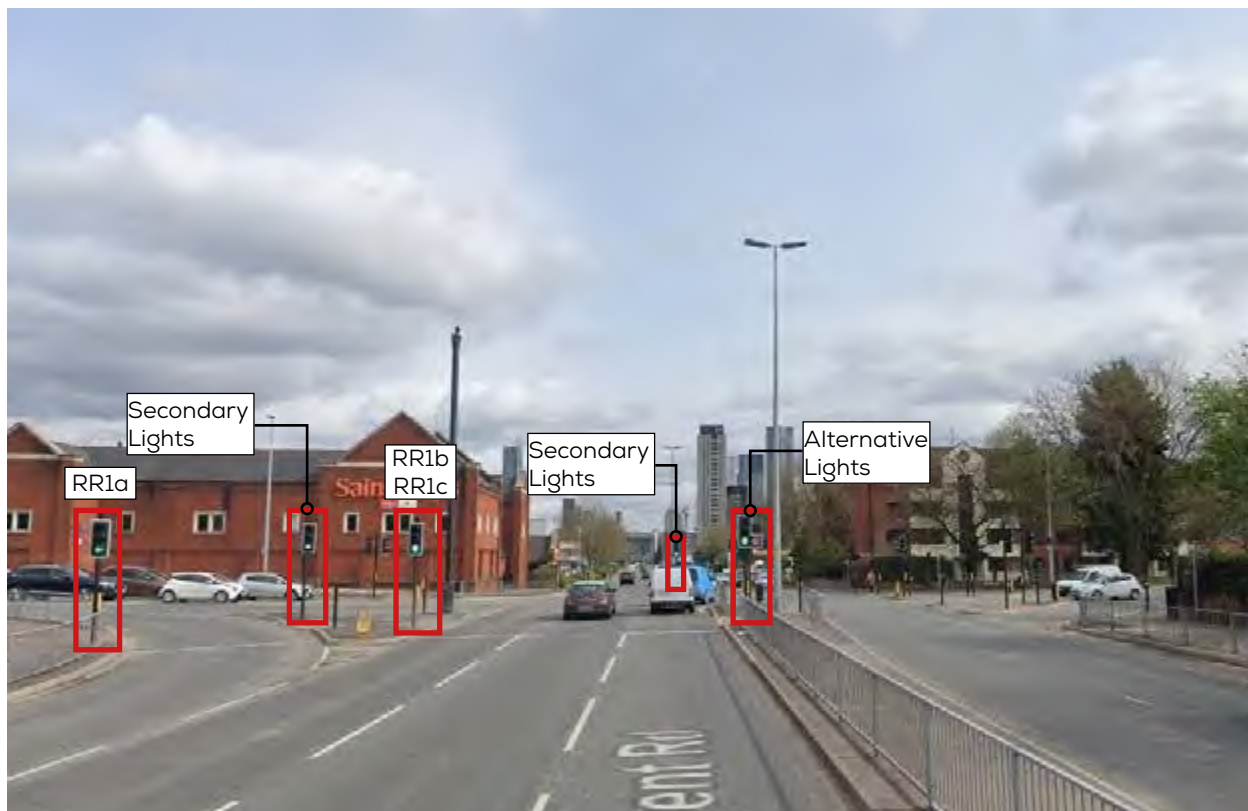


Fig. 235: Traffic Light Location

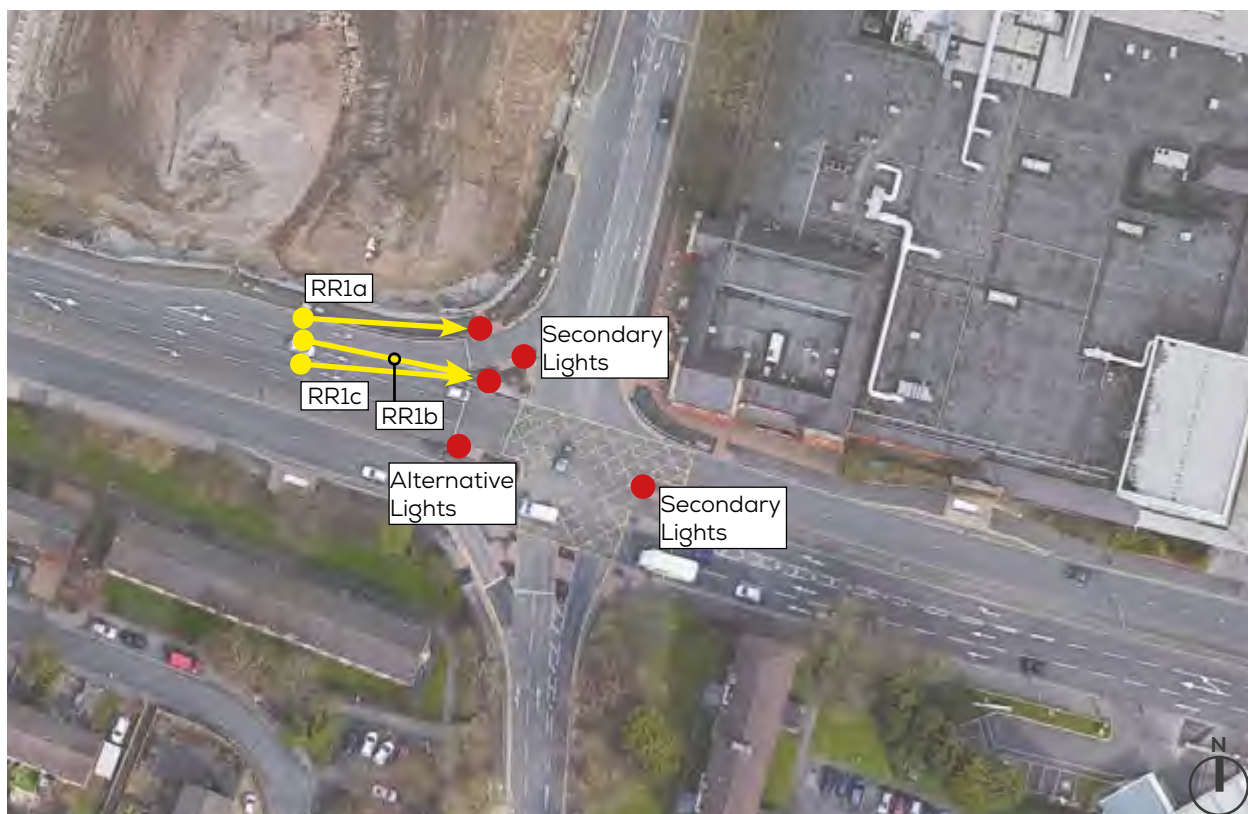


Fig. 236: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT

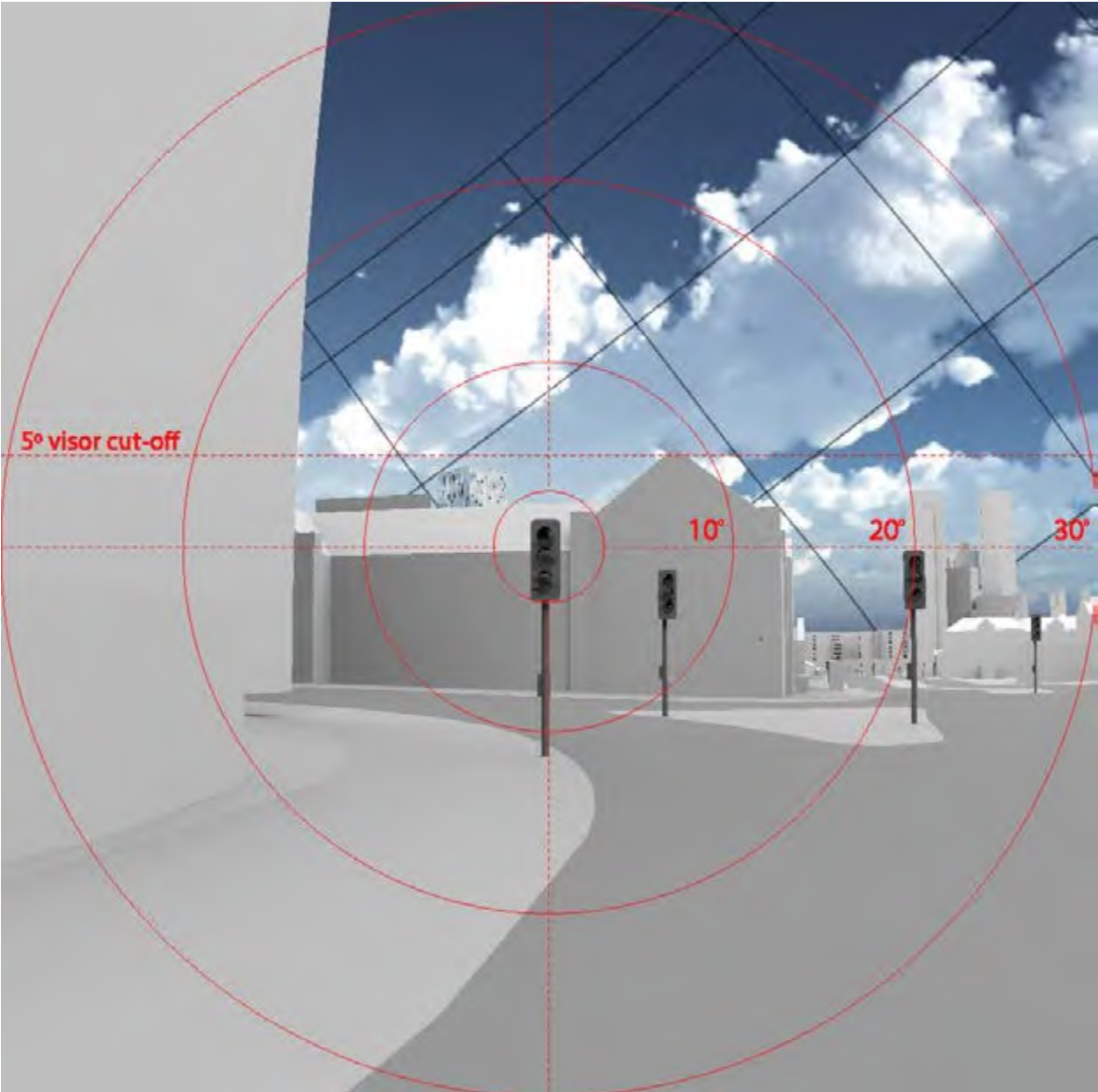


Fig. 237: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT**

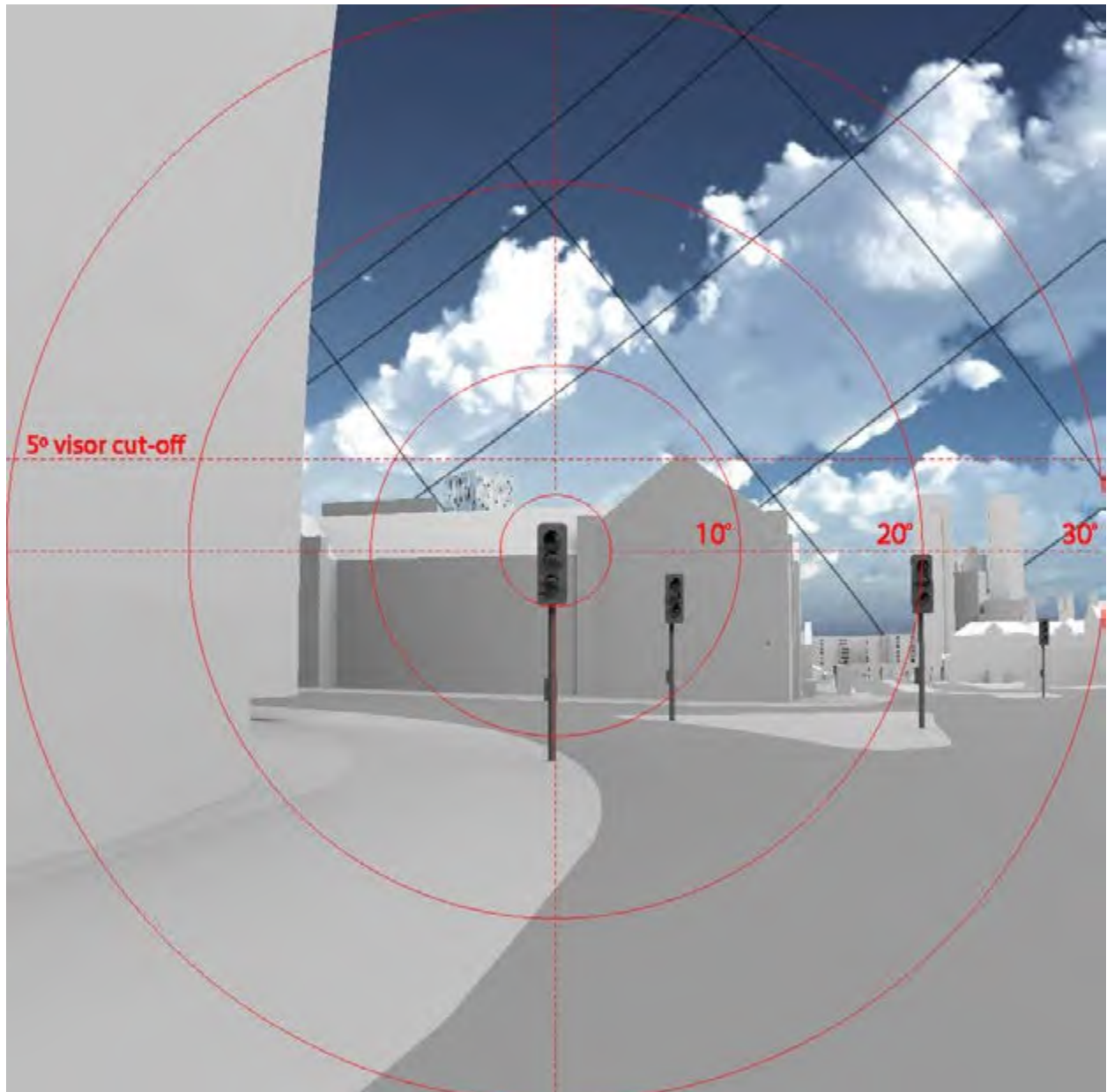


Fig. 238: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

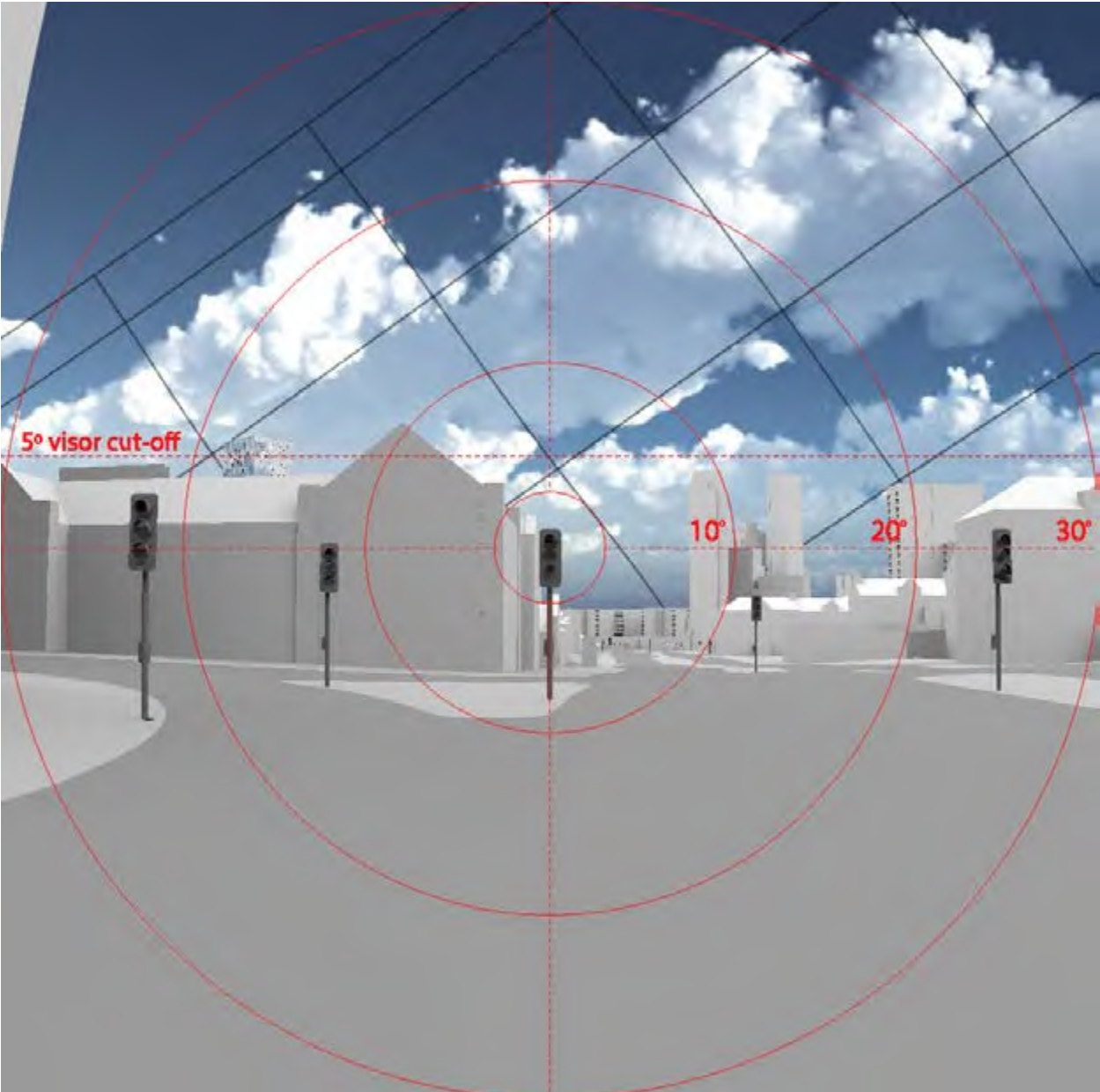
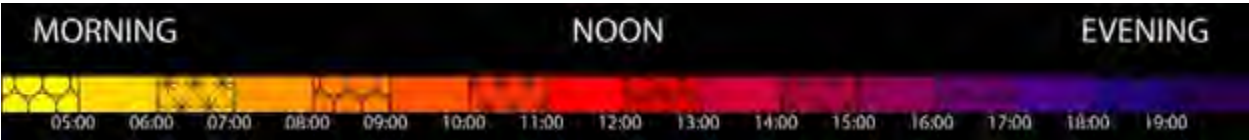


Fig. 239: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

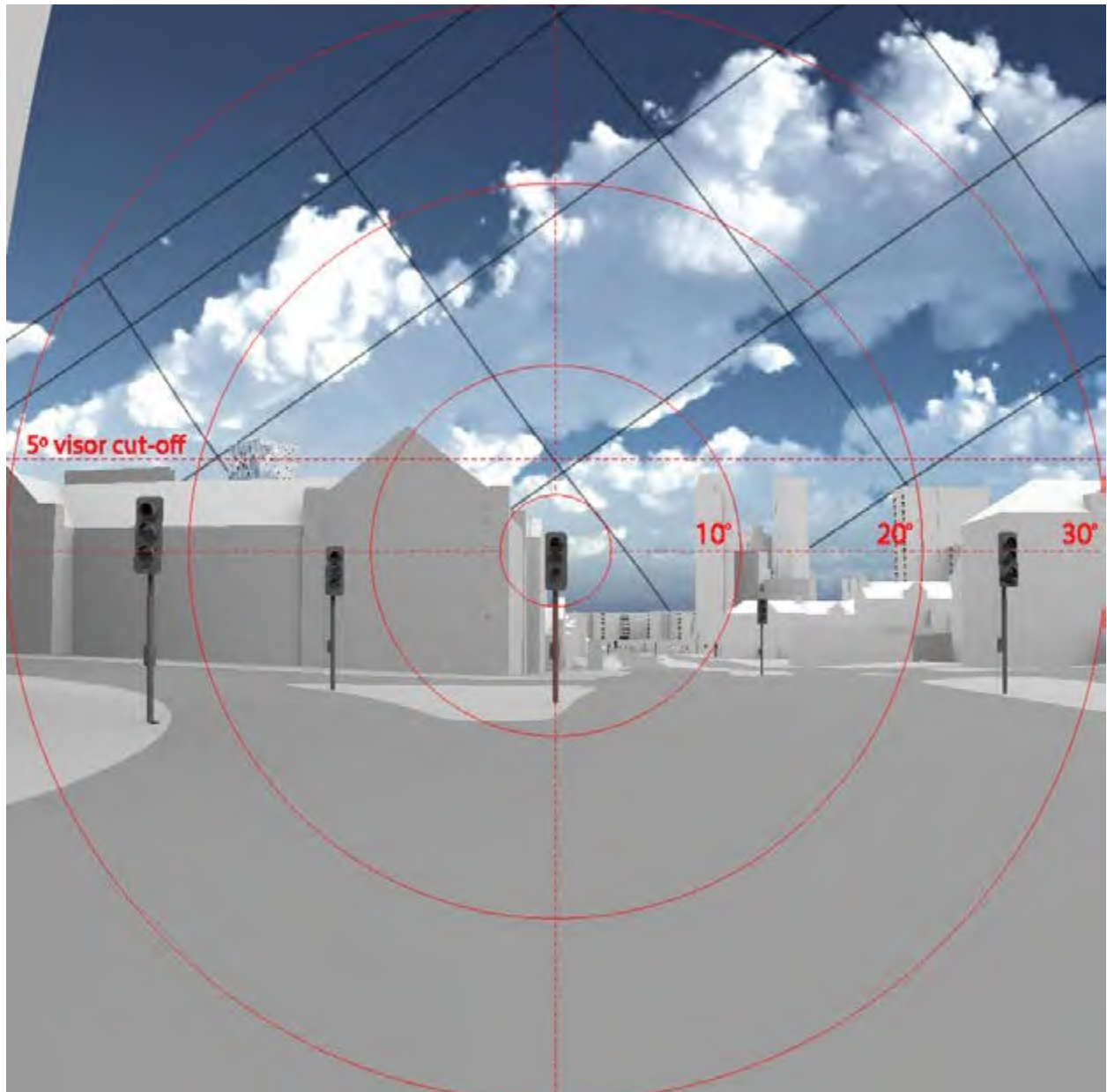


Fig. 240: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

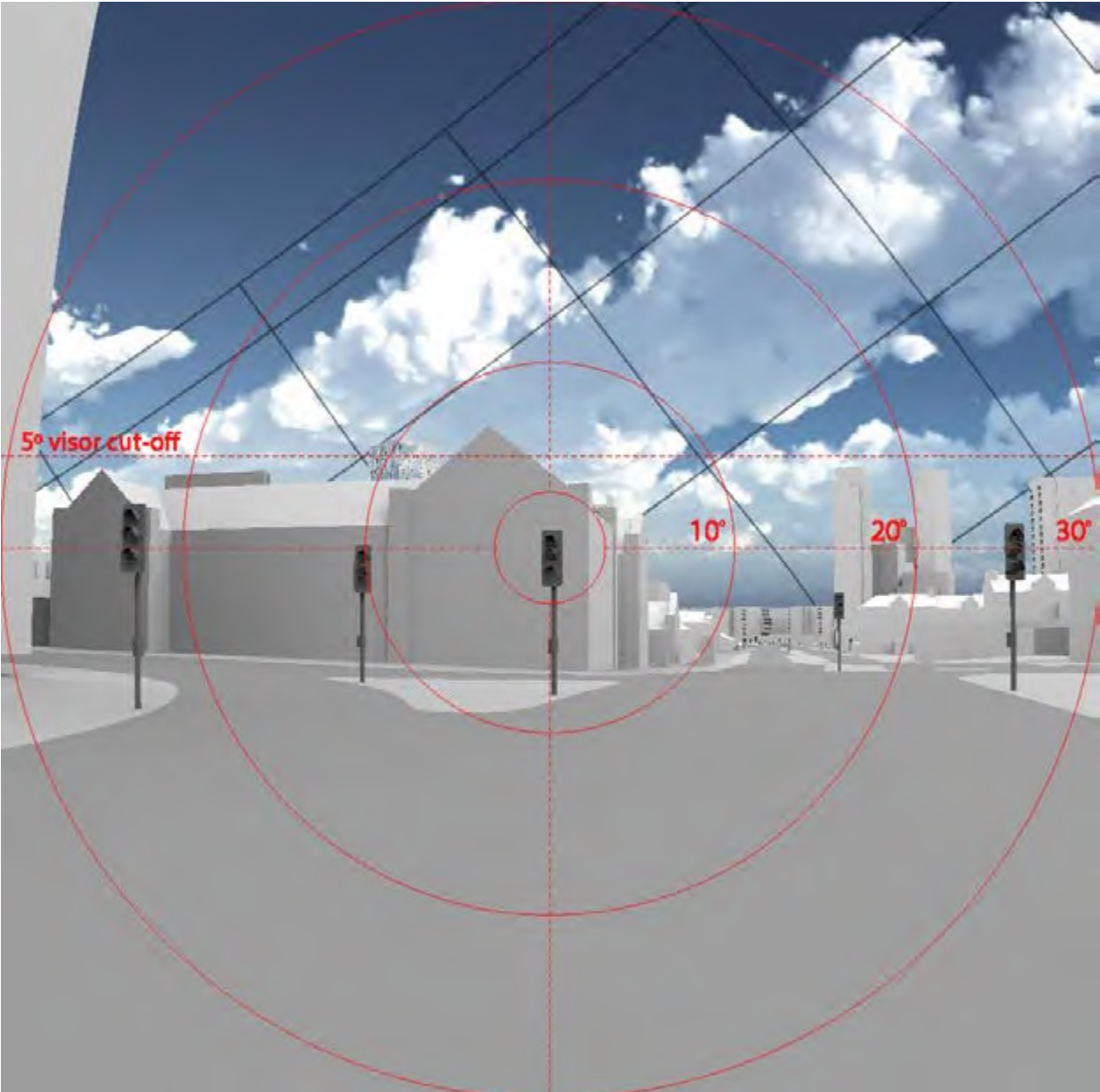


Fig. 241: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

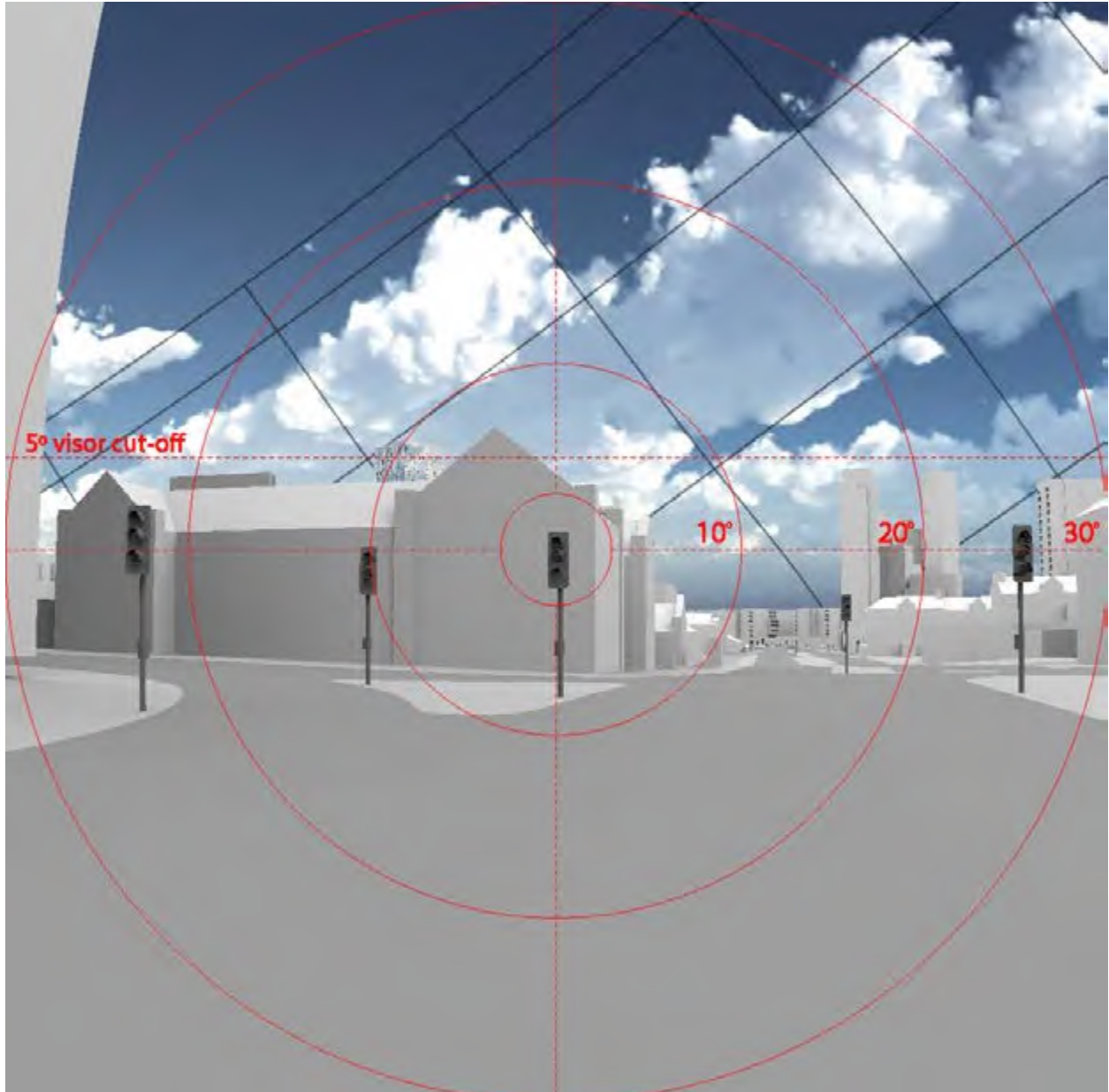


Fig. 242: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT

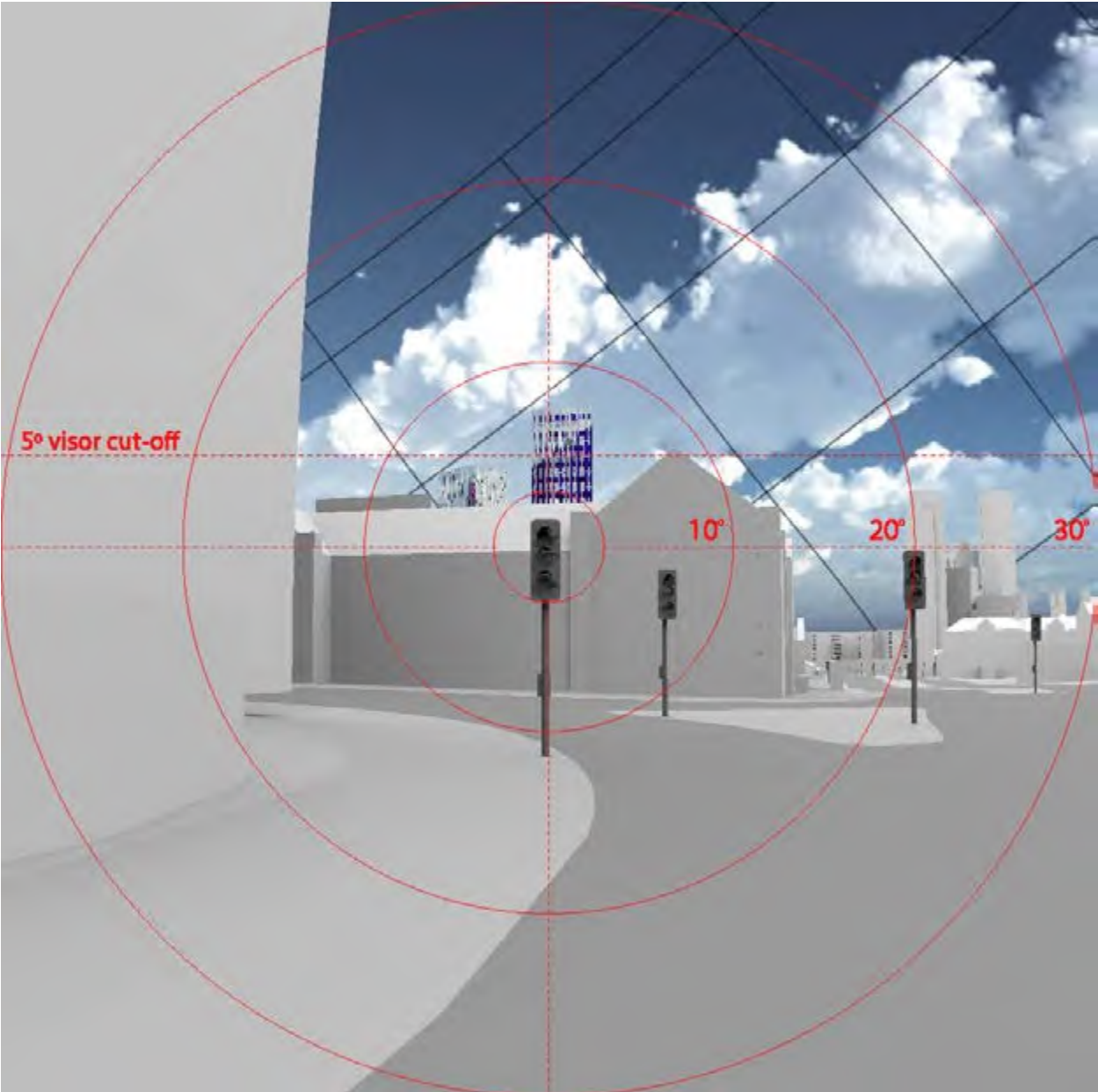


Fig. 243: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT**

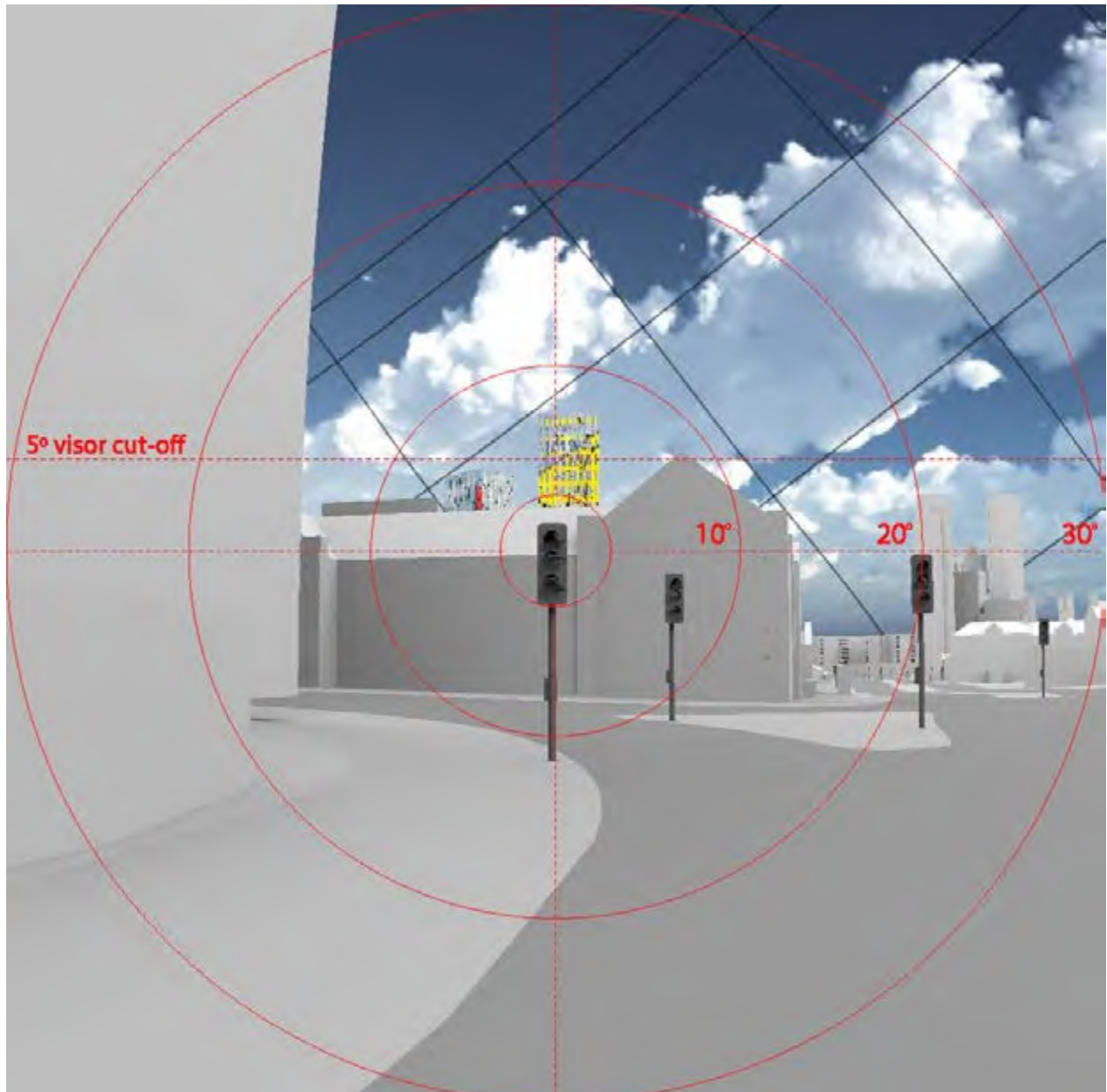


Fig. 244: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

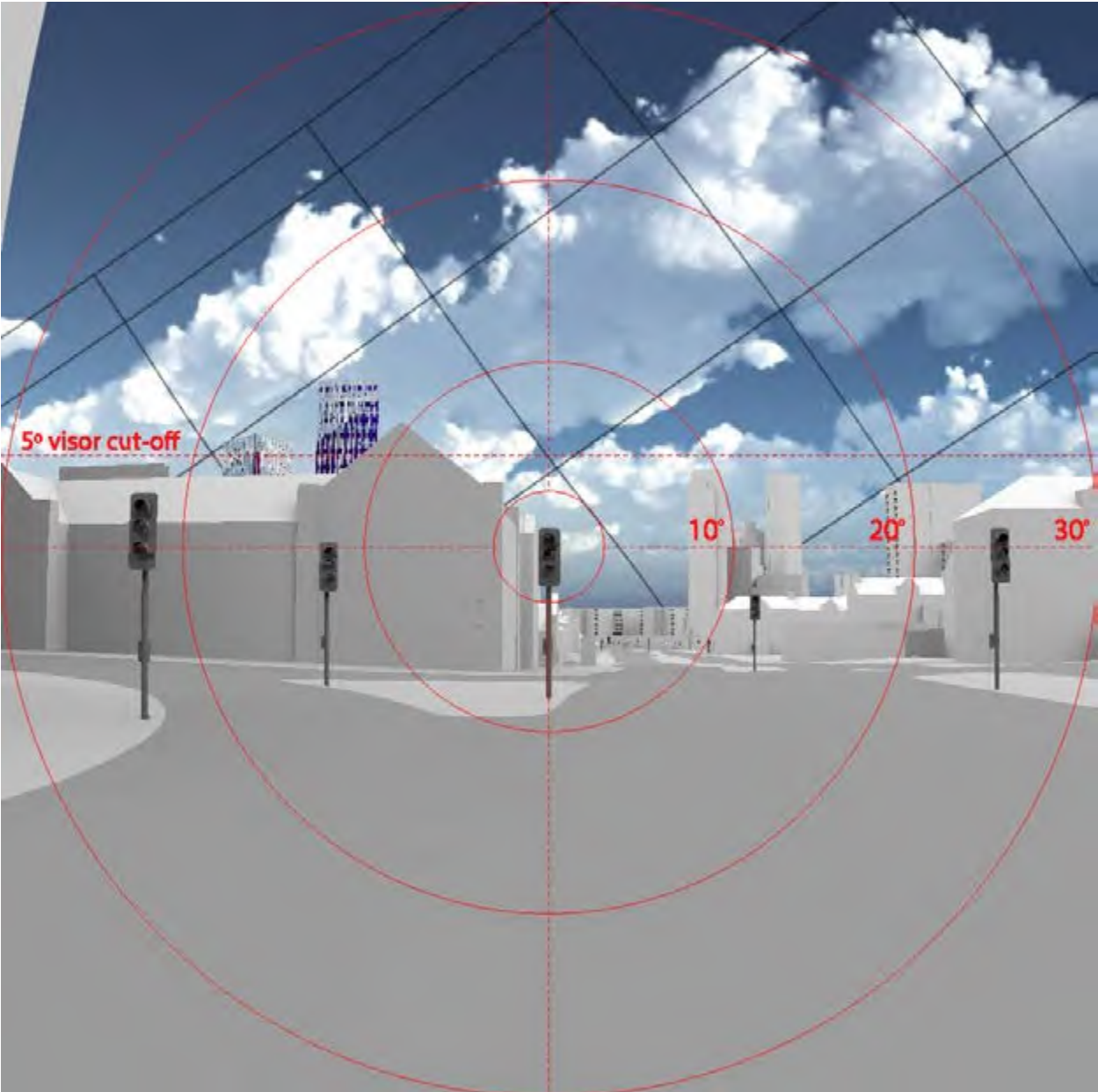


Fig. 245: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

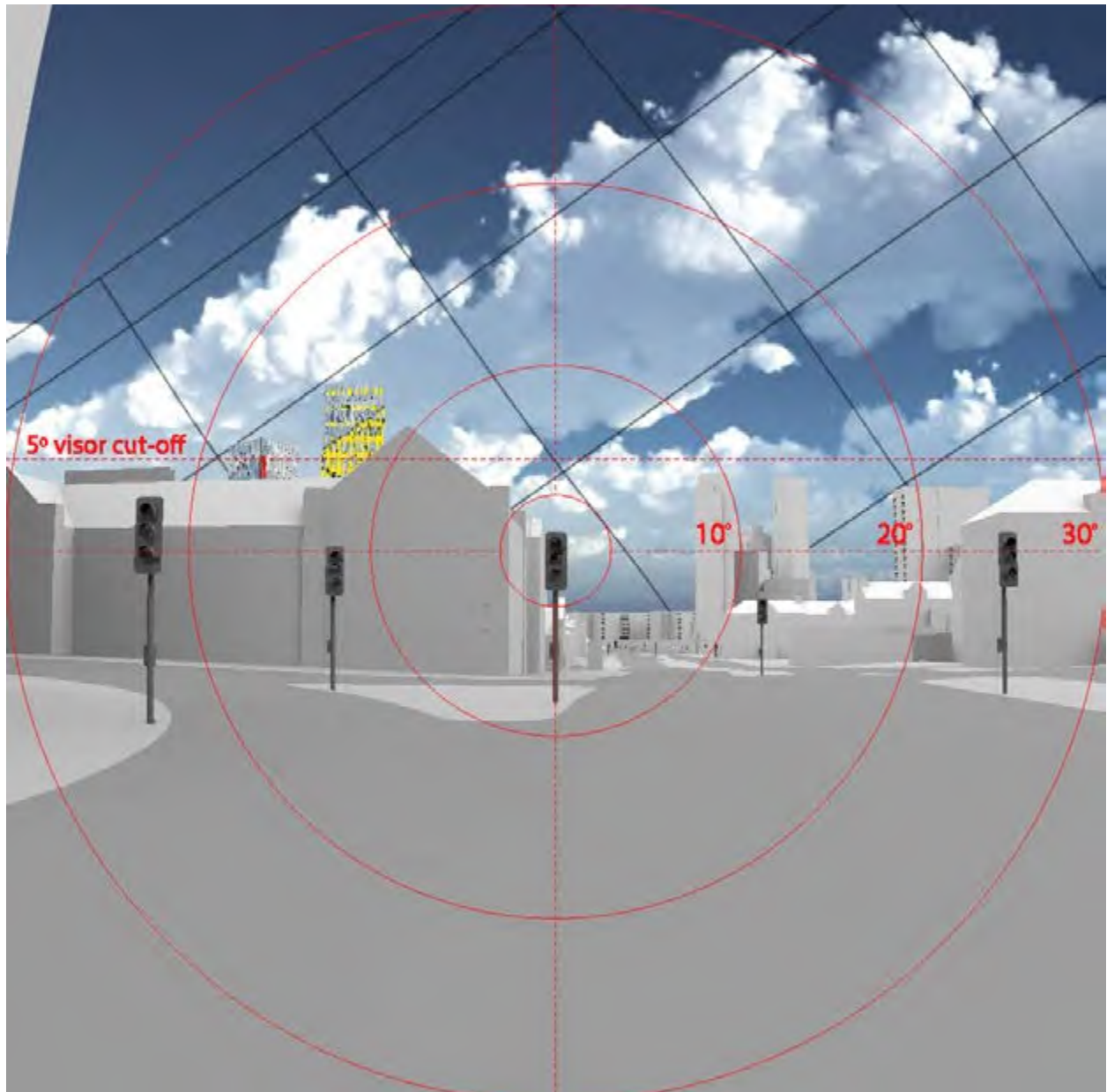


Fig. 246: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

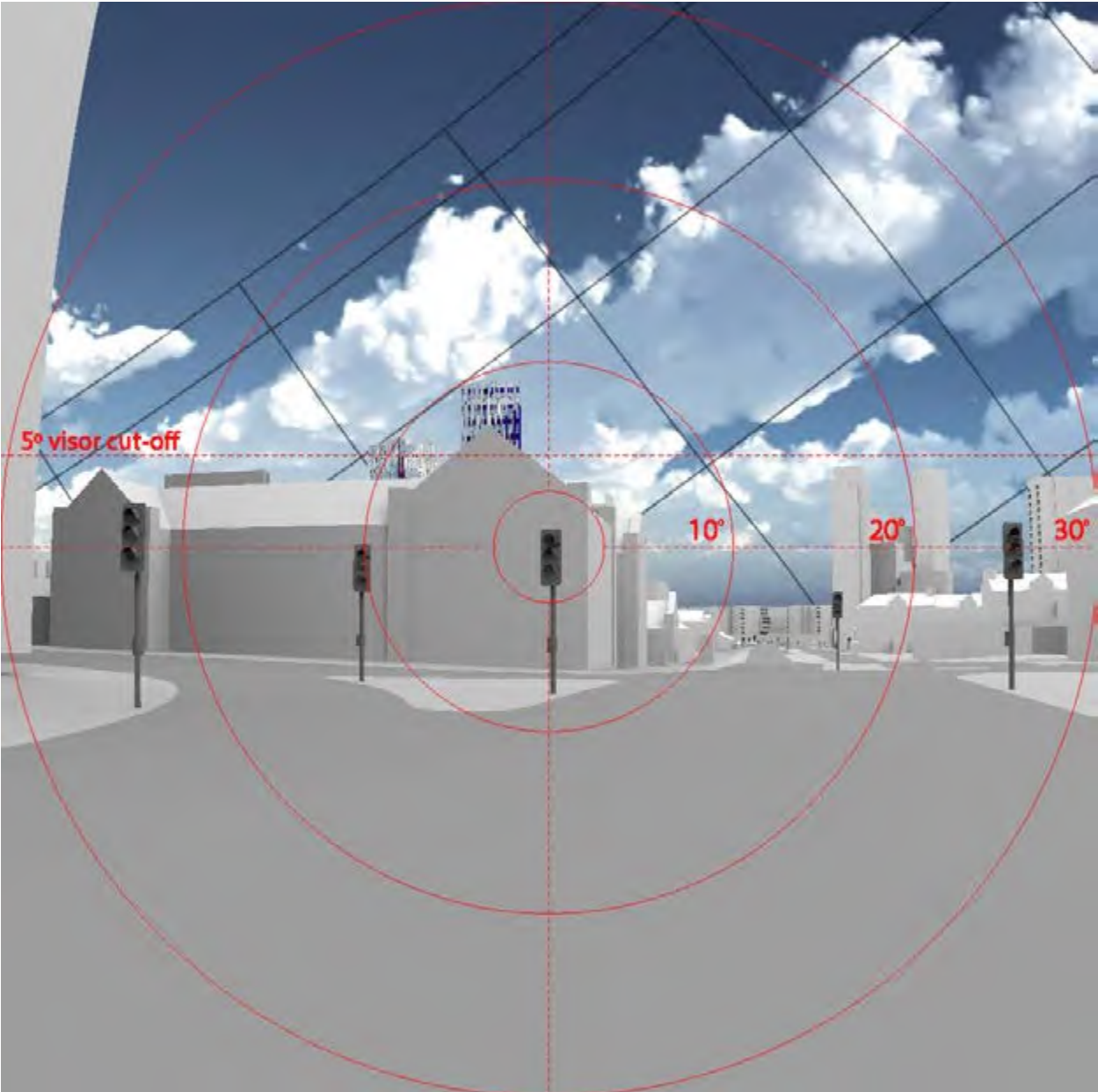


Fig. 247: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

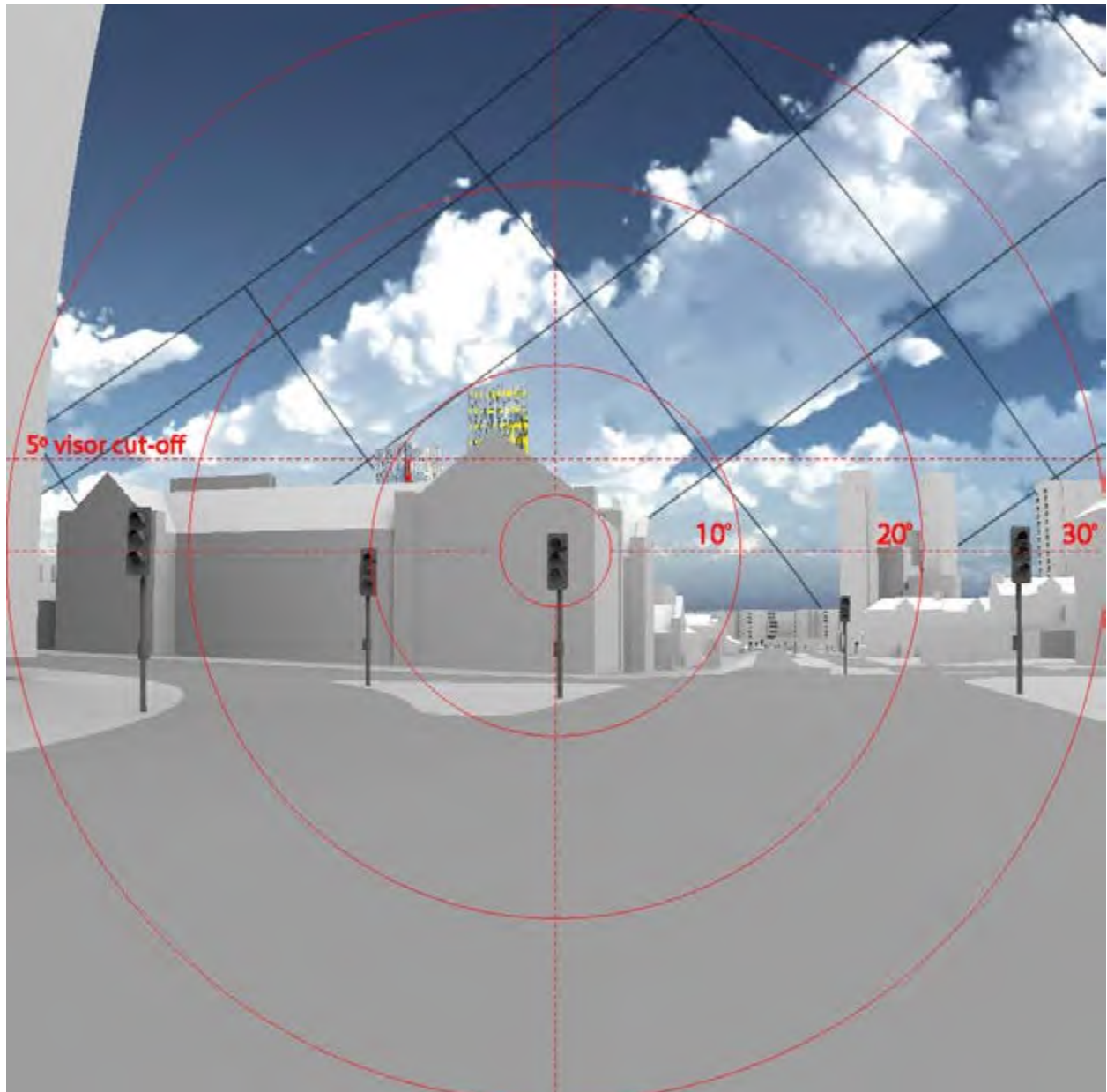


Fig. 248: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT

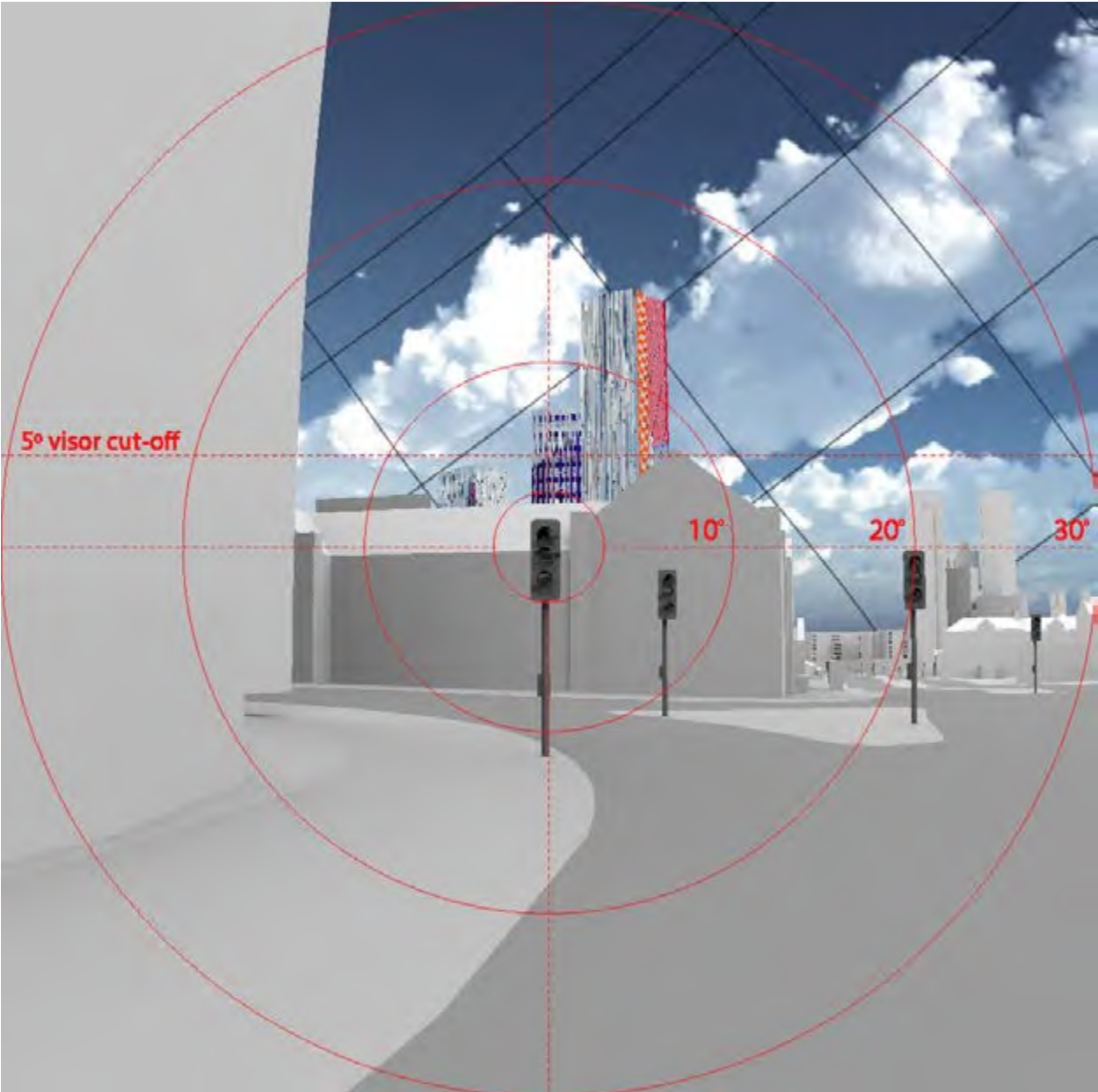


Fig. 249: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT**

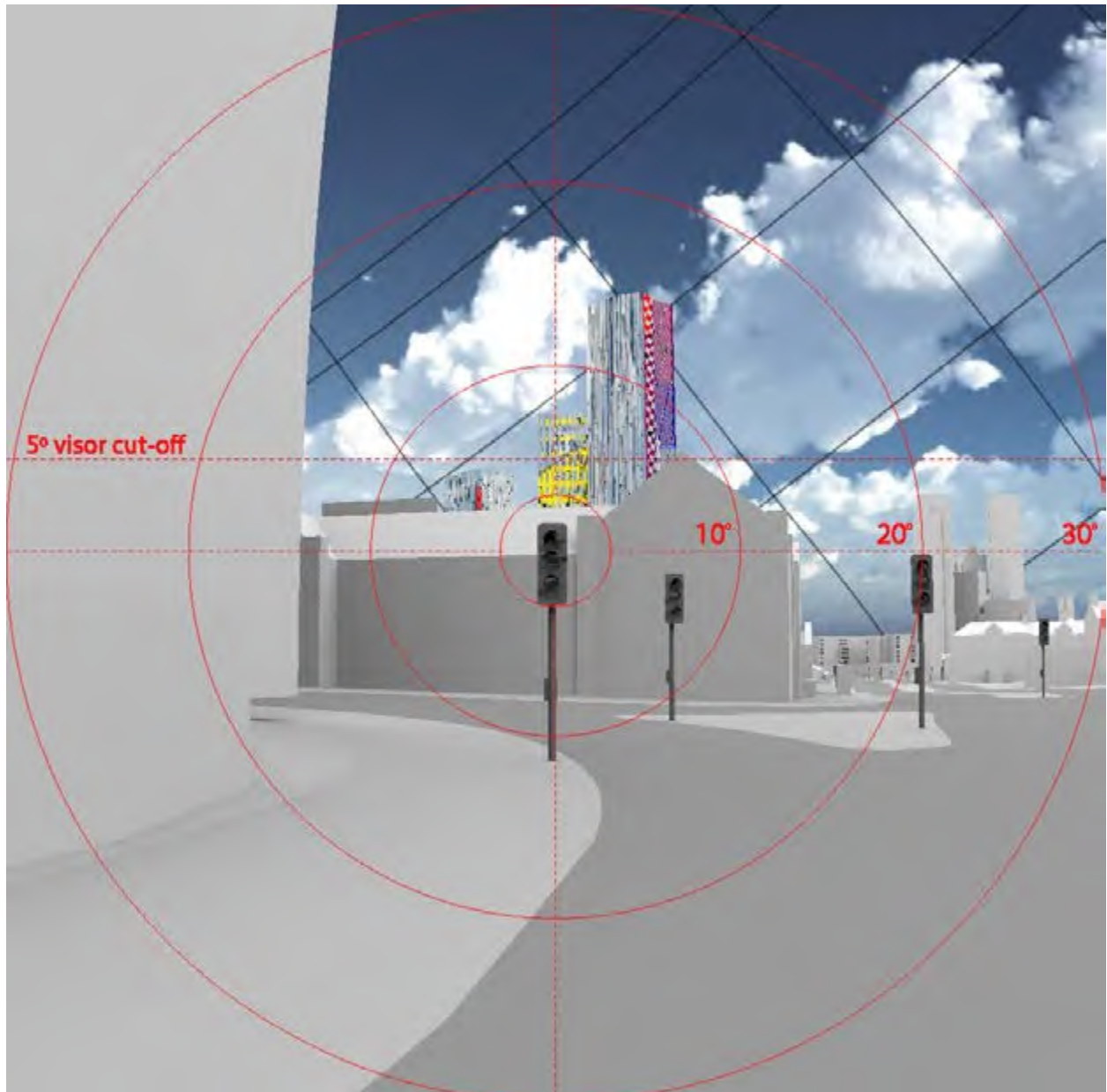


Fig. 250: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

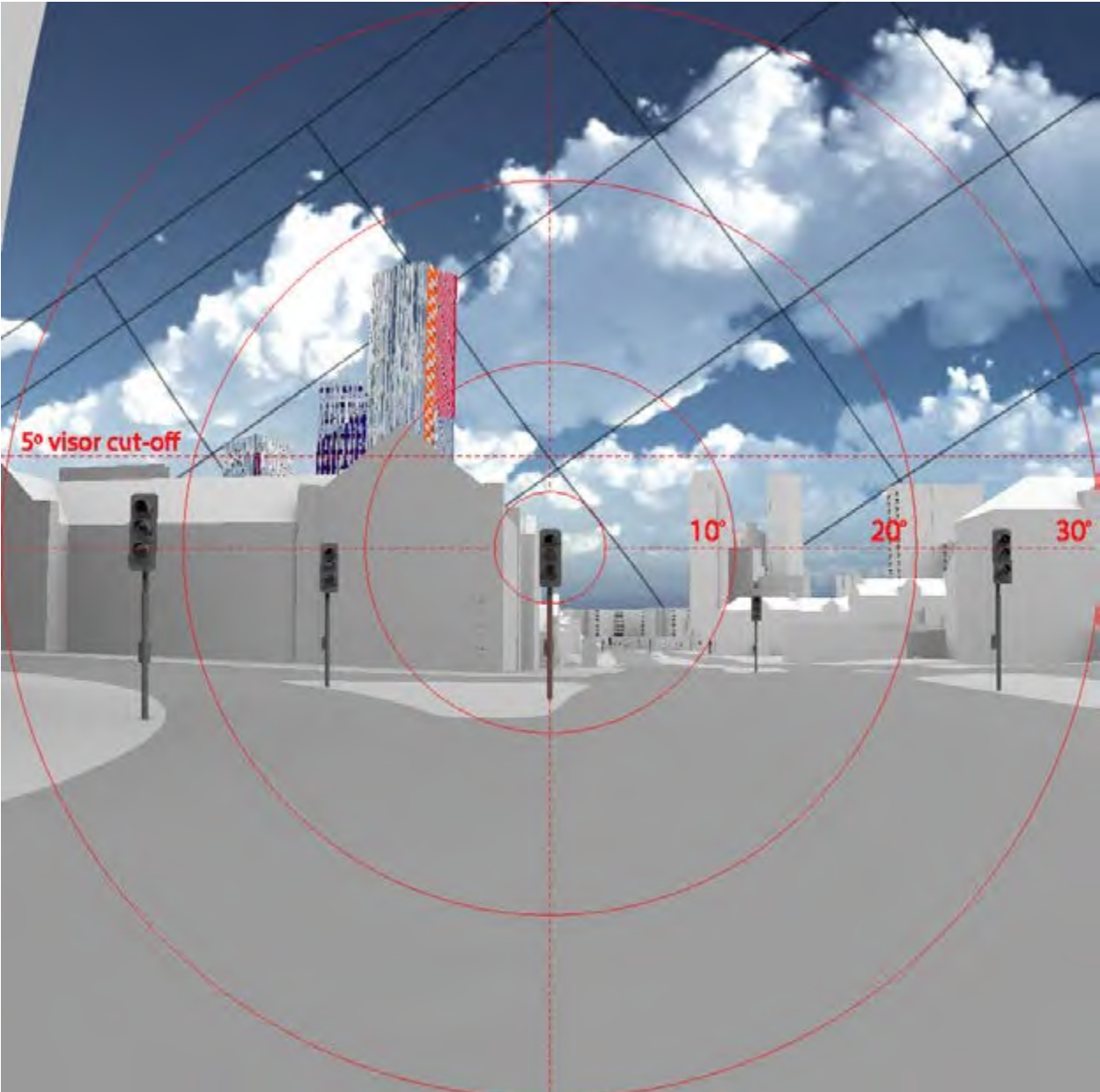
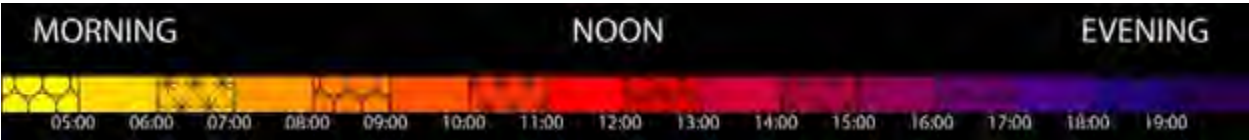


Fig. 251: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

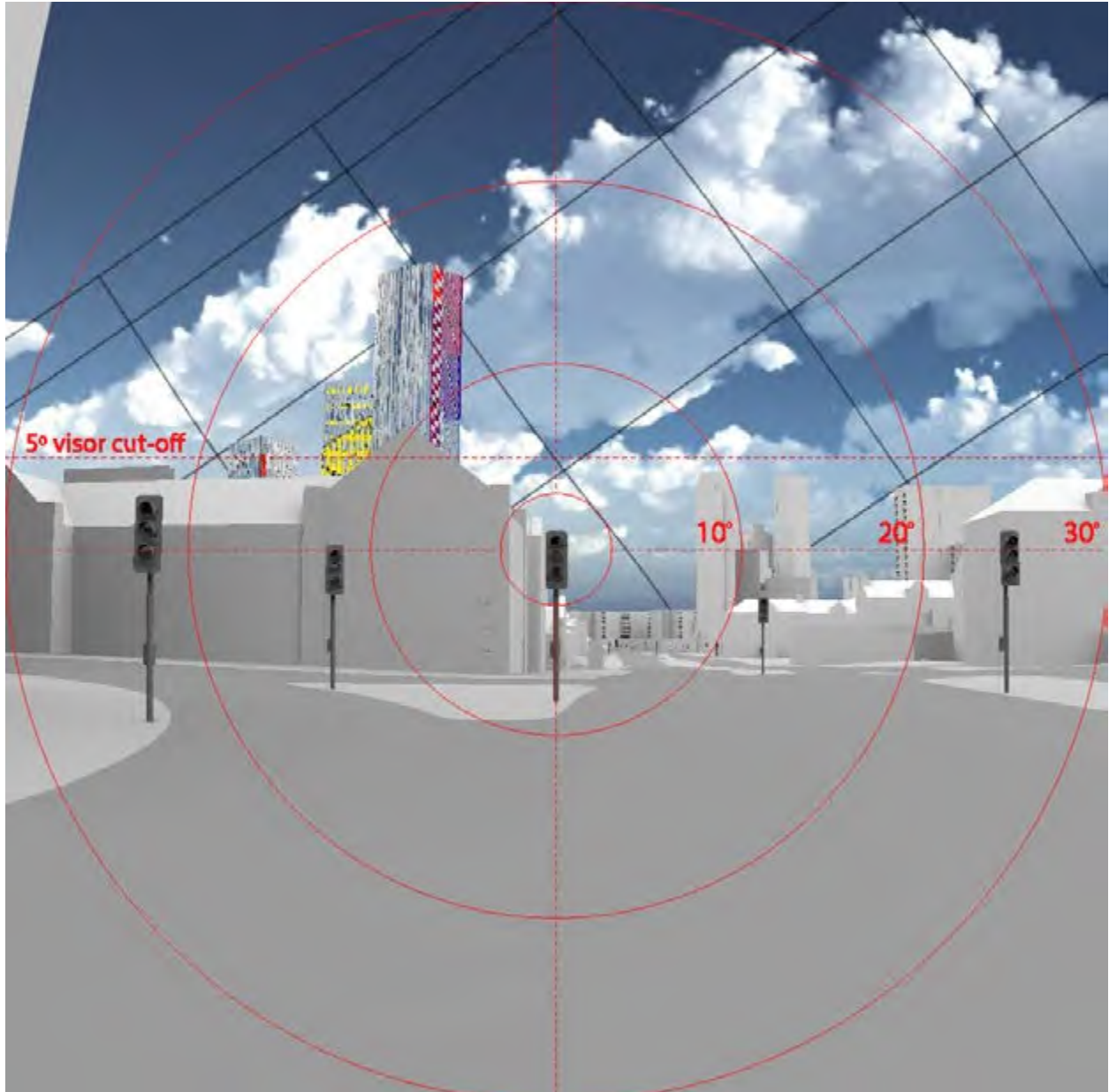


Fig. 252: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

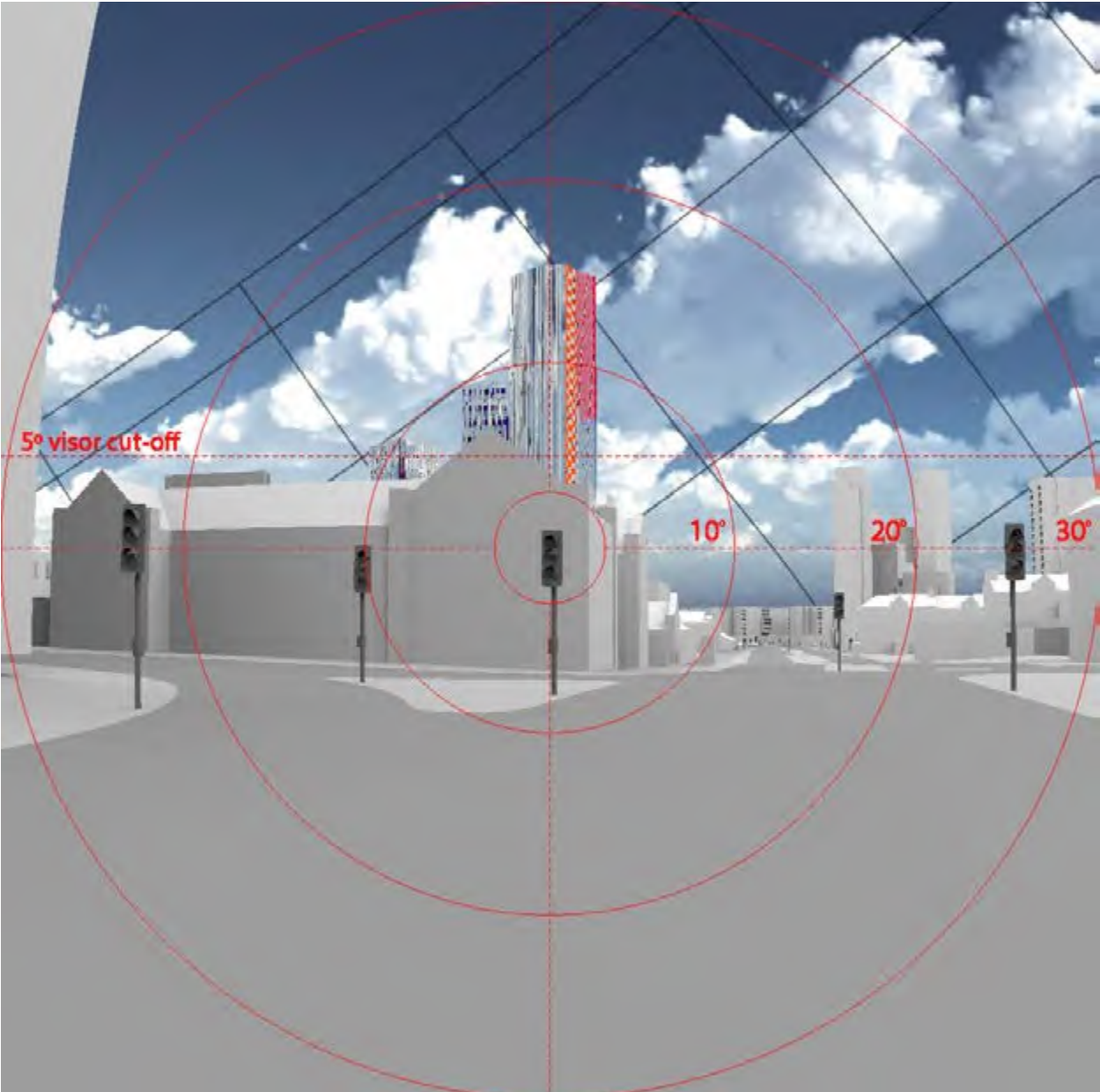


Fig. 253: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

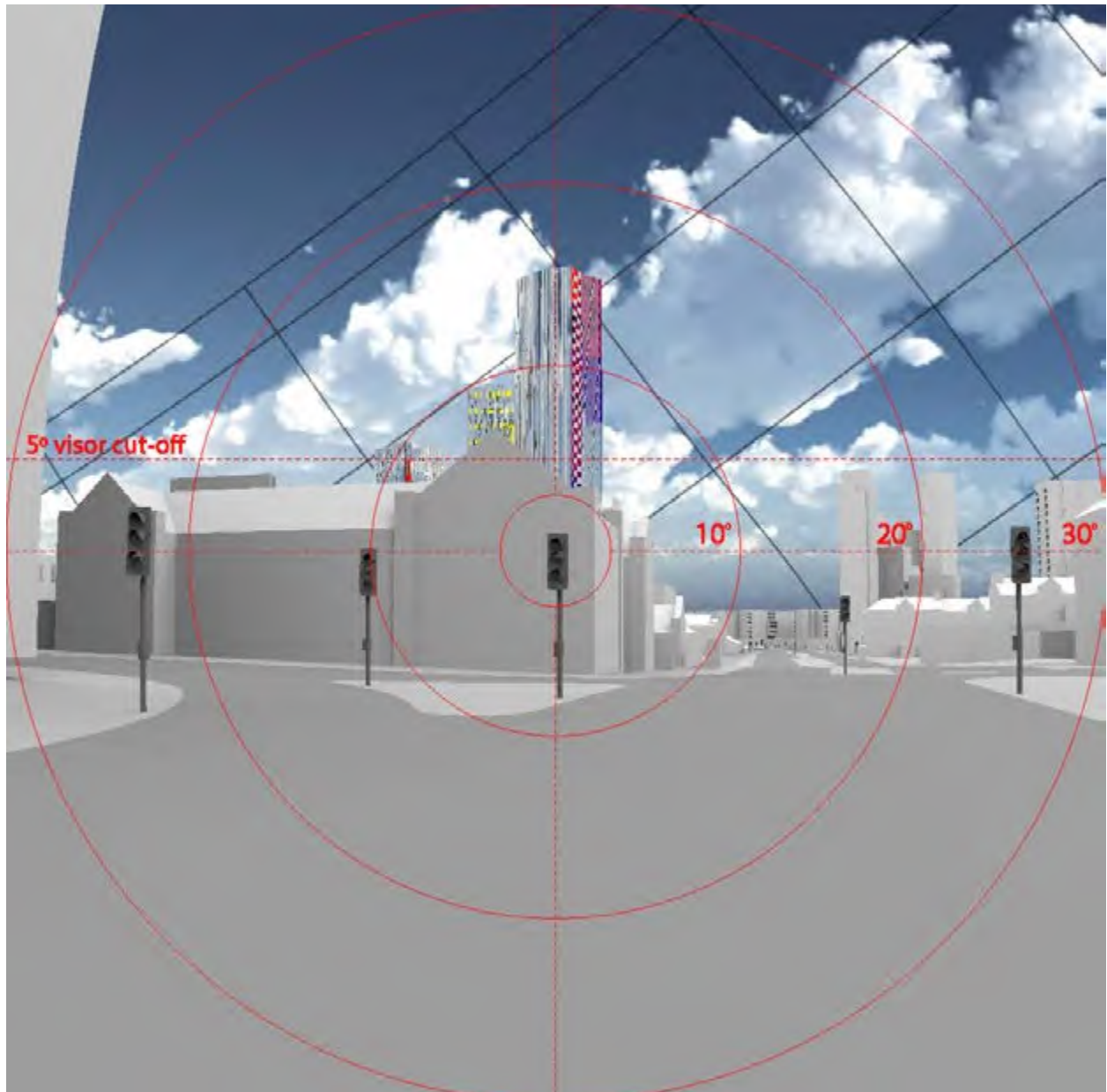


Fig. 254: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT

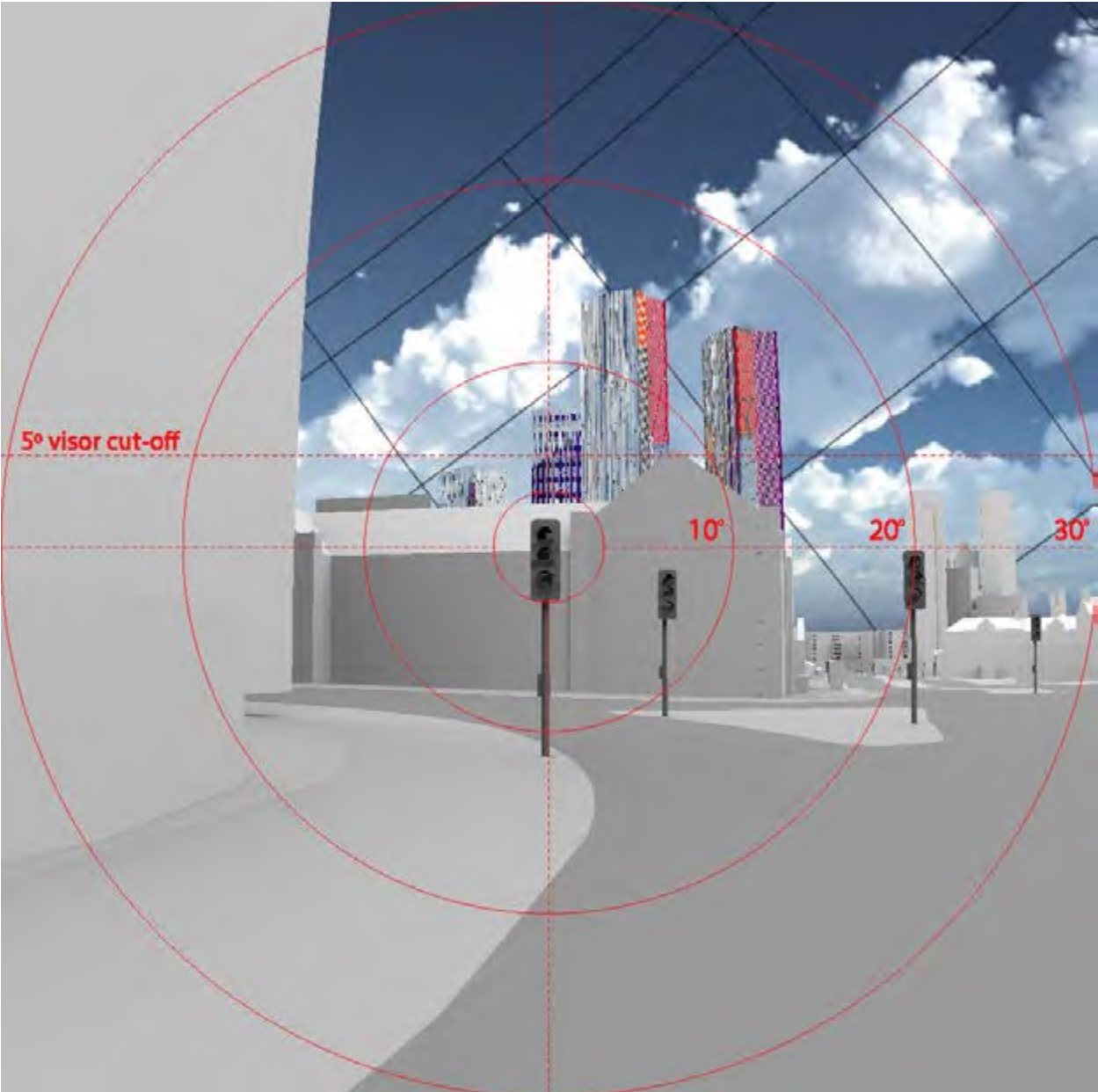


Fig. 255: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1A - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
TURNING LANE, LOOKING AT LEFT TRAFFIC LIGHT**

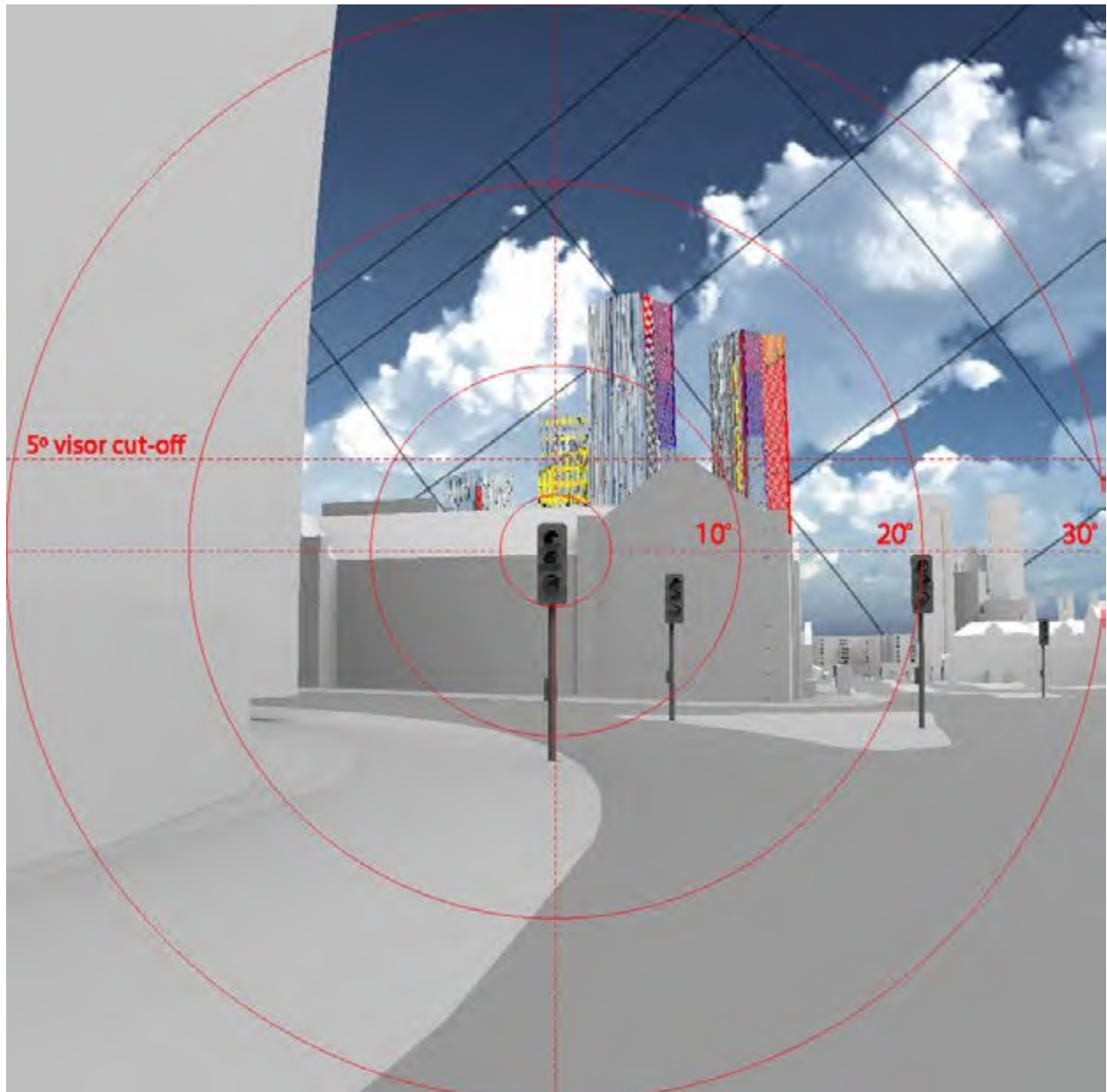


Fig. 256: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

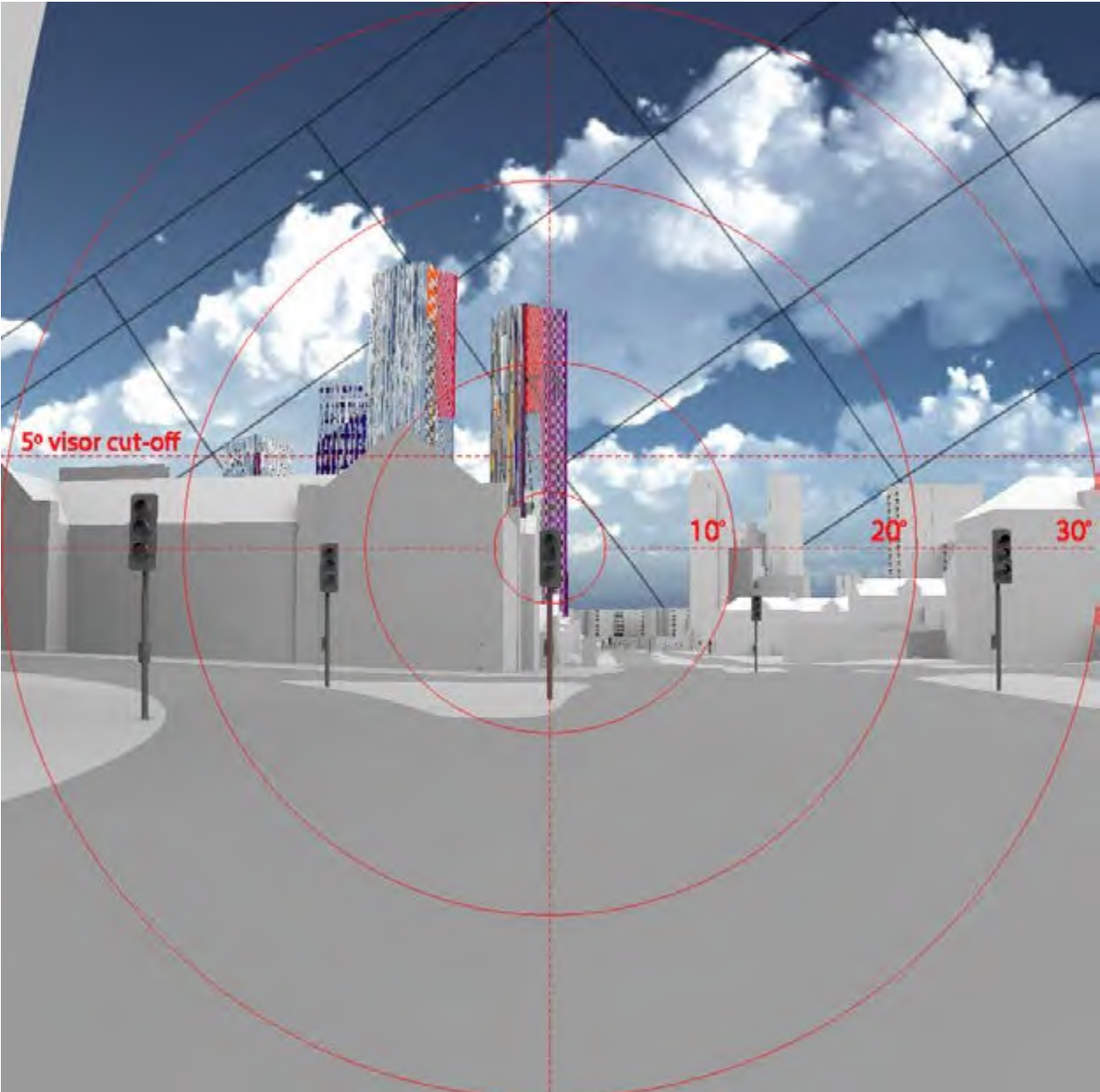
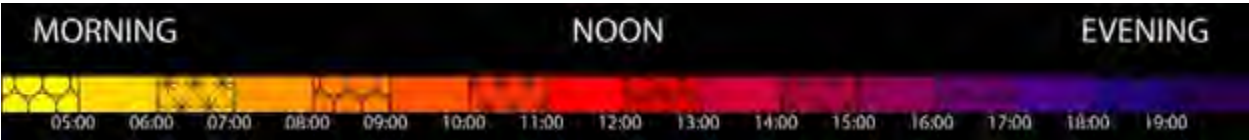


Fig. 257: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1B - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

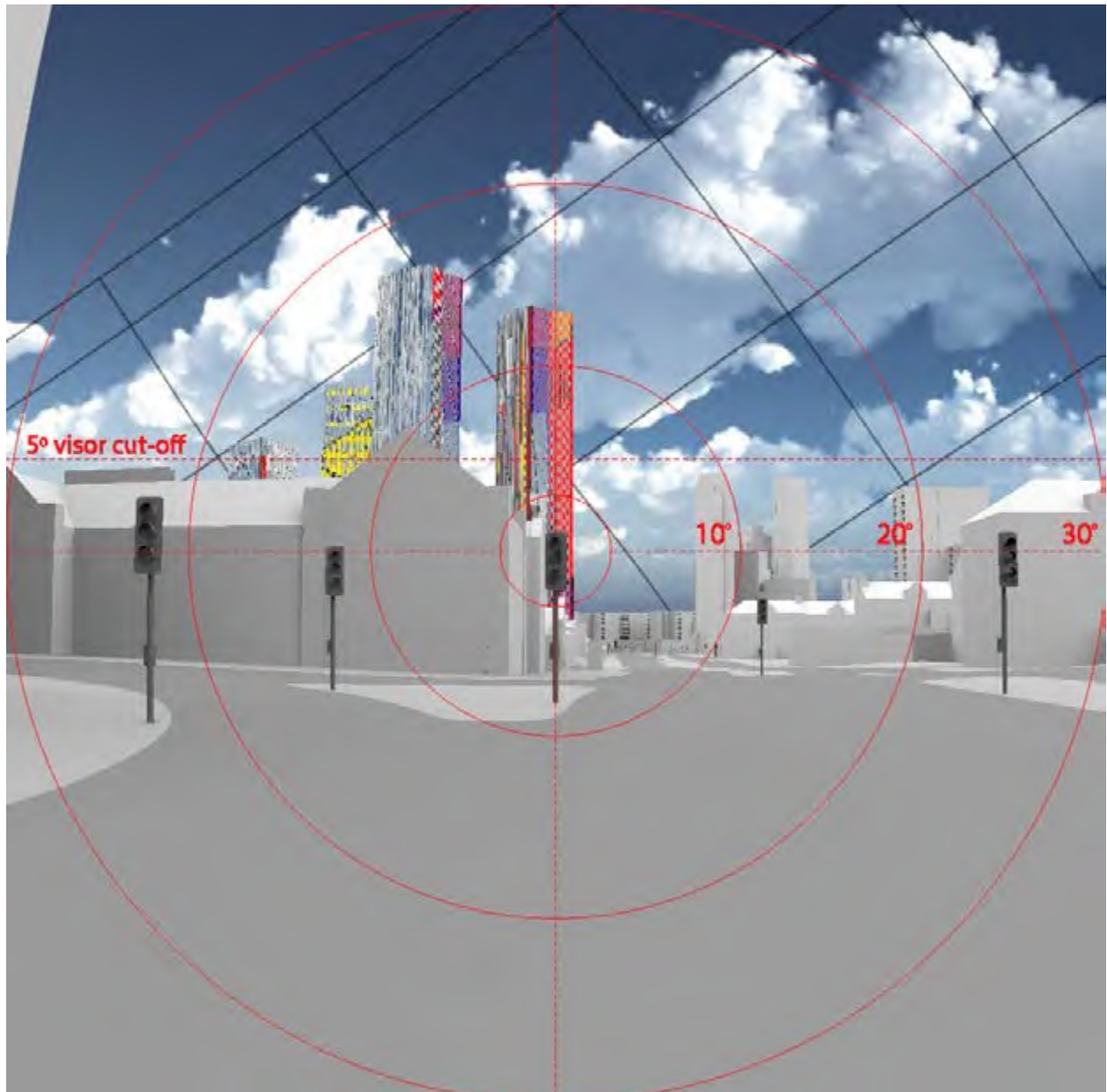


Fig. 258: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

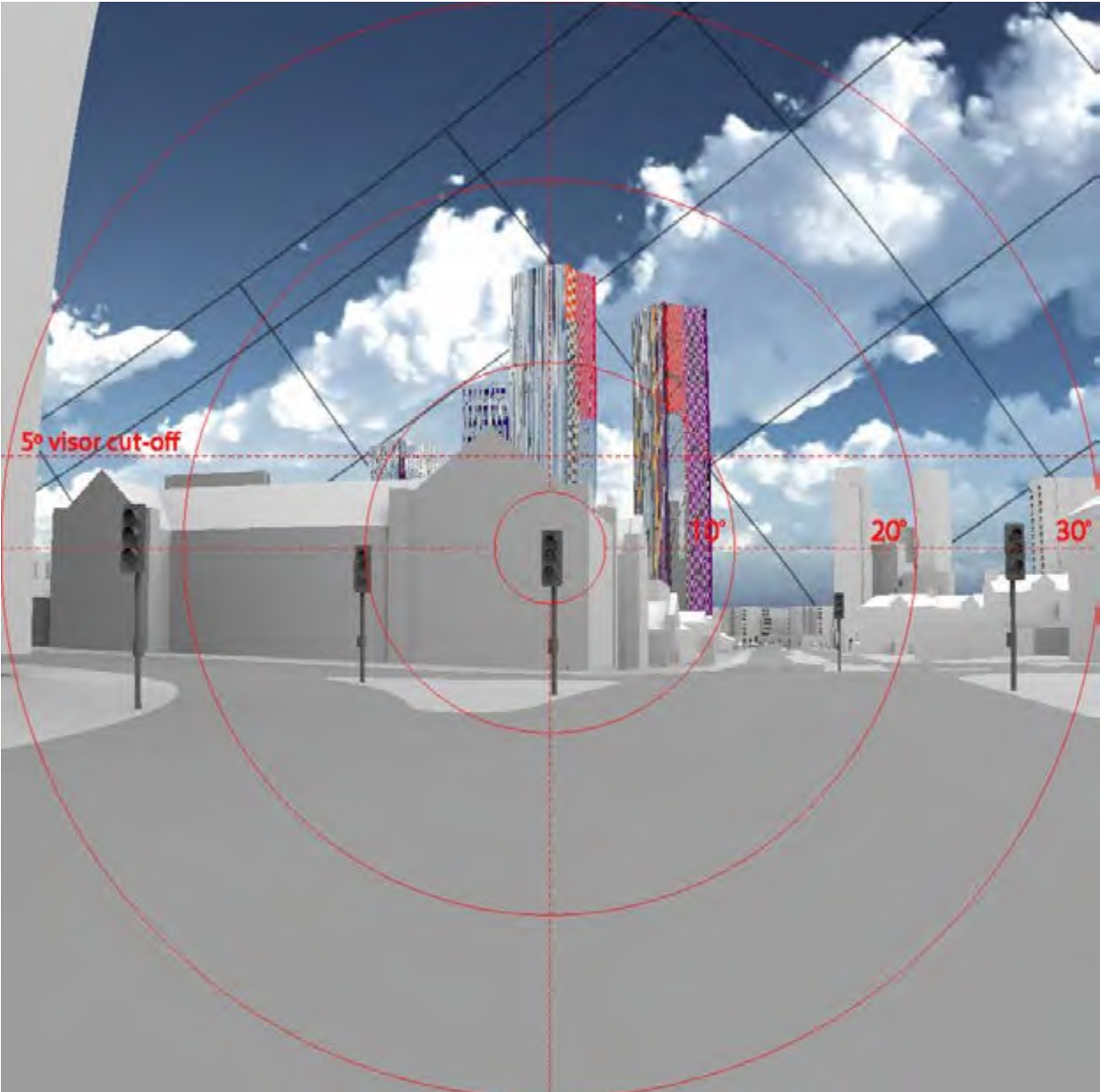


Fig. 259: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR1C - REGENT ROAD JUNCTION (WITH OLDFIELD ROAD)
STRAIGHT CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

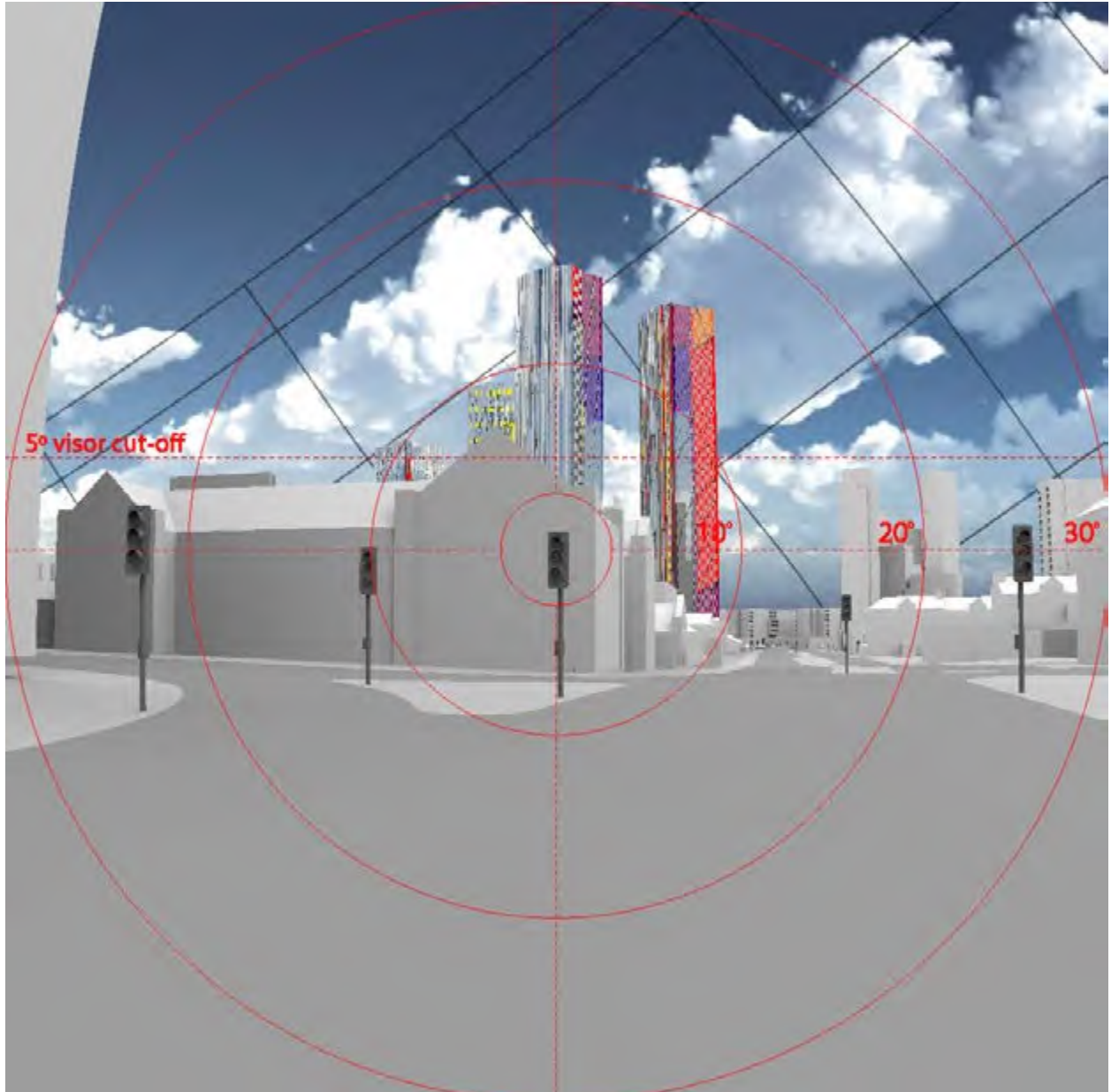


Fig. 260: Solar reflections



23 **SOLAR GLARE ASSESSMENT**
RR2 - REGENT ROAD 2

RR2 - Regent Road Eastbound Junction (with Ordsall Lane)



Fig. 261: Junction Location

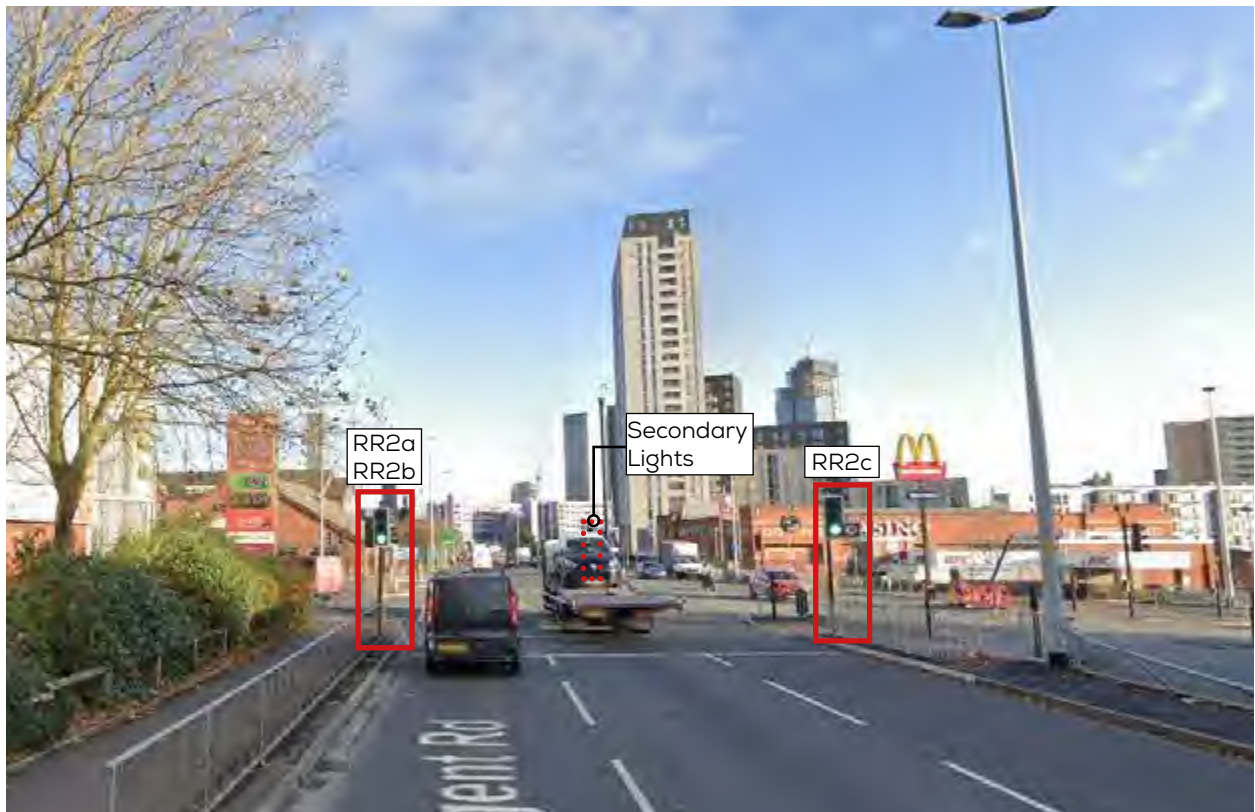


Fig. 262: Traffic Light Location

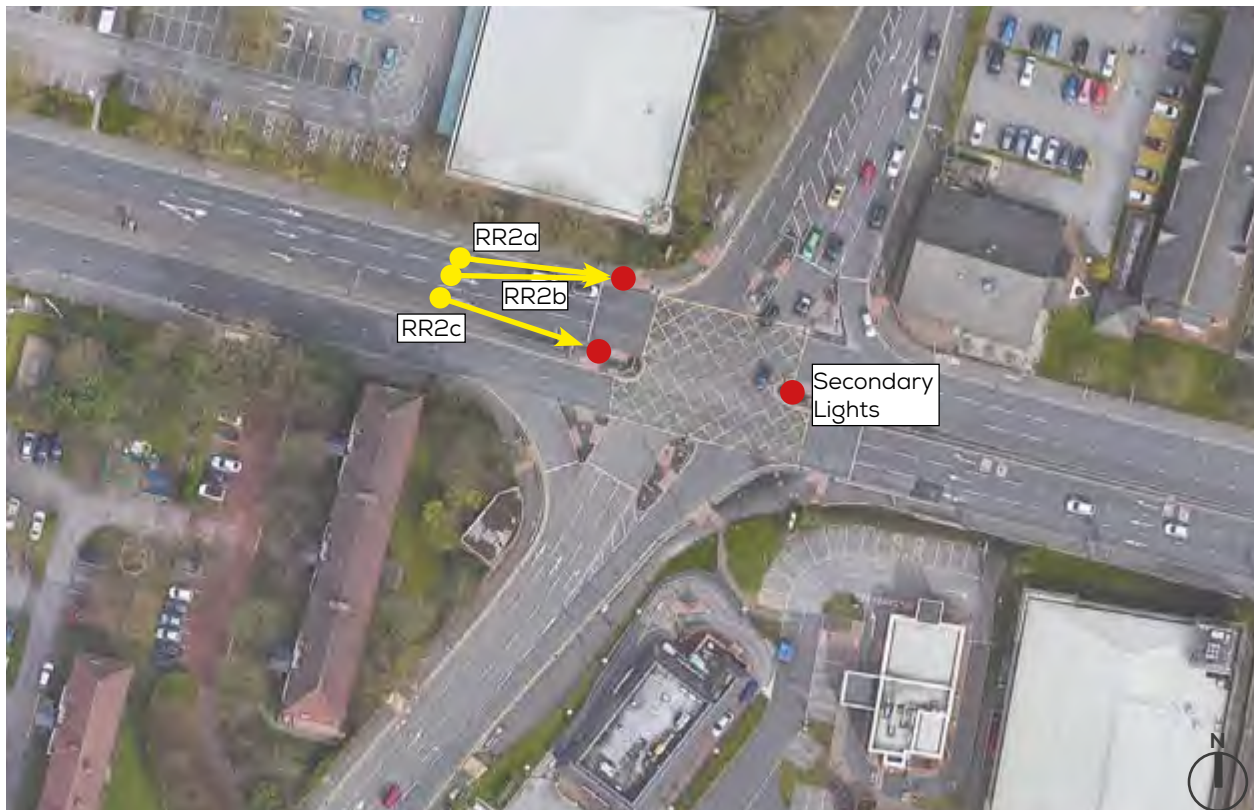


Fig. 263: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

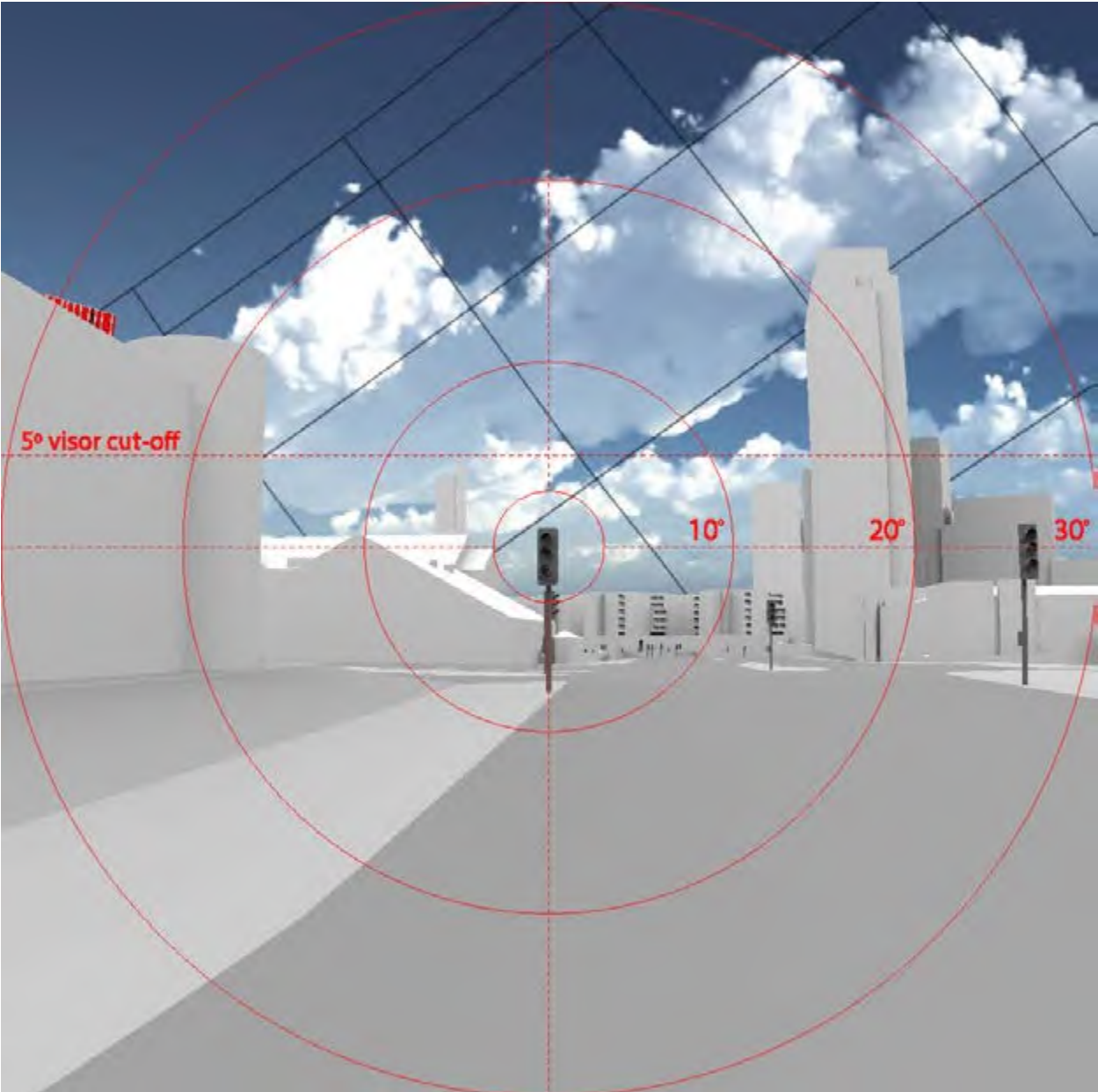


Fig. 264: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

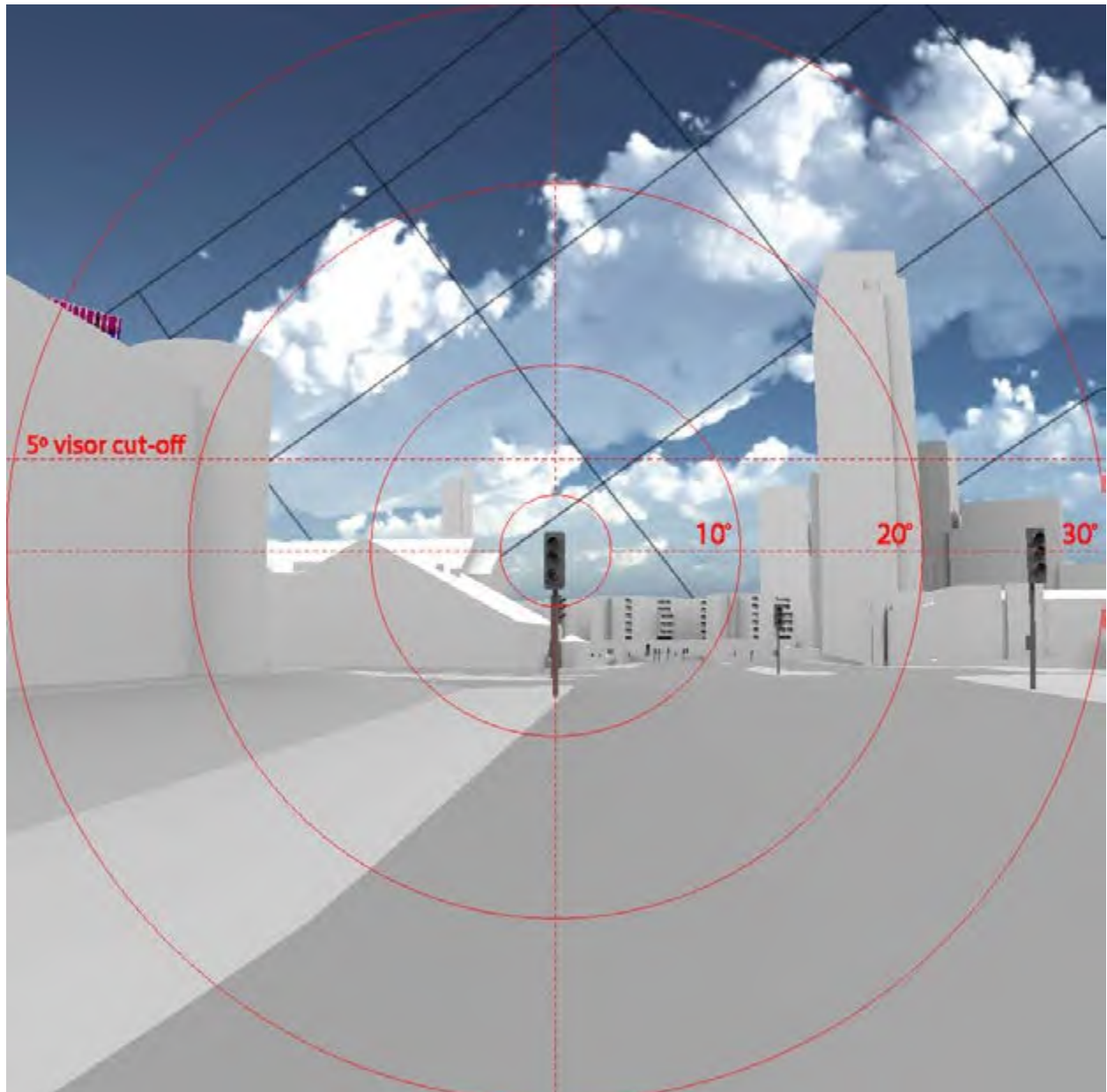


Fig. 265: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

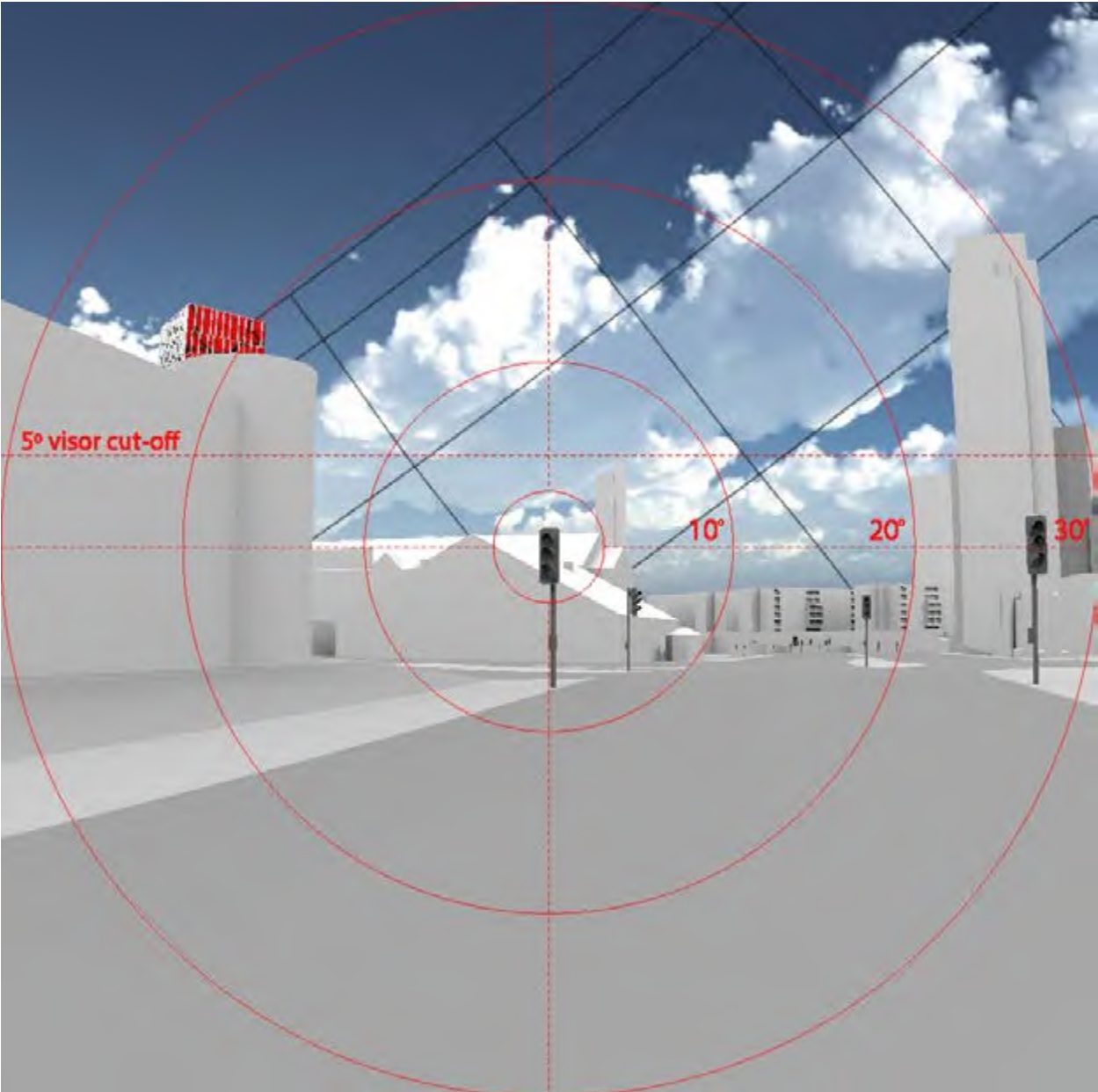


Fig. 266: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

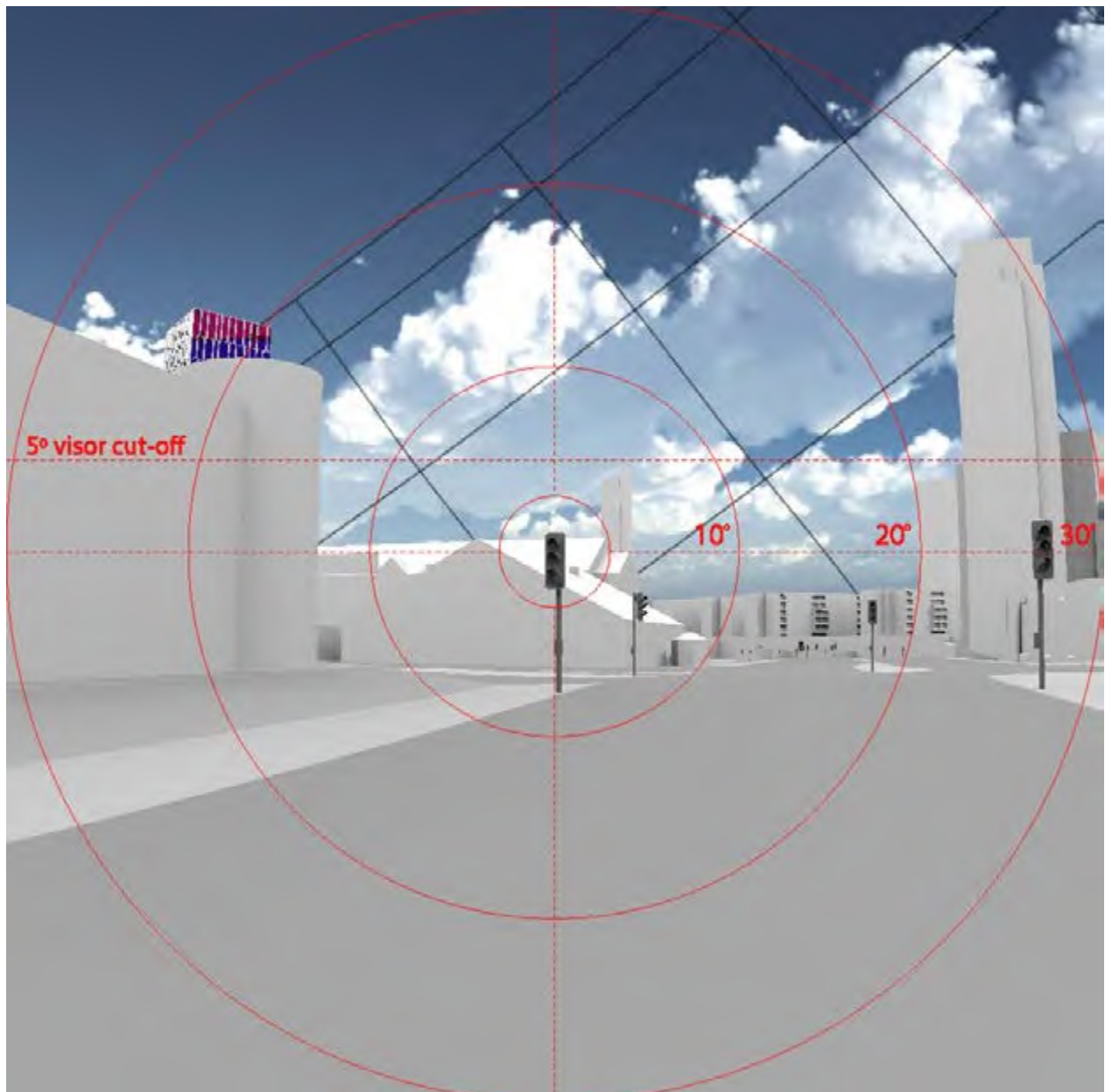


Fig. 267: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

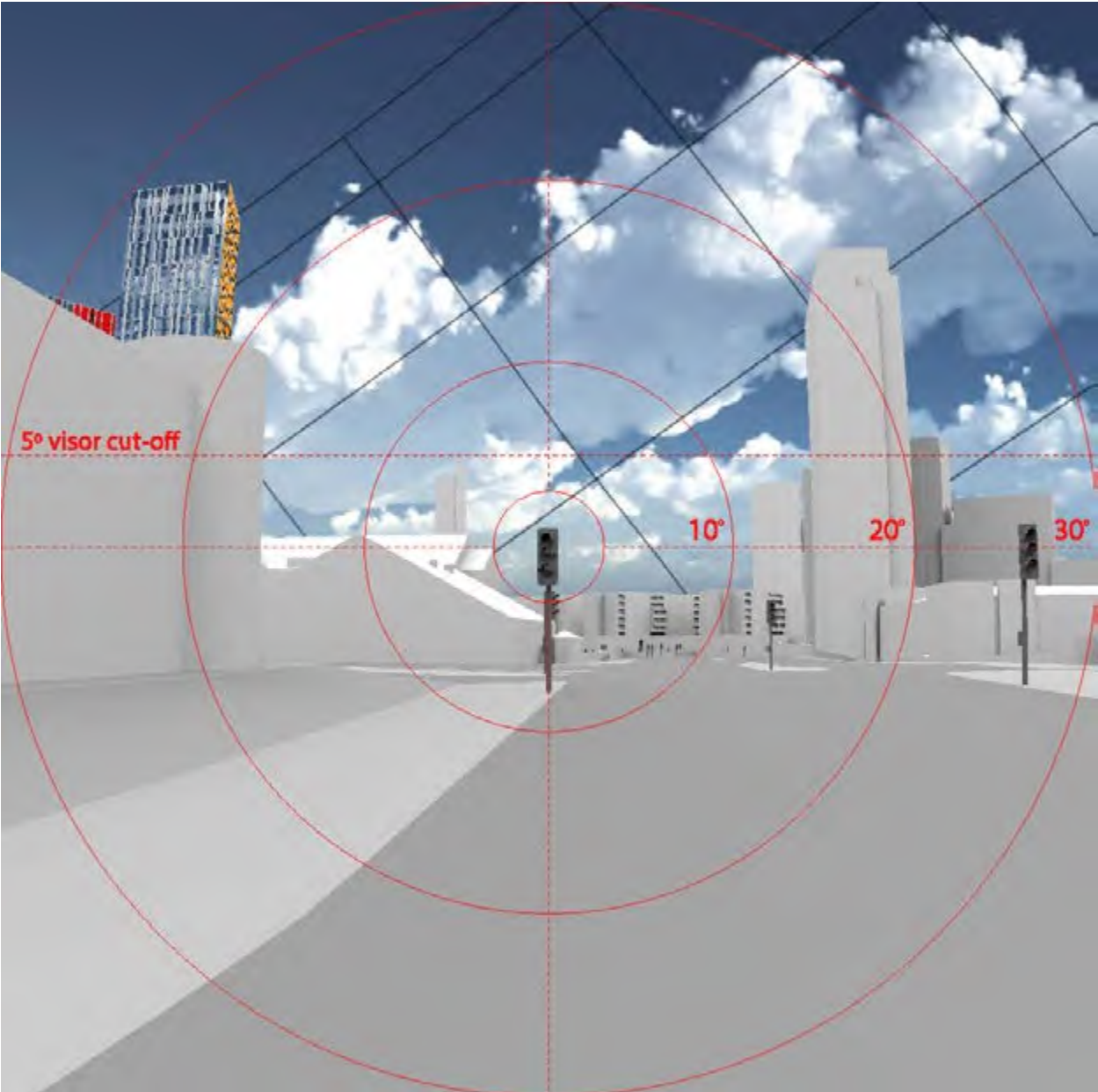


Fig. 268: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

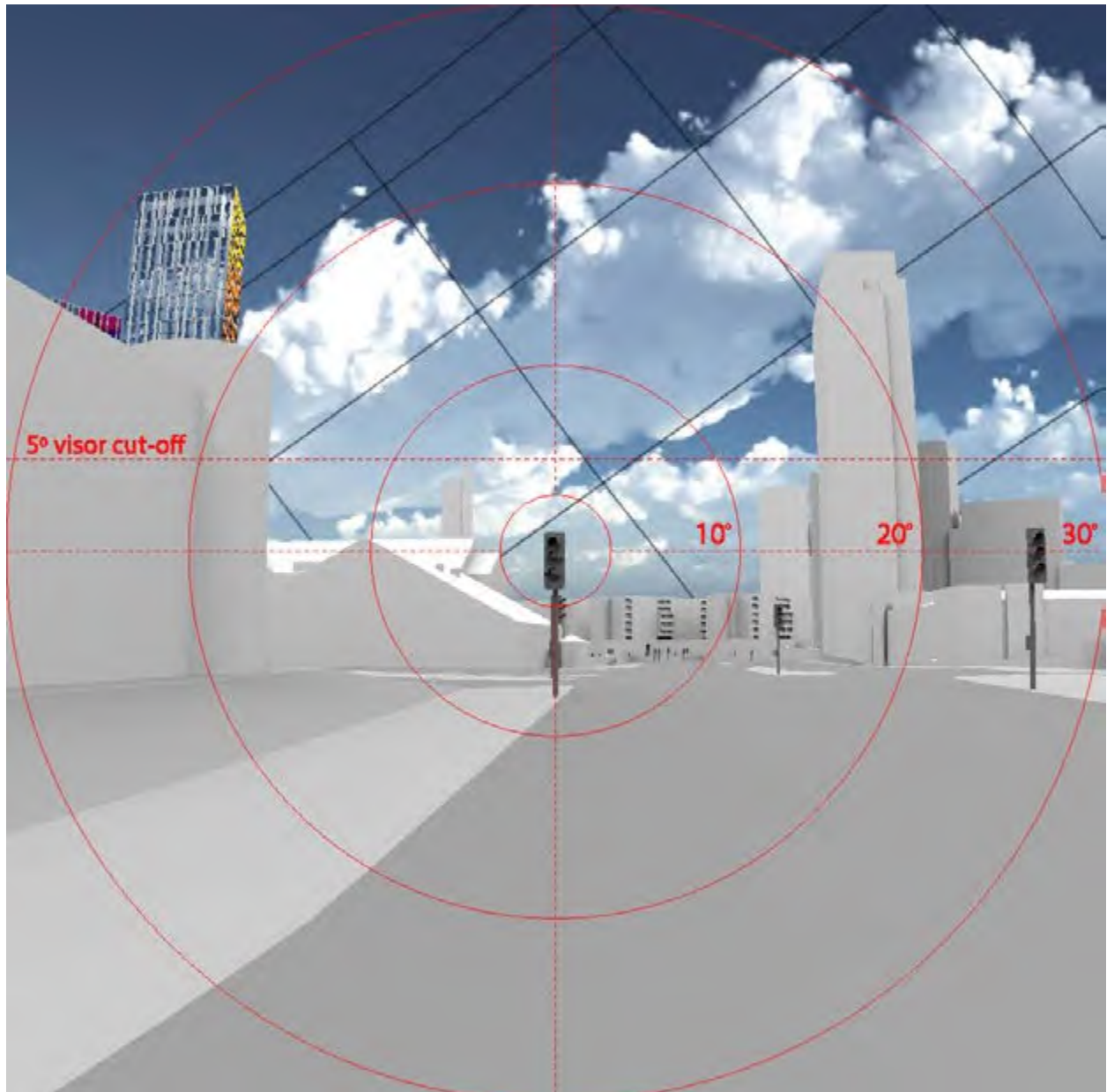


Fig. 269: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

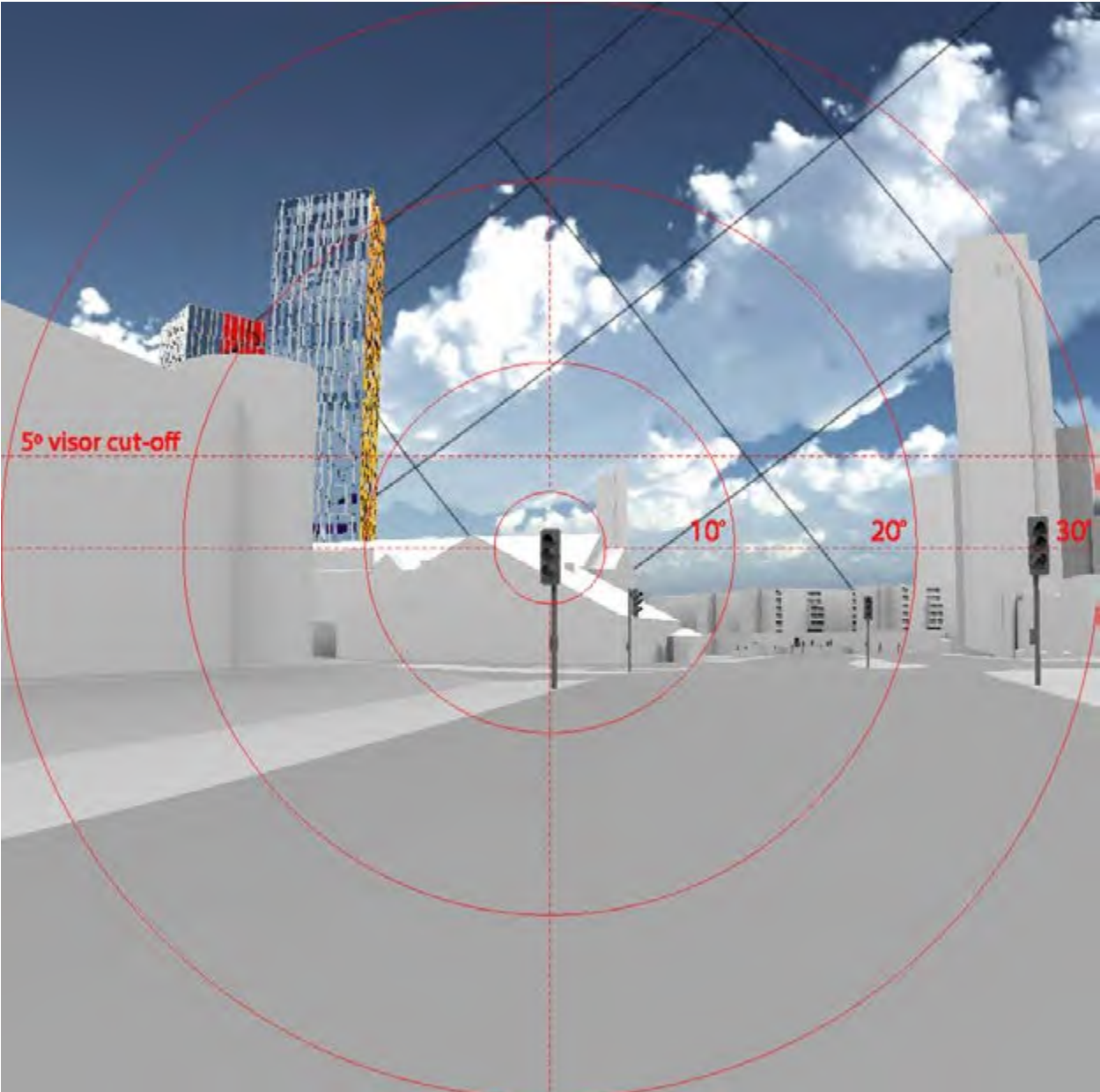


Fig. 270: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

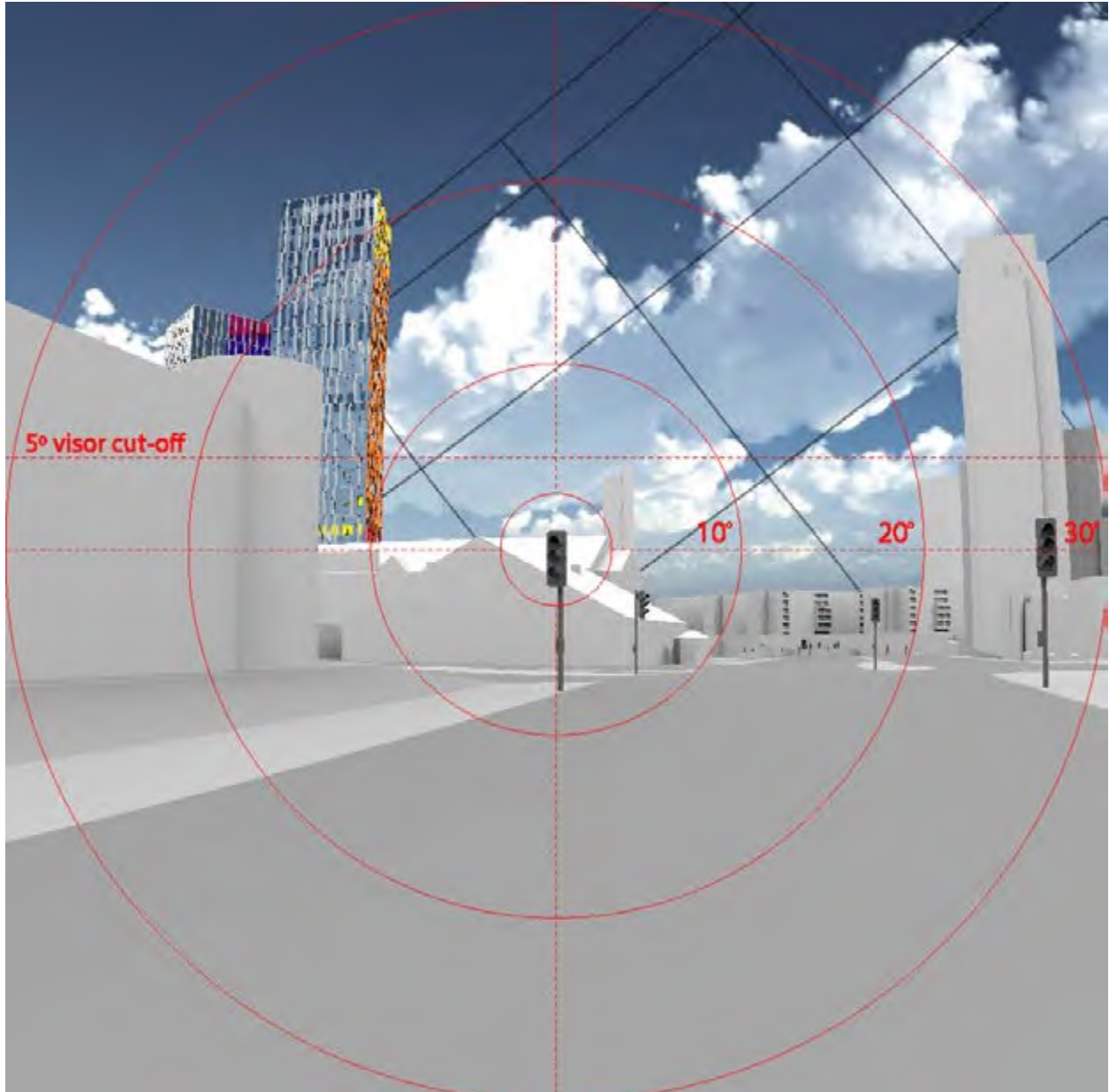


Fig. 271: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2C - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

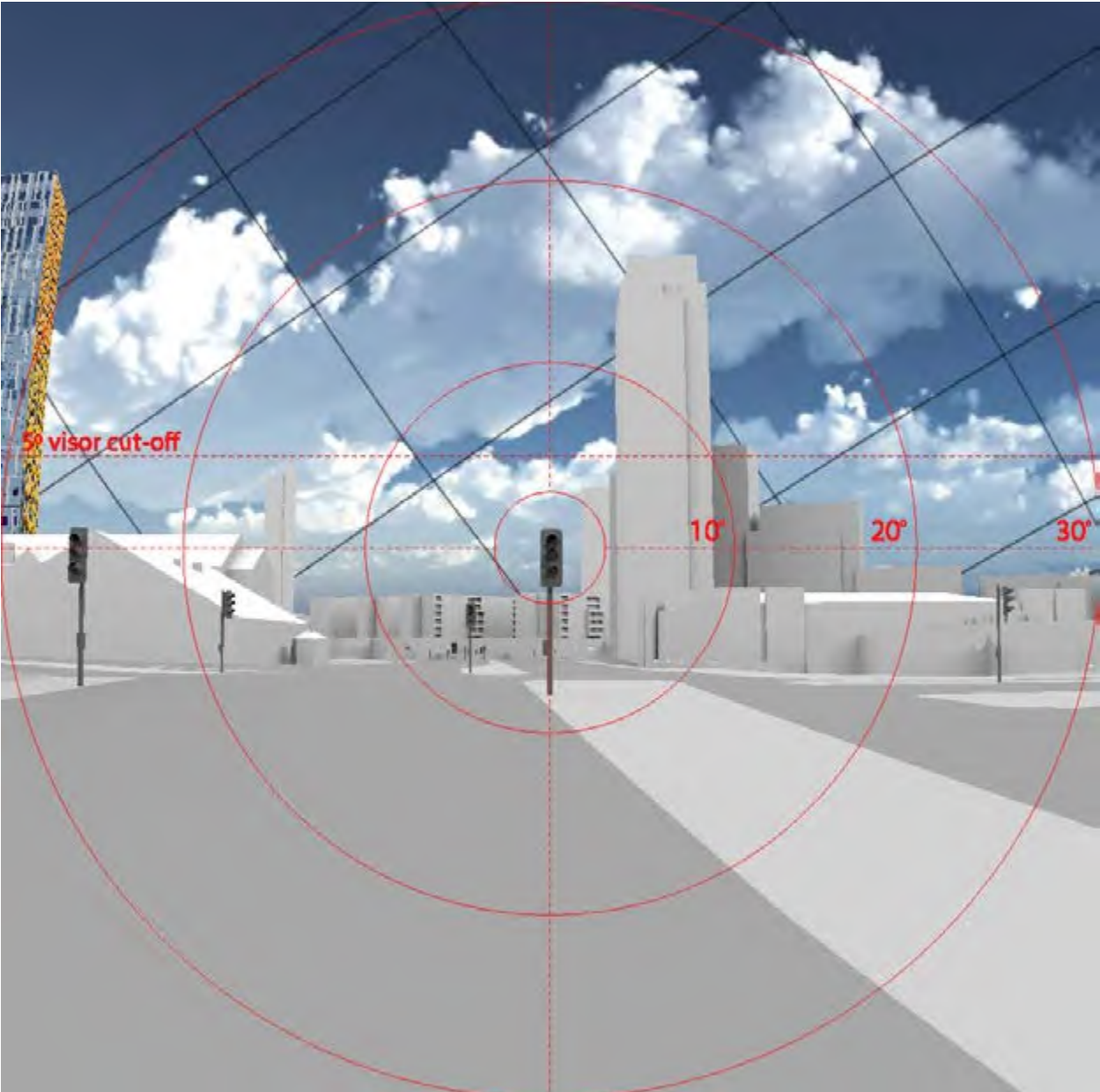


Fig. 272: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2C - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

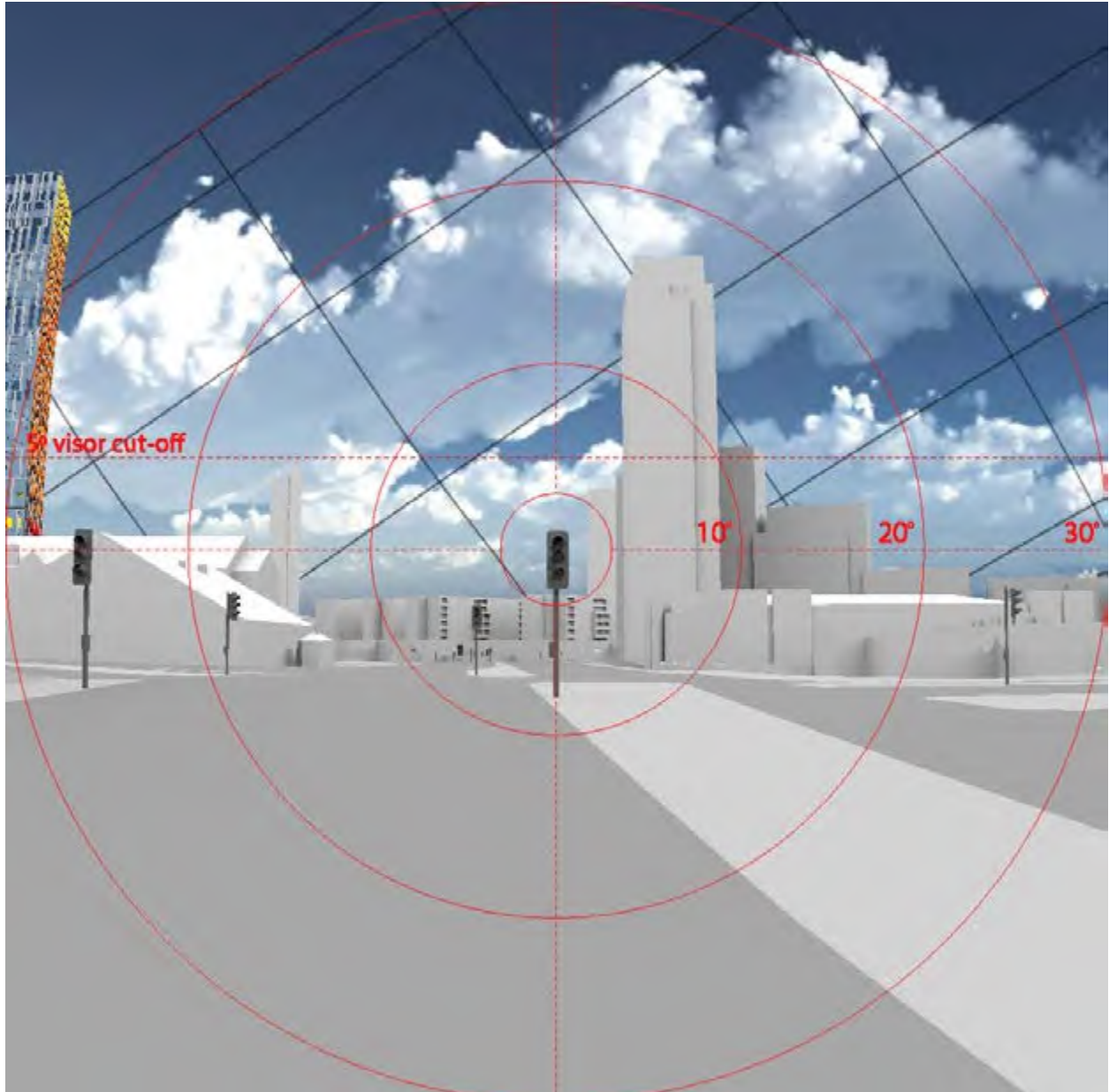


Fig. 273: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

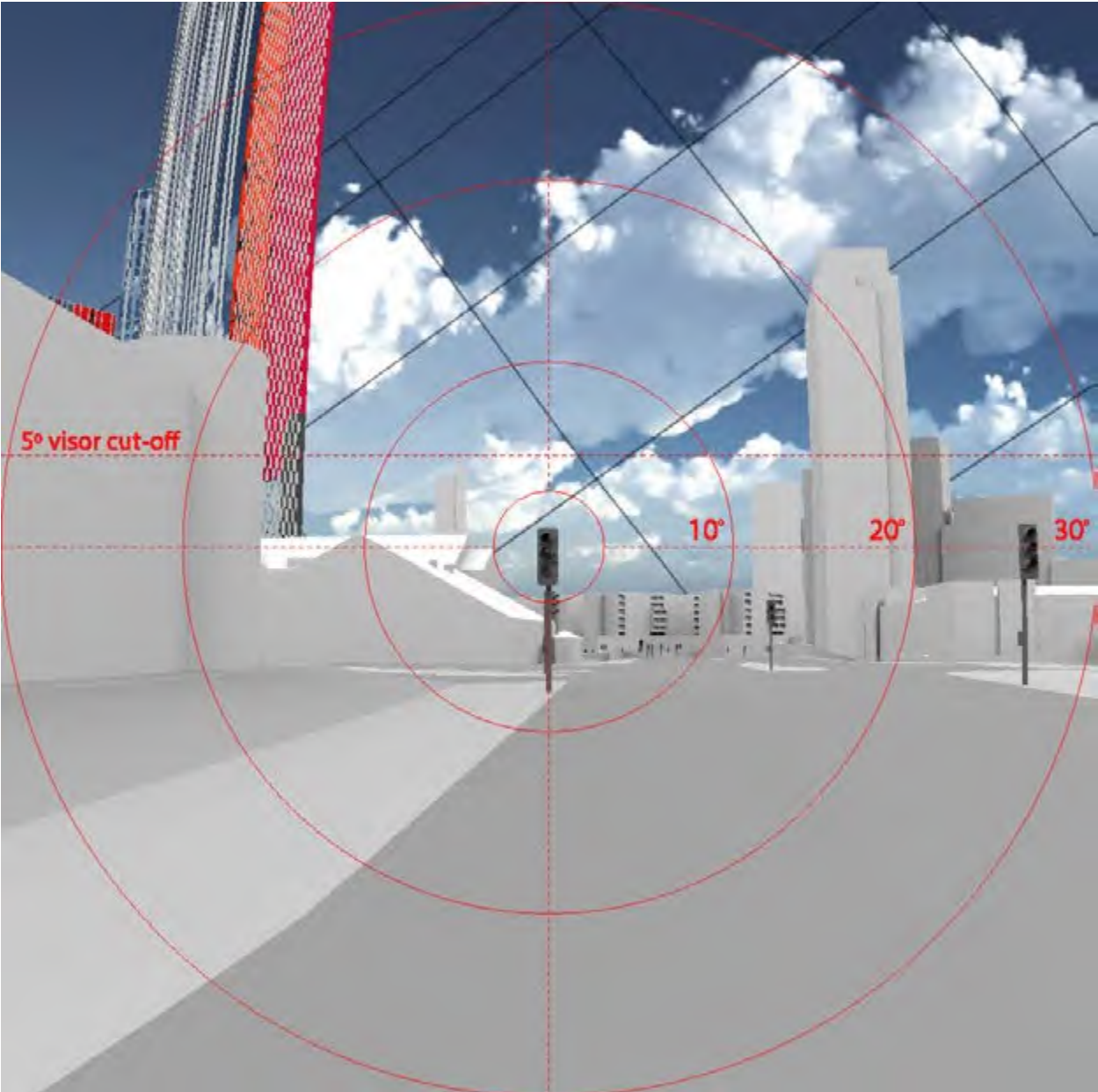


Fig. 274: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

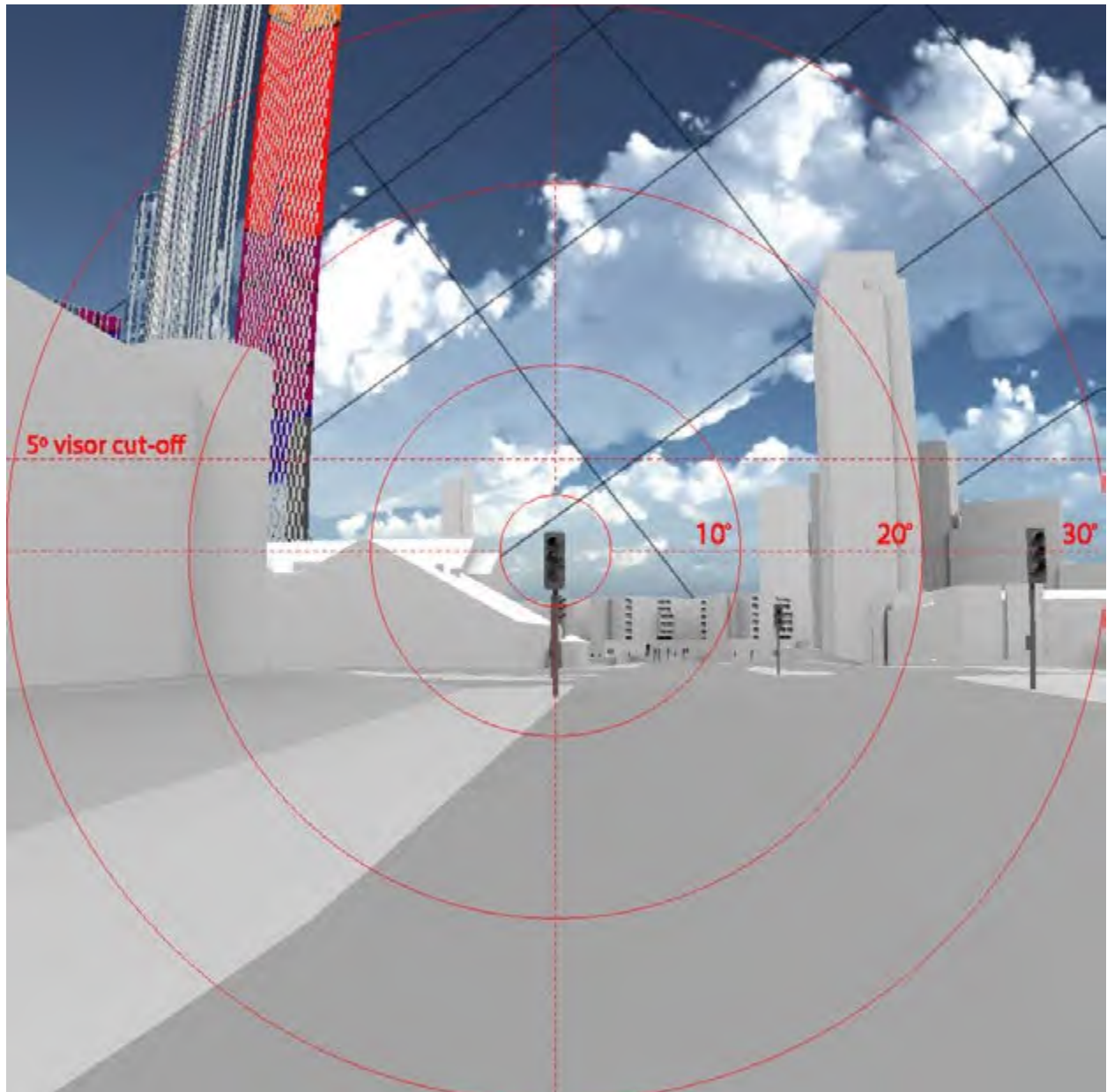


Fig. 275: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

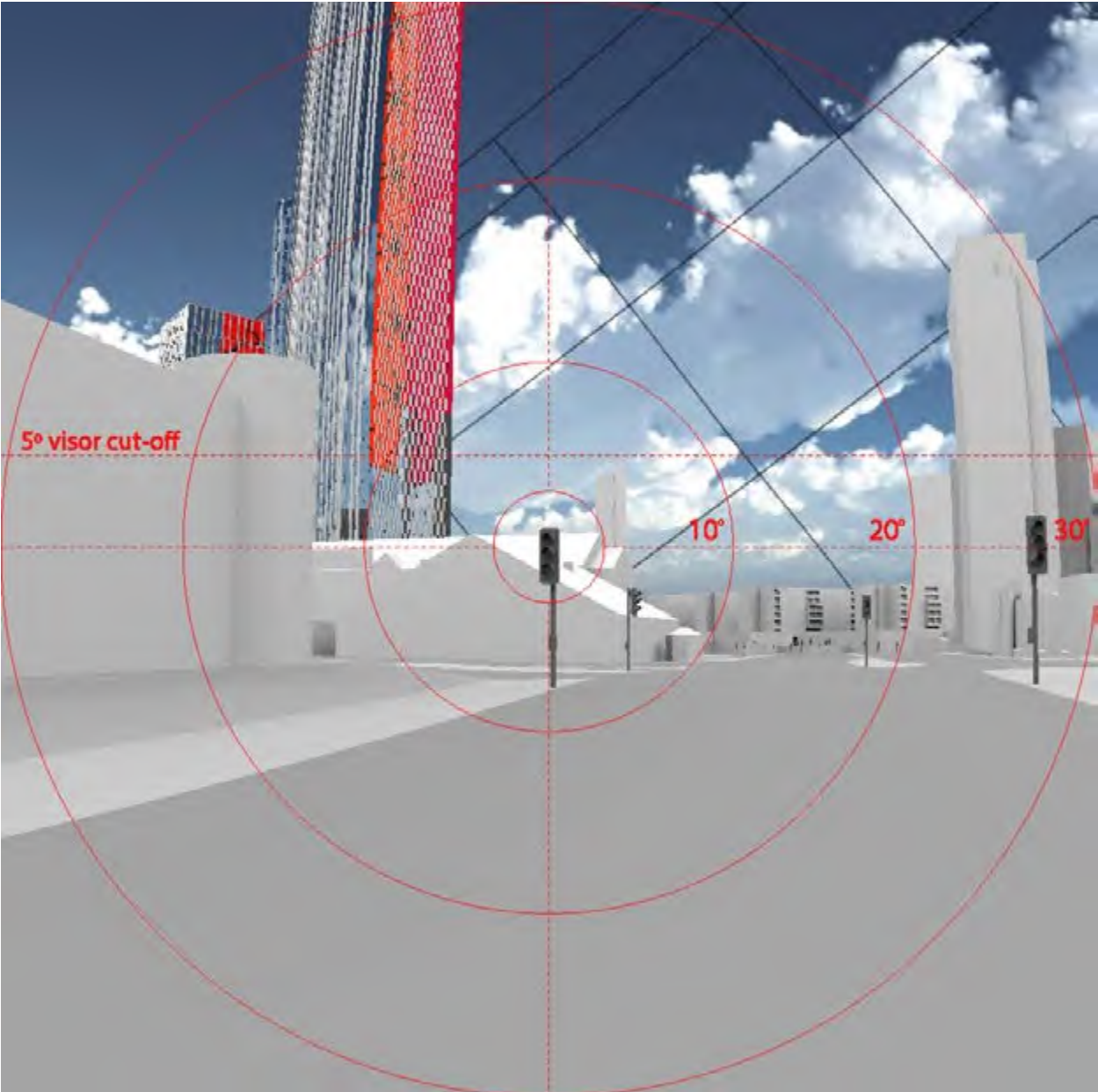


Fig. 276: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

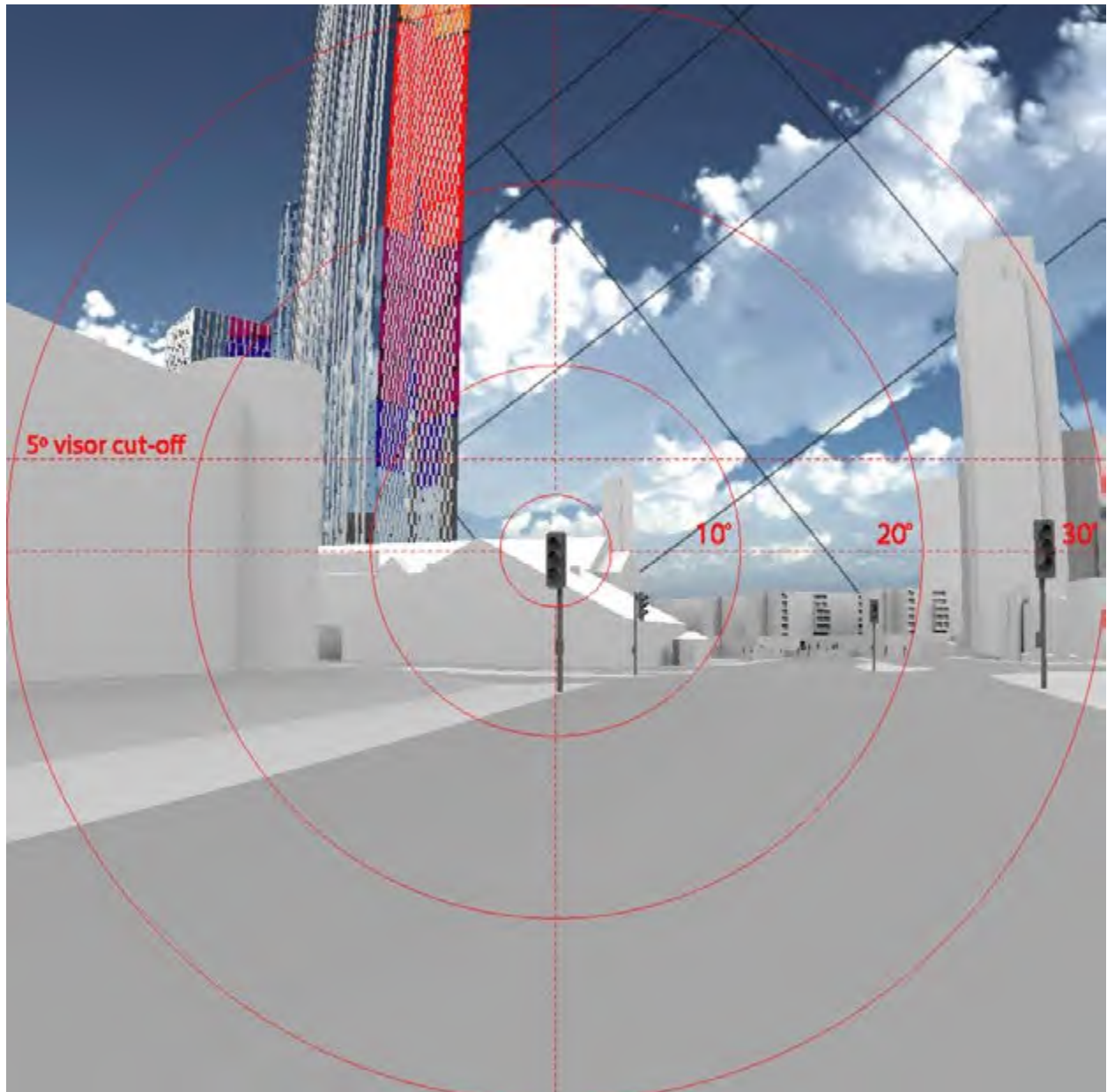


Fig. 277: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2C - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

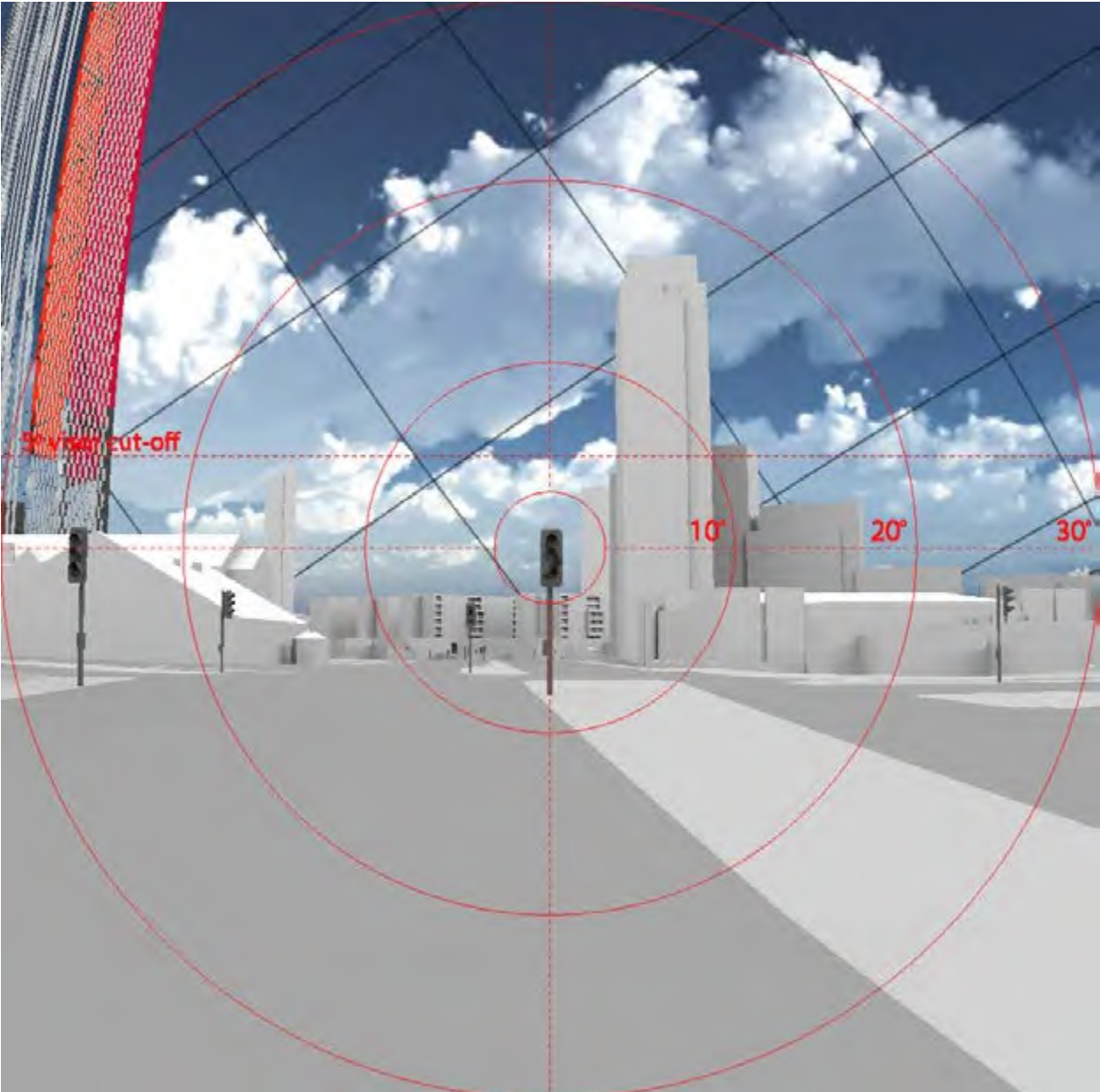


Fig. 278: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2C - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

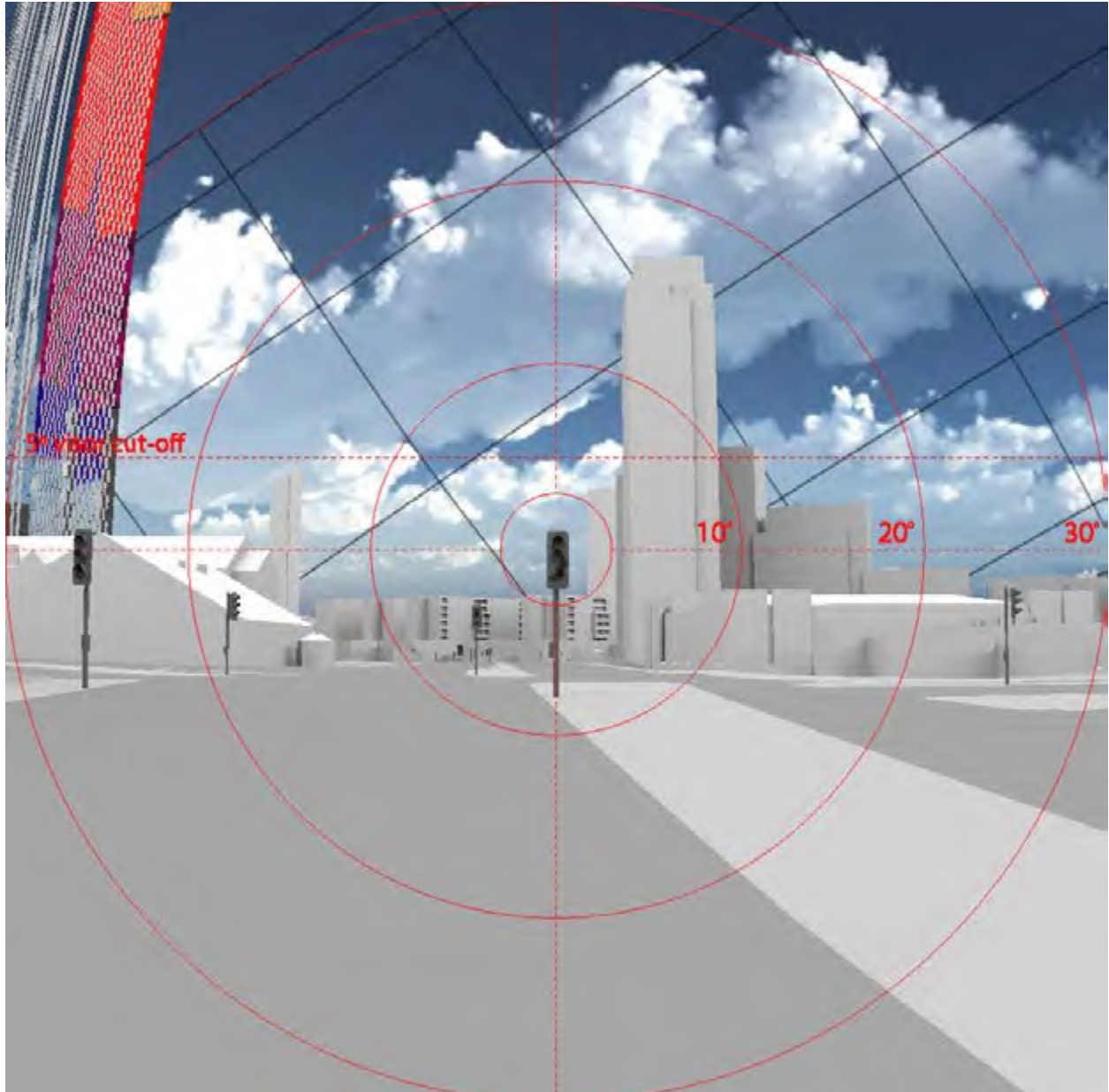


Fig. 279: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT

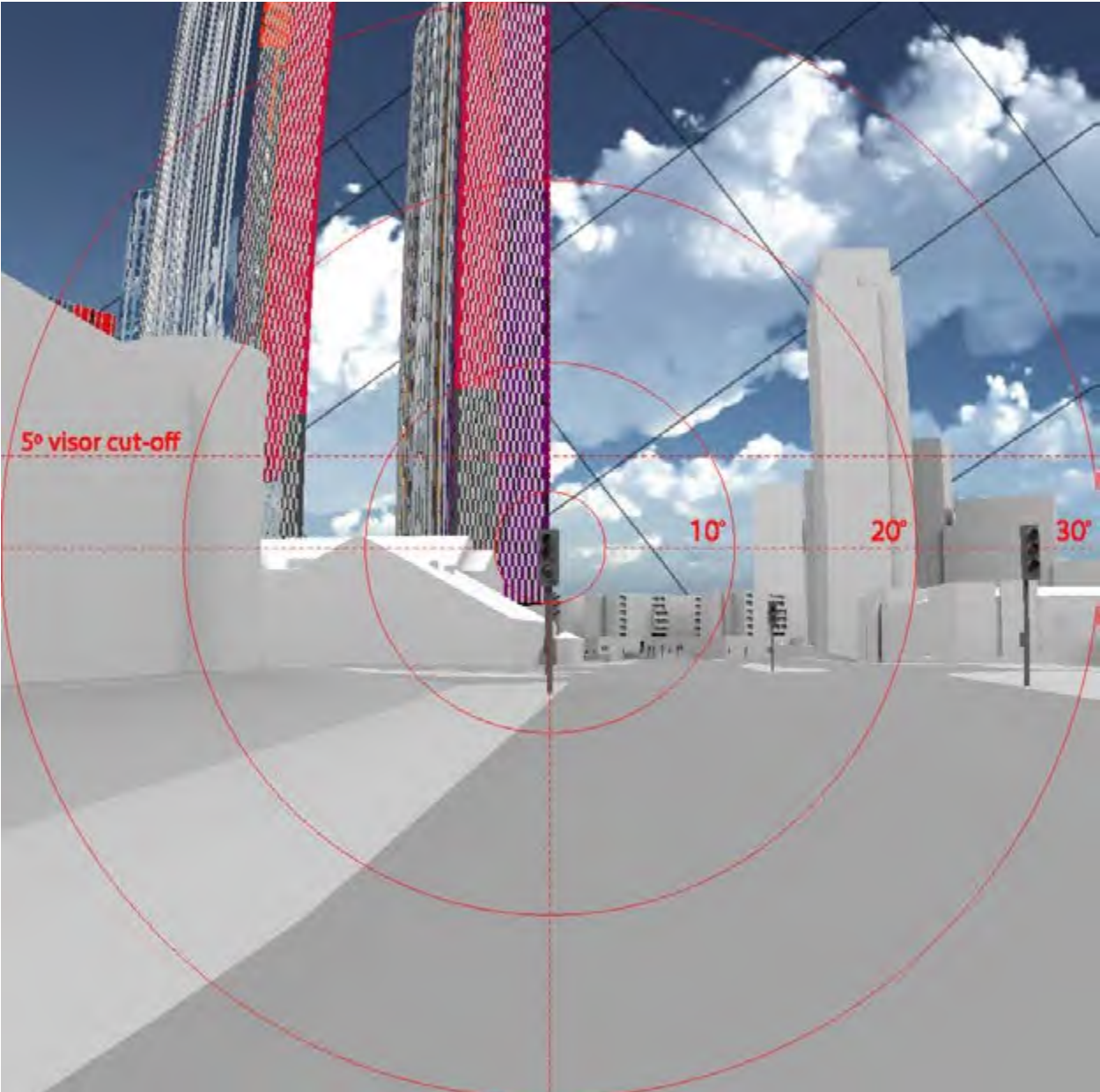
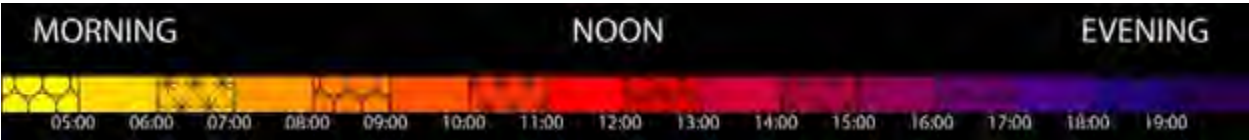


Fig. 280: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2A - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
LEFT LANE, LOOKING AT LEFT TRAFFIC LIGHT**

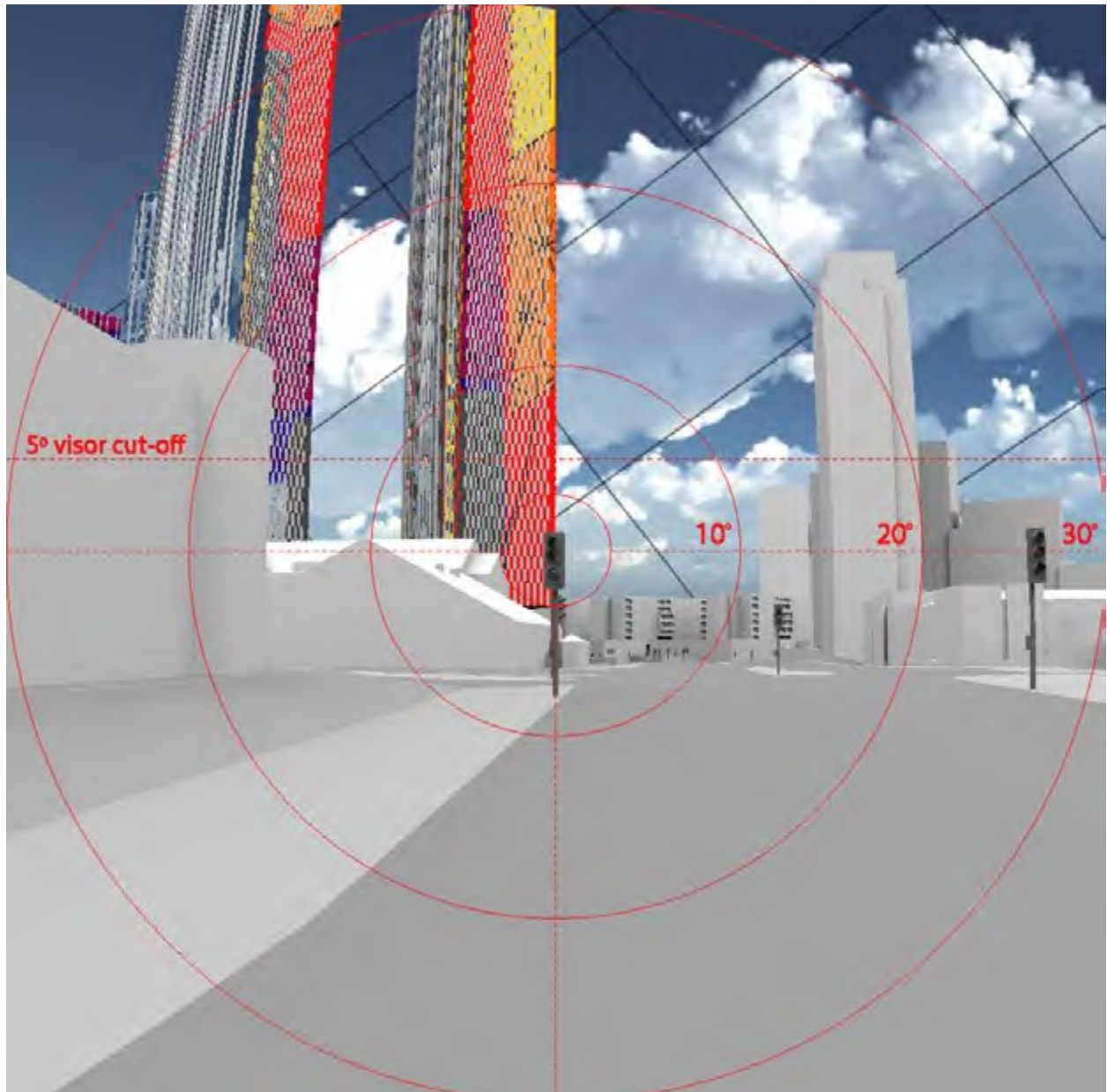


Fig. 281: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT

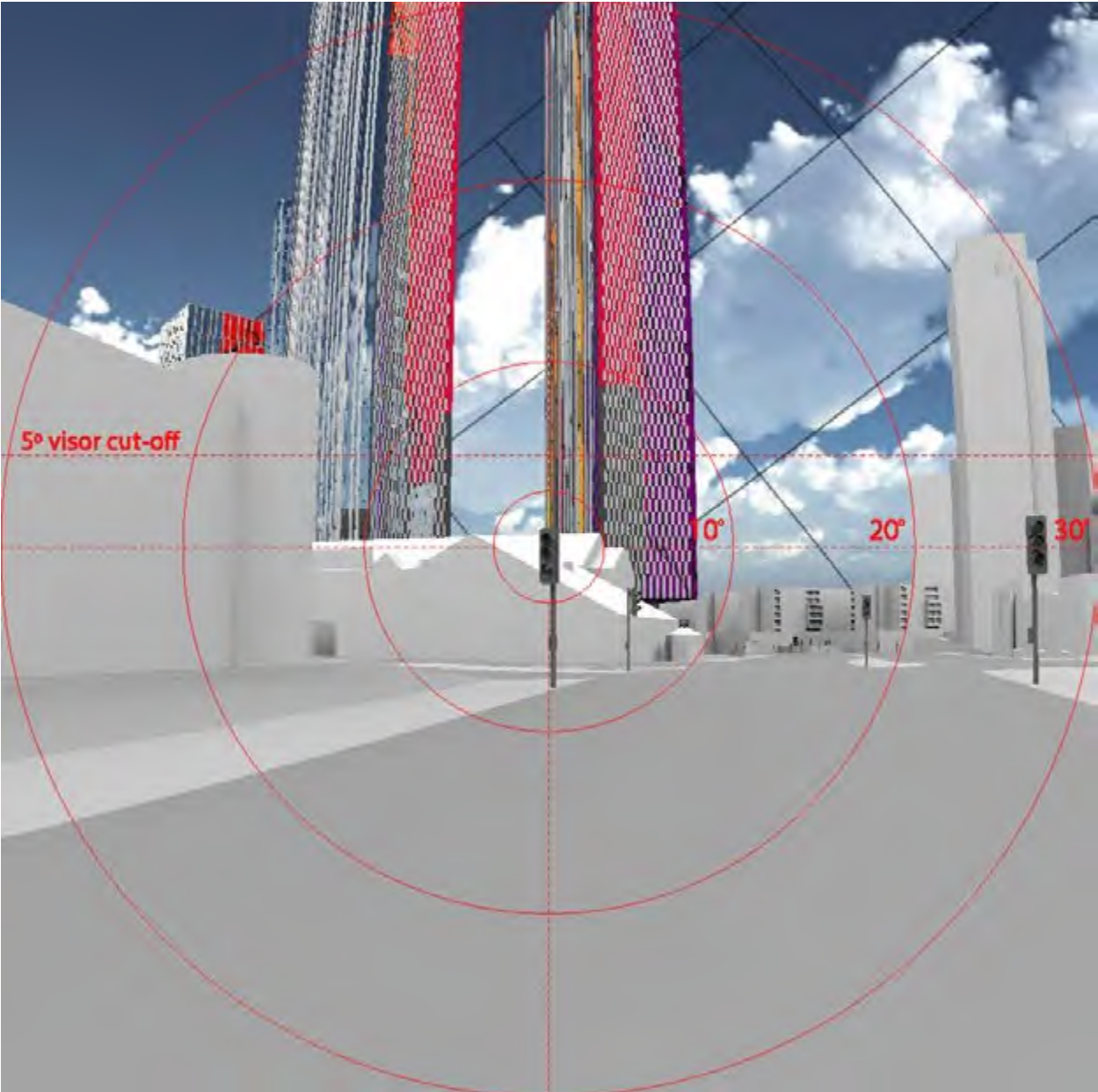


Fig. 282: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RR2B - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
CENTRAL LANE, LOOKING AT LEFT TRAFFIC LIGHT**

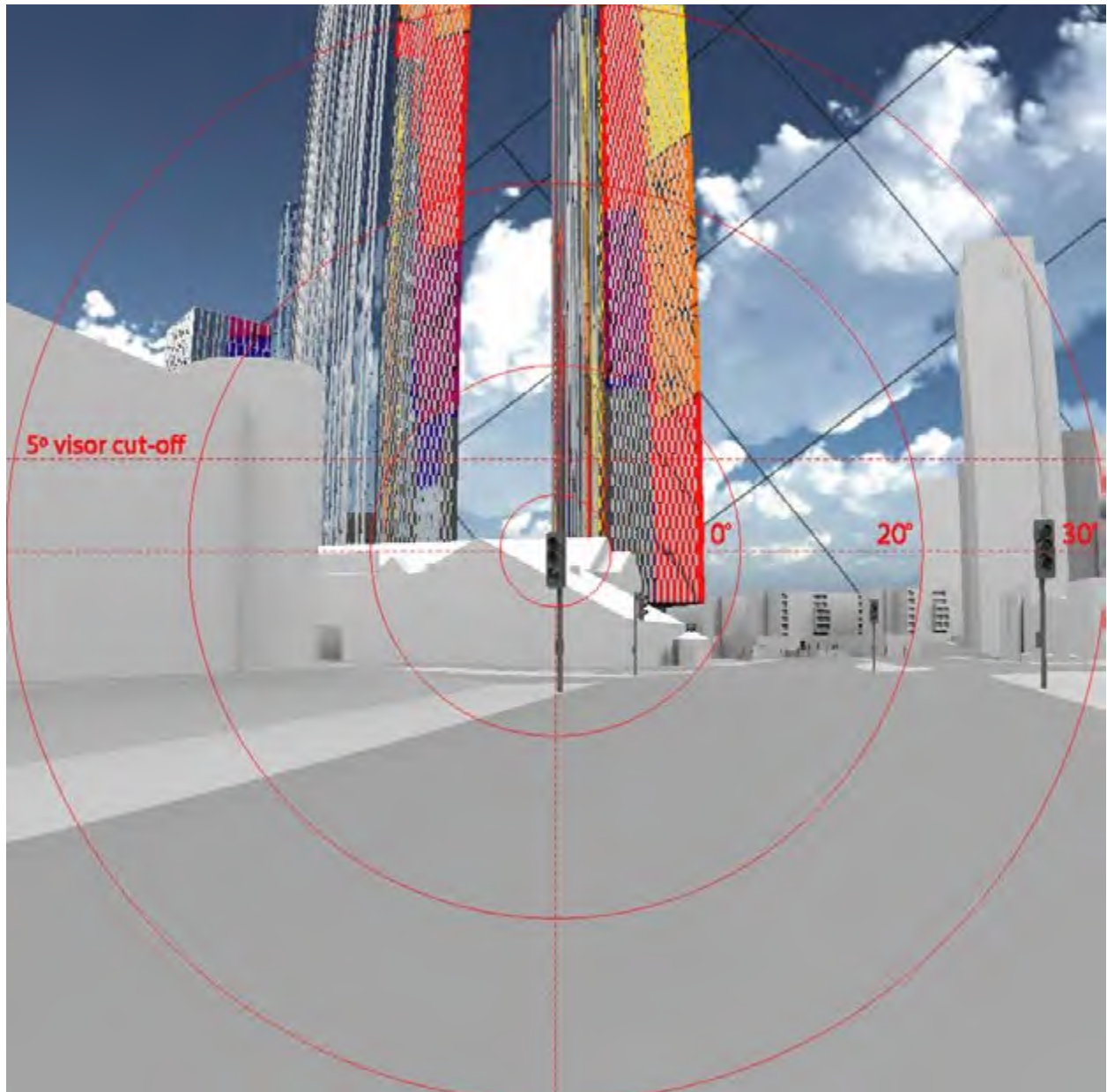


Fig. 283: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RR2C - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

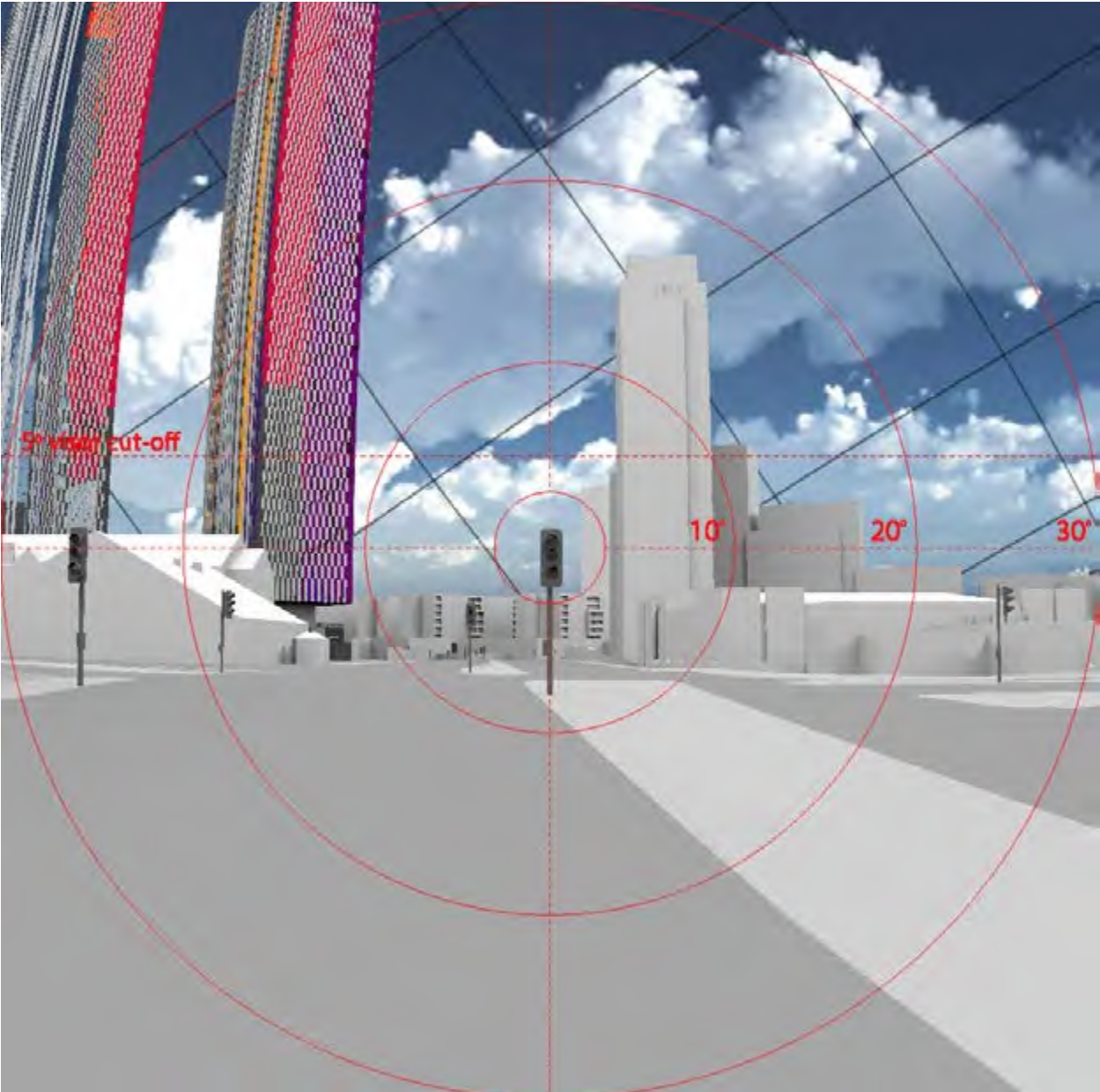


Fig. 284: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RR2C - REGENT ROAD JUNCTION (WITH ORDSALL LANE)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

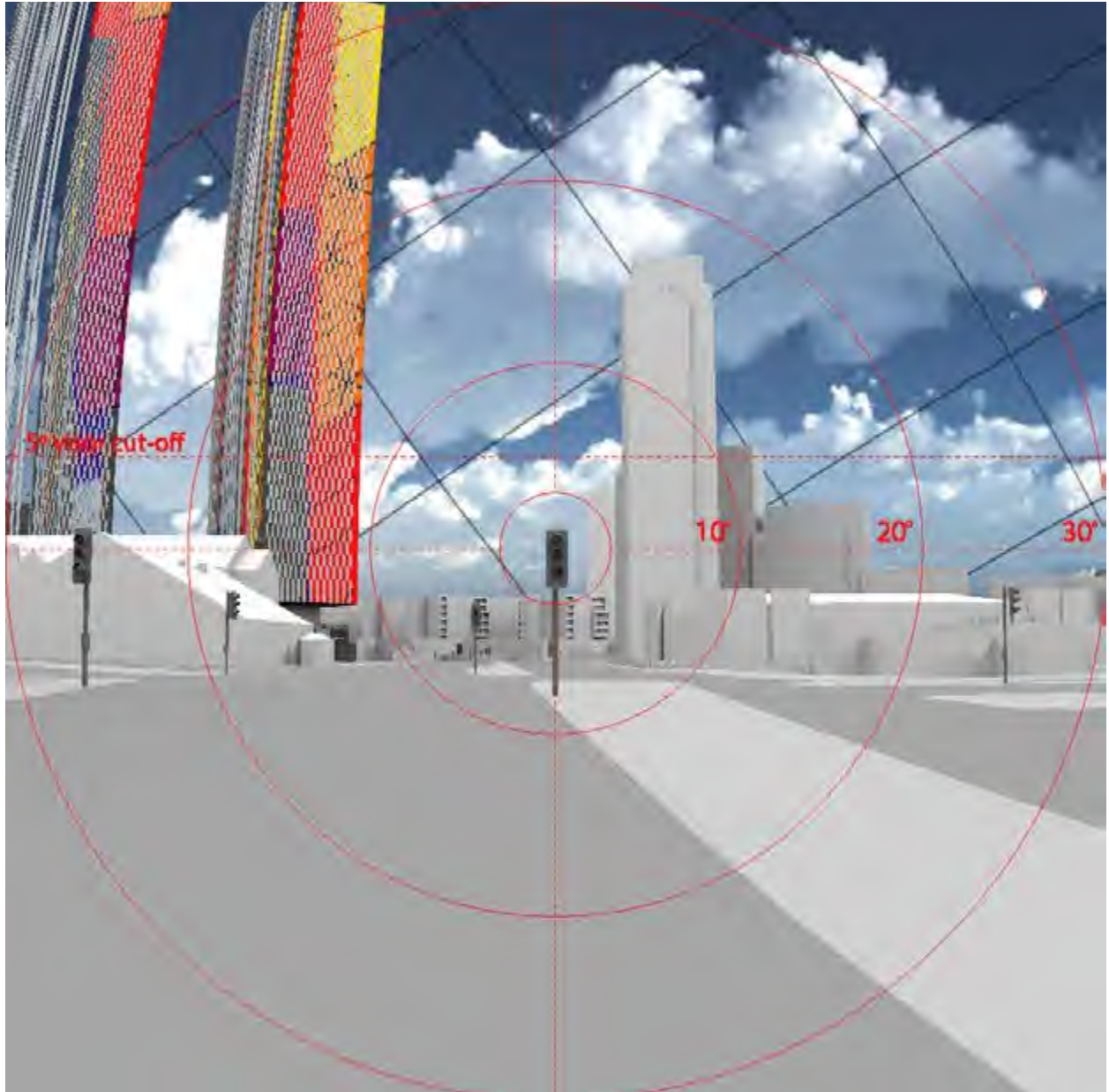


Fig. 285: Solar reflections



24 **SOLAR GLARE ASSESSMENT**
OS - ORDSALL LANE

OS - Orsdall Lane Northbound Junction (with Regent Road)



Fig. 286: Junction Location

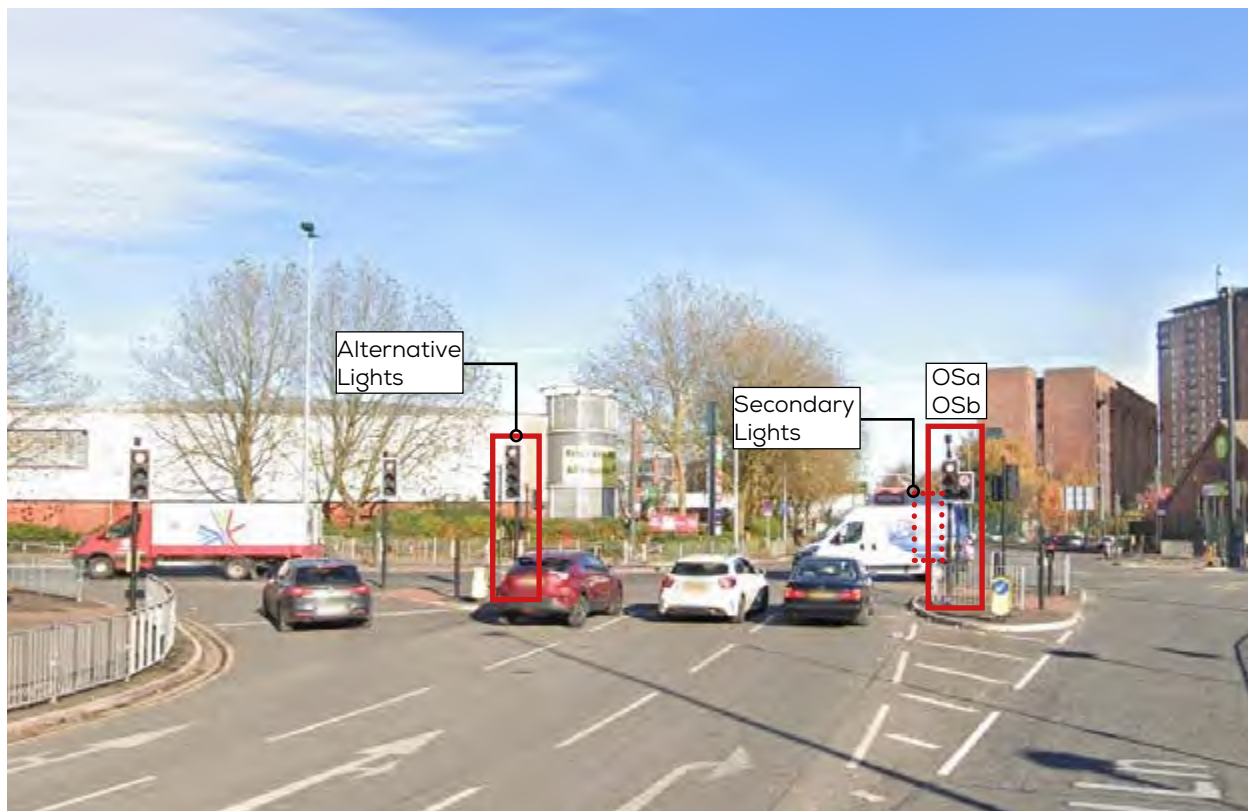


Fig. 287: Traffic Light Location

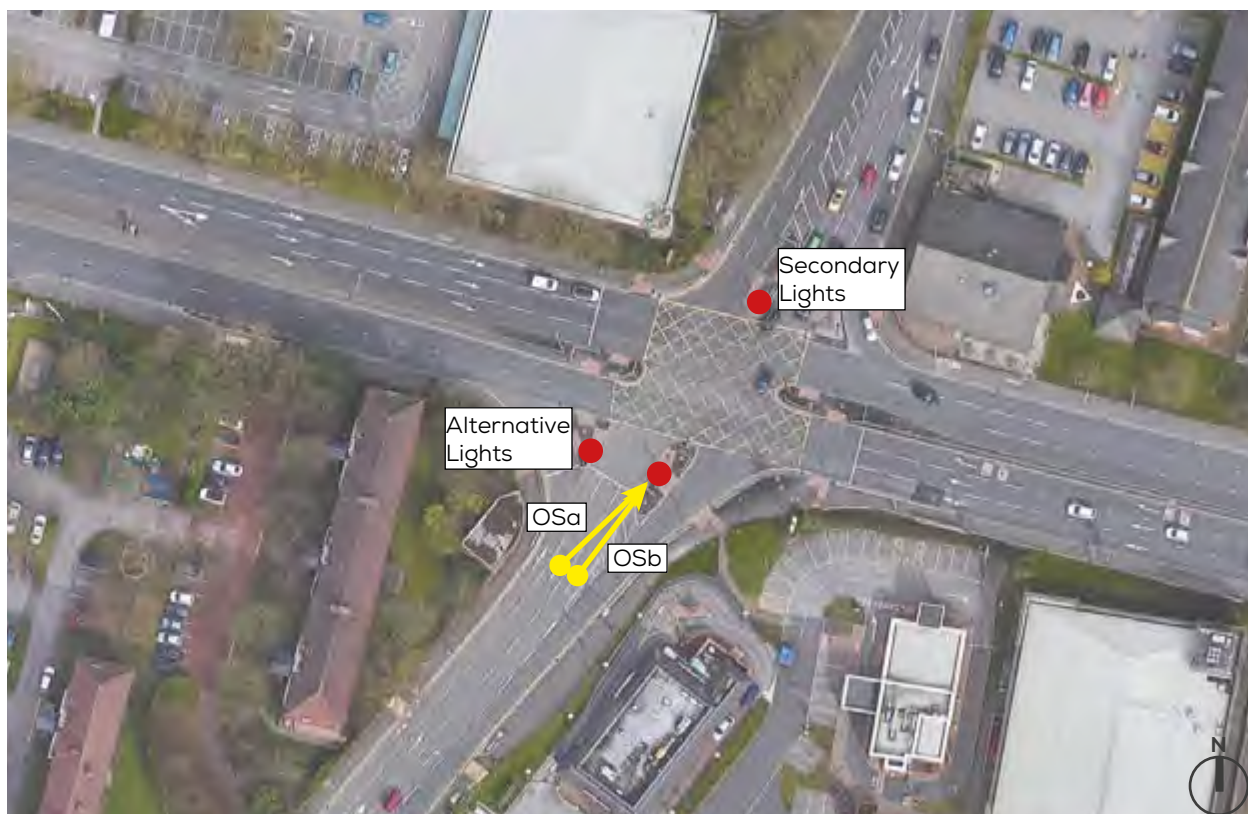


Fig. 288: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

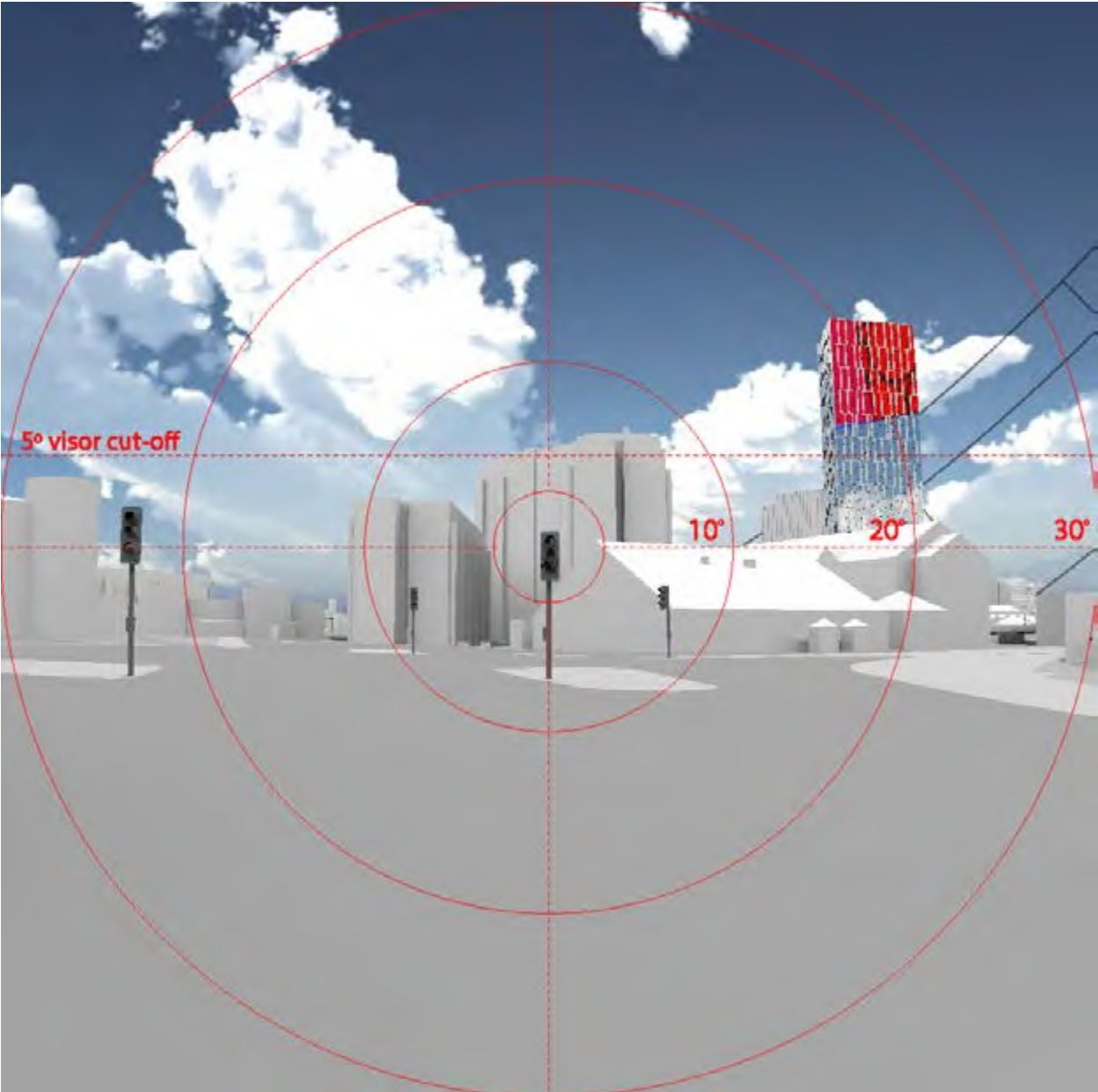


Fig. 289: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

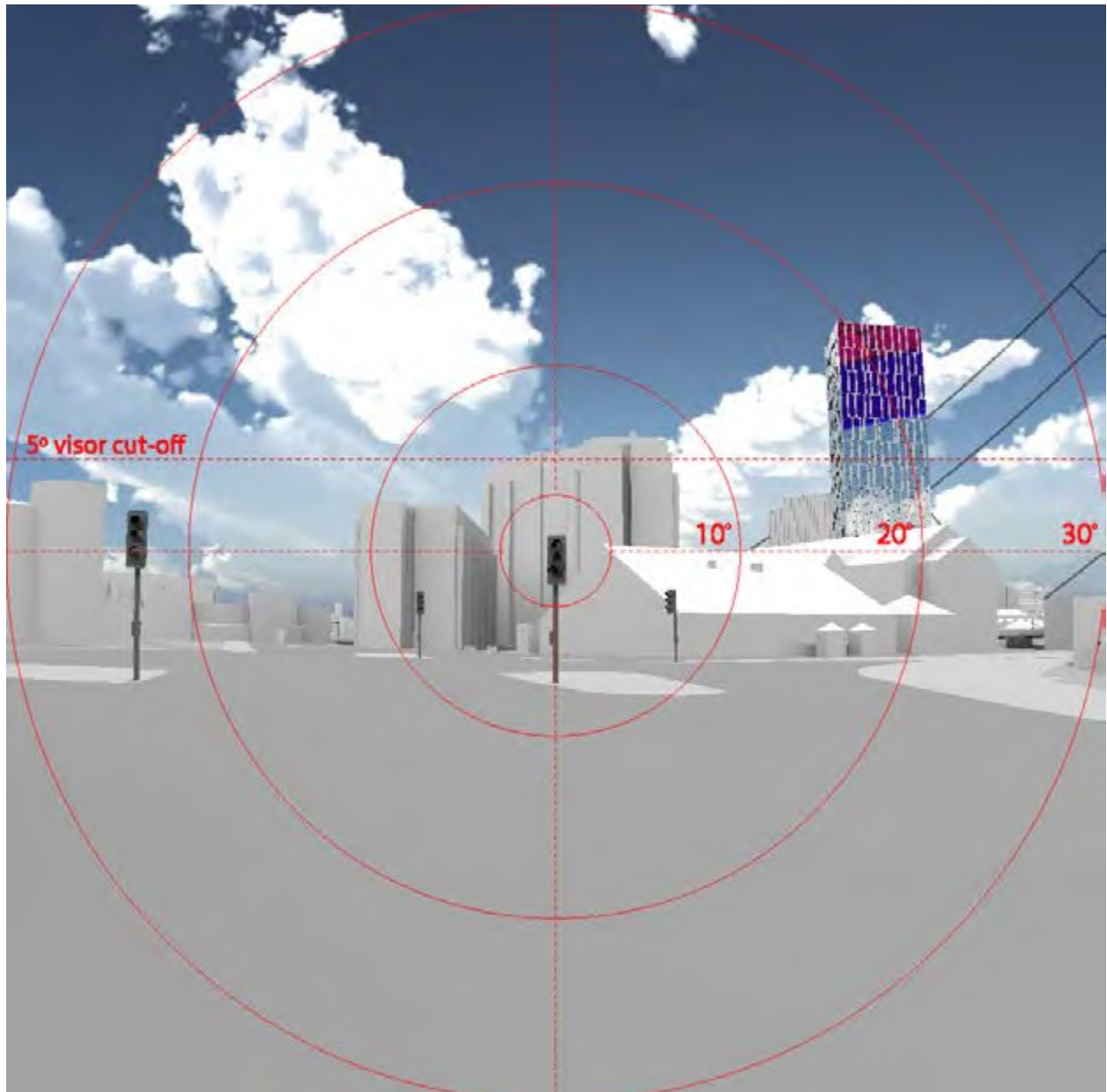


Fig. 290: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

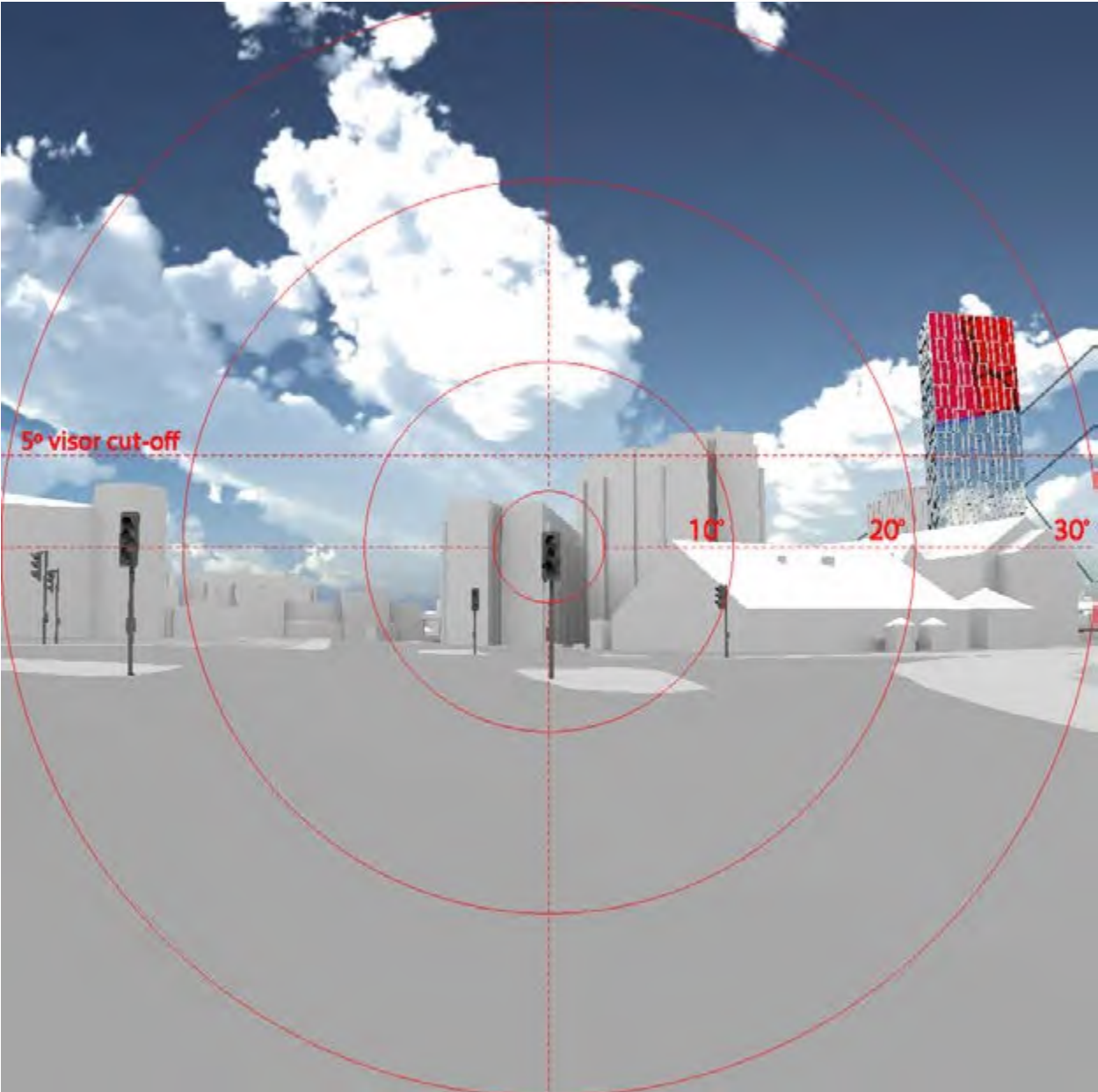


Fig. 291: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

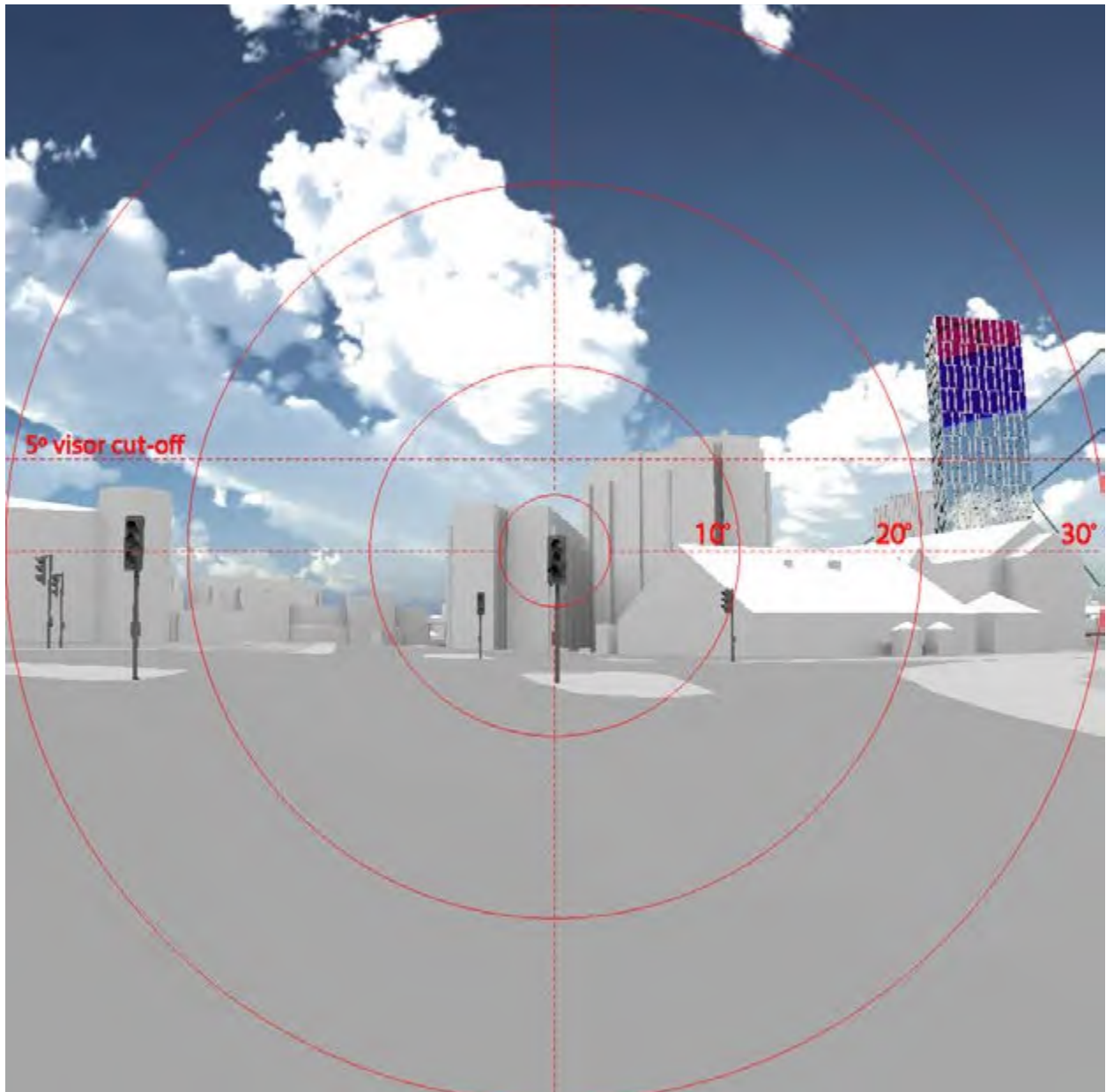


Fig. 292: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

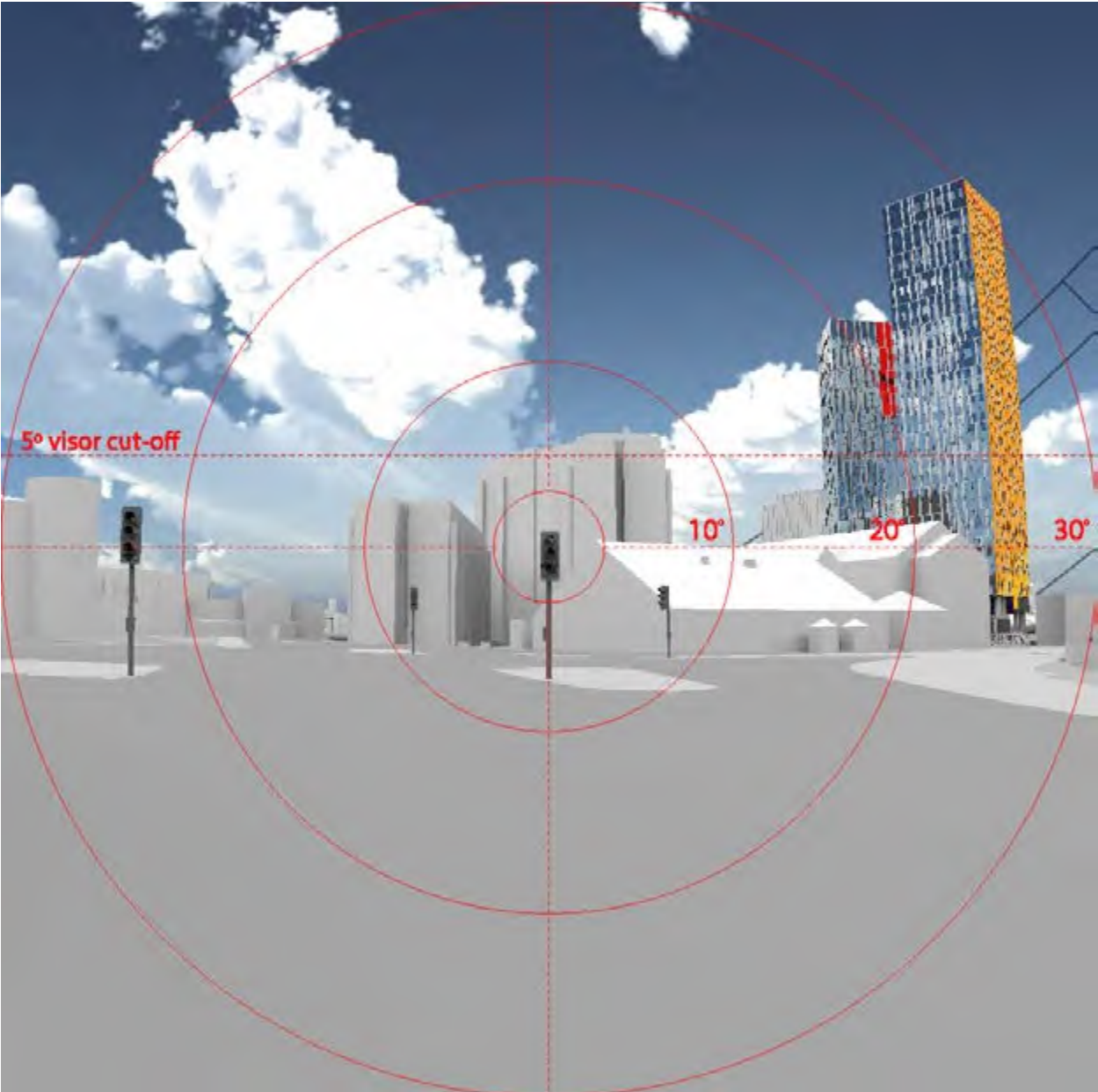


Fig. 293: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

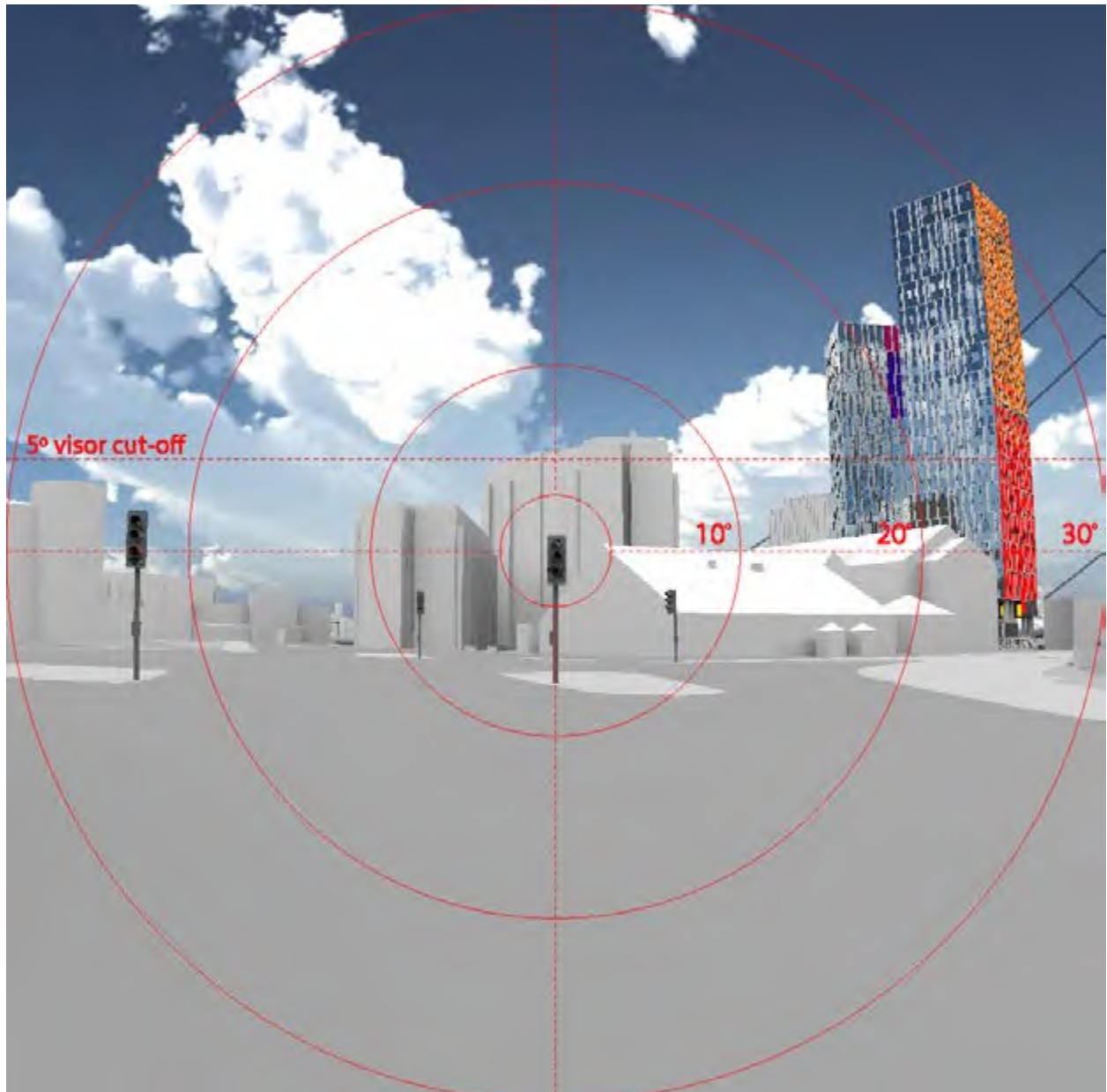


Fig. 294: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

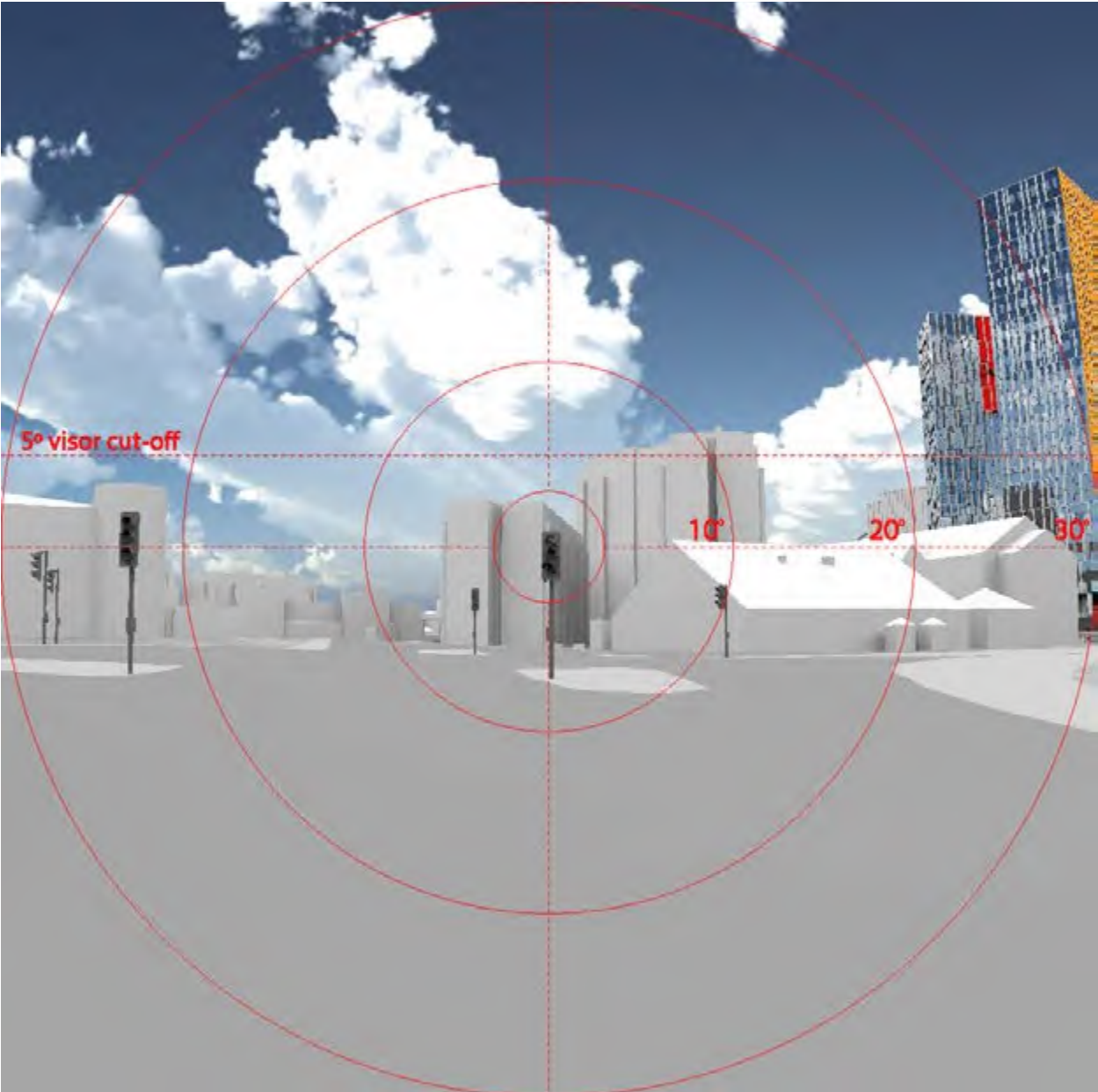


Fig. 295: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

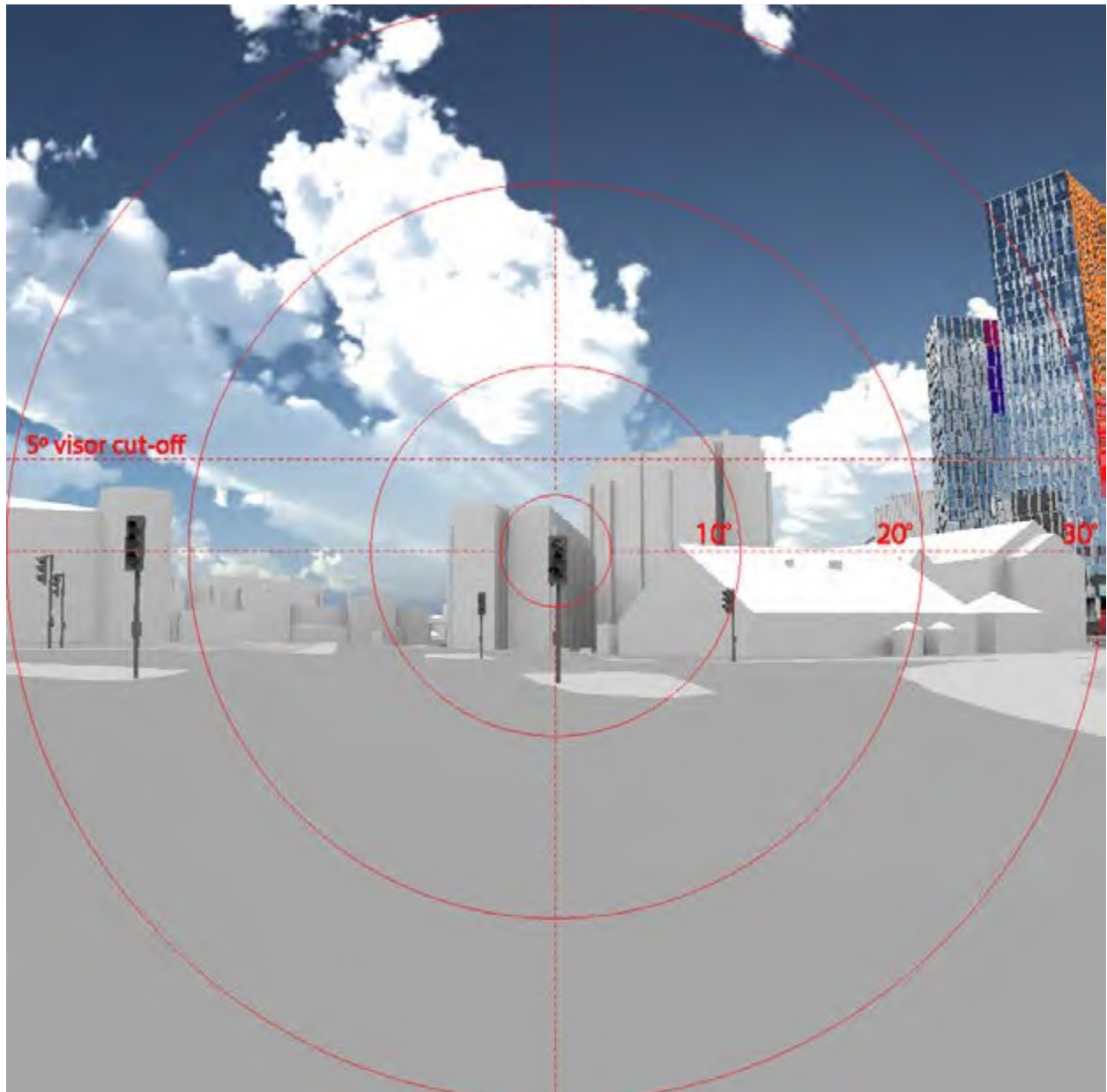


Fig. 296: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

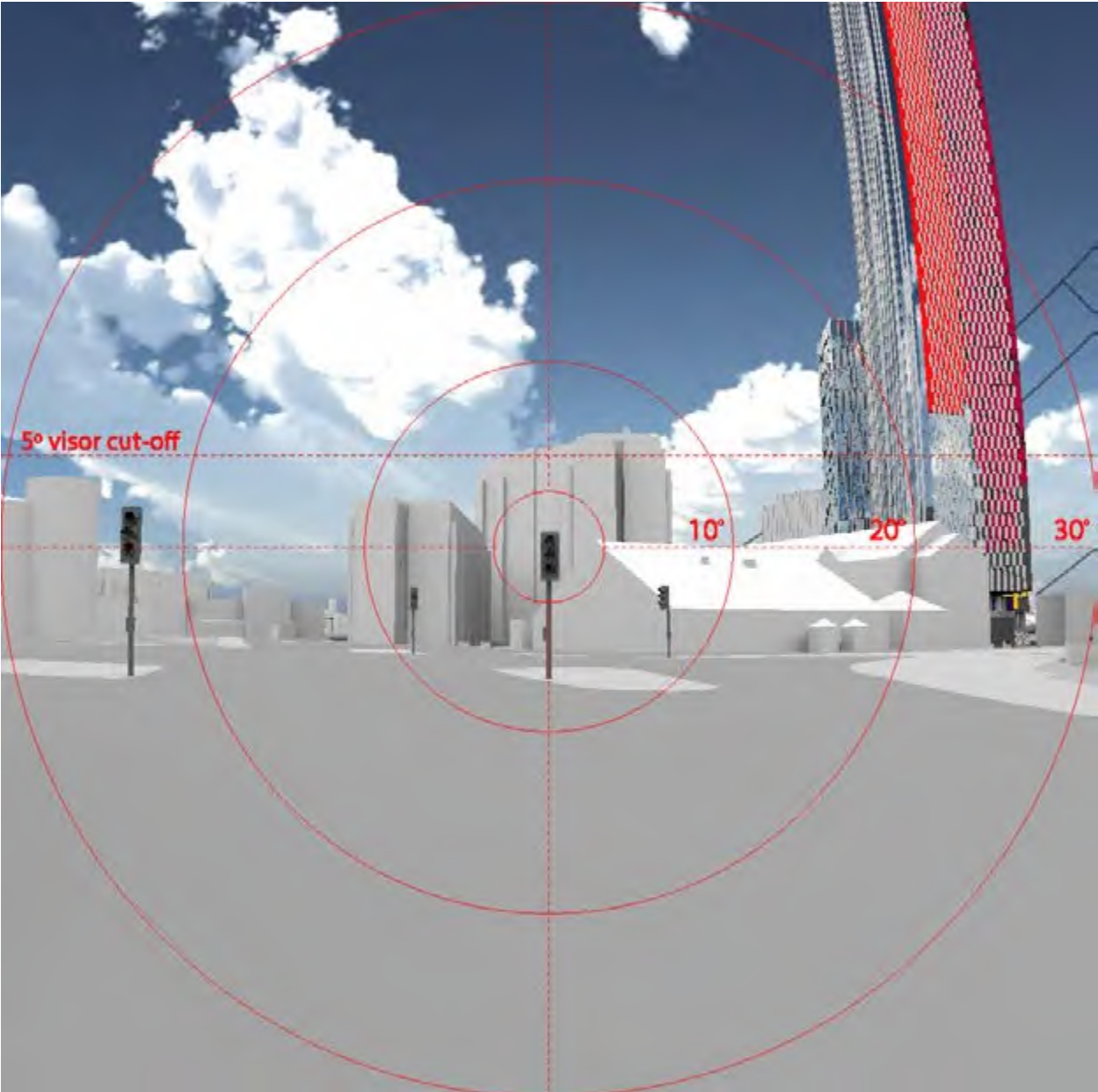


Fig. 297: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

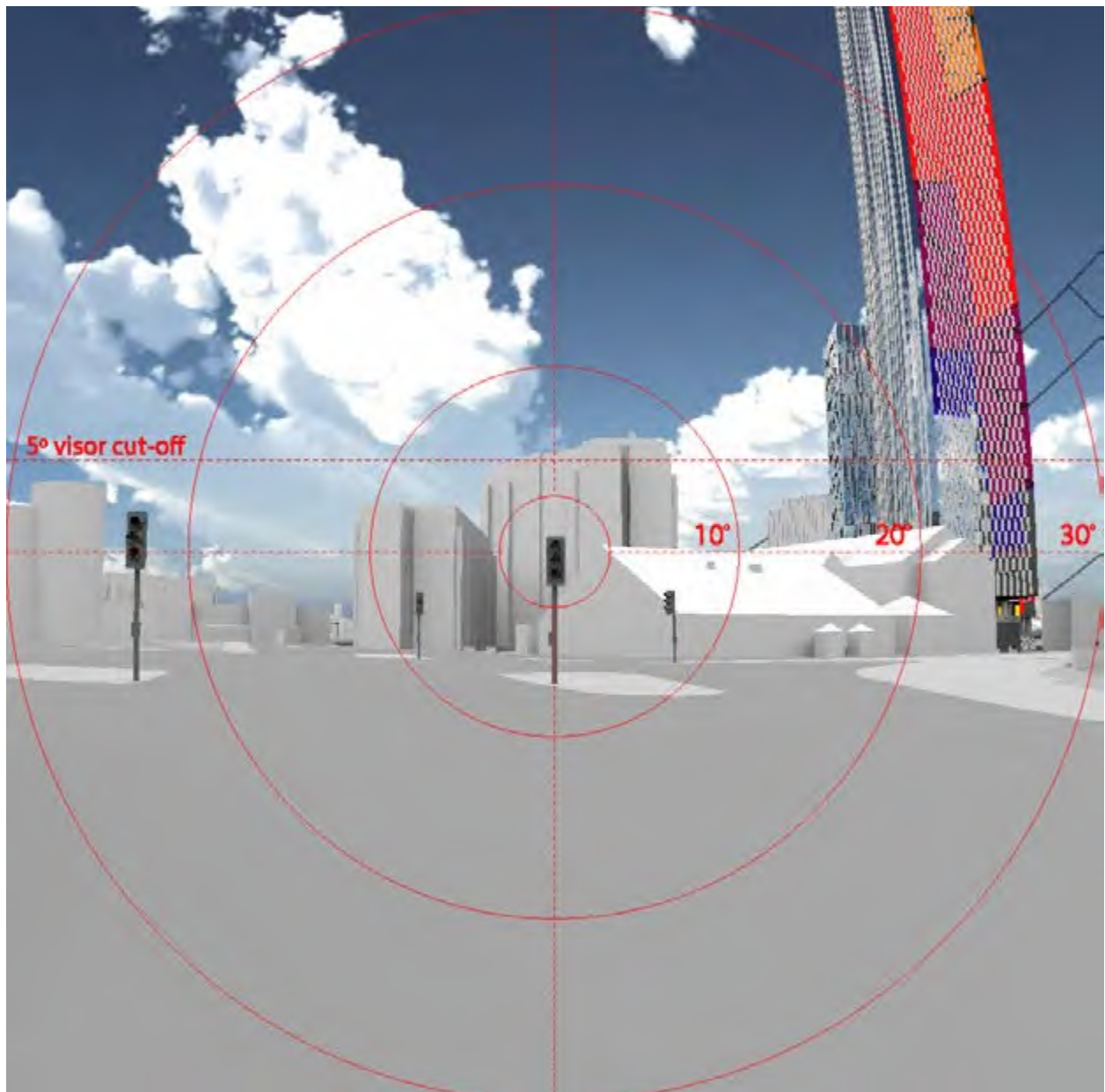


Fig. 298: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

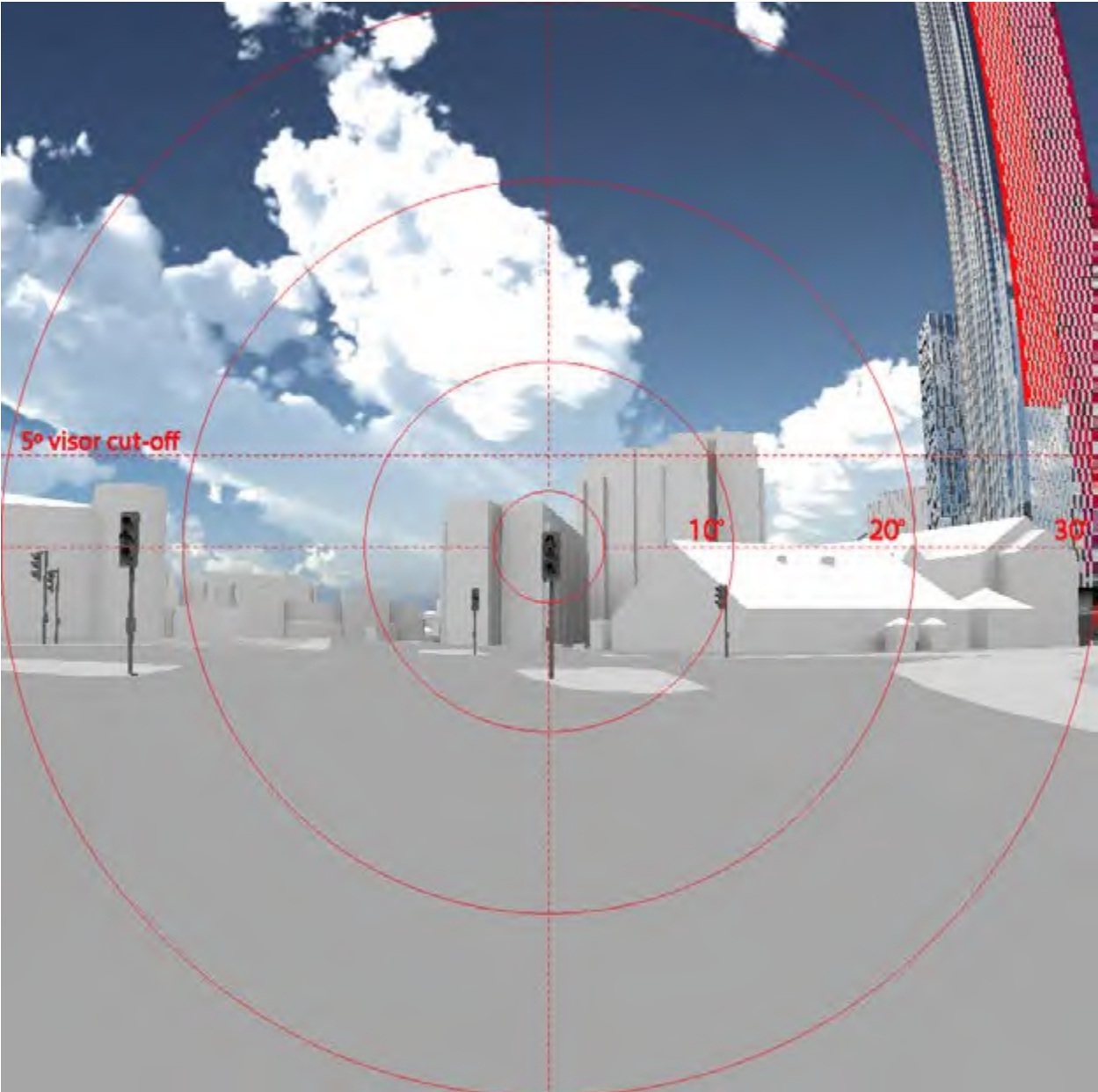


Fig. 299: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

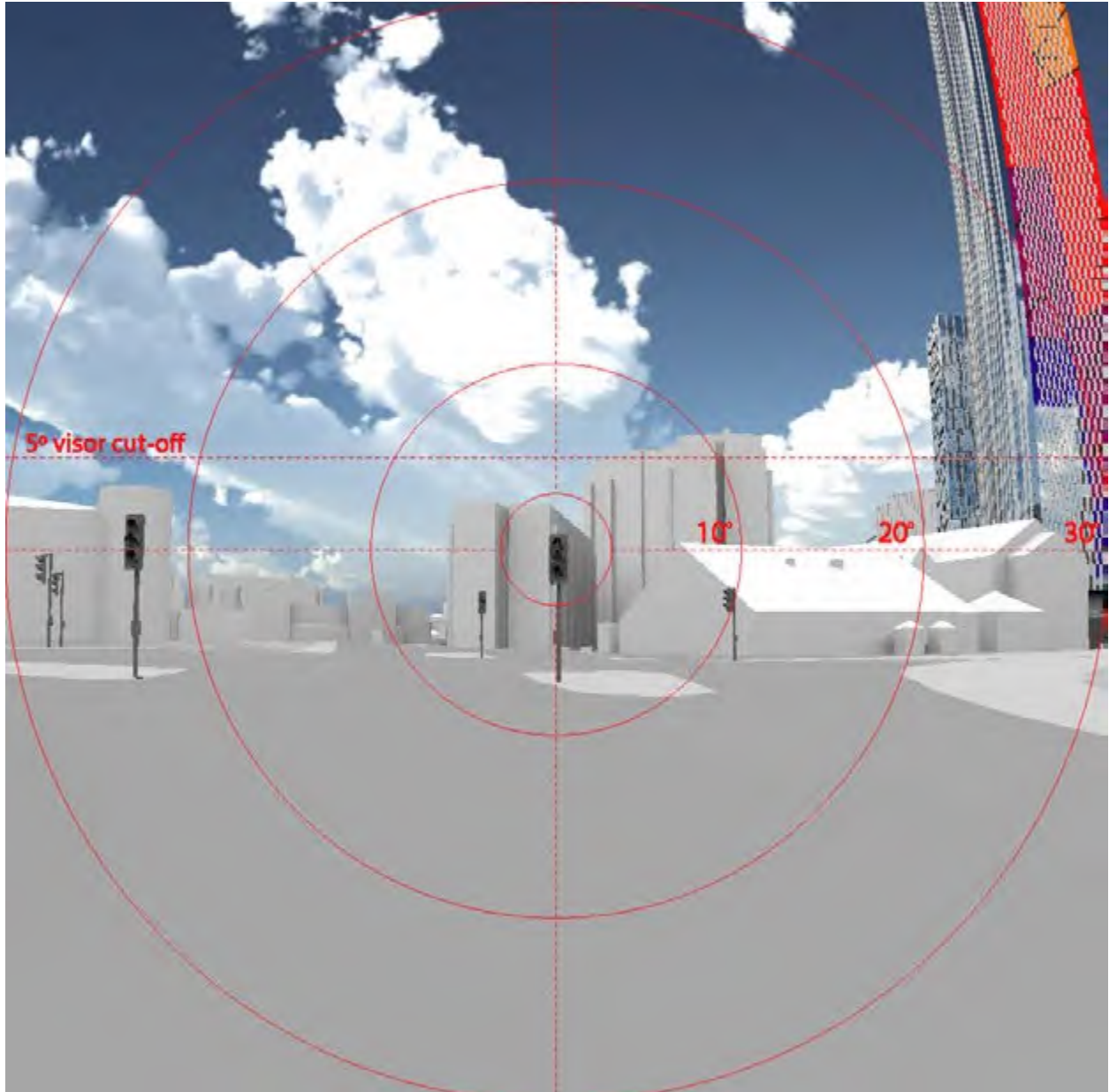


Fig. 300: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

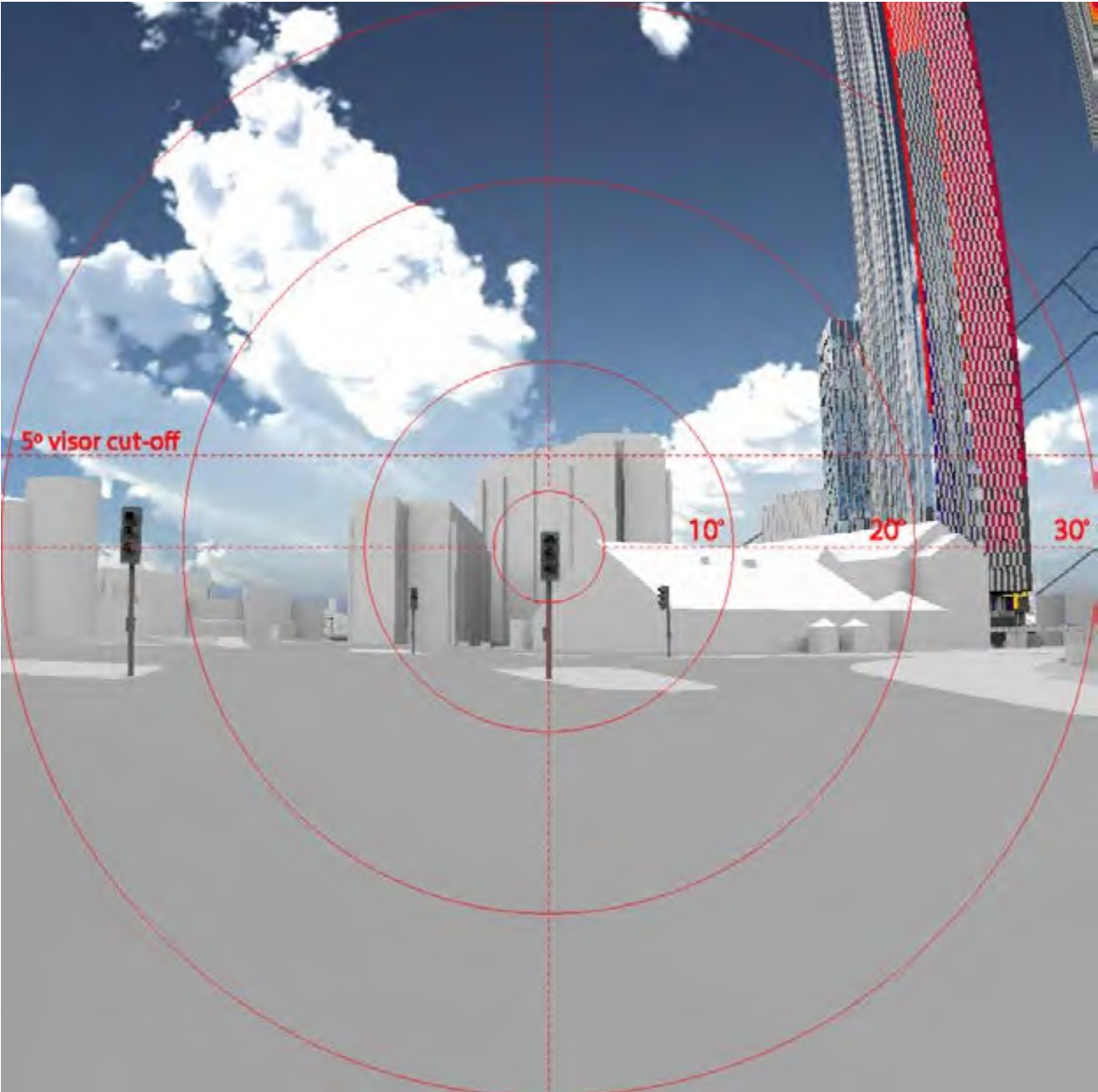


Fig. 301: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT OSA - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
CENTRAL LANE, LOOKING AT RIGHT TRAFFIC LIGHT

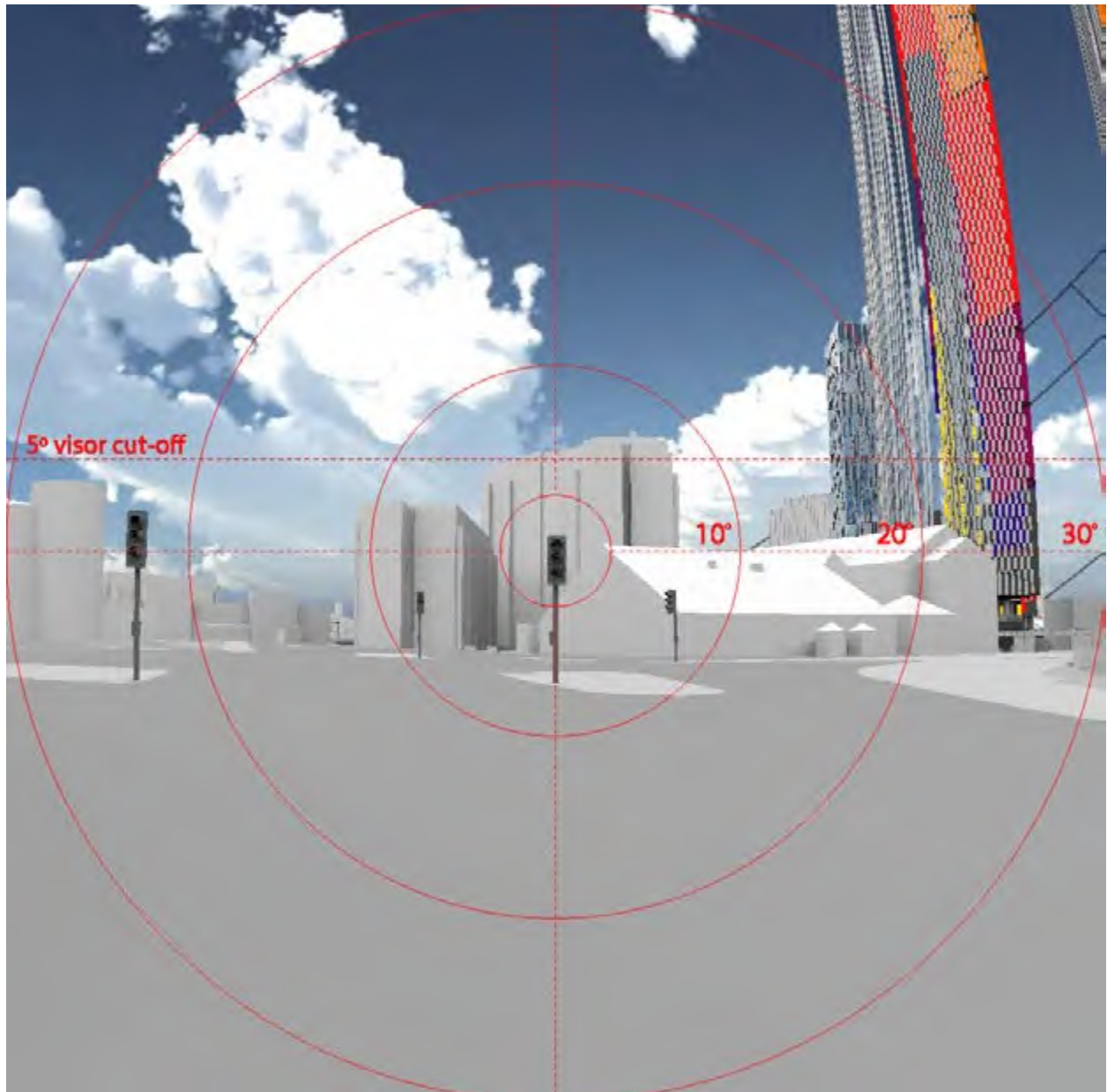


Fig. 302: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT

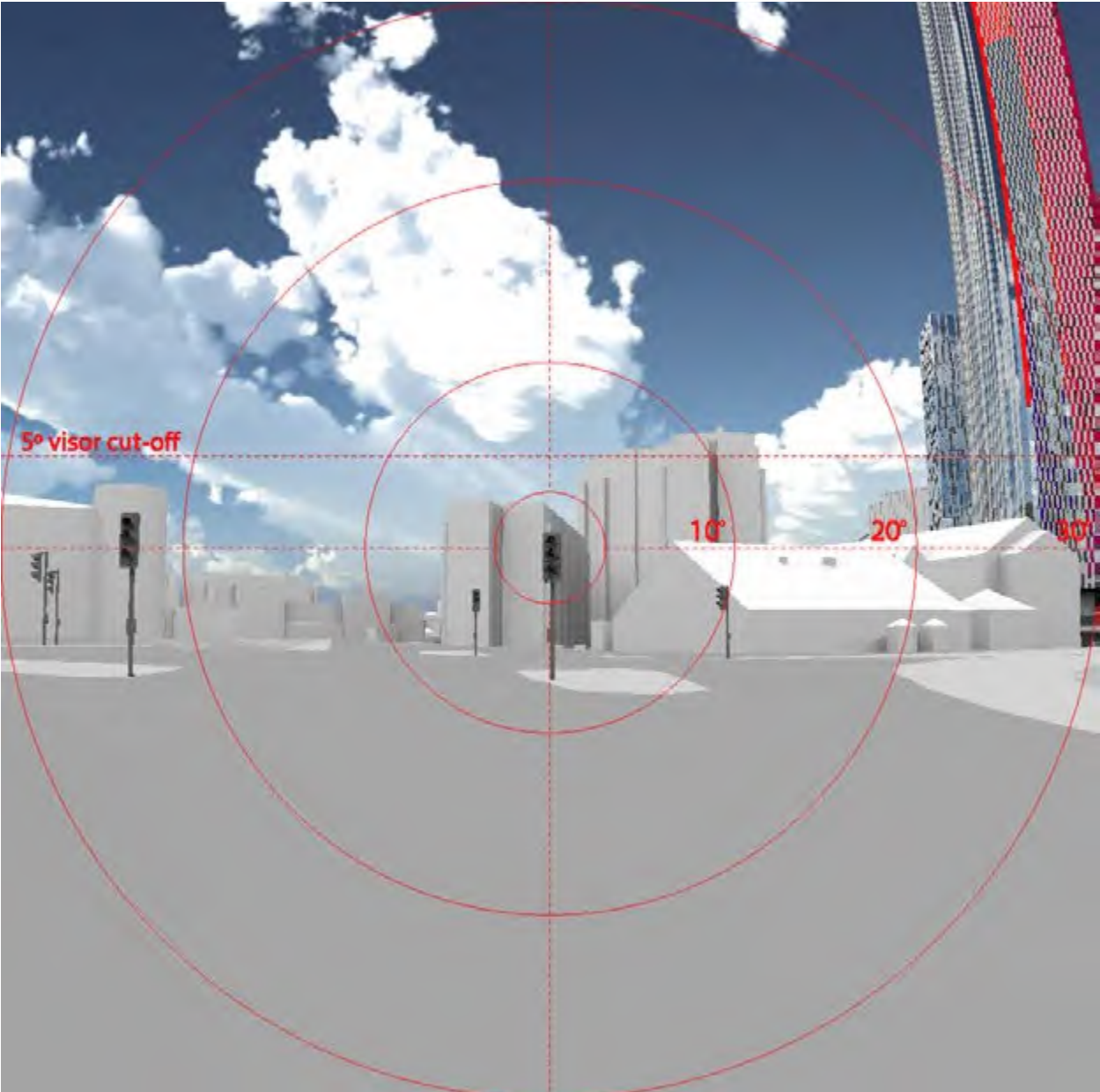
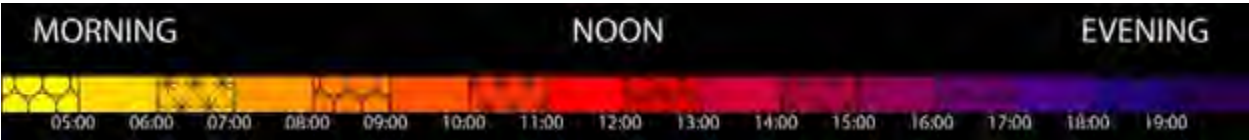


Fig. 303: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT OSB - ORDSALL LANE JUNCTION (WITH REGENT ROAD)
RIGHT LANE, LOOKING AT RIGHT TRAFFIC LIGHT**

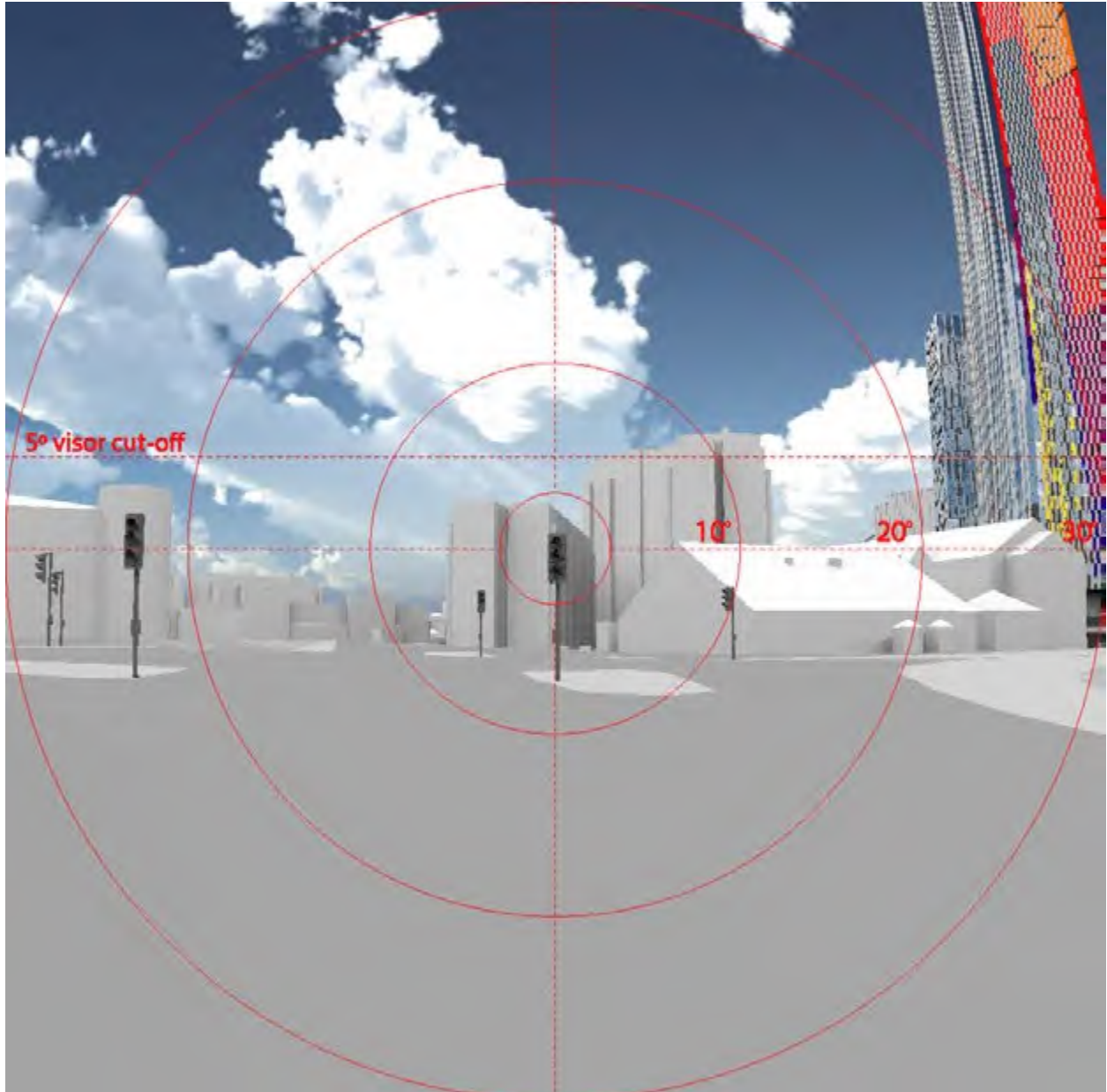


Fig. 304: Solar reflections



25 **SOLAR GLARE ASSESSMENT**
RP1 - REGENT RETAIL PARK 1

RP1 - Regent Retail Park Eastbound Pedestrian Crossing



Fig. 305: Junction Location



Fig. 306: Junction view



Fig. 307: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAGHT

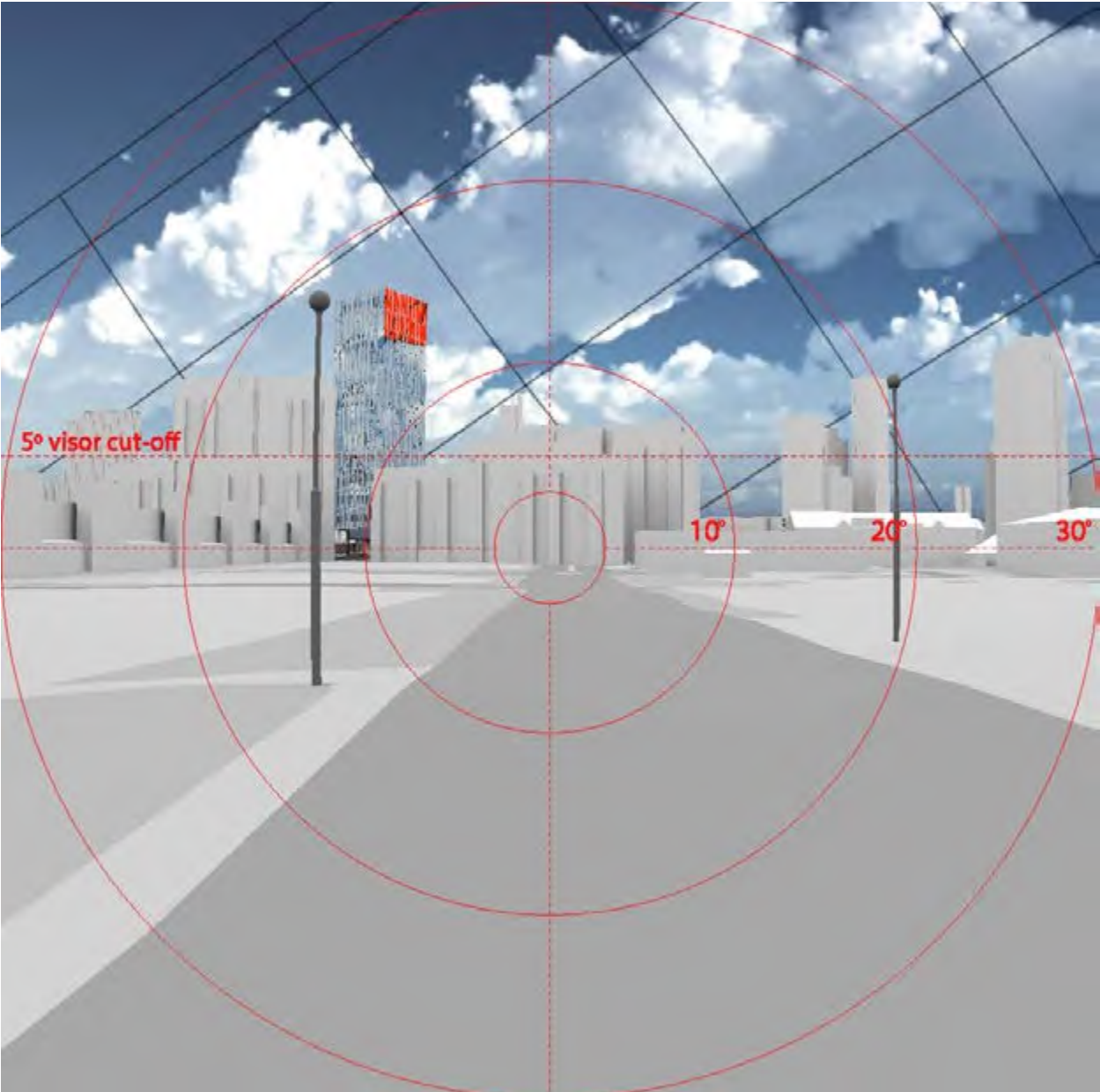


Fig. 308: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAIGHT**

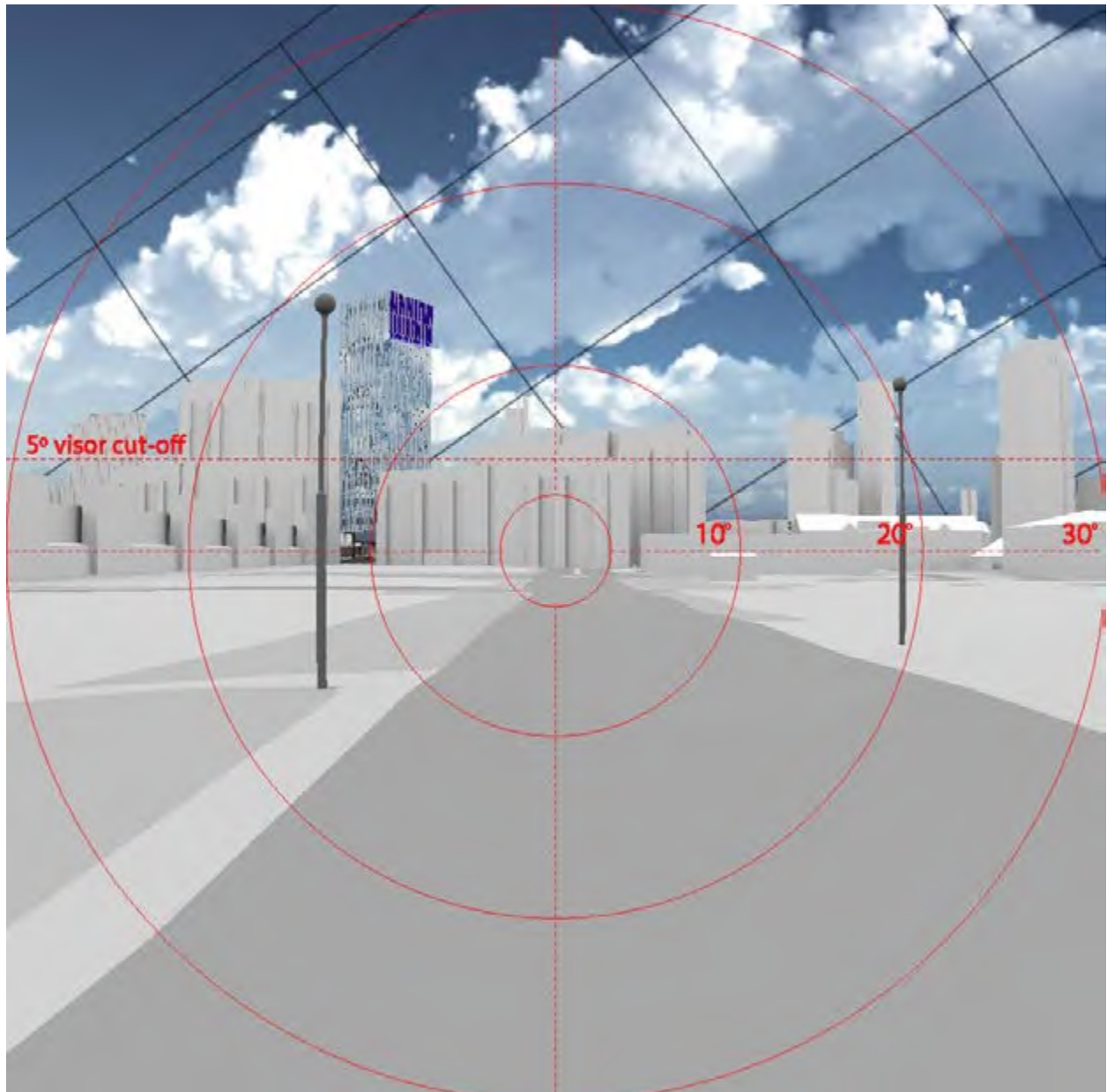


Fig. 309: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAGHT

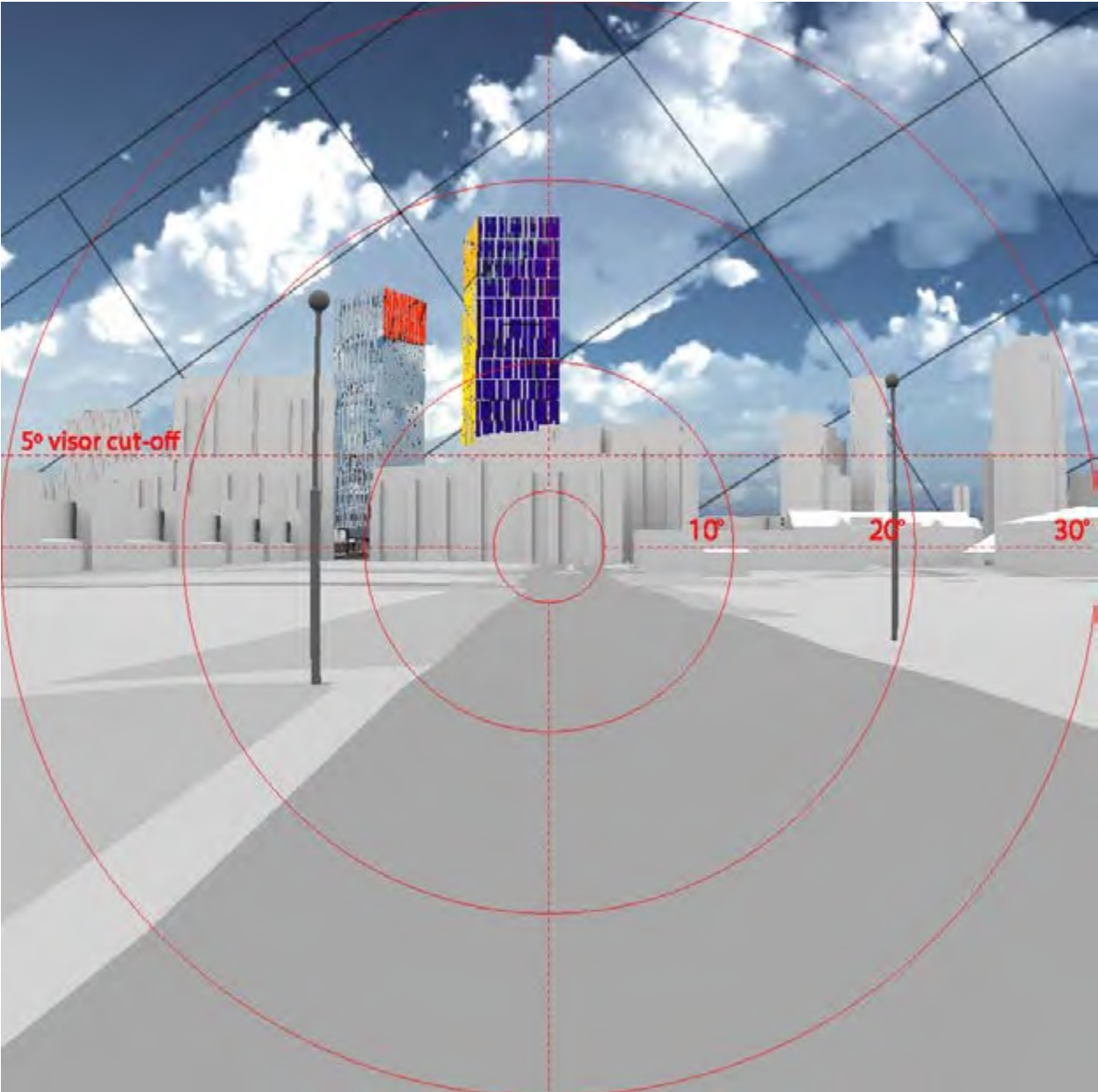


Fig. 310: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAGHT

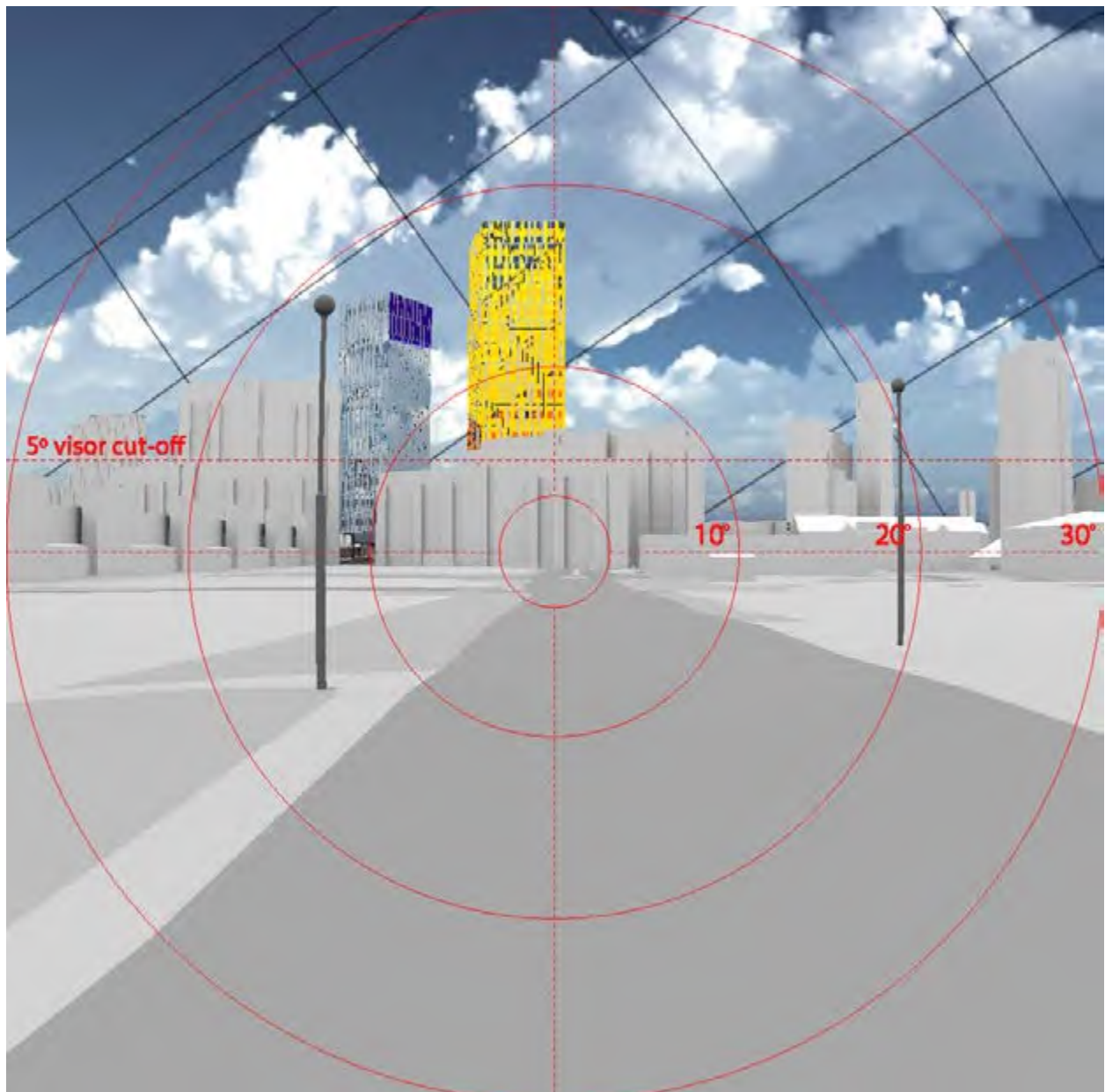


Fig. 311: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAGHT

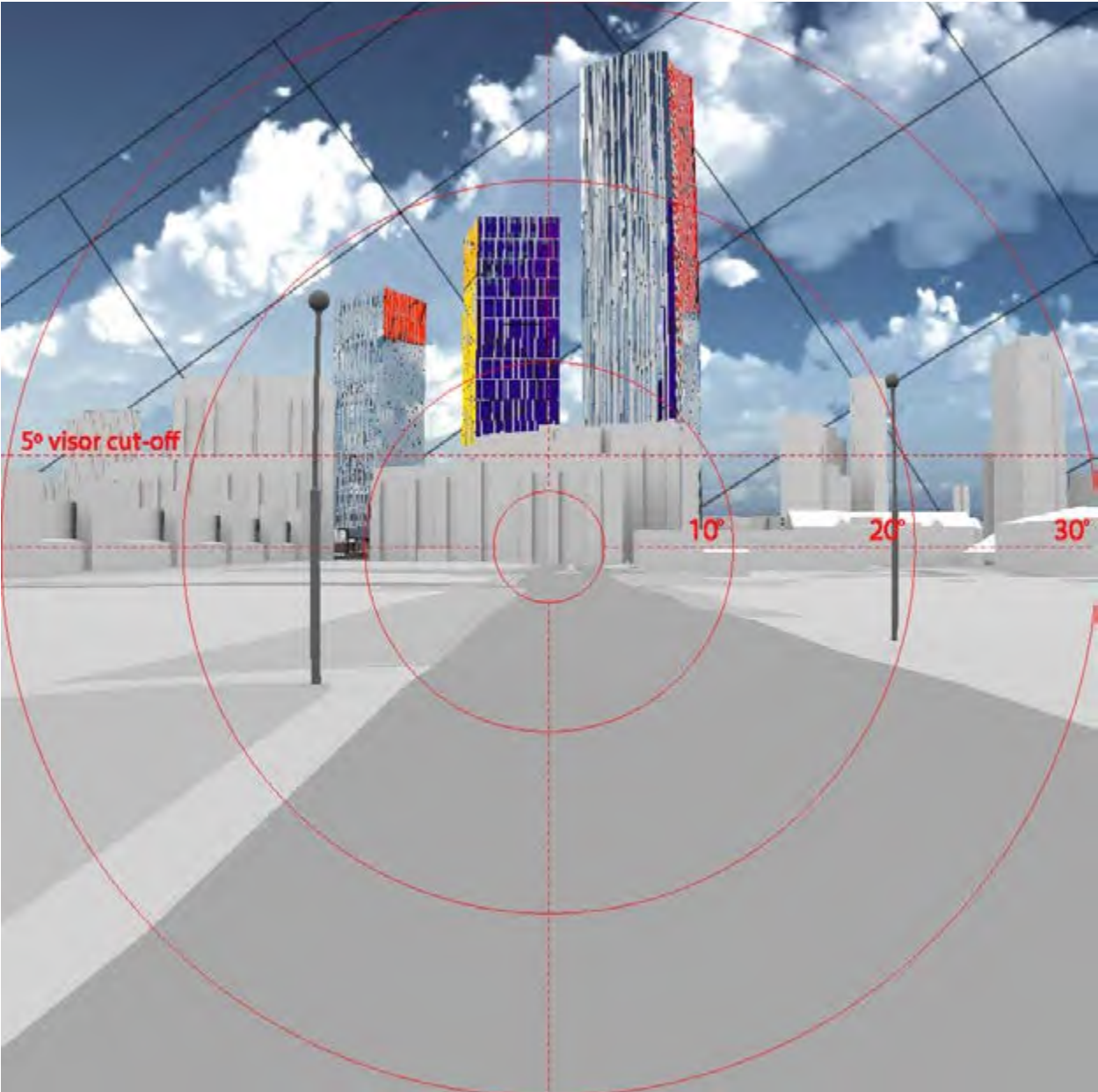


Fig. 312: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAIGHT**

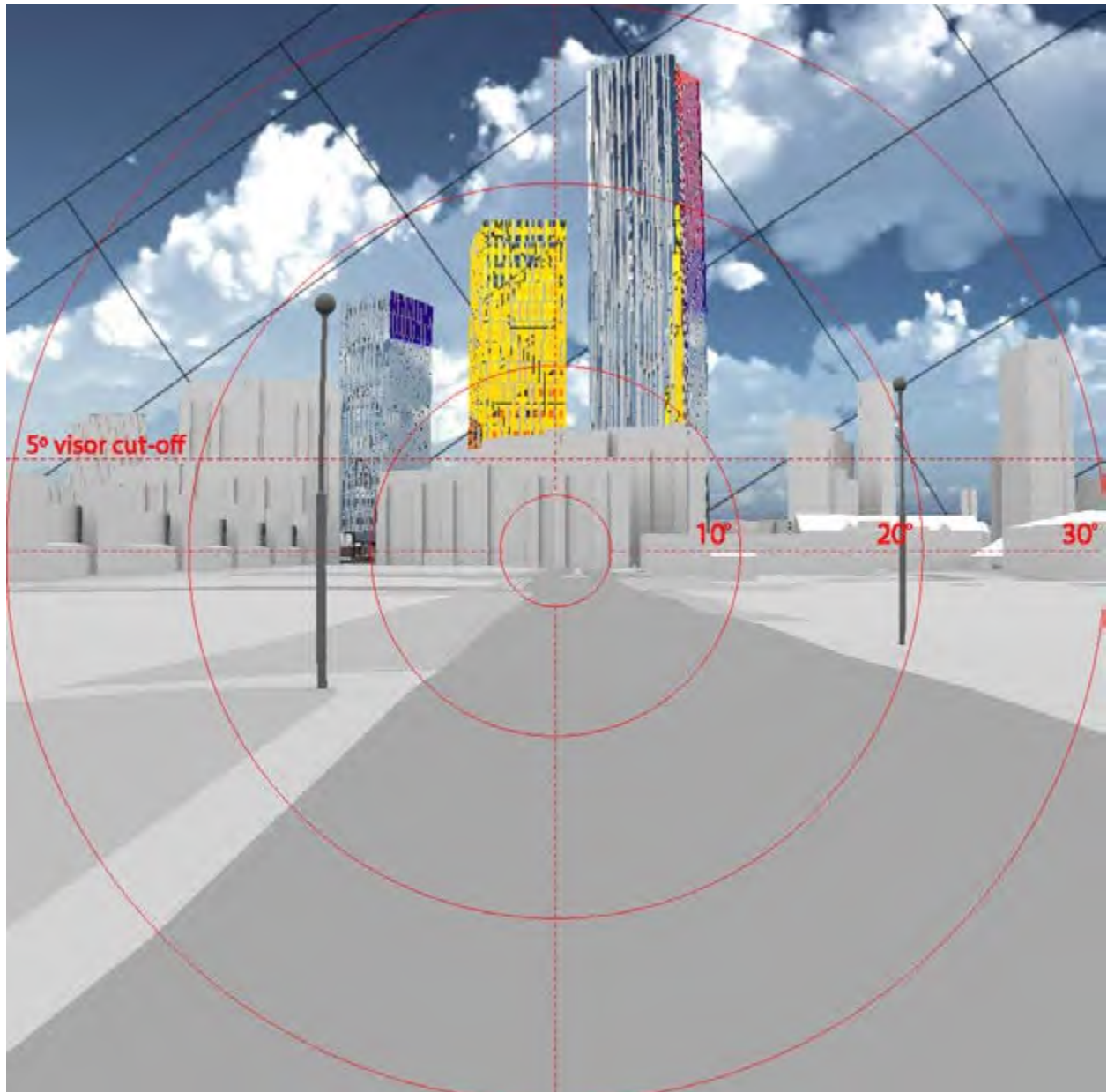


Fig. 313: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAGHT

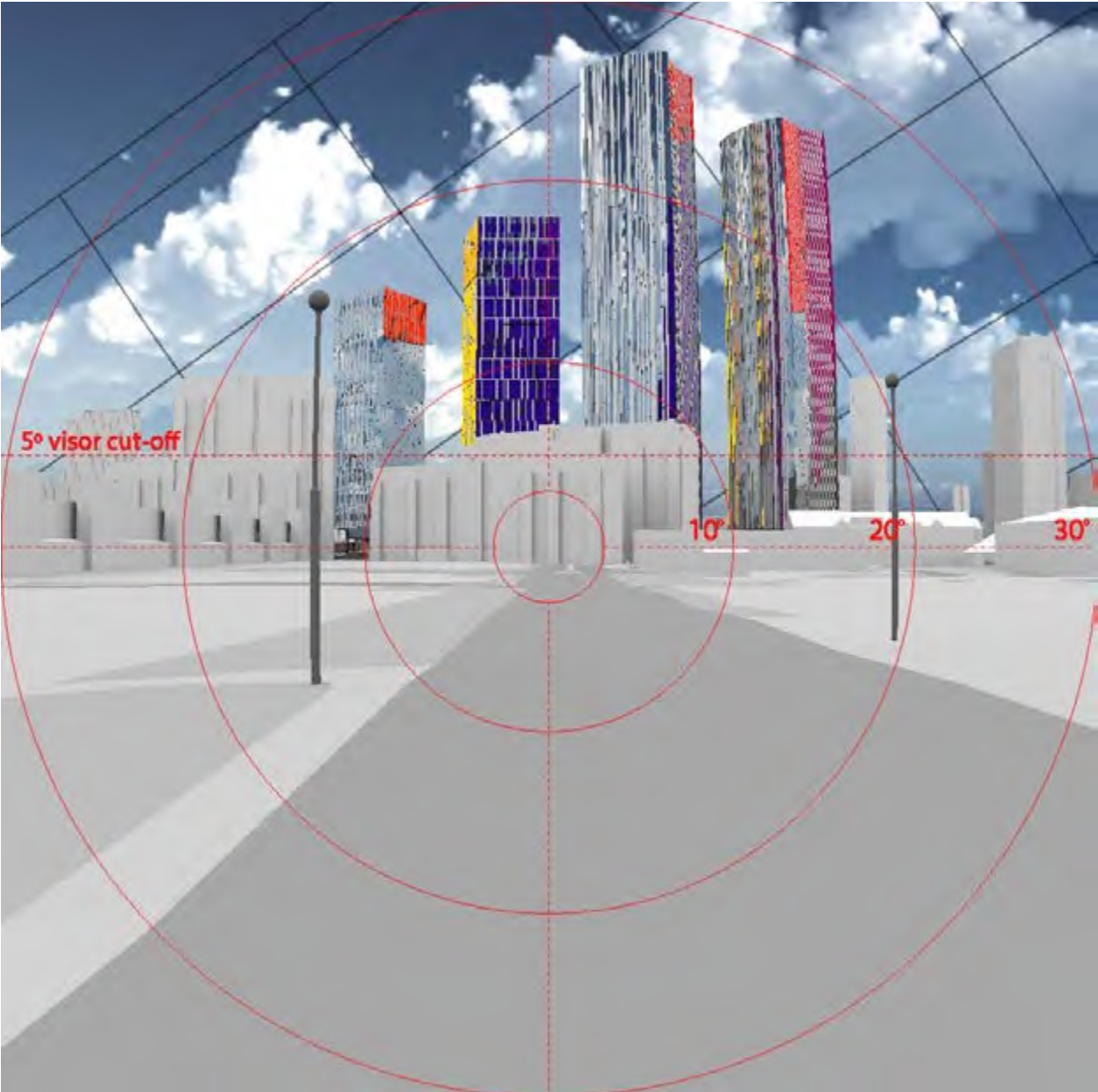


Fig. 314: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP1 - REGENT RETAIL PARK PEDESTRIAN CROSSING
LOOKING STRAGHT

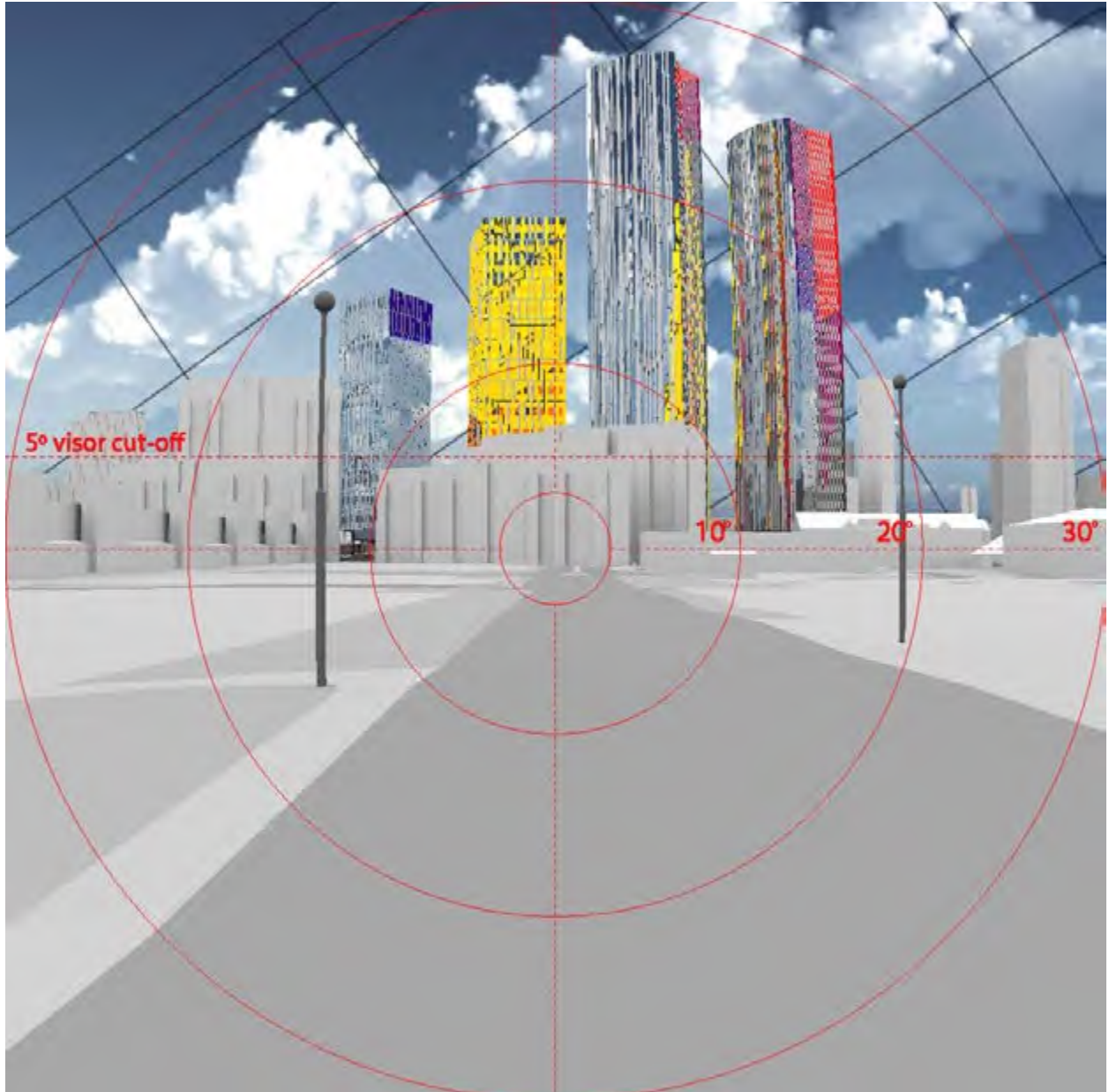


Fig. 315: Solar reflections



26 **SOLAR GLARE ASSESSMENT**
RP2 - REGENT RETAIL PARK 2

RP2 - Regent Retail Park Eastbound Junction 1



Fig. 316: Junction Location



Fig. 317: Junction view

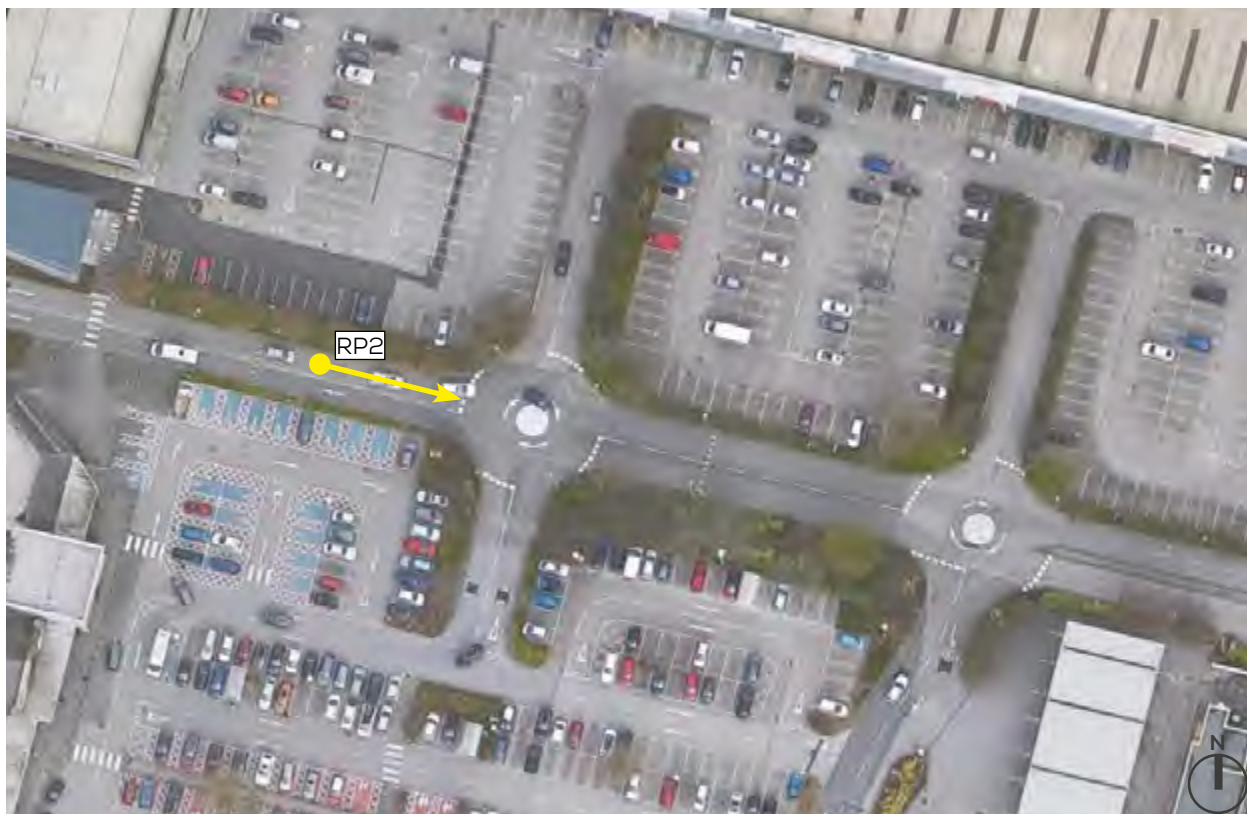


Fig. 318: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

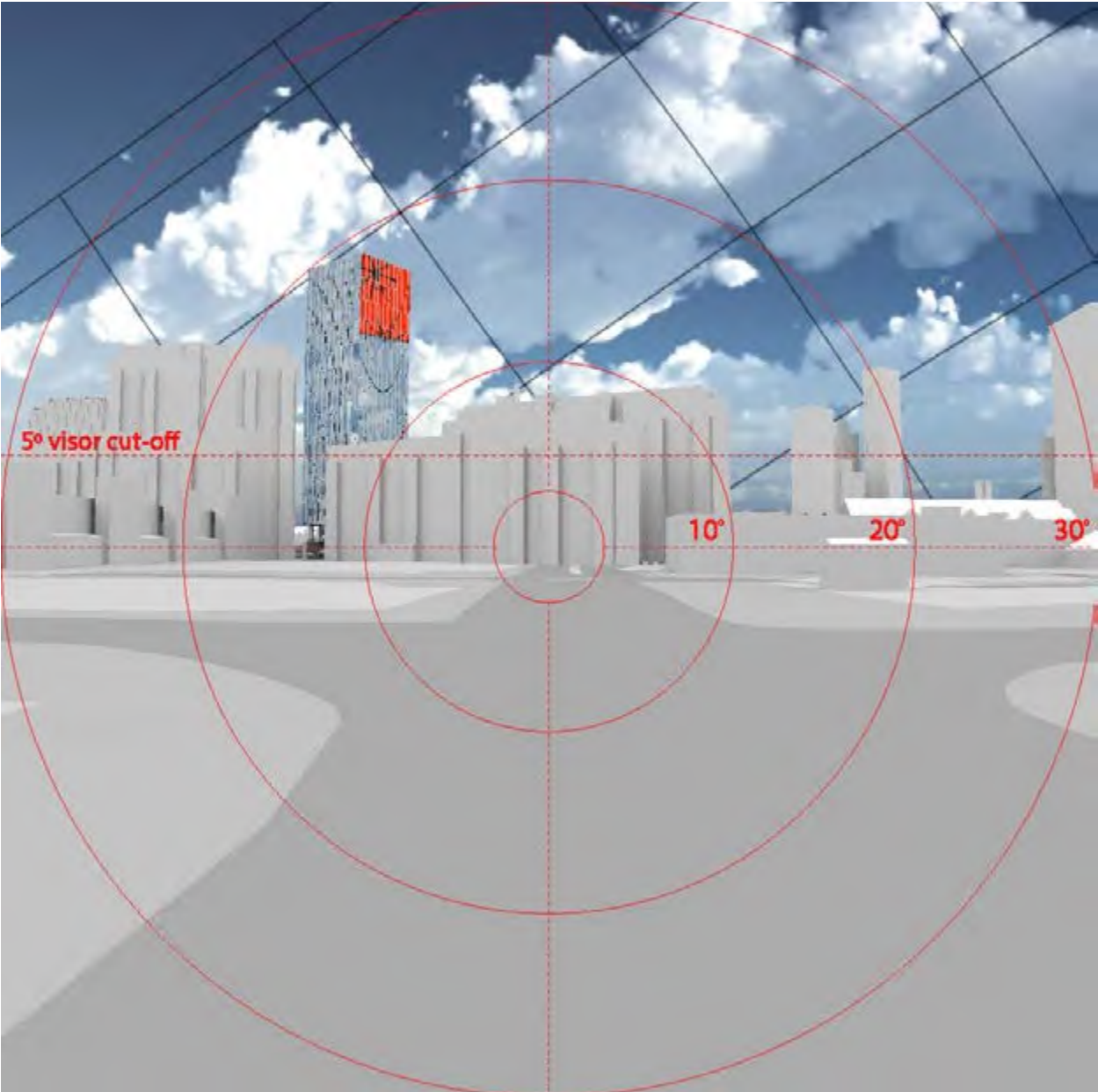


Fig. 319: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

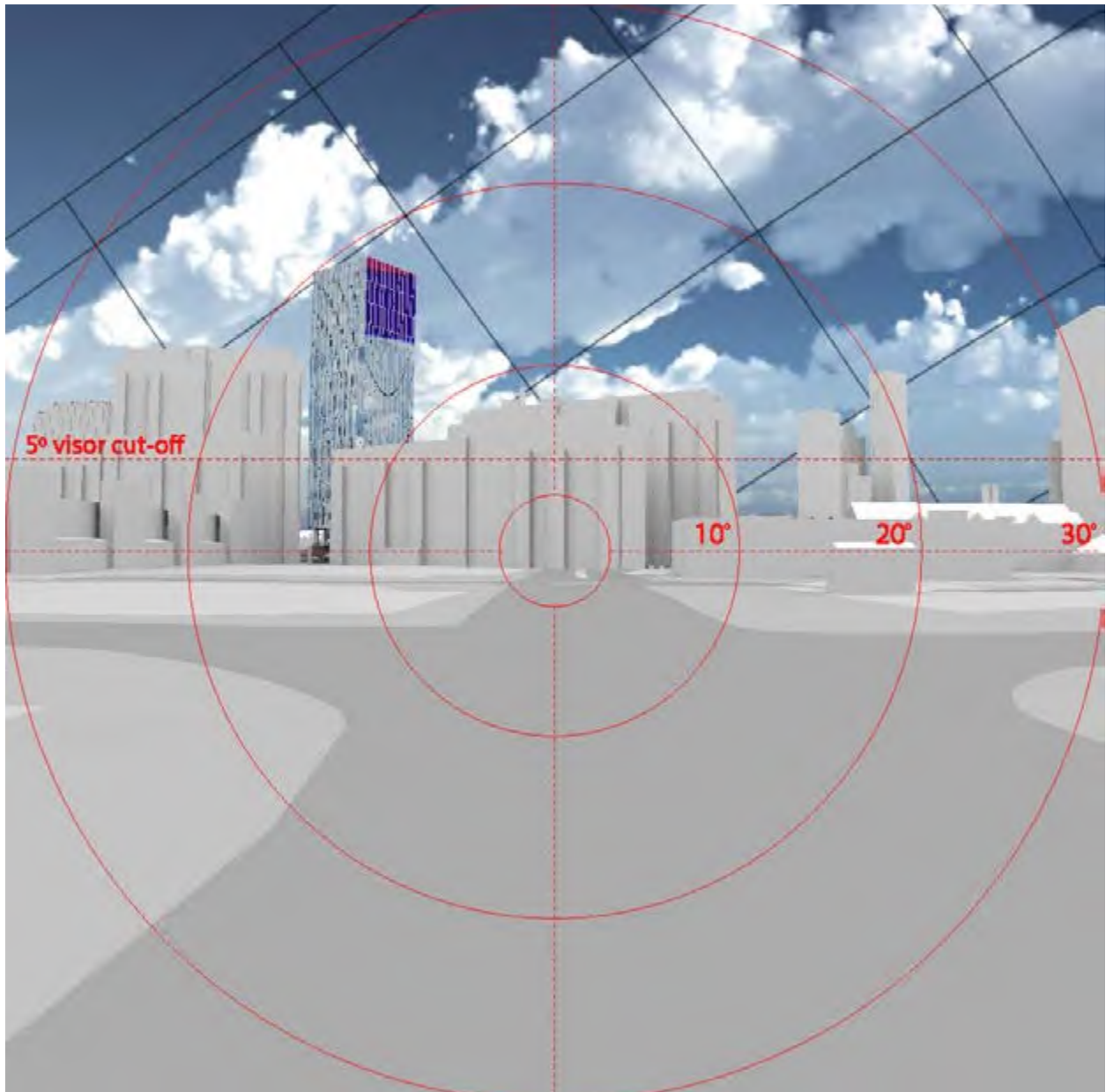


Fig. 320: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

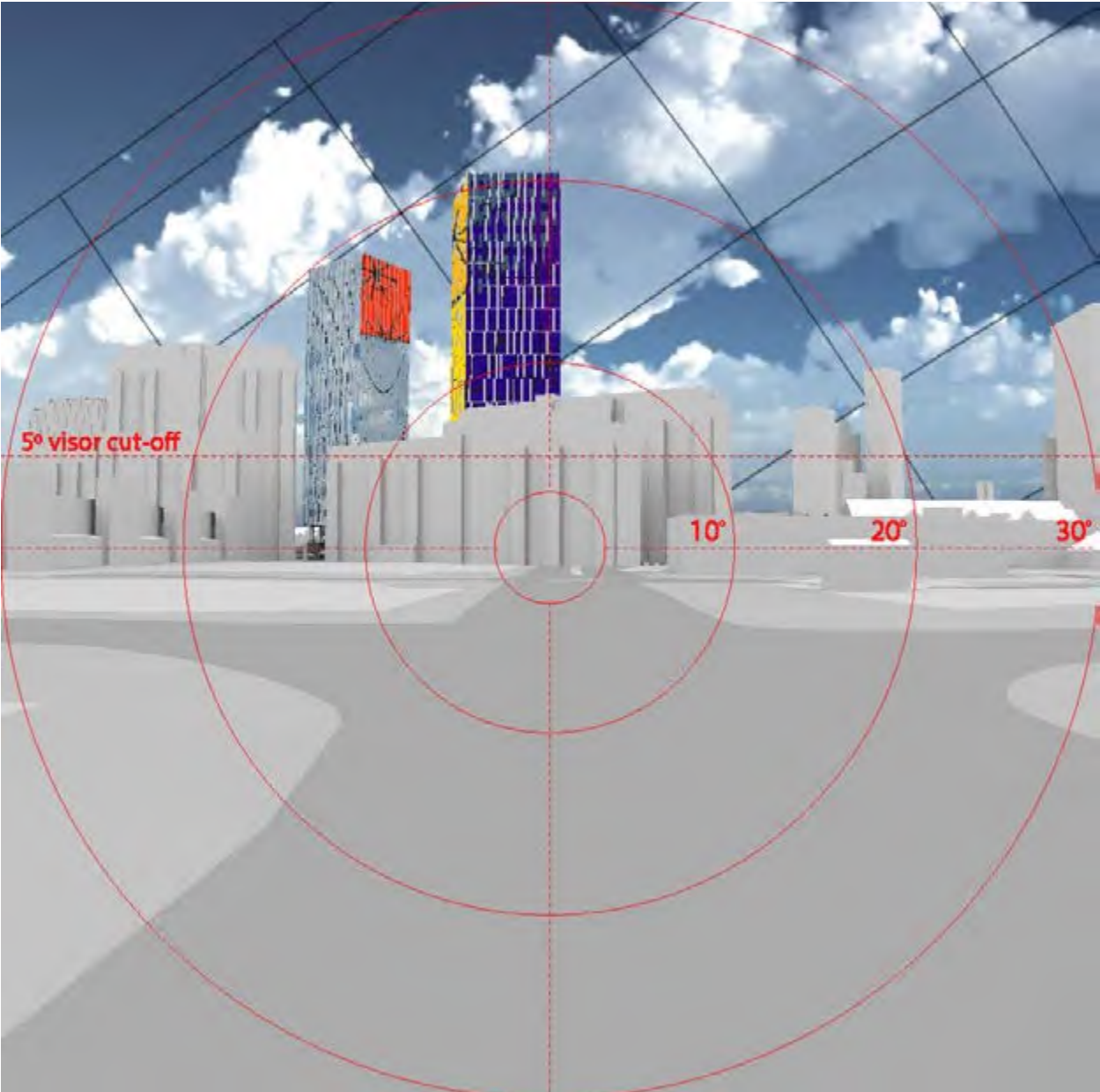


Fig. 321: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

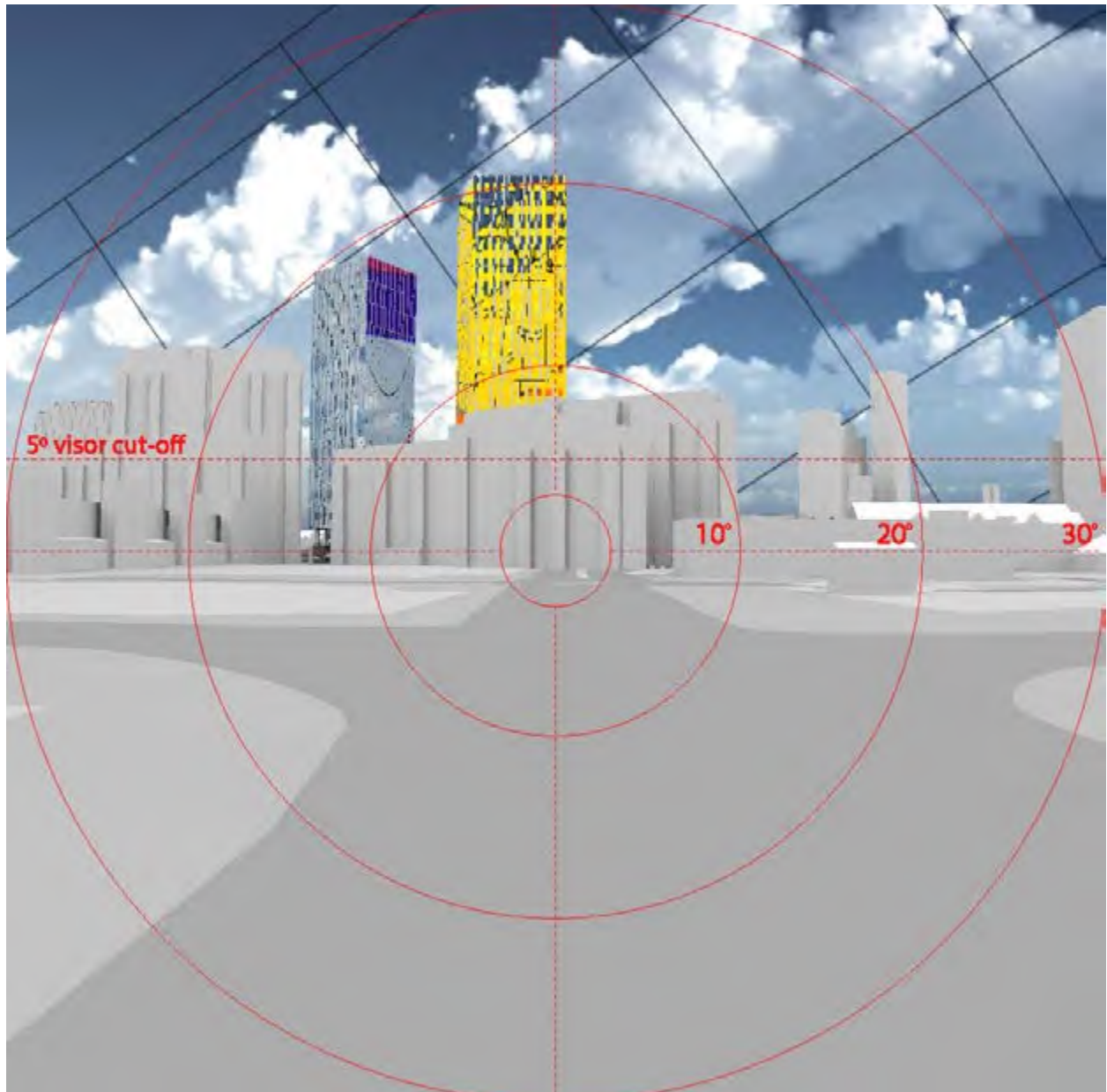


Fig. 322: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

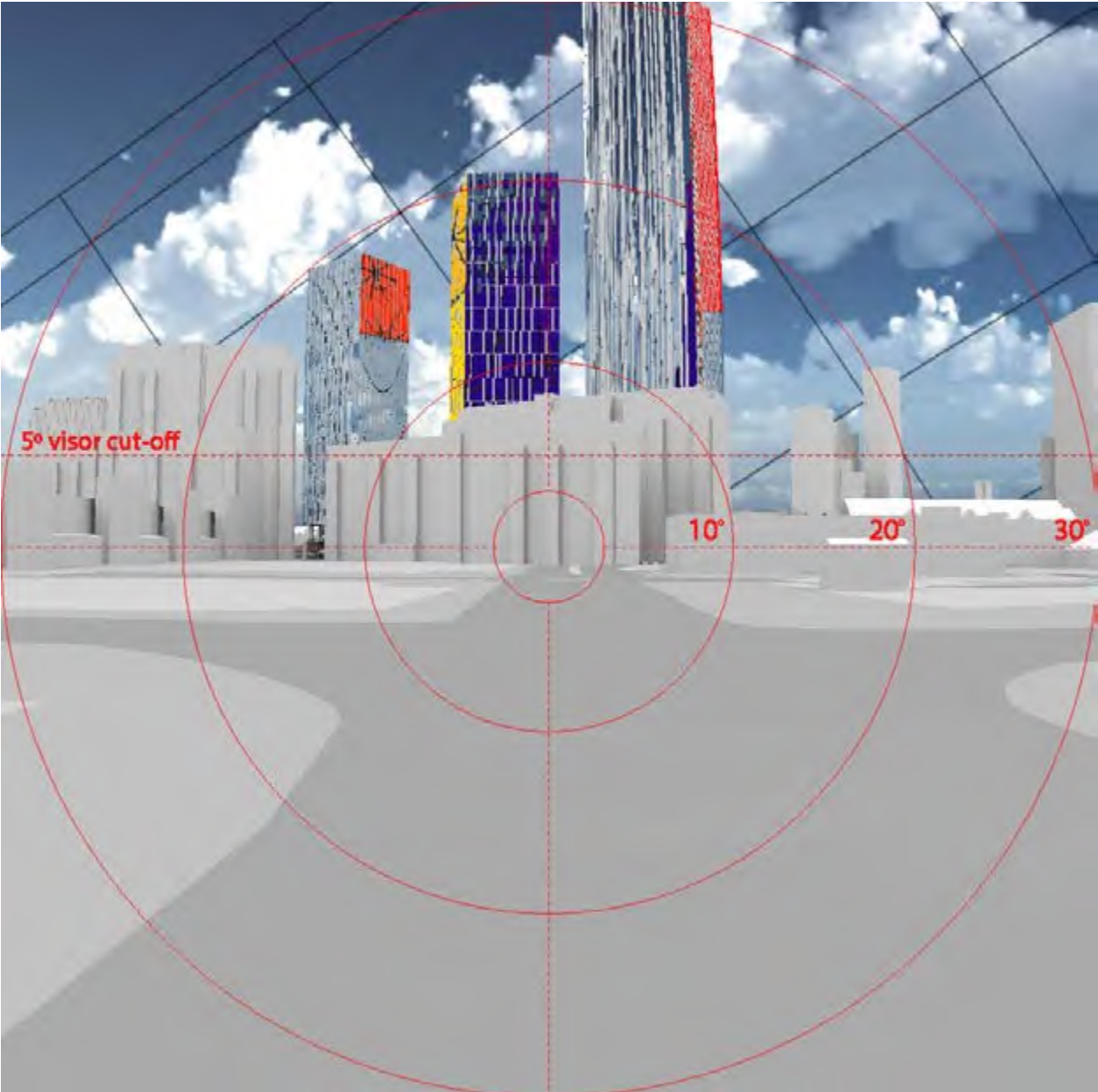


Fig. 323: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

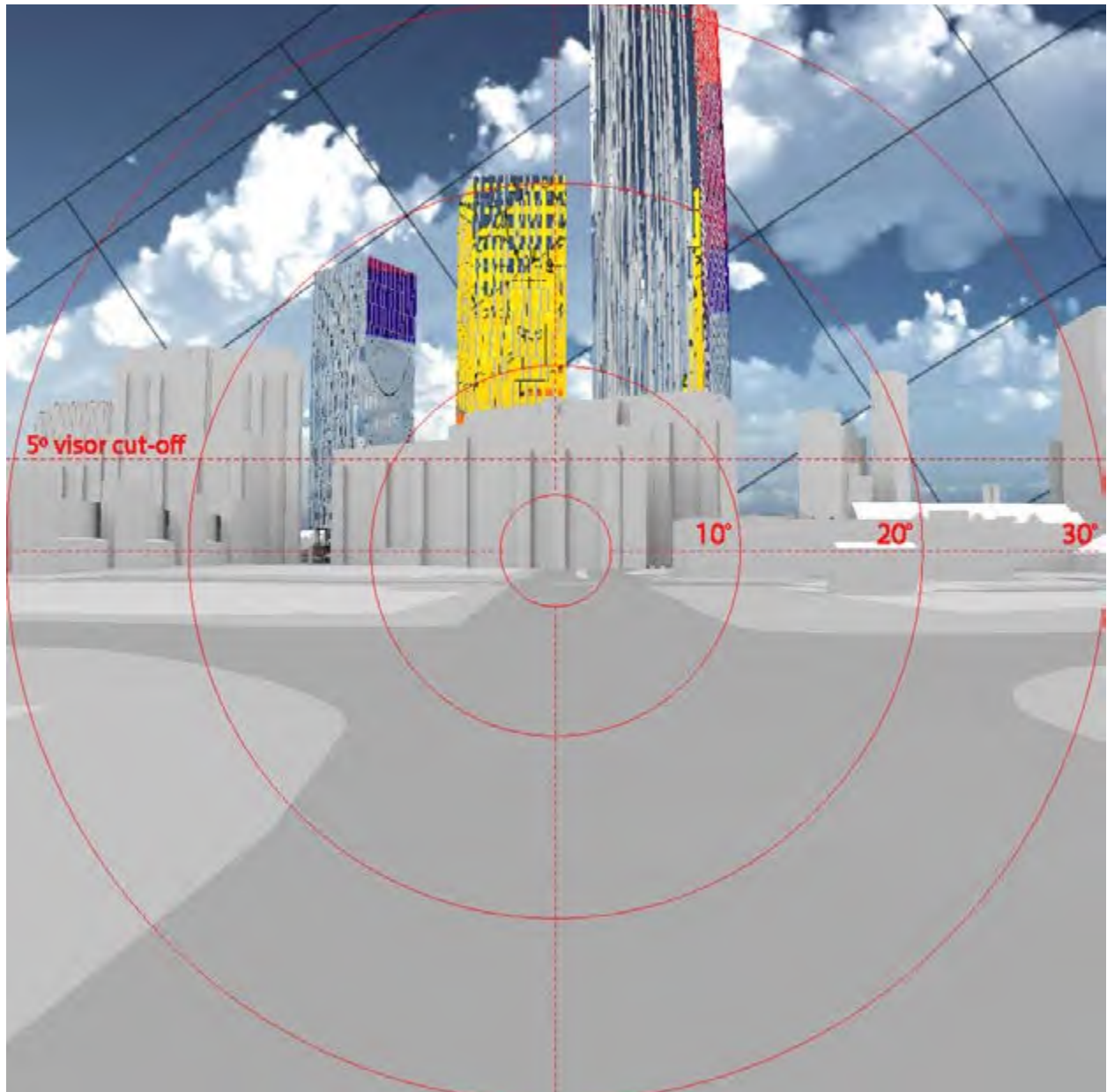


Fig. 324: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

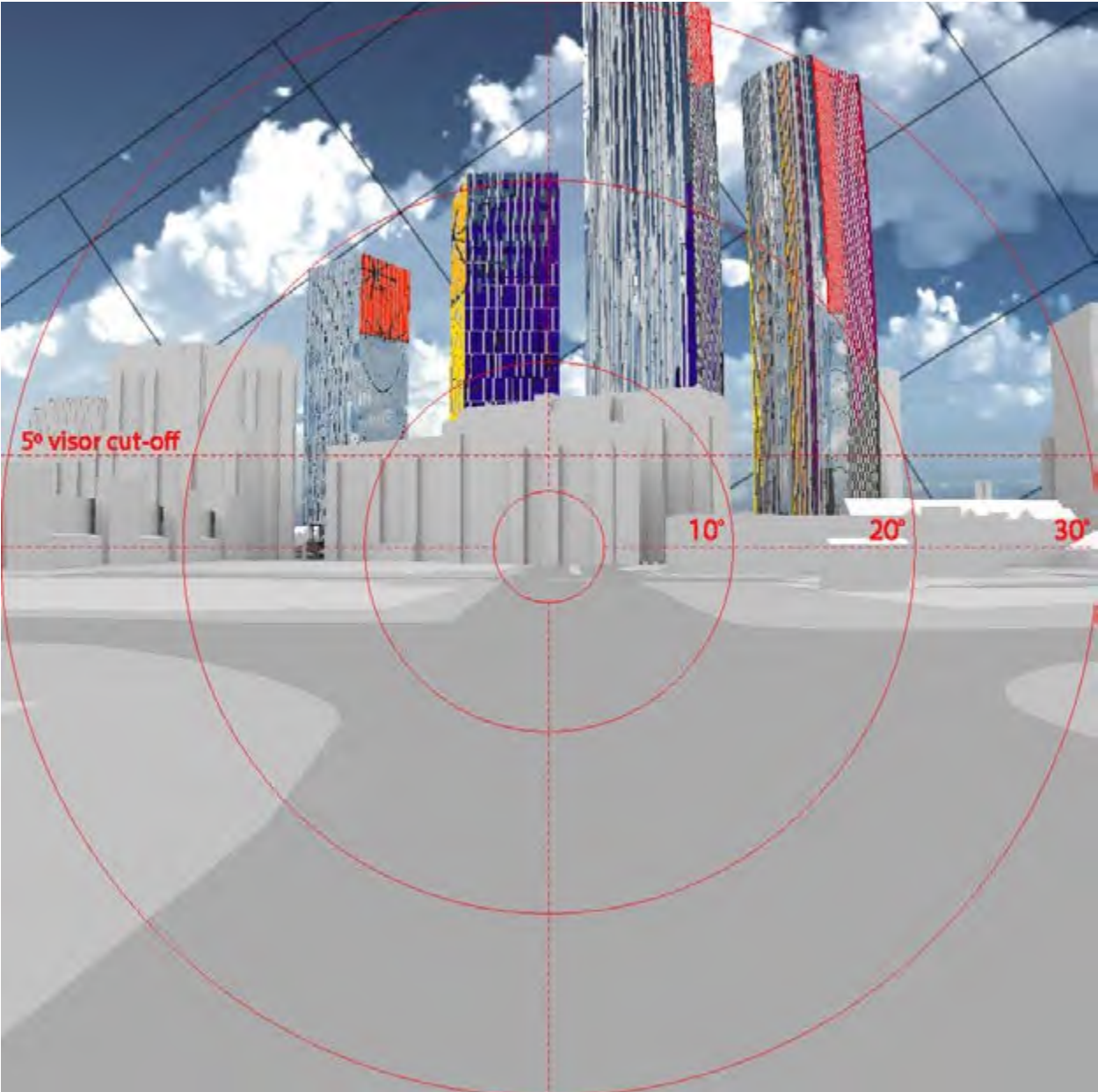


Fig. 325: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP2 - REGENT RETAIL PARK JUNCTION 1
LOOKING STRAGHT

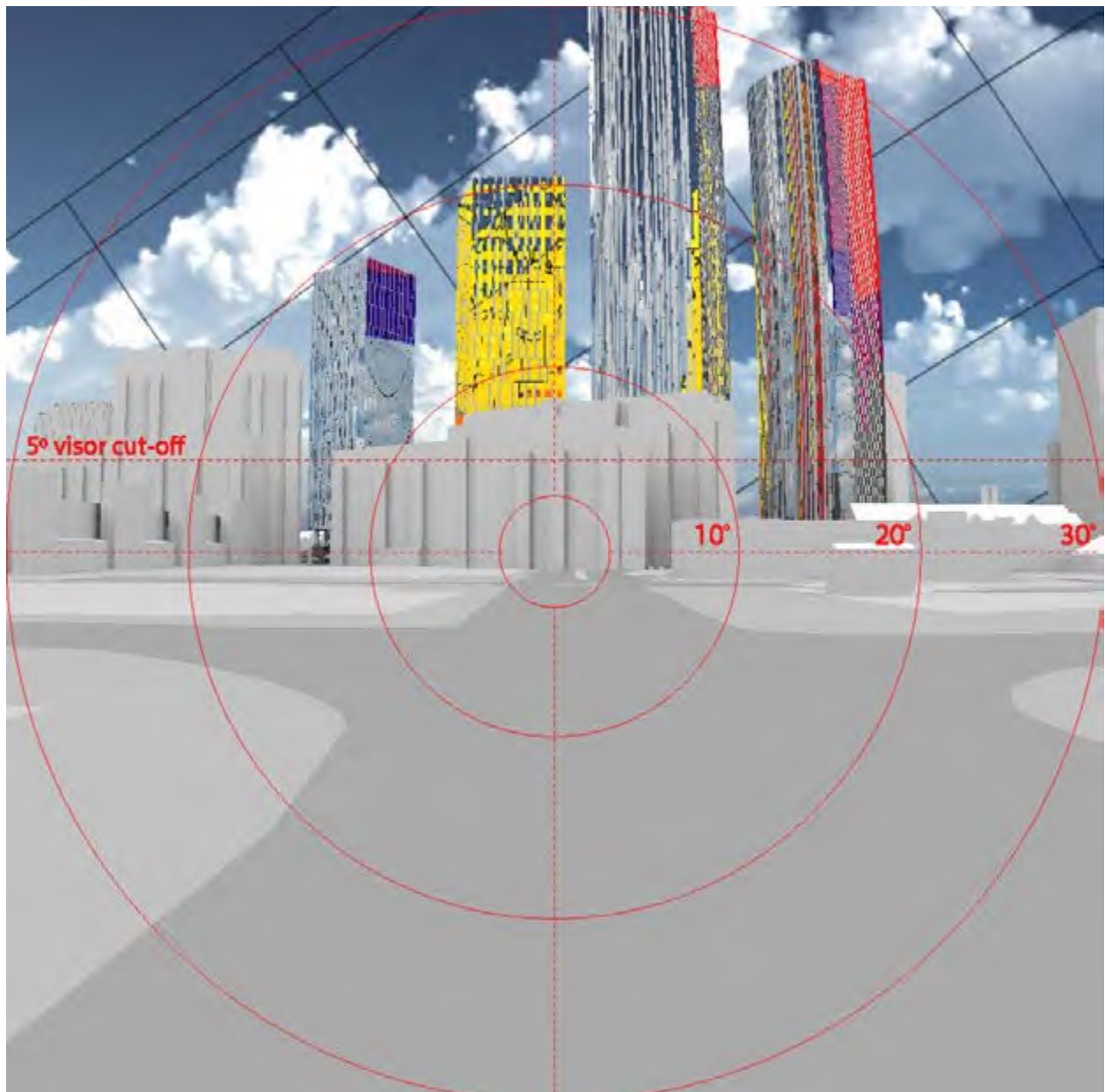


Fig. 326: Solar reflections



27 **SOLAR GLARE ASSESSMENT**
RP3 - REGENT RETAIL PARK 3

RP3 - Regent Retail Park Eastbound Junction 2



Fig. 327: Junction Location



Fig. 328: Junction view

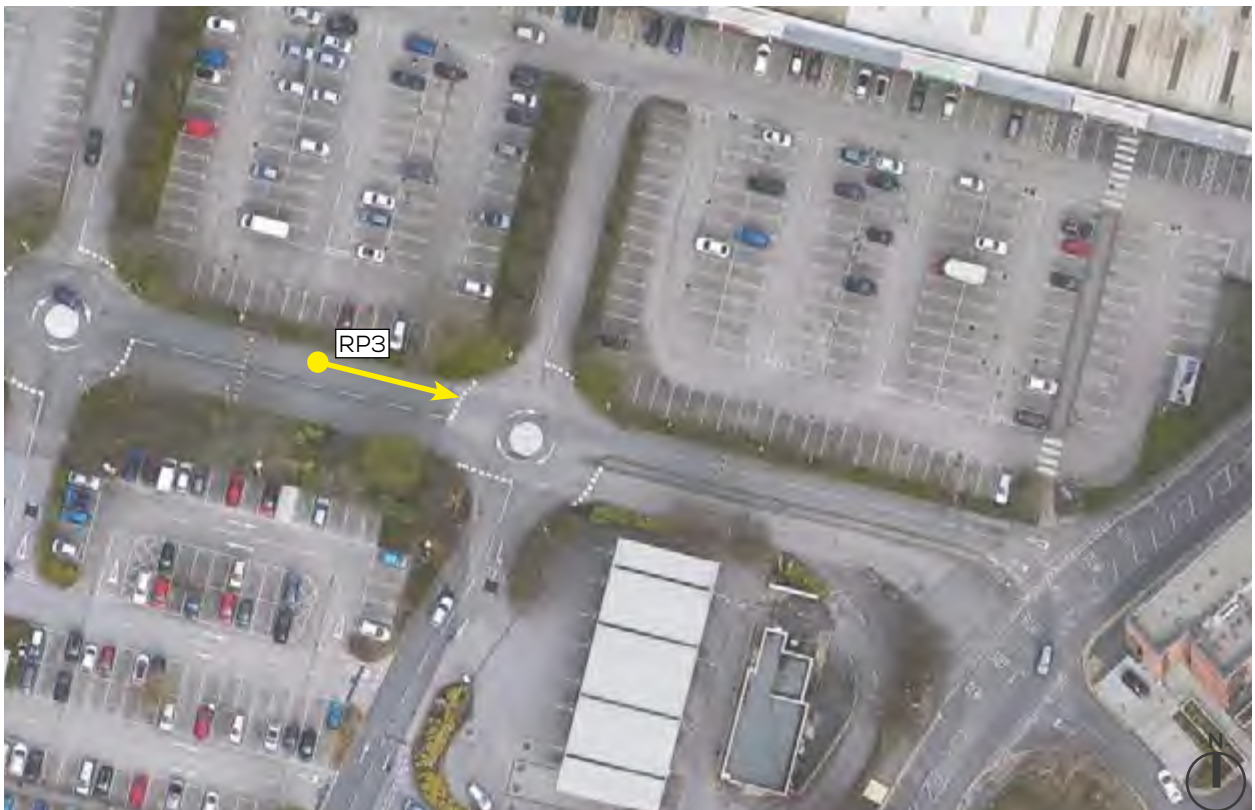


Fig. 329: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAIGHT

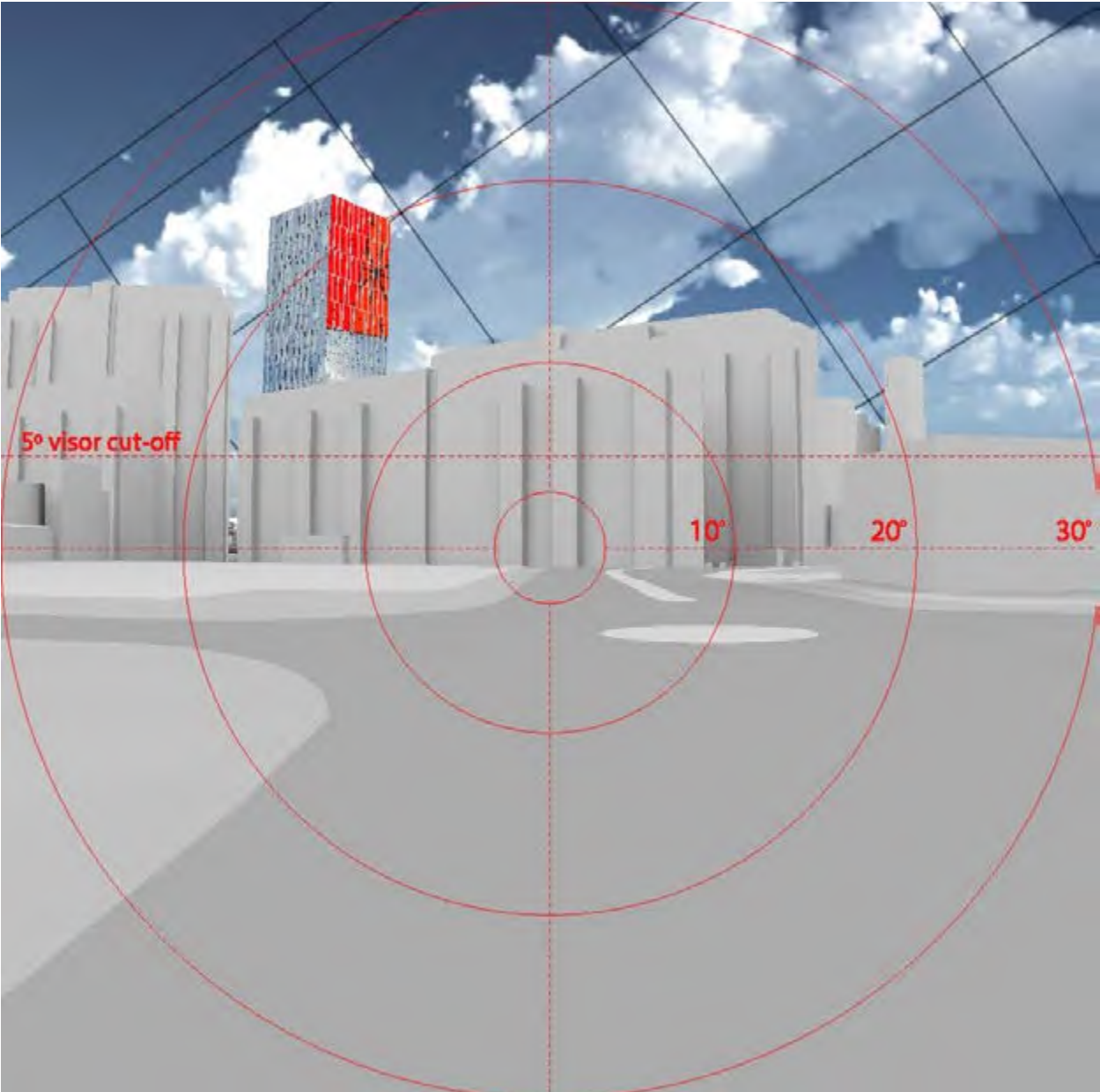


Fig. 330: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAIGHT

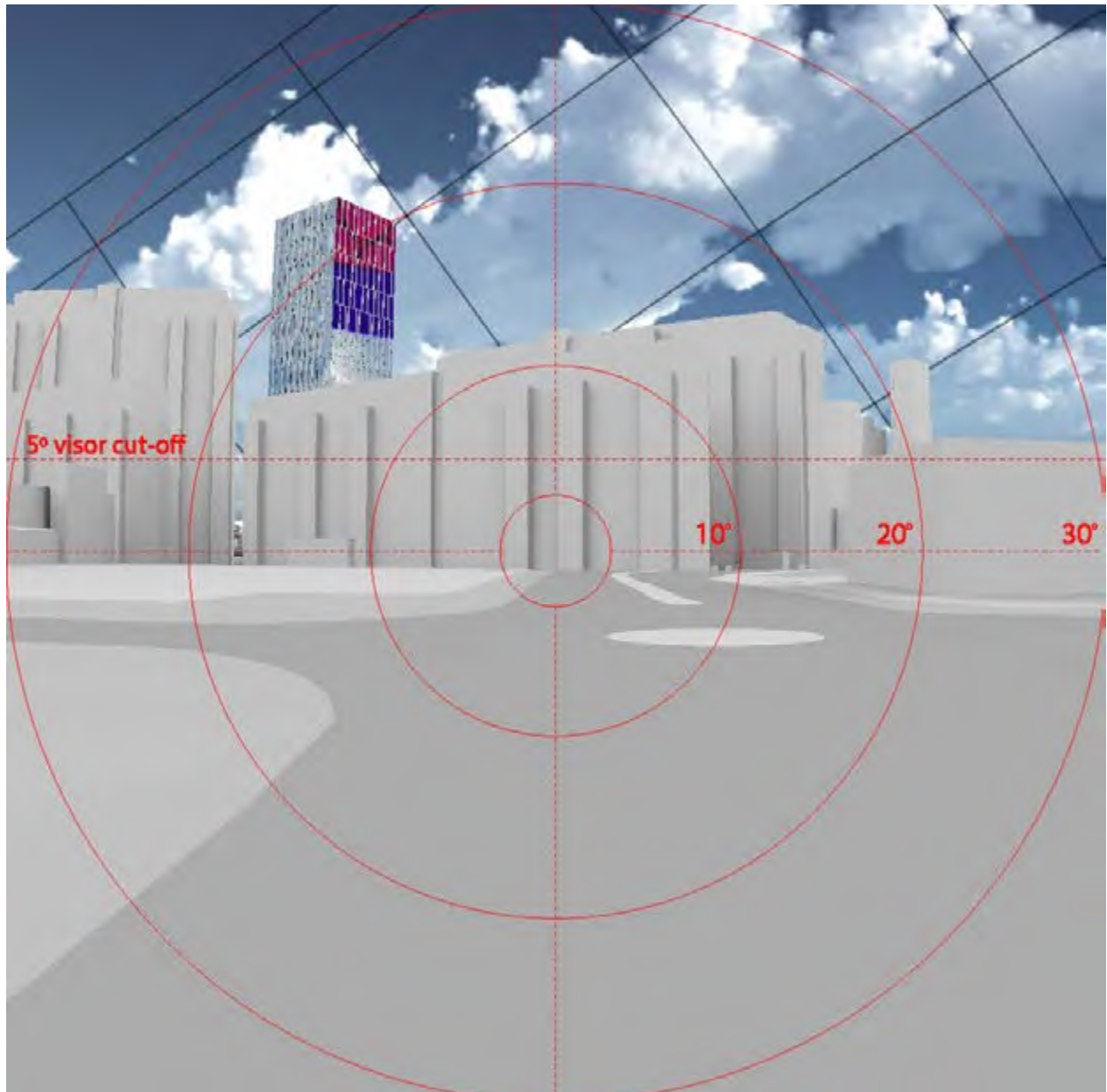


Fig. 331: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAIGHT

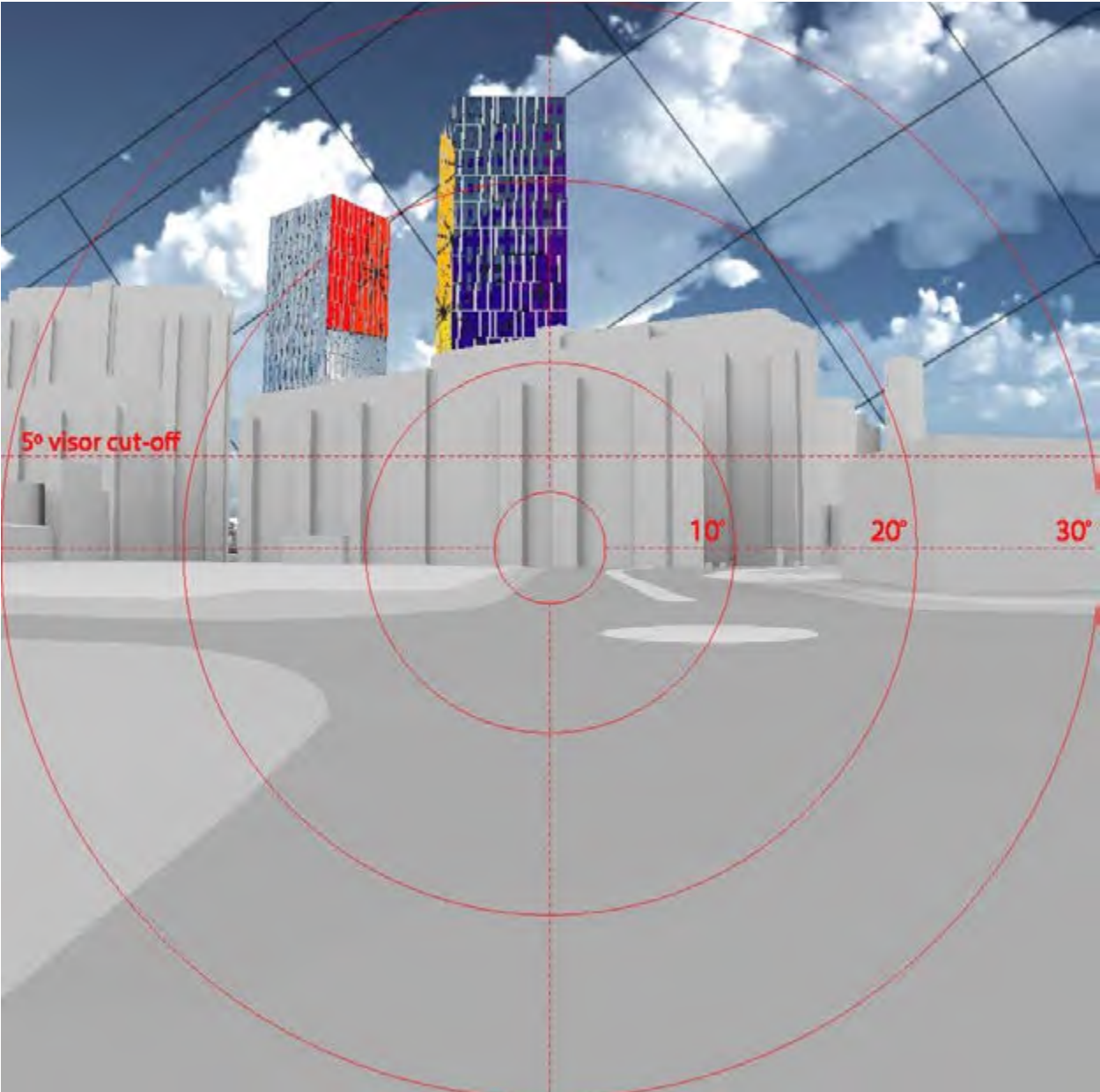


Fig. 332: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAGHT

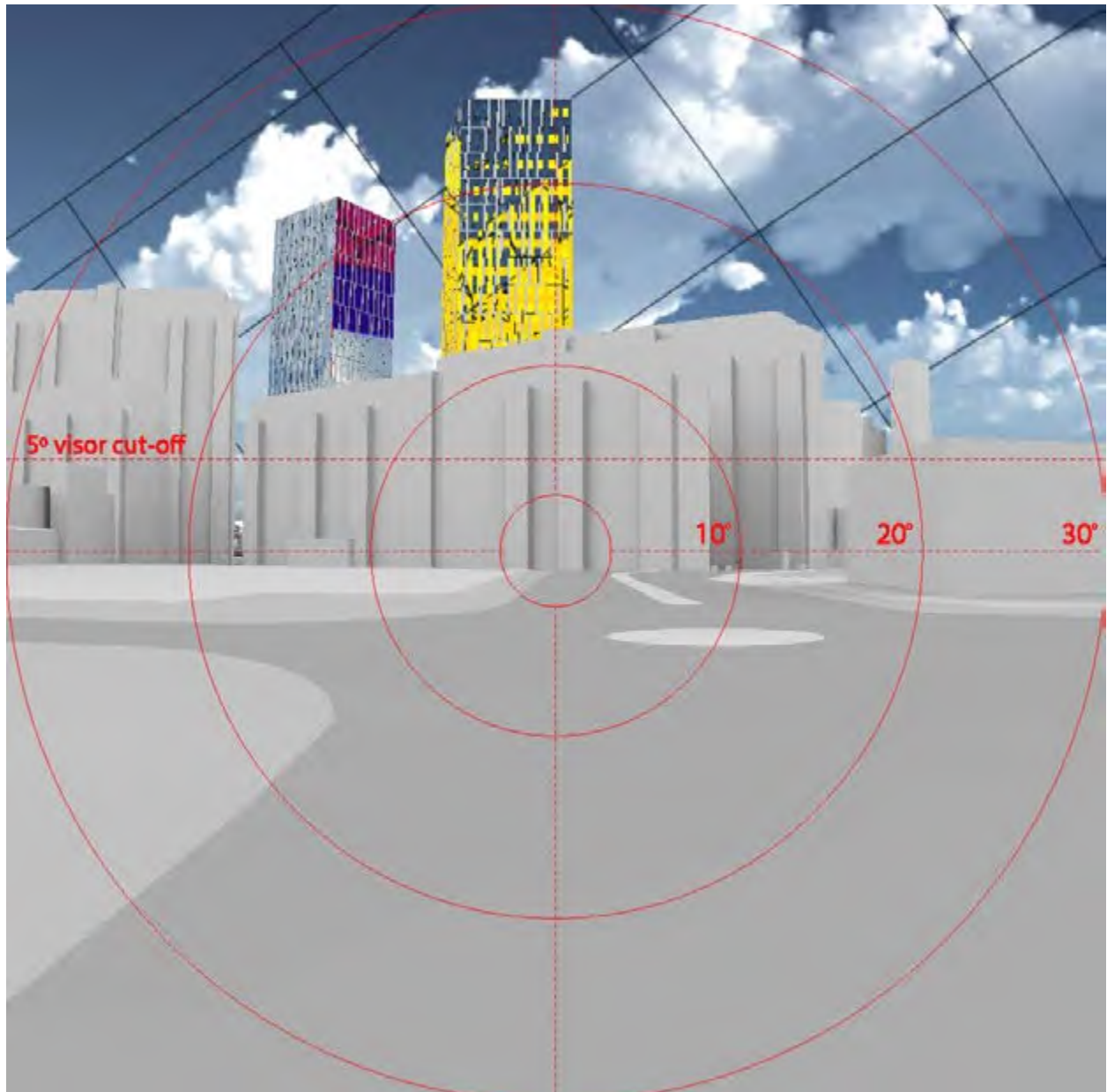


Fig. 333: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAIGHT

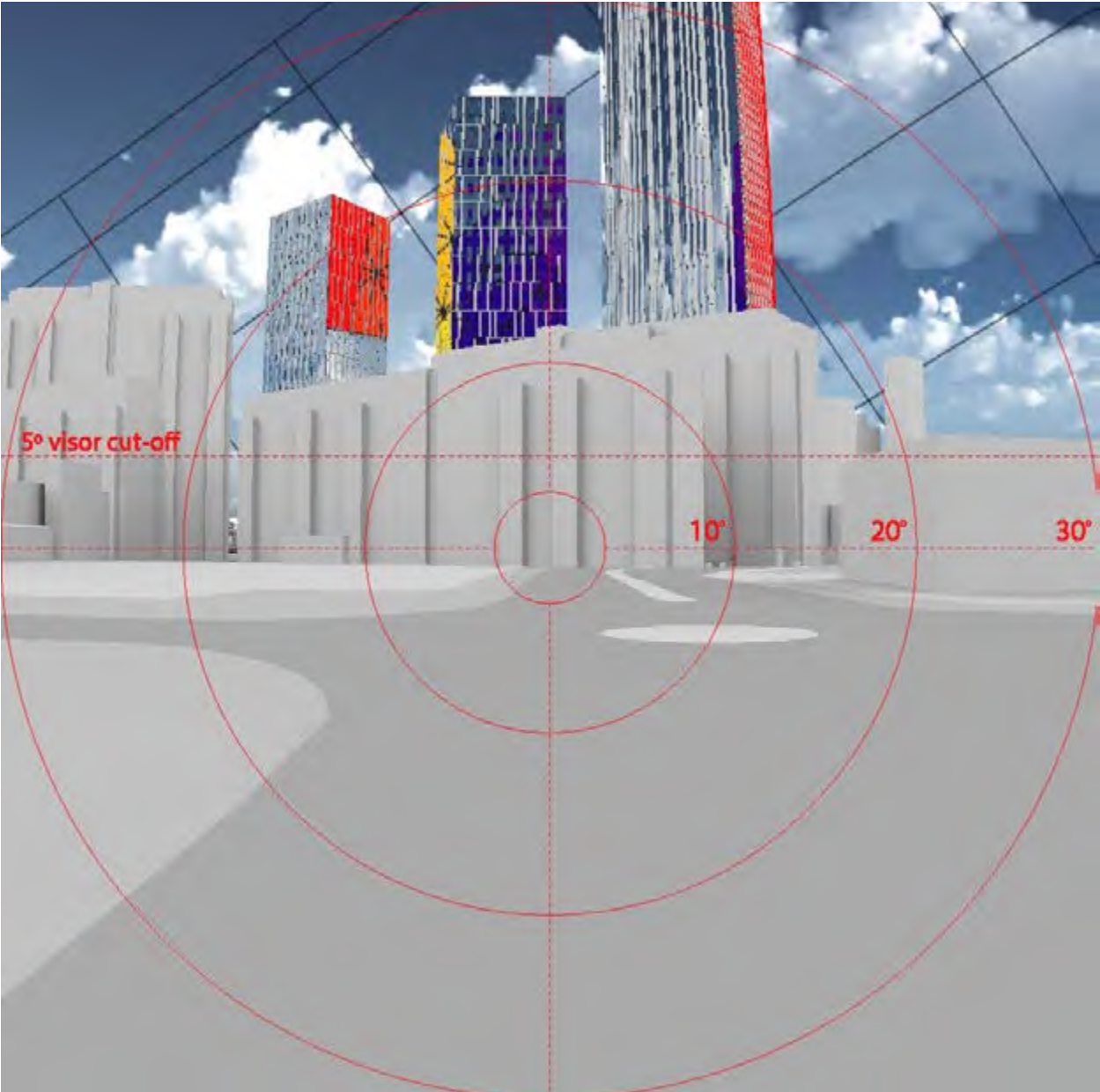


Fig. 334: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAGHT

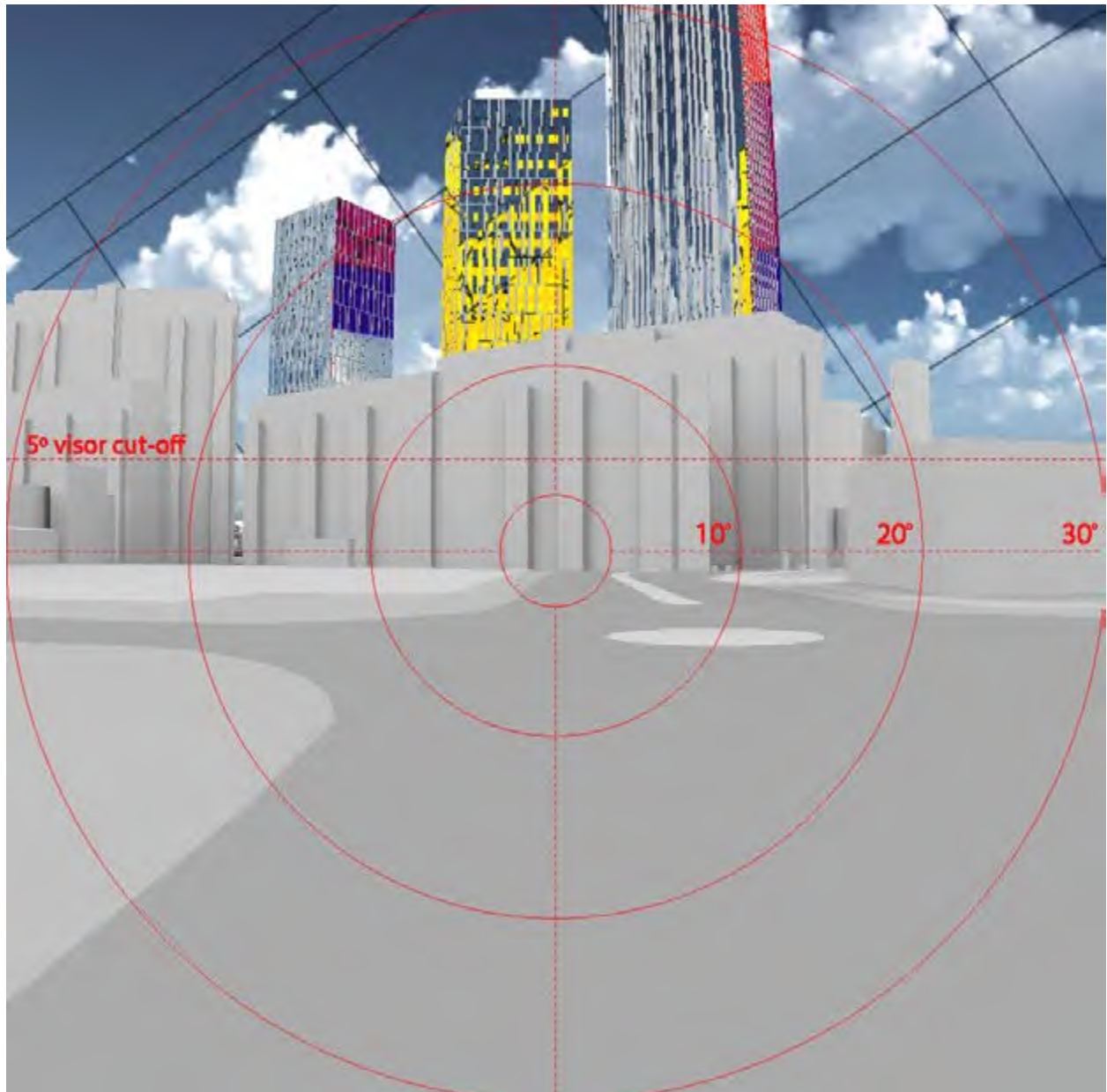


Fig. 335: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAGHT

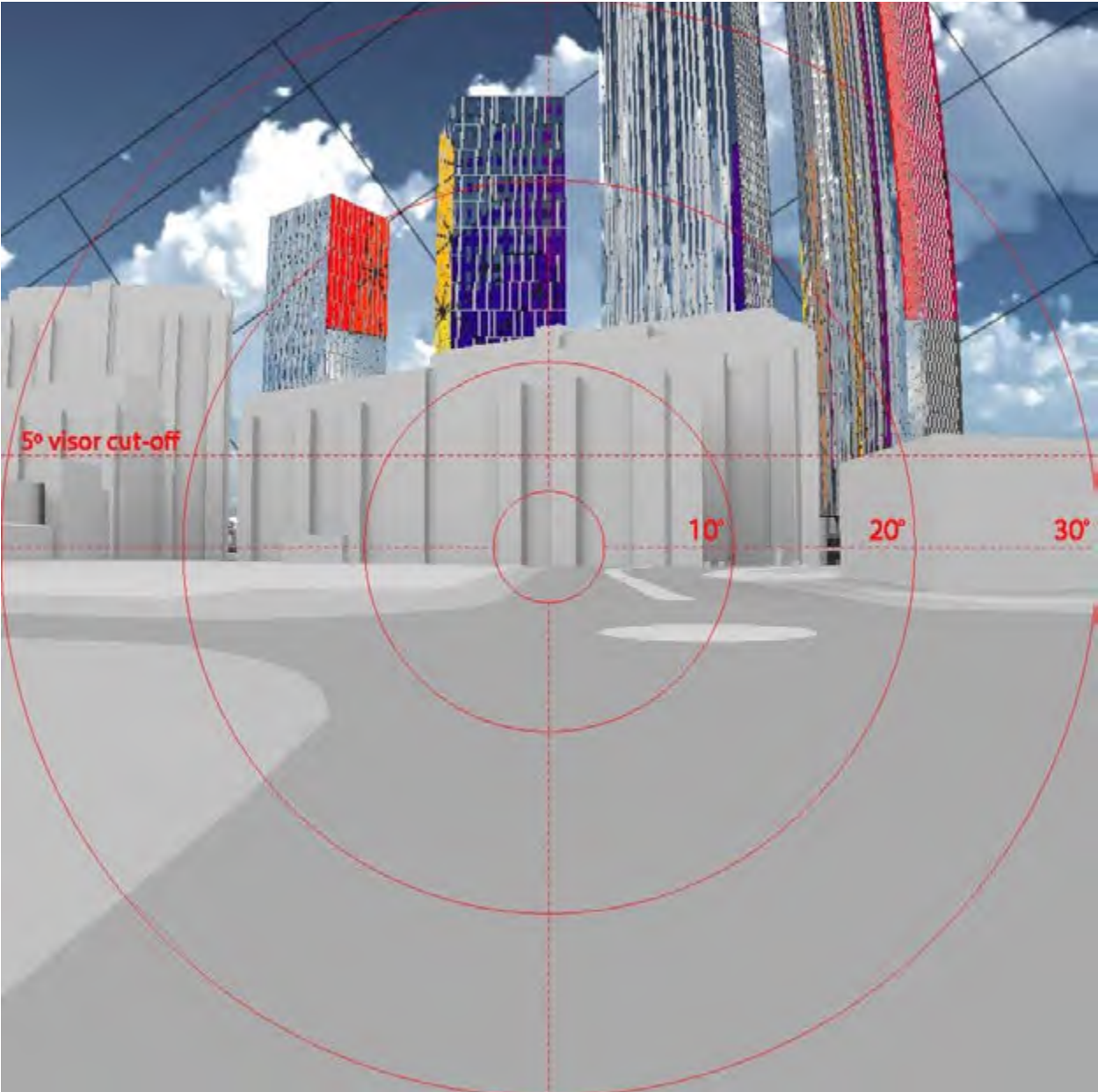


Fig. 336: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP3 - REGENT RETAIL PARK JUNCTION 2
LOOKING STRAGHT

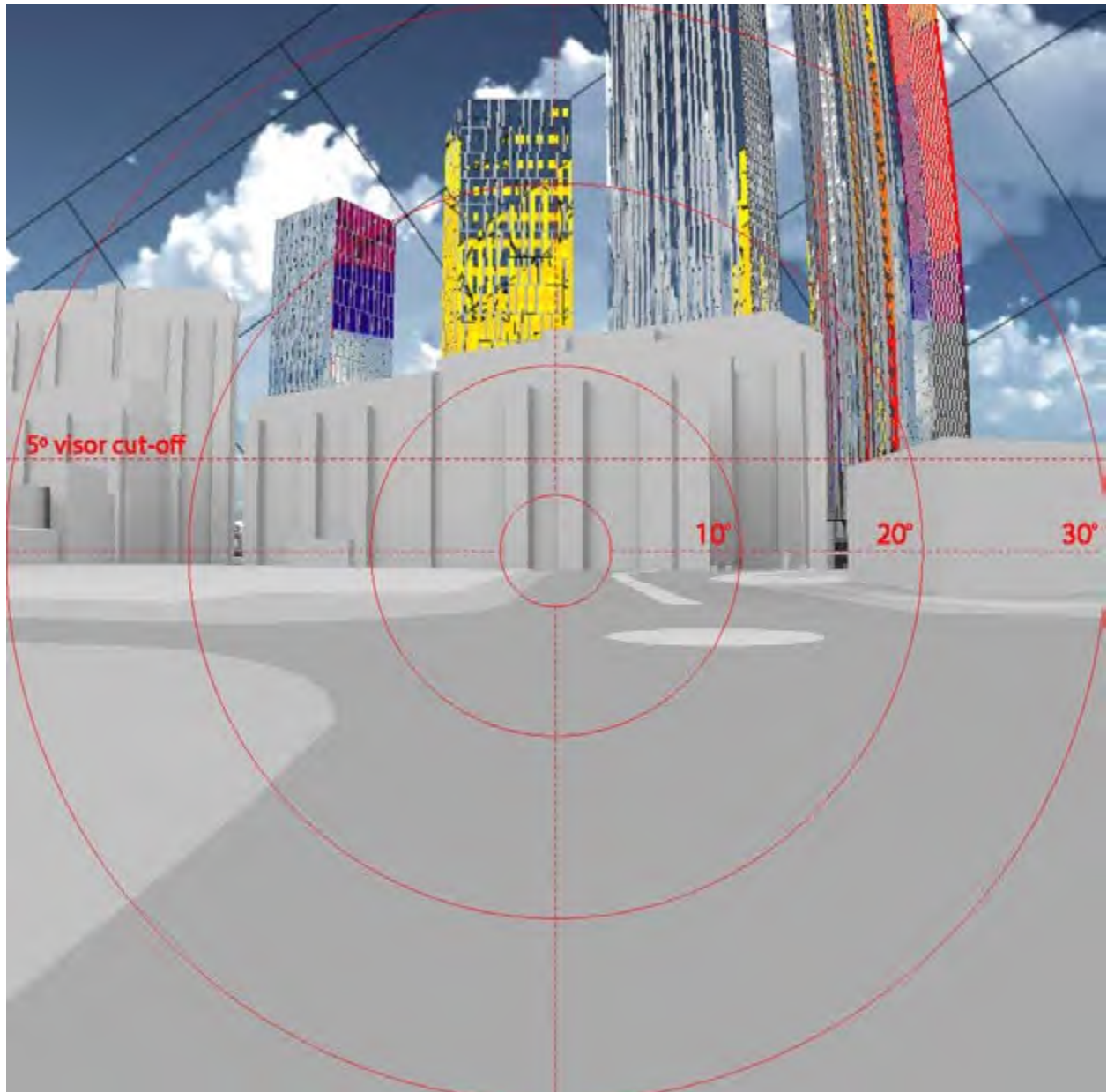


Fig. 337: Solar reflections



28 **SOLAR GLARE ASSESSMENT**
RP4 - REGENT RETAIL PARK 4

RP4 - Regent Retail Park Eastbound Junction (with Ordsall Lane)

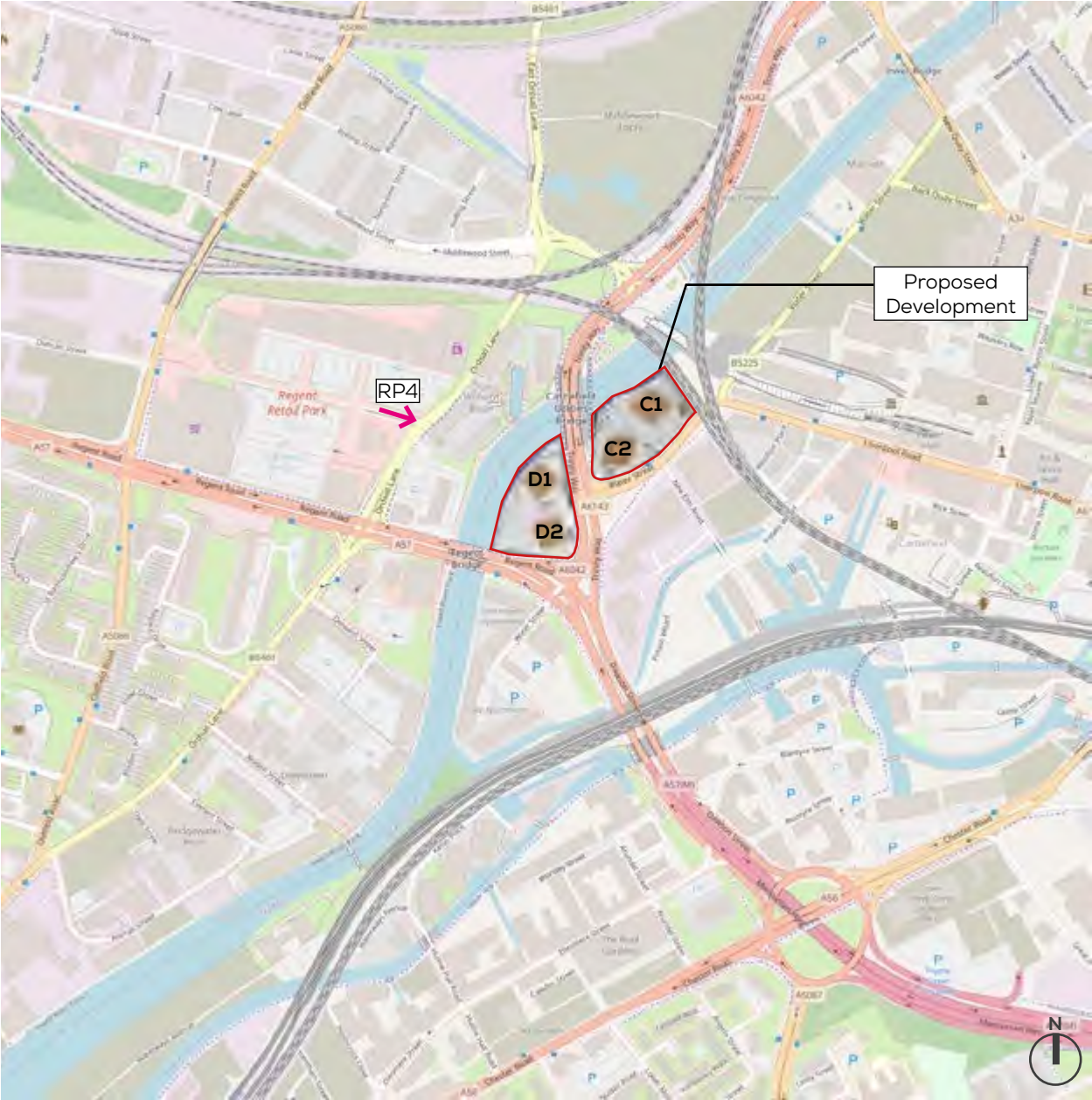


Fig. 338: Junction Location



Fig. 339: Junction view



Fig. 340: Viewpoints

Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT RP4 - REGENT RETAIL PARK JUNCTION (WITH ORDSALL LANE)
LOOKING STRAIGHT

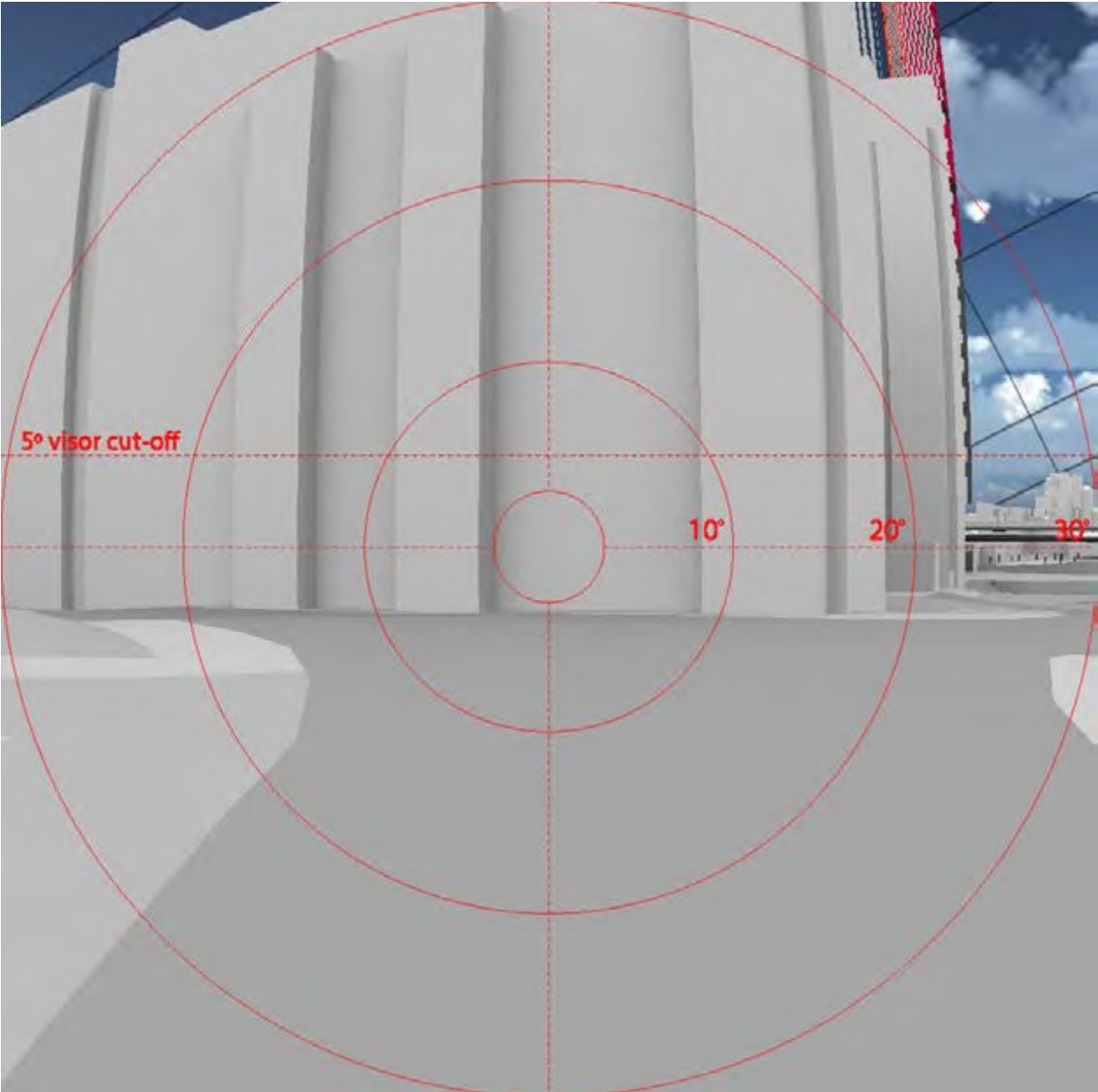


Fig. 341: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT RP4 - REGENT RETAIL PARK JUNCTION (WITH ORDSALL LANE)
LOOKING STRAGHT



Fig. 342: Solar reflections



29 **SOLAR GLARE ASSESSMENT**

ES1 - EGERTON STREET/INNER RING ROAD 1

ES1 - Egerton Street/Inner Ring Road Northbound Junction (with traffic merging from Deansgate Interchange on-ramp)



Fig. 343: Junction Location



Fig. 344: Junction view



Fig. 345: Viewpoints

Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES1 - EGERTON STREET/INNER RING ROAD JUNCTION
(MERGING WITH DEANS GATE INTERCHANGE ON-RAMP)
LOOKING STRAIGHT

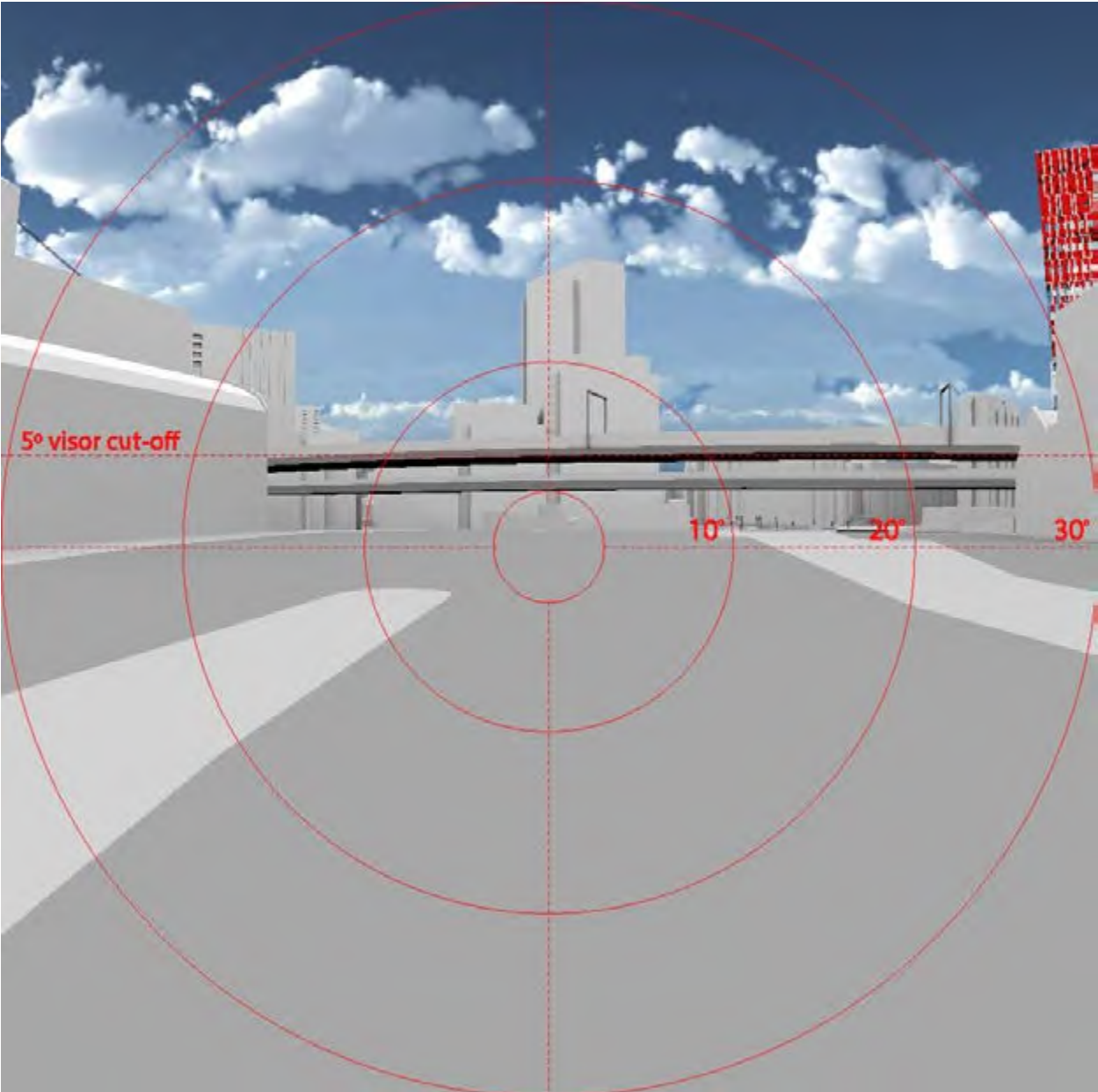


Fig. 346: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES1 - EGERTON STREET/INNER RING ROAD JUNCTION
(MERGING WITH DEANS GATE INTERCHANGE ON-RAMP)
LOOKING STRAIGHT**

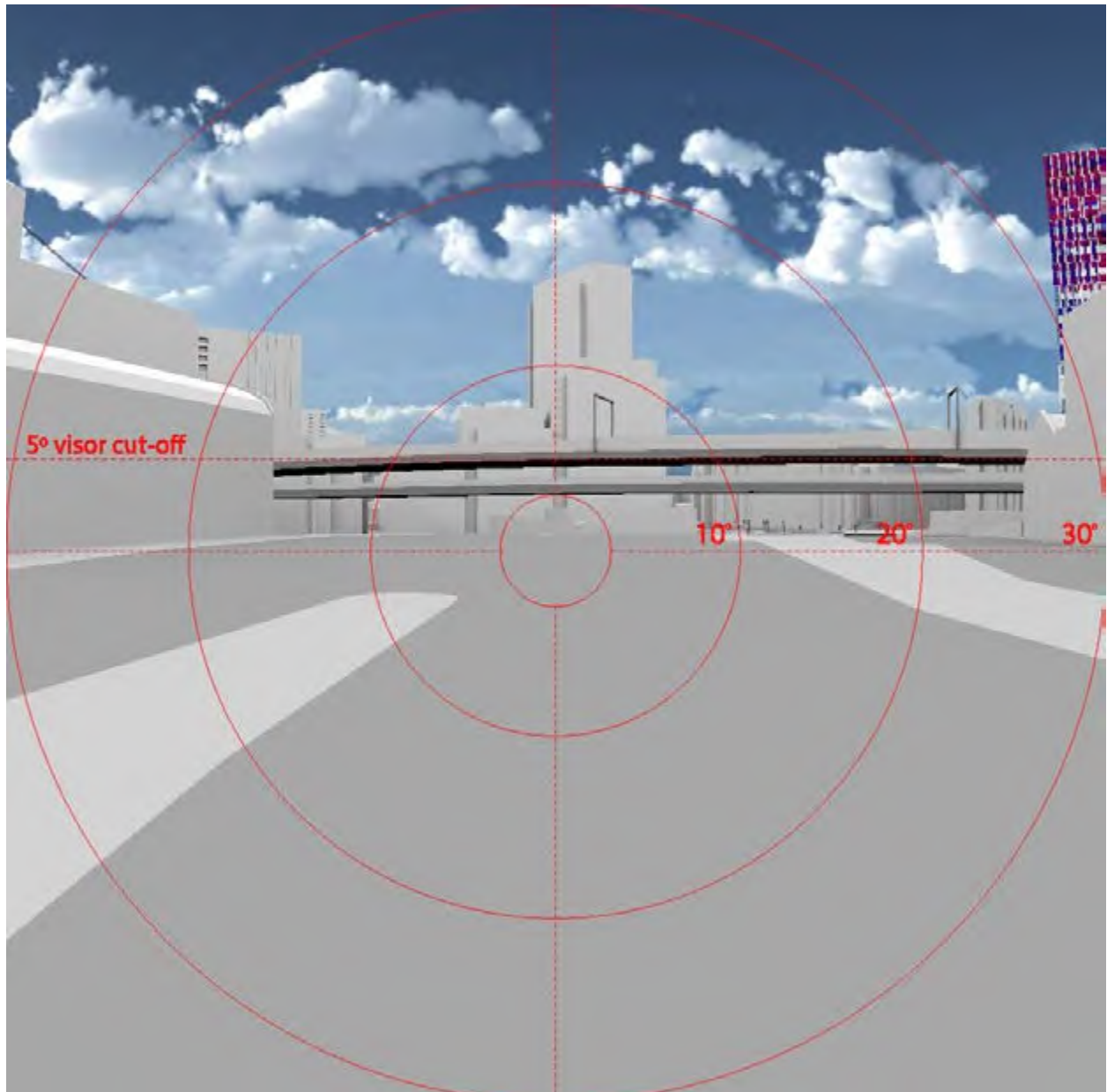


Fig. 347: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES1 - EGERTON STREET/INNER RING ROAD JUNCTION
(MERGING WITH DEANS GATE INTERCHANGE ON-RAMP)
LOOKING STRAIGHT

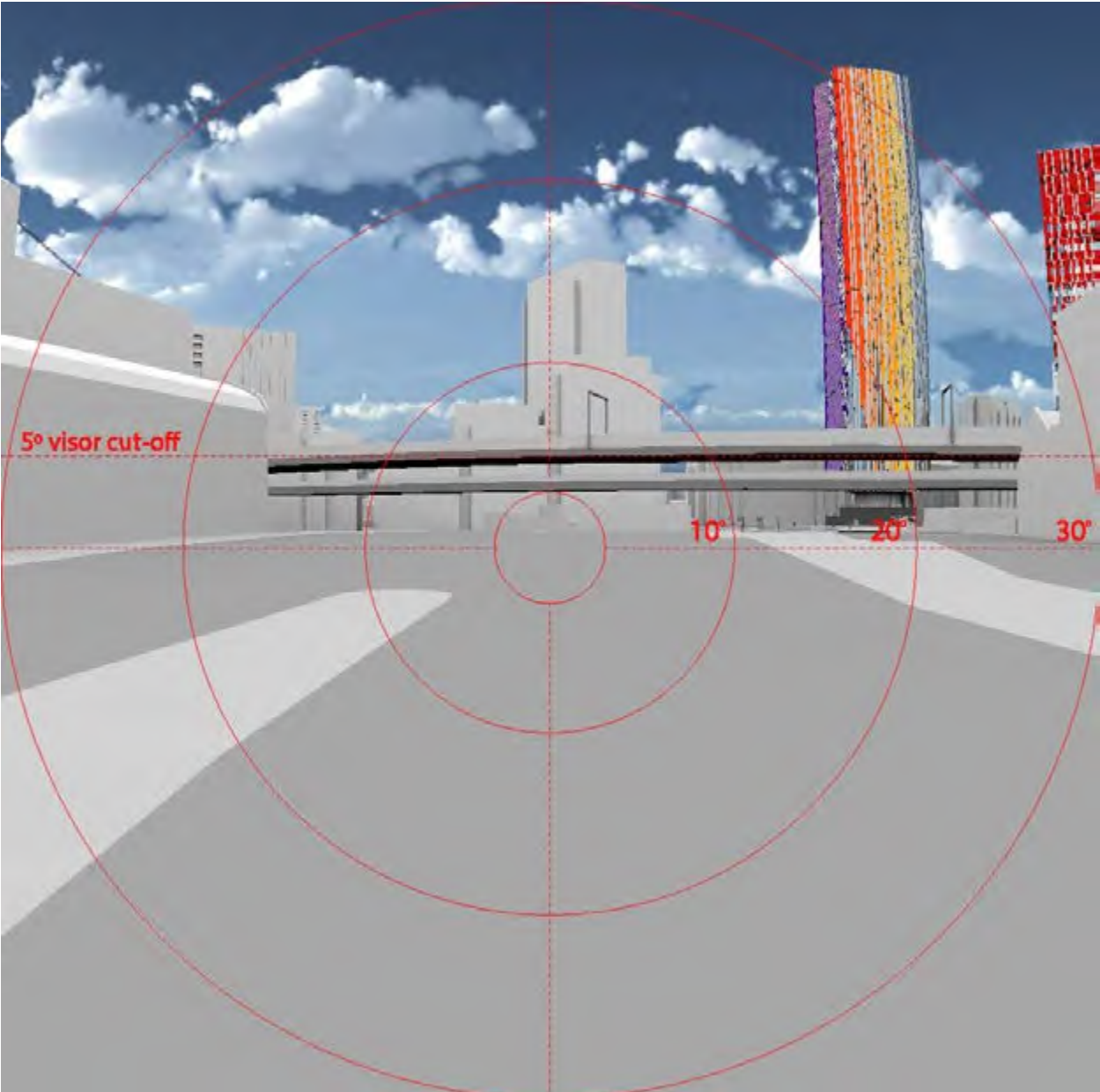


Fig. 348: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES1 - EGERTON STREET/INNER RING ROAD JUNCTION
(MERGING WITH DEANS GATE INTERCHANGE ON-RAMP)
LOOKING STRAIGHT**

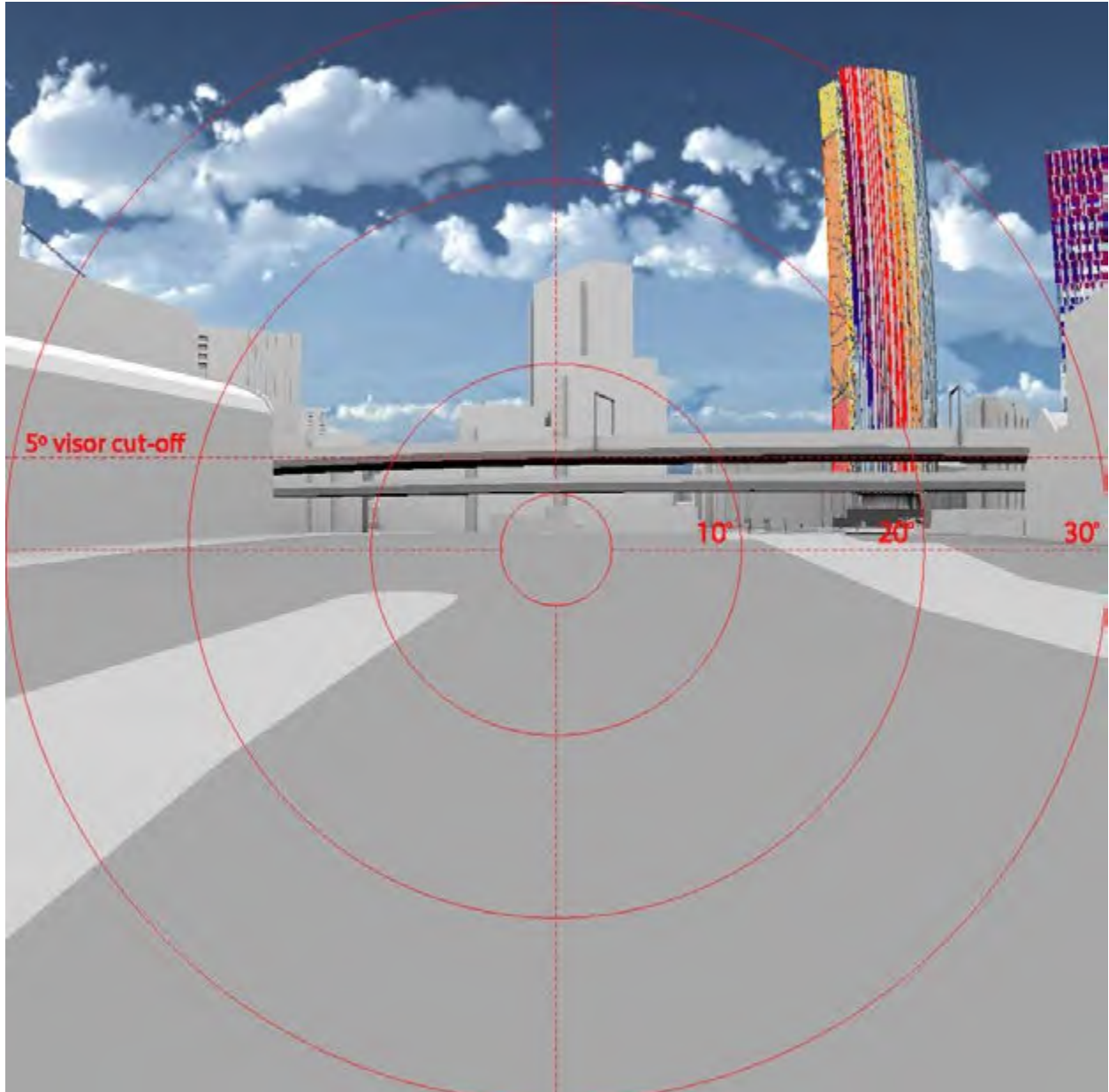


Fig. 349: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES1 - EGERTON STREET/INNER RING ROAD JUNCTION
(MERGING WITH DEANS GATE INTERCHANGE ON-RAMP)
LOOKING STRAIGHT

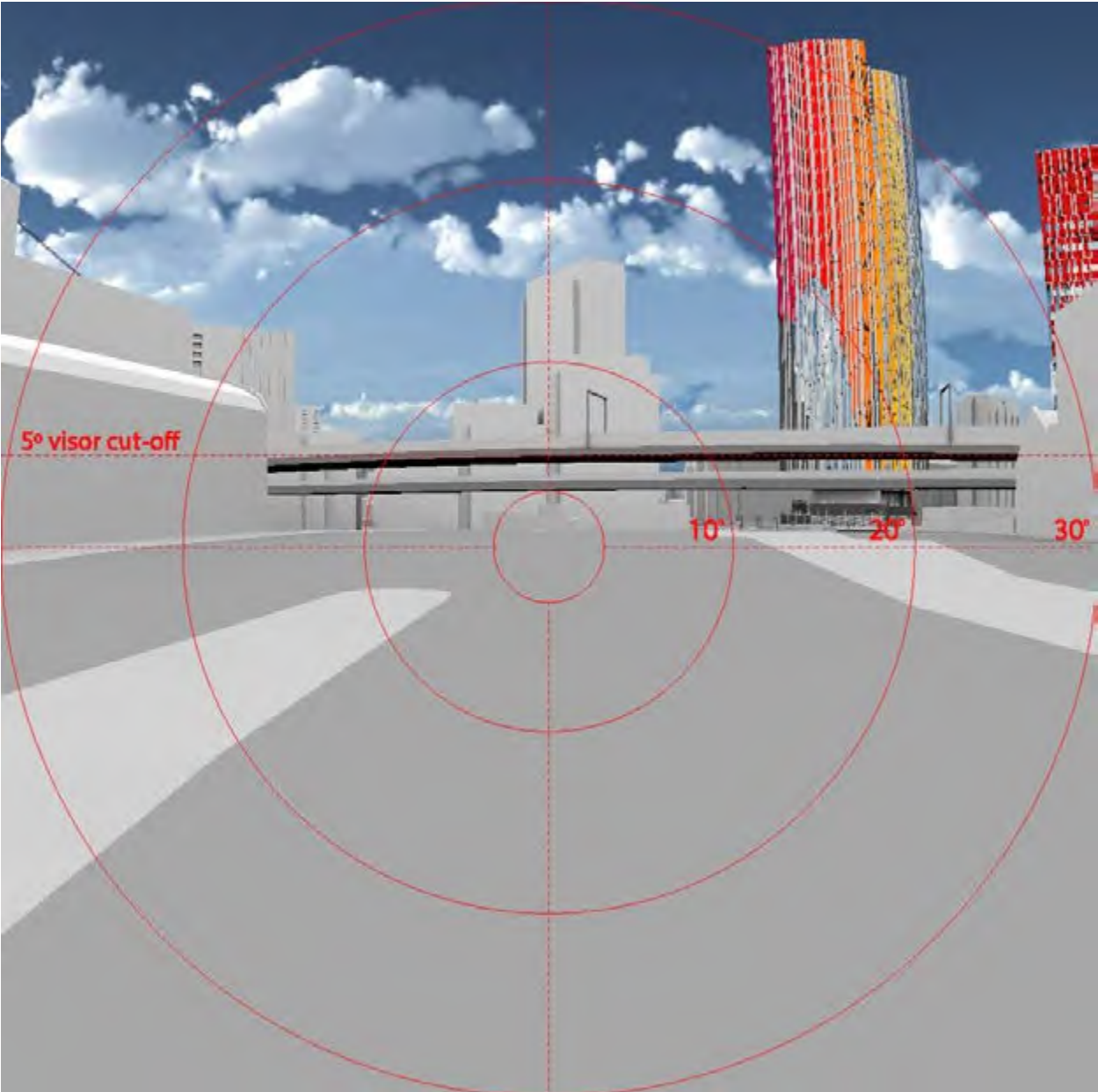


Fig. 350: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES1 - EGERTON STREET/INNER RING ROAD JUNCTION
(MERGING WITH DEANS GATE INTERCHANGE ON-RAMP)
LOOKING STRAIGHT**

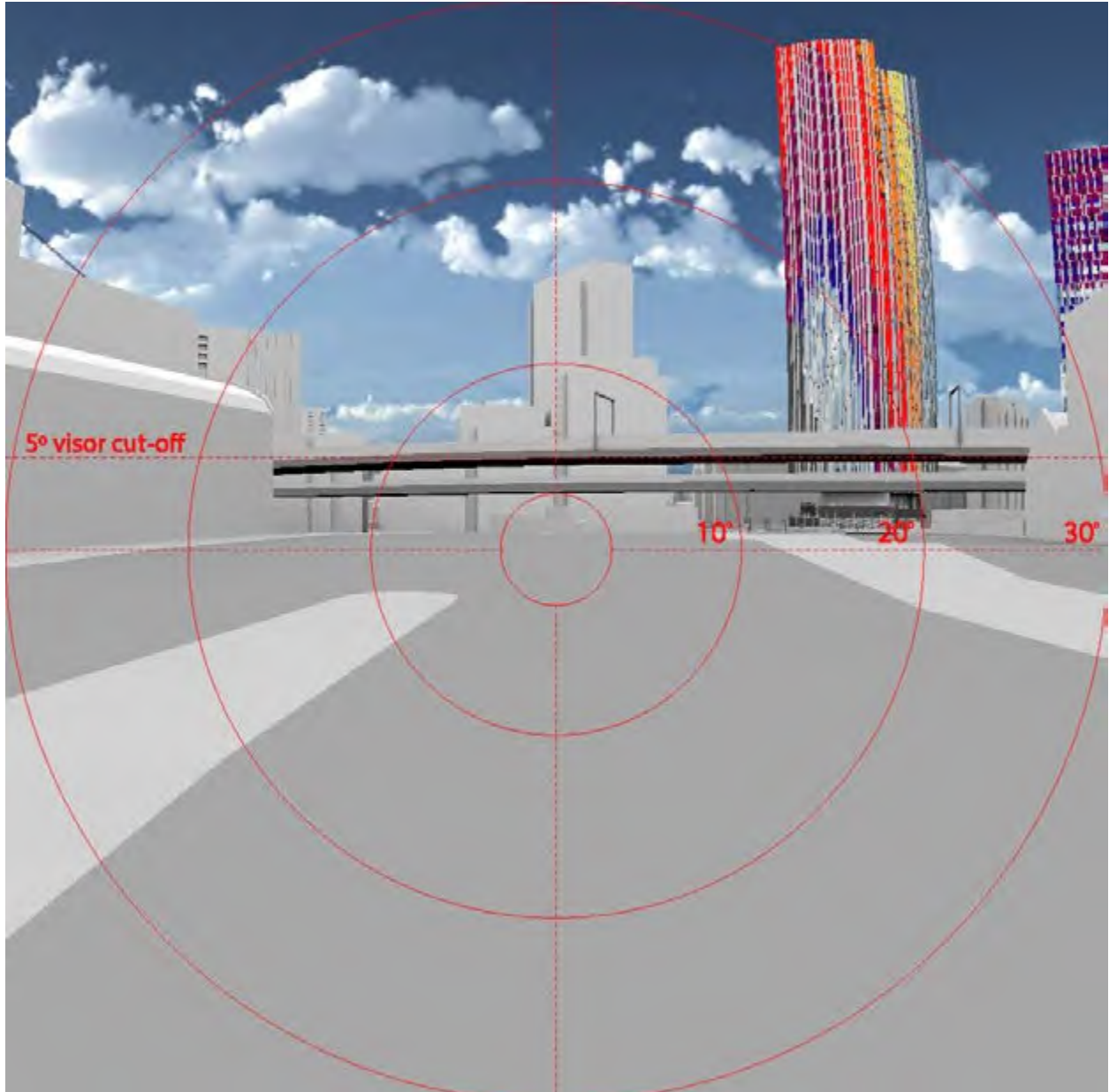


Fig. 351: Solar reflections



30 **SOLAR GLARE ASSESSMENT**

ES_SLIP - DEANSGATE INTERCHANGE SLIP-ROAD

ES_Slip - Deansgate Interchange on-ramp Northbound to Egerton Street/Inner Ring Road



Fig. 352: Junction Location



Fig. 353: Junction view



Fig. 354: Viewpoints

Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES_SLIP - DEANS_GATE INTERCHANGE ON-RAMP JUNCTION
(MERGING WITH EGERTON STREET/INNER RING ROAD)
LOOKING STRAIGHT

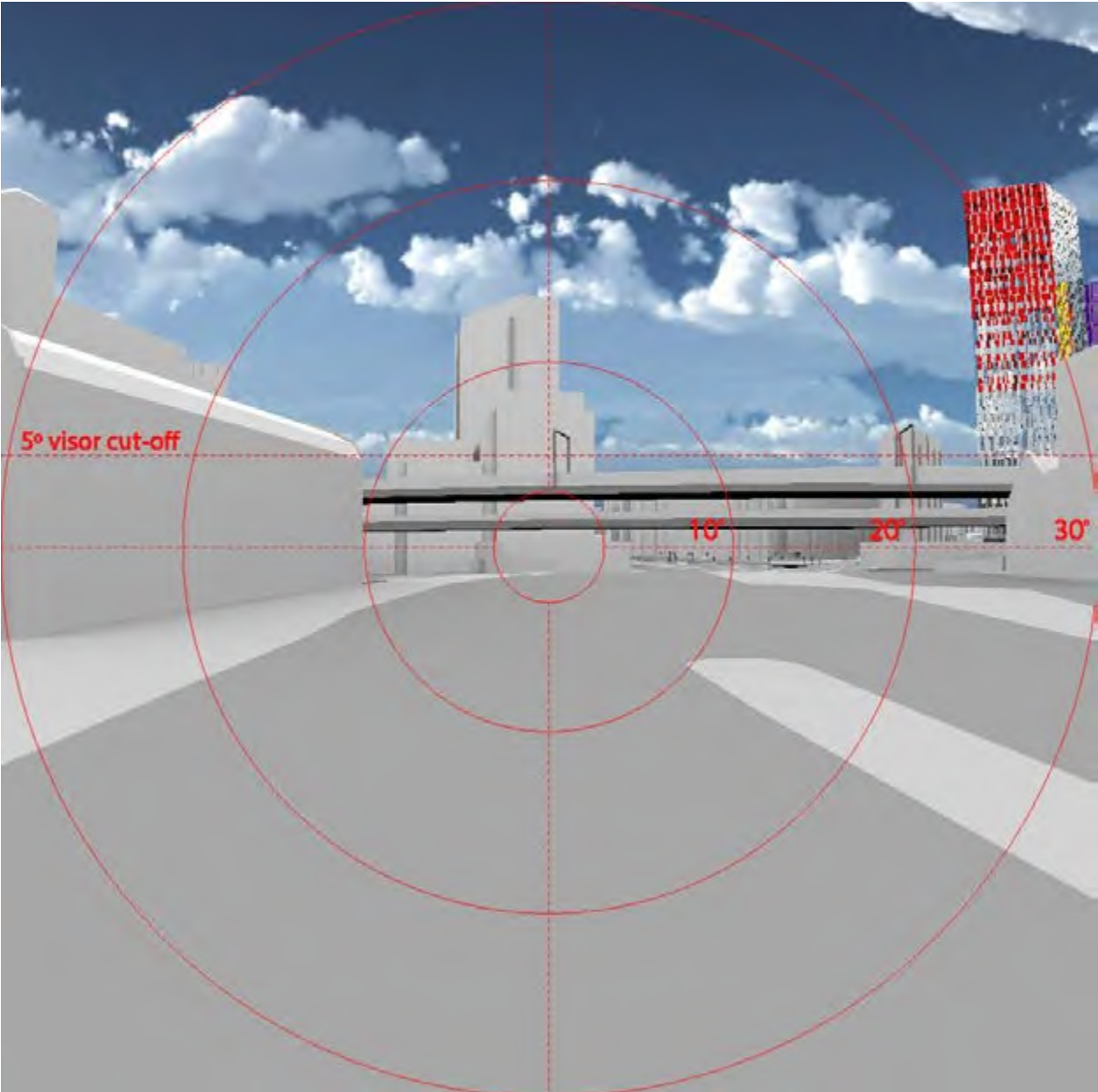


Fig. 355: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES_SLIP - DEANSGATE INTERCHANGE ON-RAMP JUNCTION
(MERGING WITH EGERTON STREET/INNER RING ROAD)
LOOKING STRAIGHT**

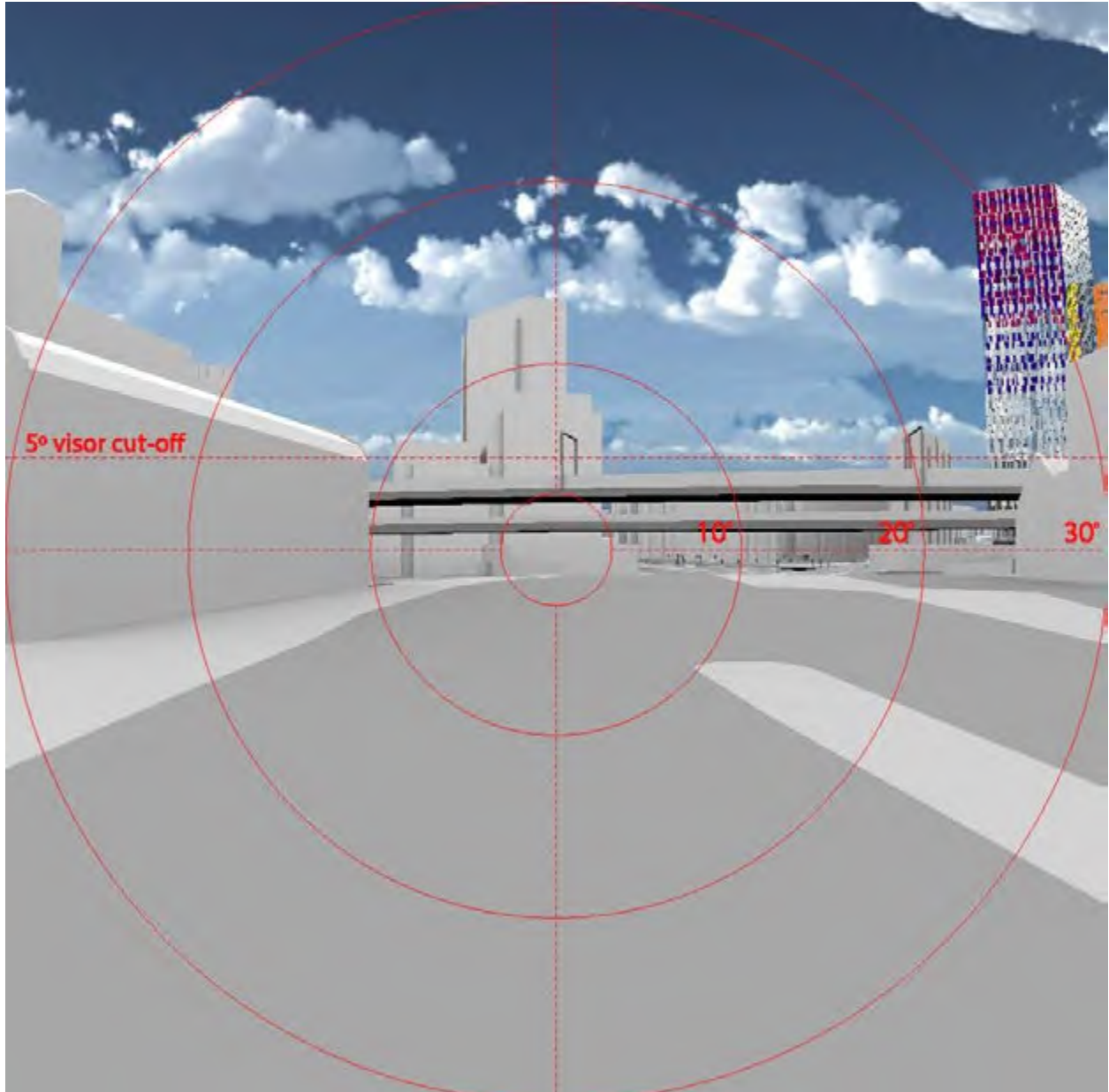


Fig. 356: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES_SLIP - DEANSGATE INTERCHANGE ON-RAMP JUNCTION
(MERGING WITH EGERTON STREET/INNER RING ROAD)
LOOKING STRAGHT

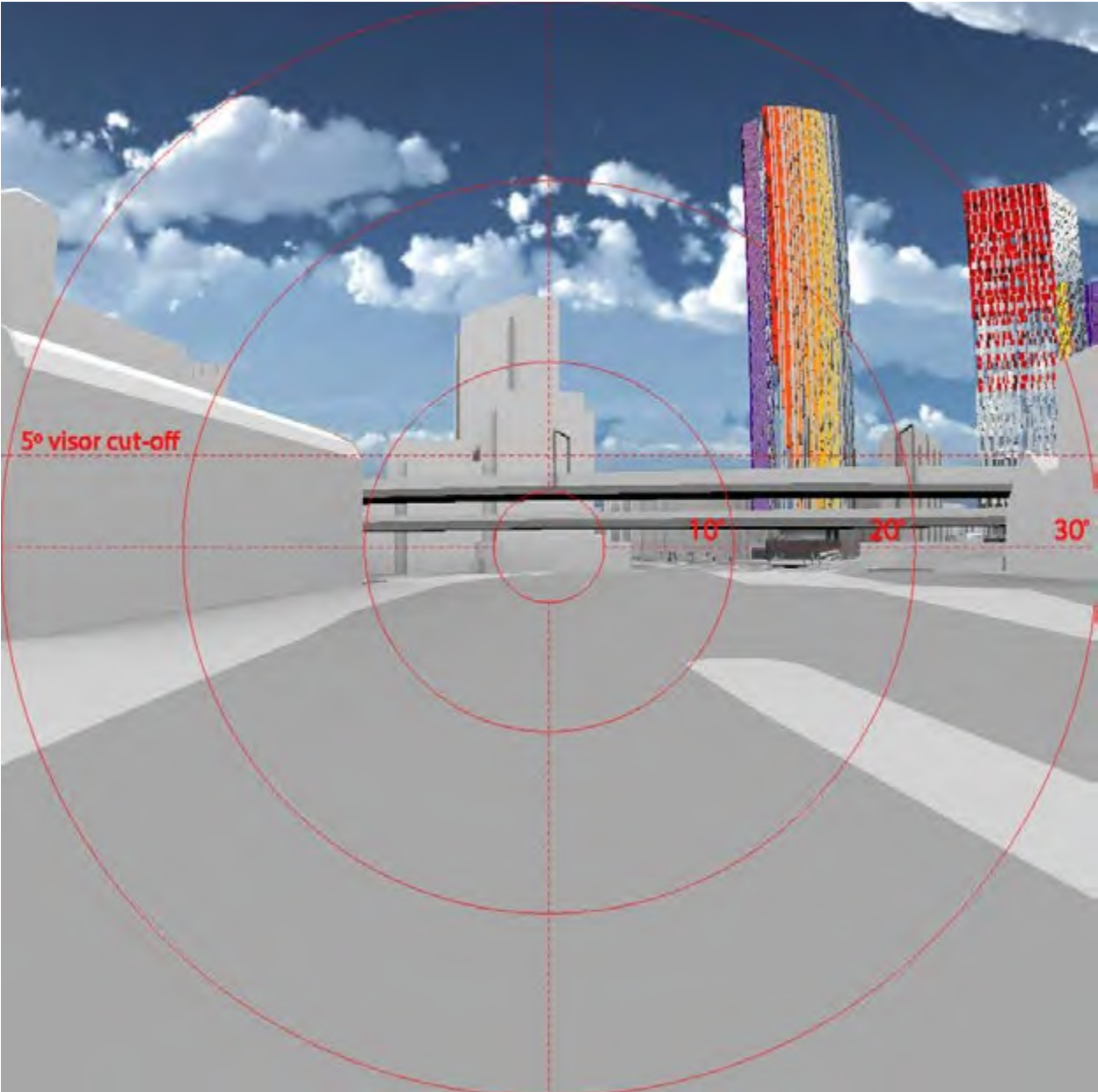


Fig. 357: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES_SLIP - DEANSGATE INTERCHANGE ON-RAMP JUNCTION
(MERGING WITH EGERTON STREET/INNER RING ROAD)
LOOKING STRAIGHT**

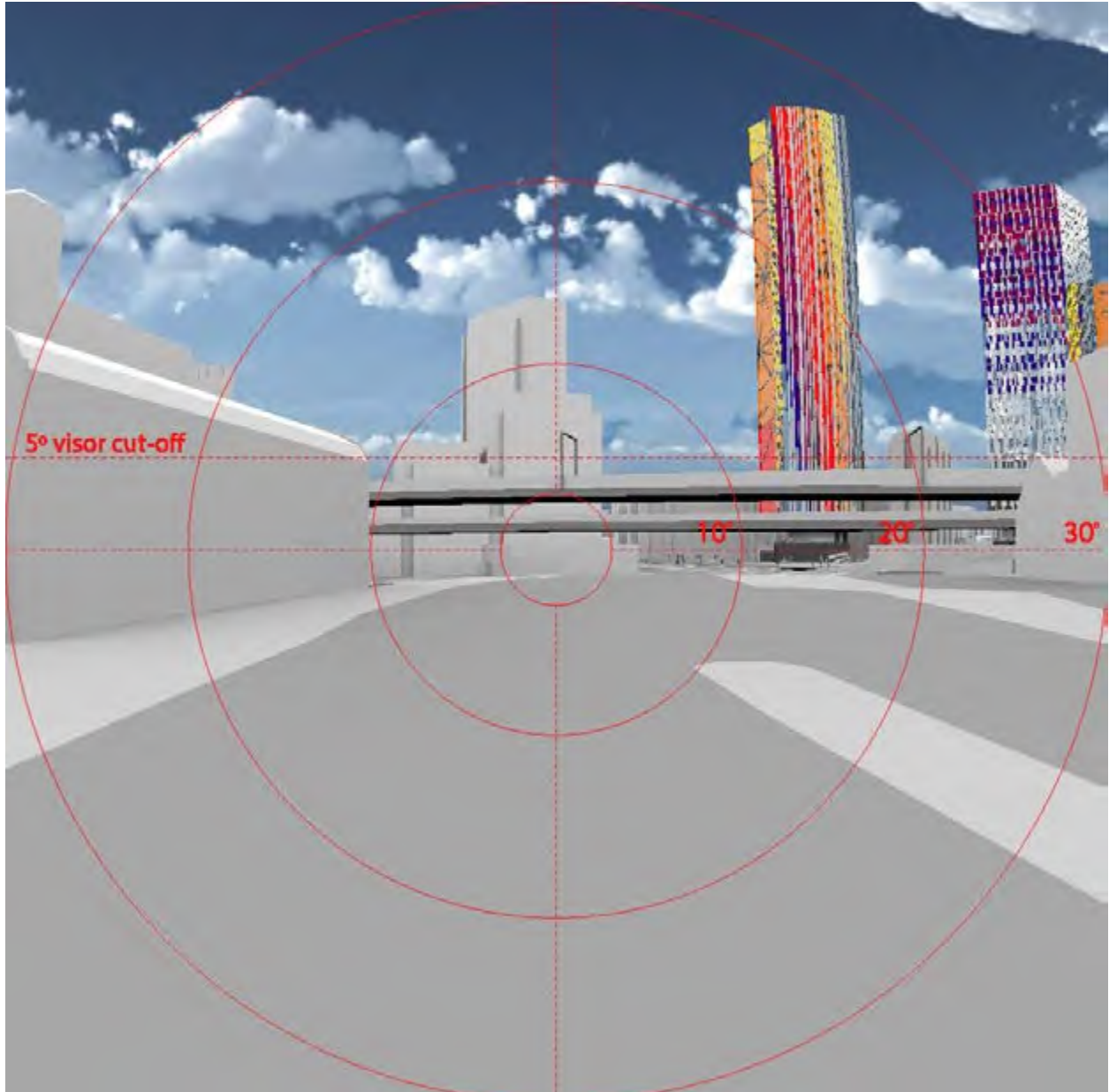


Fig. 358: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT ES_SLIP - DEANS_GATE INTERCHANGE ON-RAMP JUNCTION
(MERGING WITH EGERTON STREET/INNER RING ROAD)
LOOKING STRAGHT

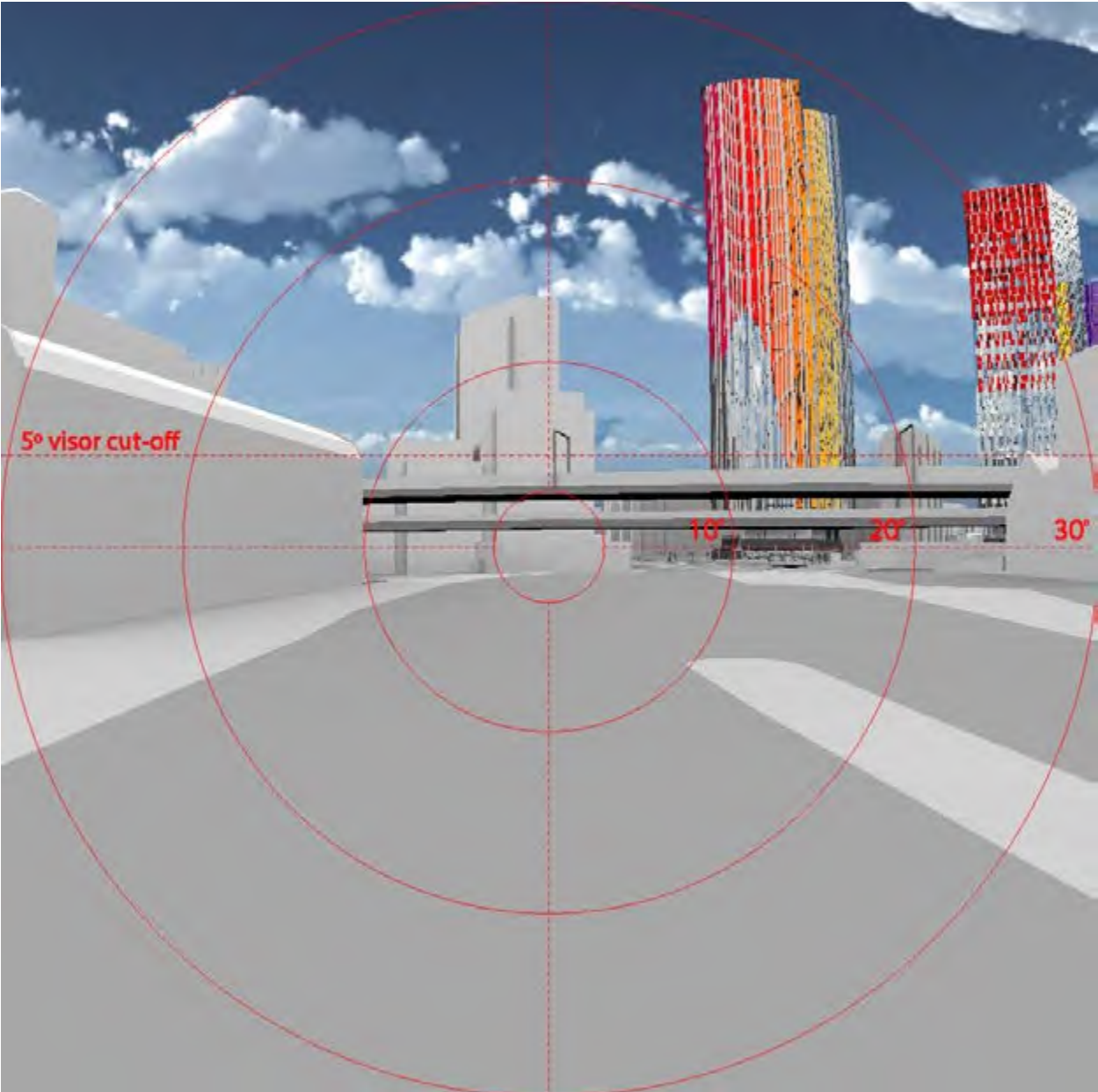


Fig. 359: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT ES_SLIP - DEANSGATE INTERCHANGE ON-RAMP JUNCTION
(MERGING WITH EGERTON STREET/INNER RING ROAD)
LOOKING STRAIGHT**

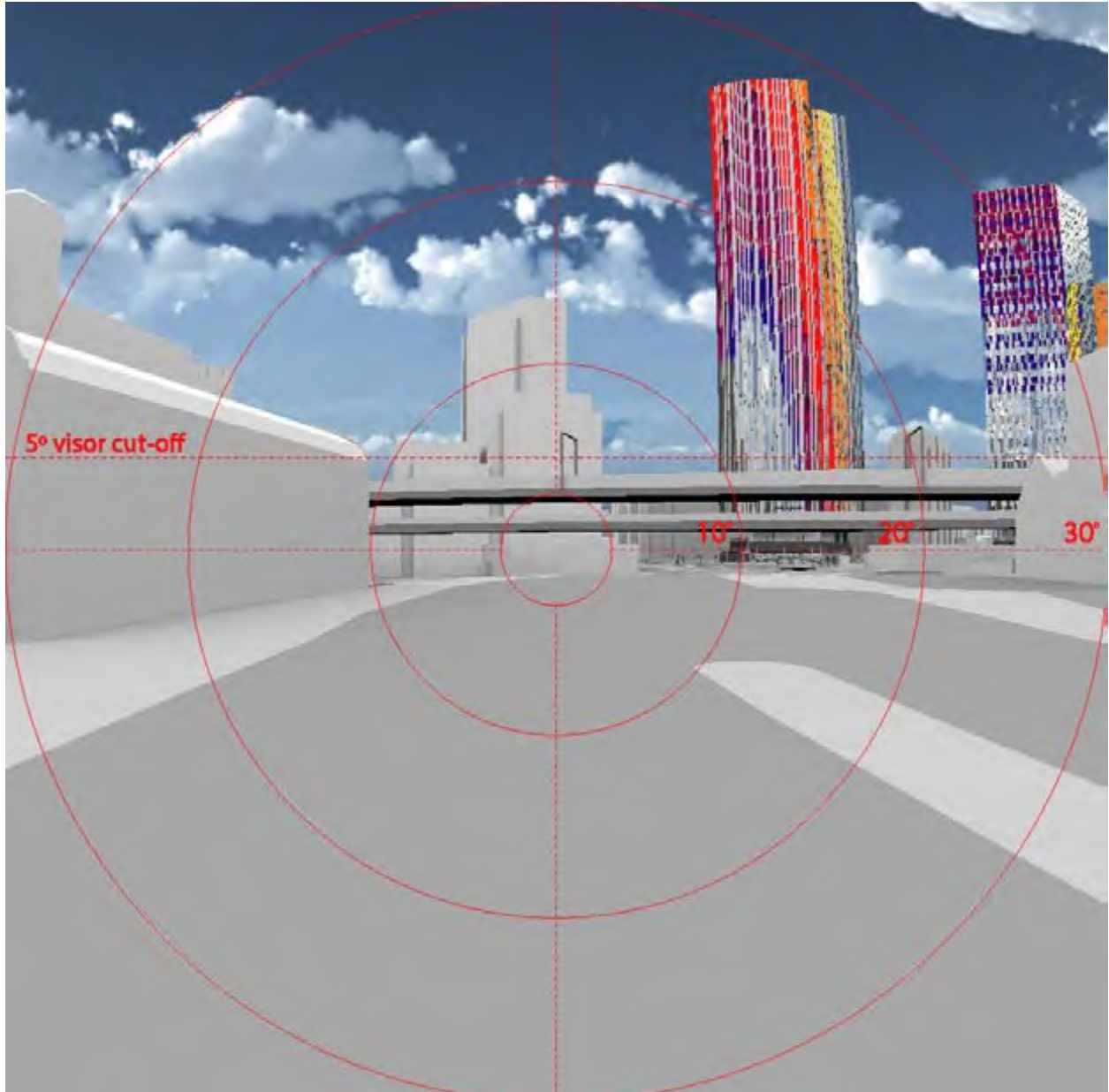


Fig. 360: Solar reflections



31 **SOLAR GLARE ASSESSMENT**
DGI - DEANSGATE INTERCHANGE

DGI - Deansgate Interchange Northbound Junction (with Chester Road)



Fig. 361: Junction Location

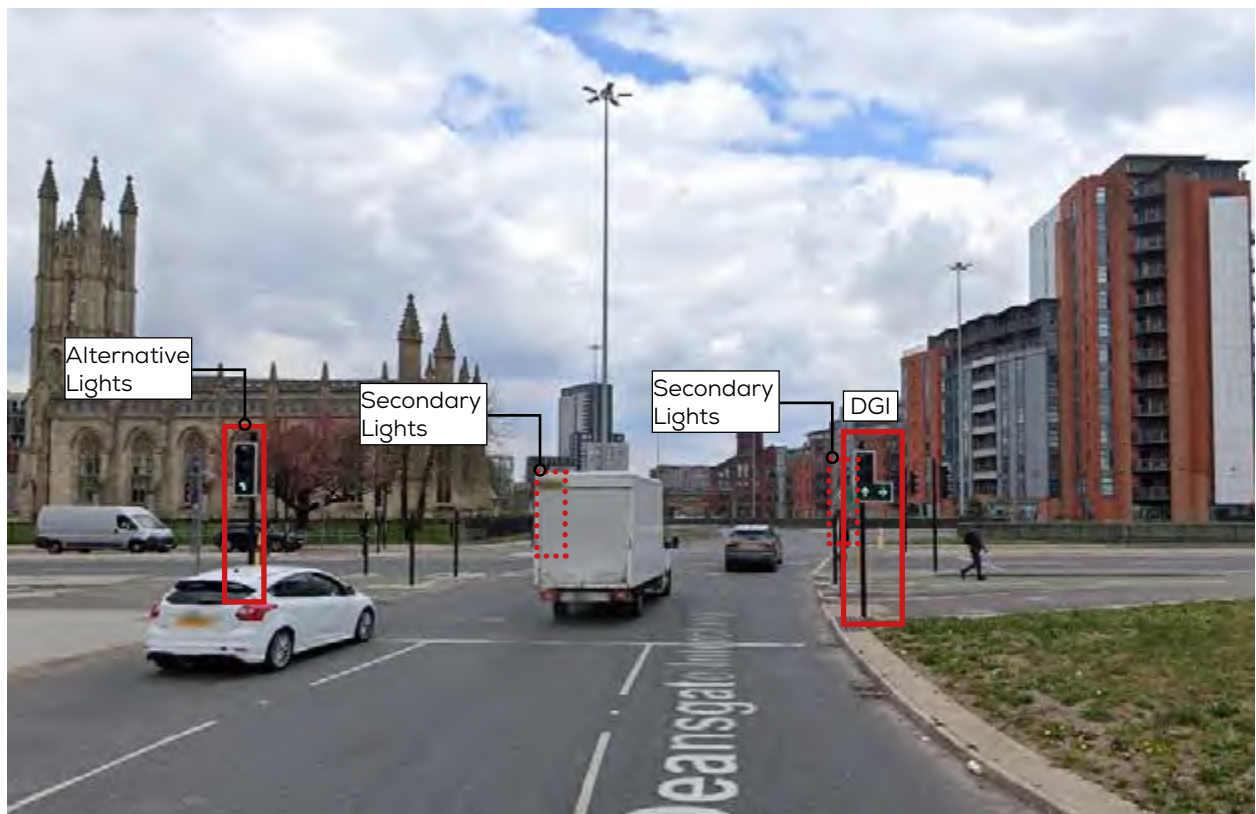


Fig. 362: Traffic Light Location

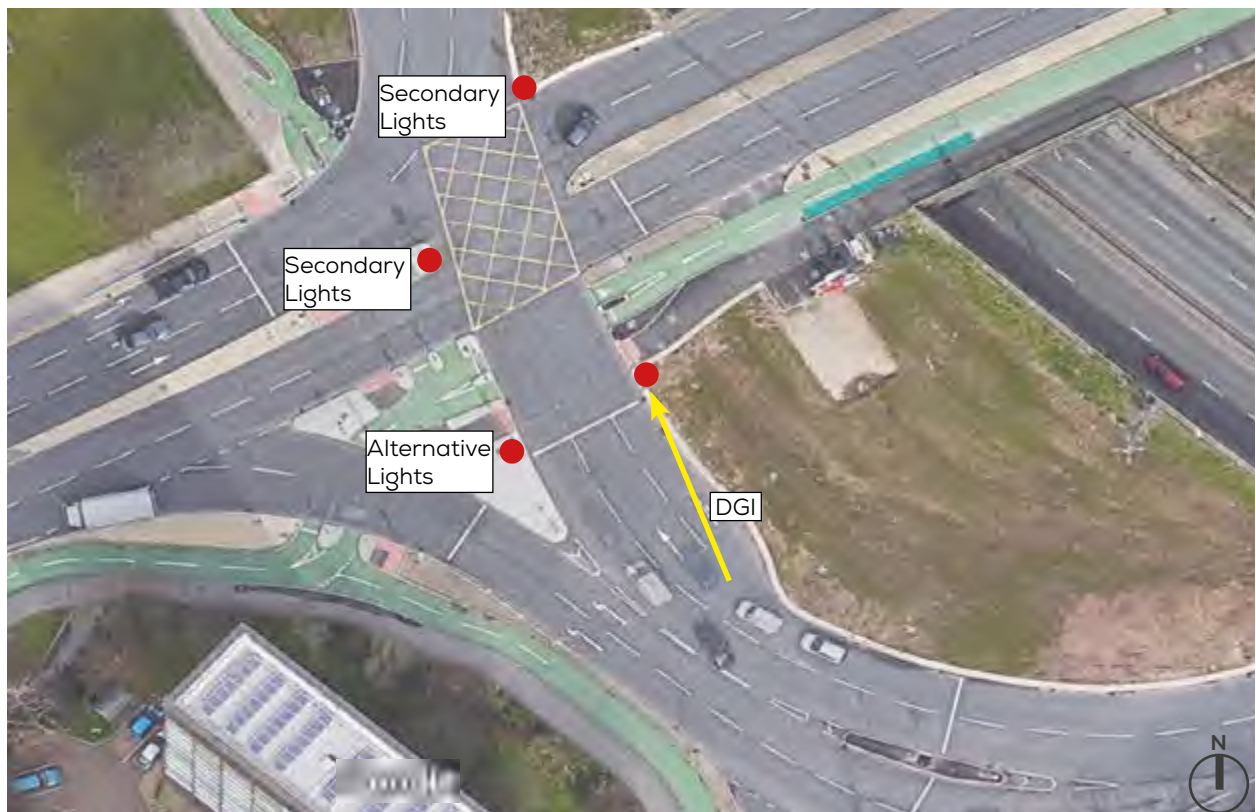


Fig. 363: Viewpoints

Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT DGI - DEANS GATE INTERCHANGE JUNCTION (WITH CHESTER ROAD)
LOOKING STRAIGHT

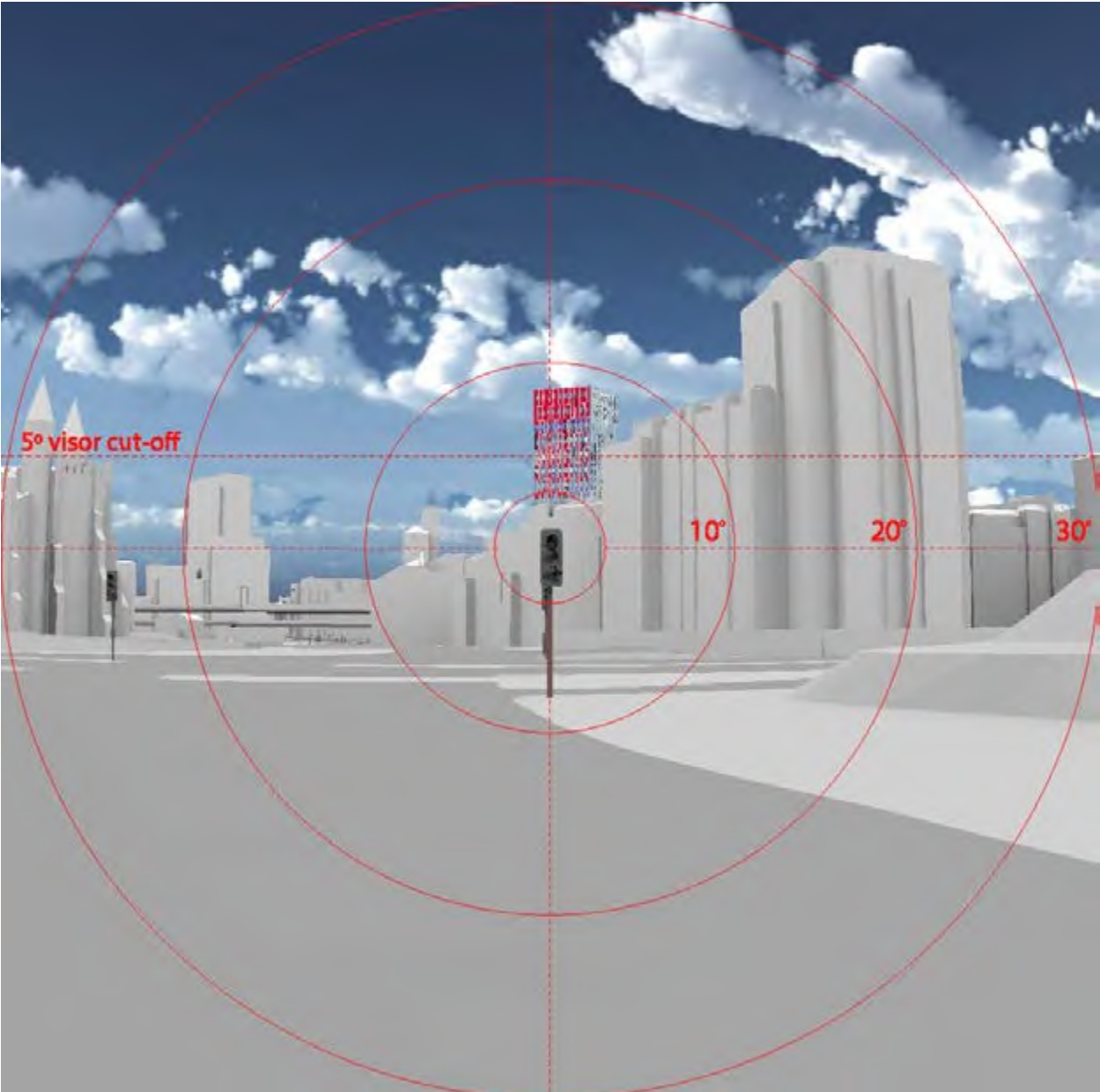


Fig. 364: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT DGI - DEANSGATE INTERCHANGE JUNCTION (WITH CHESTER ROAD)
LOOKING STRAGHT

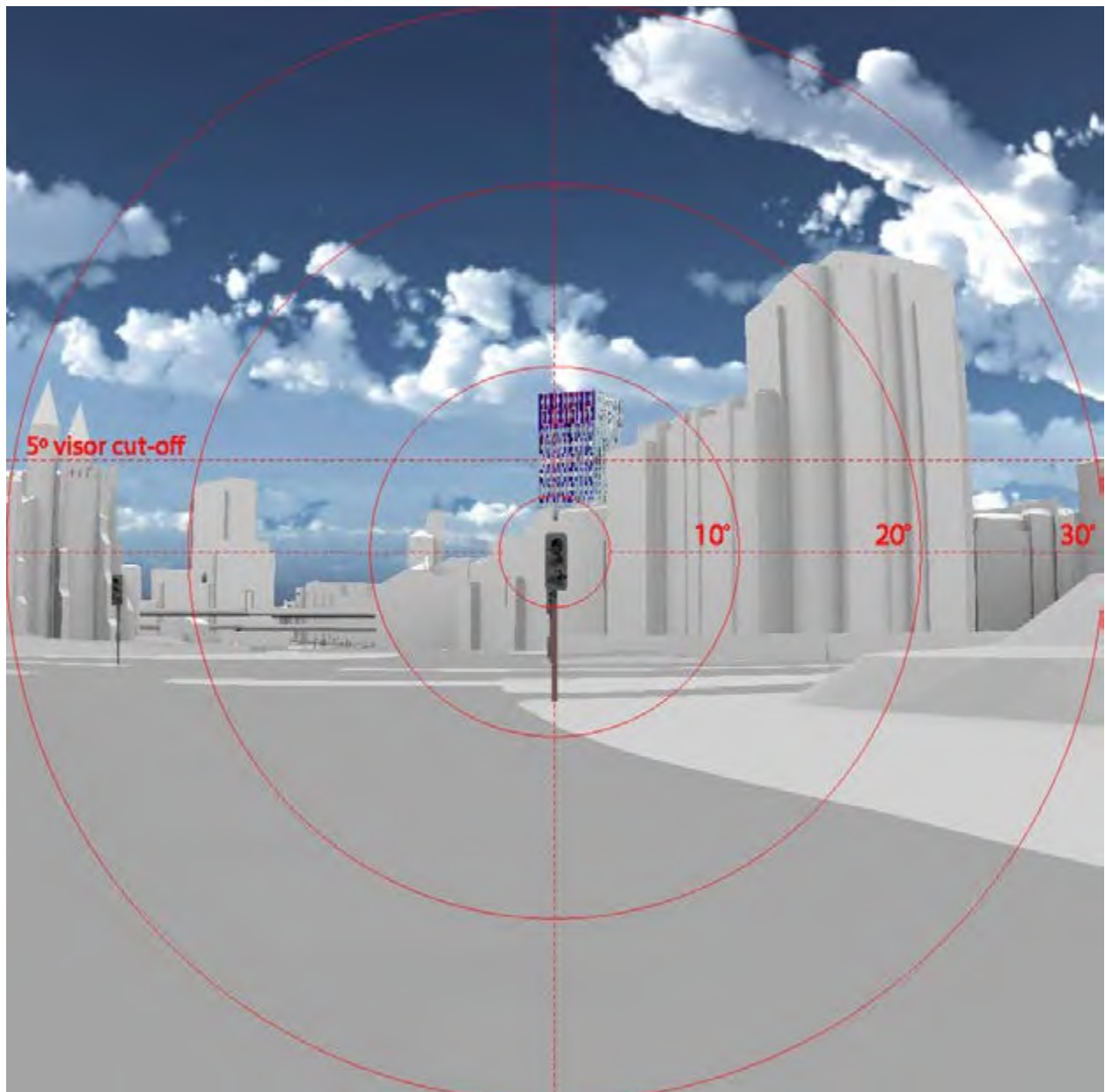


Fig. 365: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT DGI - DEANS GATE INTERCHANGE JUNCTION (WITH CHESTER ROAD)
LOOKING STRAIGHT

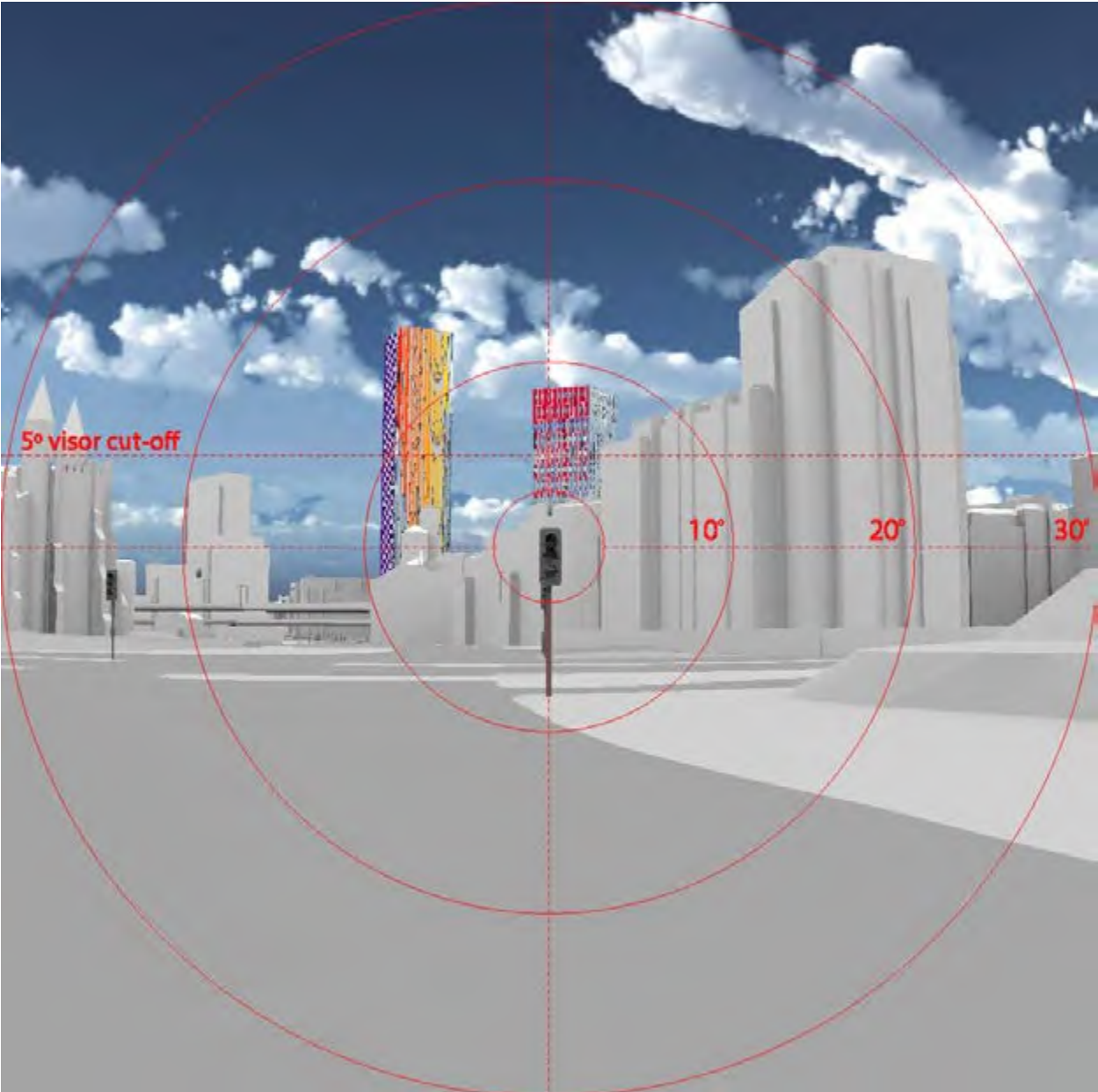


Fig. 366: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT DGI - DEANSGATE INTERCHANGE JUNCTION (WITH CHESTER ROAD)
LOOKING STRAGHT

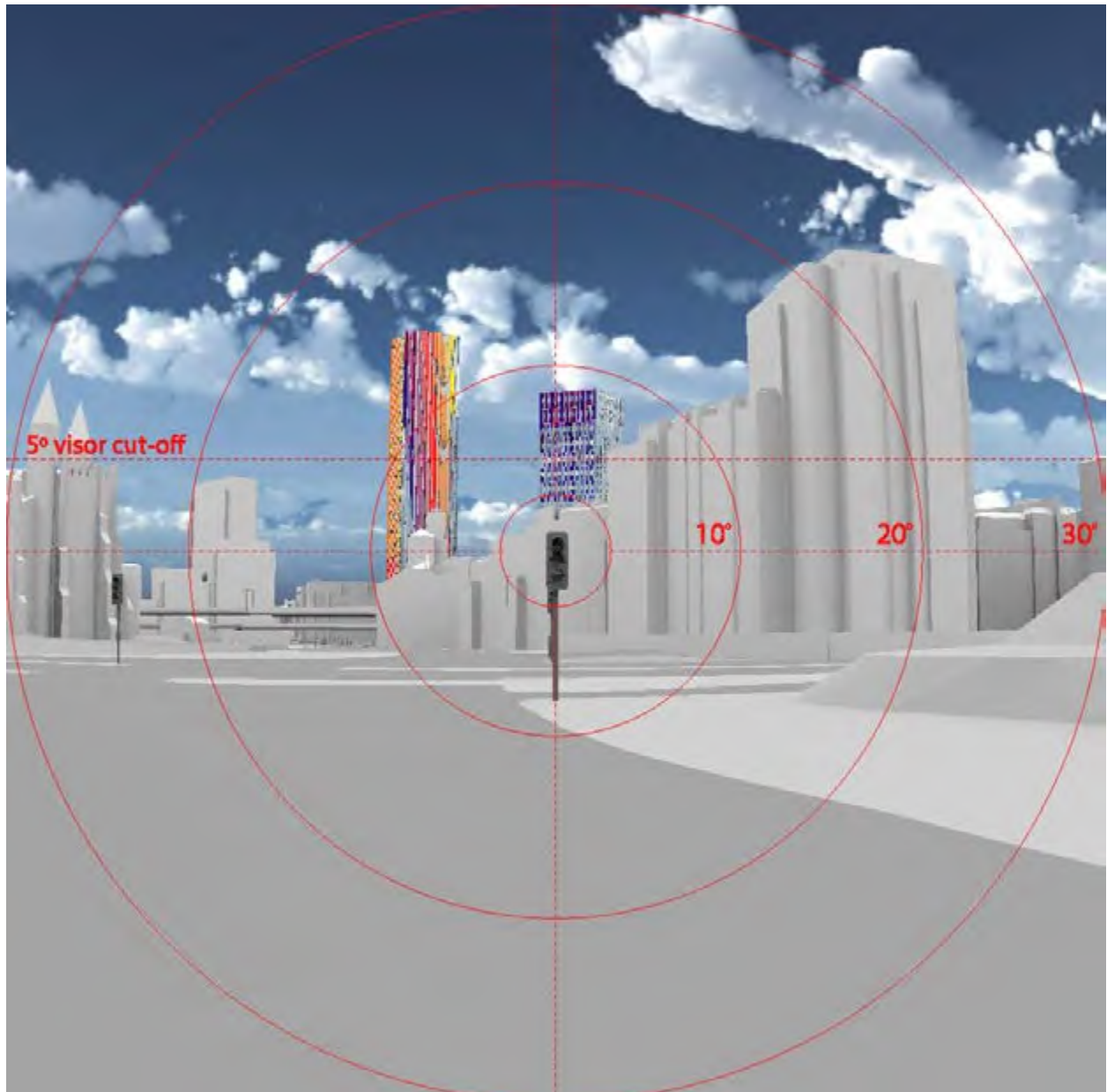


Fig. 367: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT DGI - DEANS GATE INTERCHANGE JUNCTION (WITH CHESTER ROAD)
LOOKING STRAIGHT

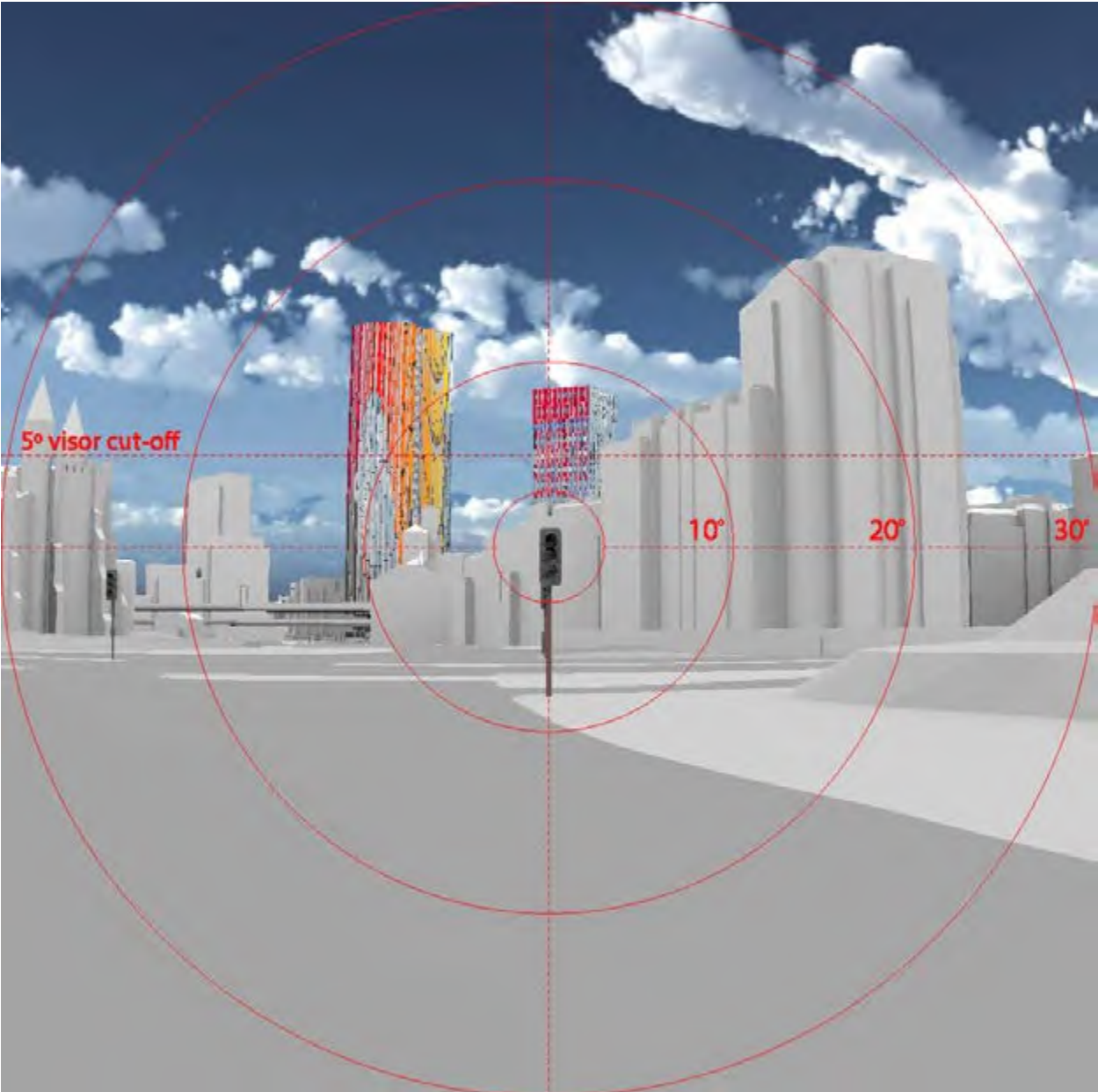


Fig. 368: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT DGI - DEANSGATE INTERCHANGE JUNCTION (WITH CHESTER ROAD)
LOOKING STRAGHT

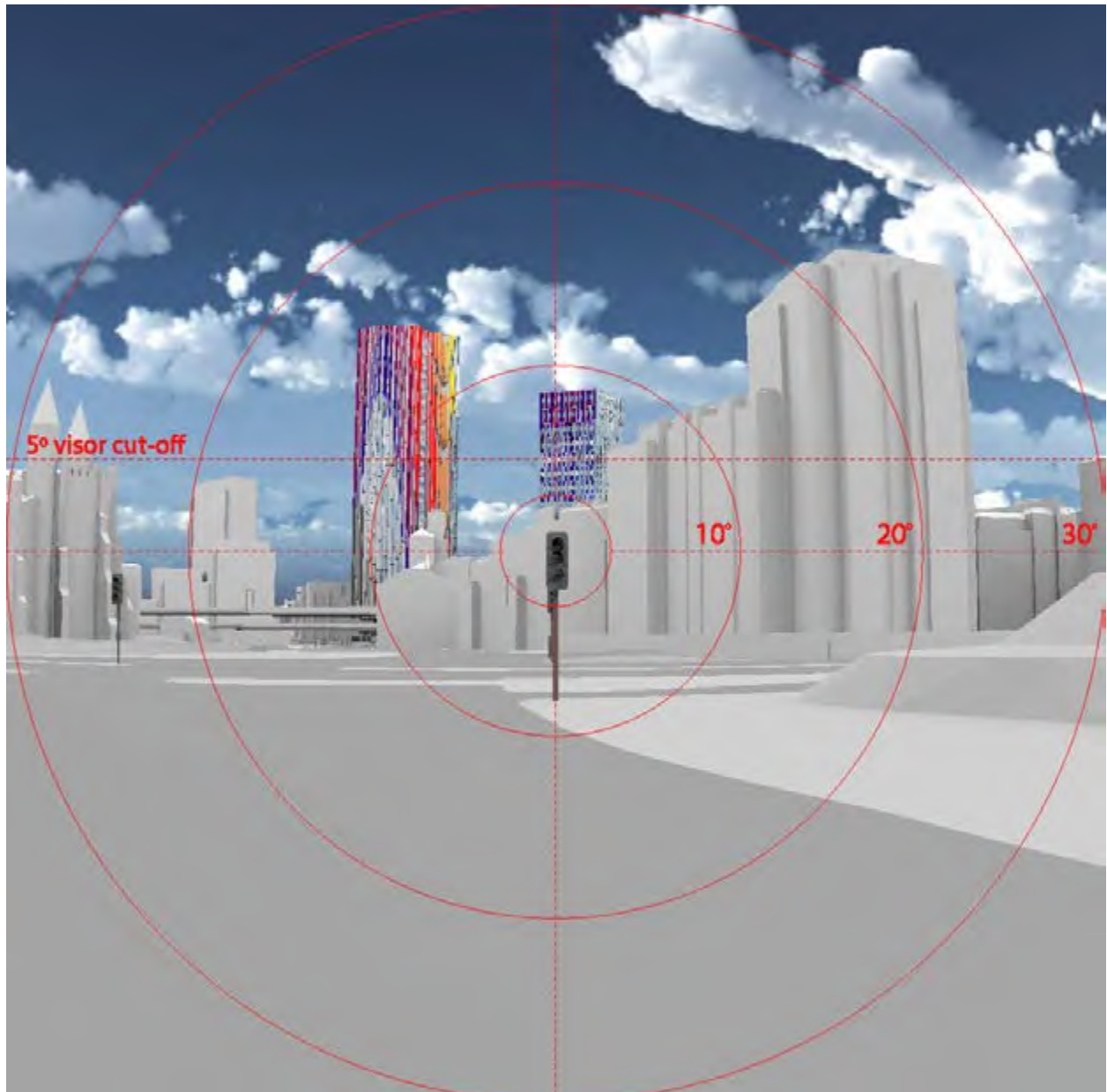


Fig. 369: Solar reflections



32 **SOLAR GLARE ASSESSMENT**

N1 - NORTHERN LINE SOUTHBOUND 1

N1 - Nothern Line - Southbound from Salford Crescent to Deansgate

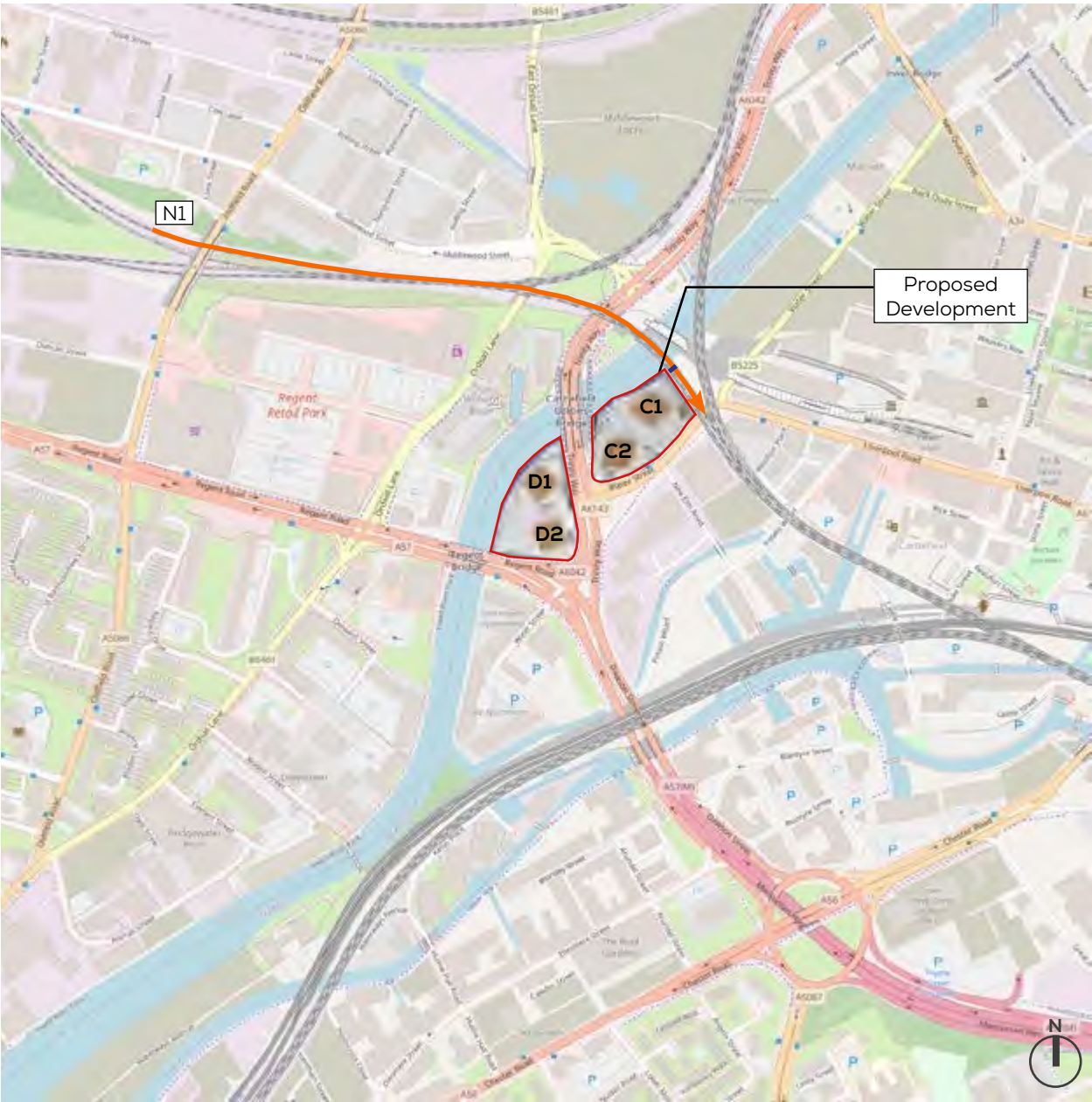


Fig. 370: Junction Location



Fig. 371: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAGHT

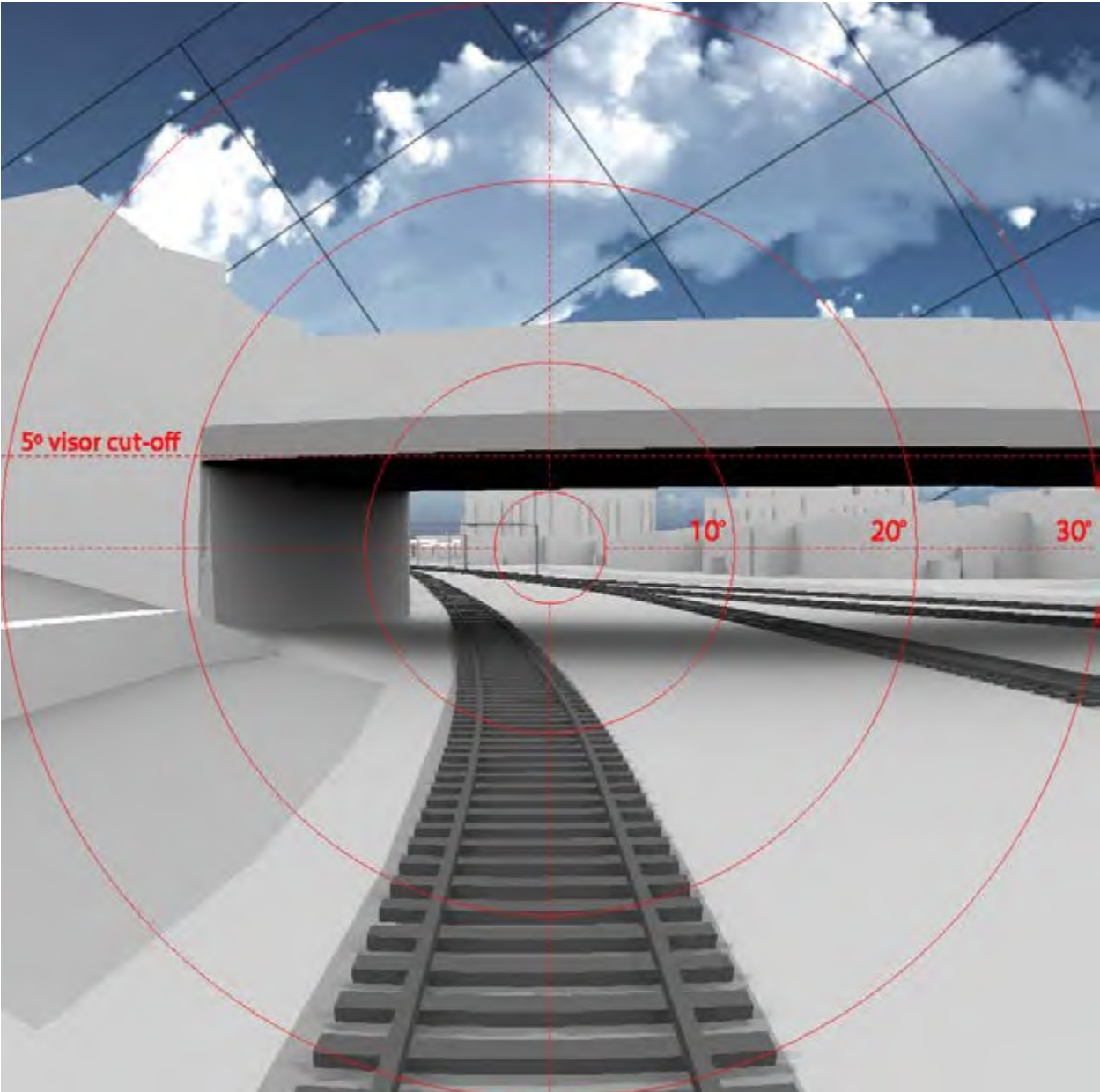


Fig. 372: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAGHT**

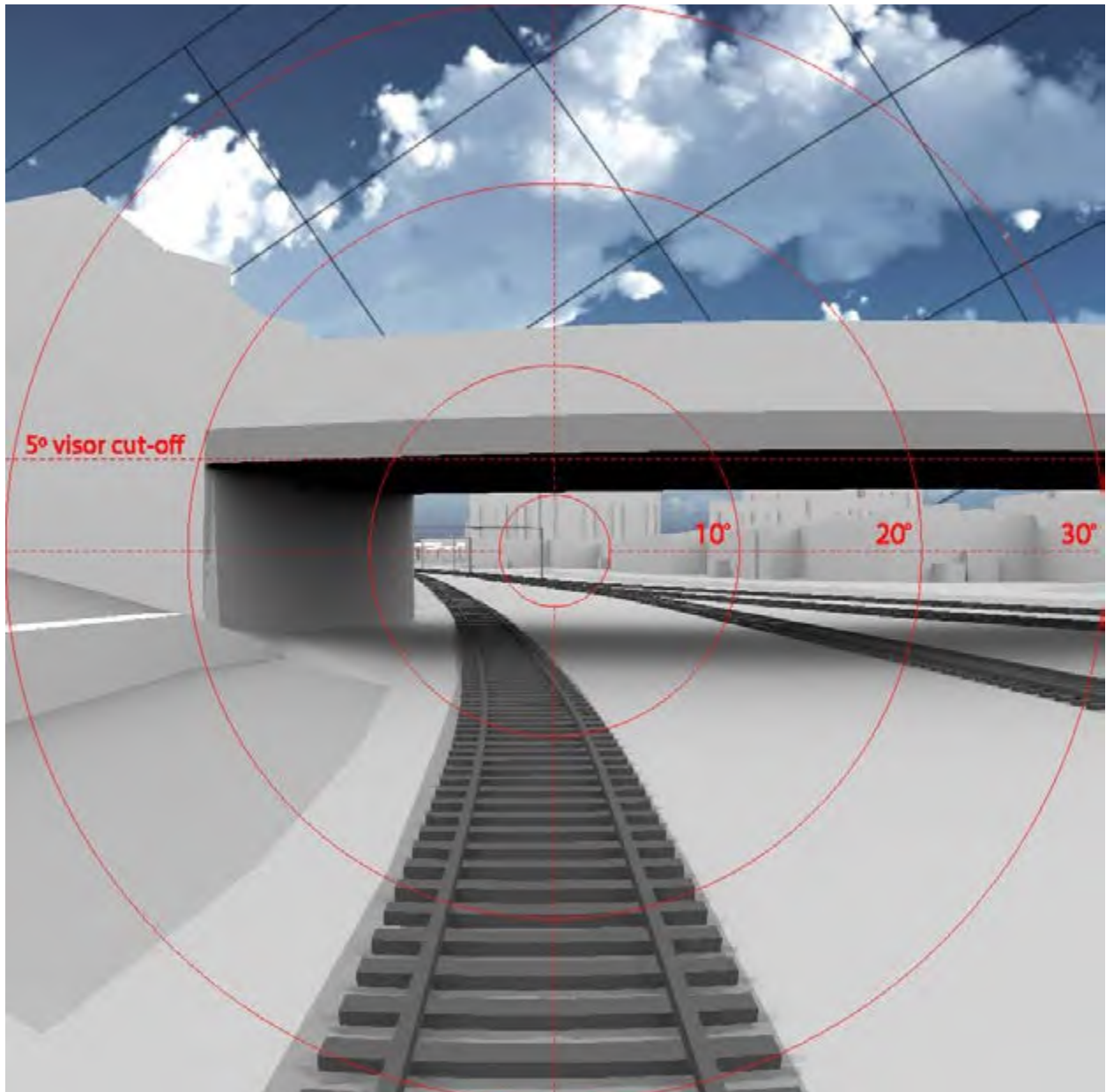


Fig. 373: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAGHT

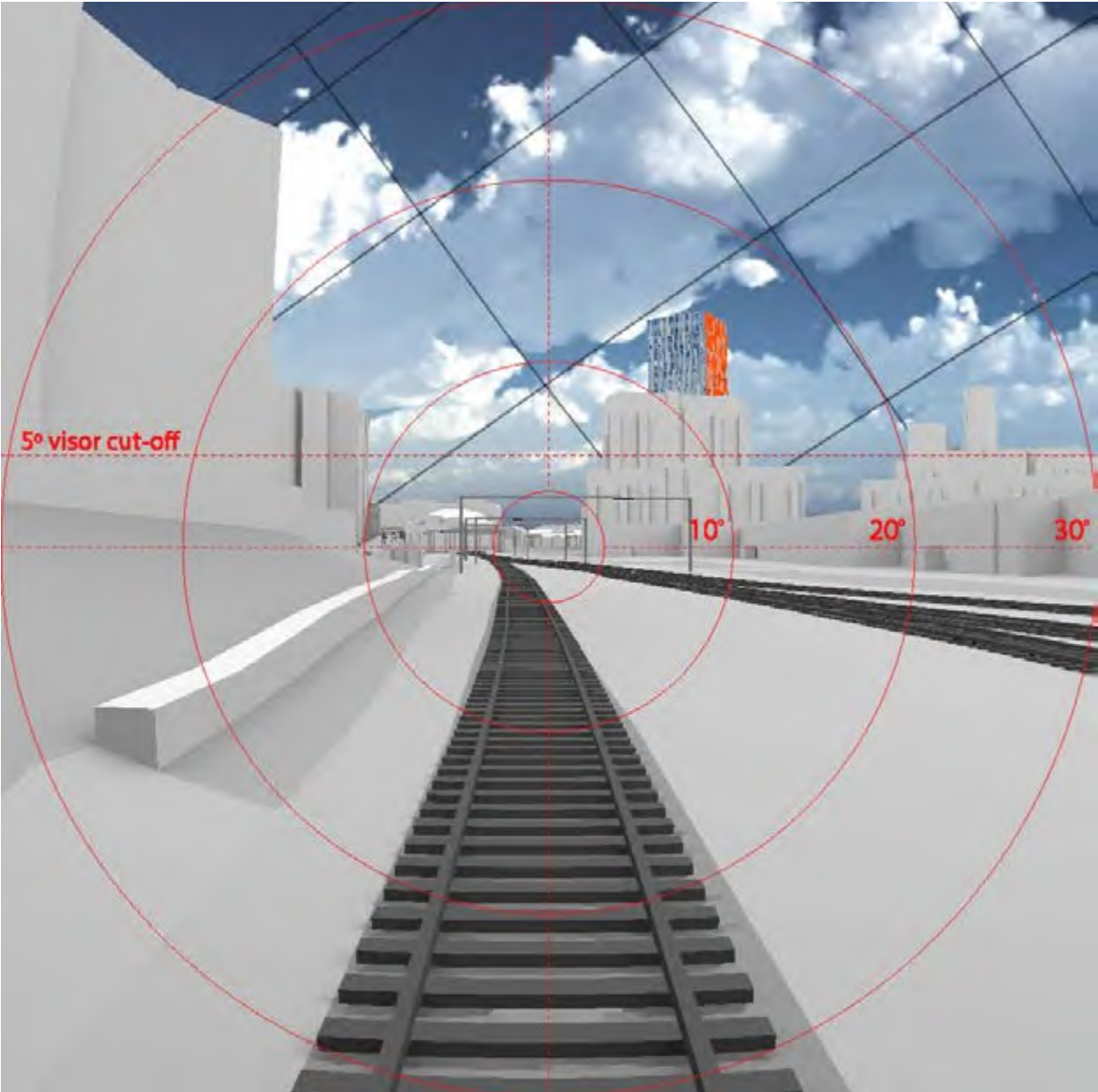


Fig. 374: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAGHT**

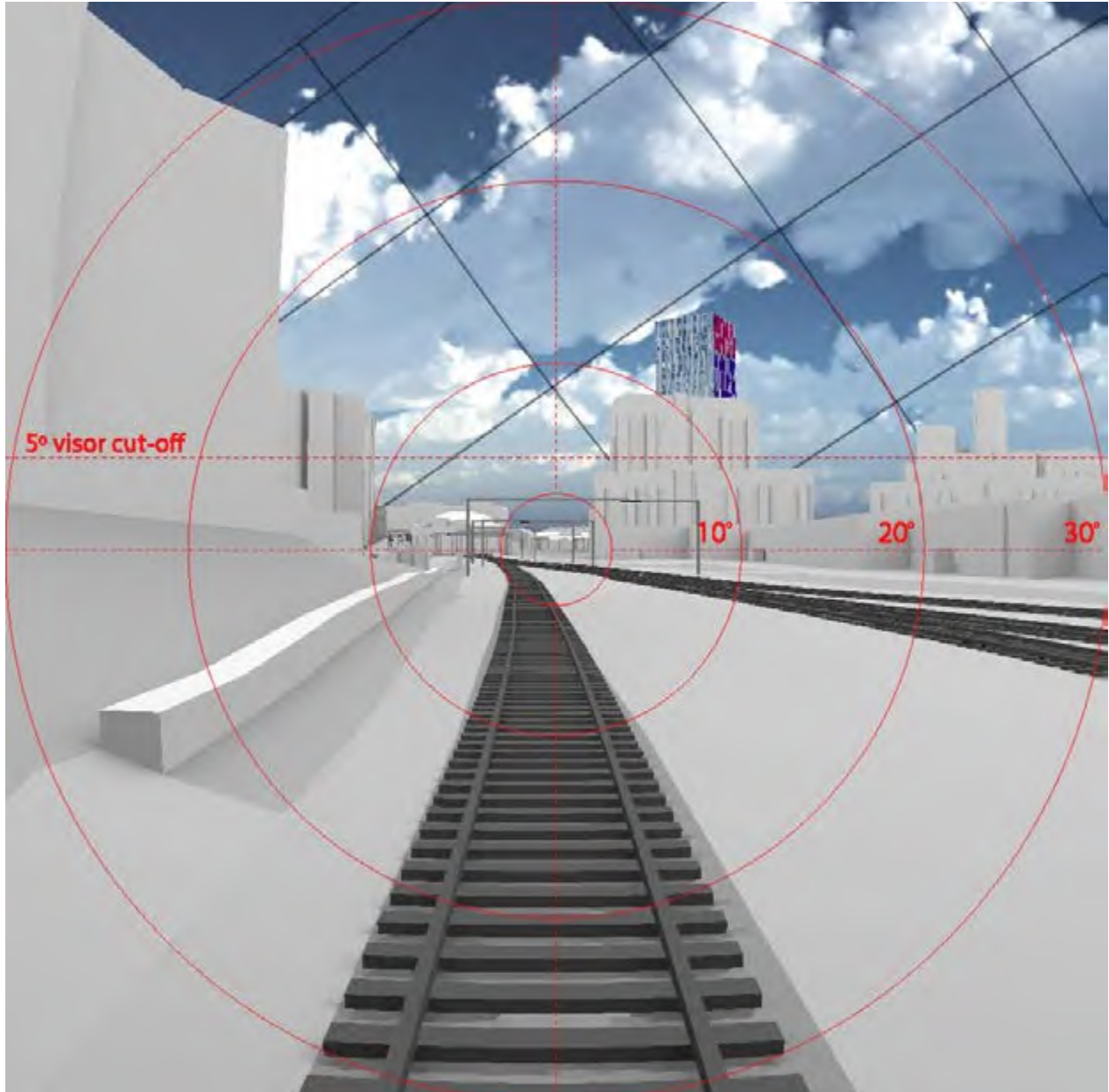


Fig. 375: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT

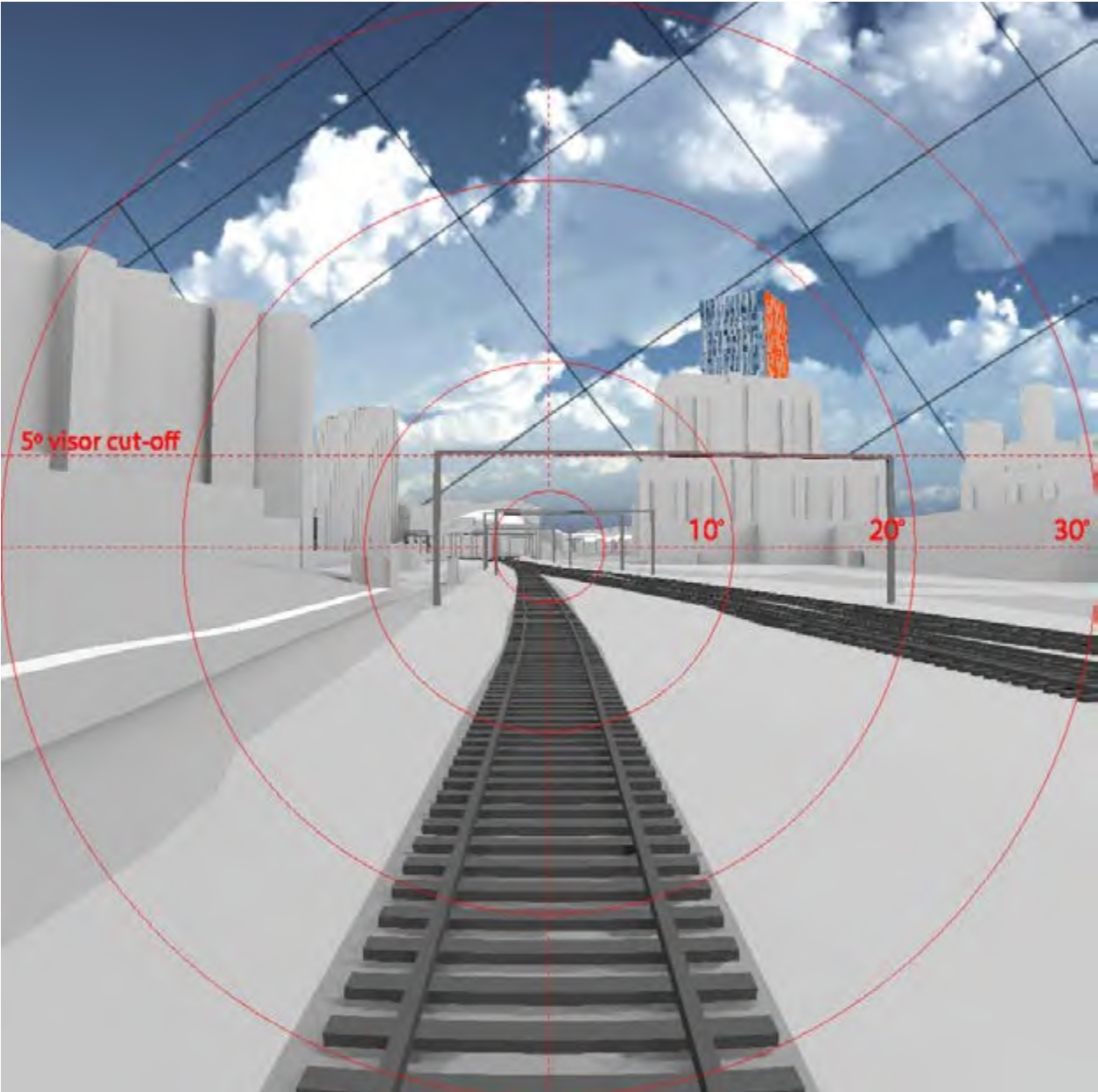


Fig. 376: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT**

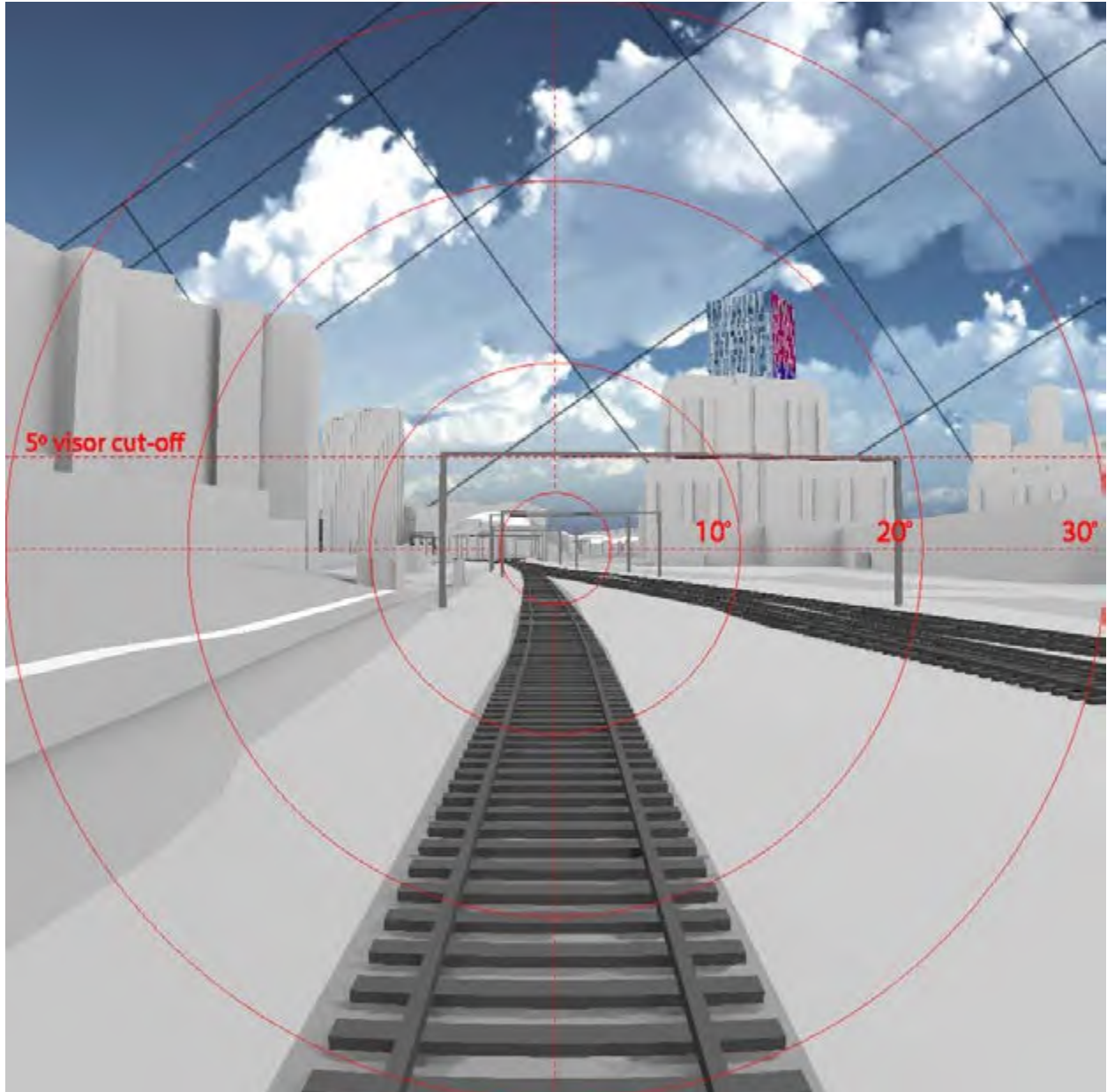


Fig. 377: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT

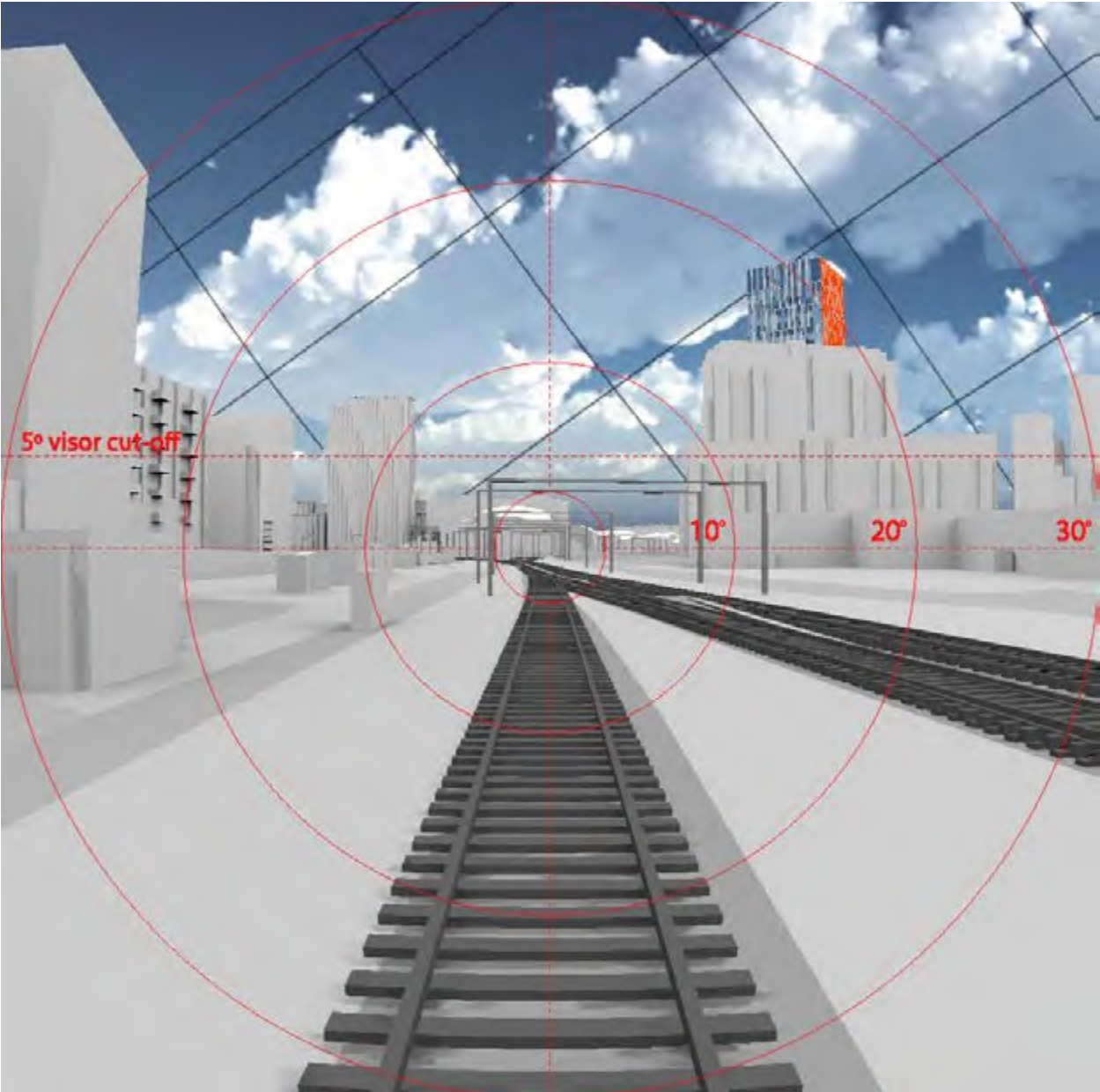
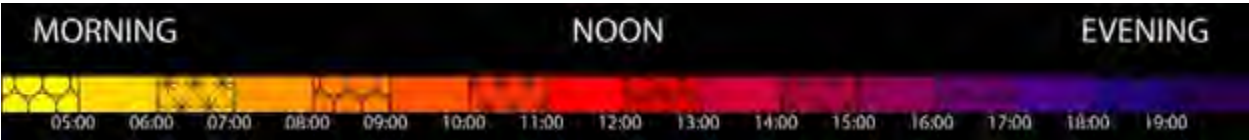


Fig. 378: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT**

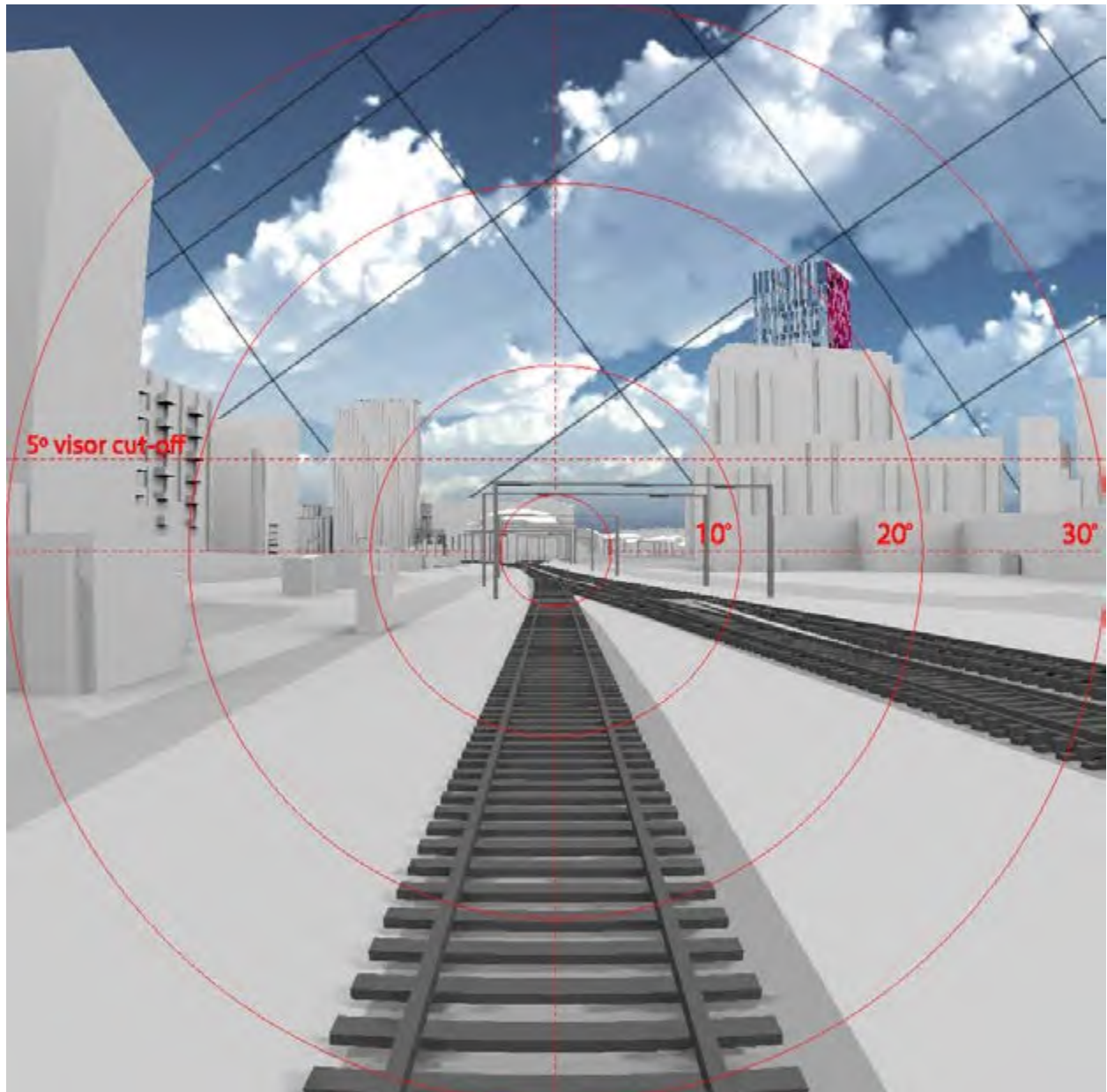


Fig. 379: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT

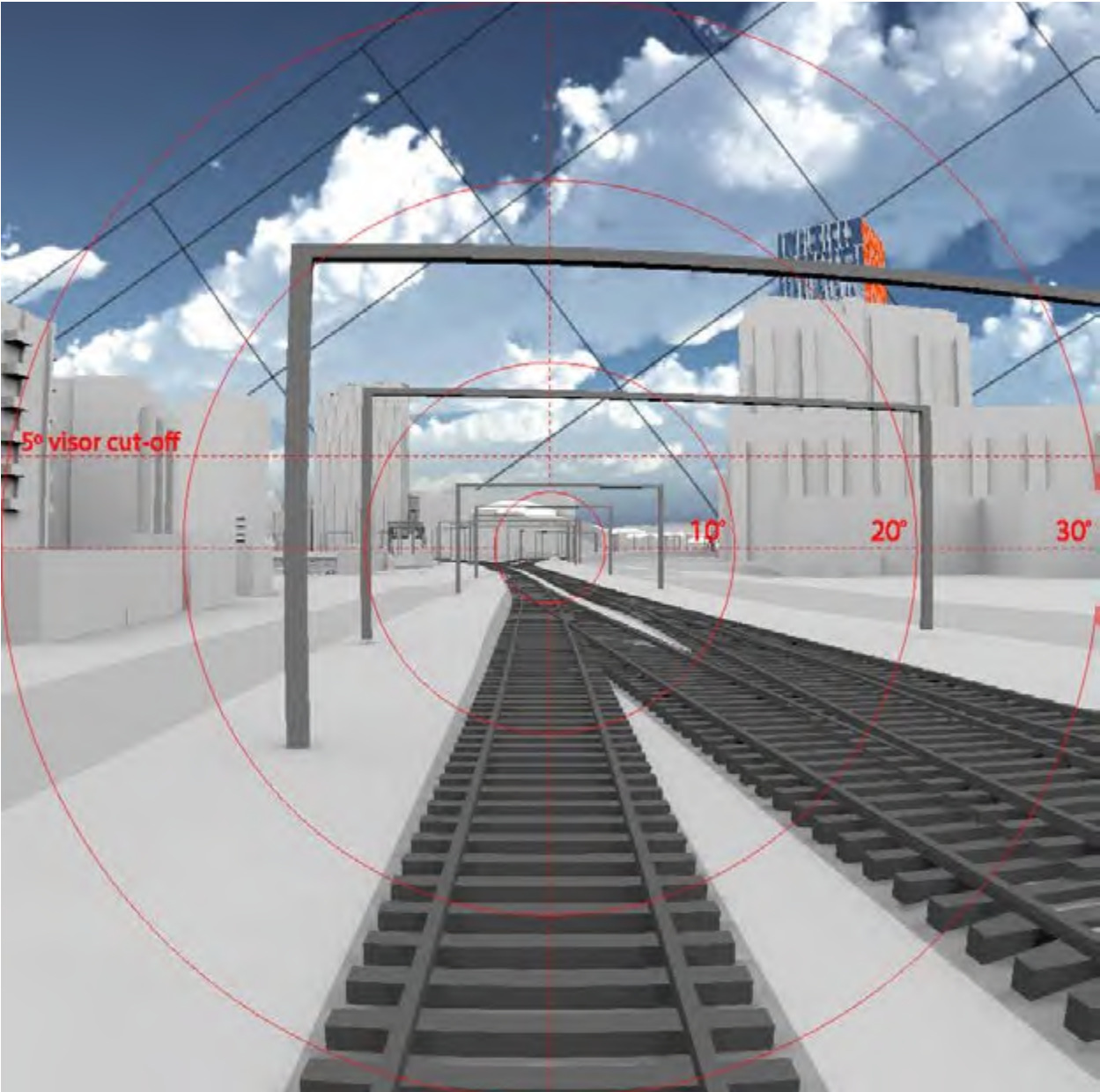


Fig. 380: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT**

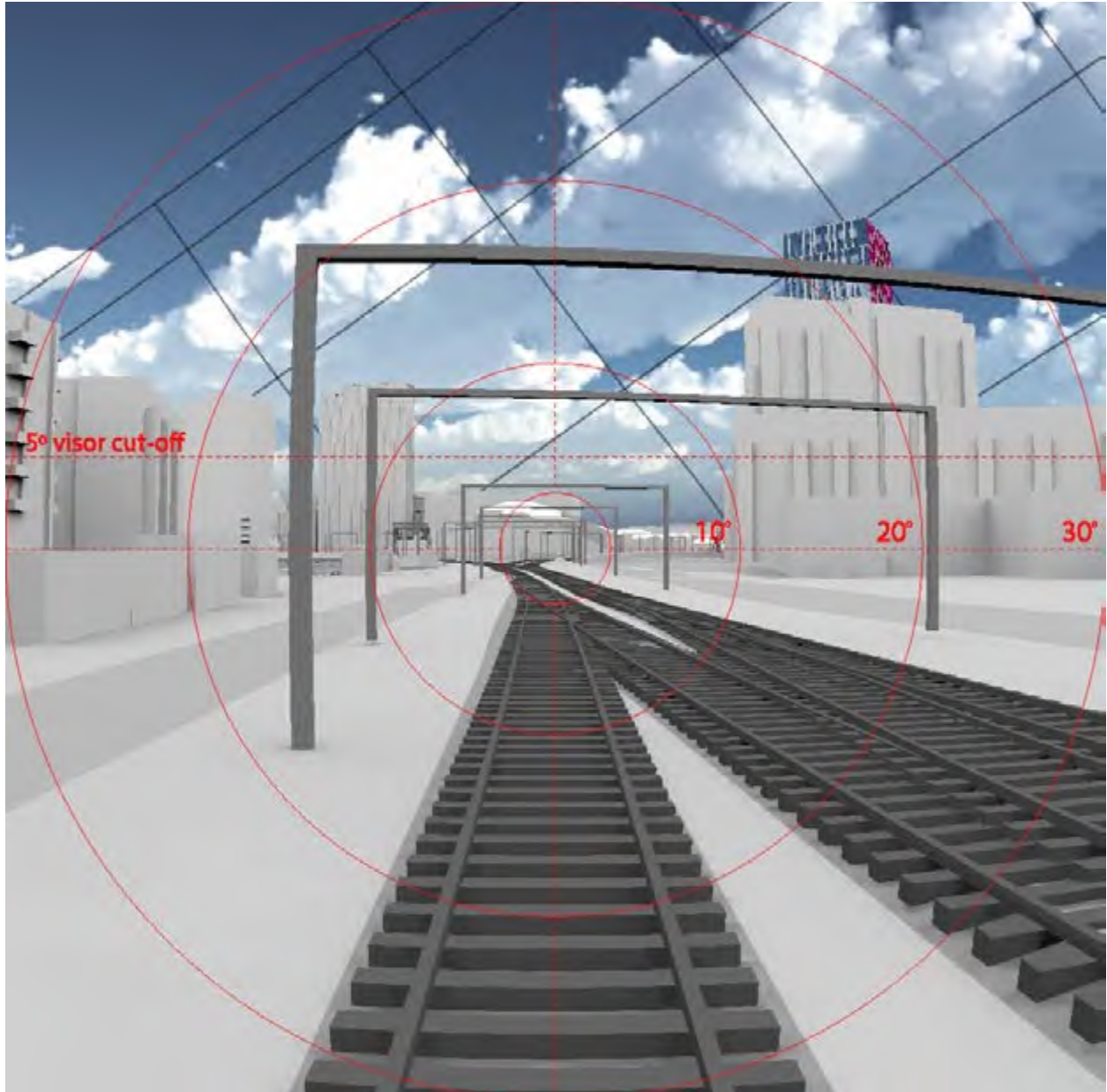


Fig. 381: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT

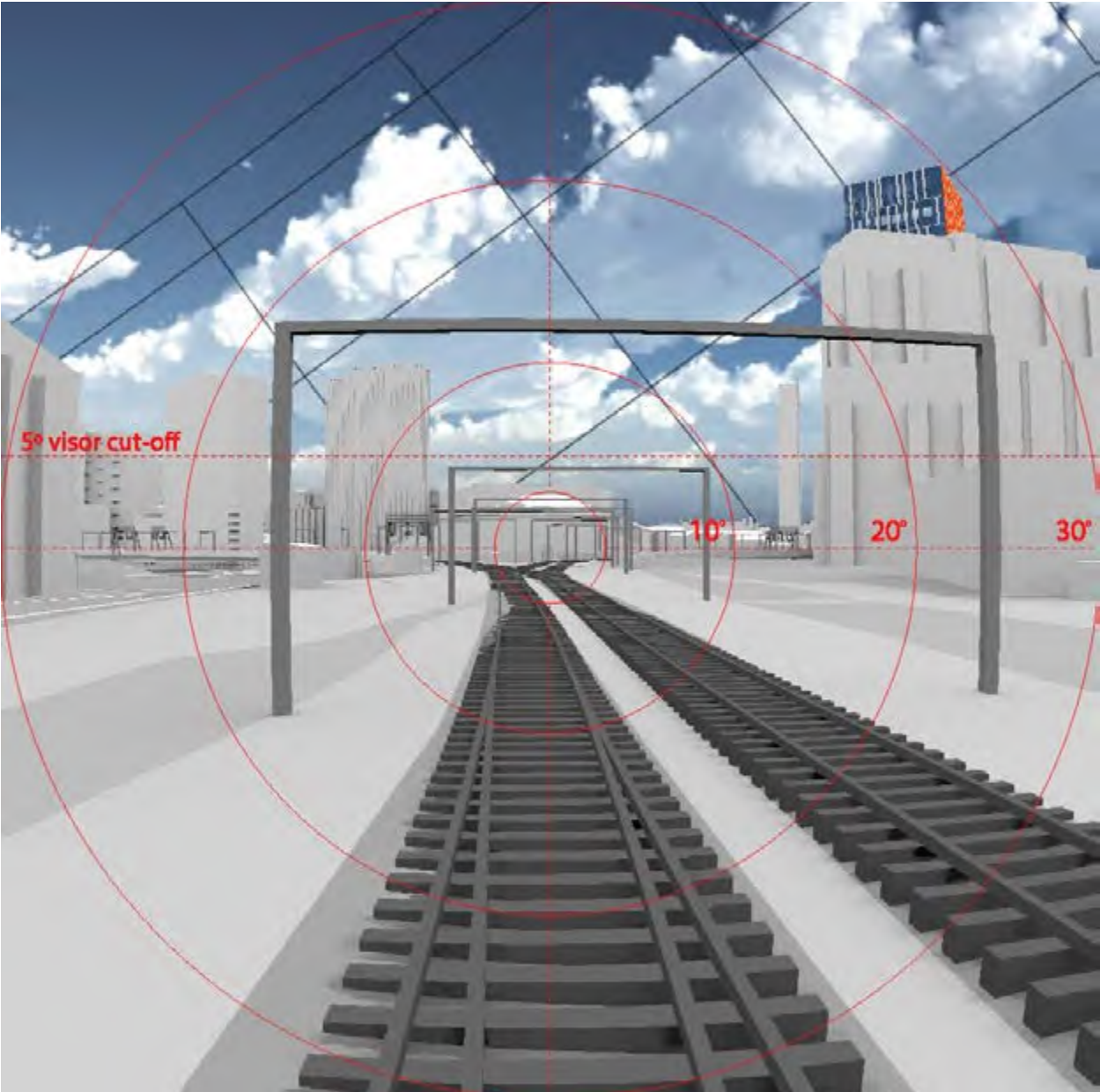


Fig. 382: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT**

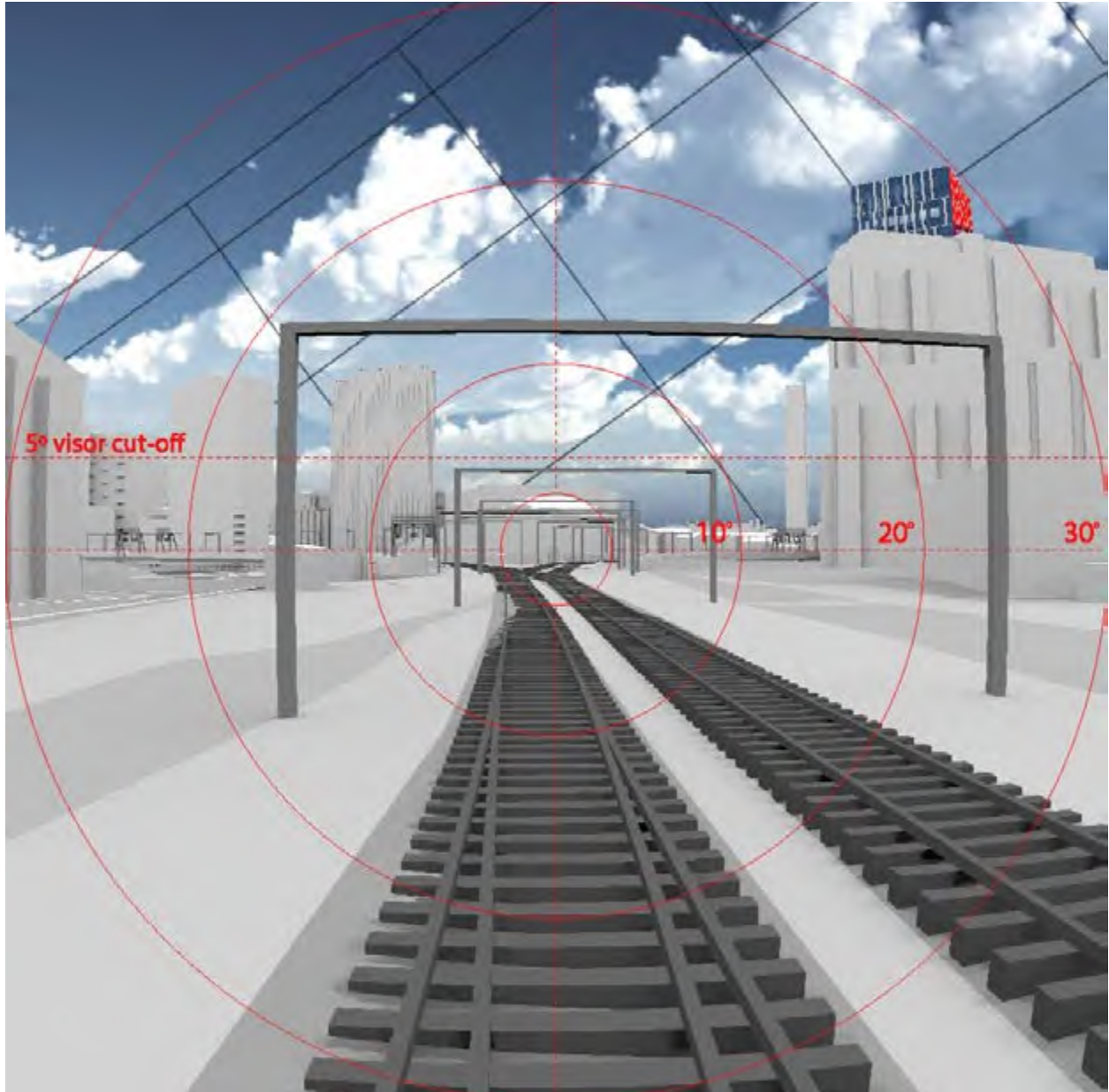


Fig. 383: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT

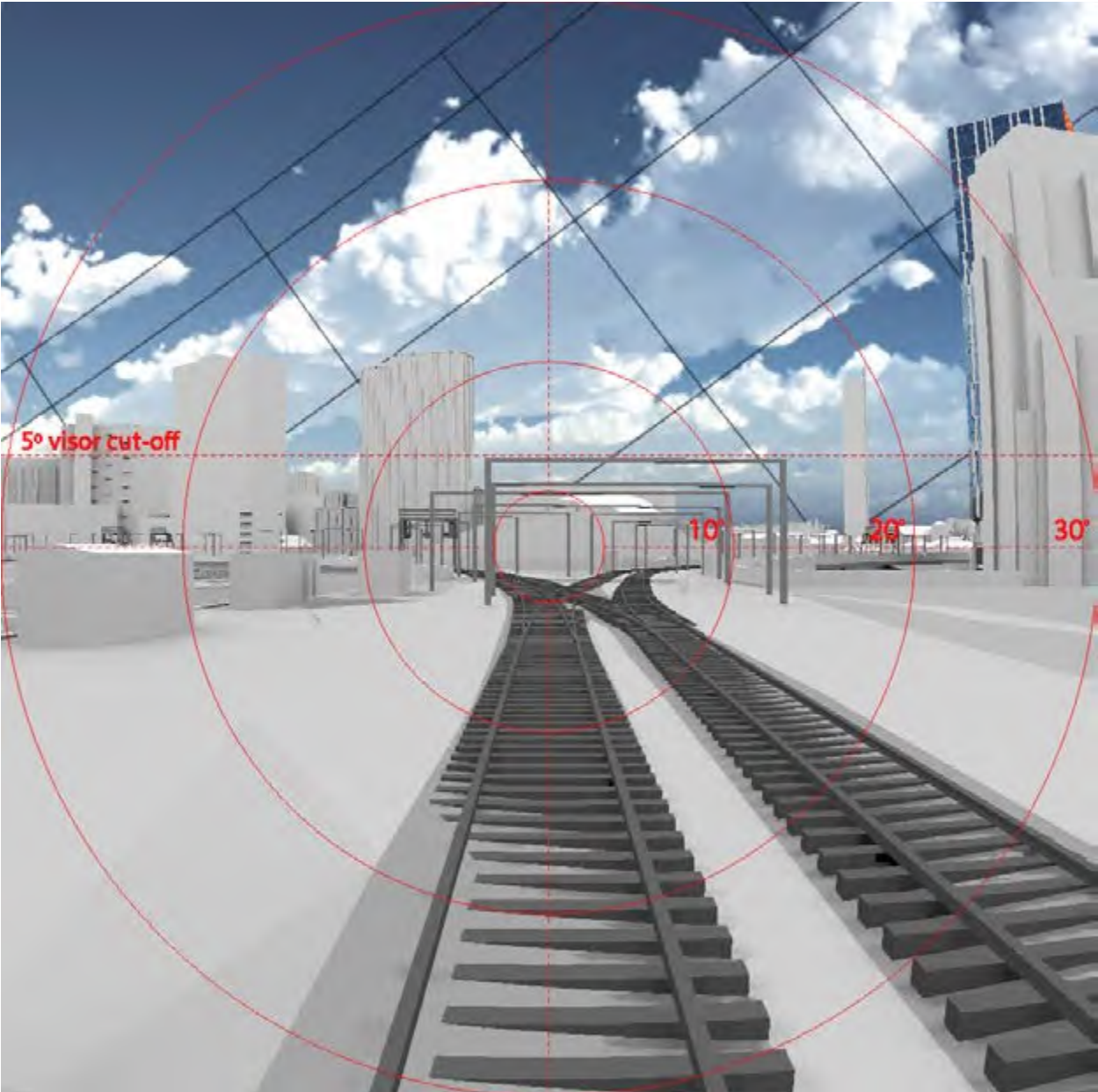


Fig. 384: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT**

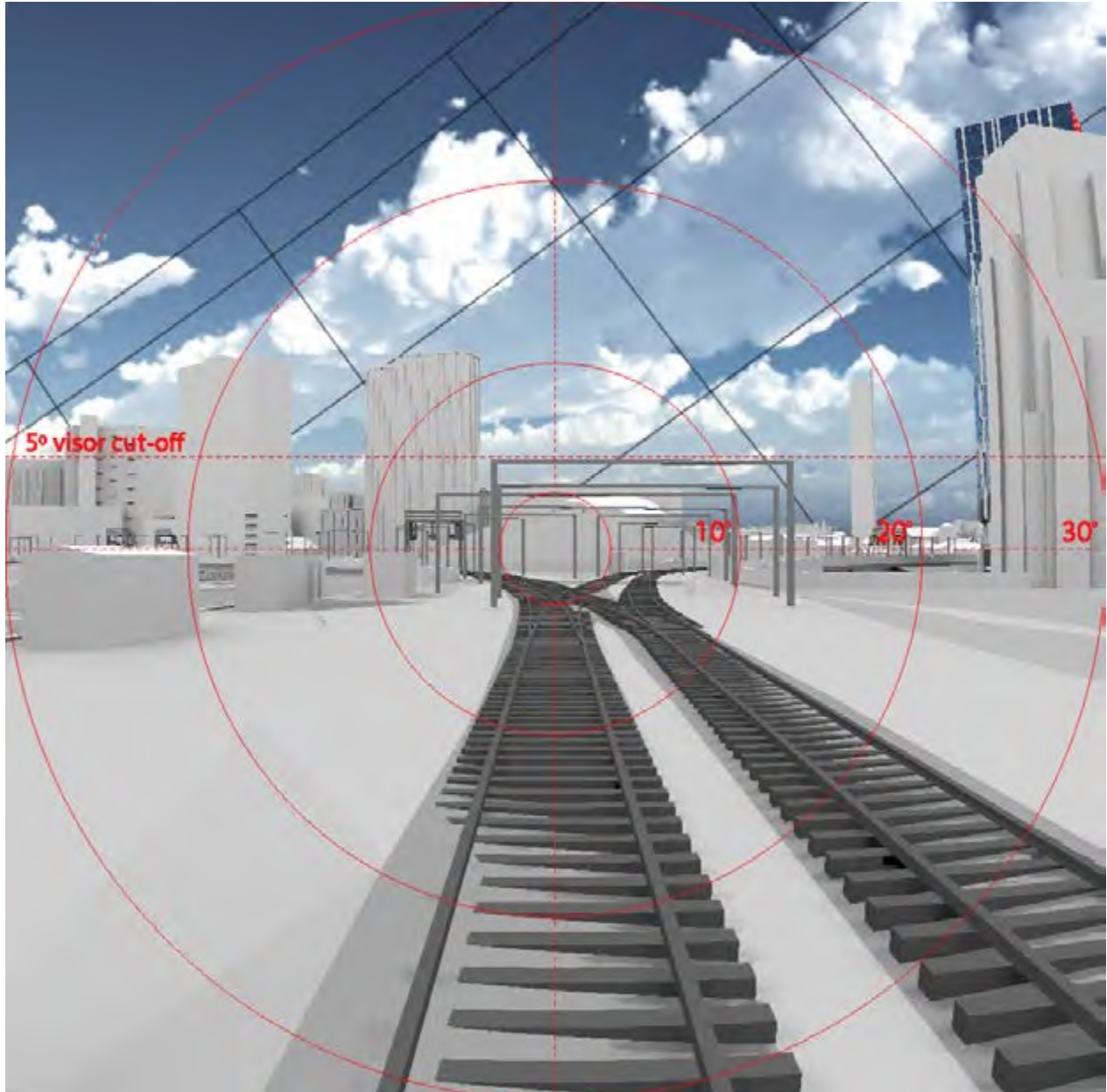


Fig. 385: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT



Fig. 386: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT**

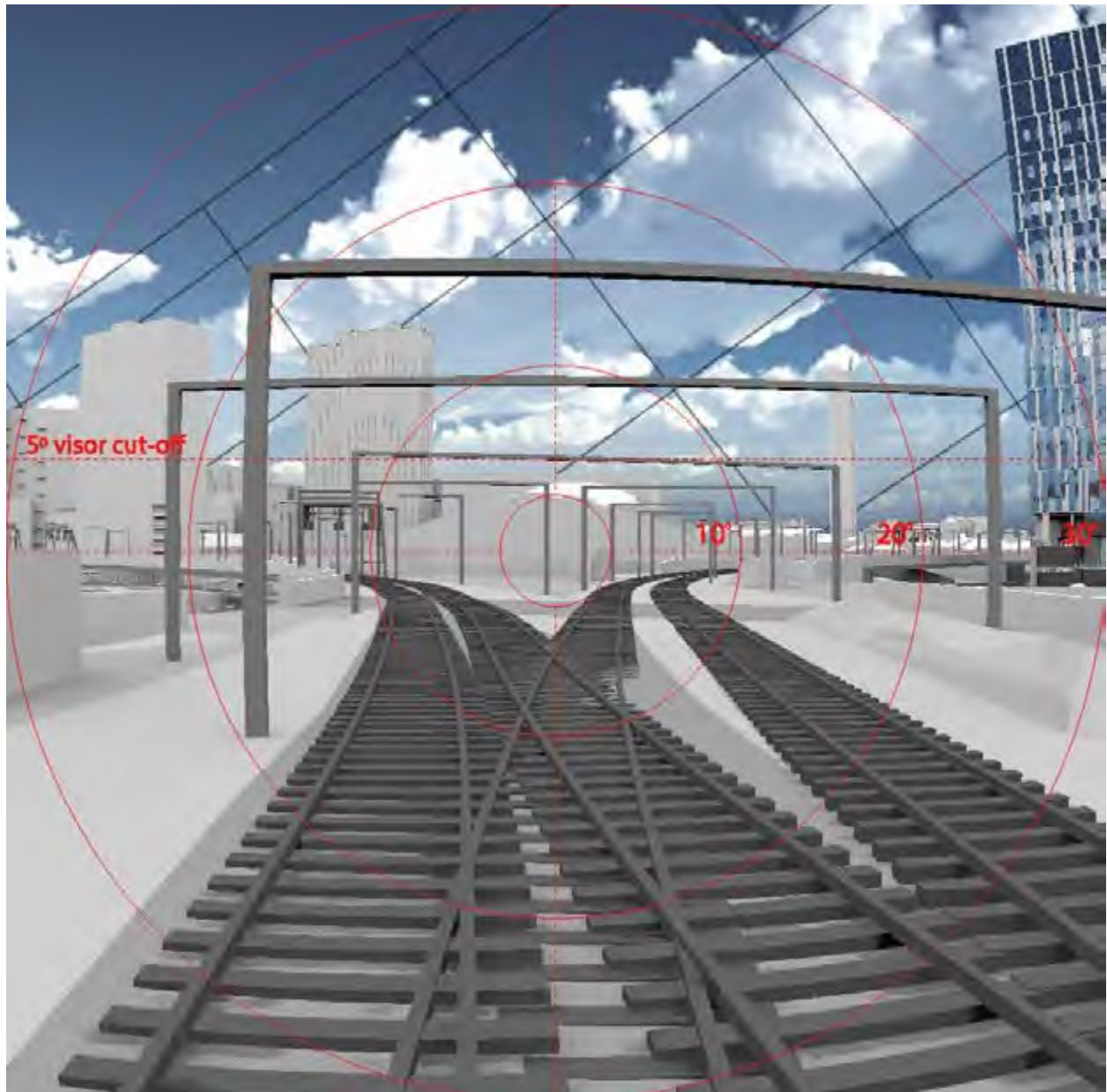


Fig. 387: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT

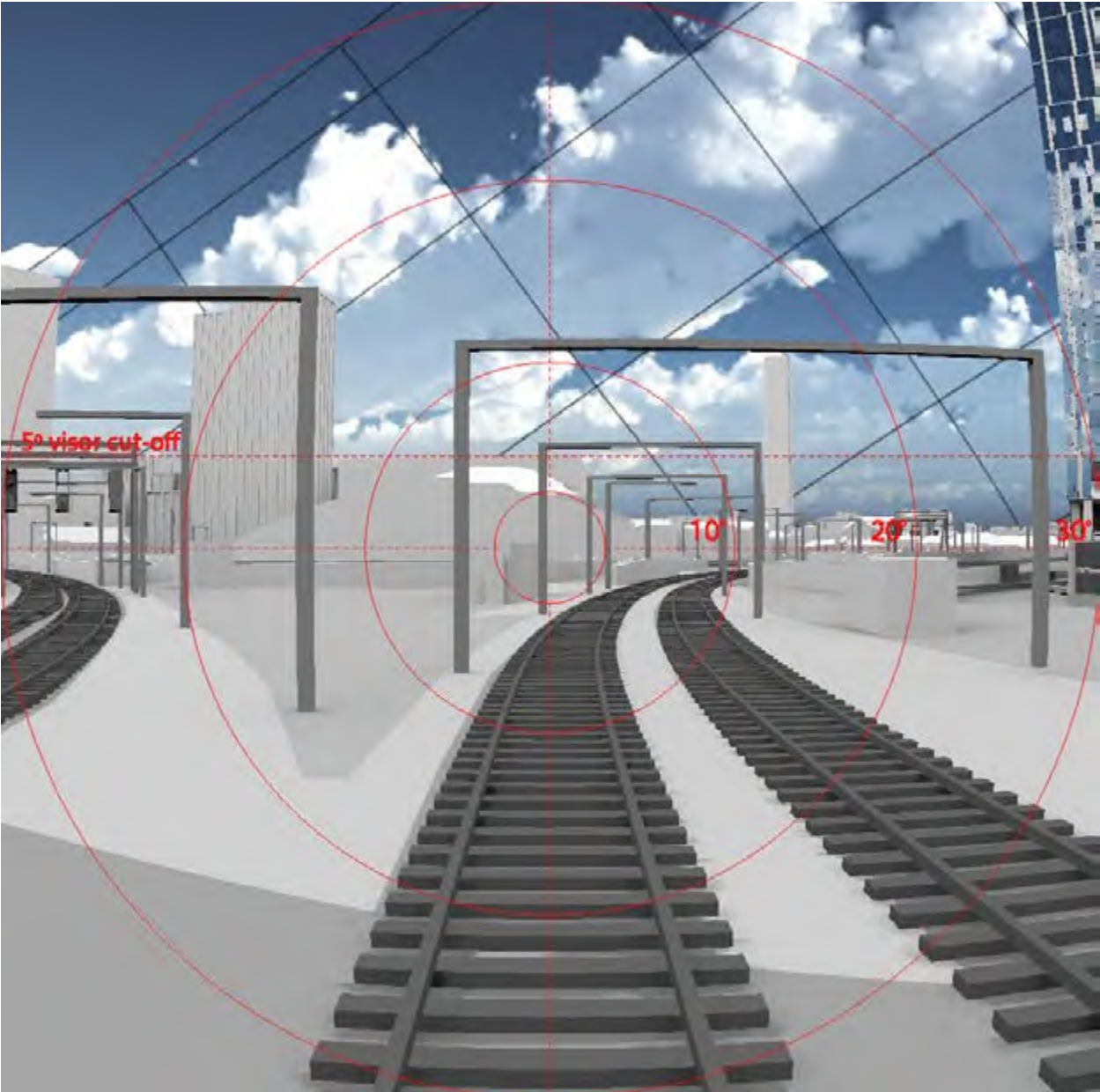


Fig. 388: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT**

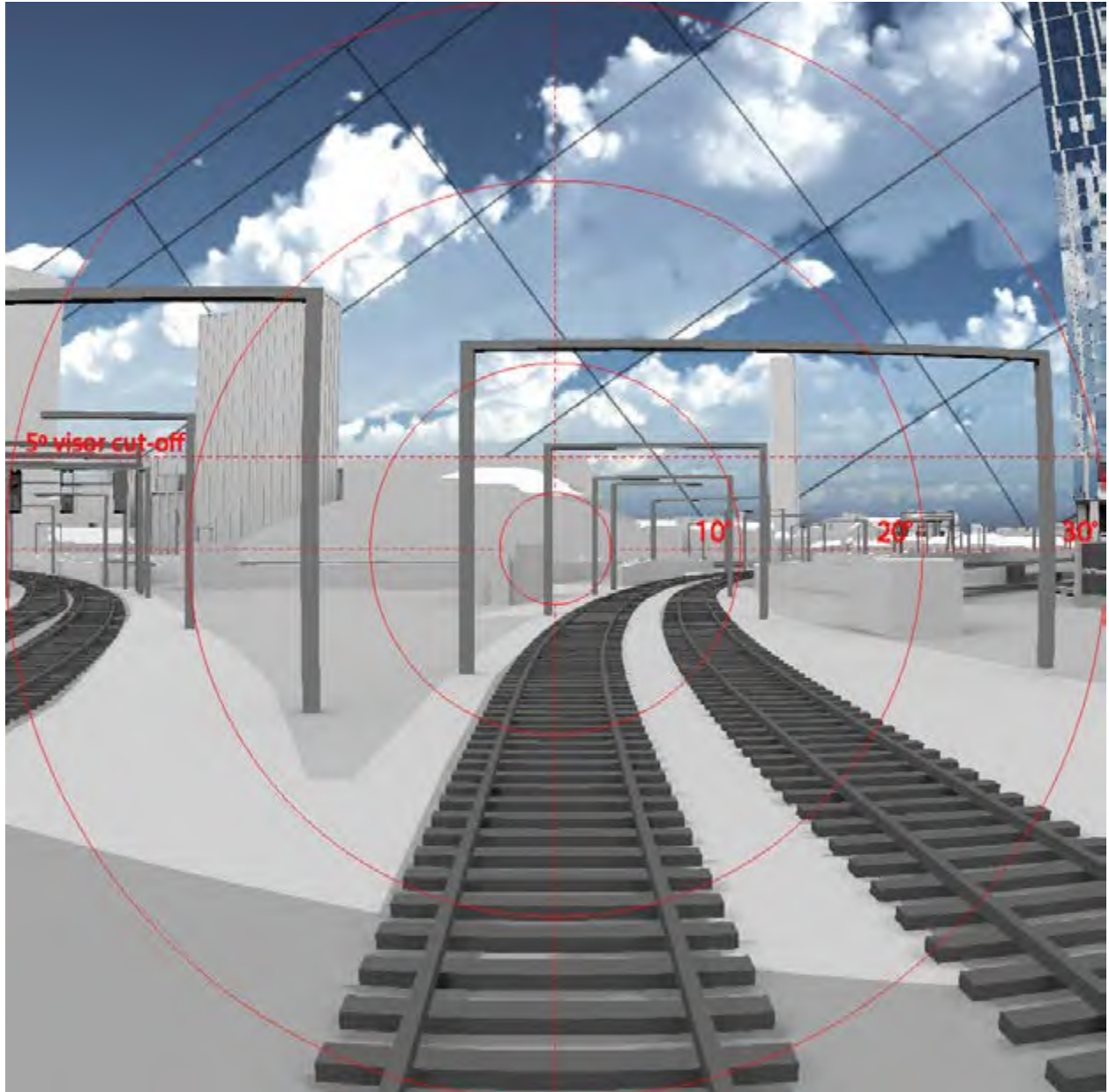


Fig. 389: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT

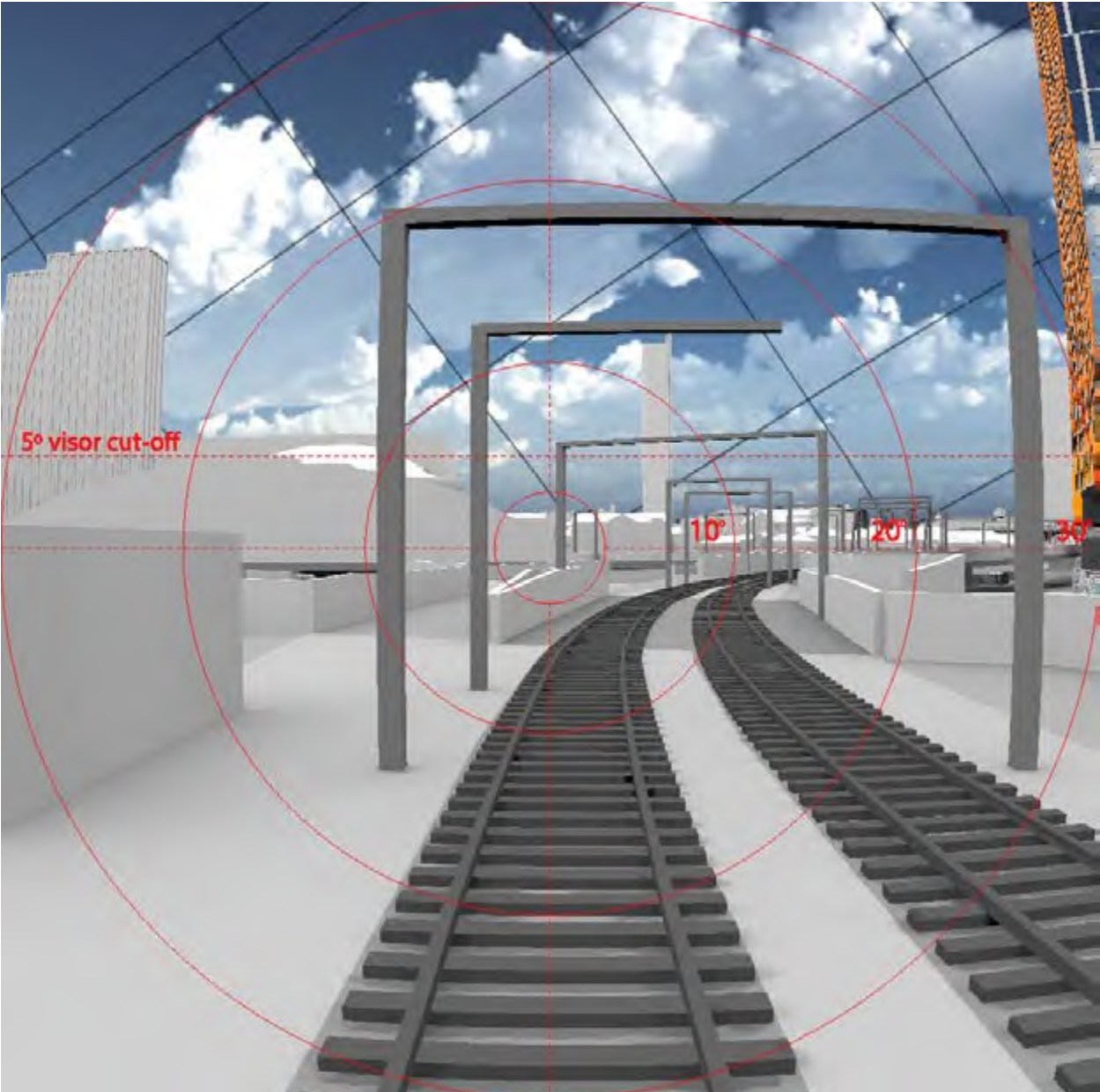


Fig. 390: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT**

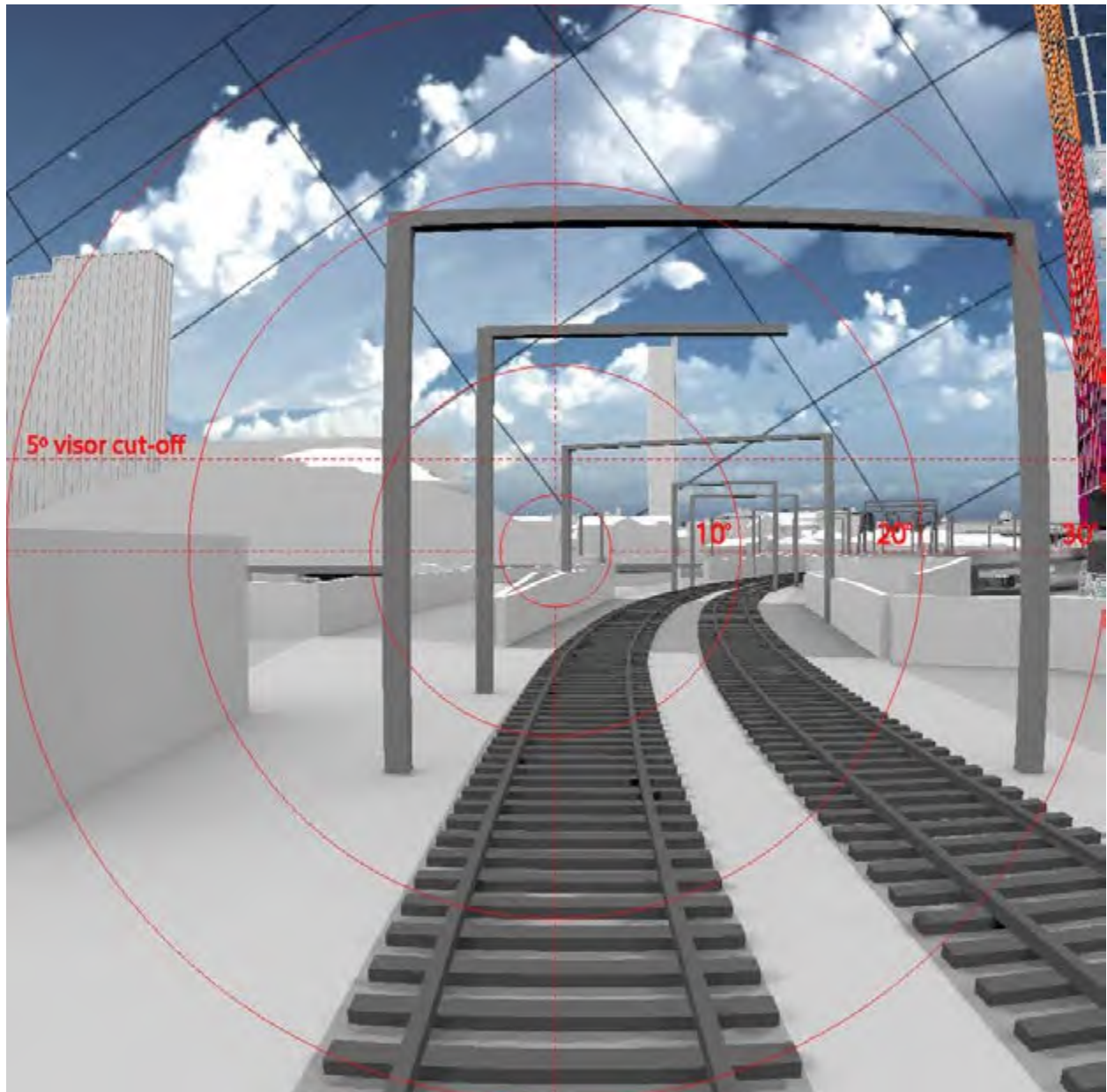


Fig. 391: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAGHT

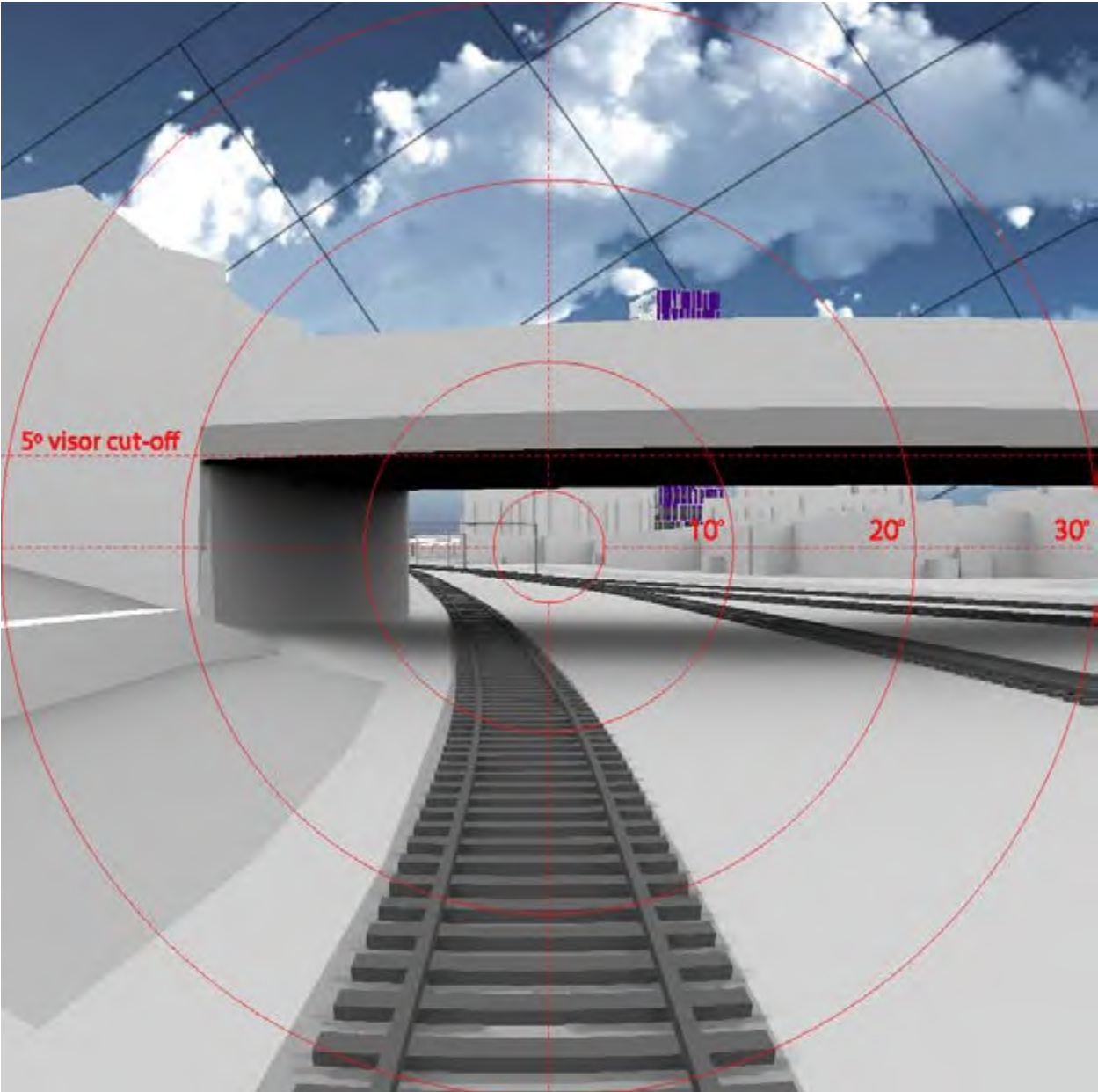


Fig. 392: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAGHT**

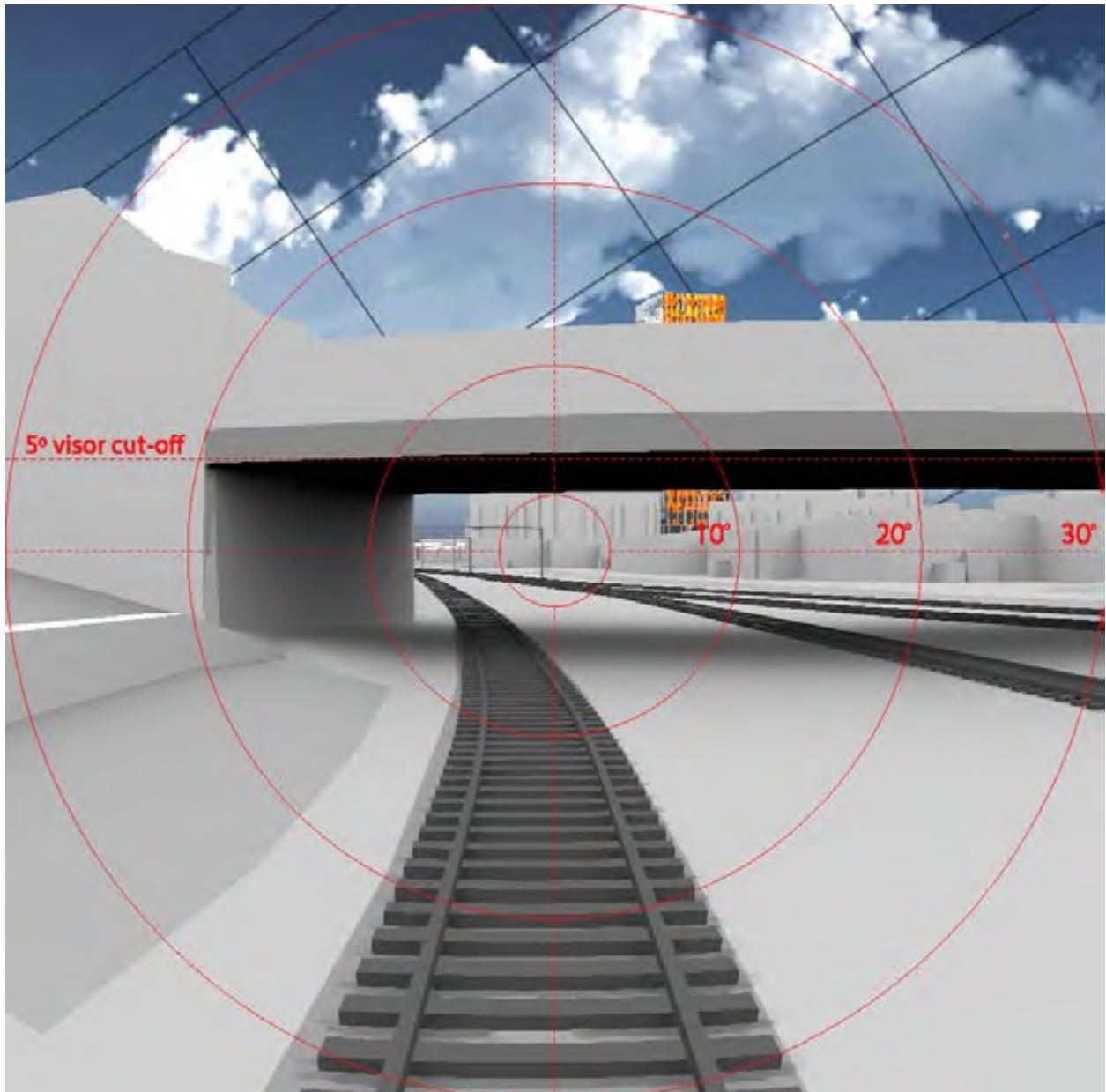


Fig. 393: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY

VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAIGHT

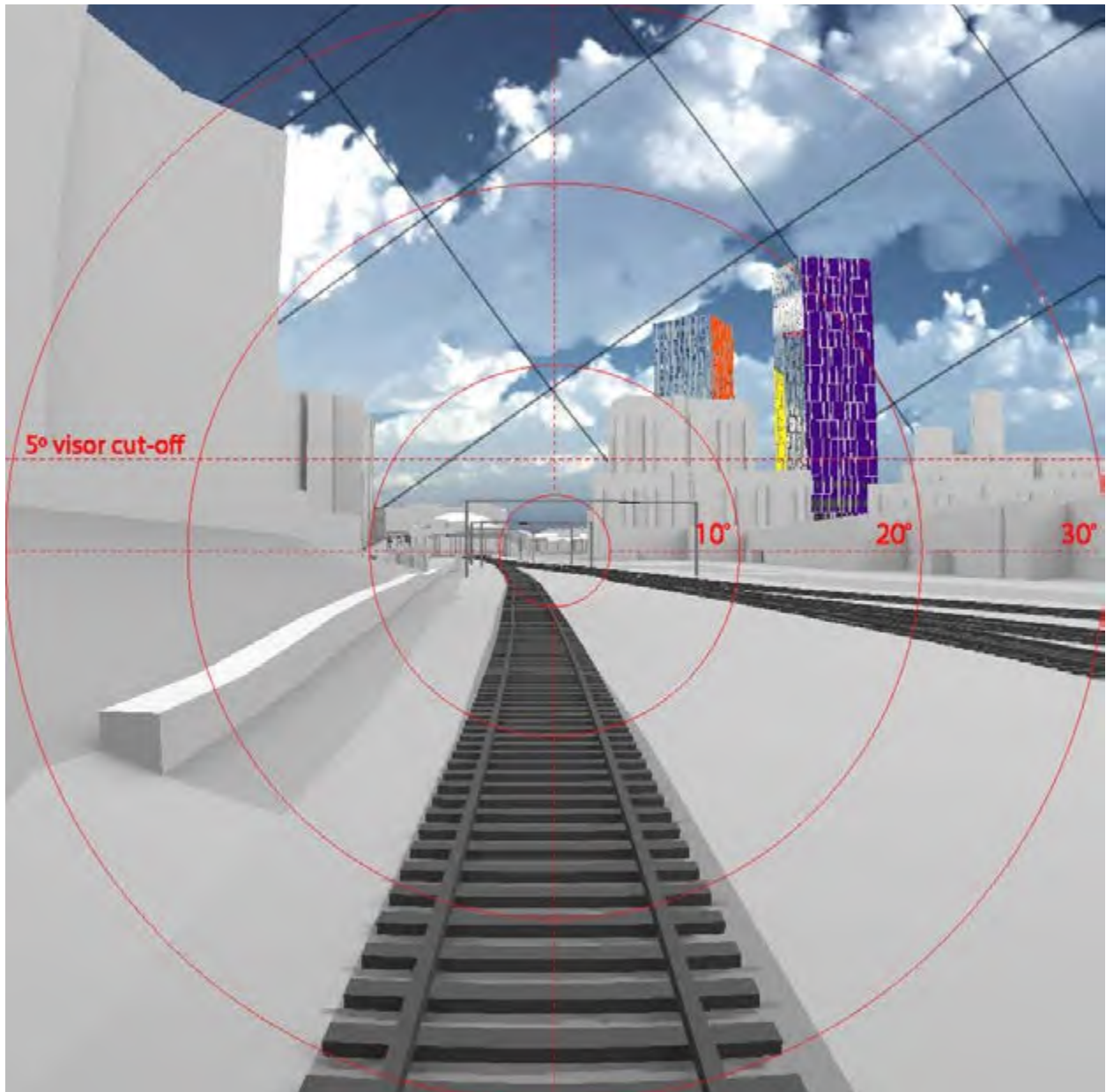
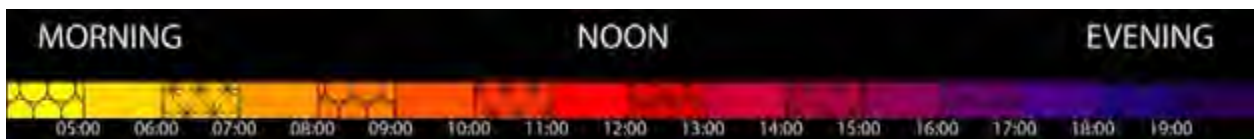


Fig. 394: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAGHT**

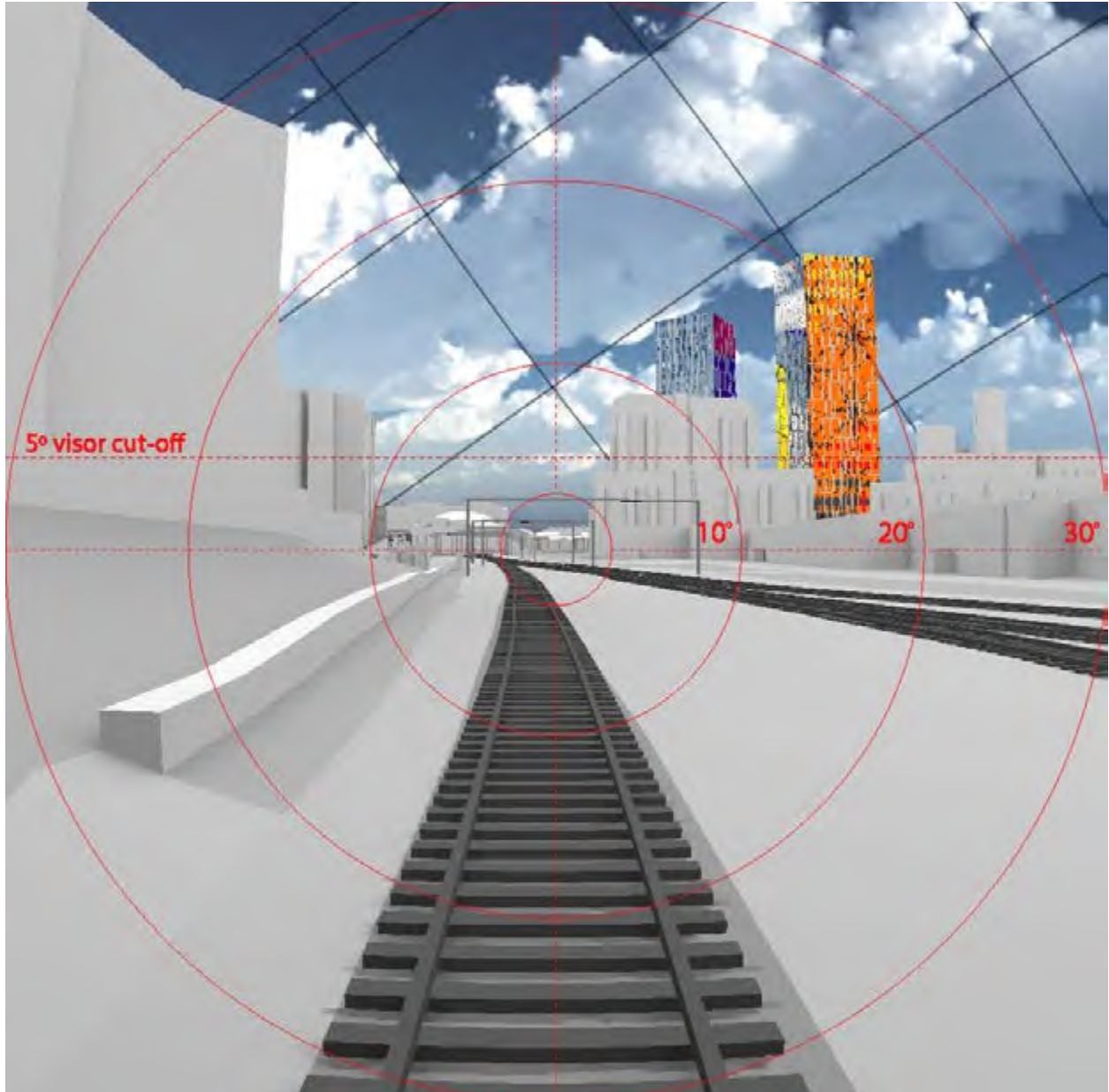


Fig. 395: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT

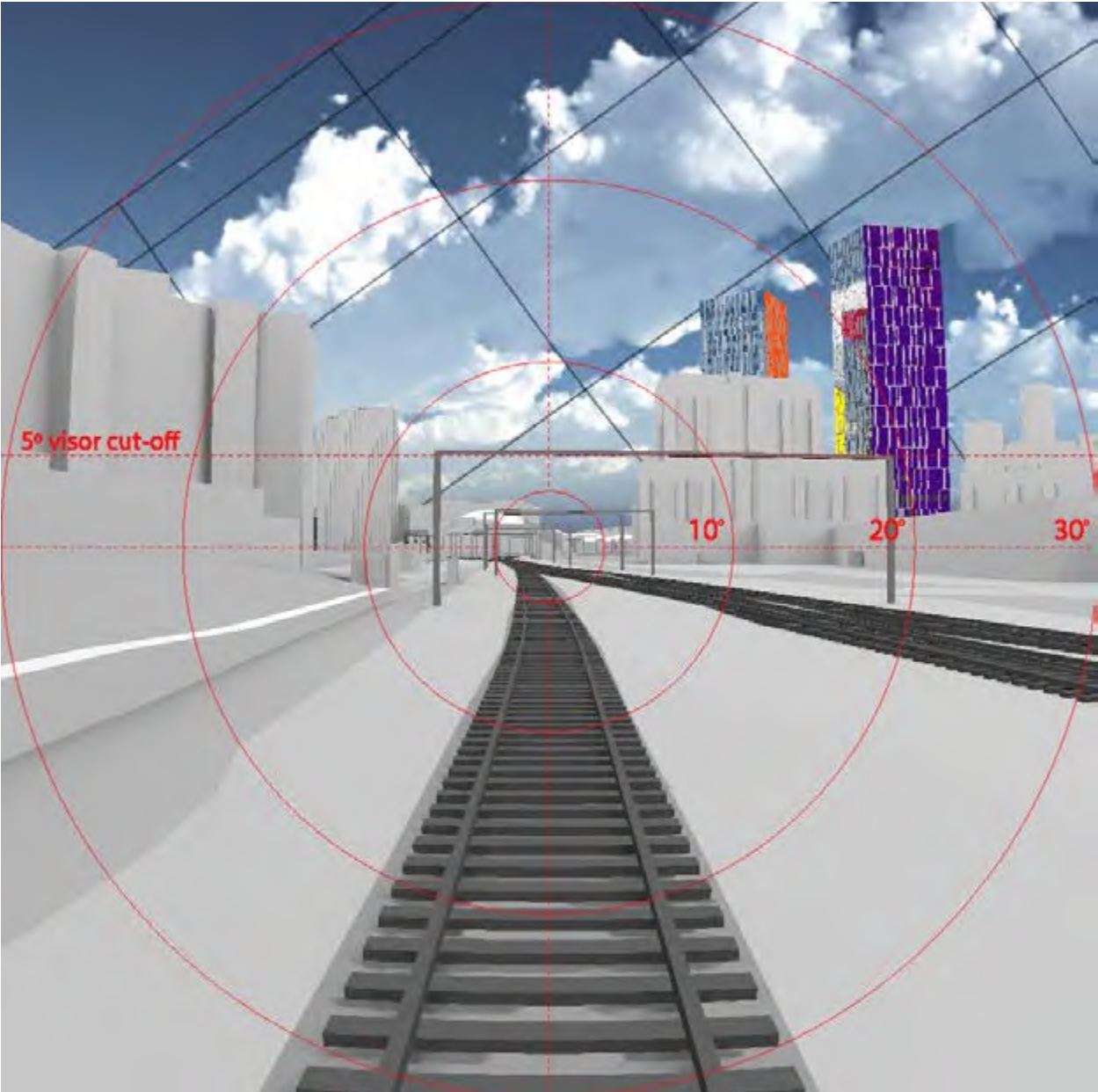


Fig. 396: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT**

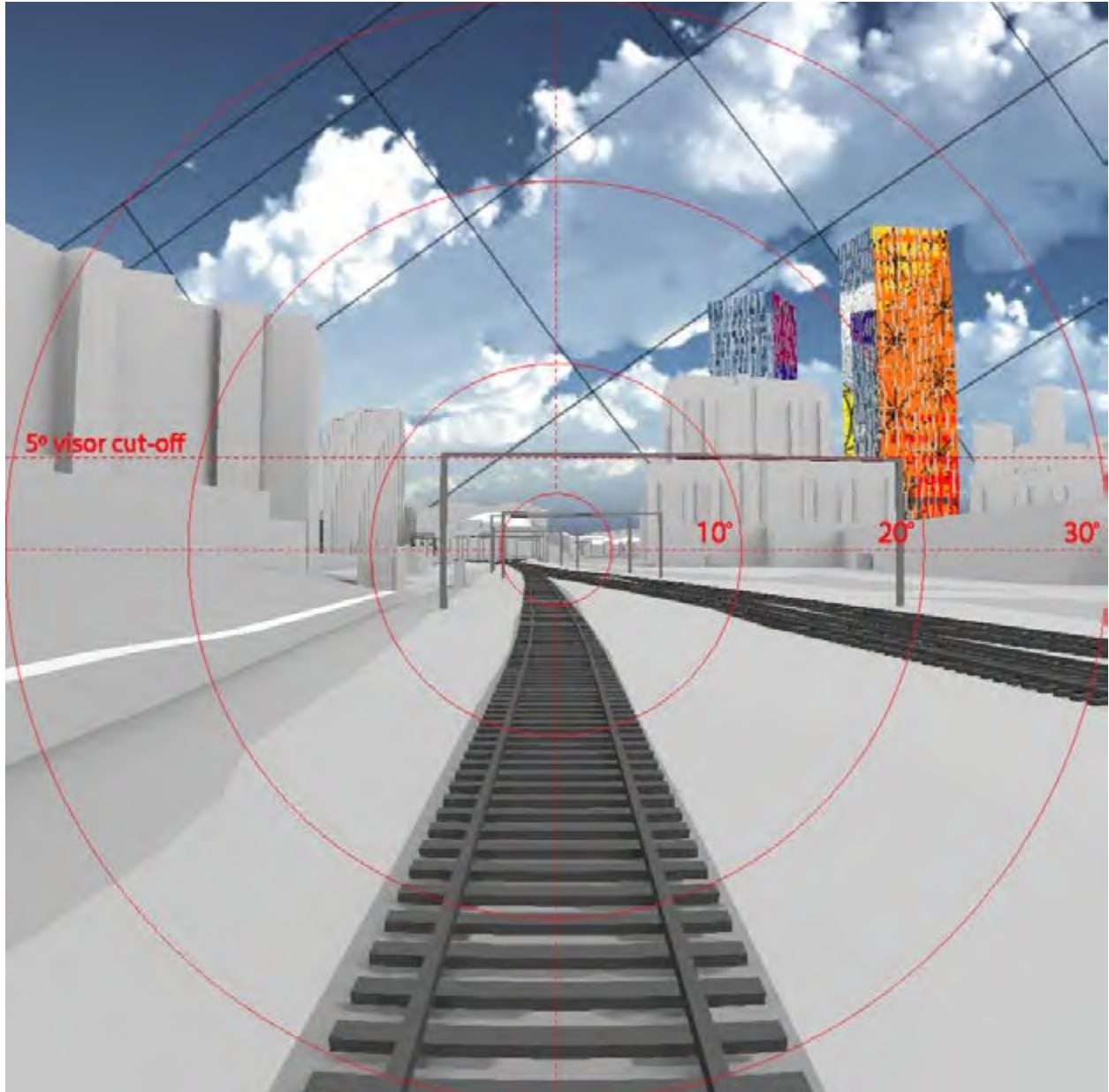


Fig. 397: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT

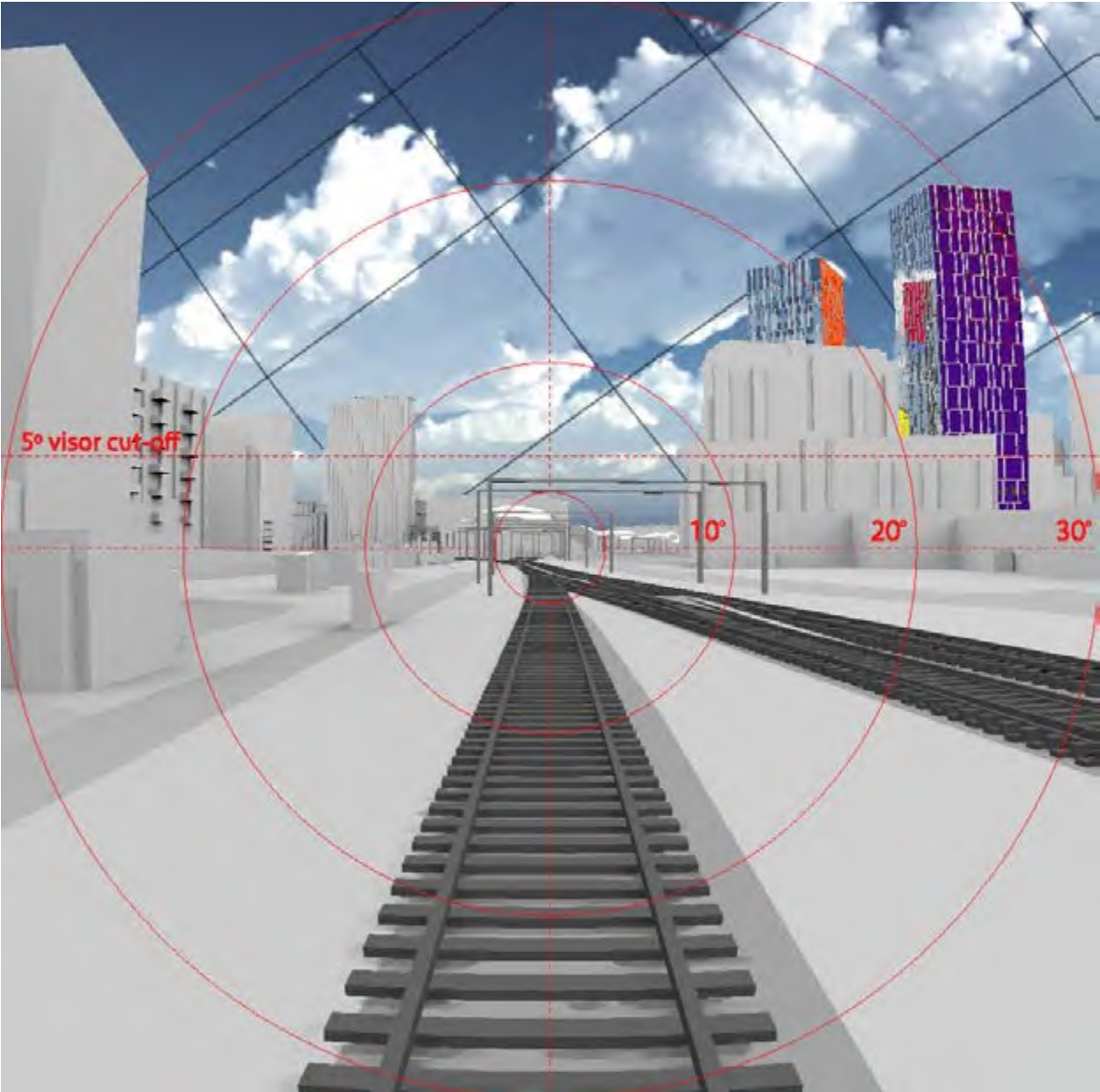


Fig. 398: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT**

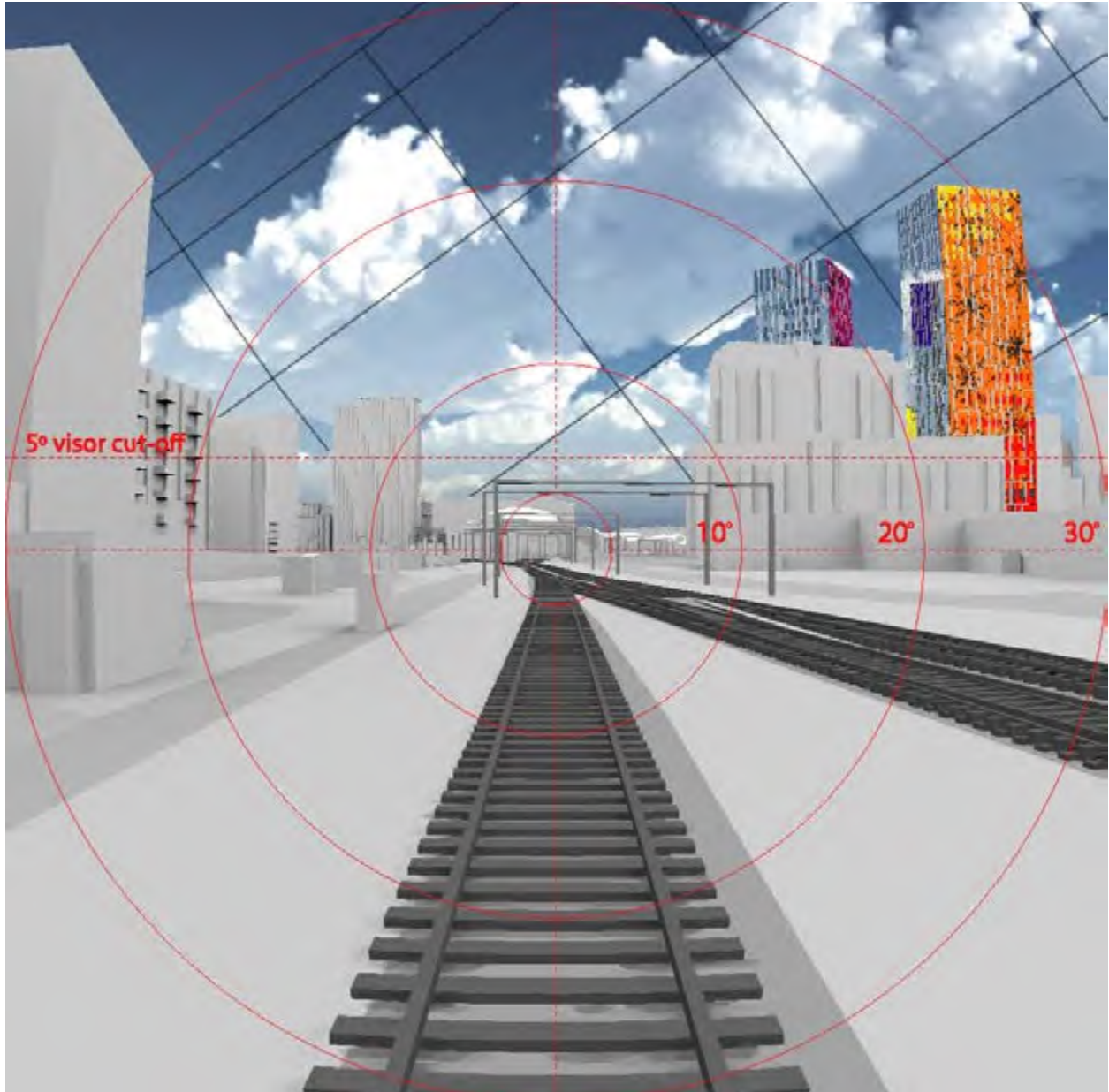


Fig. 399: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT

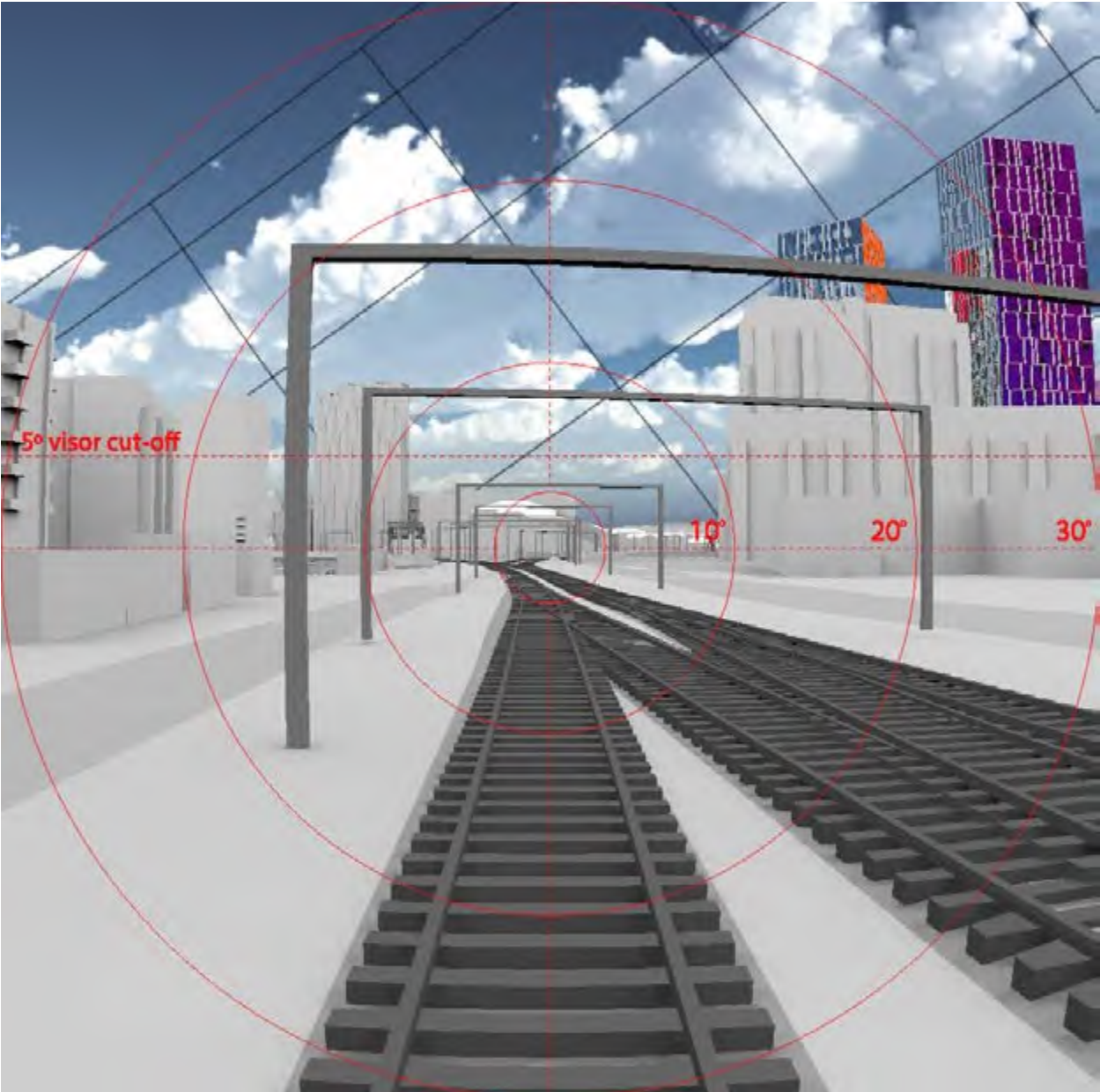


Fig. 400: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT**



Fig. 401: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT

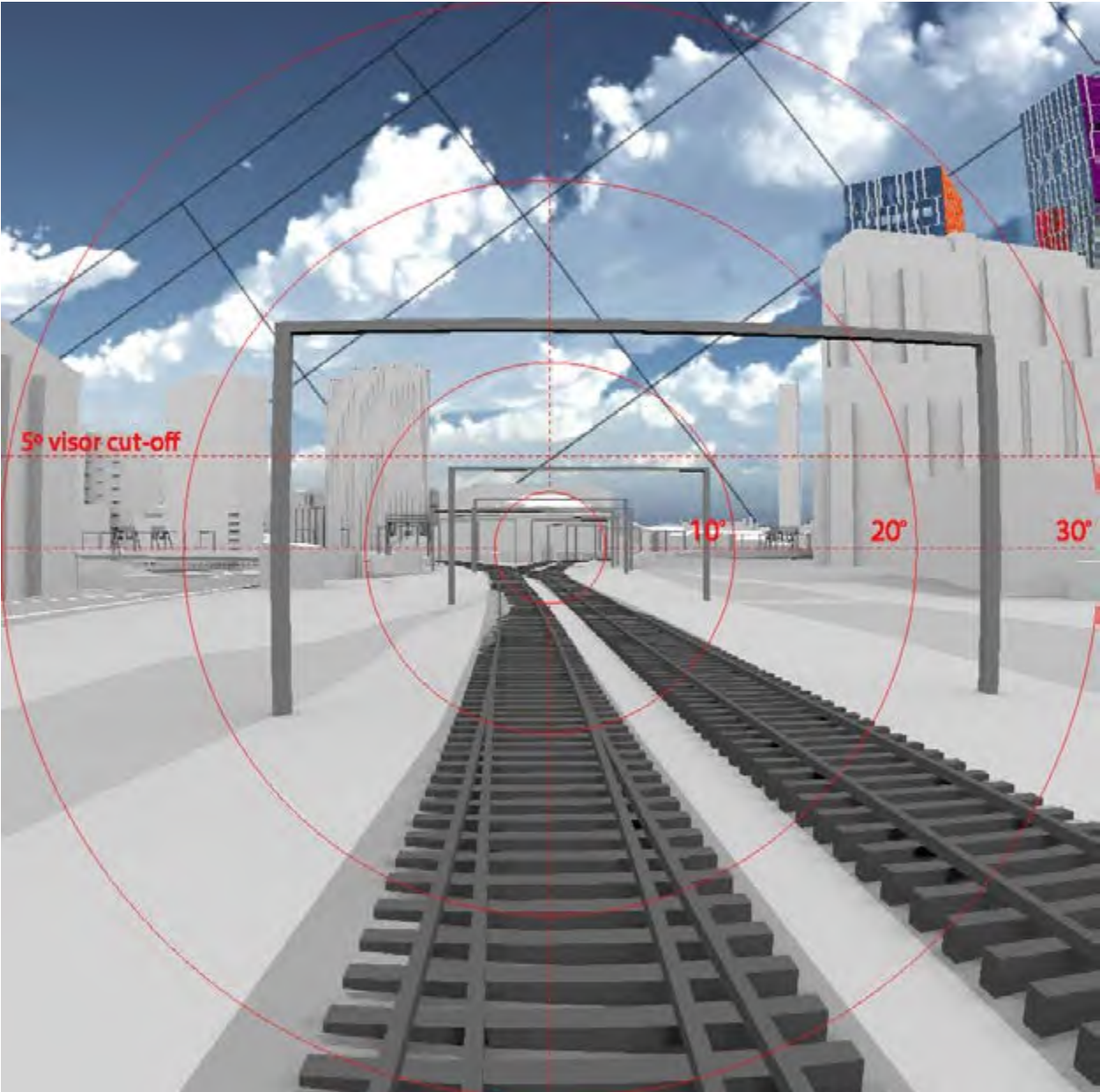


Fig. 402: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT**

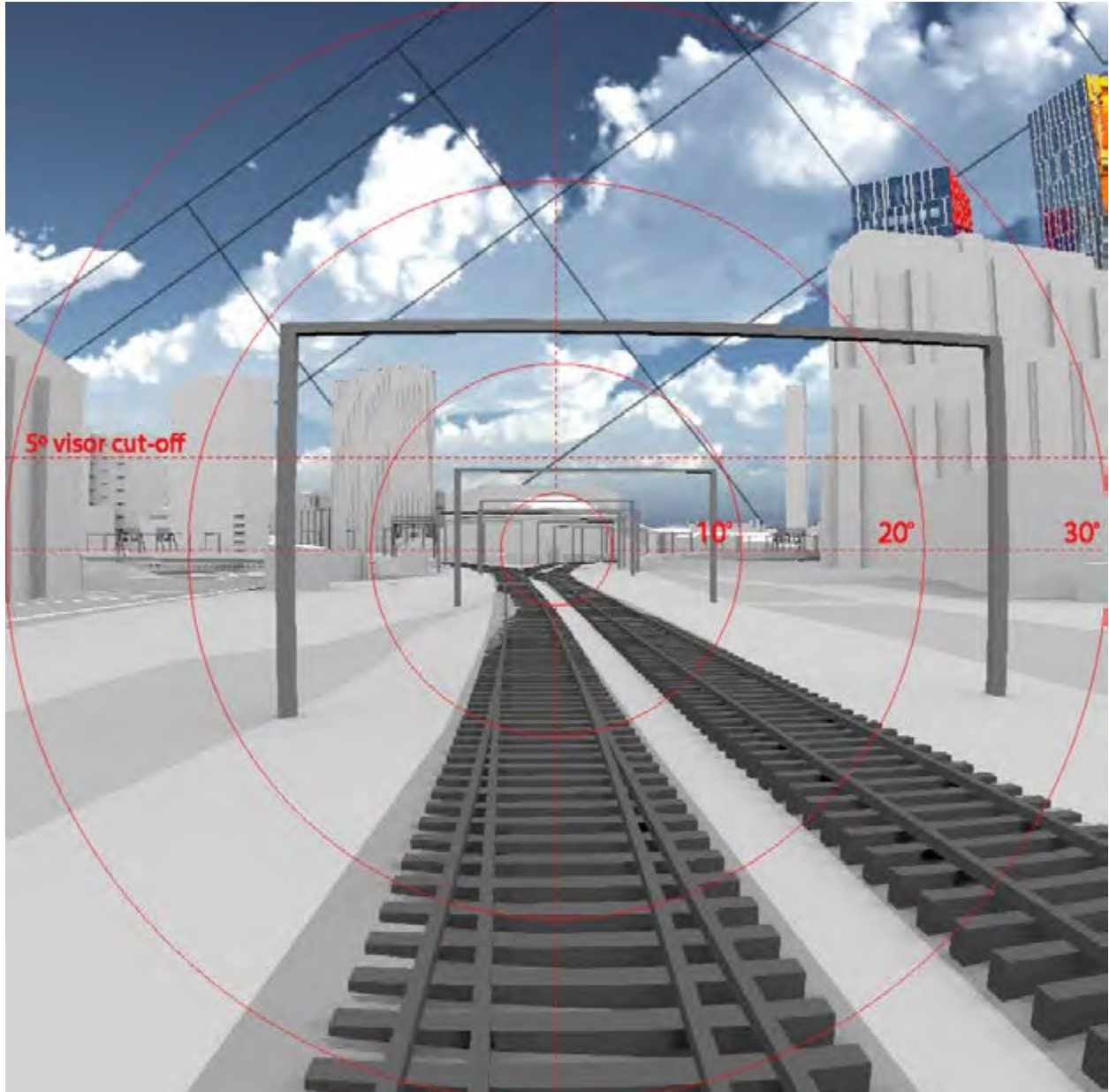


Fig. 403: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT

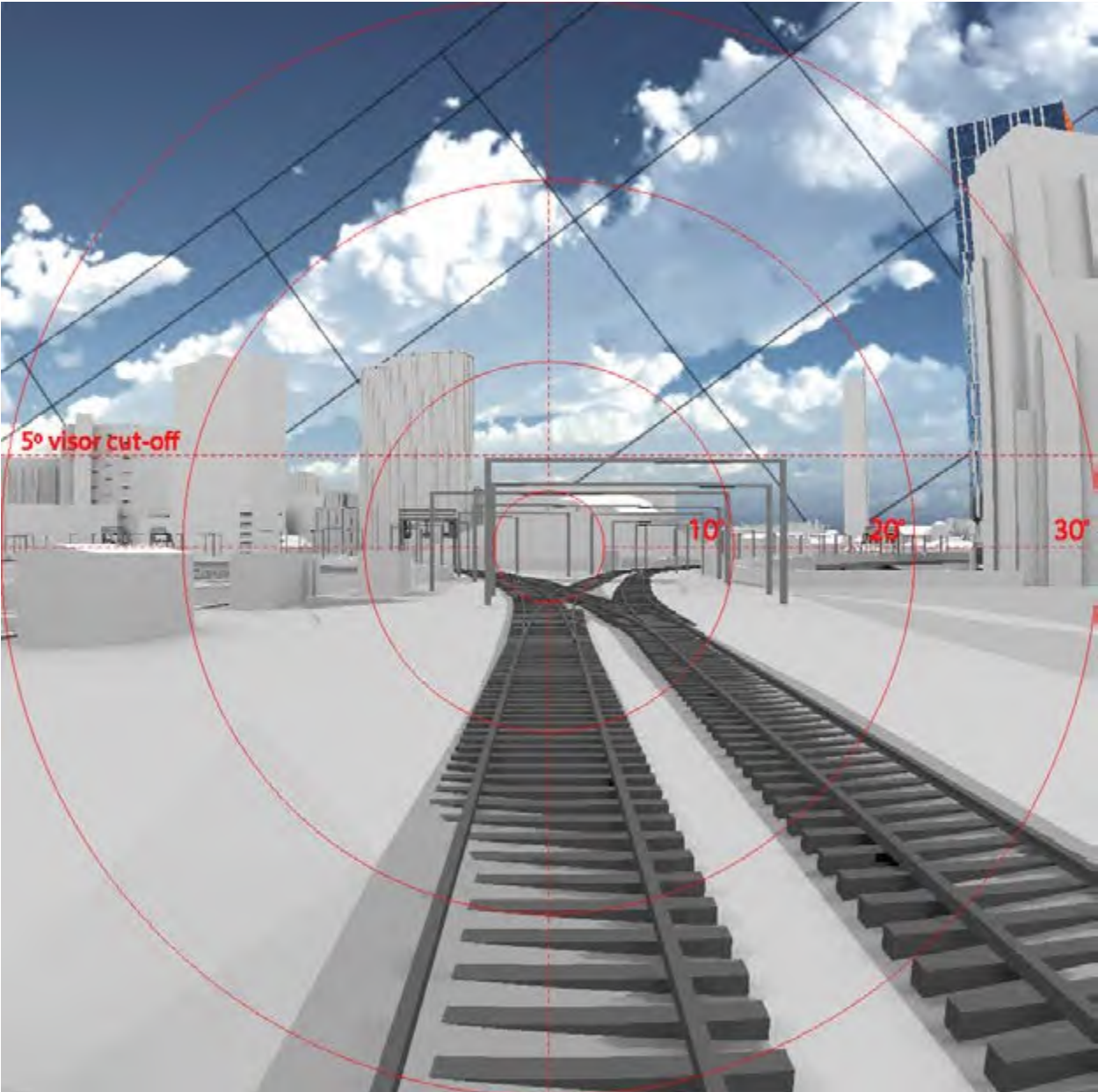


Fig. 404: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT**

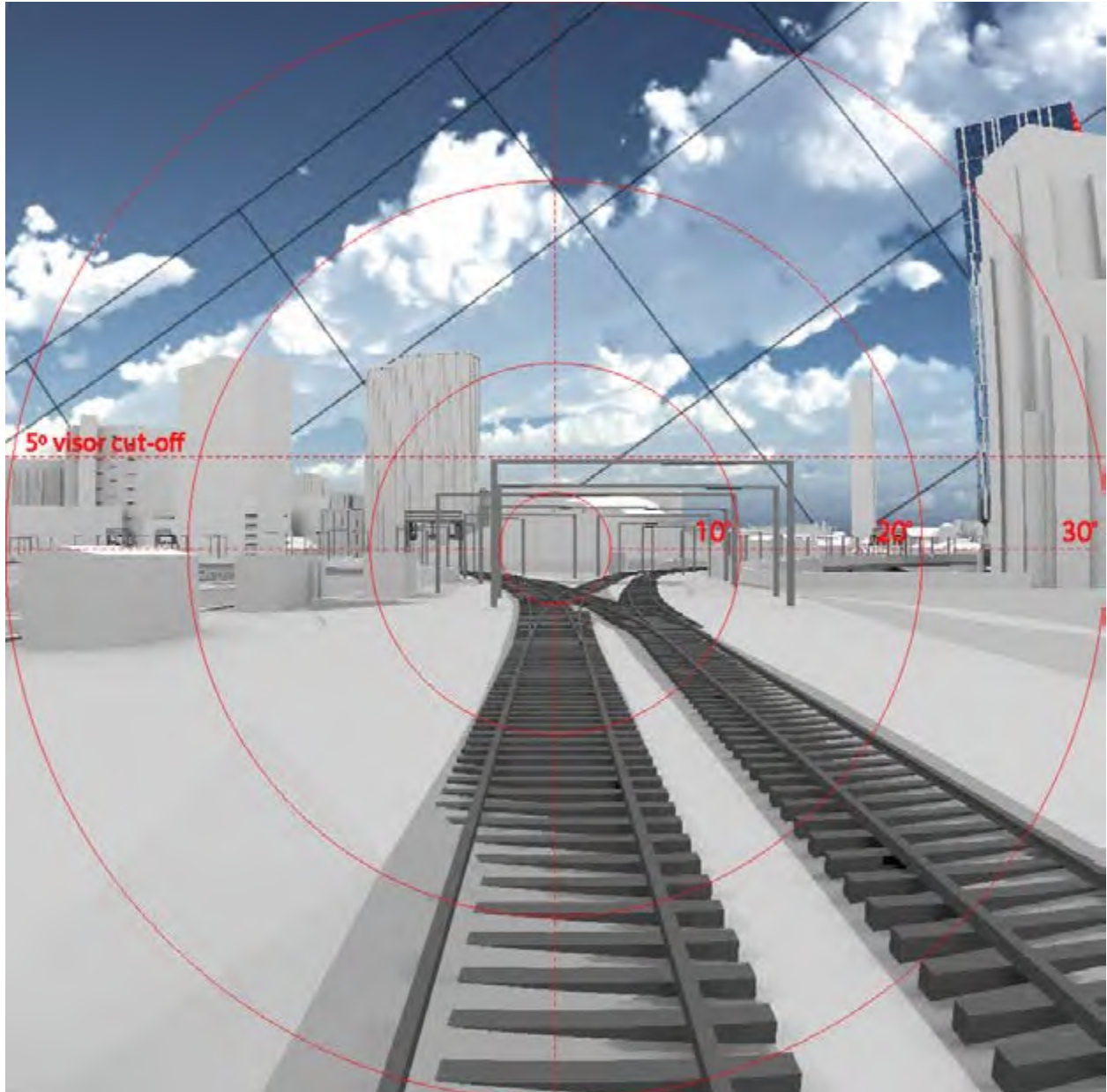


Fig. 405: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT



Fig. 406: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT**

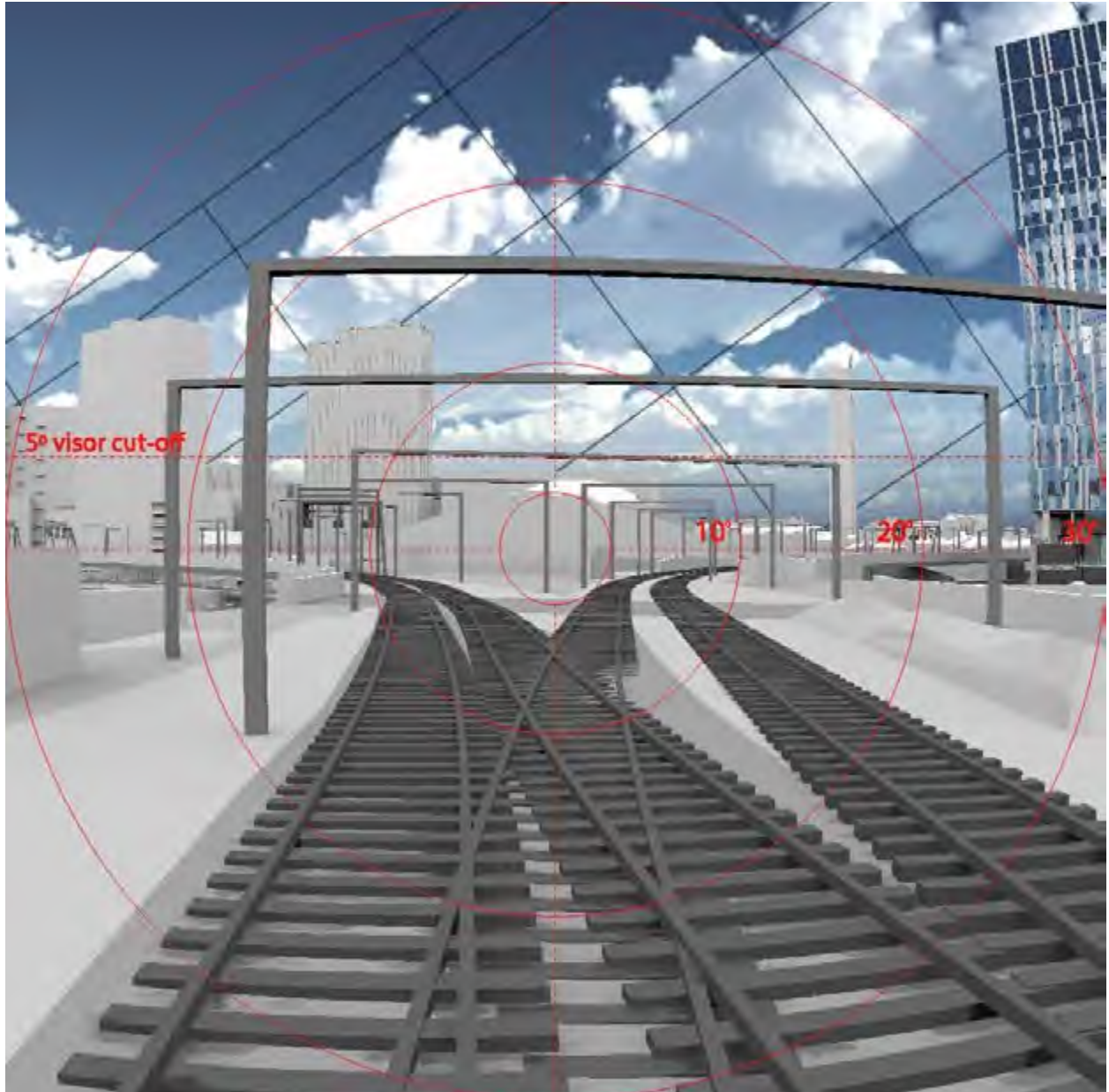


Fig. 407: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT

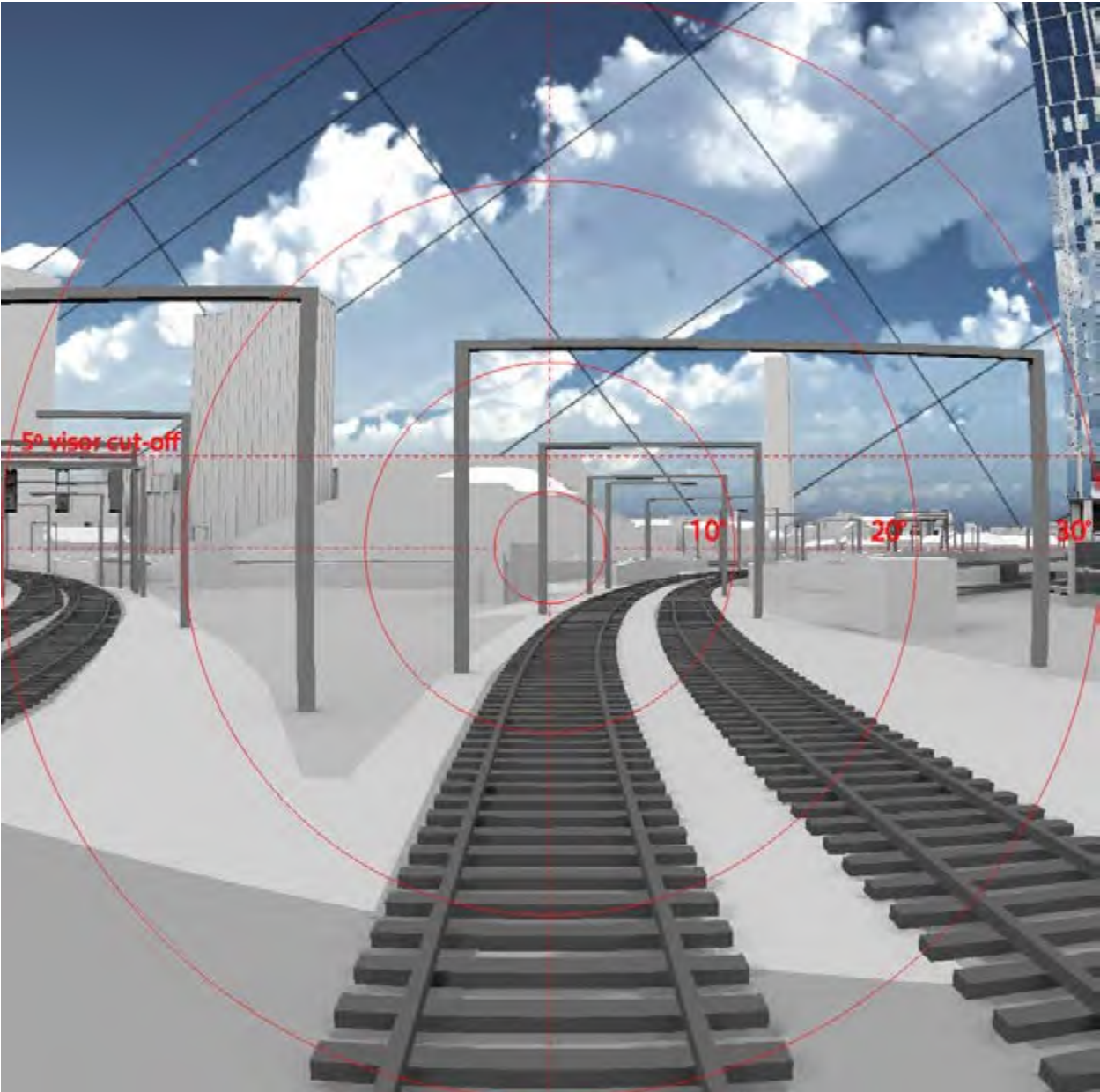


Fig. 408: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT**

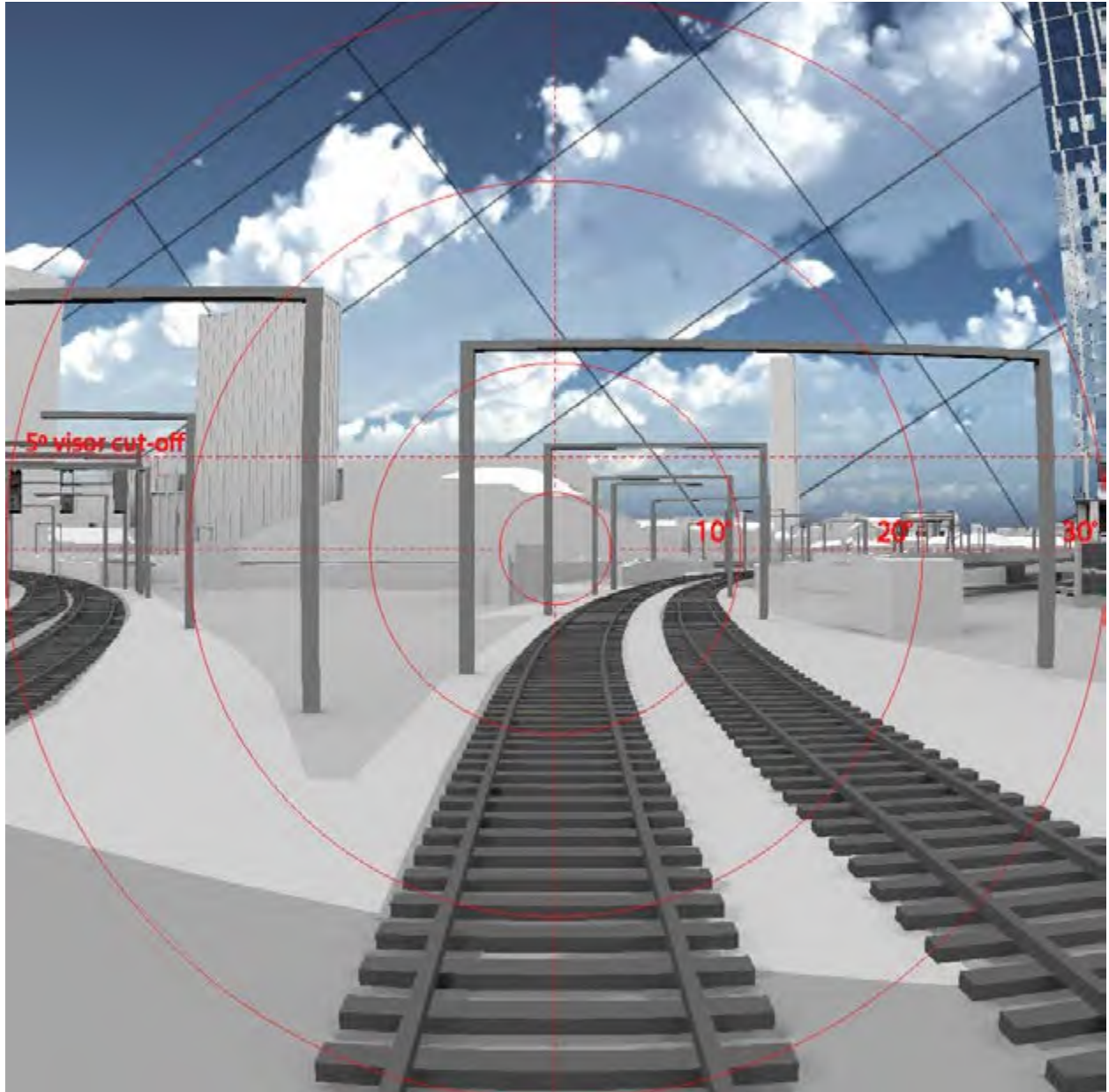


Fig. 409: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT

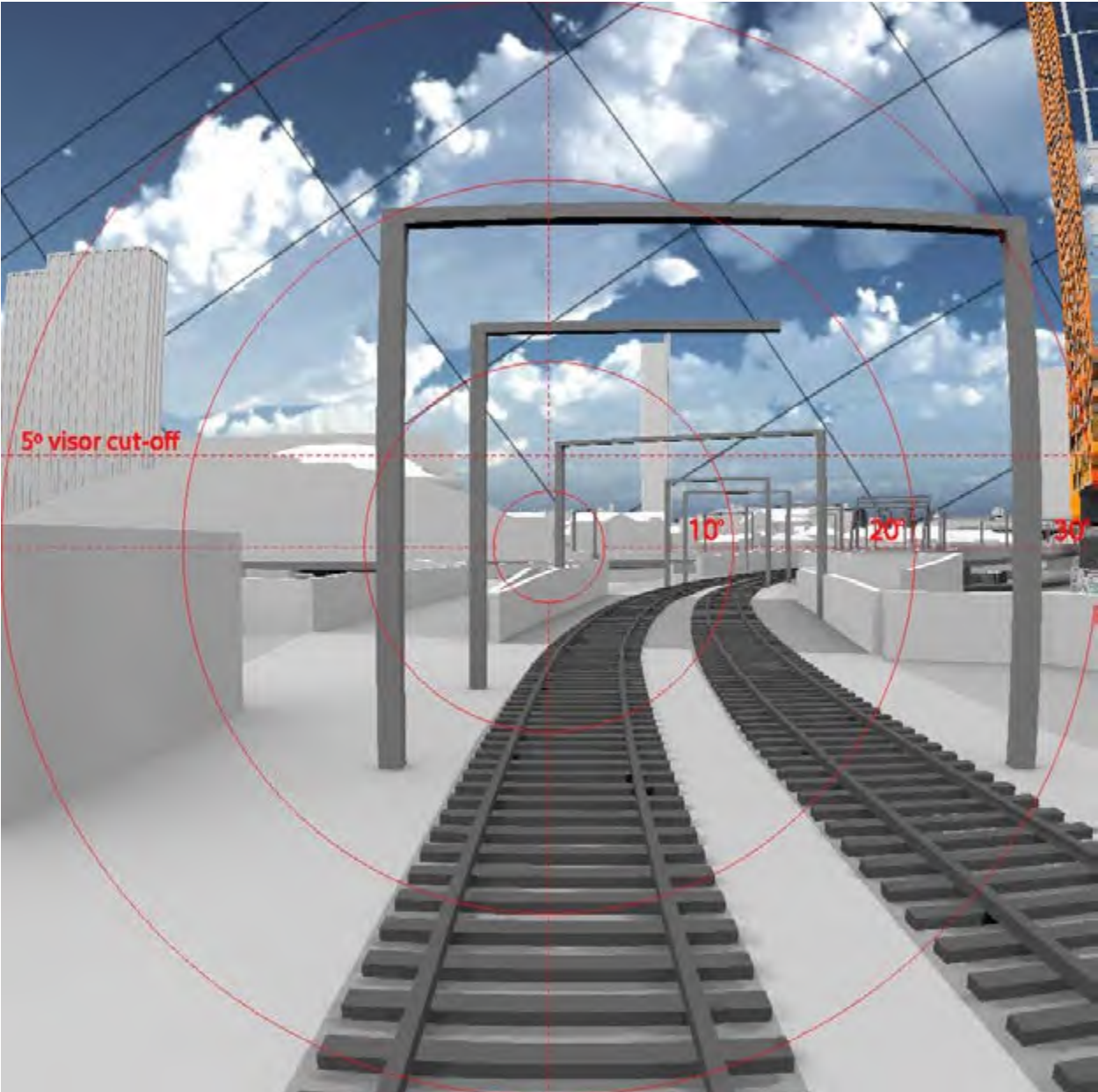


Fig. 410: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT**

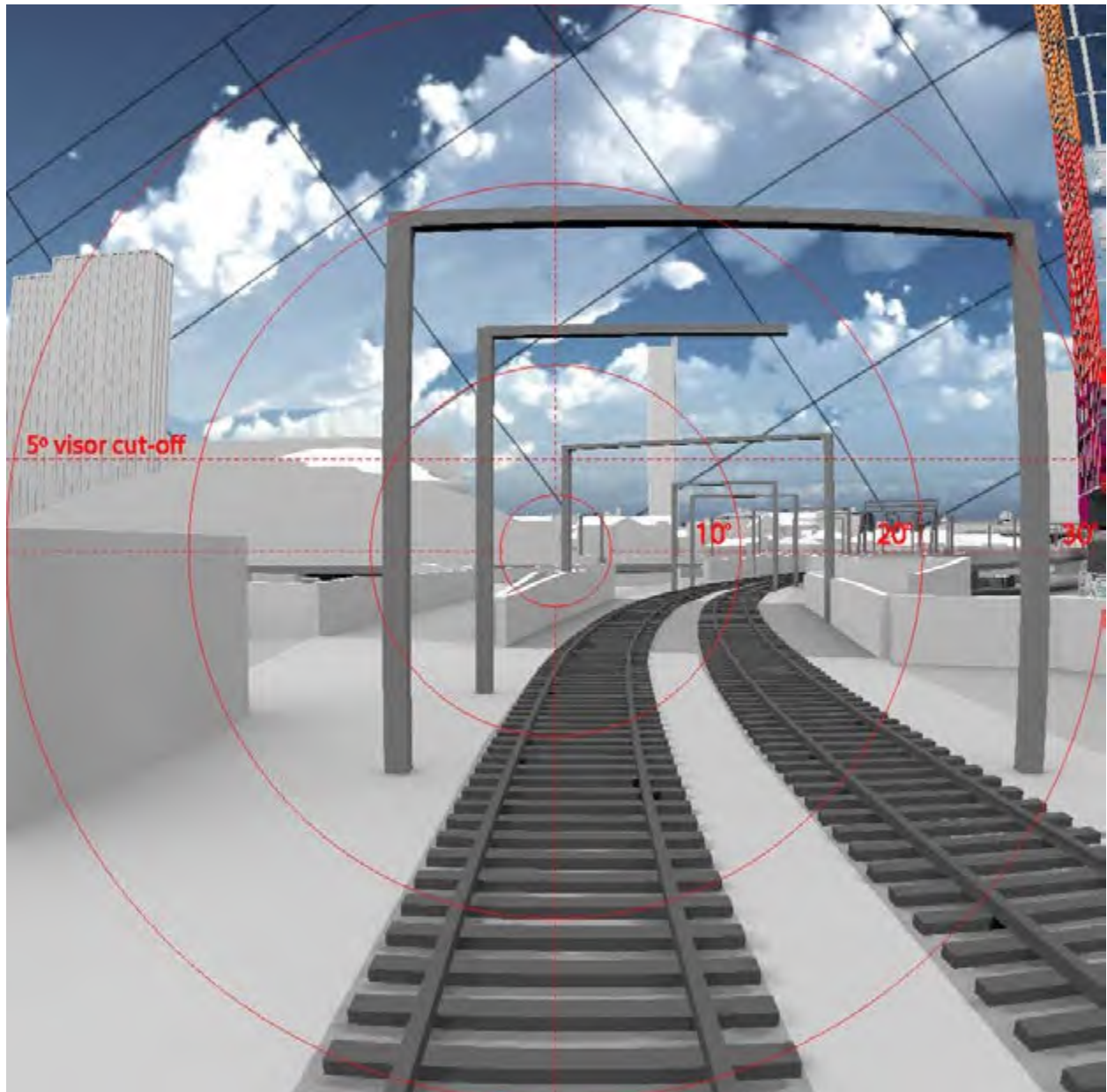


Fig. 411: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAGHT

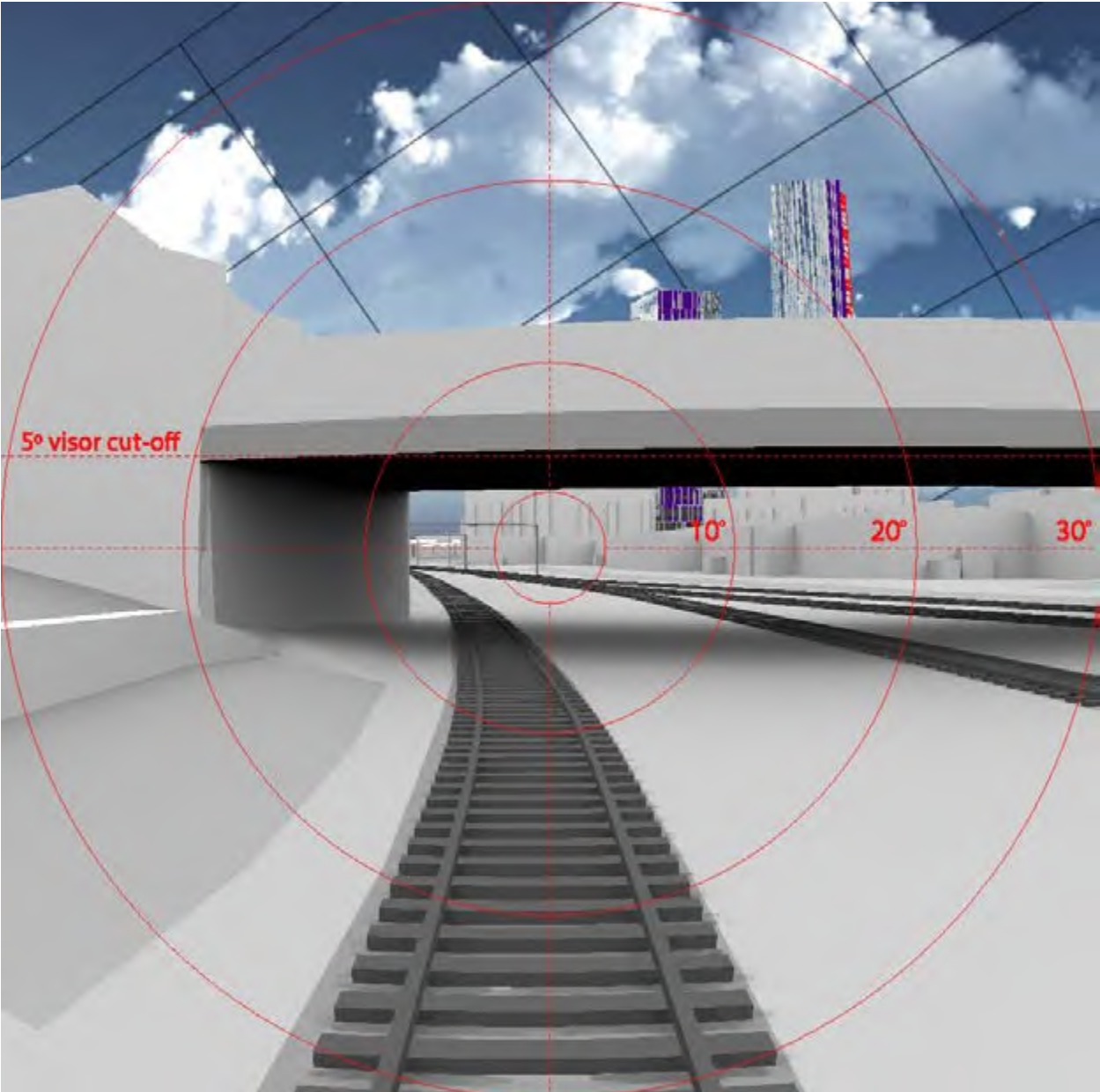


Fig. 412: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAGHT**

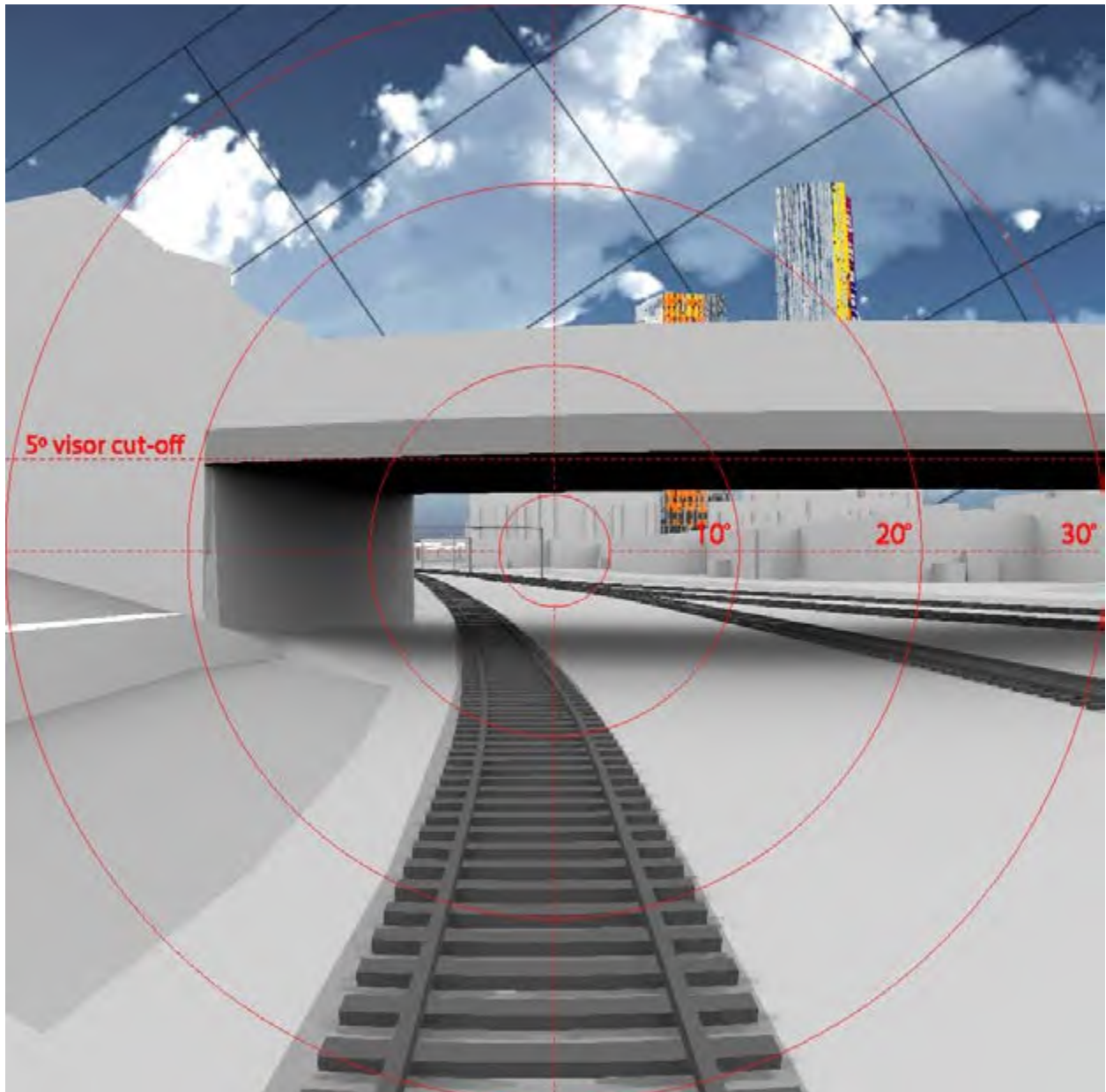


Fig. 413: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAGHT

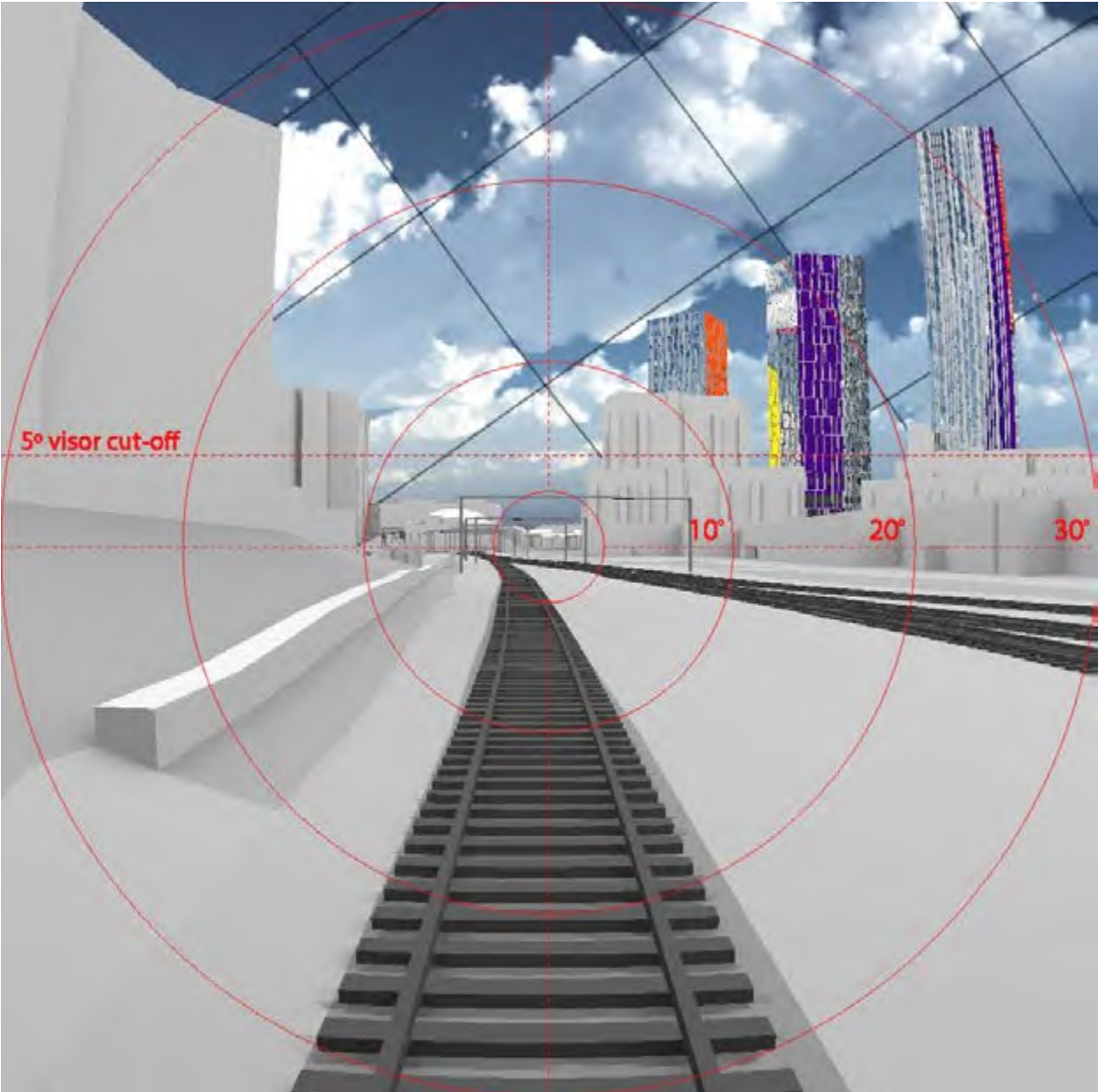


Fig. 414: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAGHT**

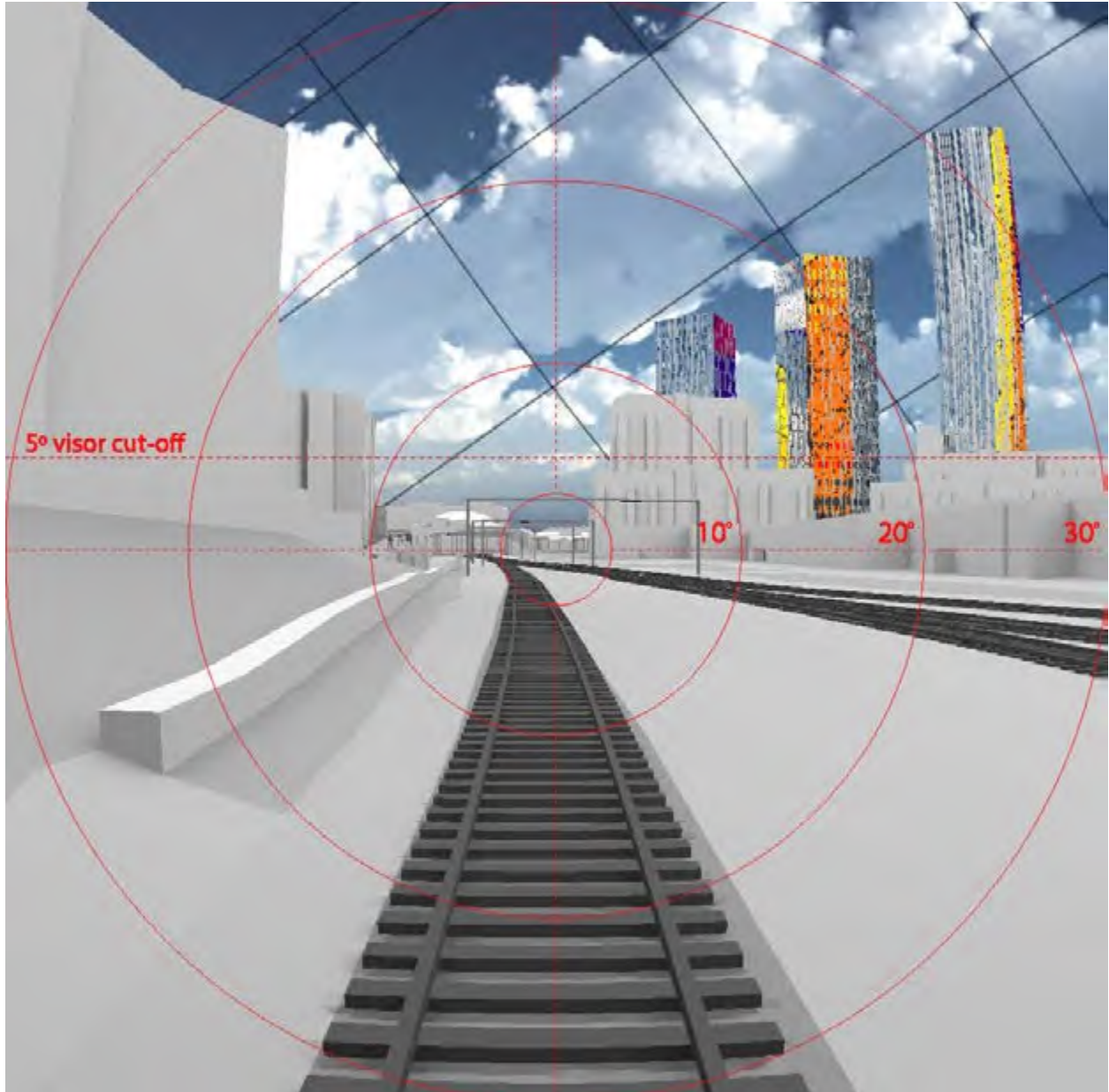


Fig. 415: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT

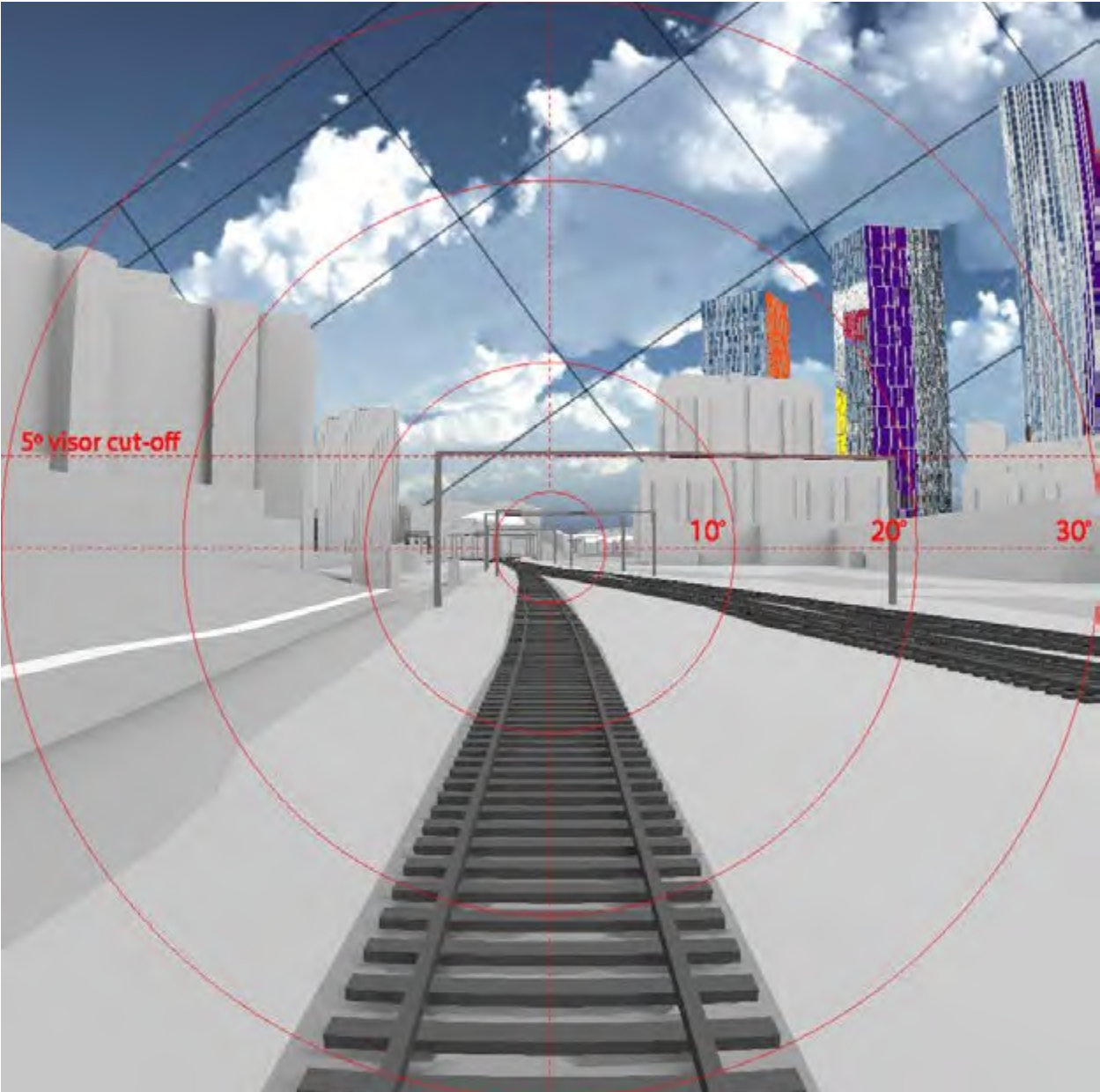


Fig. 416: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT**

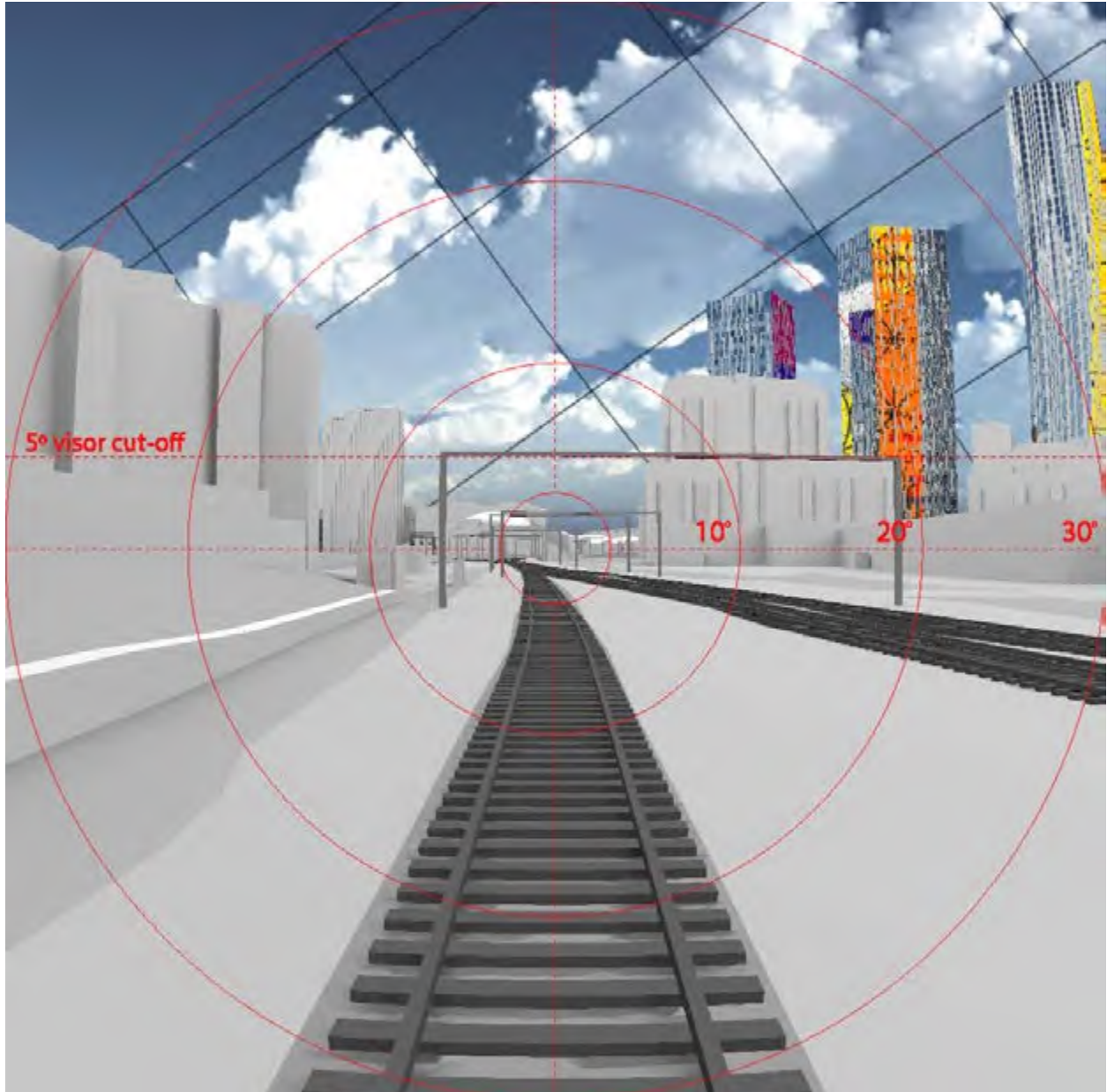


Fig. 417: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT

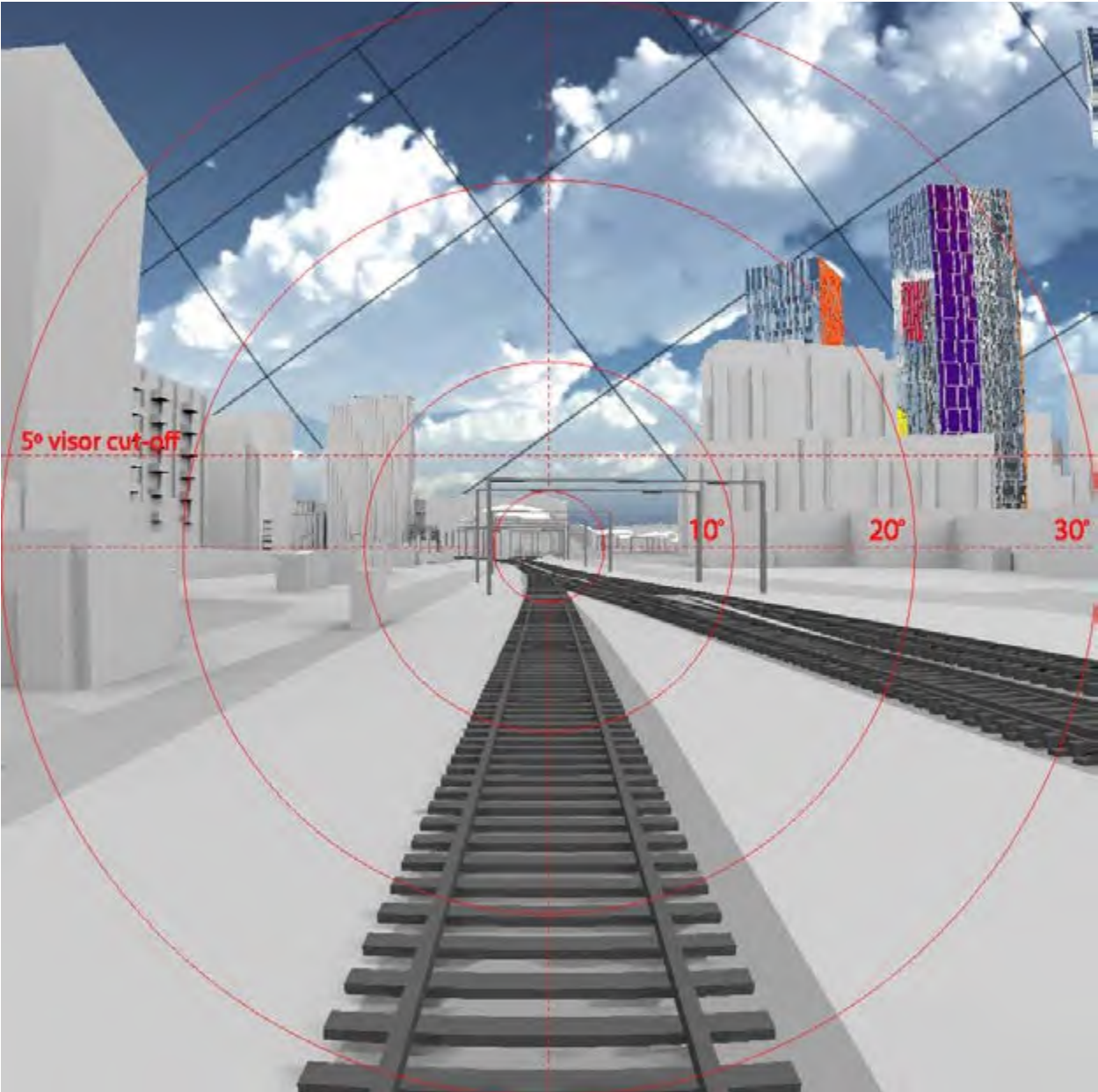


Fig. 418: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT**

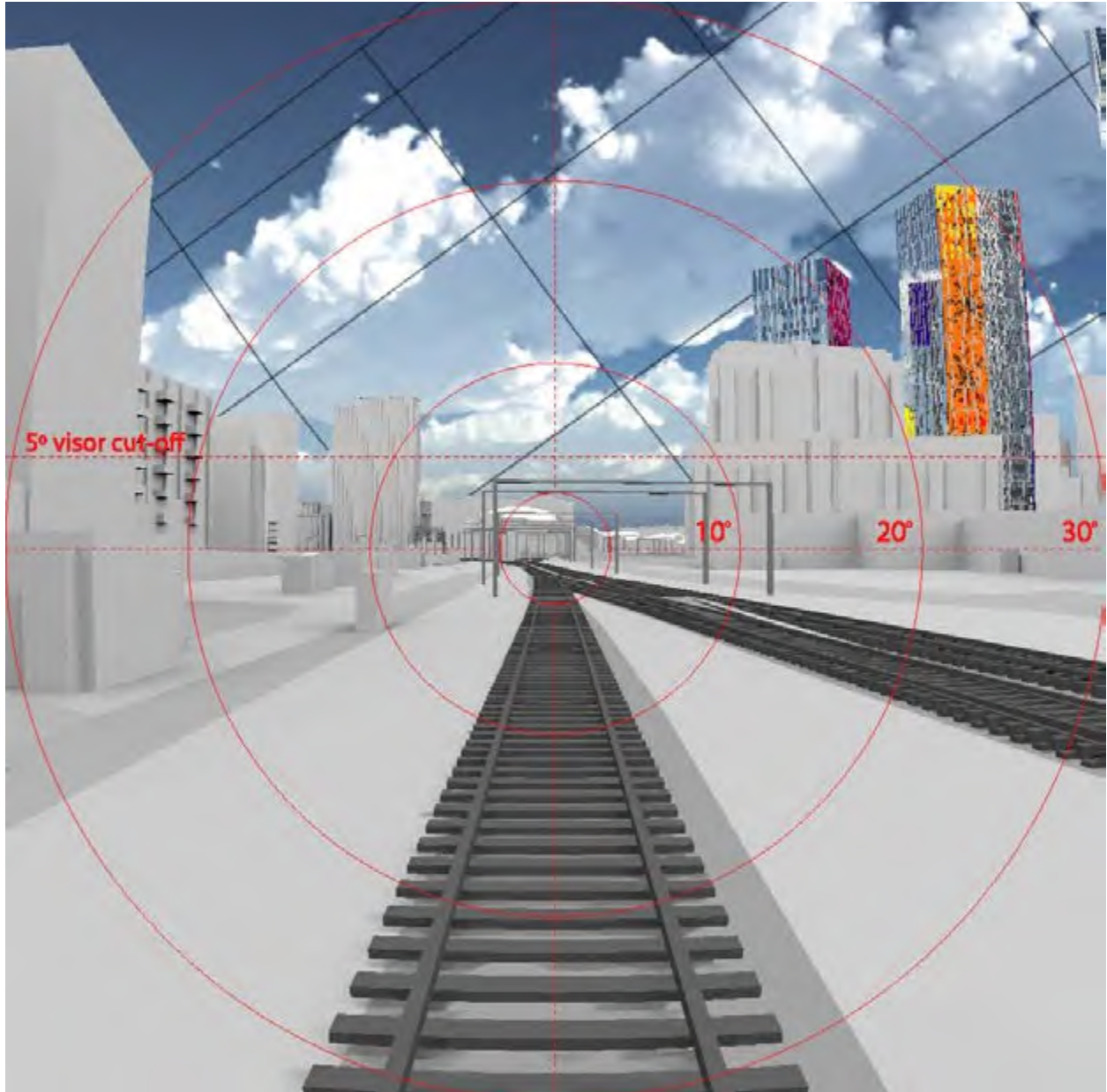


Fig. 419: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT

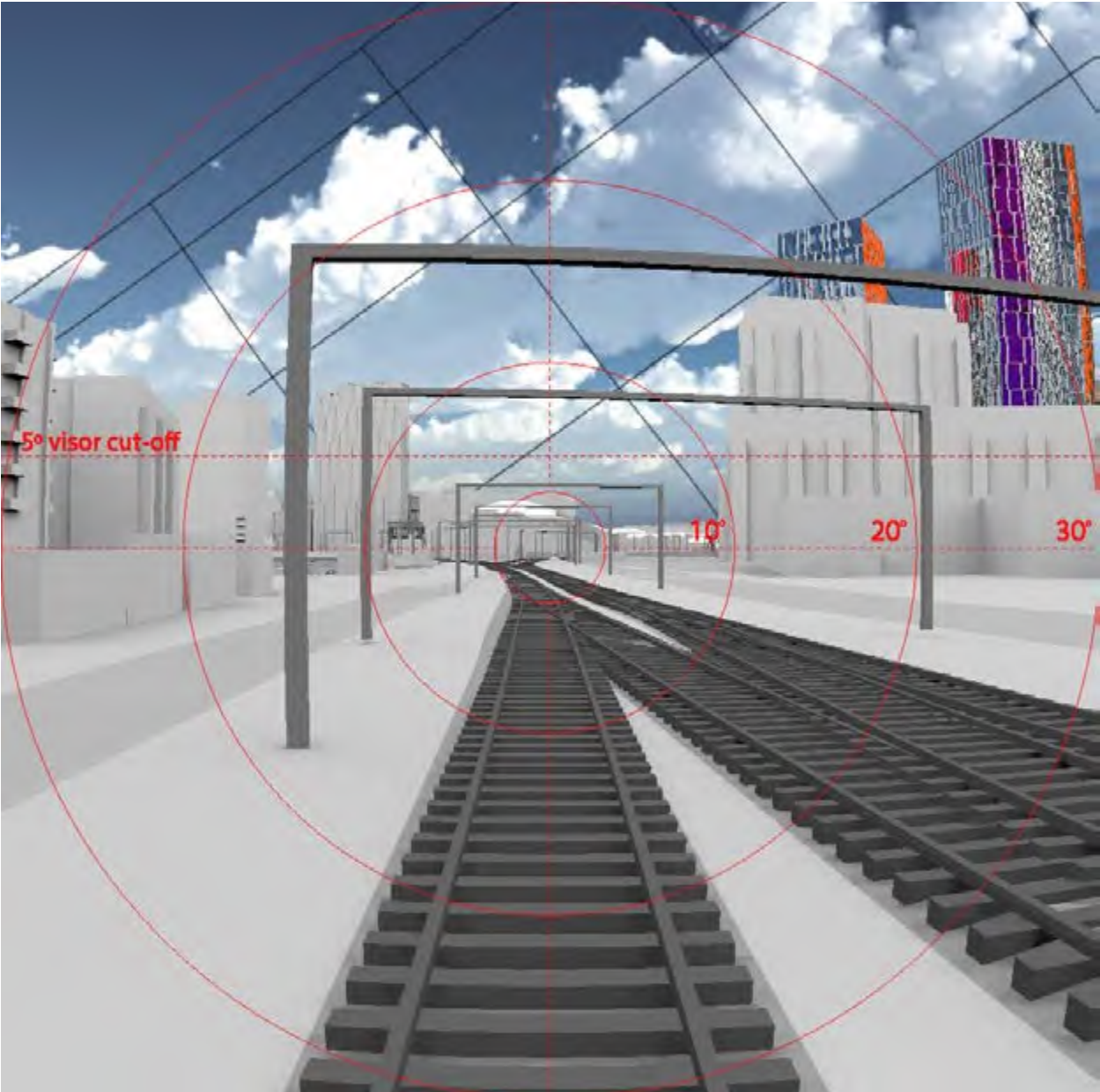


Fig. 420: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT**

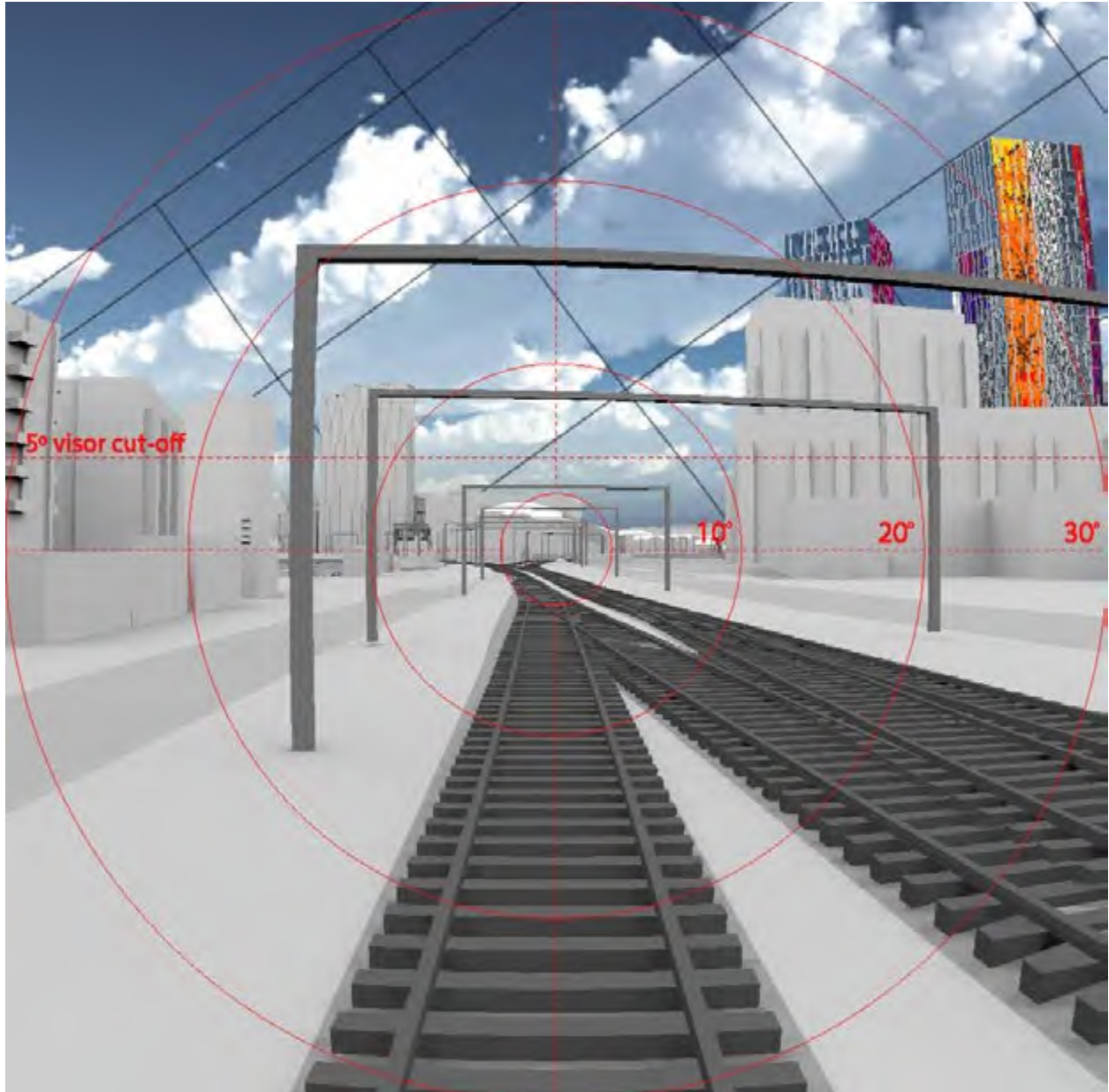


Fig. 421: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT

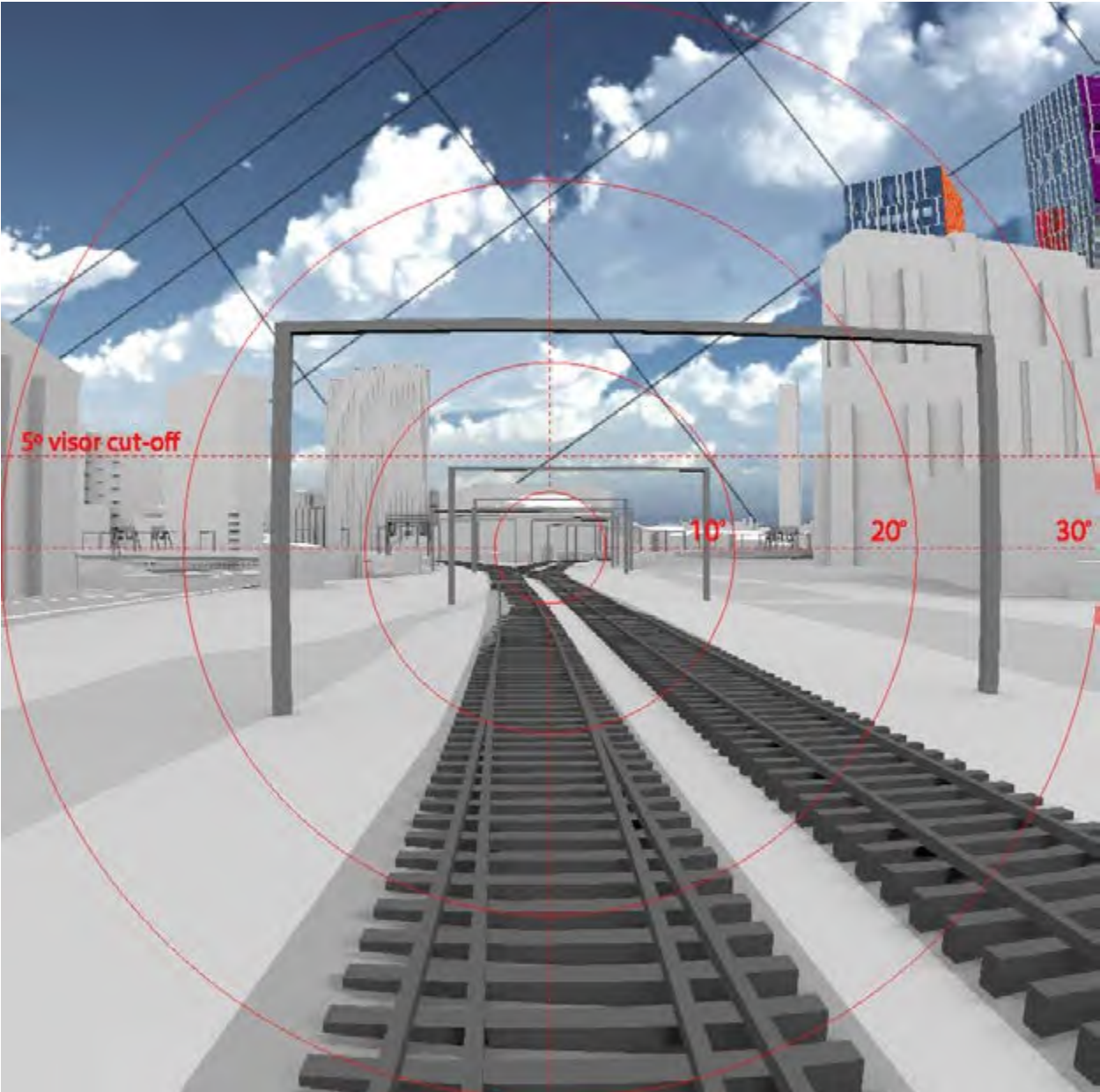


Fig. 422: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT**

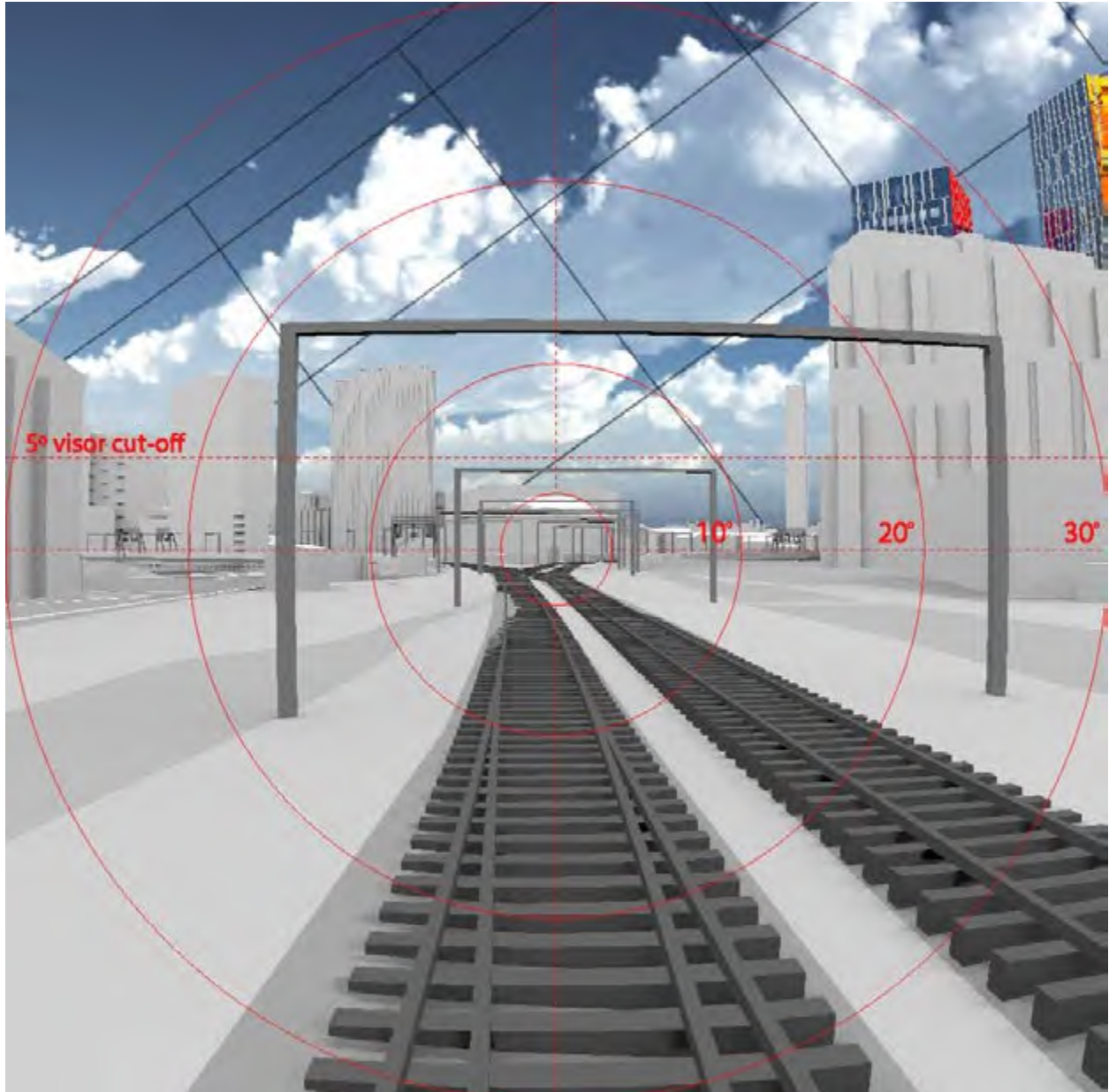


Fig. 423: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT

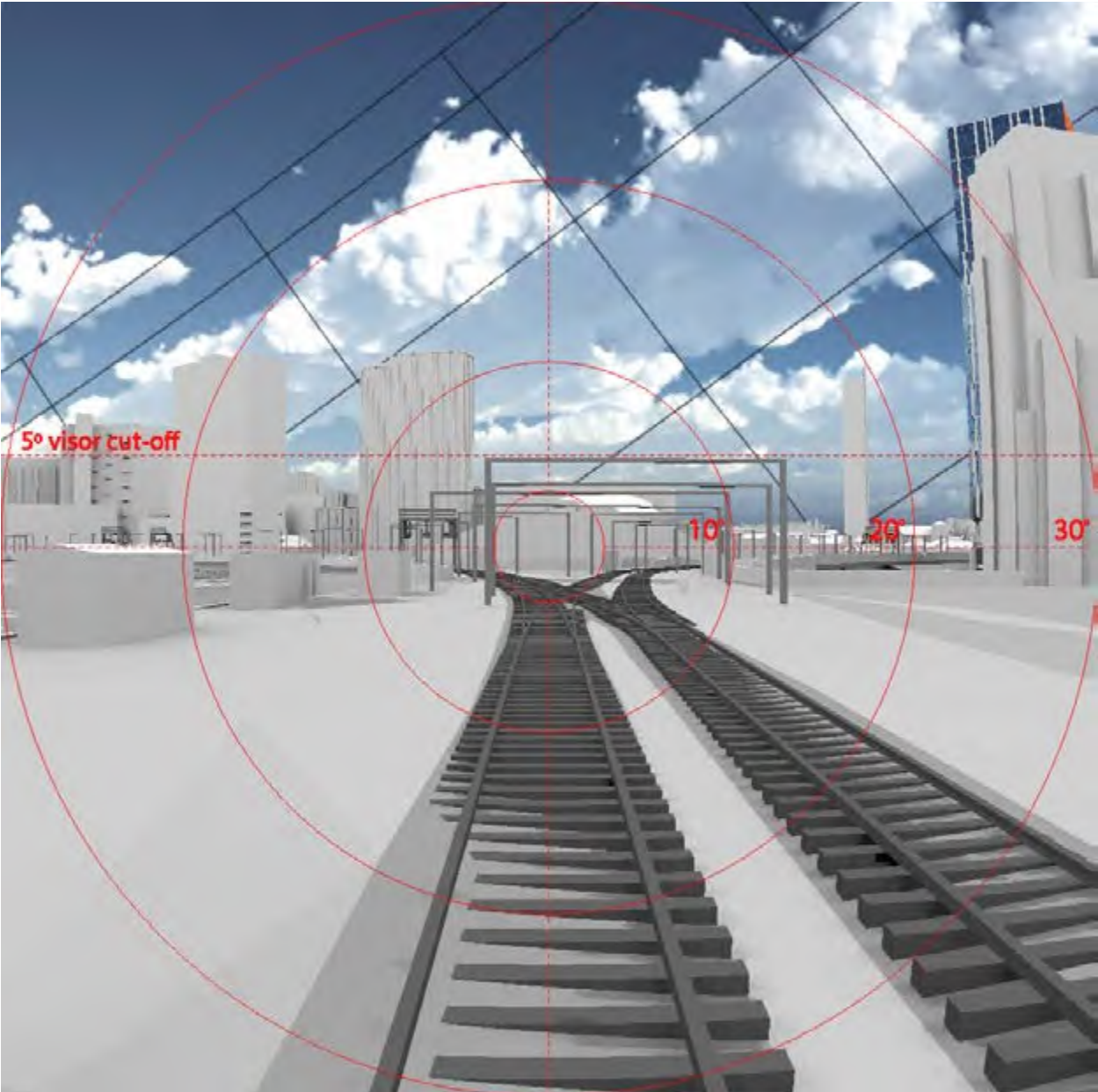


Fig. 424: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT**

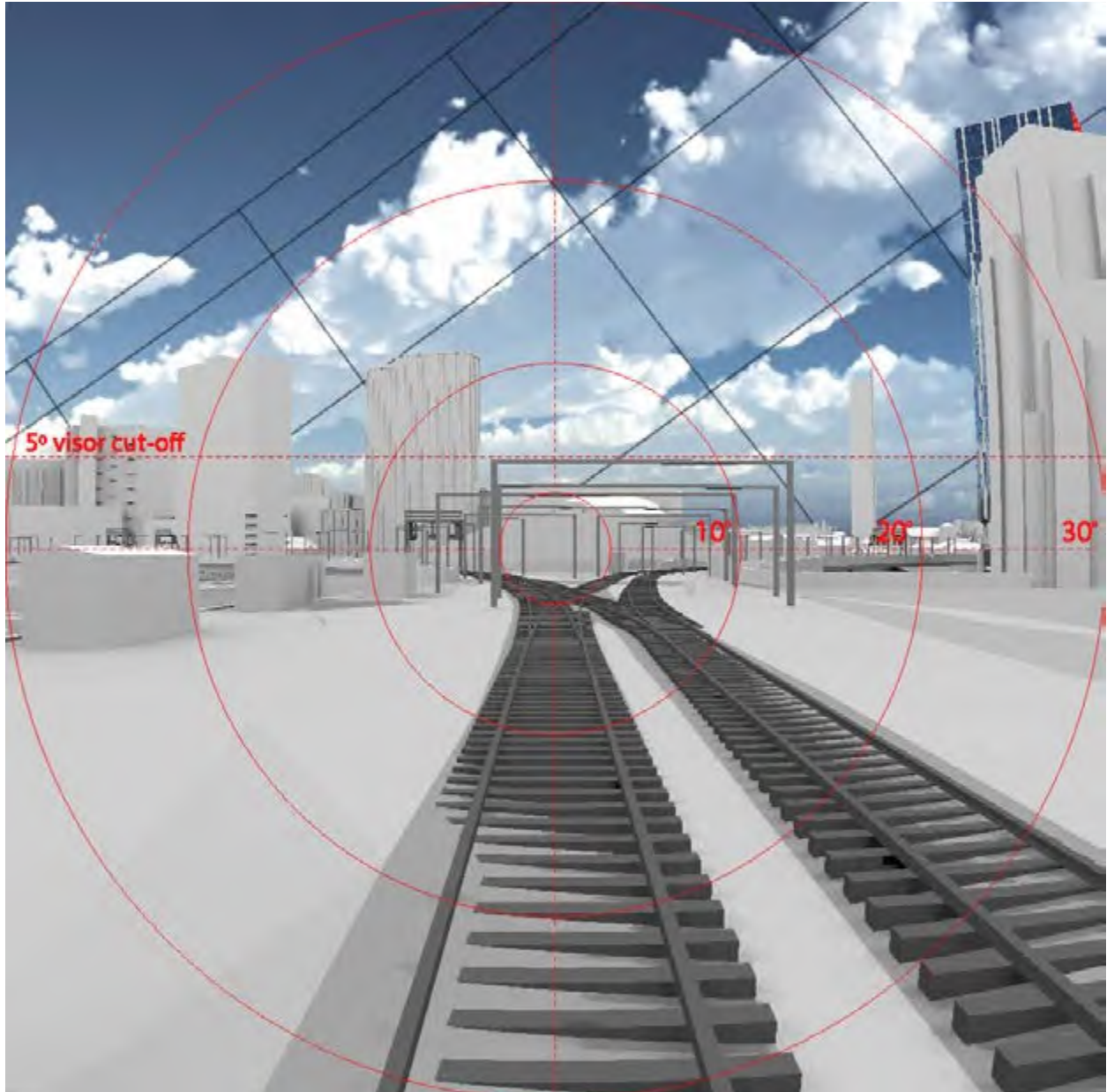


Fig. 425: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT



Fig. 426: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT**

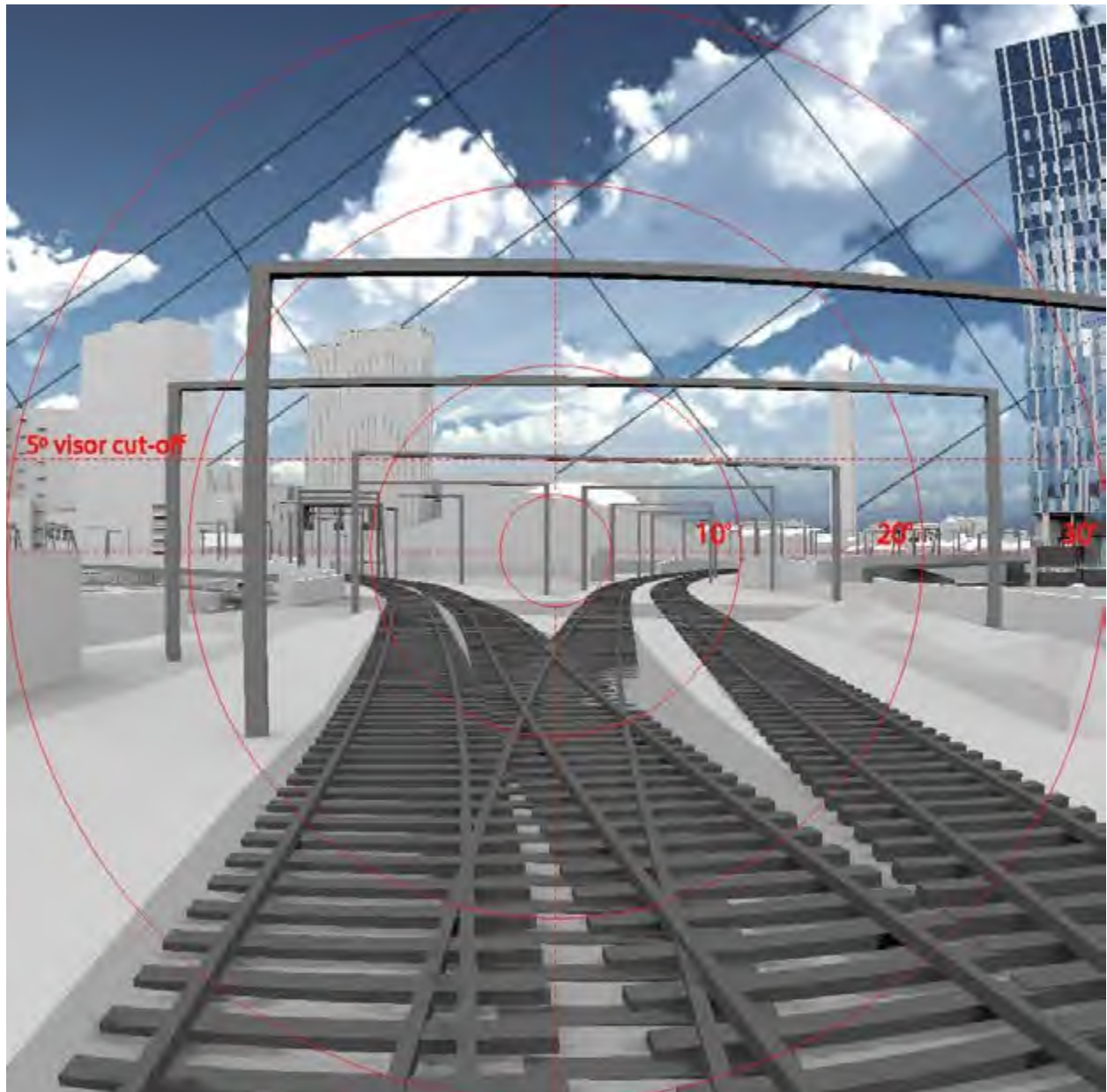


Fig. 427: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT

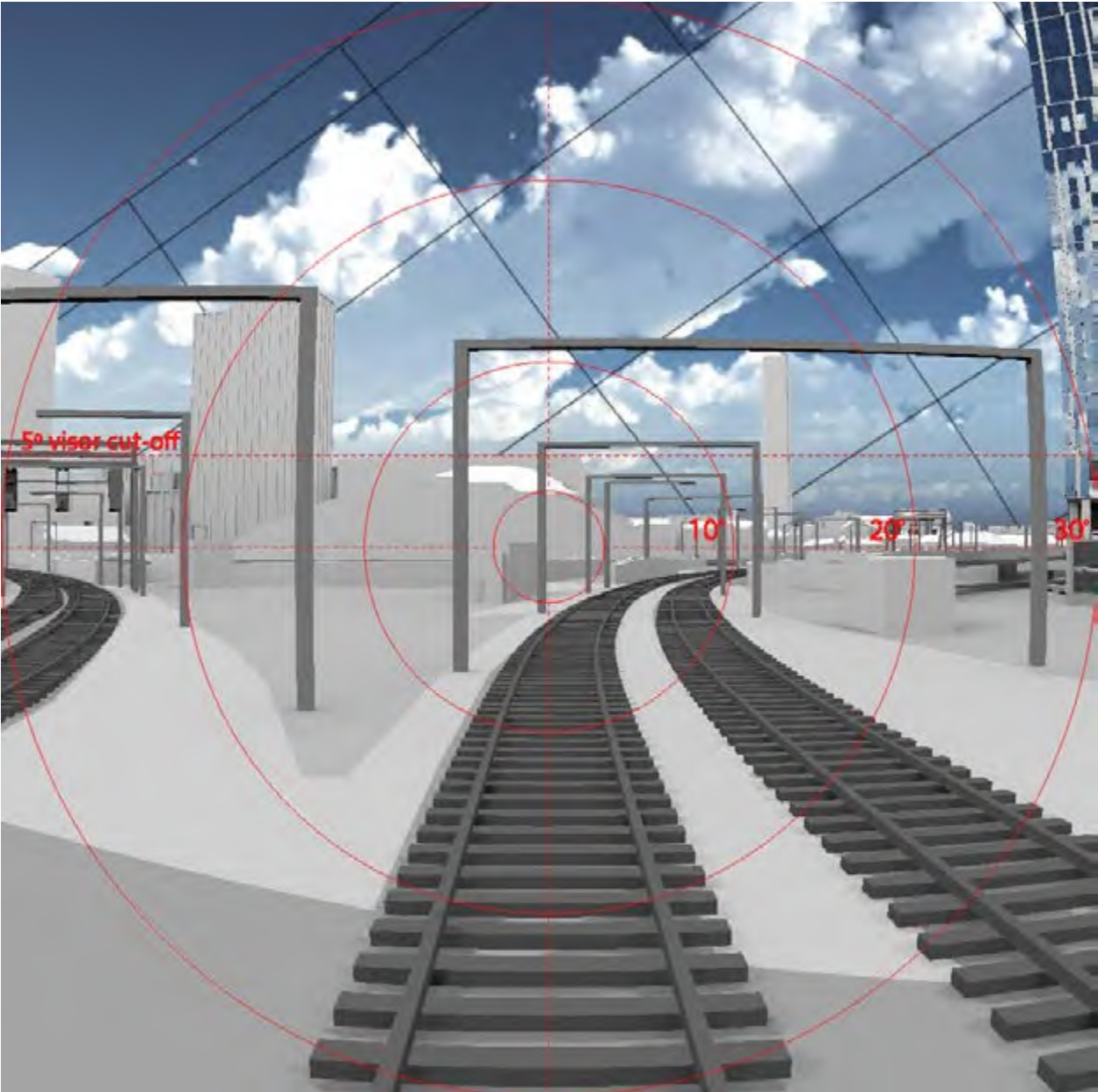


Fig. 428: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT**

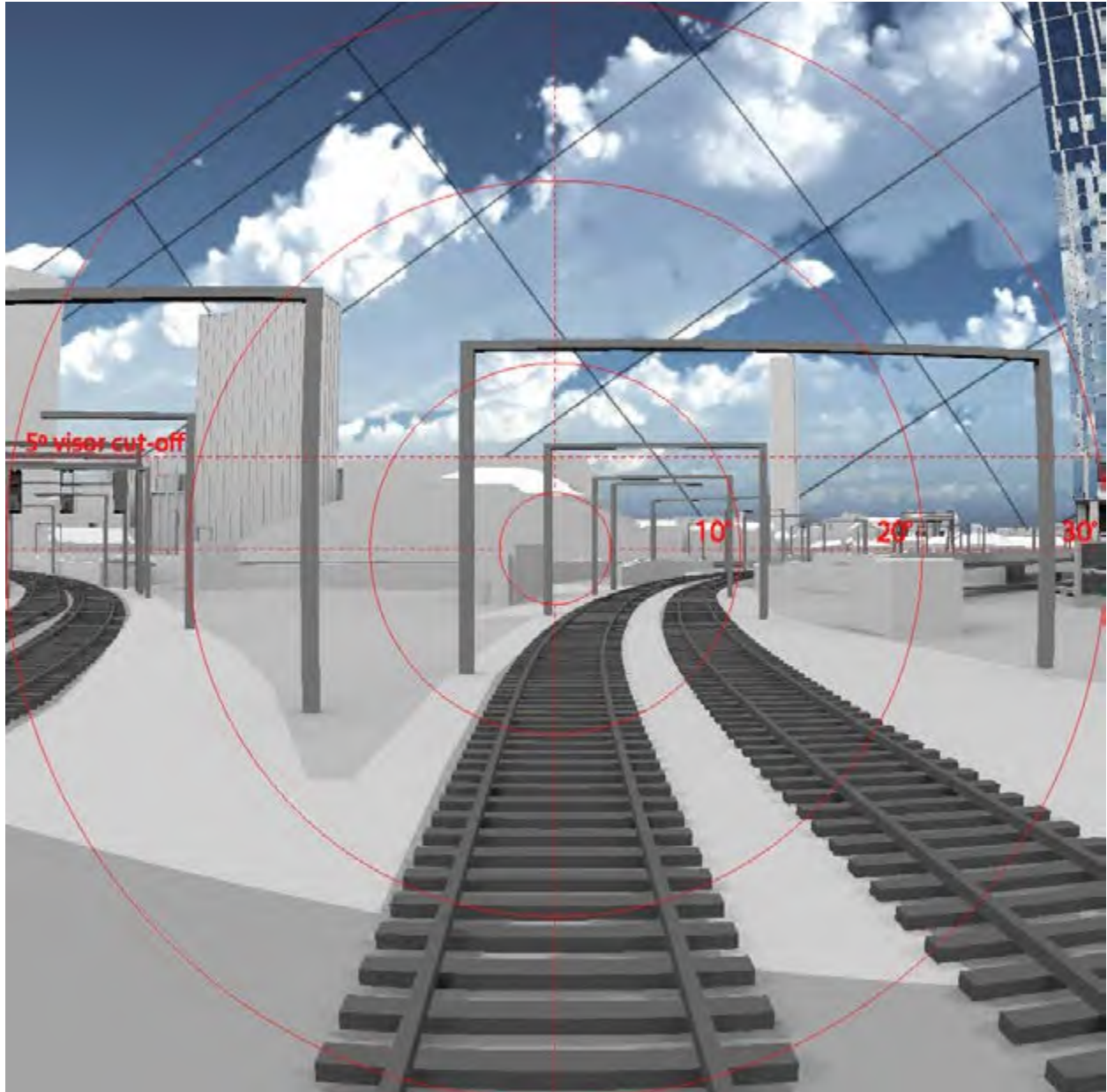


Fig. 429: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT

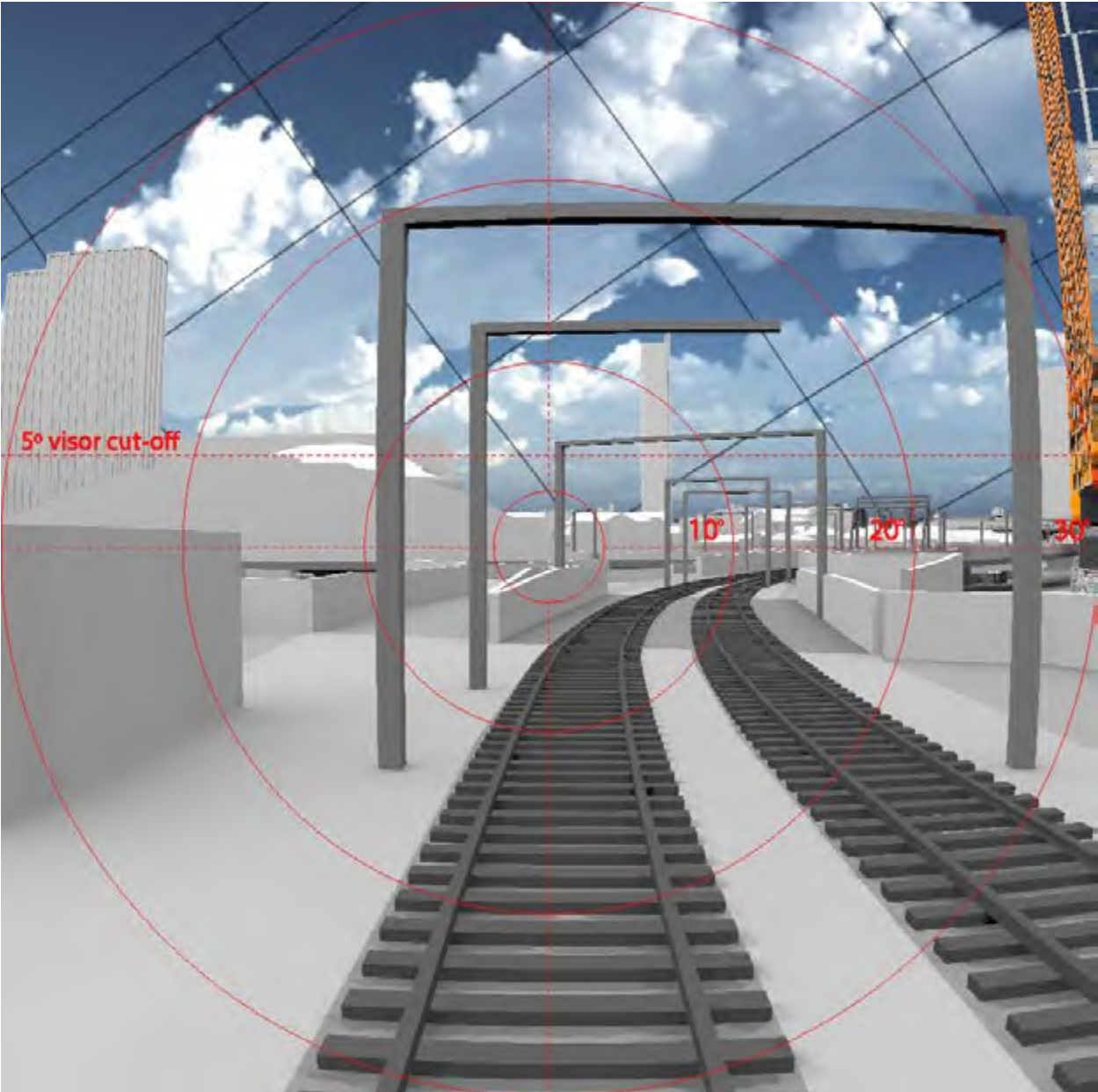


Fig. 430: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT**

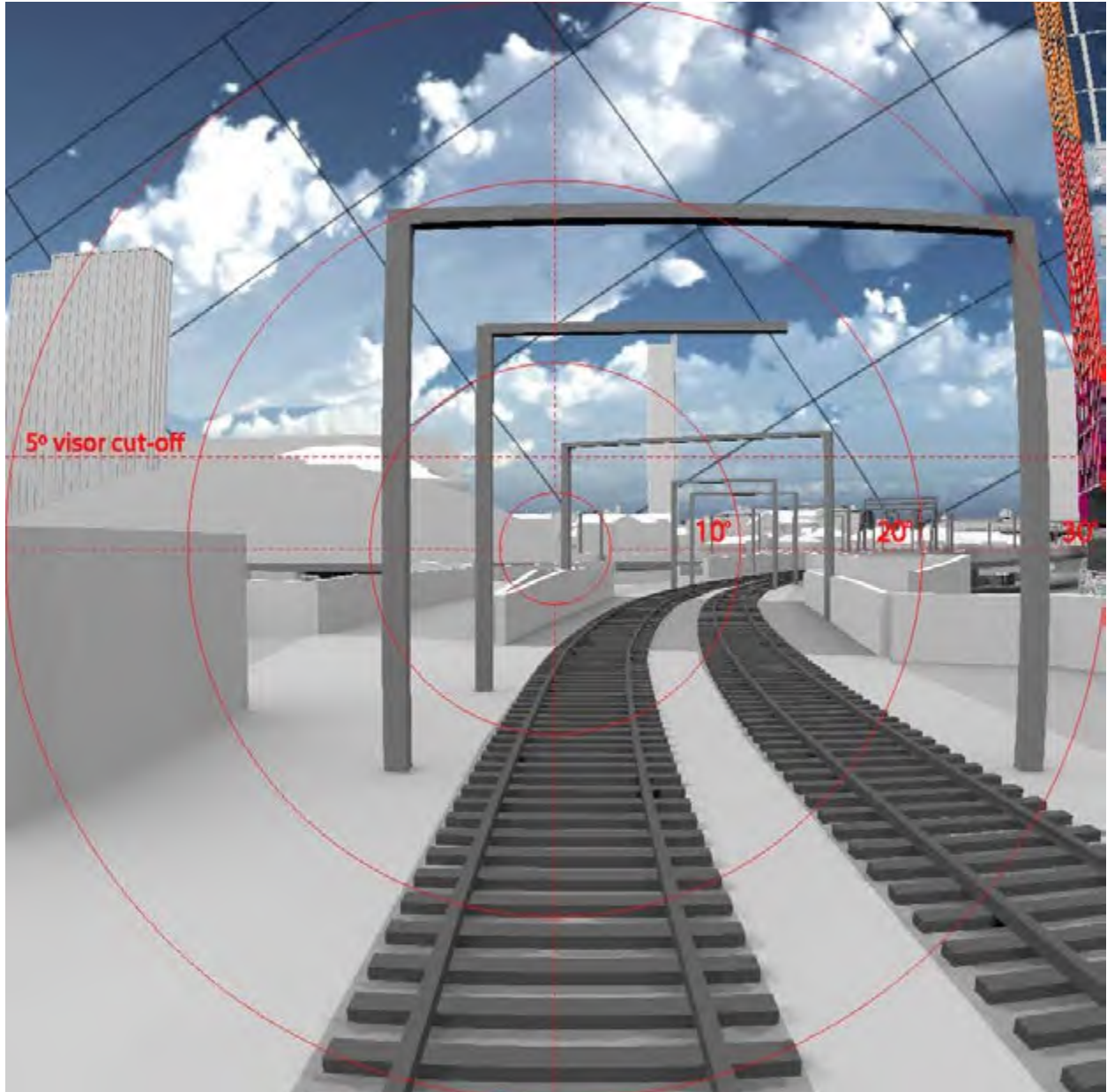


Fig. 431: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY

VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAIGHT

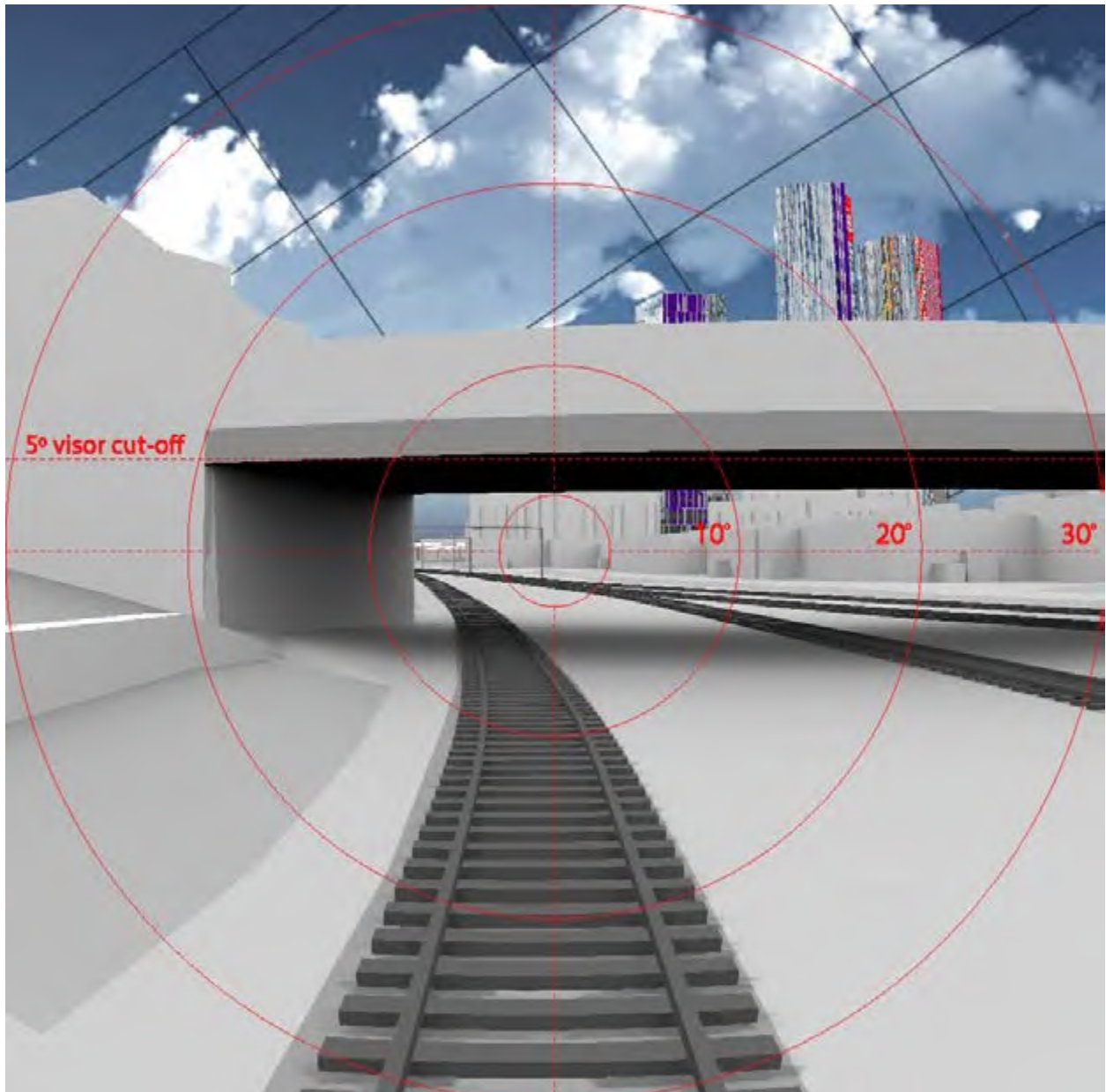
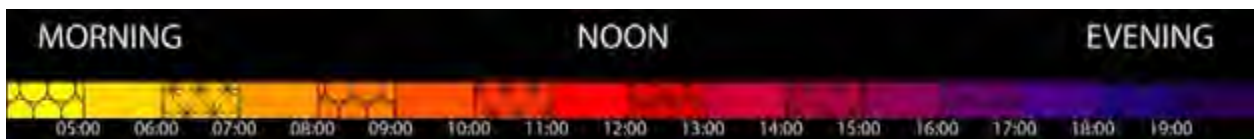


Fig. 432: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-10 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 500M FROM SITE
LOOKING STRAGHT**

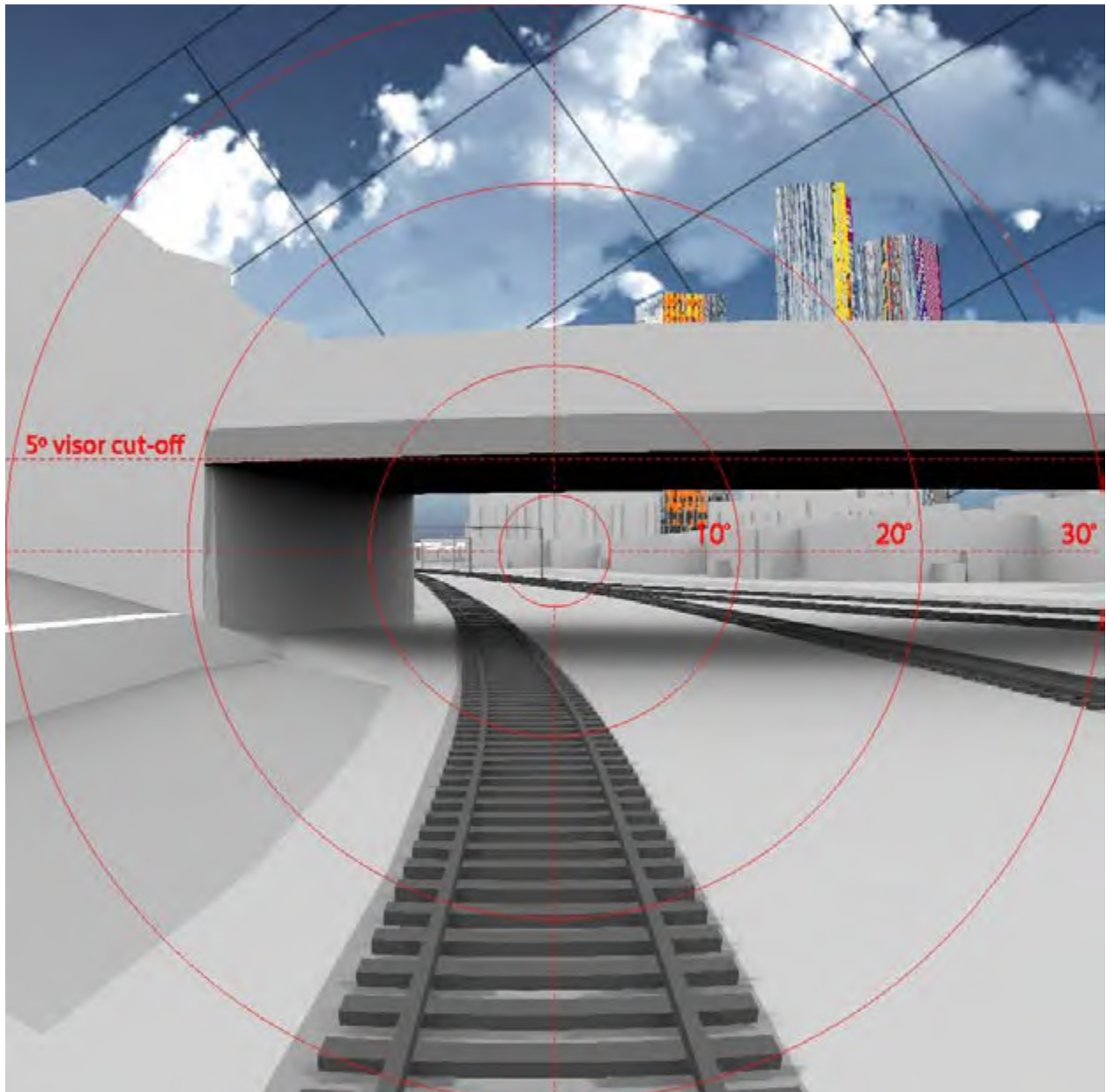


Fig. 433: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAGHT

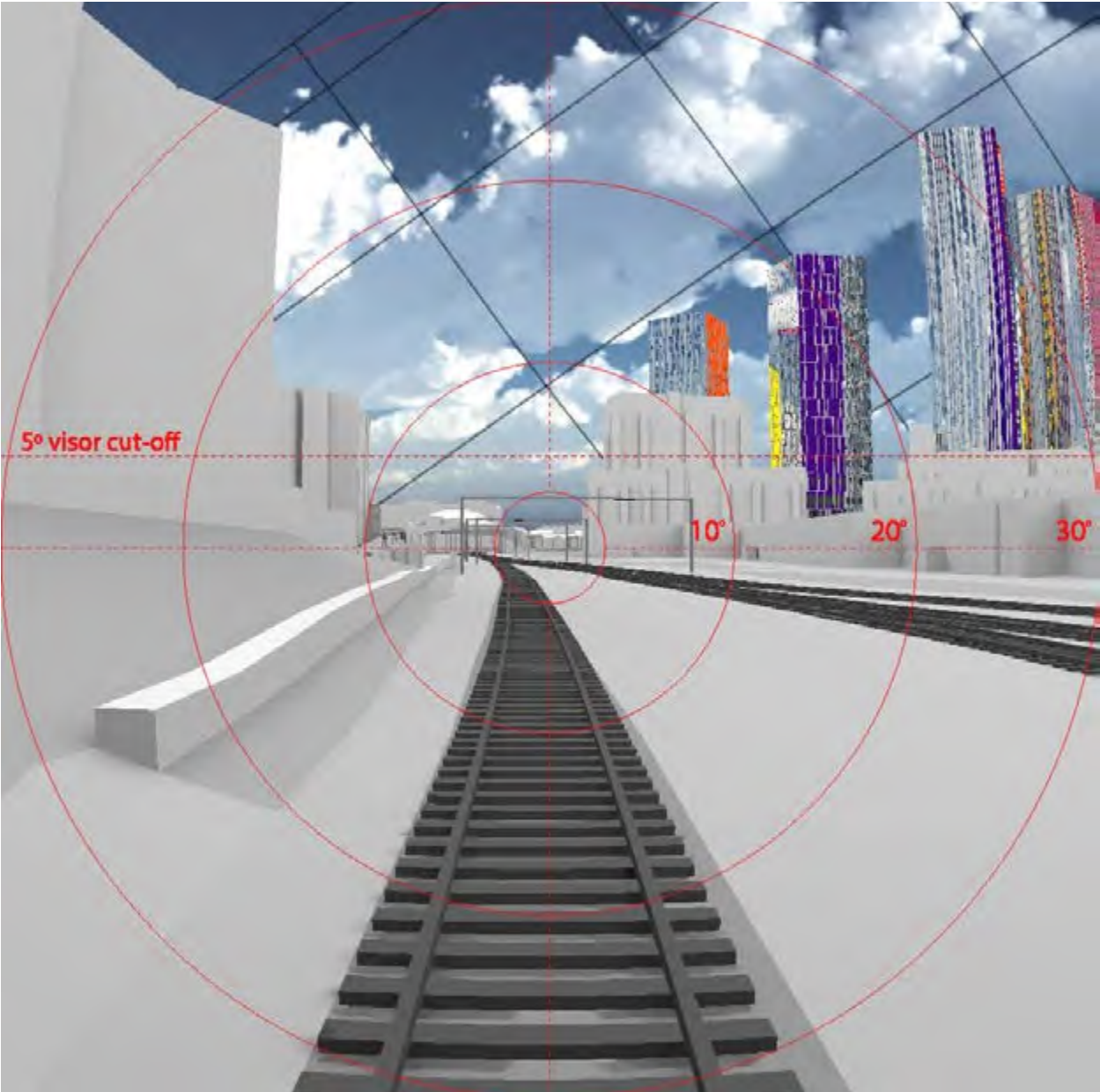


Fig. 434: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-60 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 450M FROM SITE
LOOKING STRAGHT**

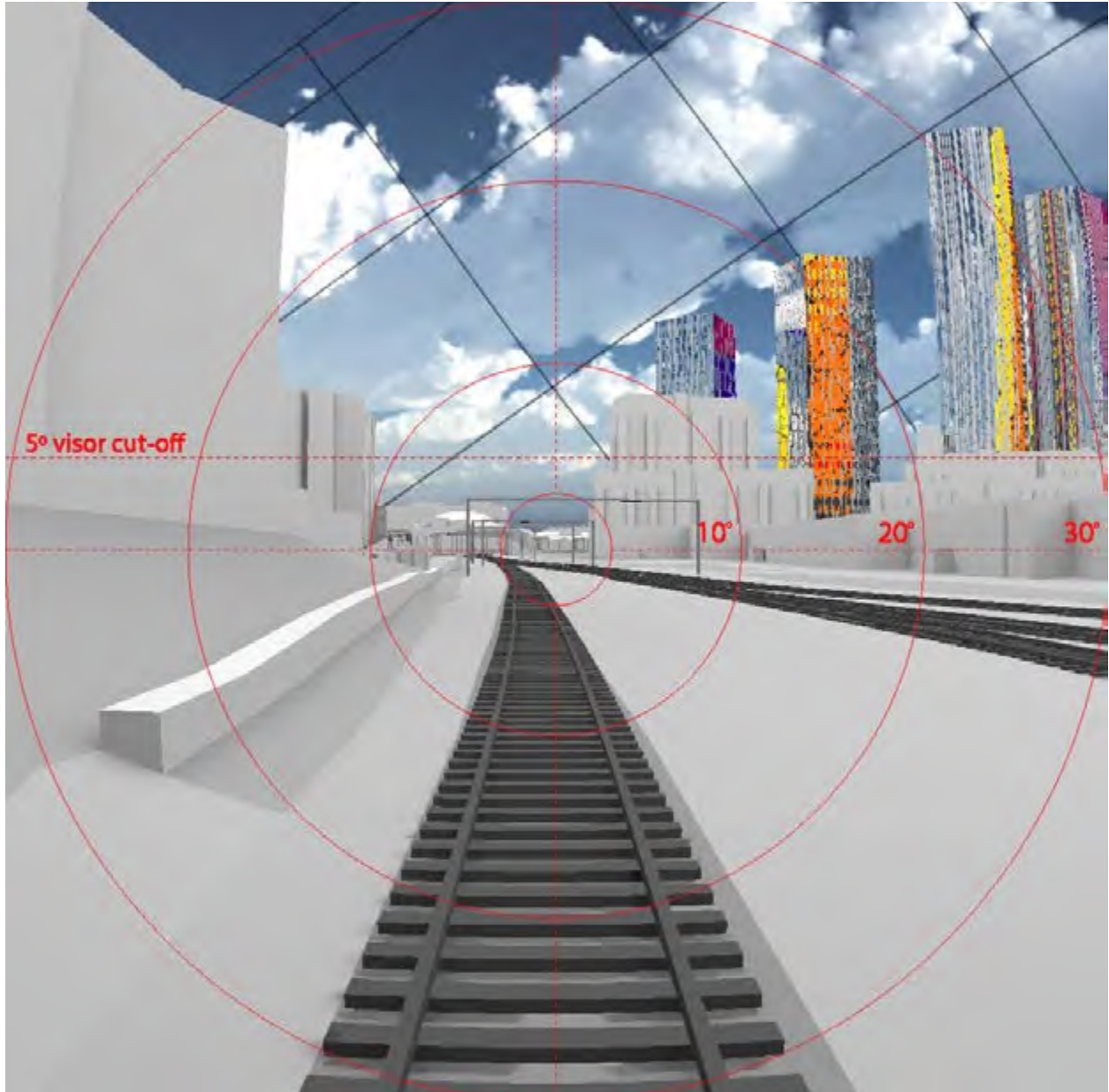


Fig. 435: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT

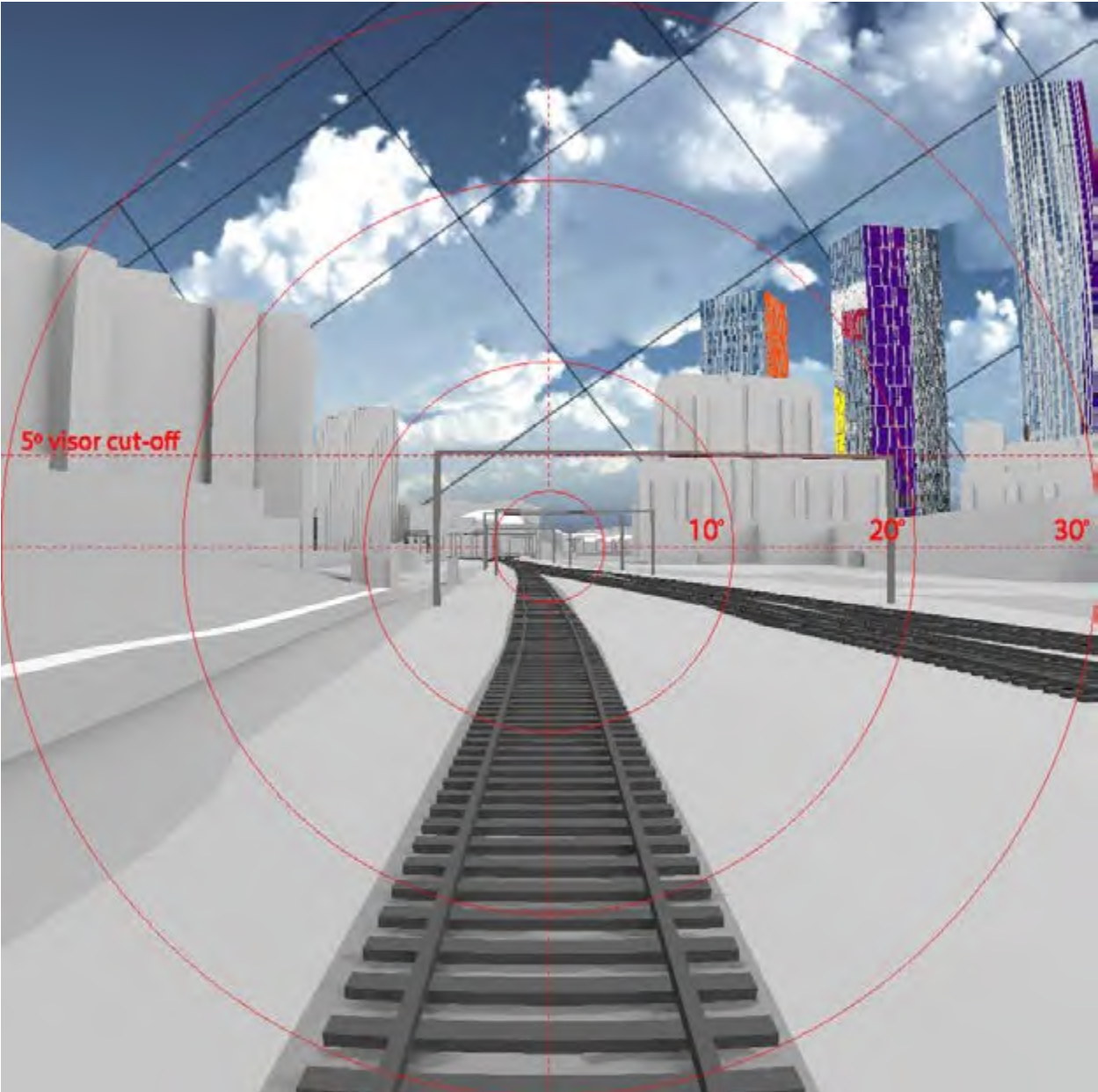


Fig. 436: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-110 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 400M FROM SITE
LOOKING STRAGHT**

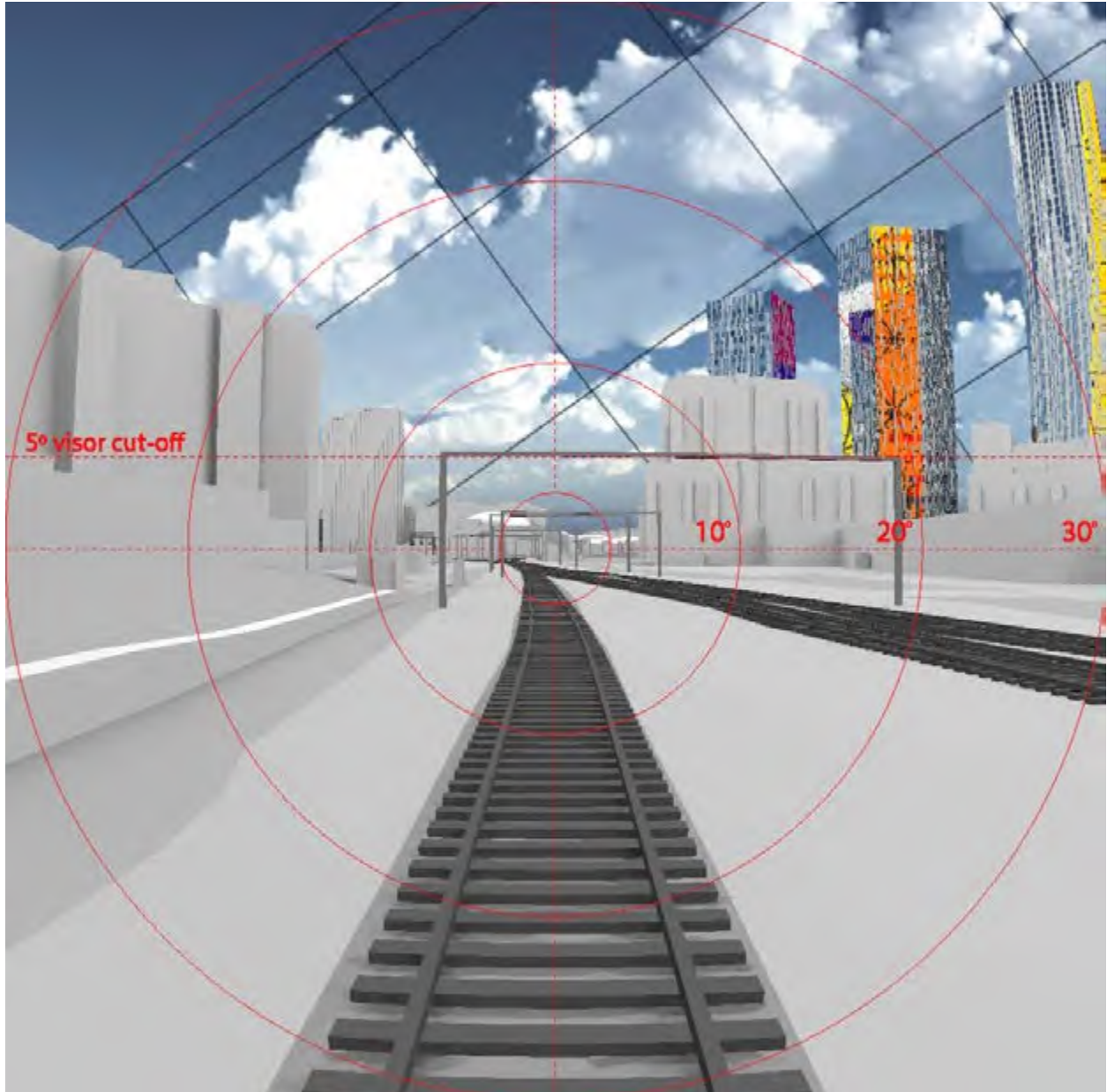


Fig. 437: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT

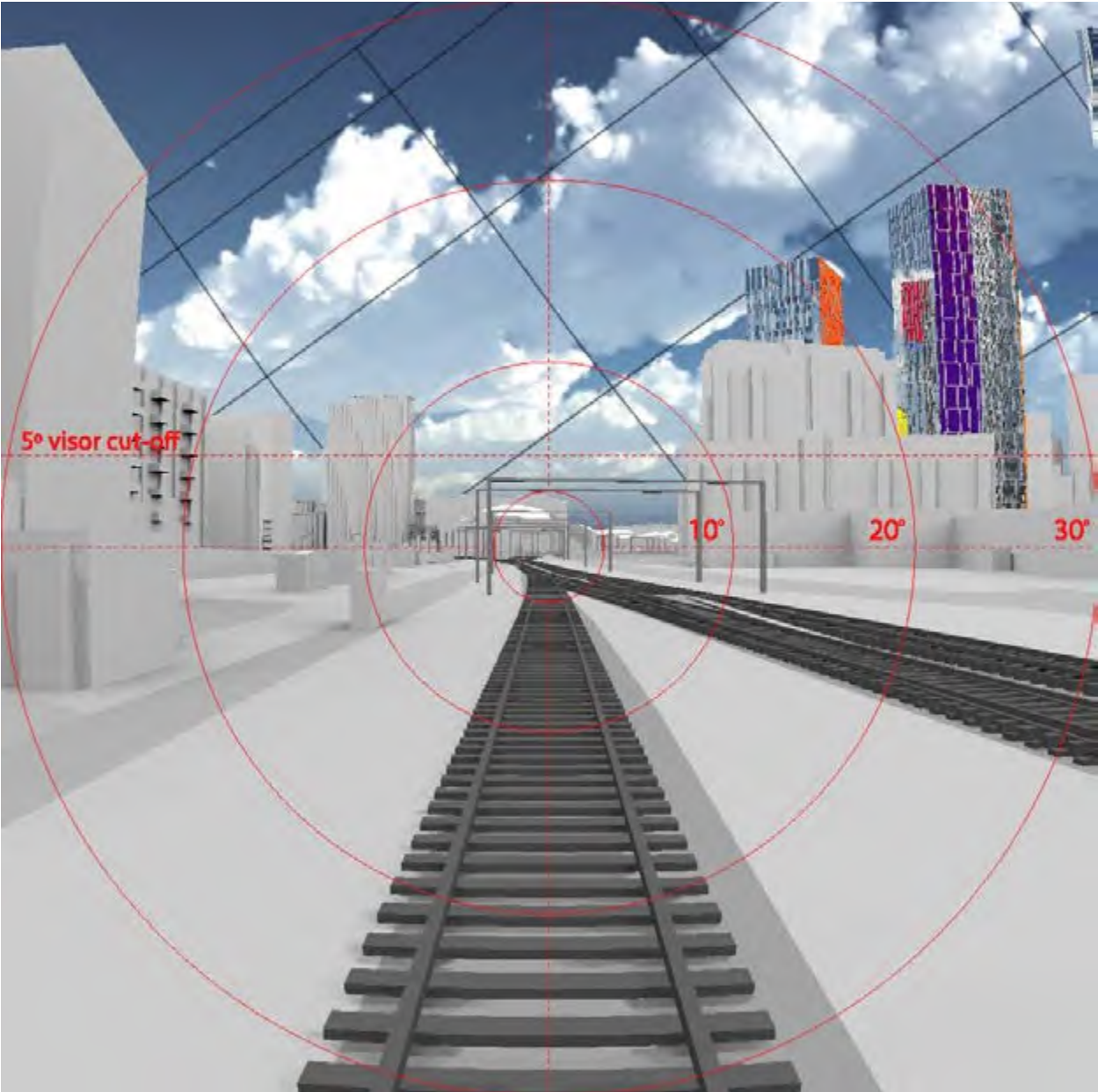


Fig. 438: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-160 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 350M FROM SITE
LOOKING STRAGHT**

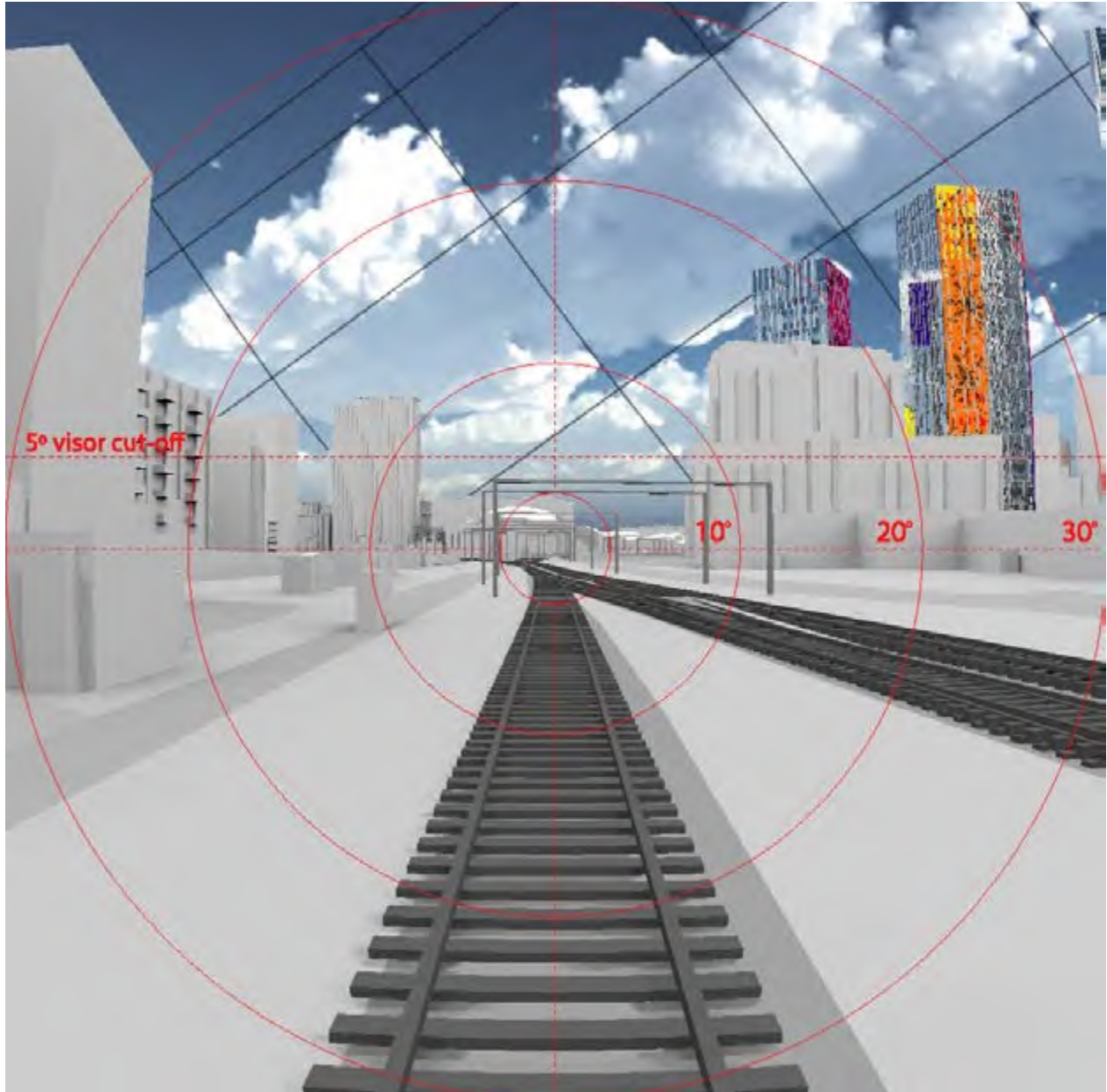


Fig. 439: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT

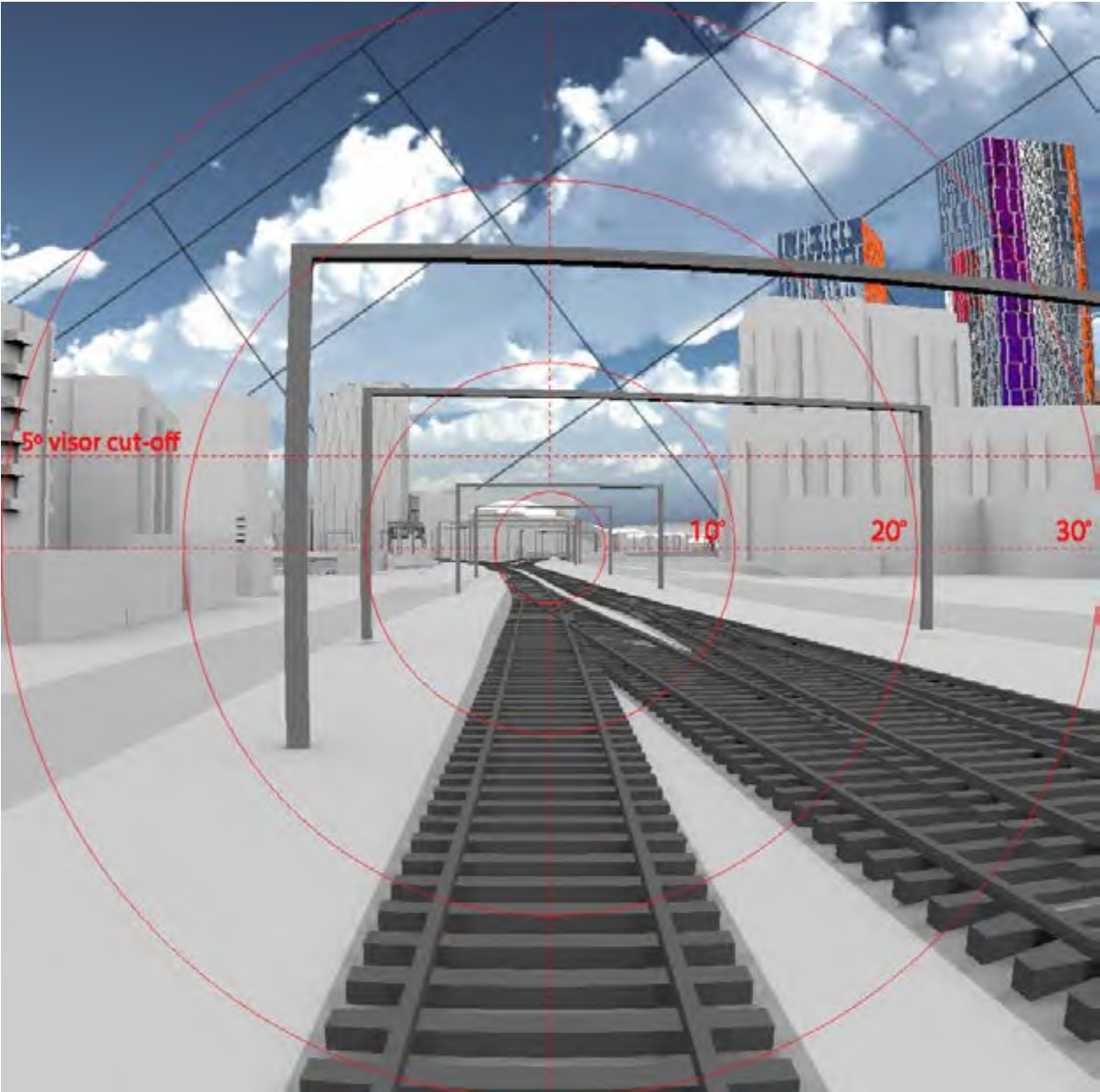


Fig. 440: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-210 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 300M FROM SITE
LOOKING STRAGHT**

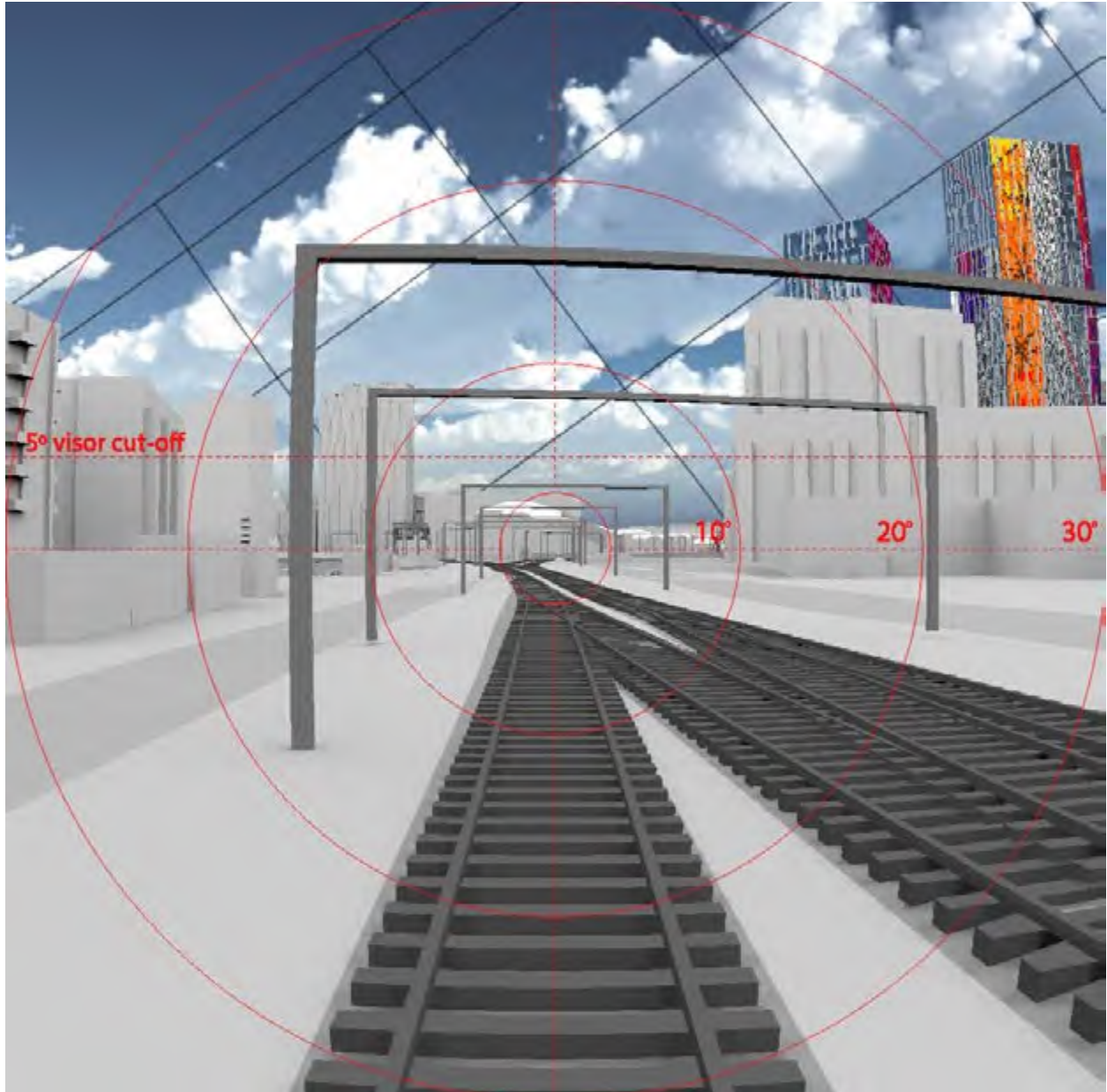


Fig. 441: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT

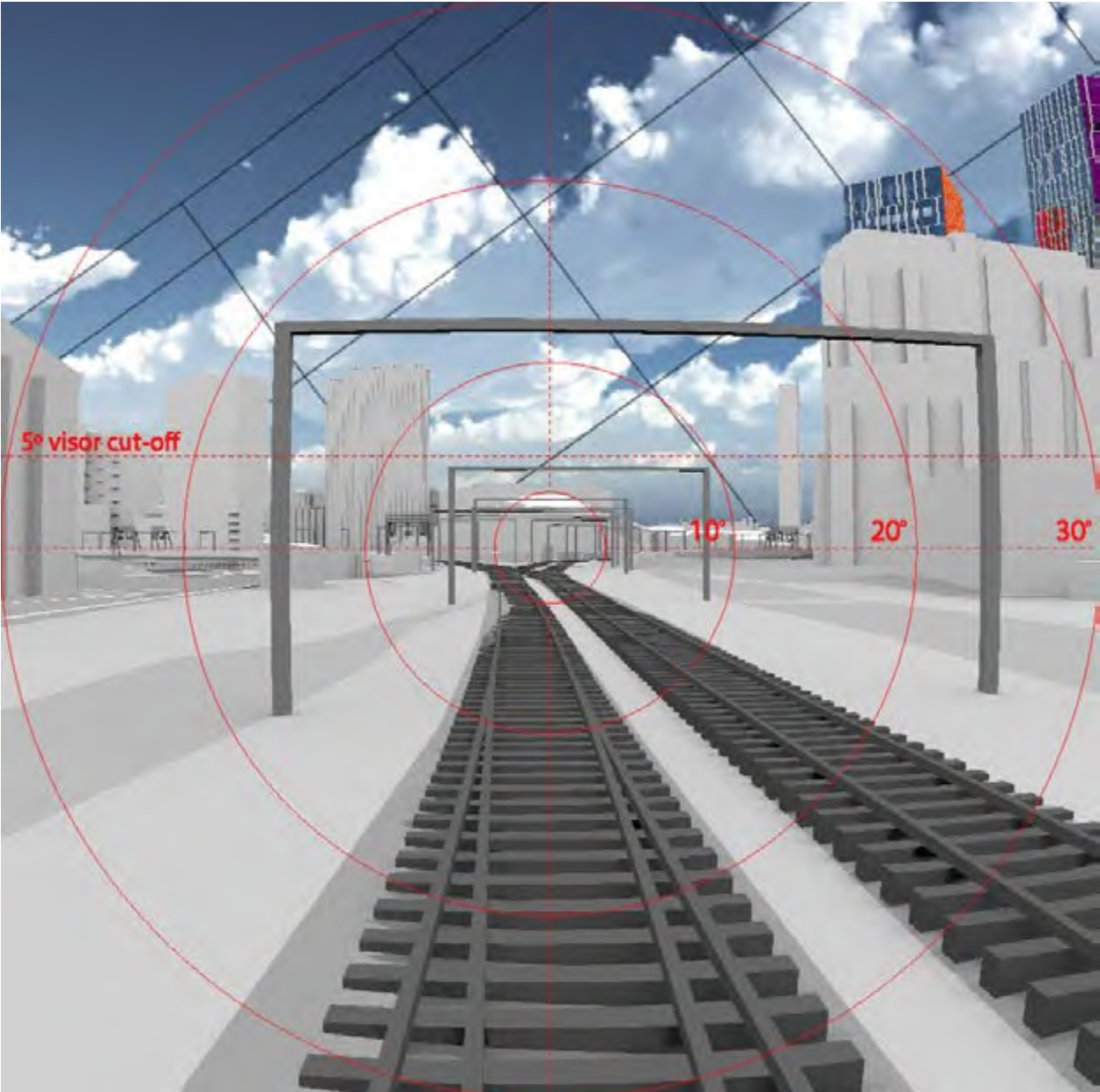


Fig. 442: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-260 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 250M FROM SITE
LOOKING STRAGHT**

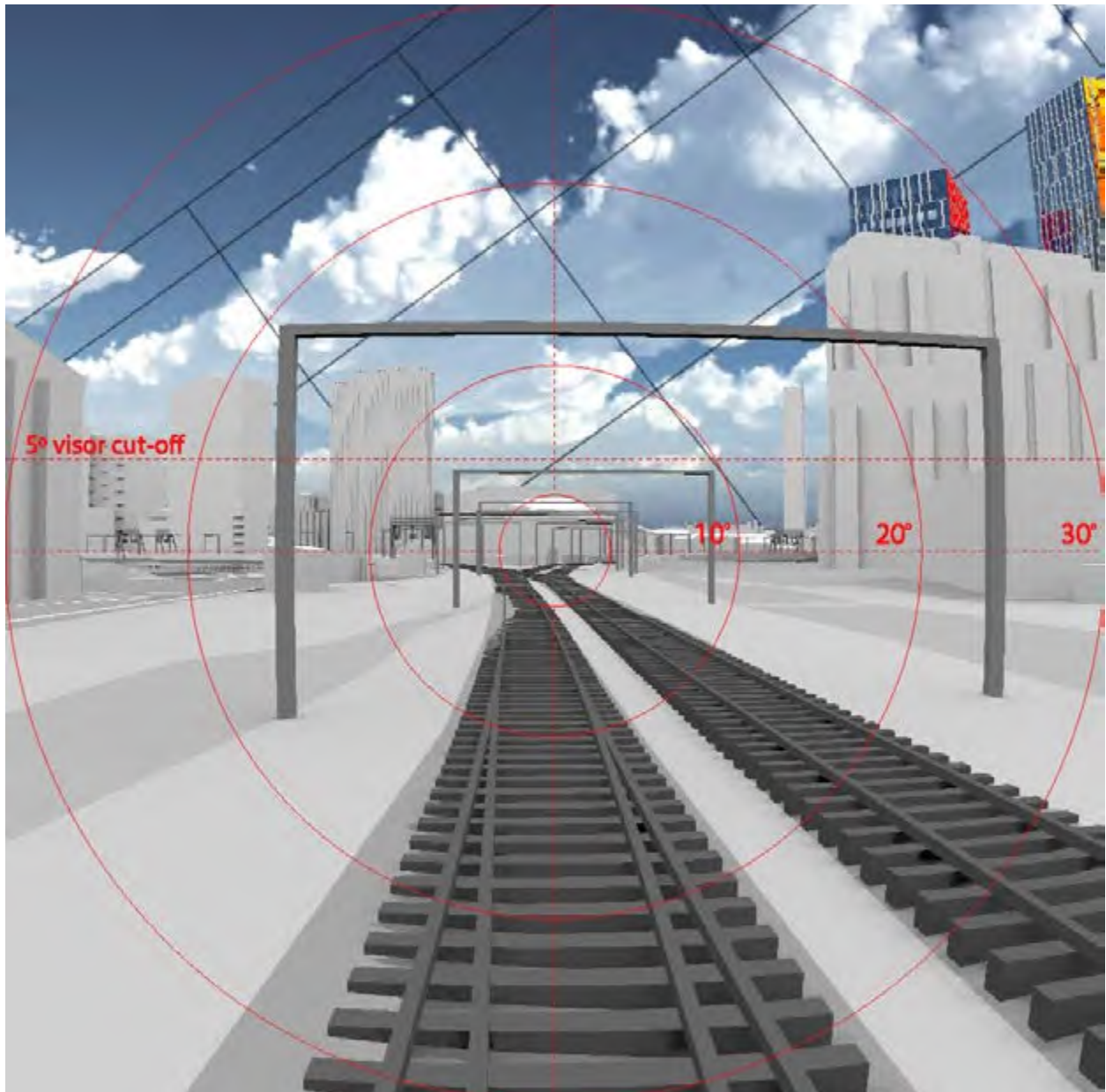


Fig. 443: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT

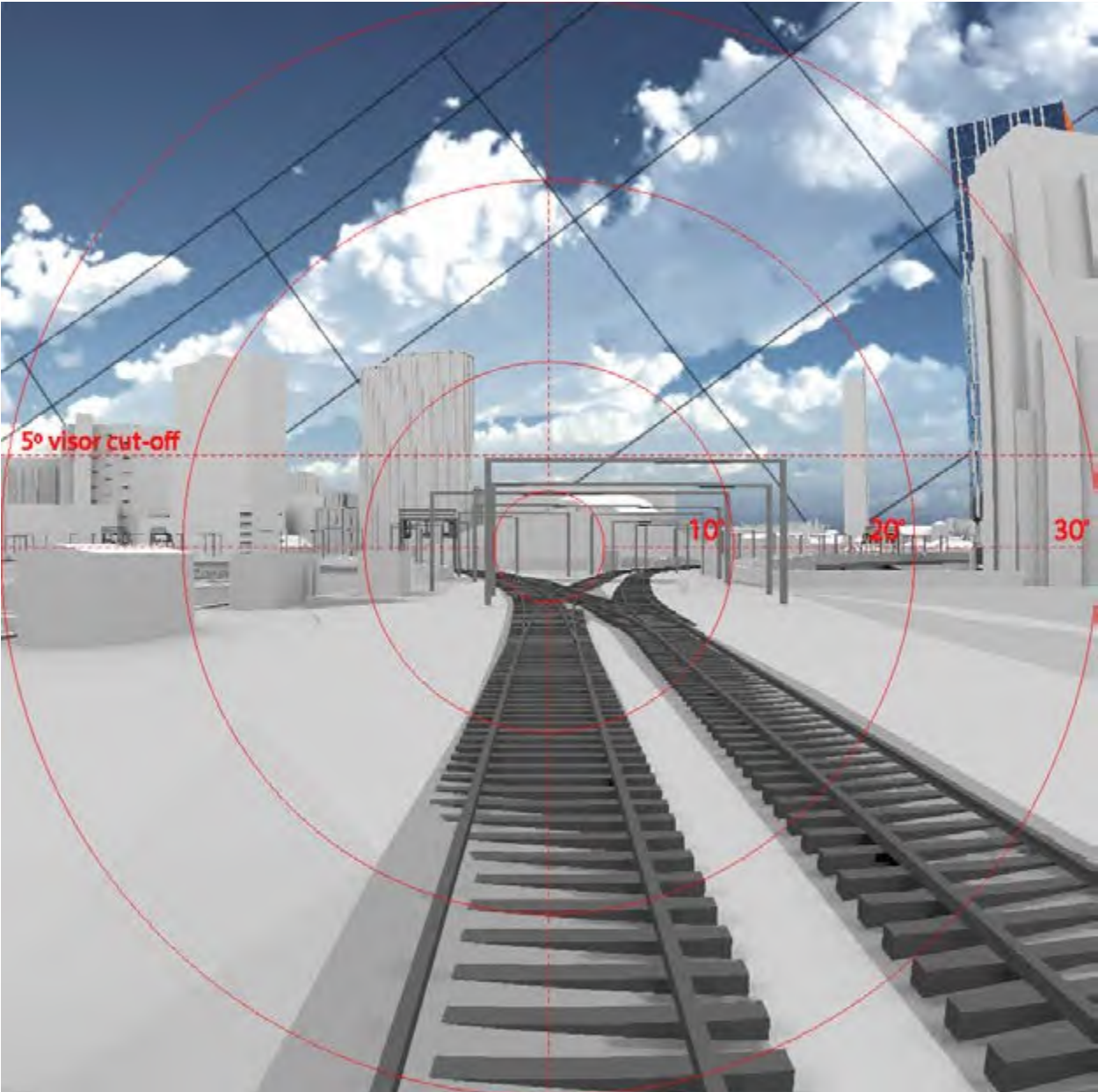


Fig. 444: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-310 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 200M FROM SITE
LOOKING STRAGHT**

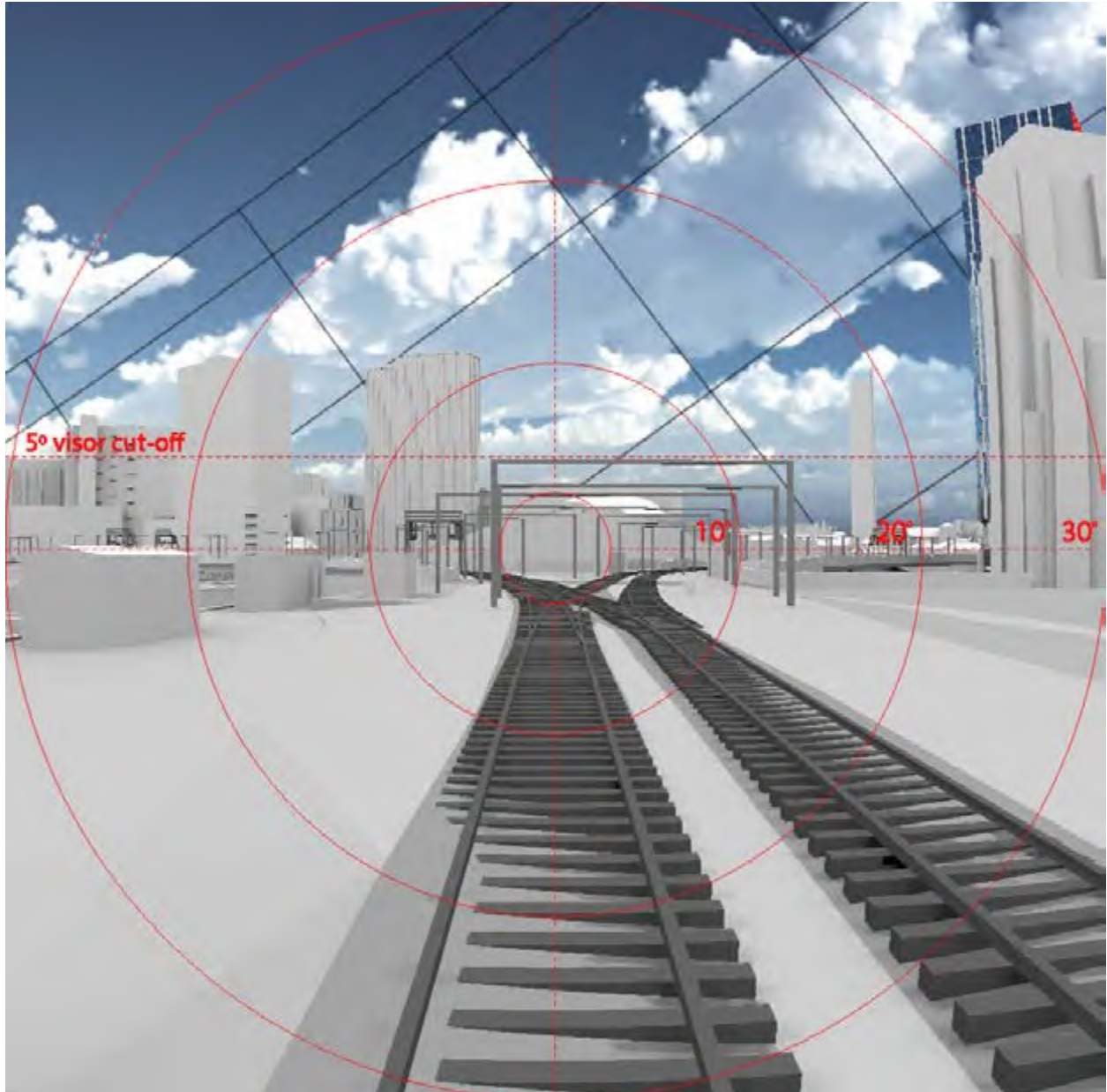


Fig. 445: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT



Fig. 446: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-360 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 150M FROM SITE
LOOKING STRAGHT**

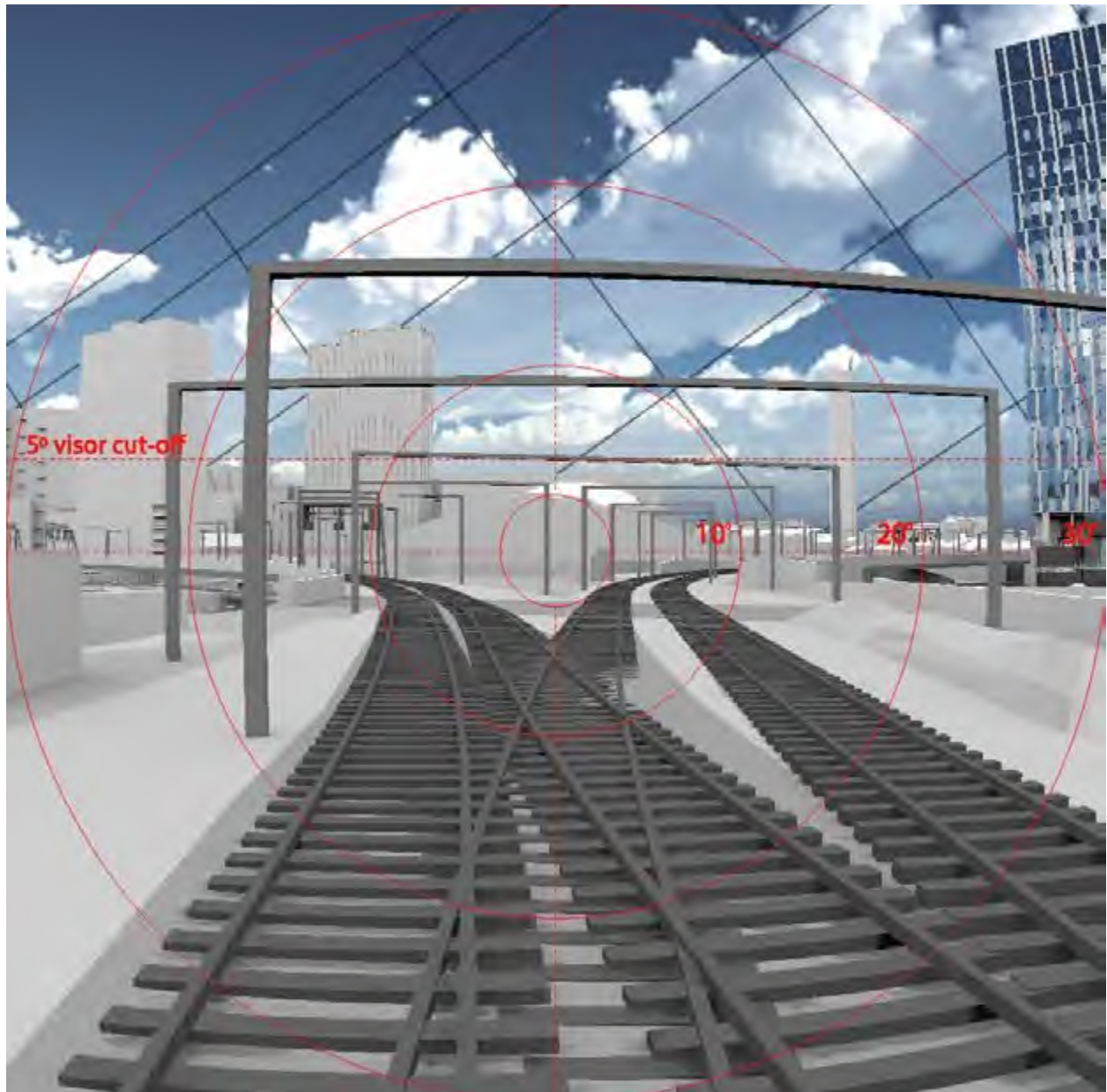


Fig. 447: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT

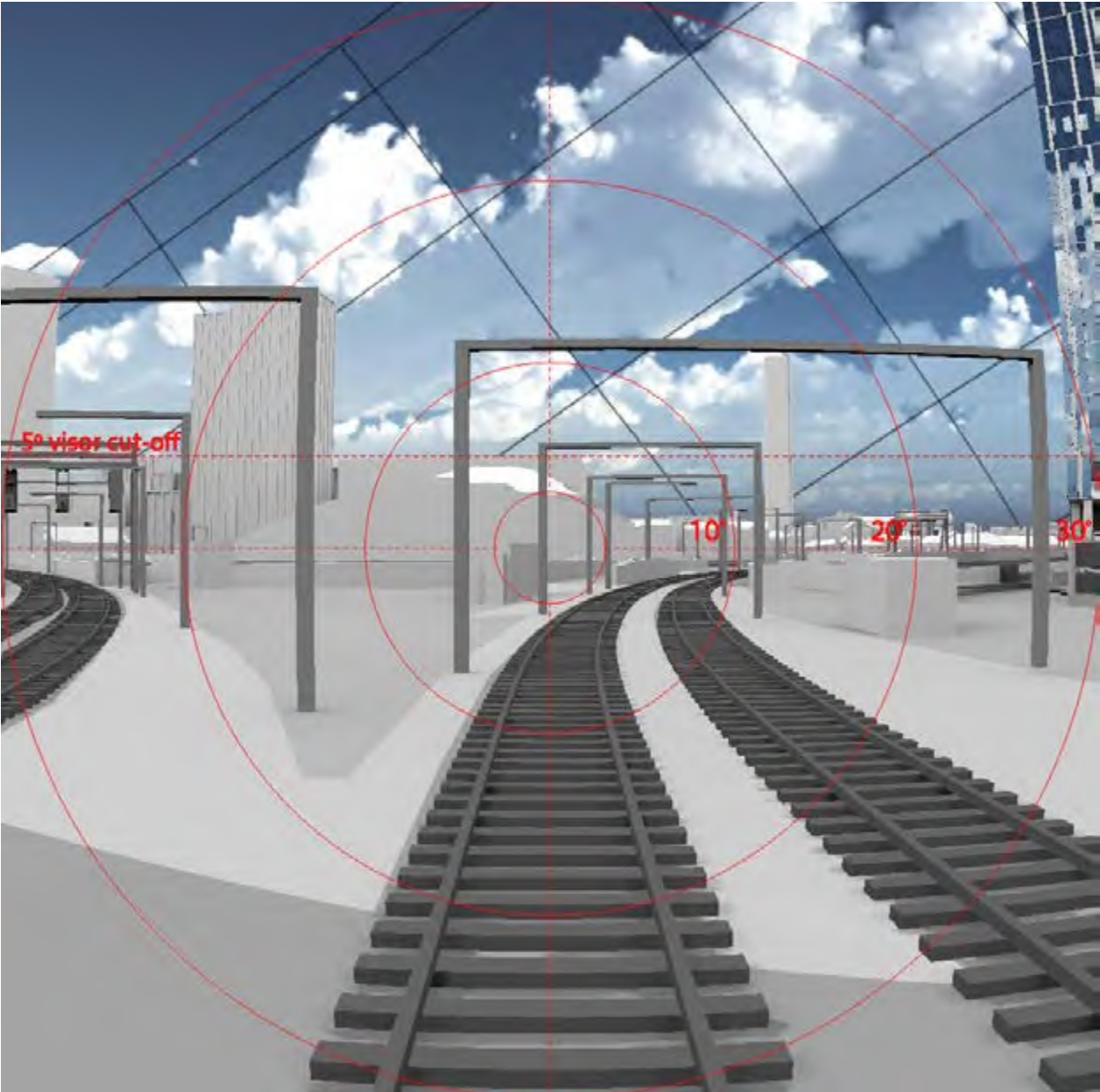


Fig. 448: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-410 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 100M FROM SITE
LOOKING STRAGHT**

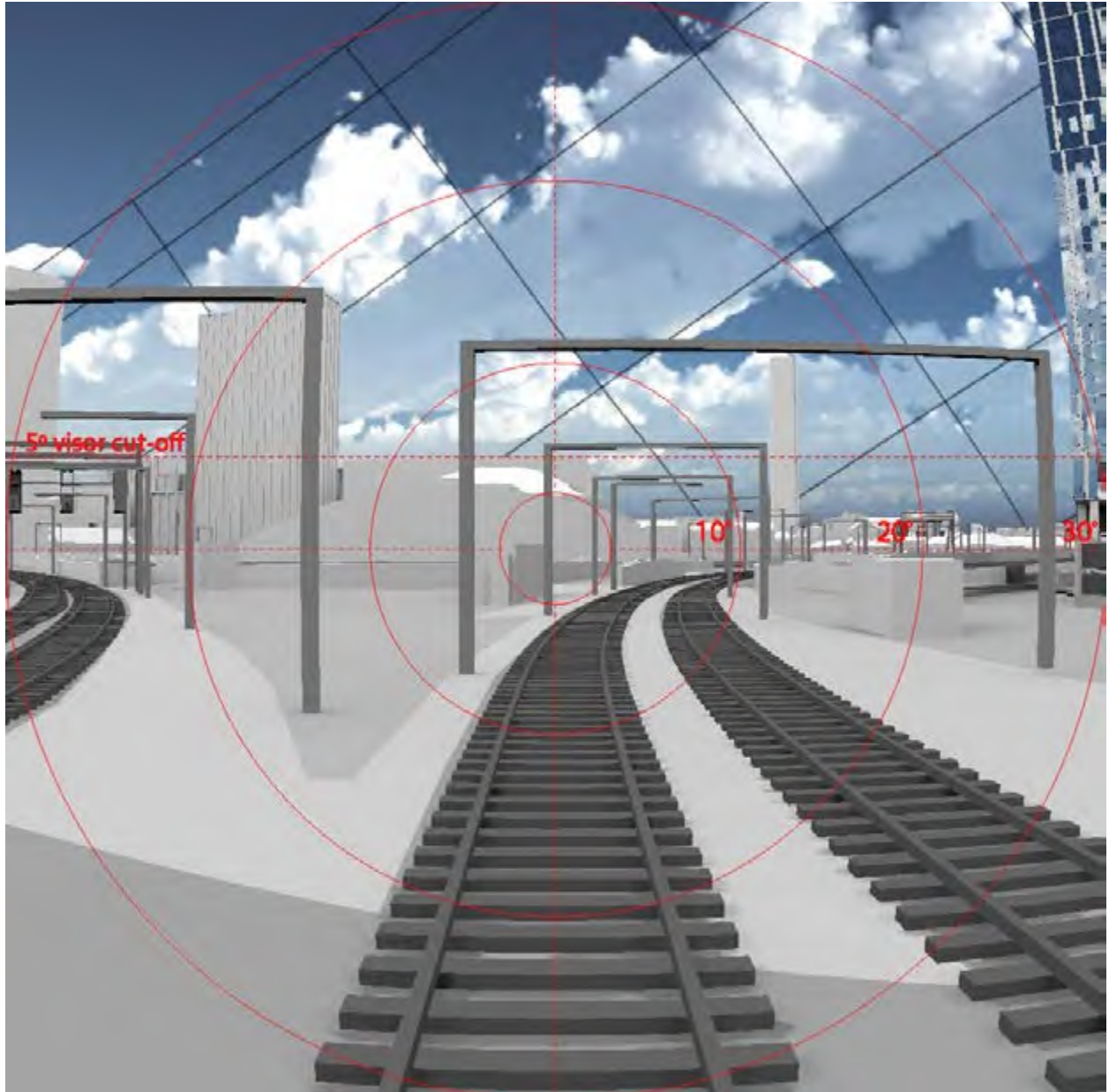


Fig. 449: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT

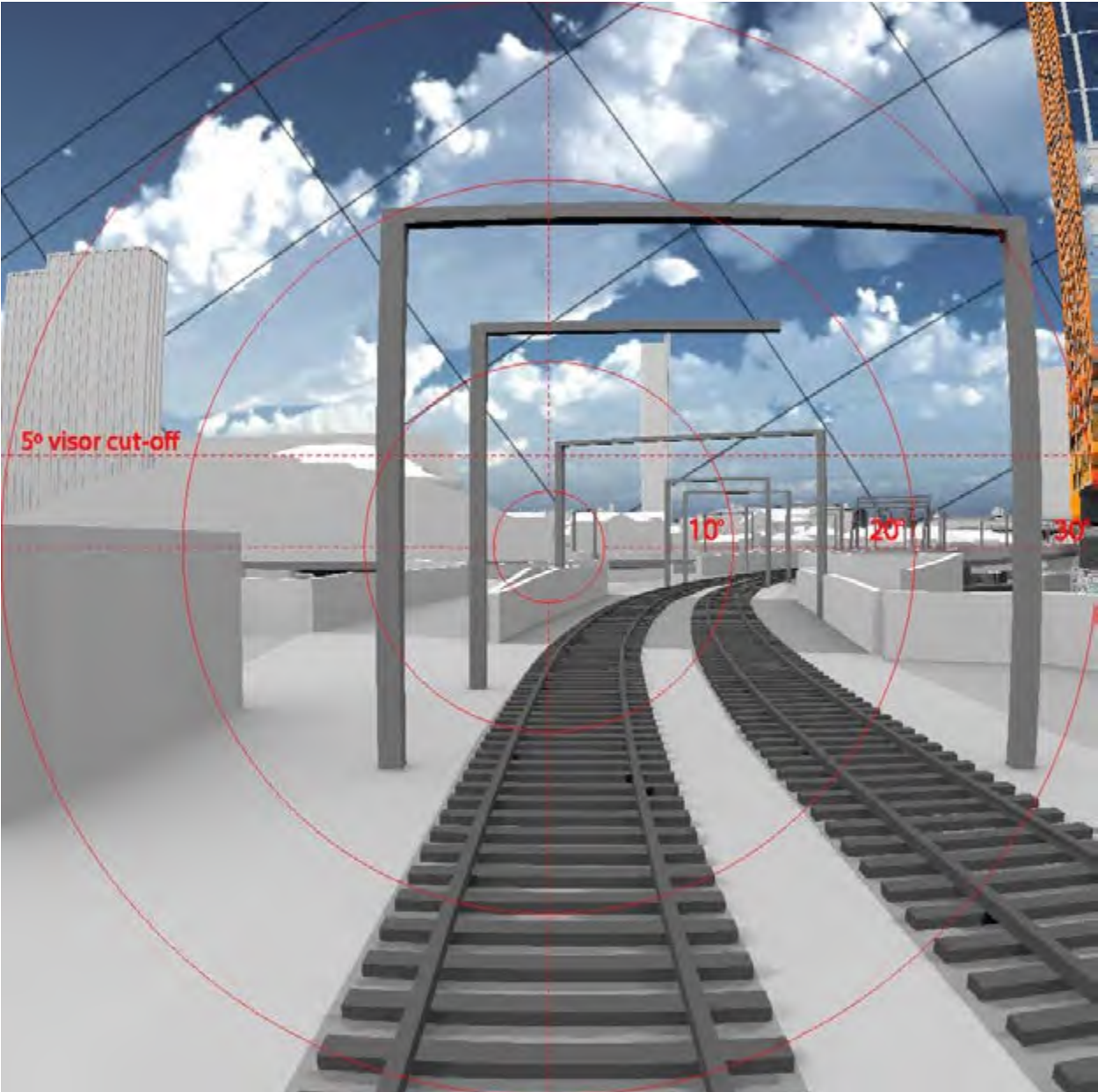


Fig. 450: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N1-460 - NORTHERN LINE SOUTHBOUND TRACK 1 - APPROX 50M FROM SITE
LOOKING STRAGHT**

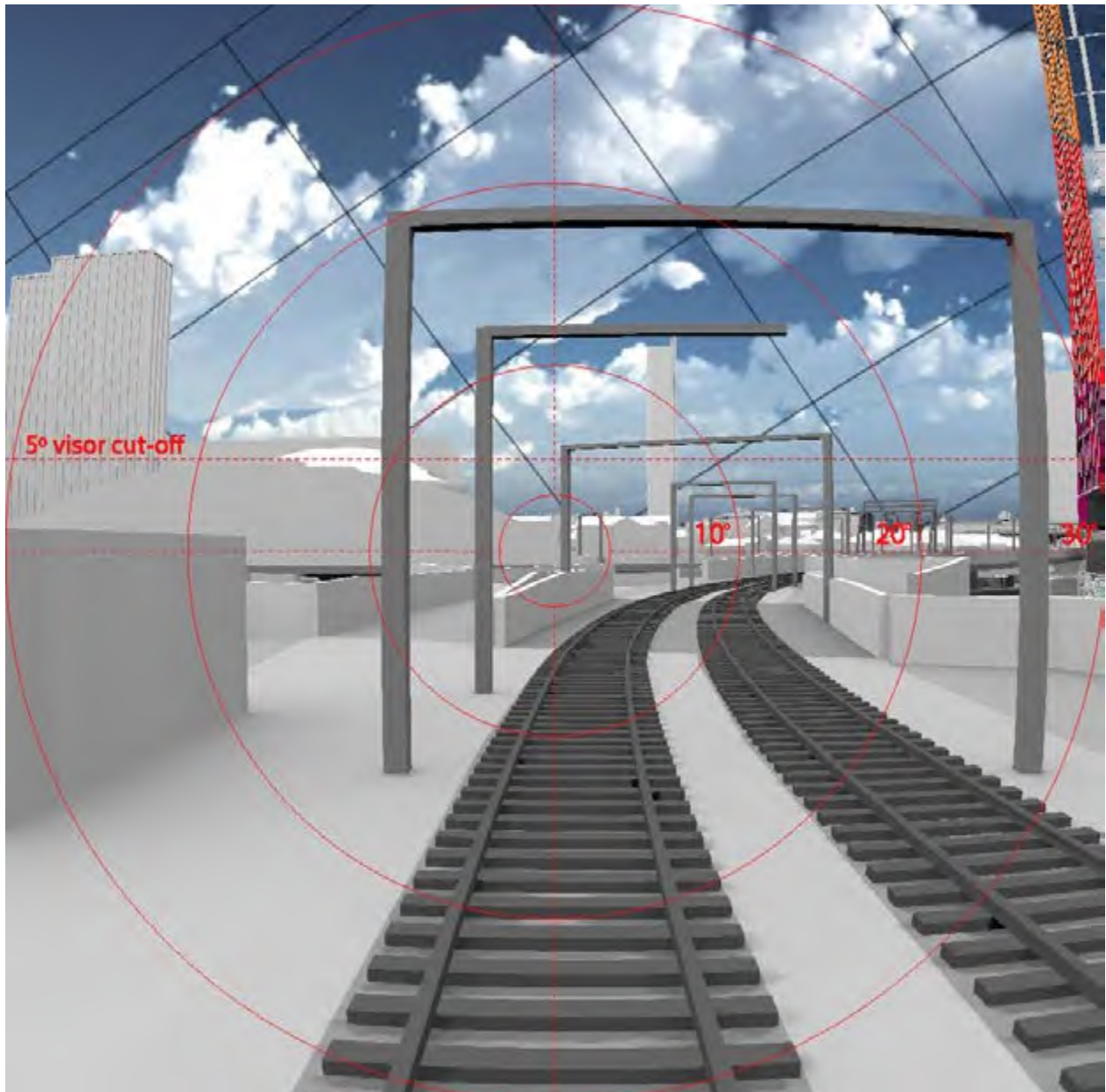


Fig. 451: Solar reflections



33 **SOLAR GLARE ASSESSMENT**

N2 - NORTHERN LINE SOUTHBOUND 2

N2 - Nothern Line - Southbound from Salford Central to Salford Crescent

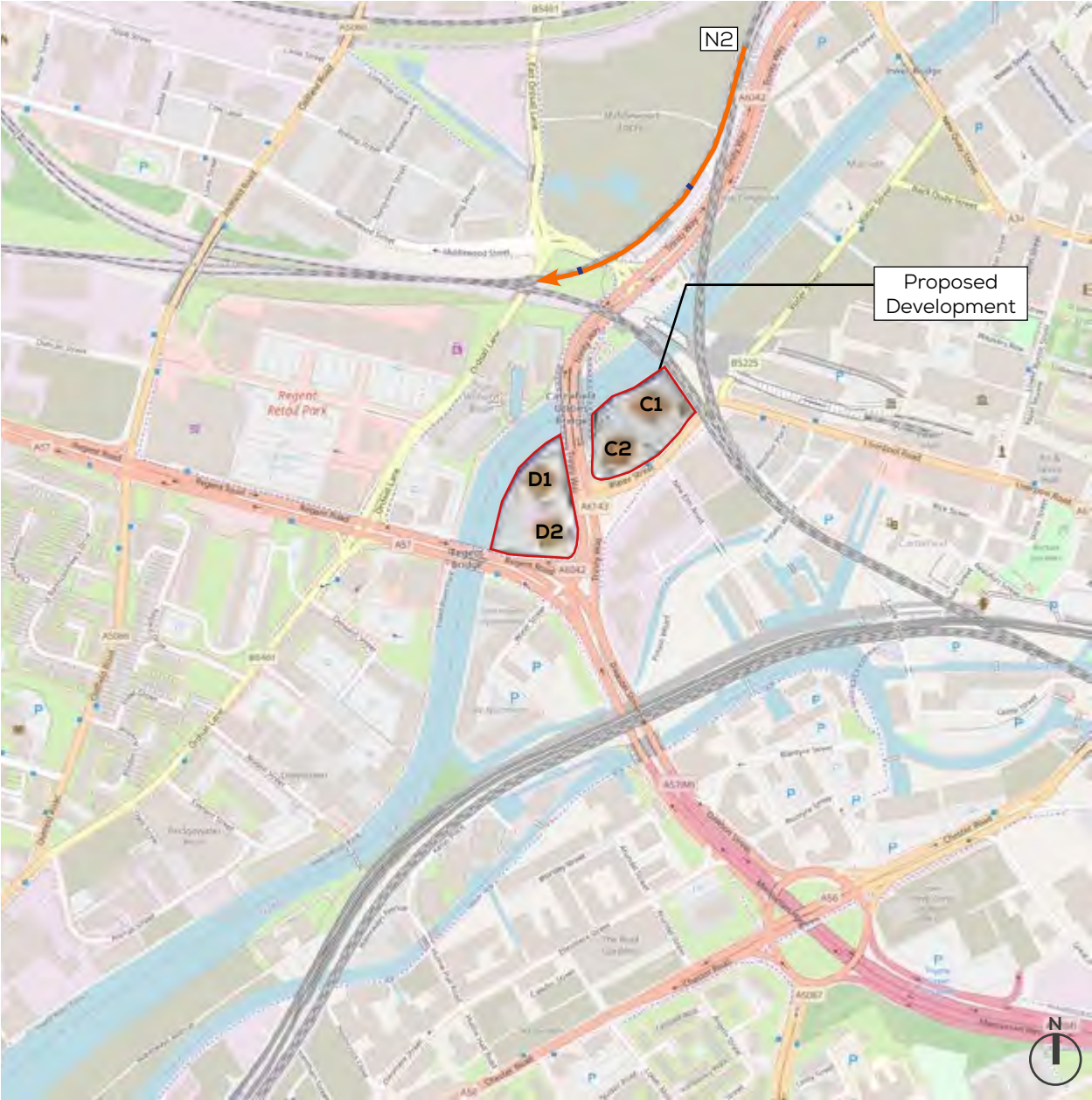


Fig. 452: Junction Location



Fig. 453: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT

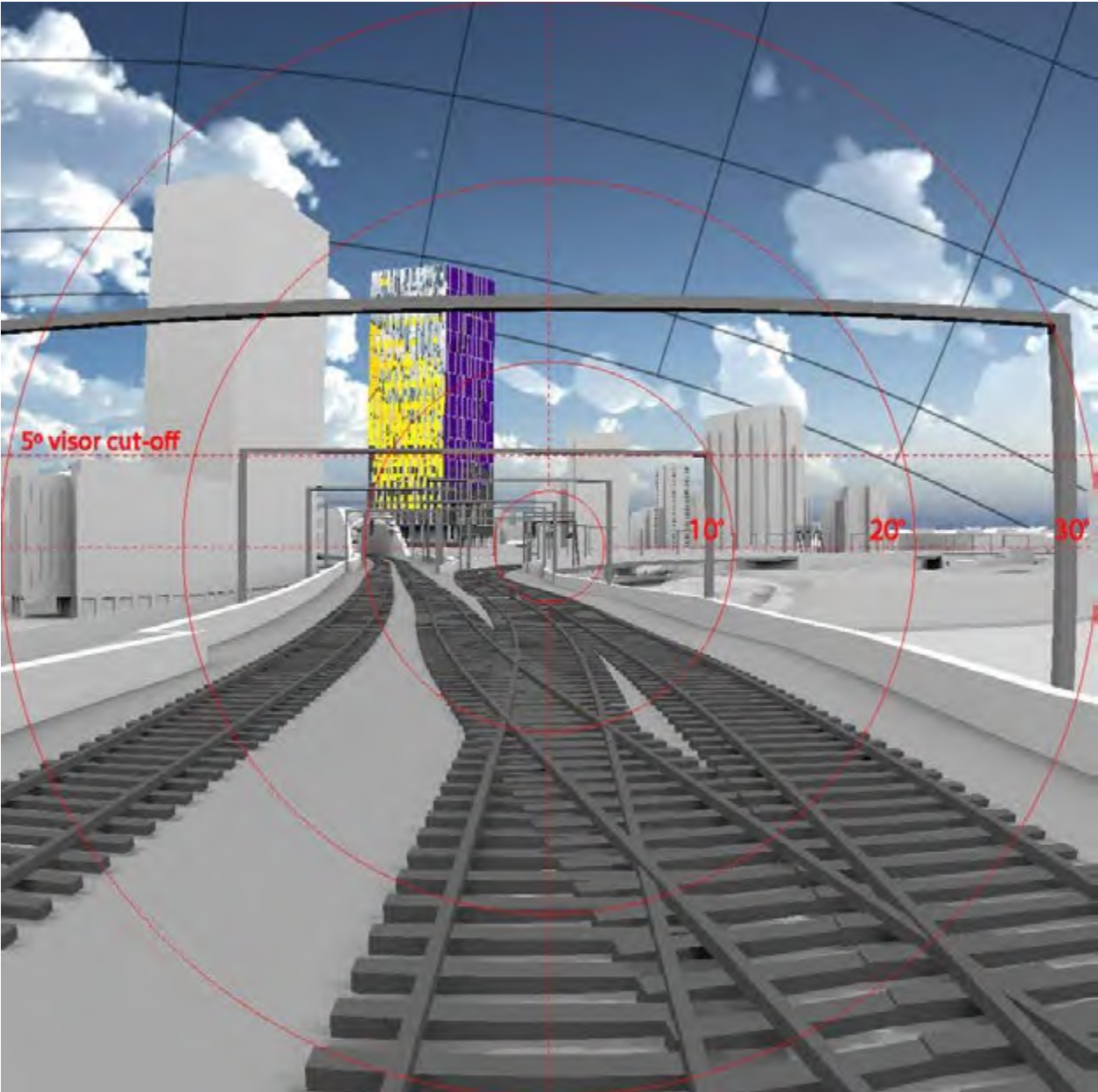


Fig. 454: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT**

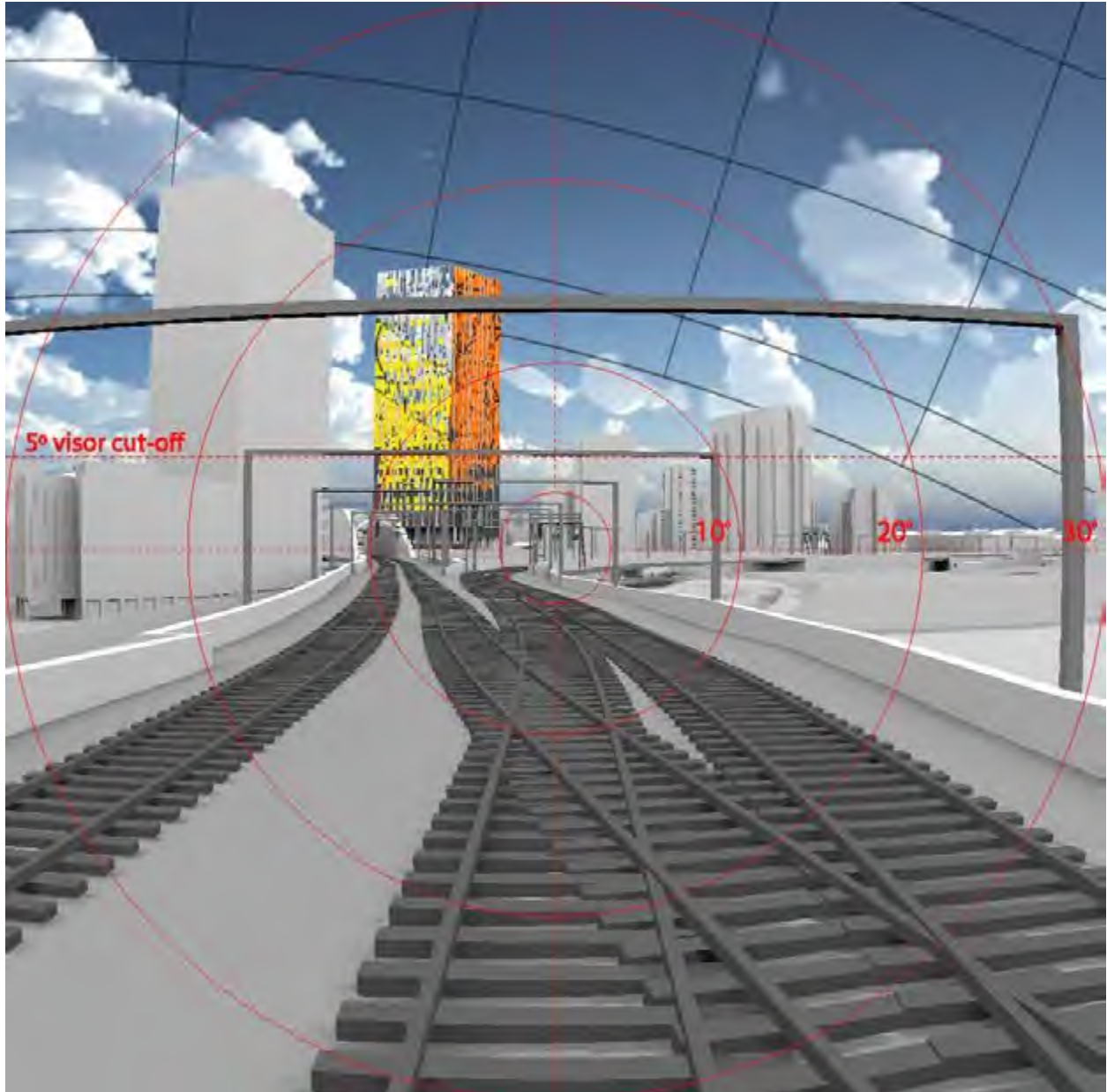


Fig. 455: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT

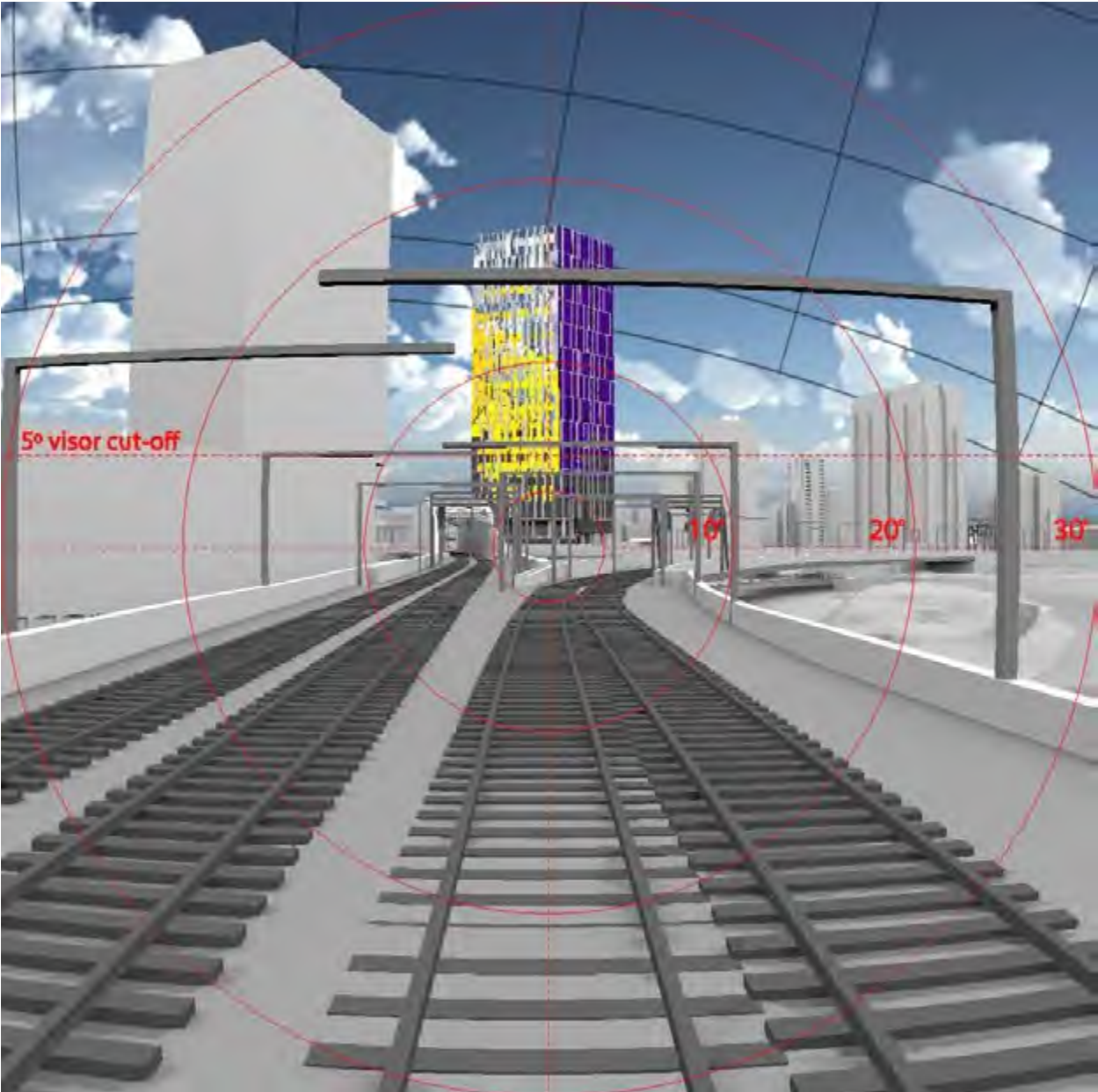


Fig. 456: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT**



Fig. 457: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

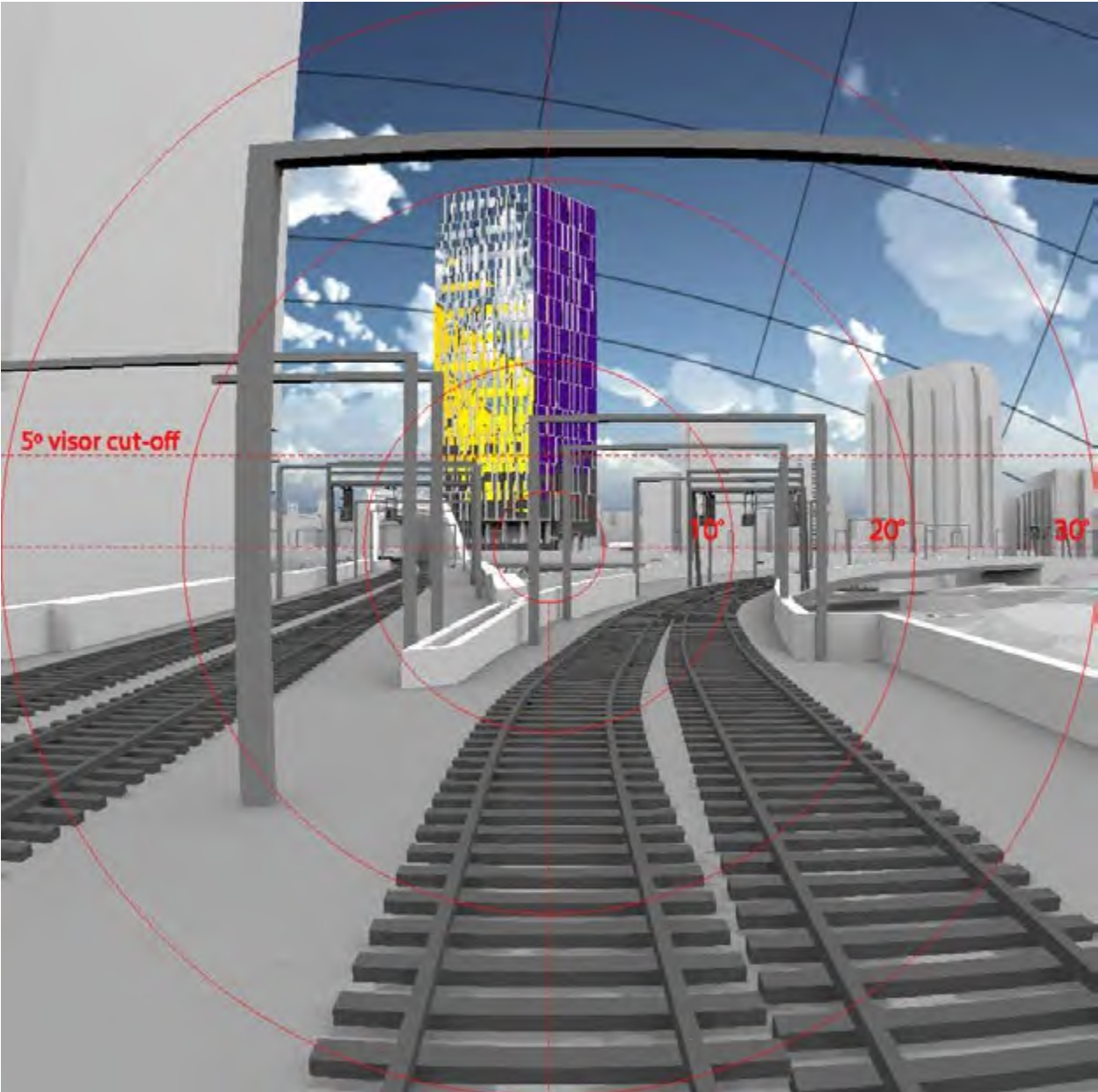


Fig. 458: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

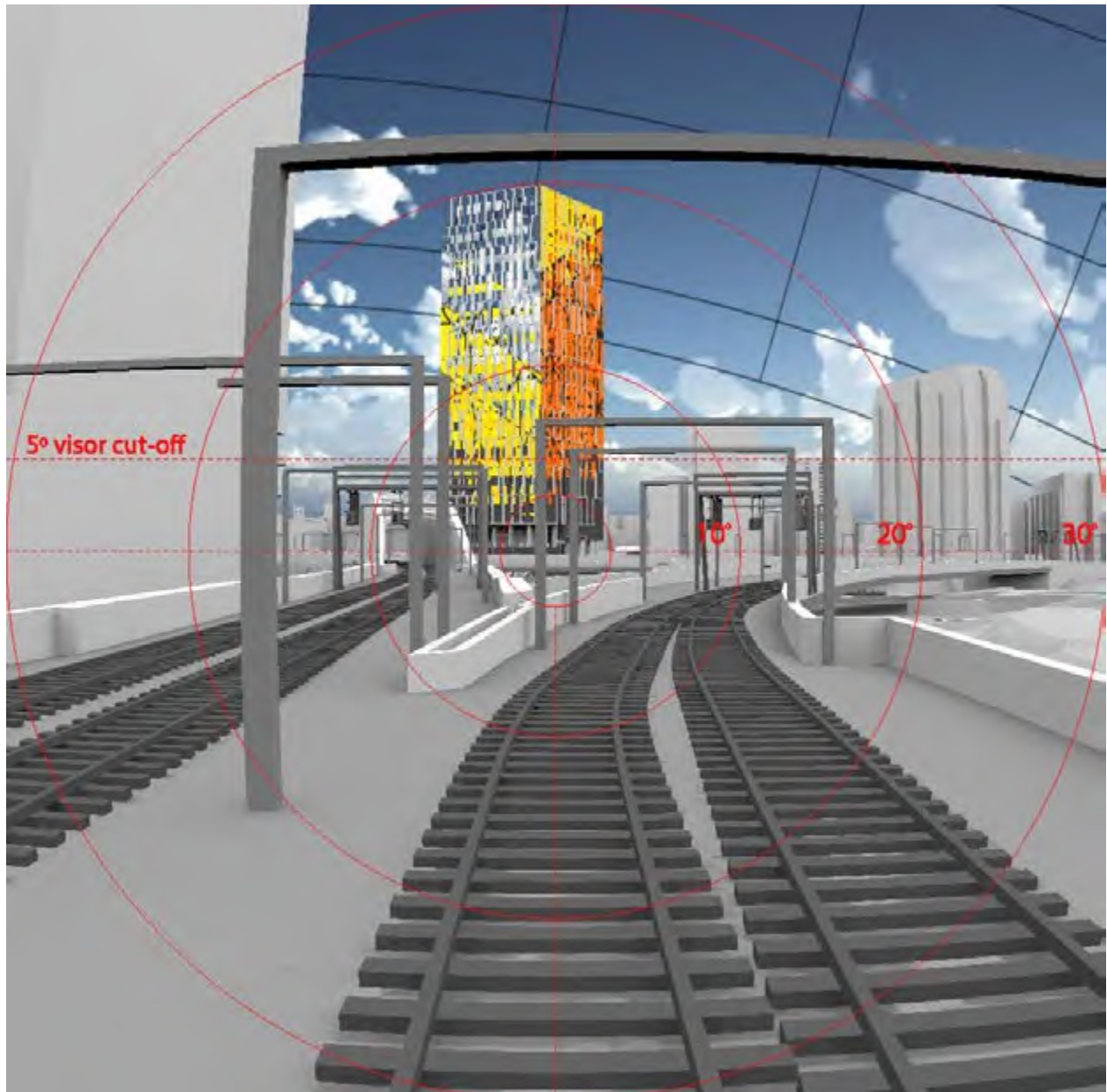


Fig. 459: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

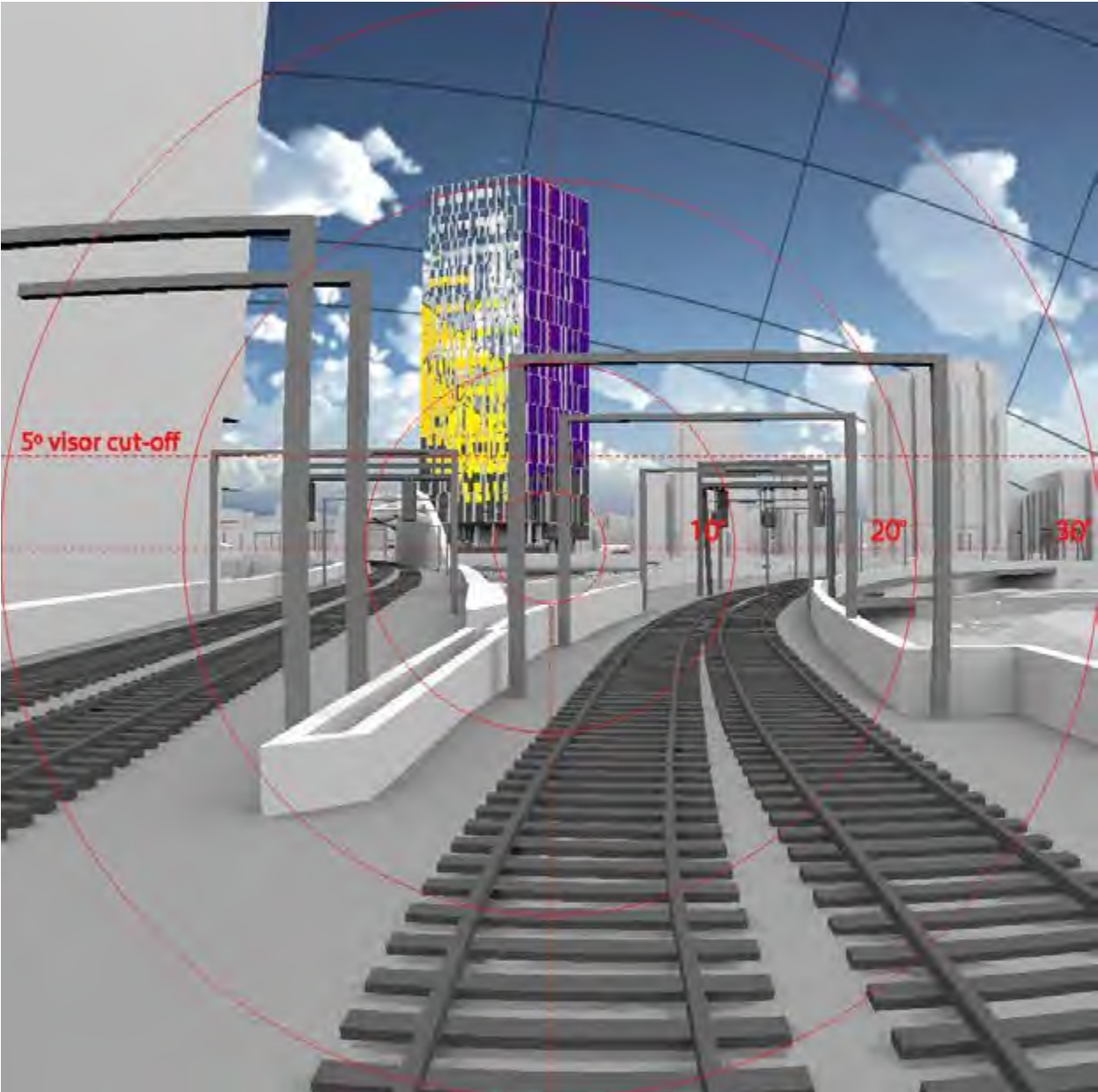
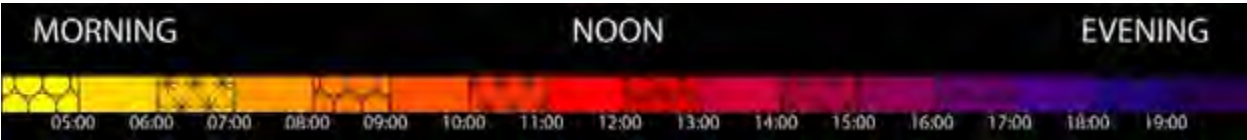


Fig. 460: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

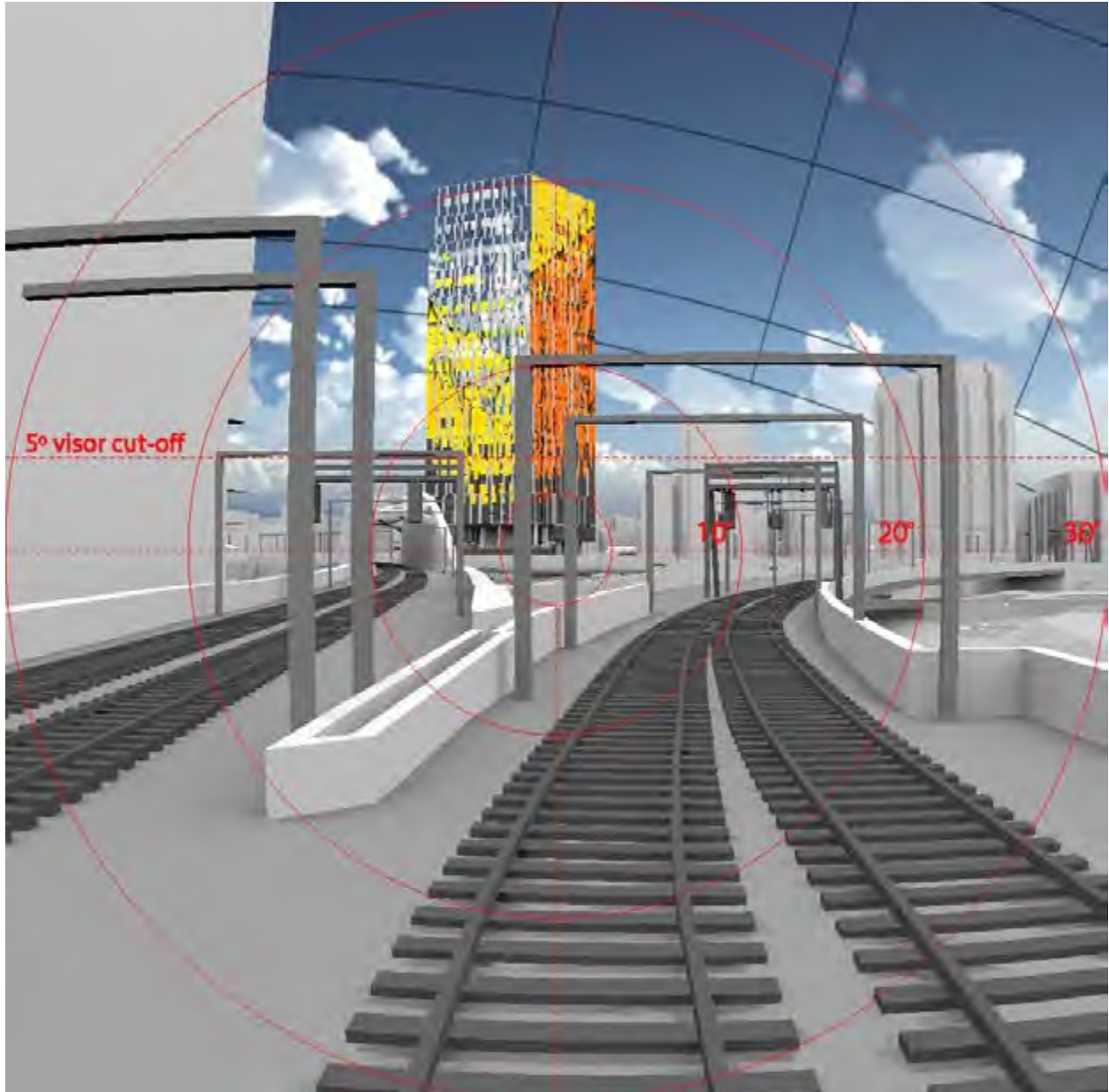


Fig. 461: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

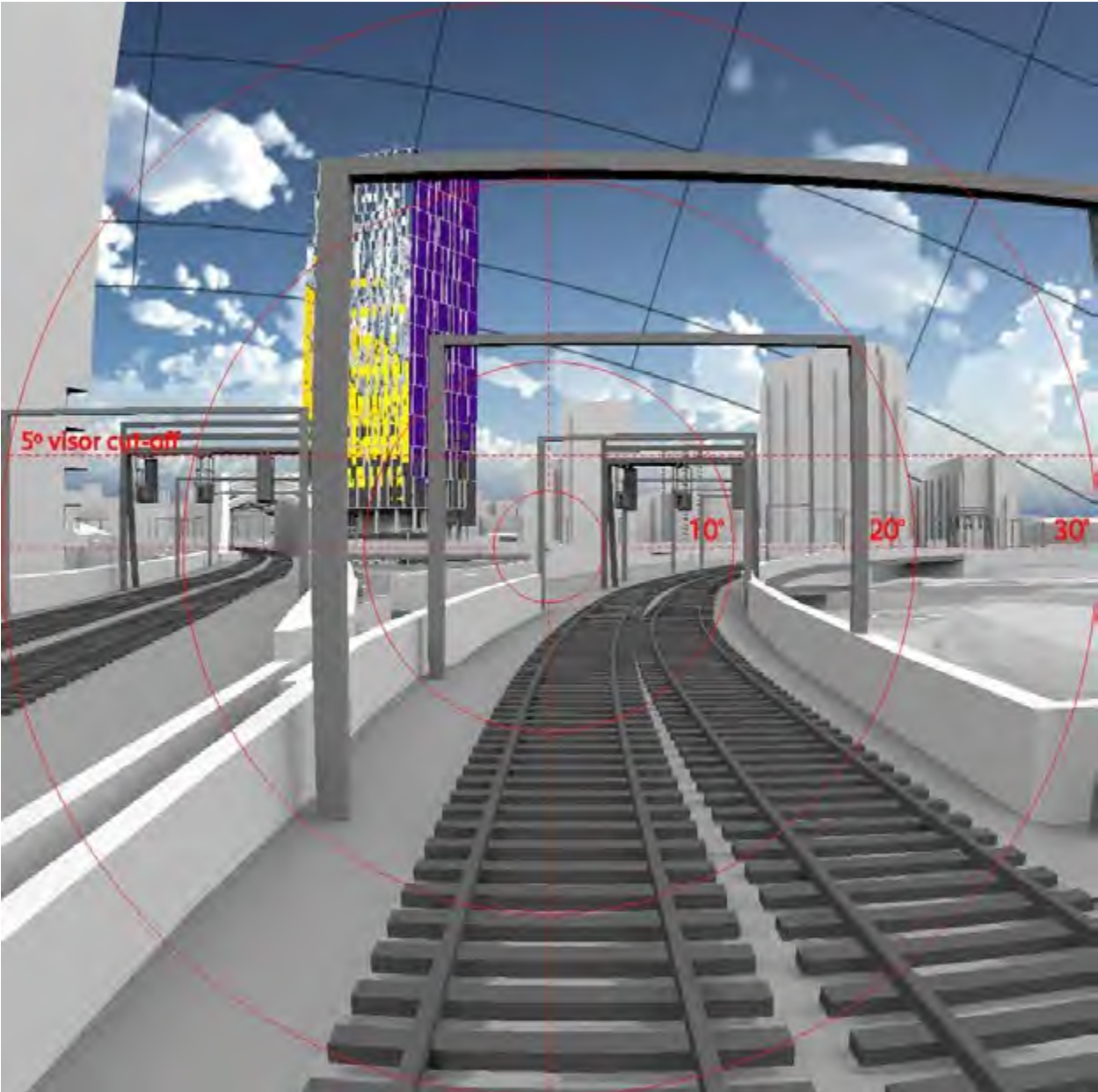


Fig. 462: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

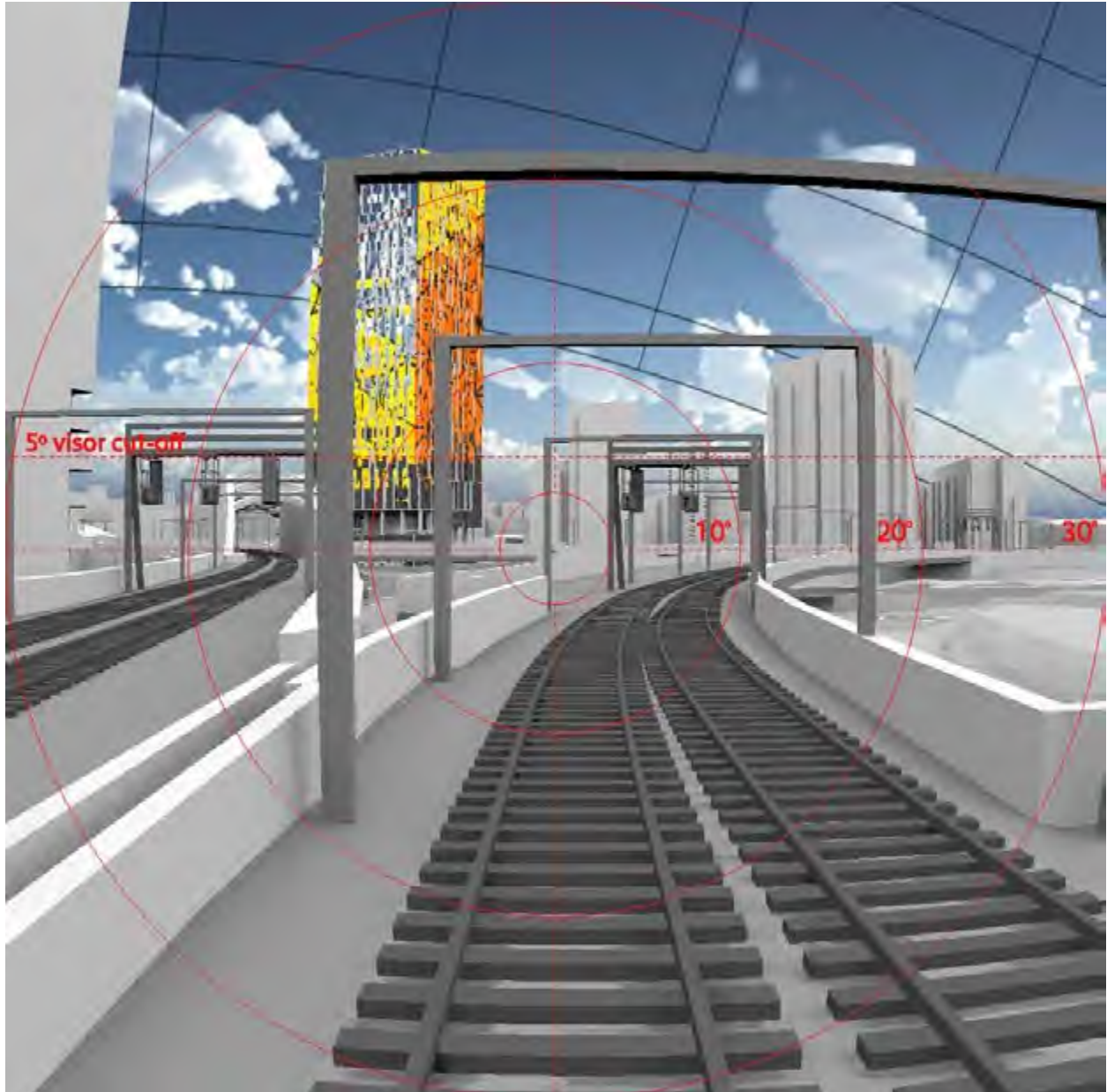


Fig. 463: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

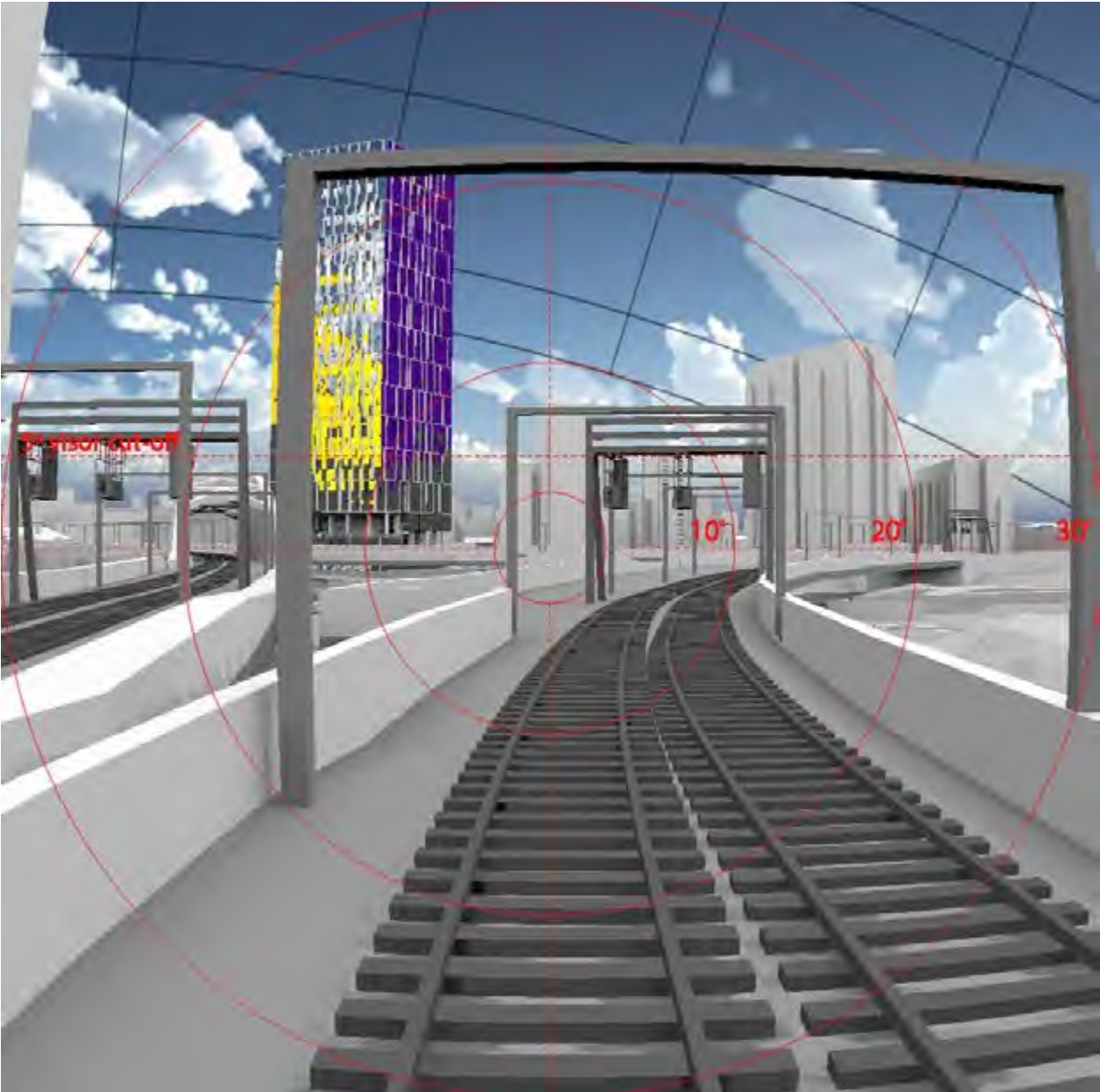


Fig. 464: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

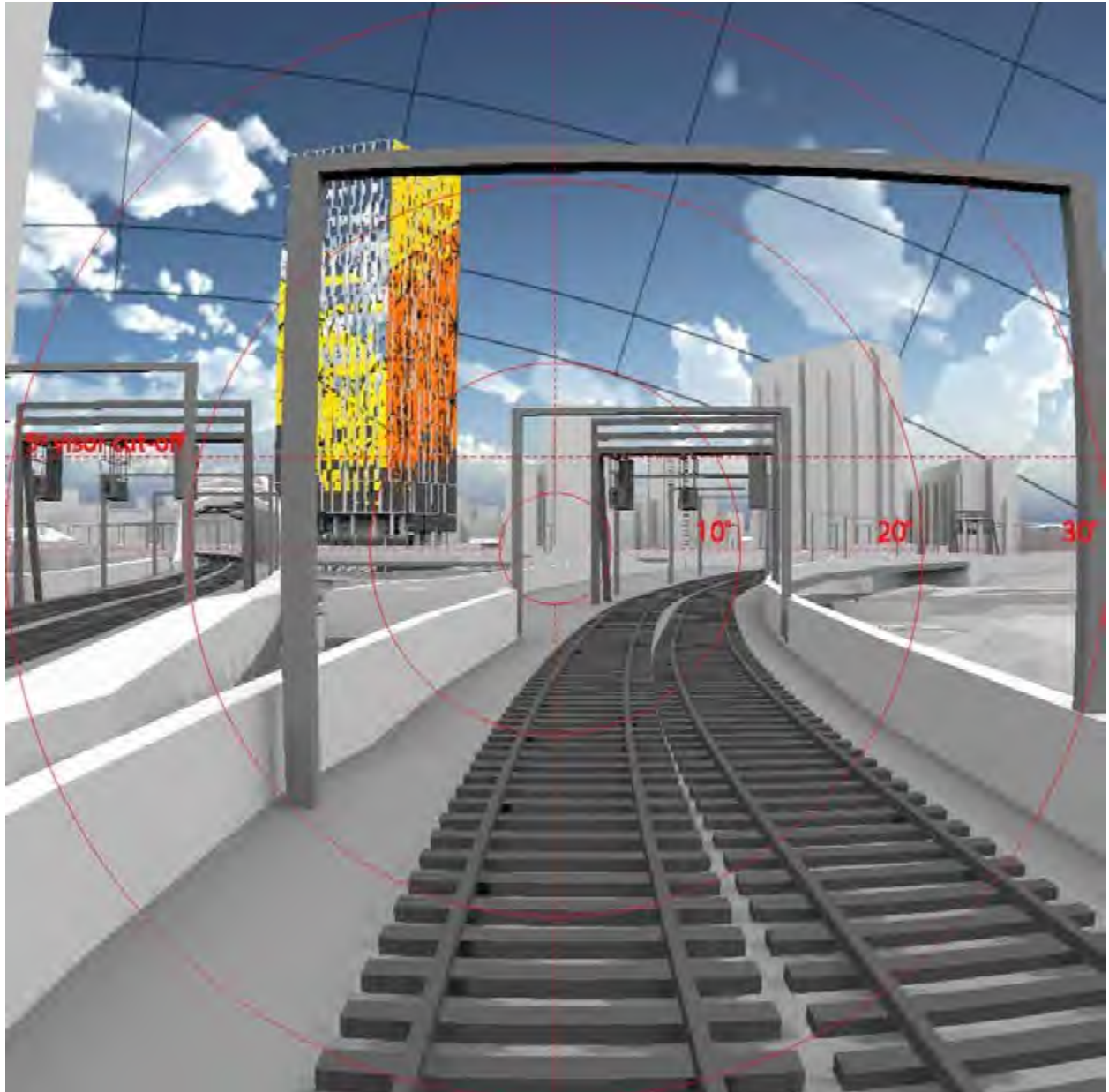


Fig. 465: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

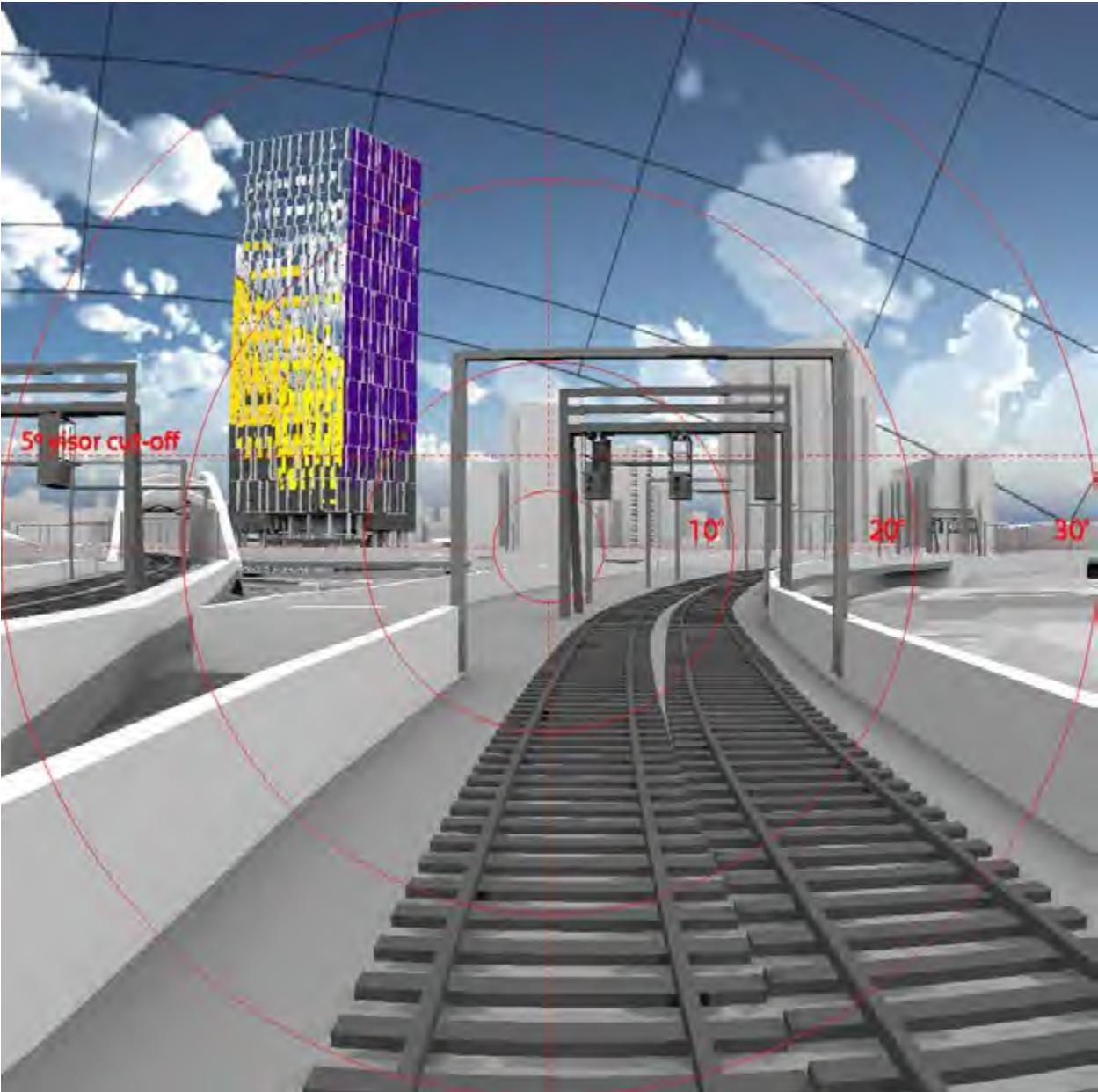


Fig. 466: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**



Fig. 467: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

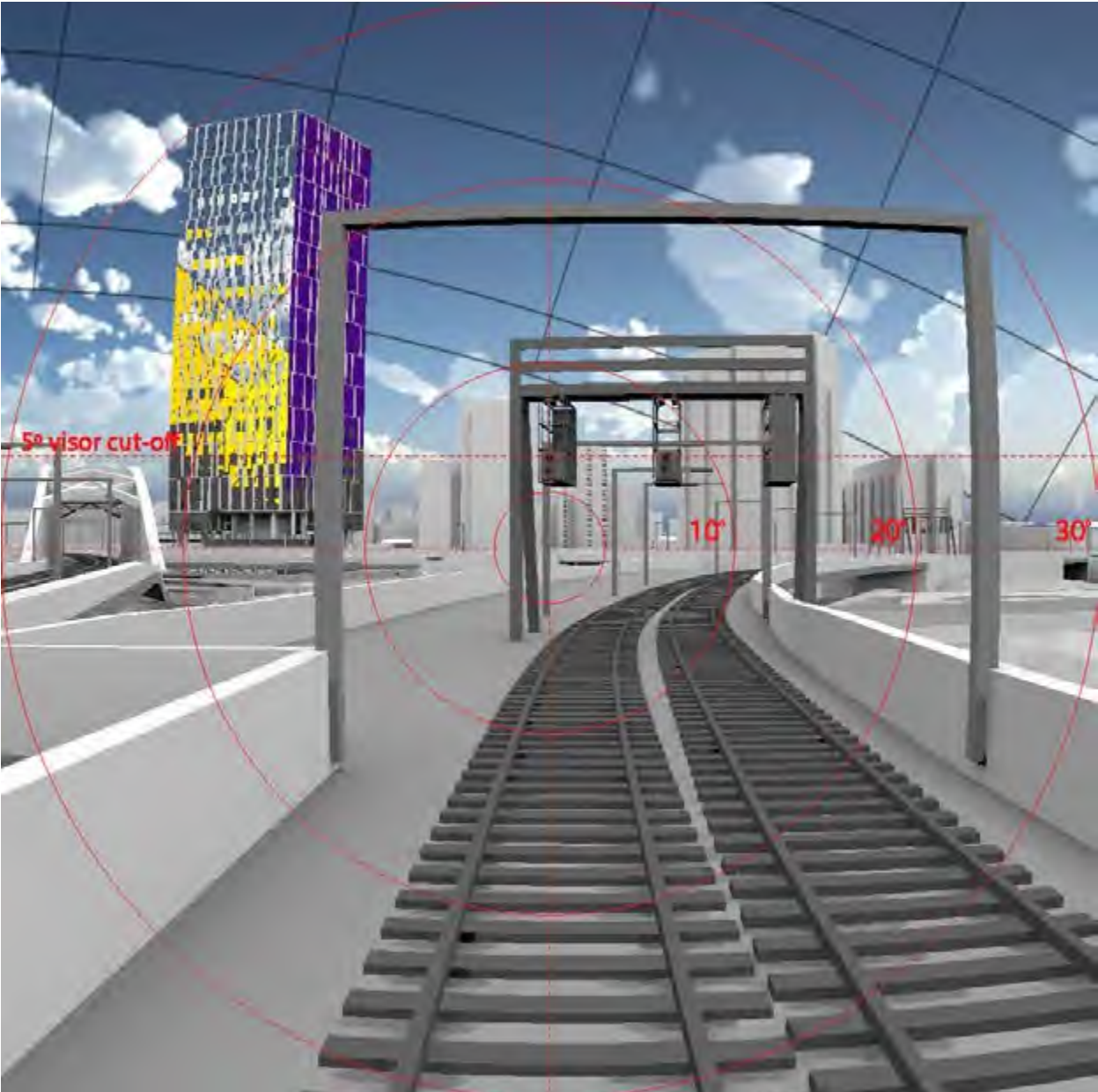
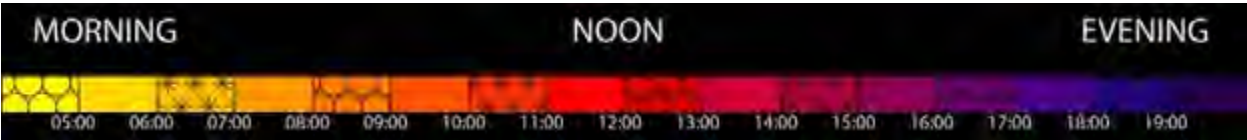


Fig. 468: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**



Fig. 469: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL



Fig. 470: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAIGHT - APPROX 20M FROM SIGNAL**

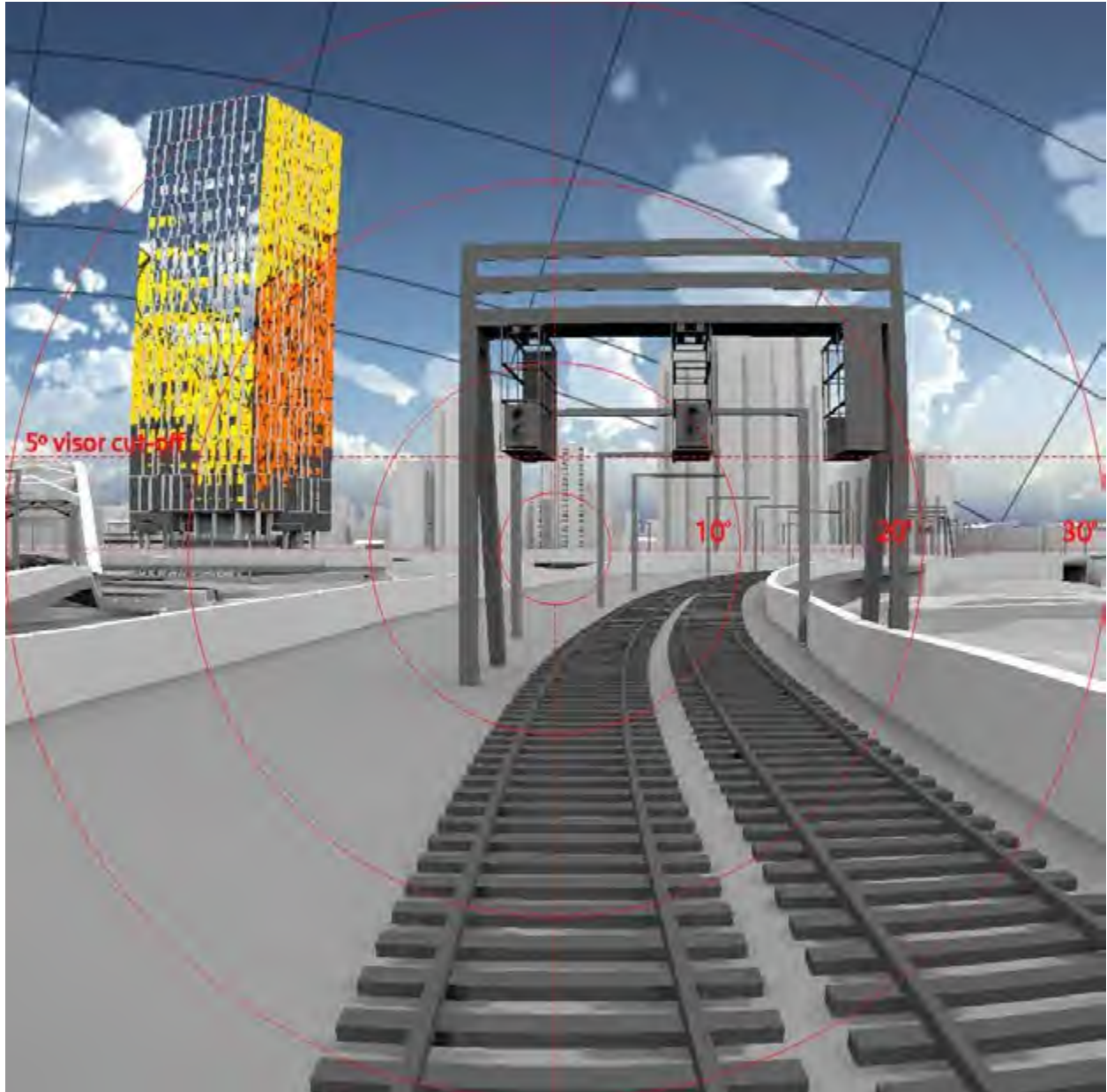


Fig. 471: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

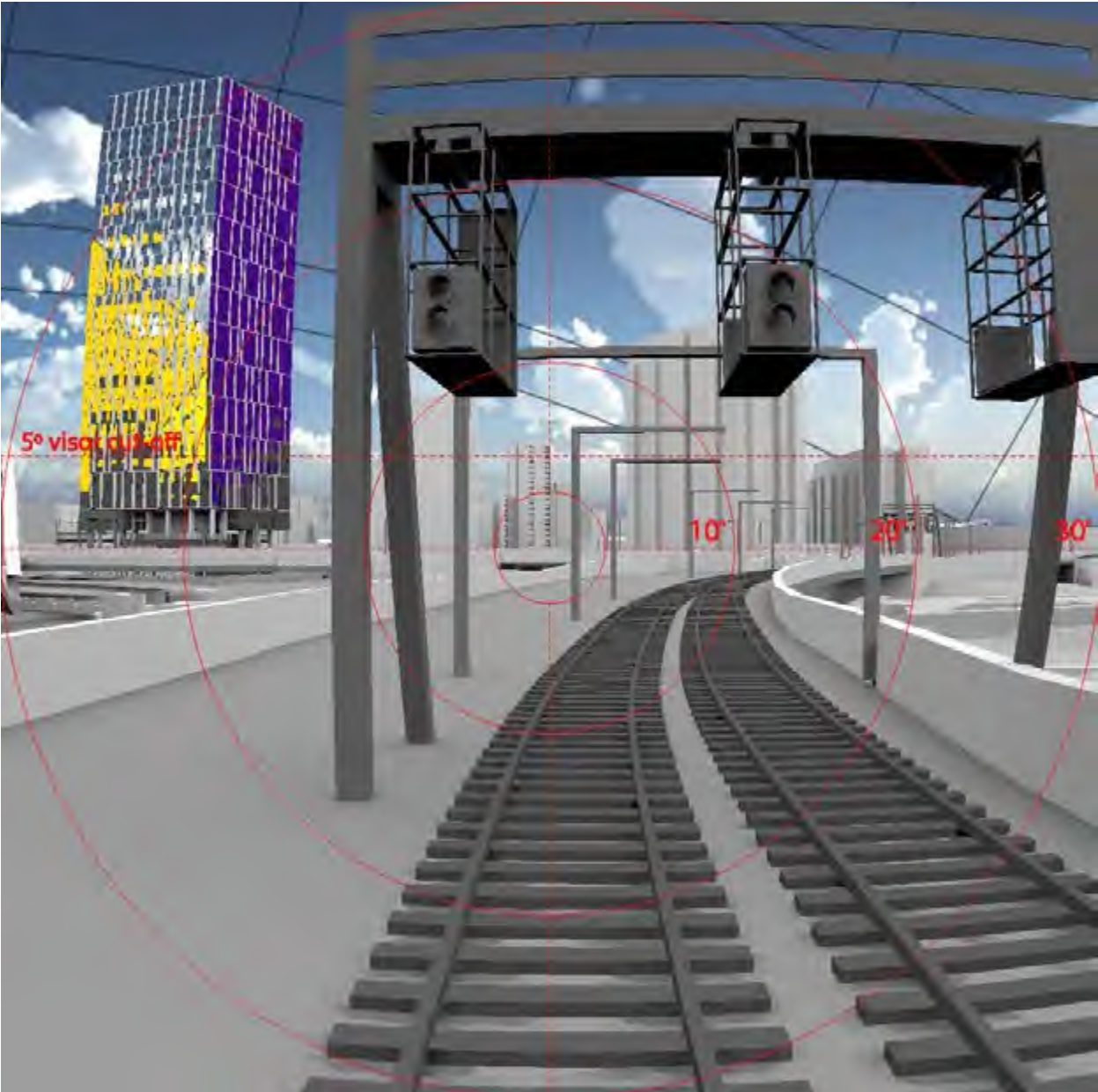
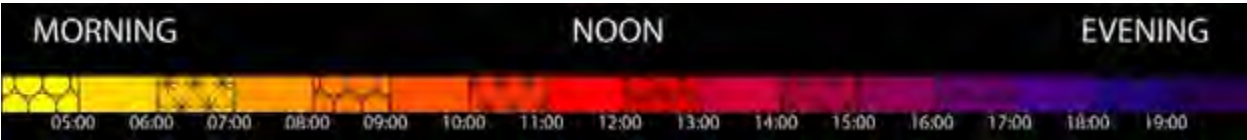


Fig. 472: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT- APPROX 10M FROM SIGNAL**

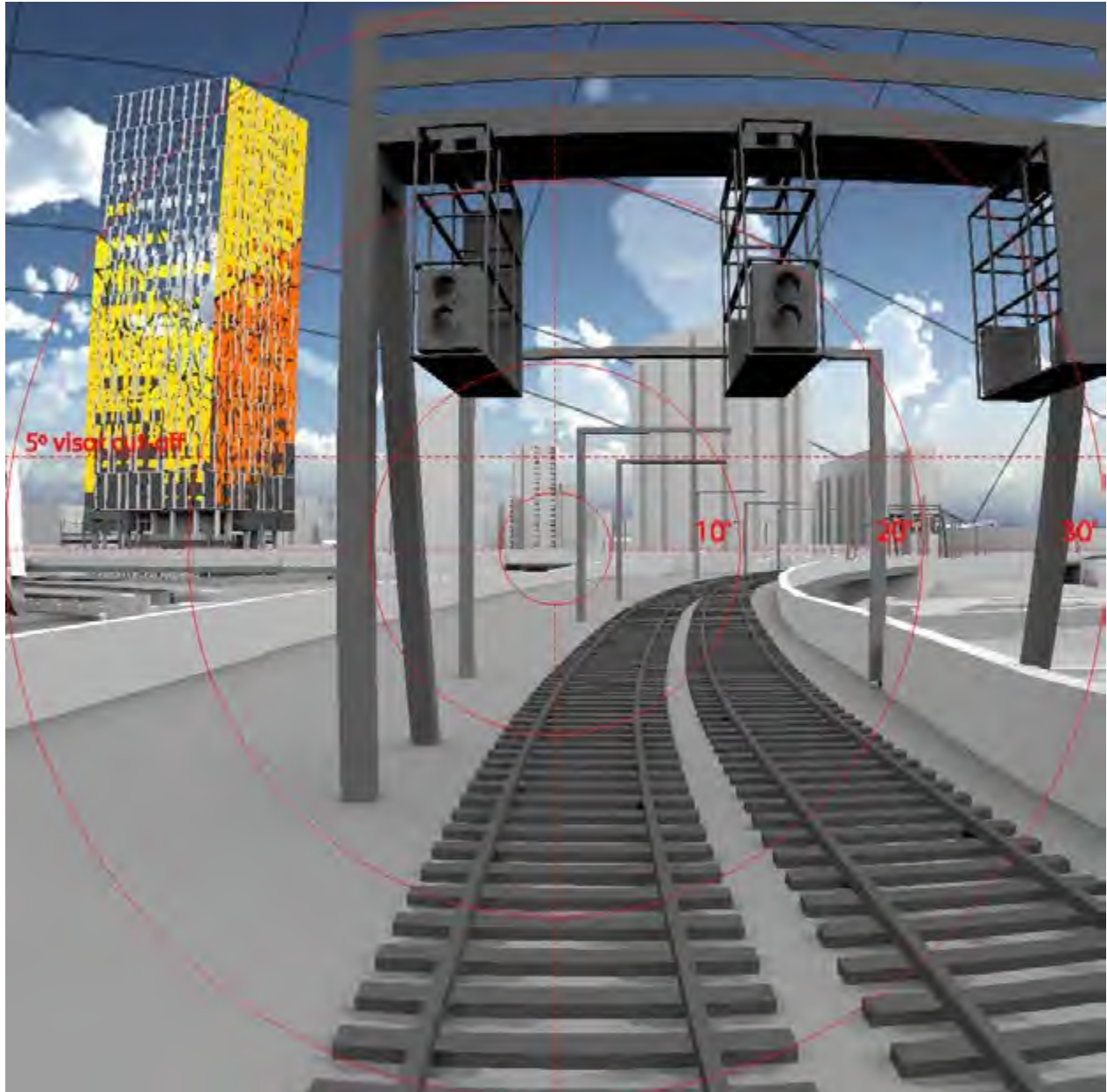


Fig. 473: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAGHT

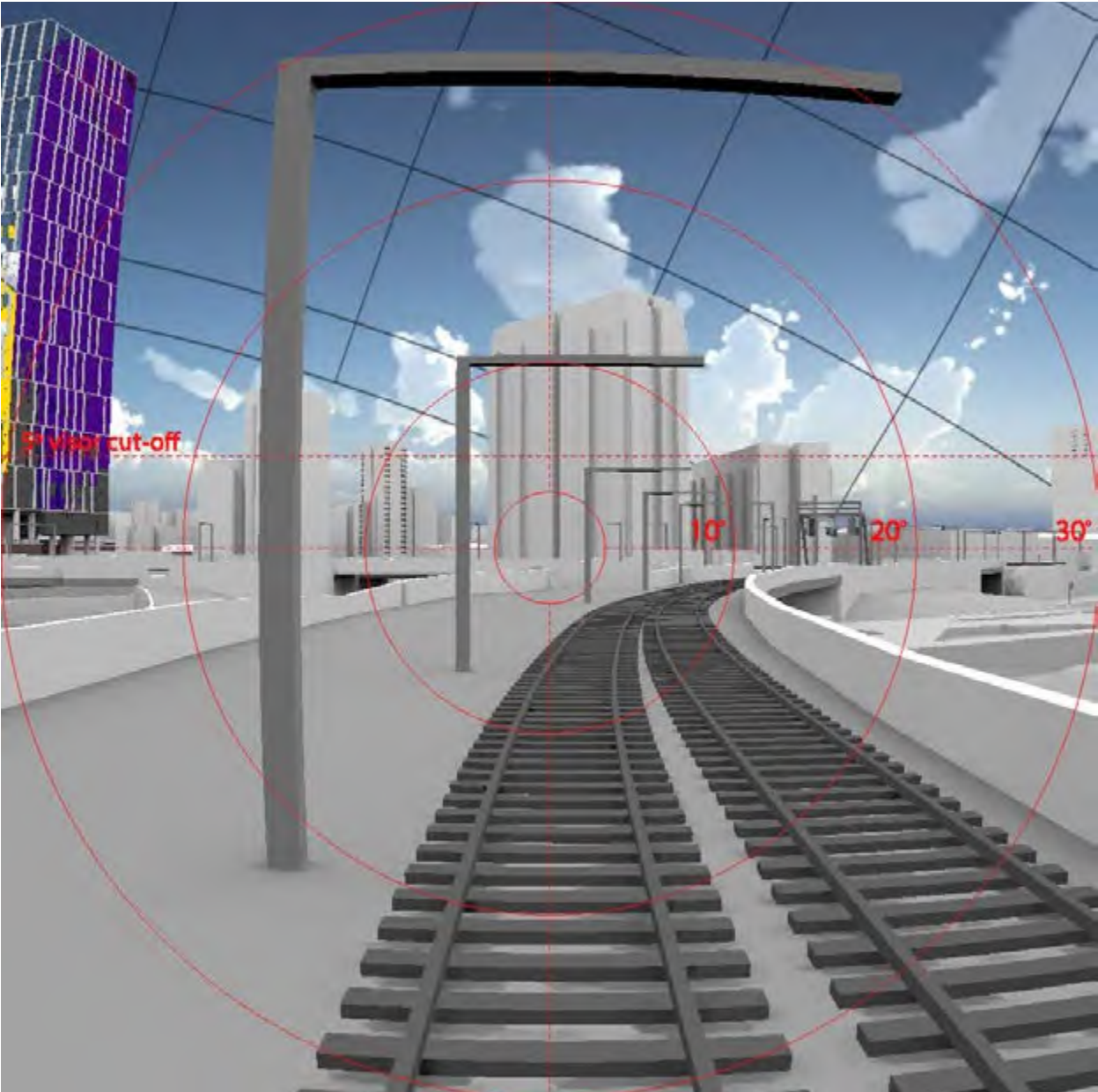
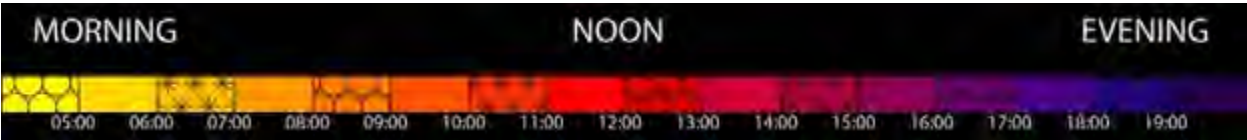


Fig. 474: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAGHT**

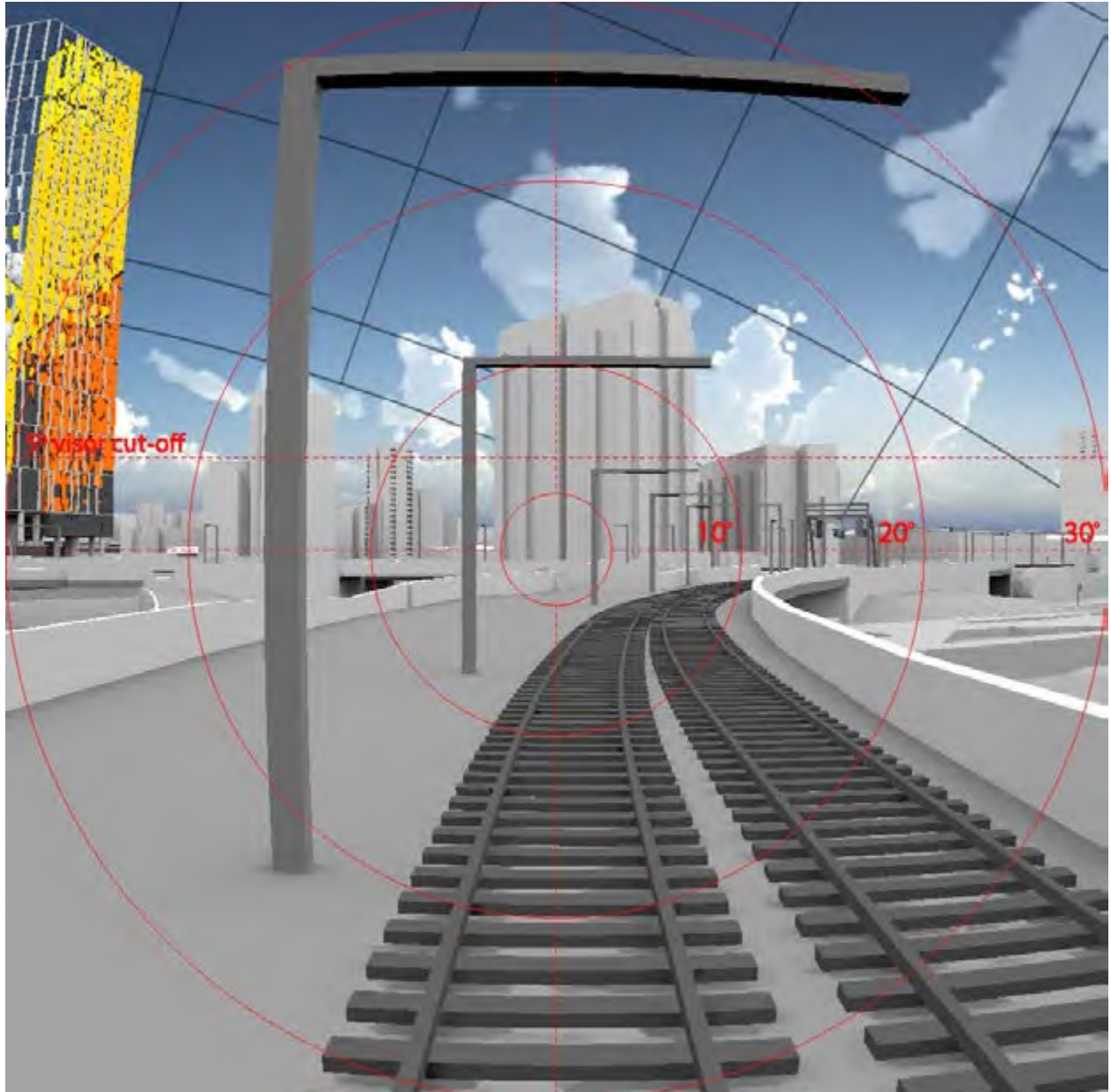


Fig. 475: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT

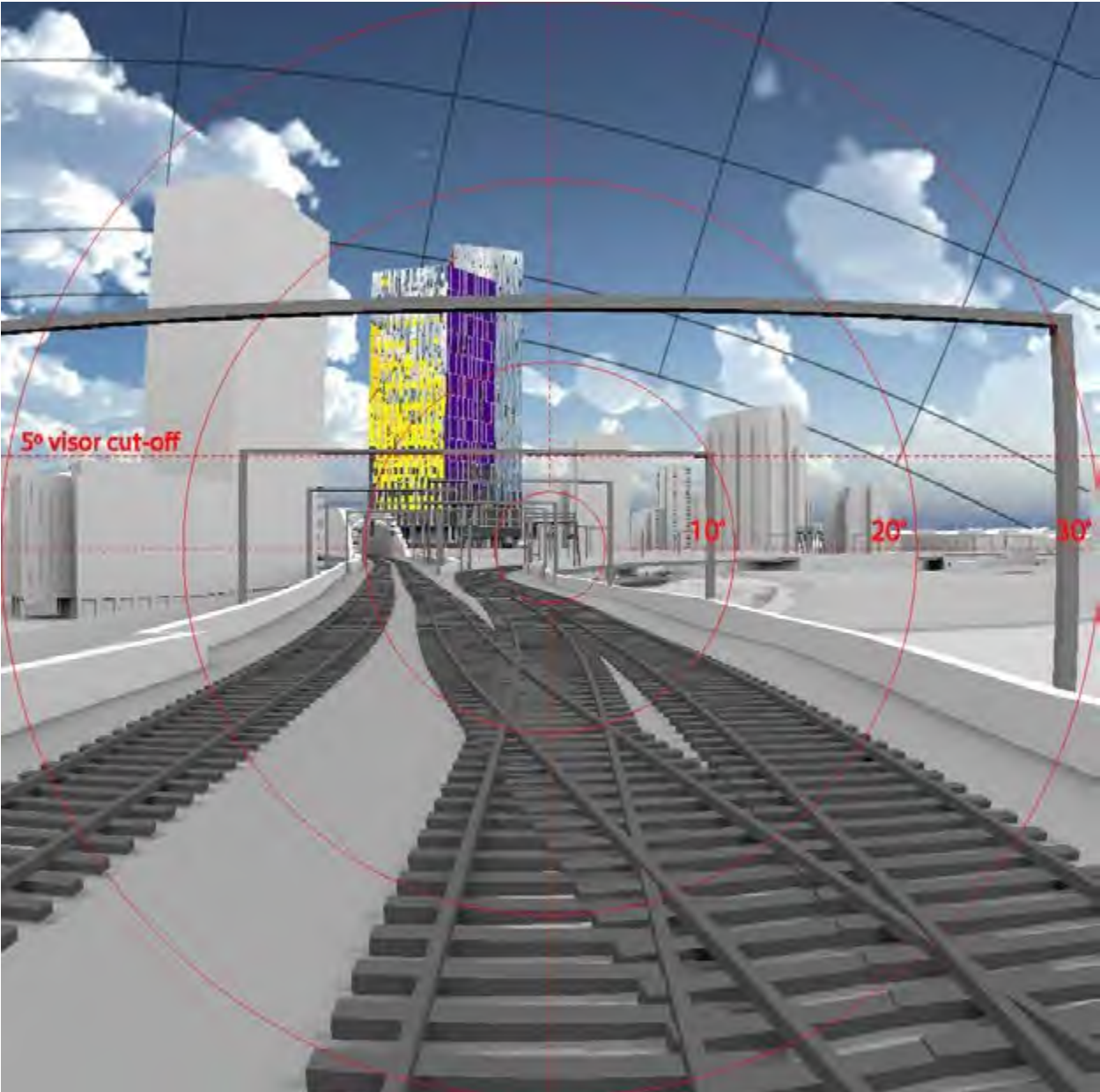


Fig. 476: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT**

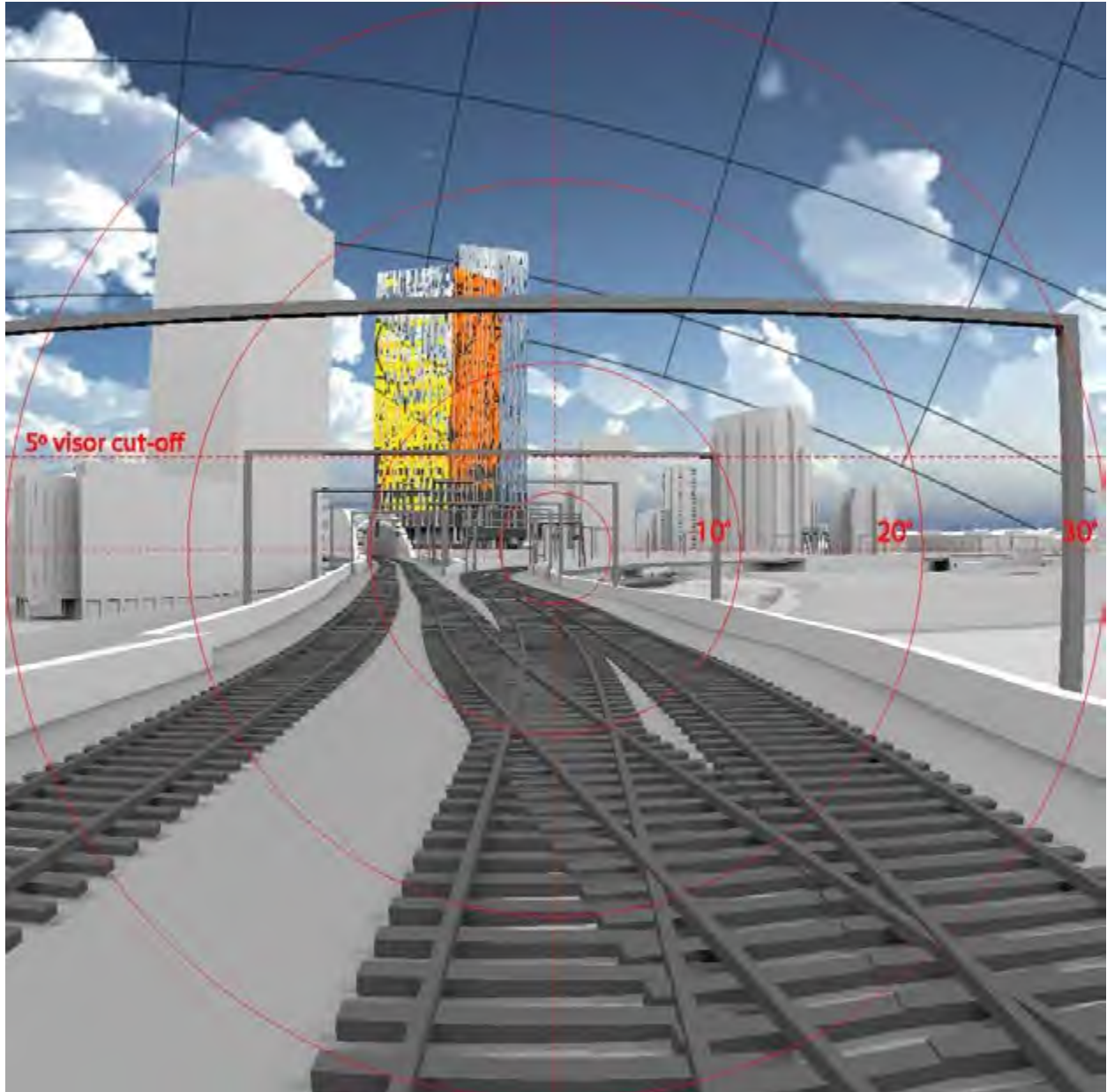


Fig. 477: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT

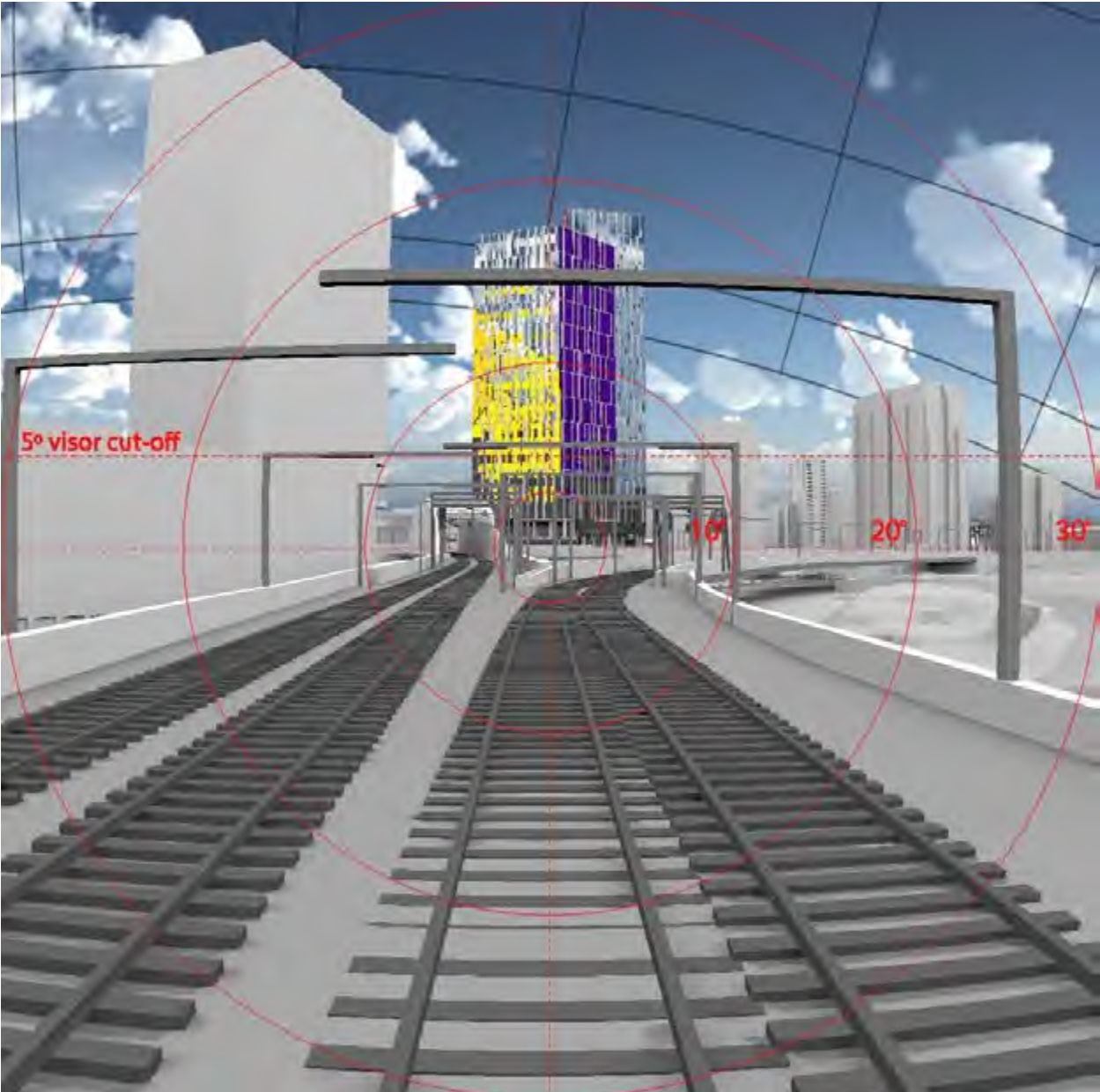


Fig. 478: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT**



Fig. 479: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

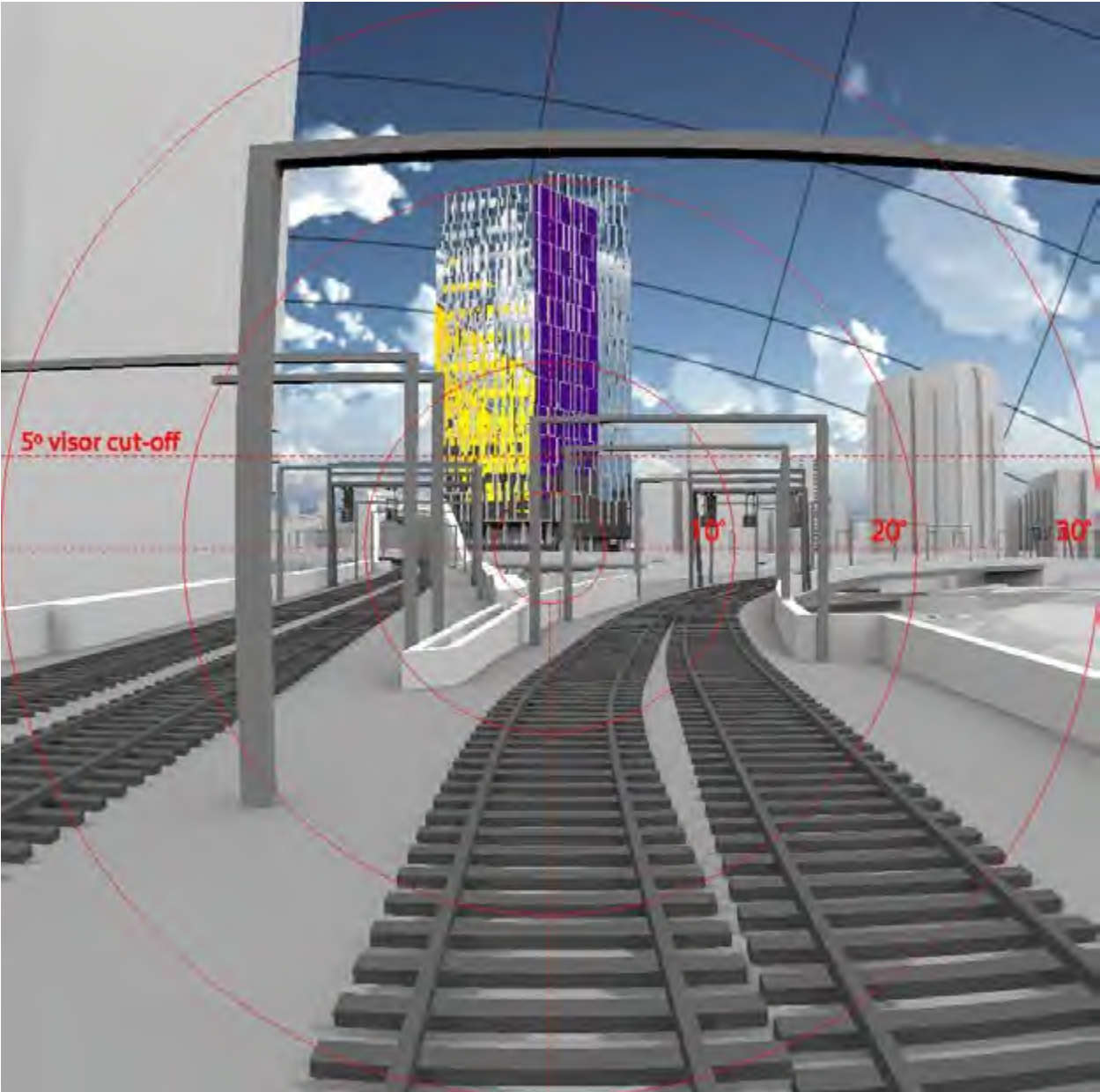


Fig. 480: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

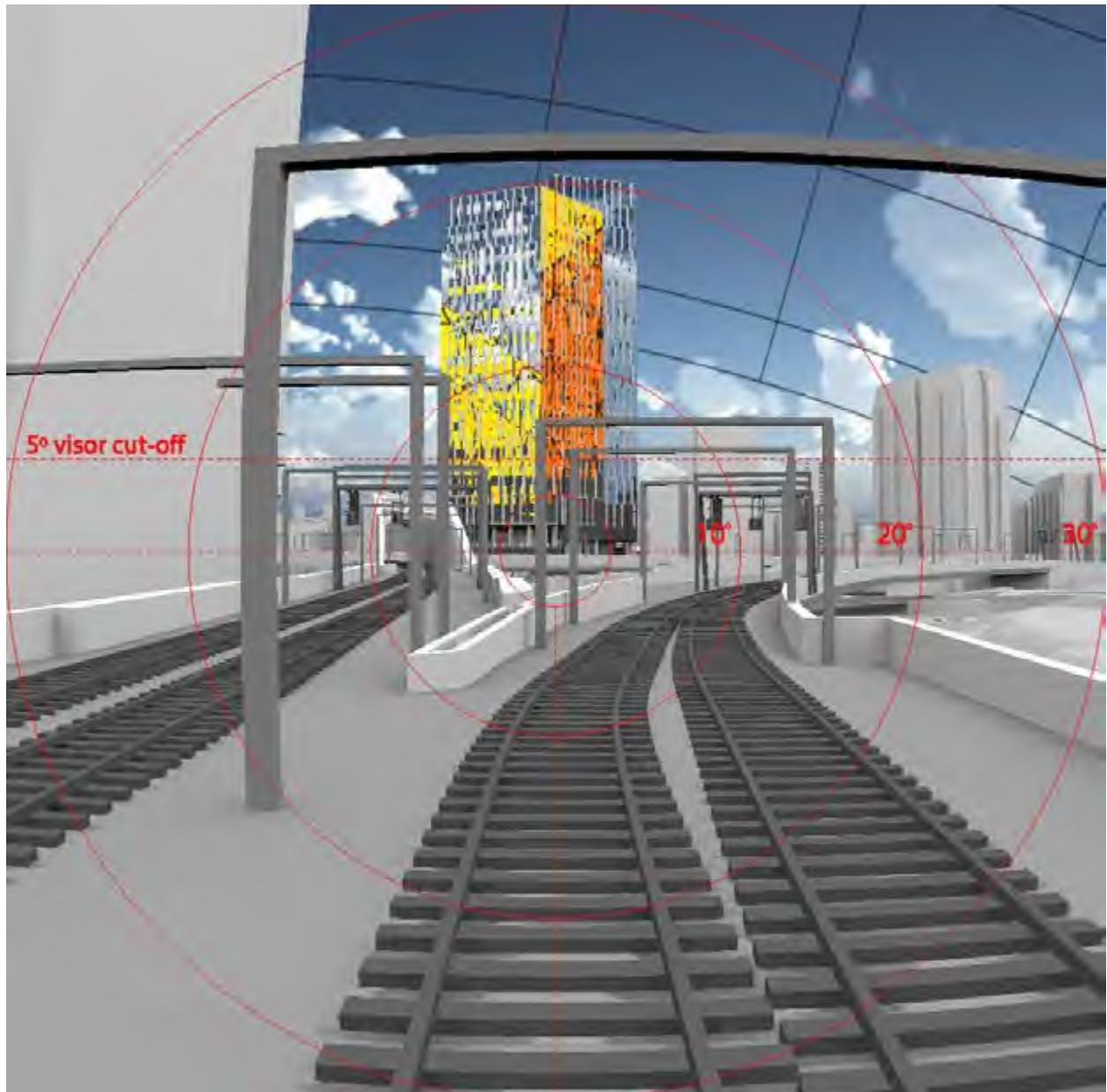


Fig. 481: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

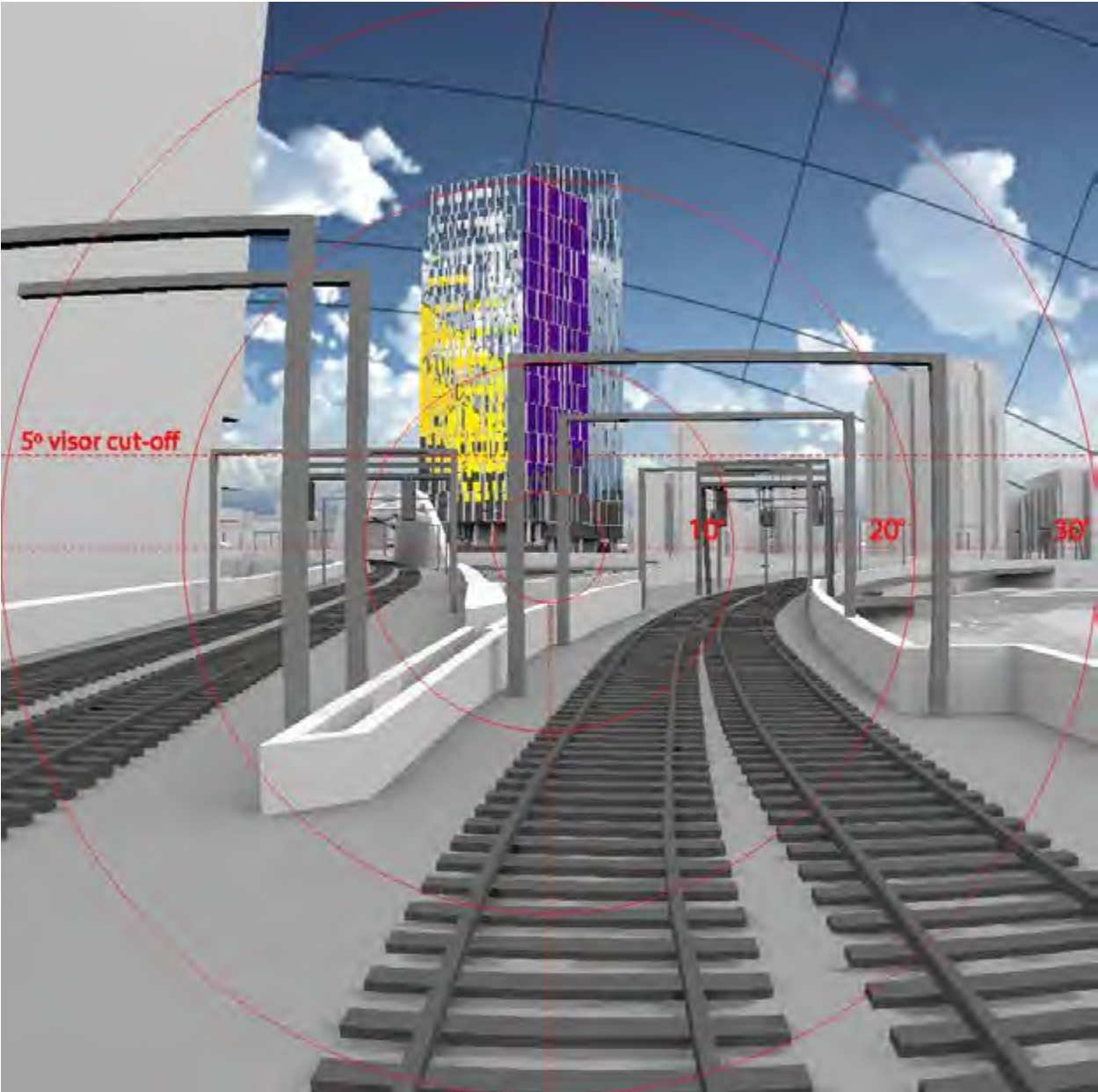


Fig. 482: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

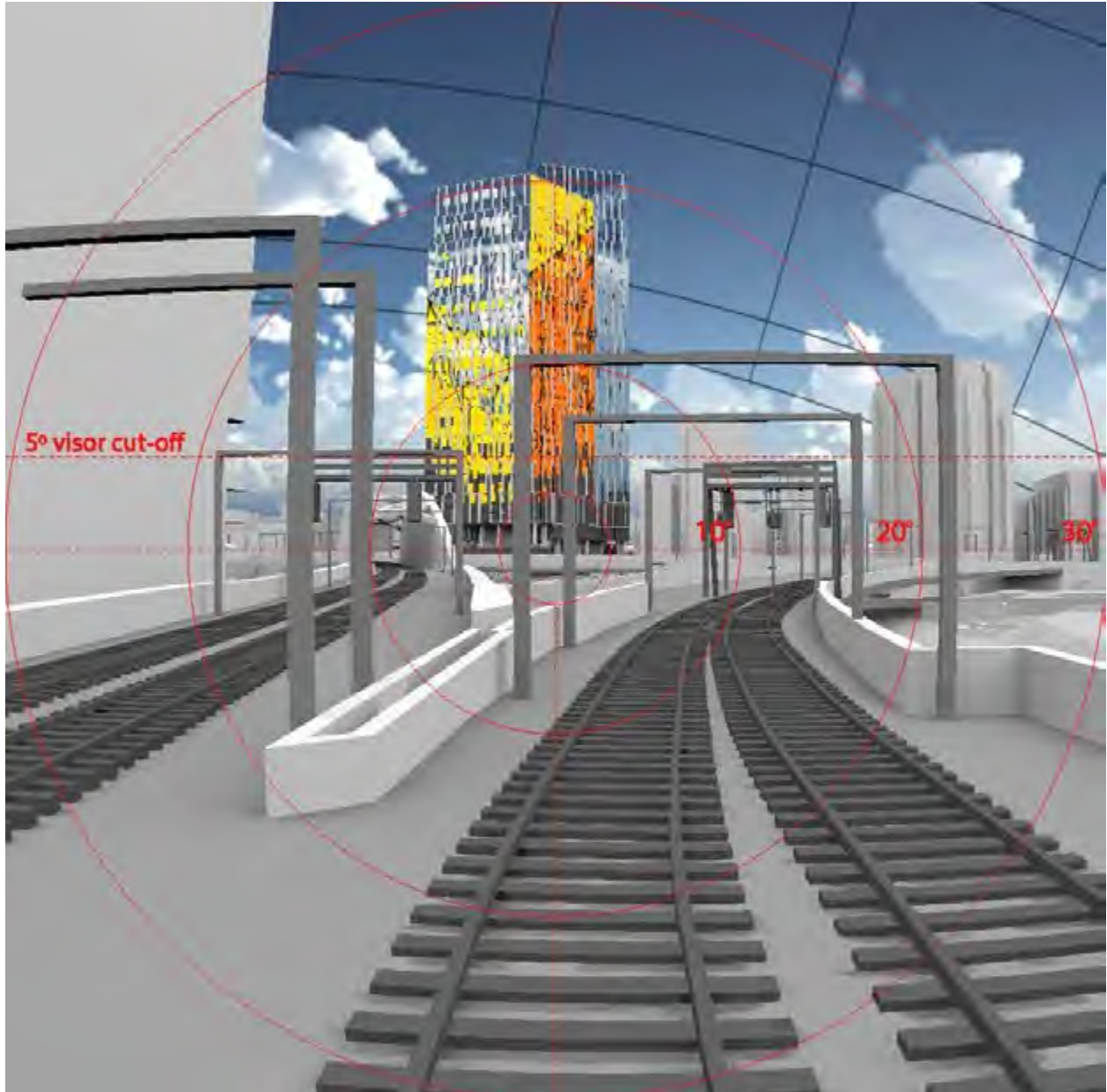


Fig. 483: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

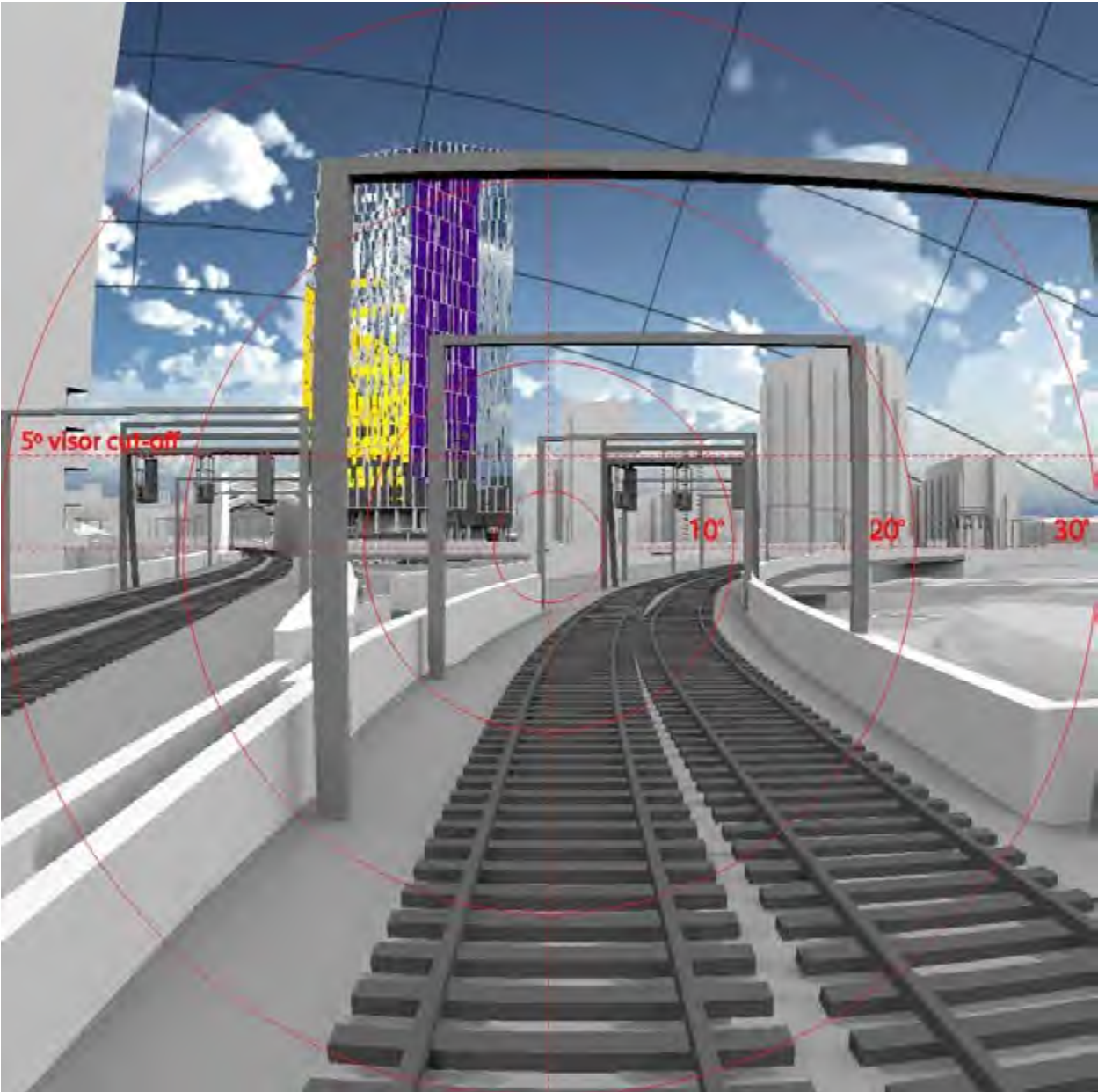


Fig. 484: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

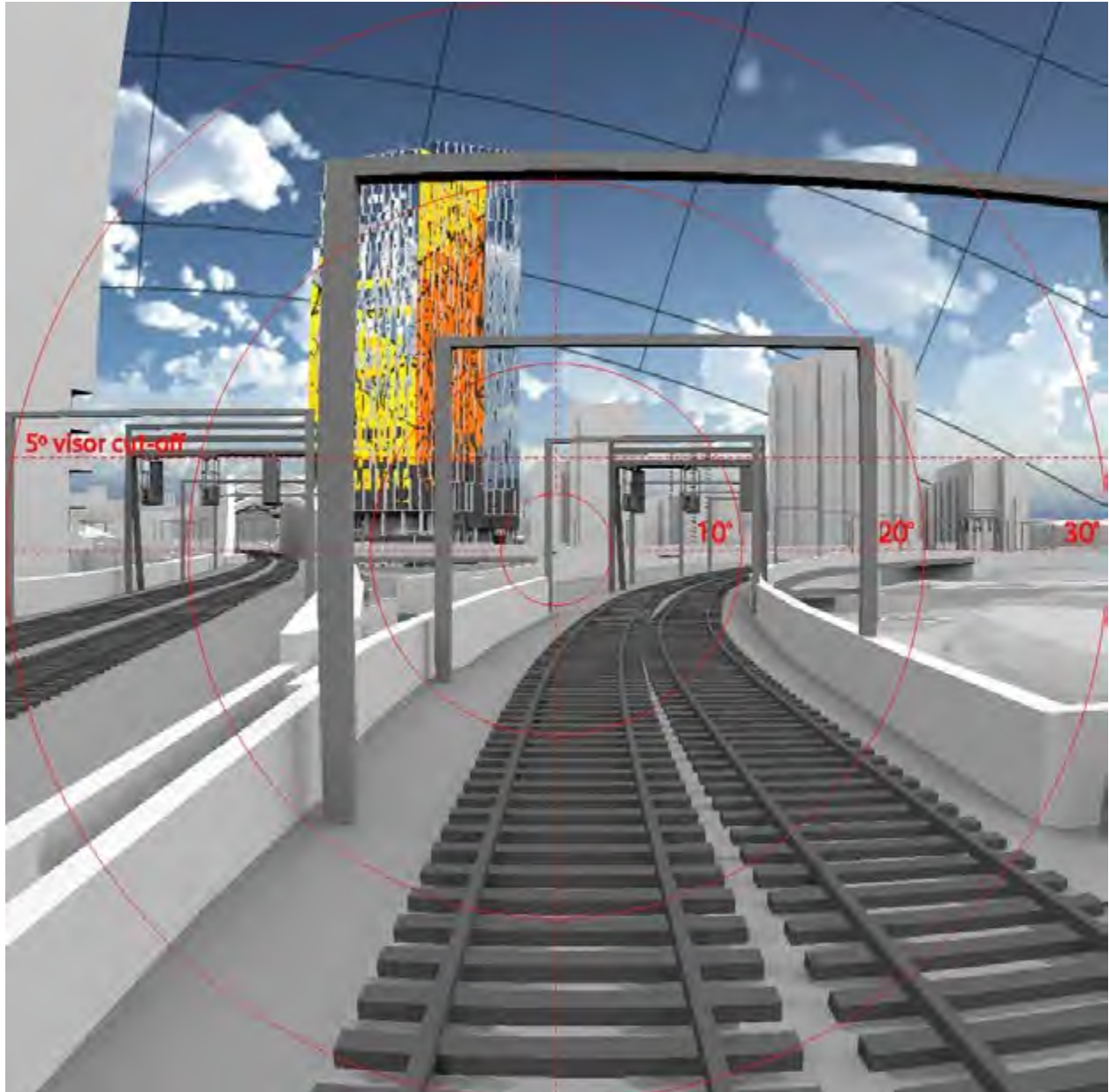


Fig. 485: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

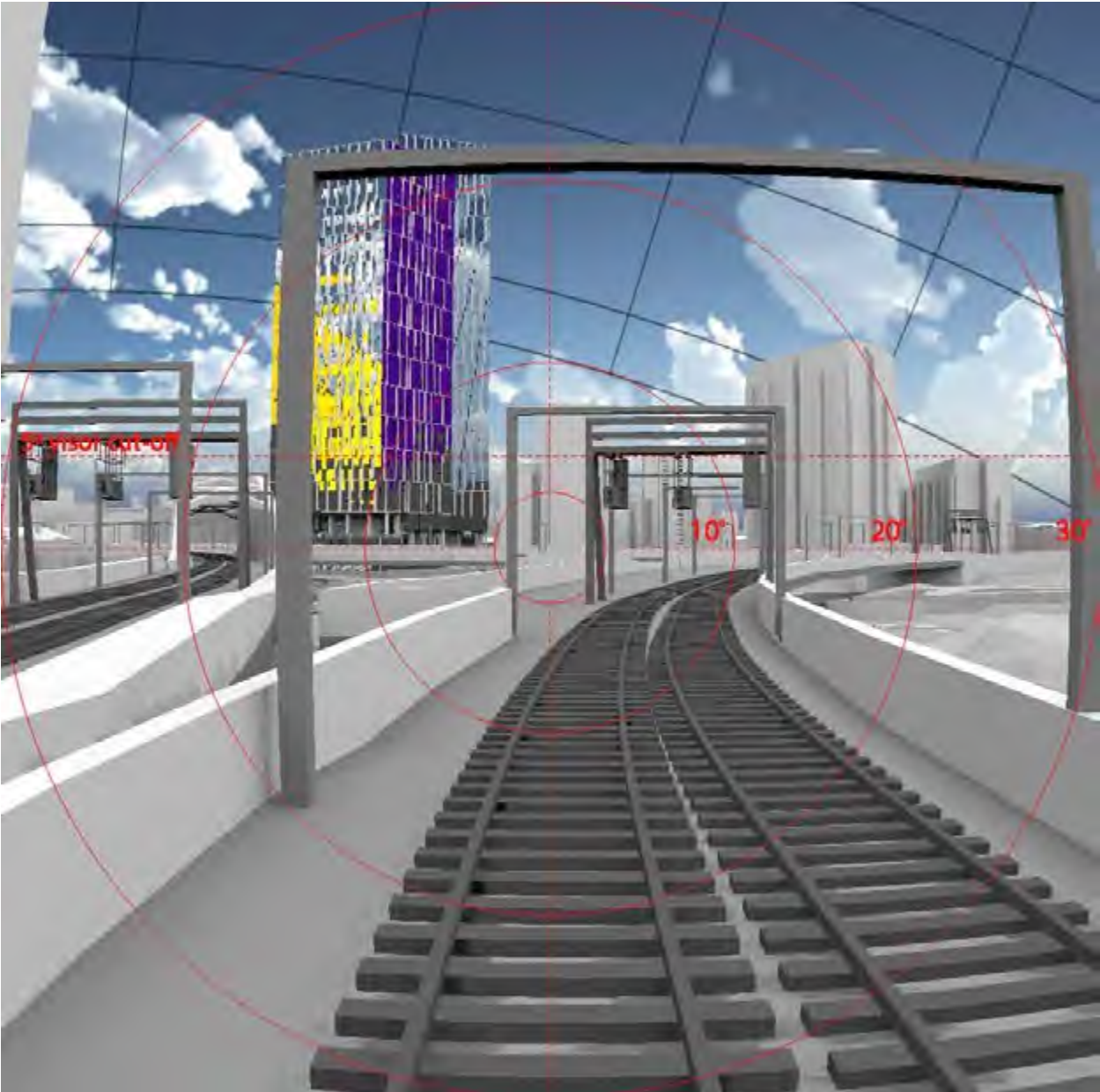


Fig. 486: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**



Fig. 487: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

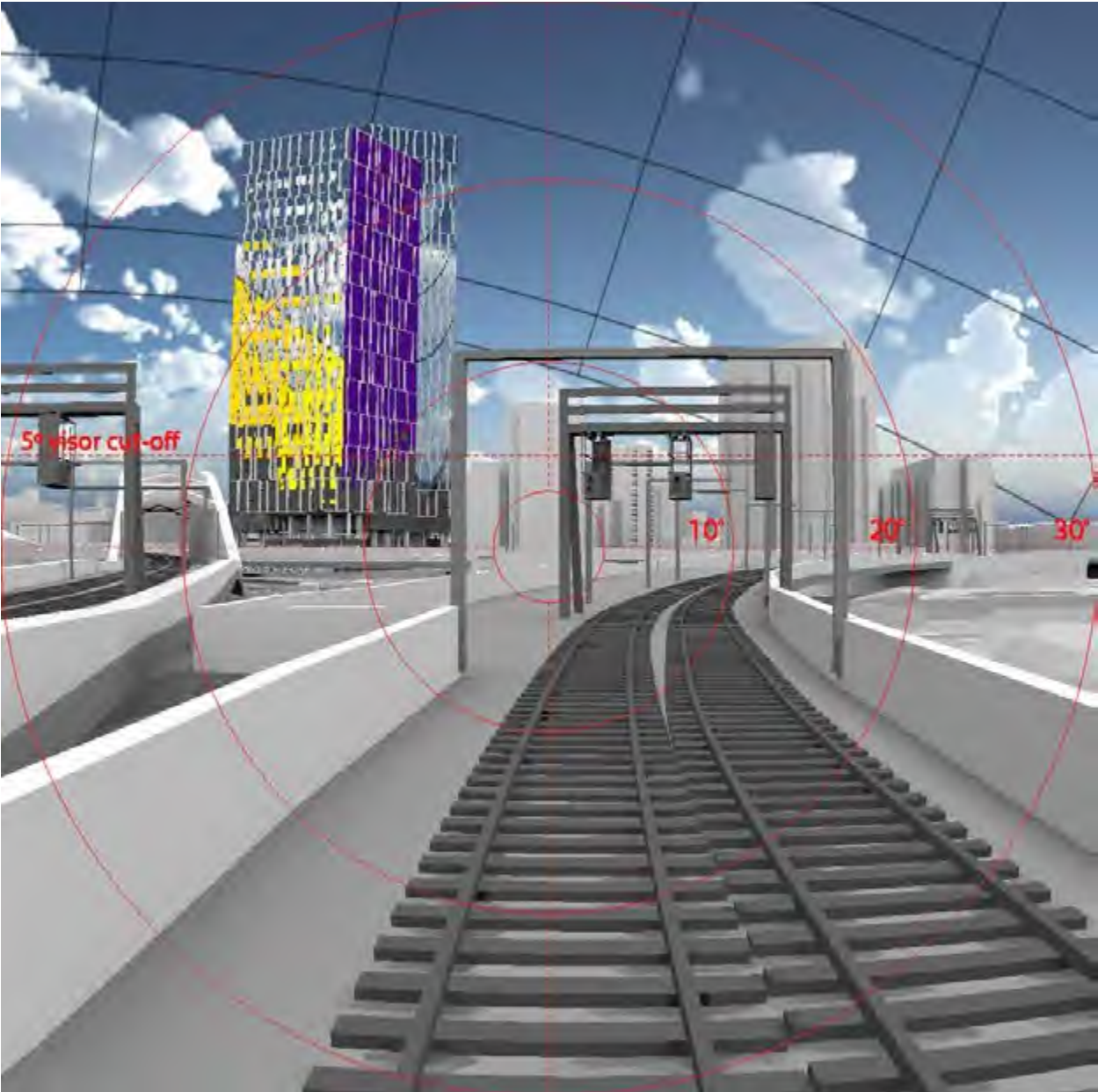


Fig. 488: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**



Fig. 489: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

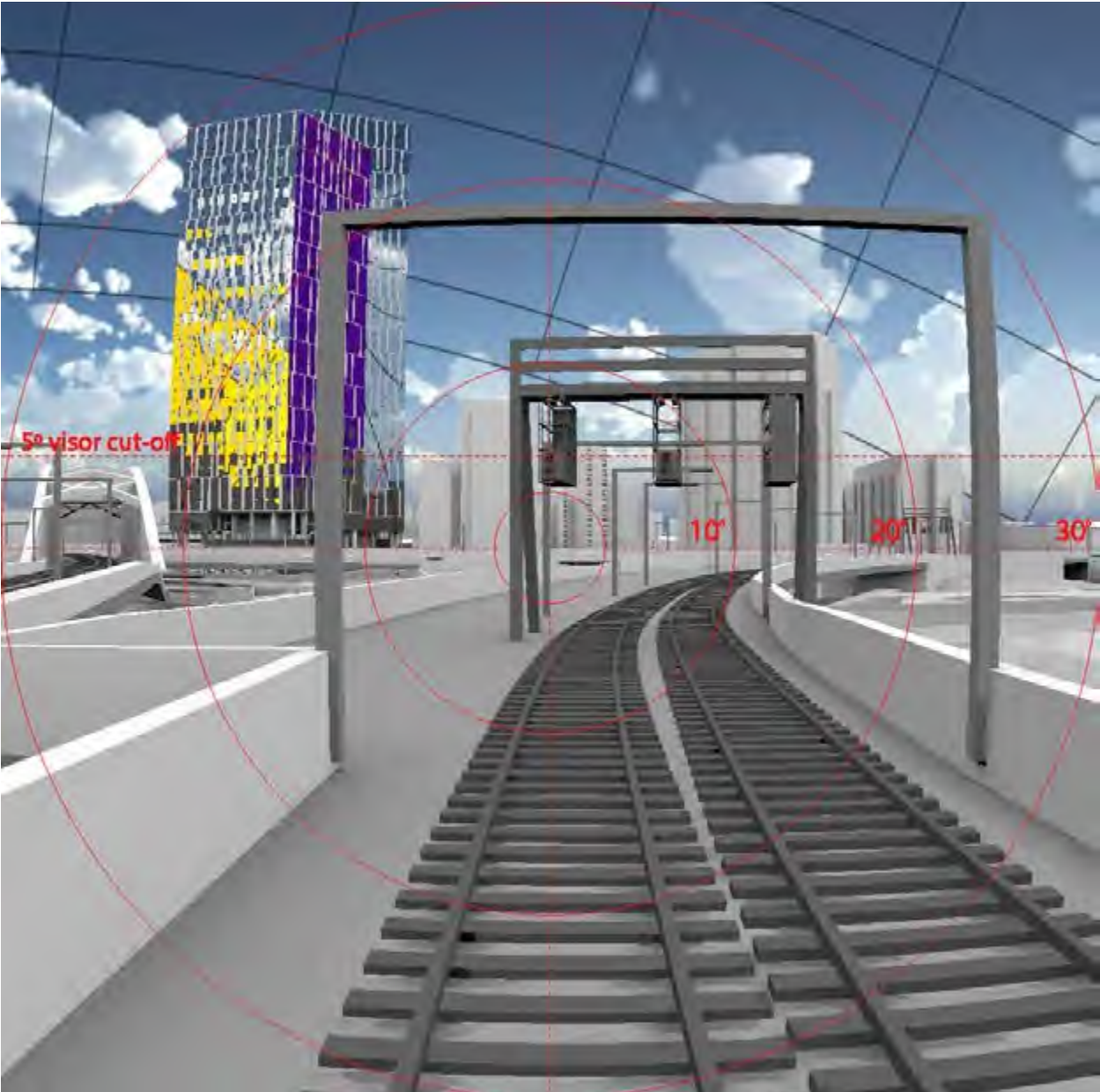


Fig. 490: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

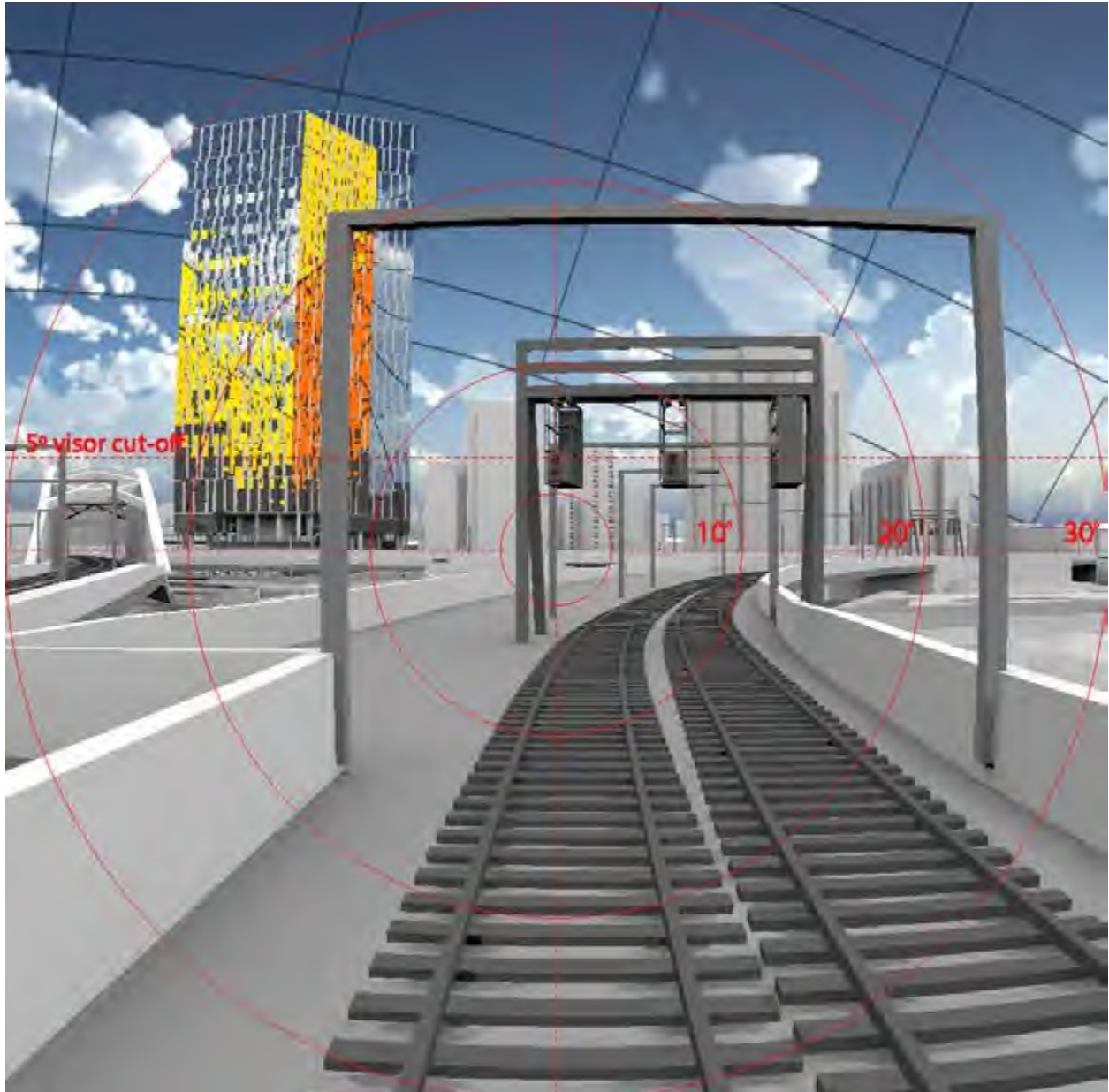


Fig. 491: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL



Fig. 492: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAIGHT - APPROX 20M FROM SIGNAL**

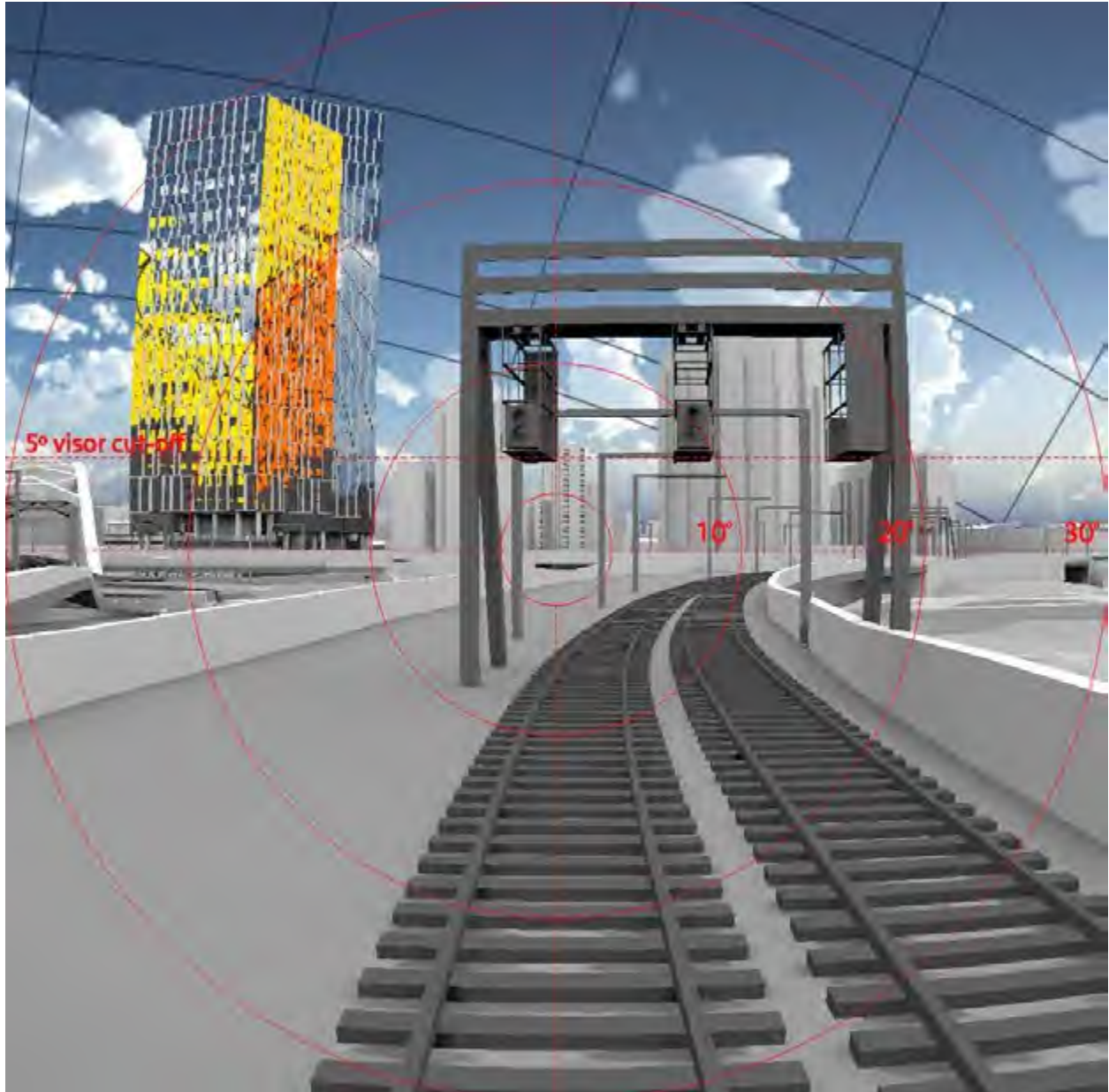


Fig. 493: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

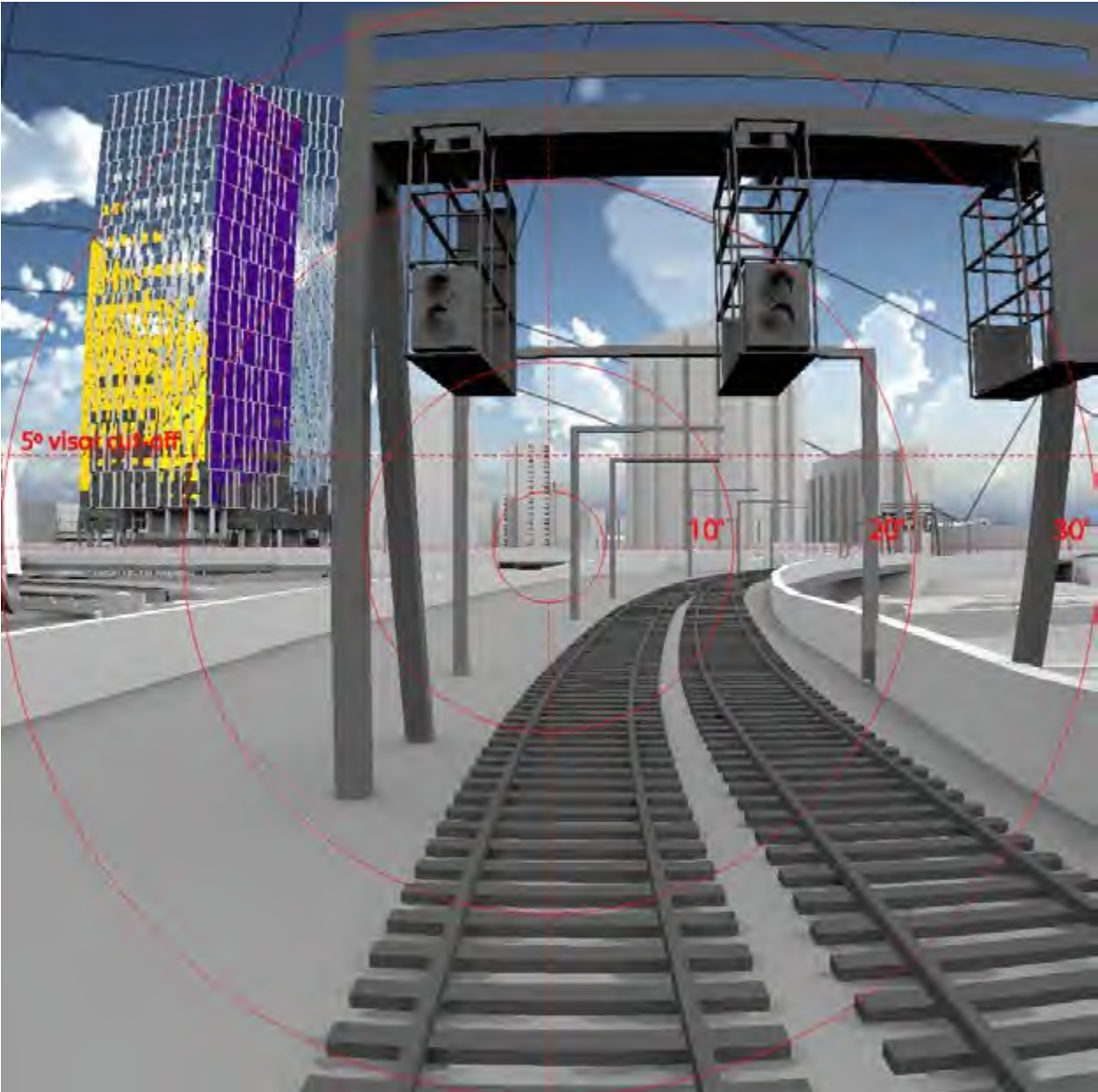


Fig. 494: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT- APPROX 10M FROM SIGNAL**

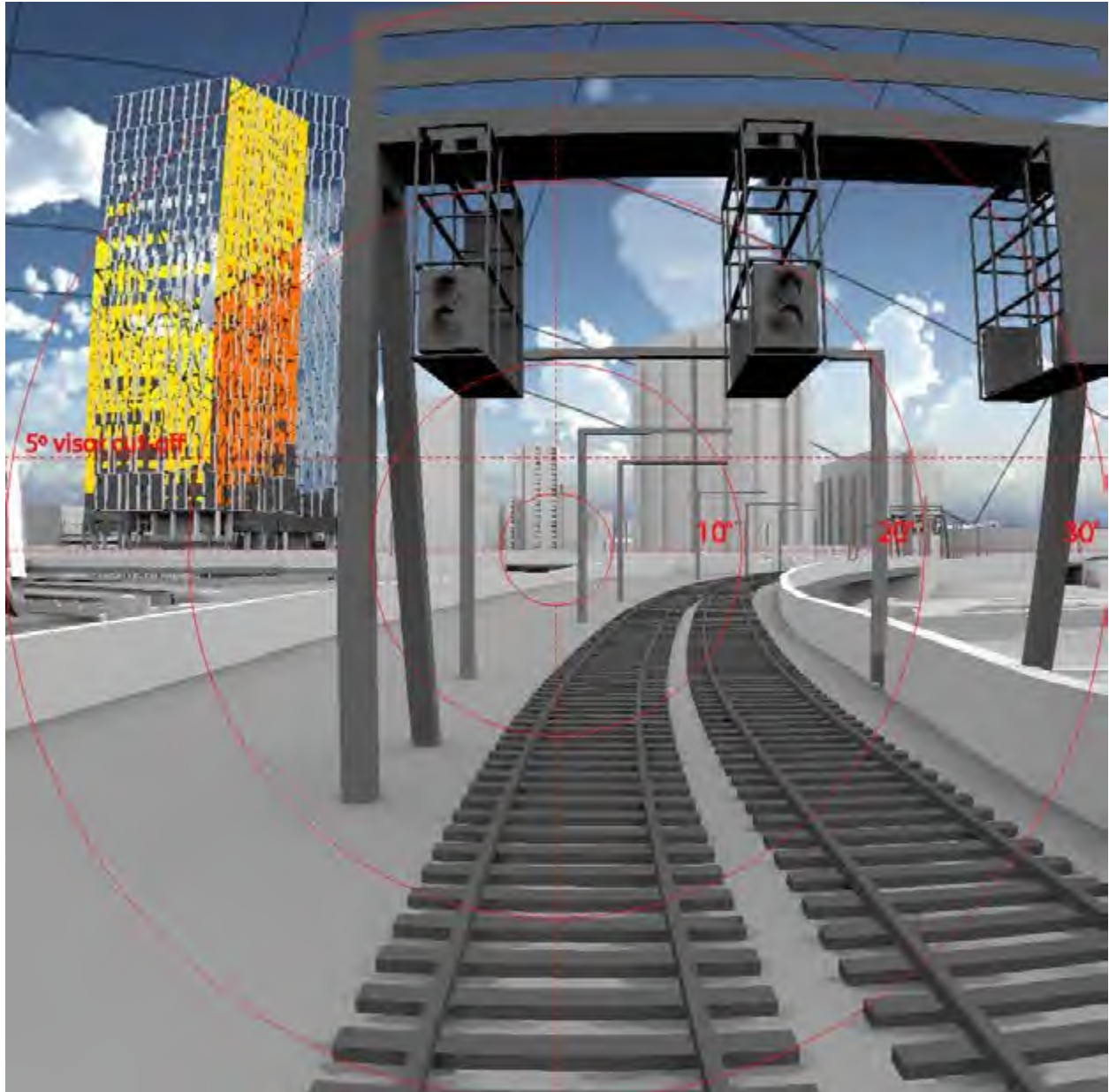


Fig. 495: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAGHT

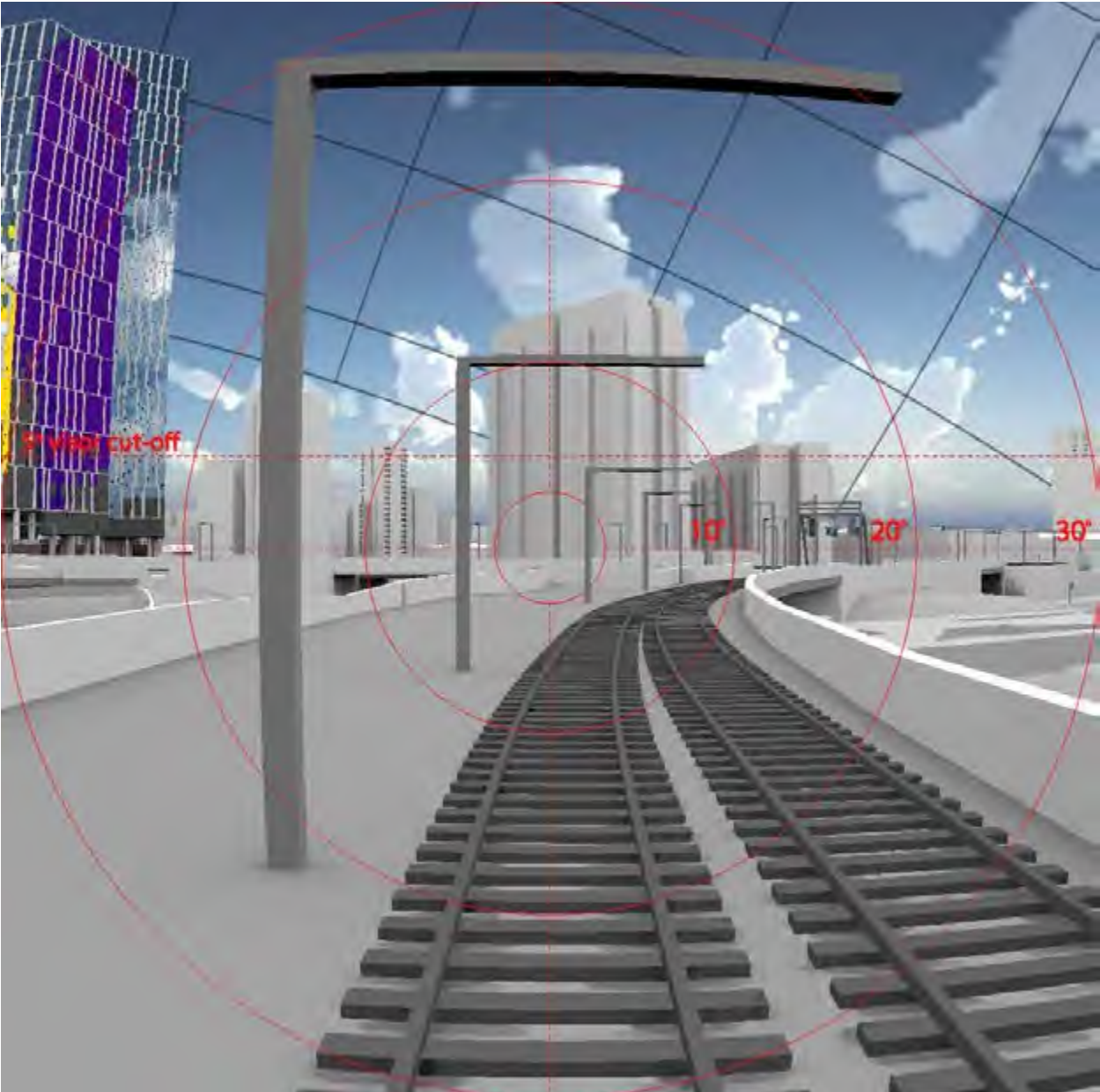


Fig. 496: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAIGHT**

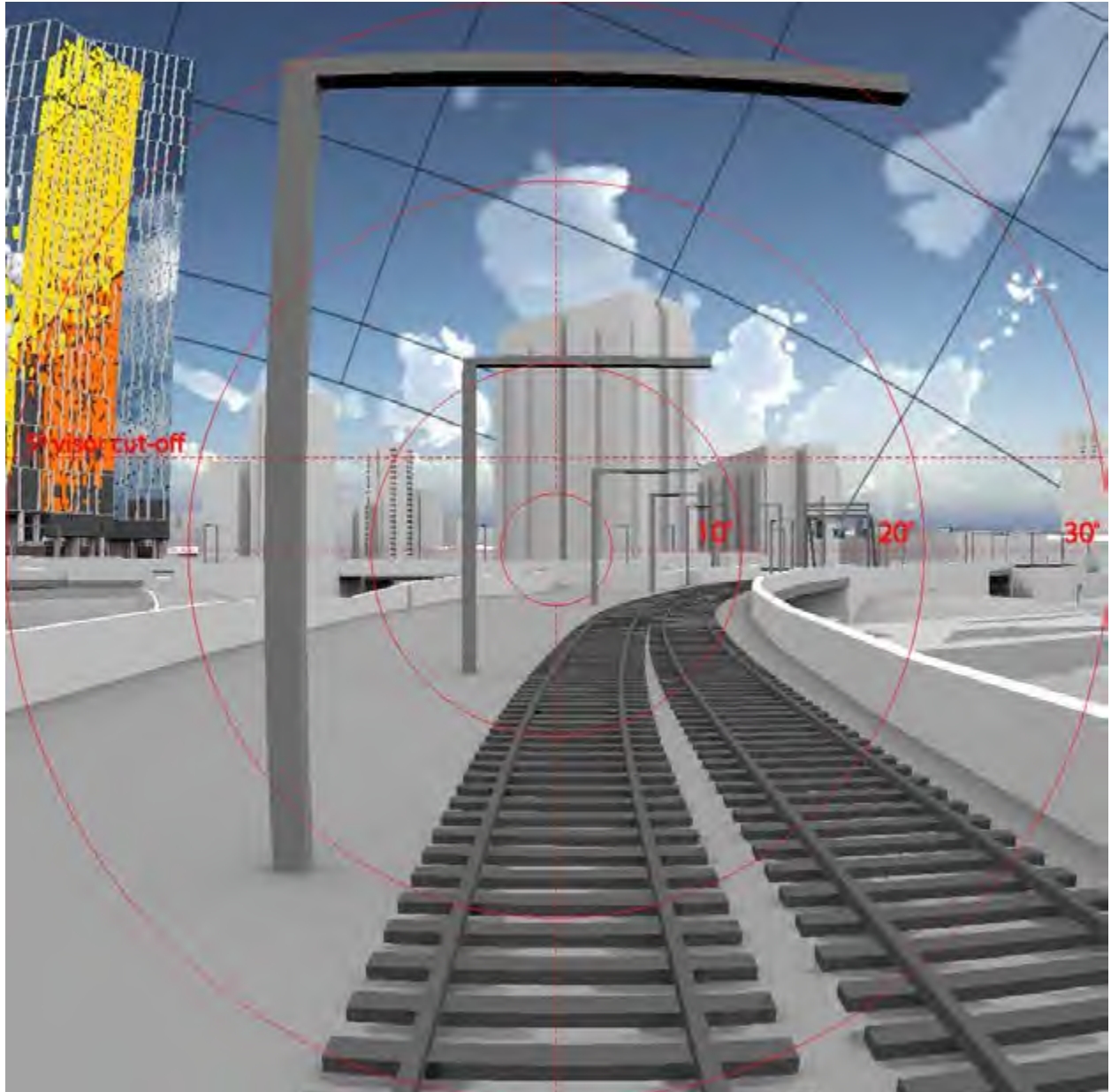


Fig. 497: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT

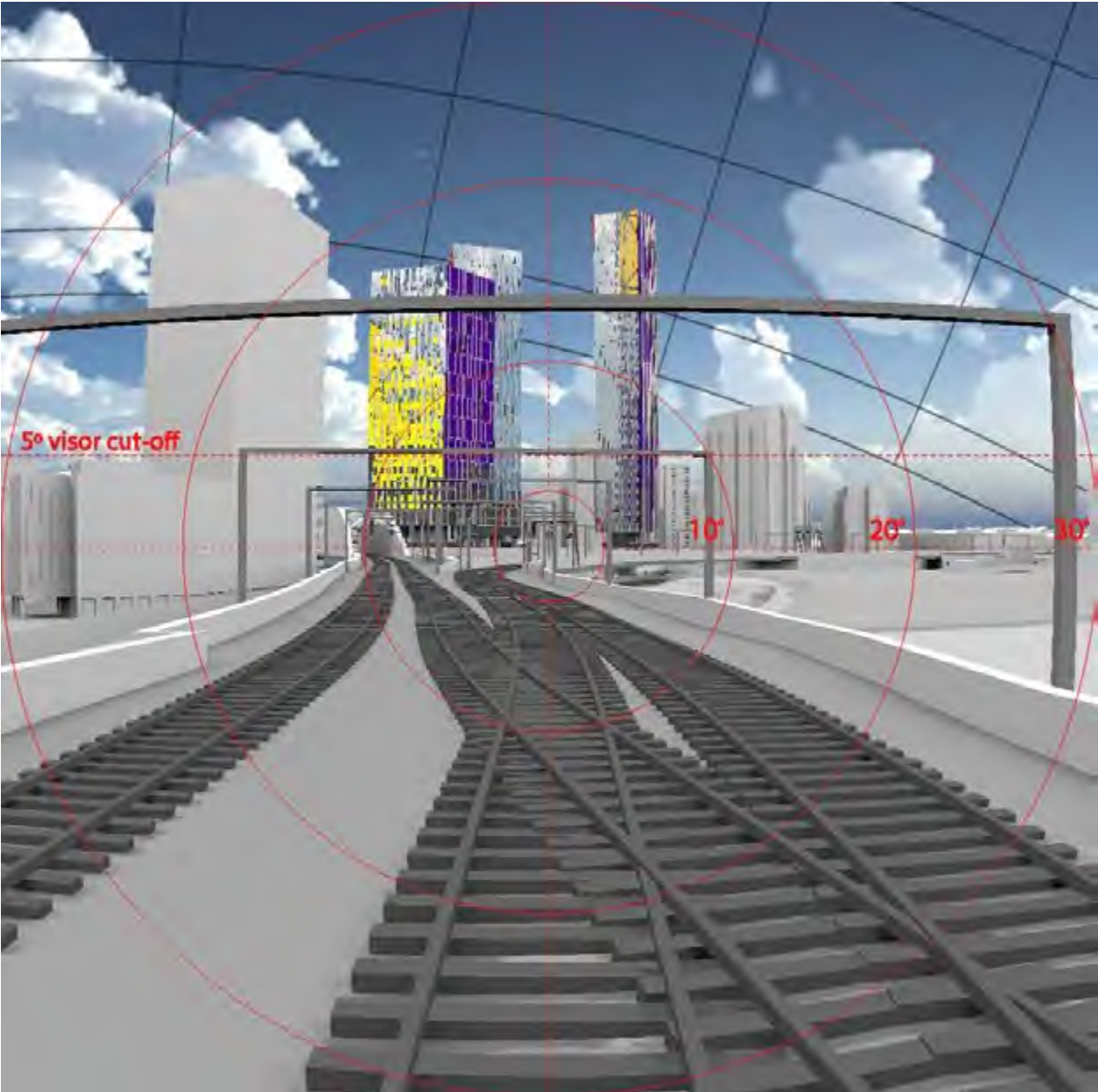


Fig. 498: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT**

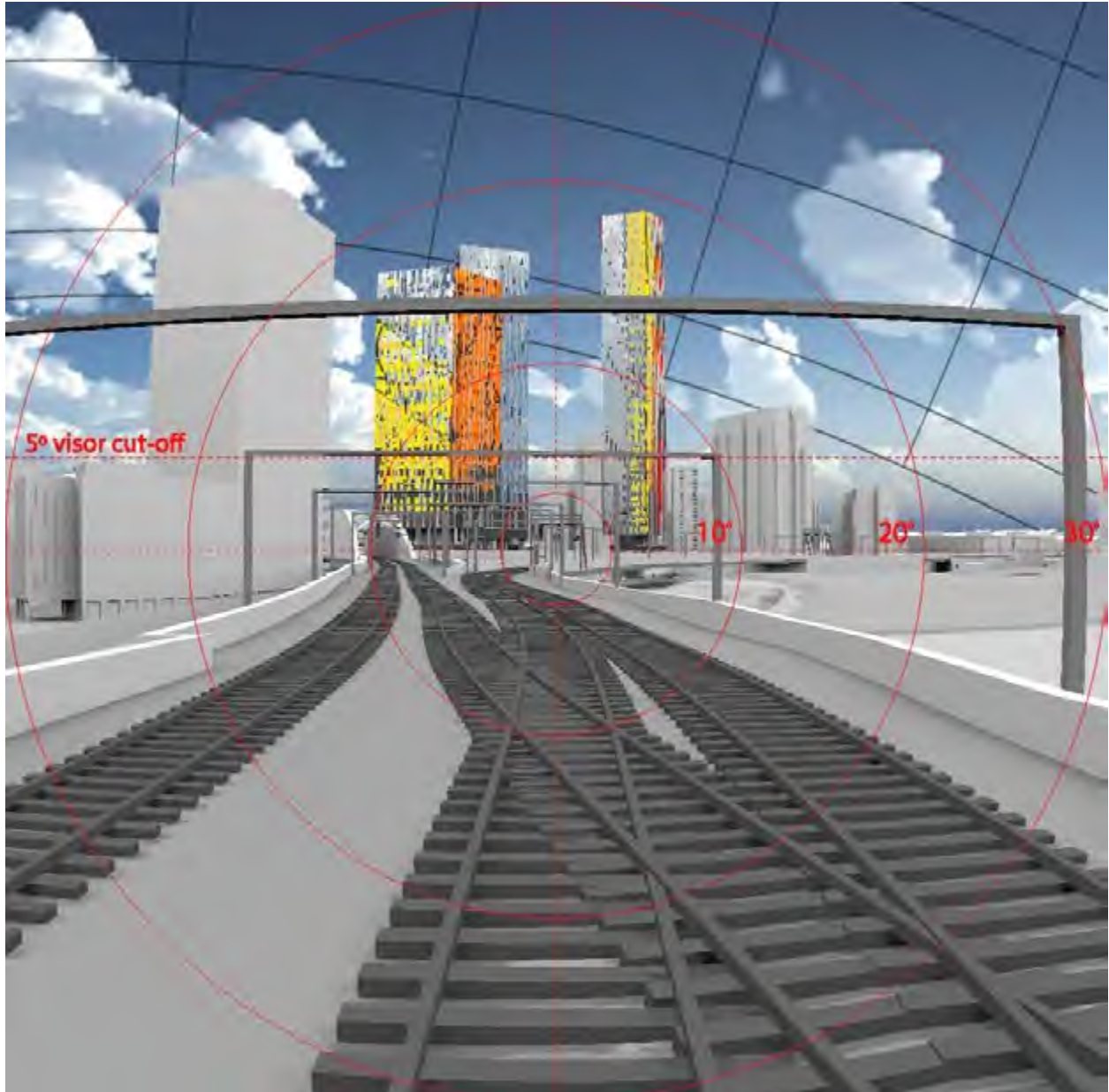


Fig. 499: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT

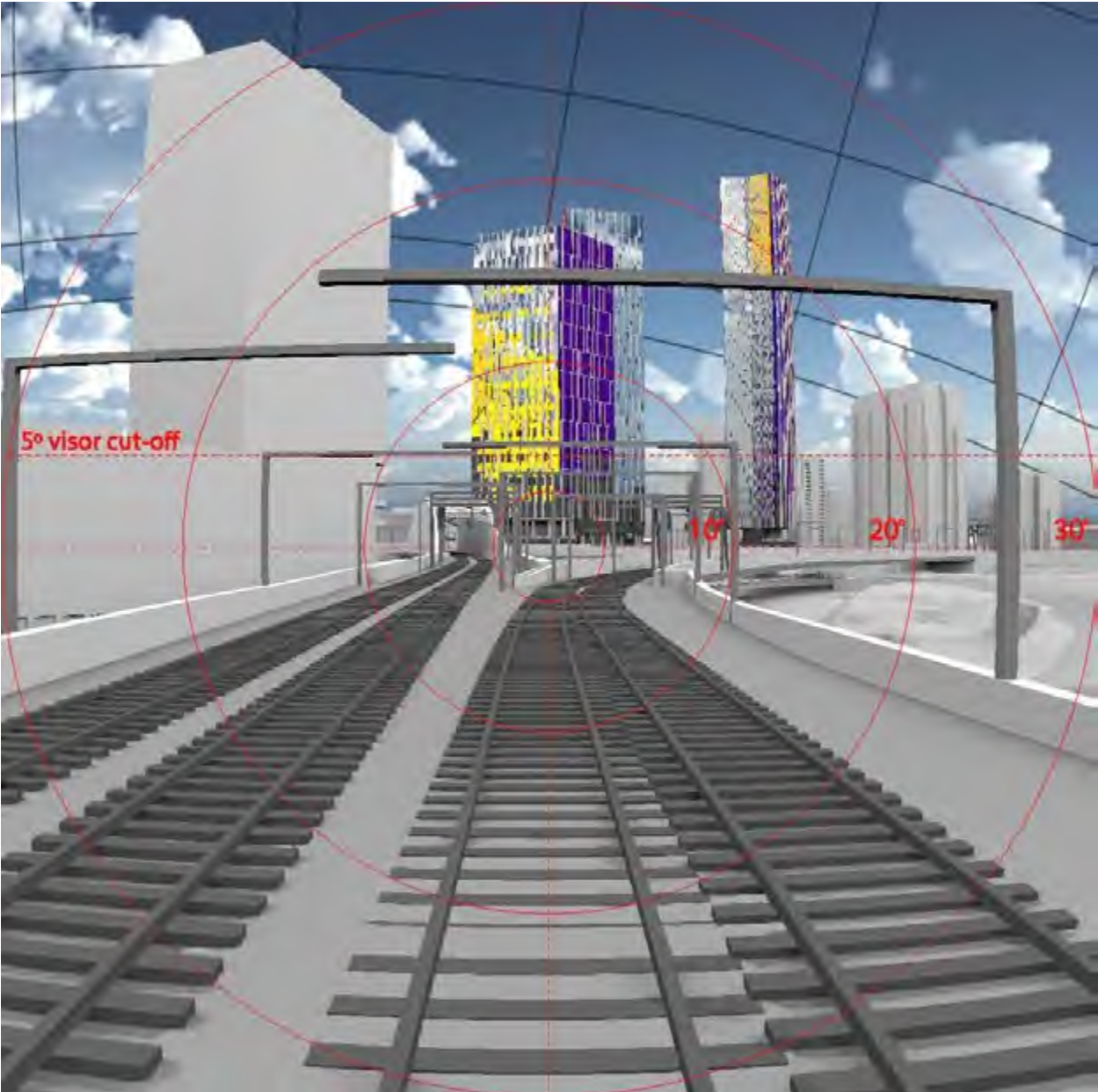


Fig. 500: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT**

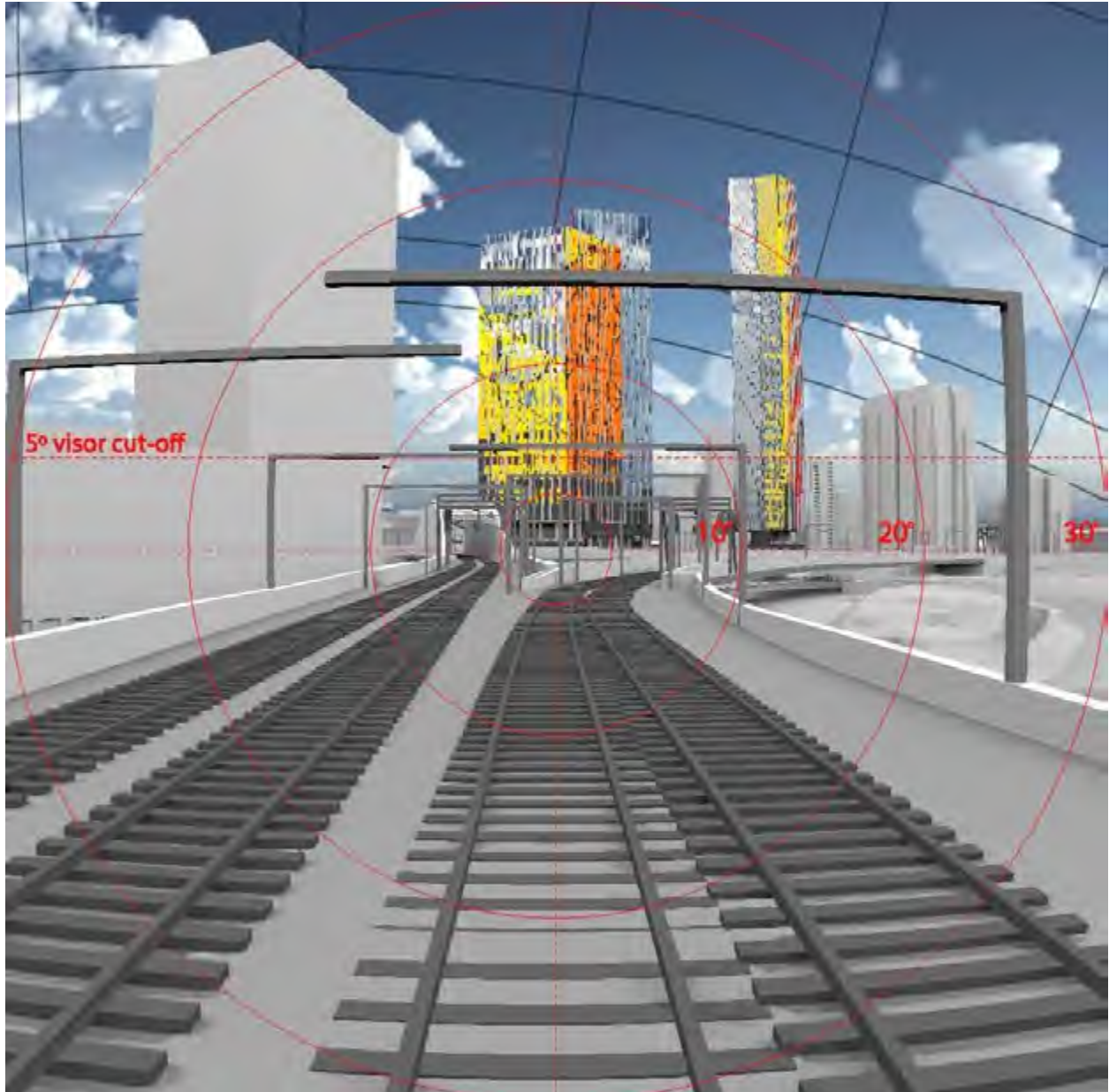


Fig. 501: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

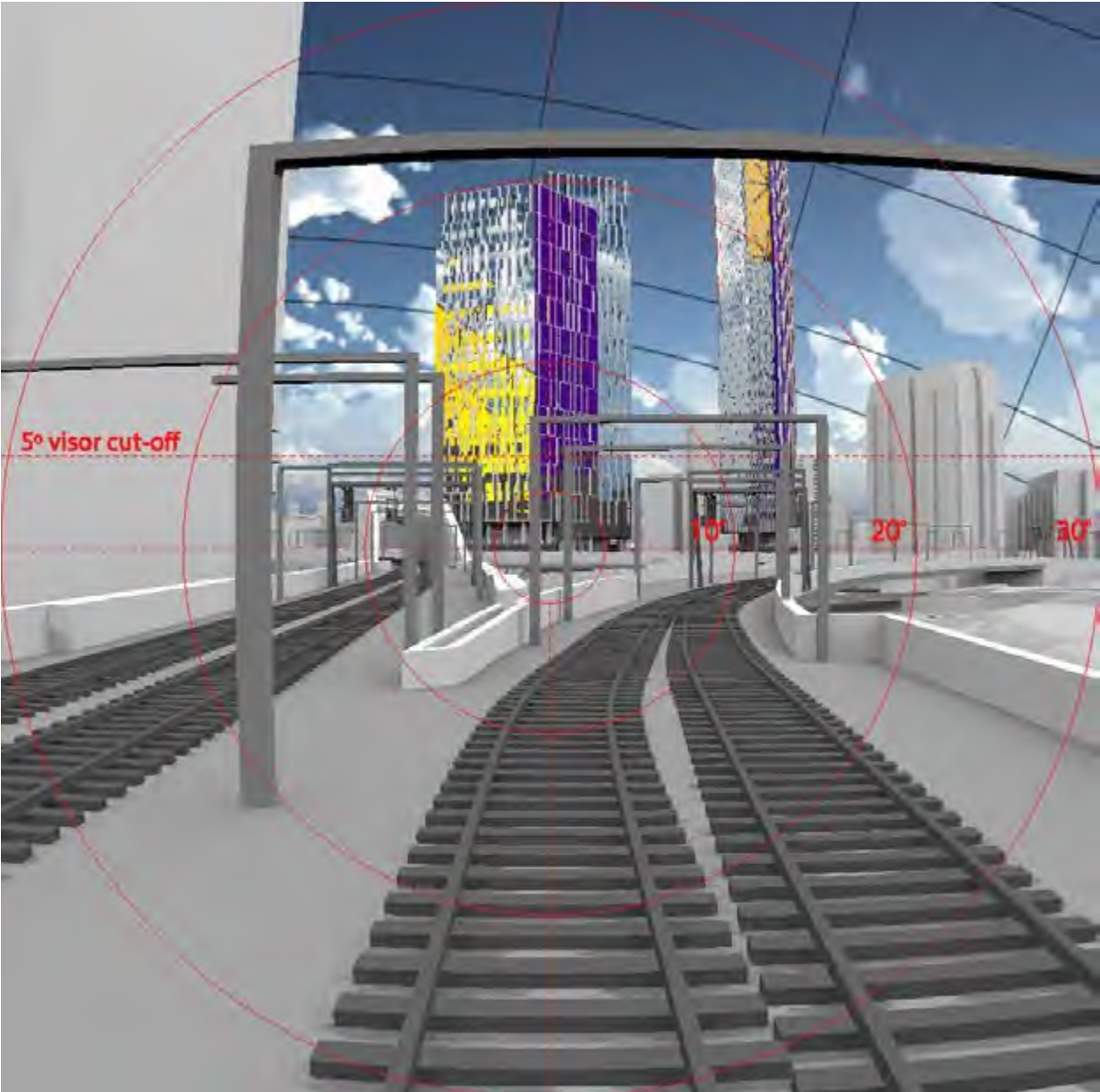


Fig. 502: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

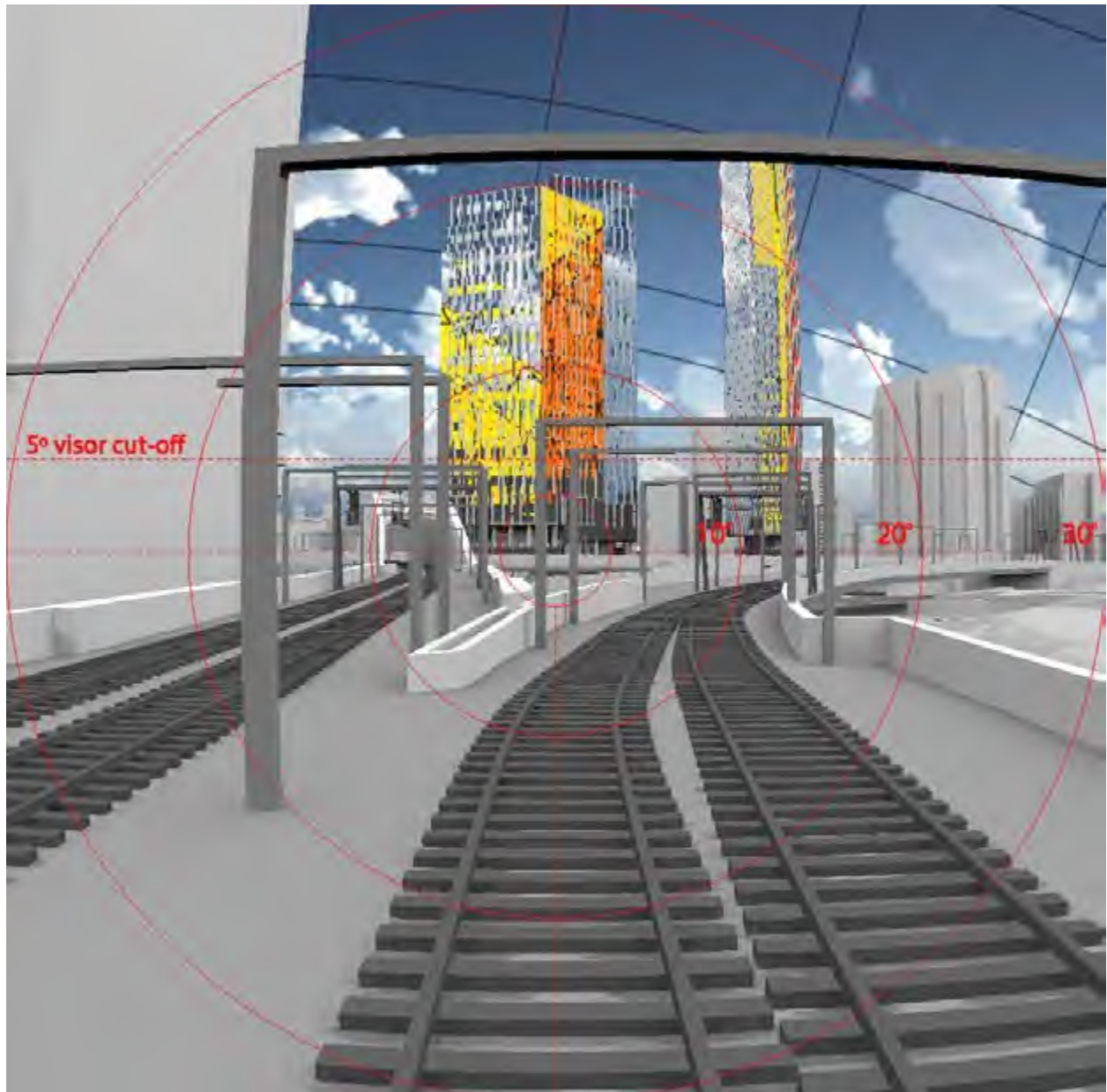


Fig. 503: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

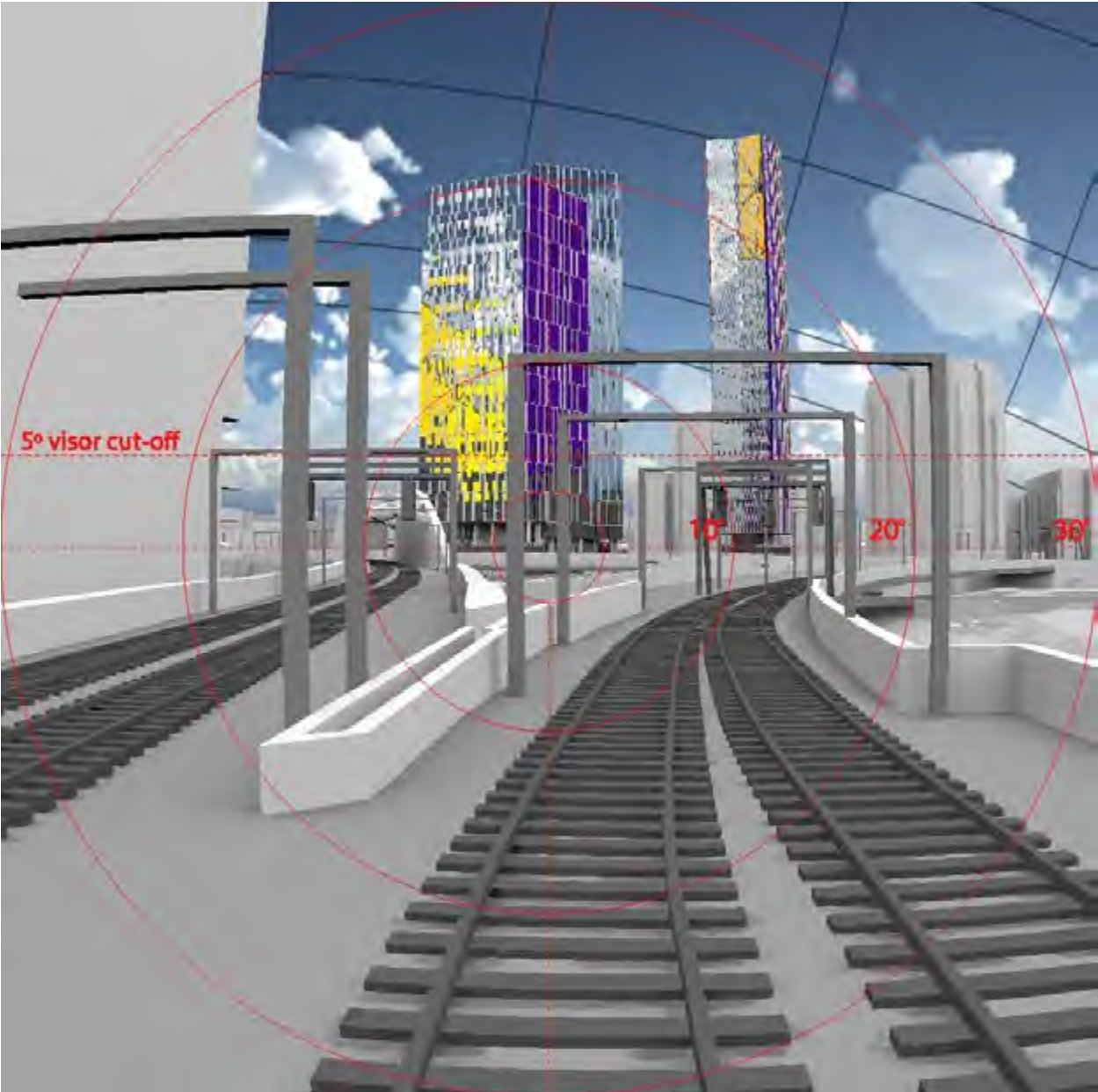


Fig. 504: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

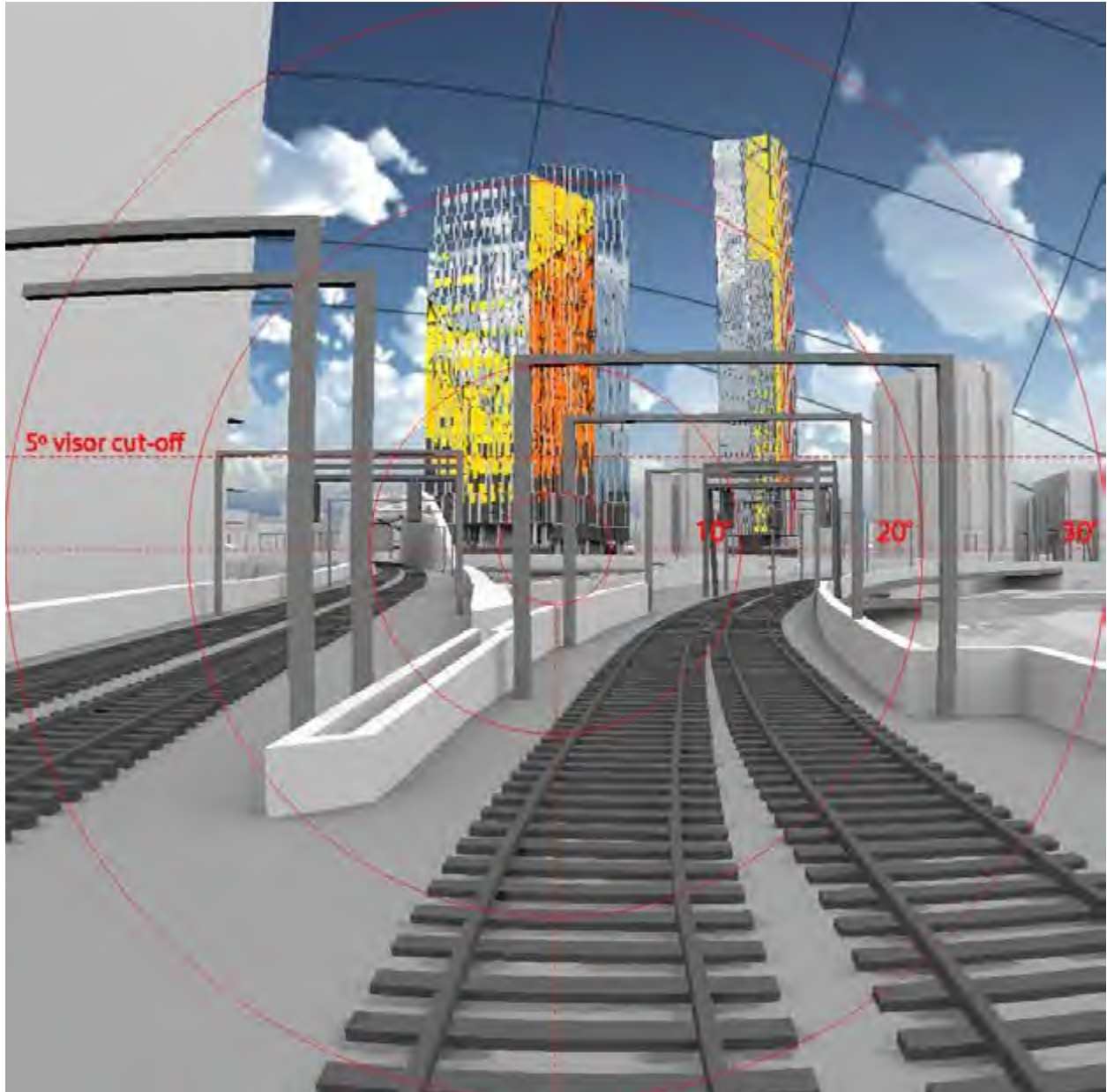


Fig. 505: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

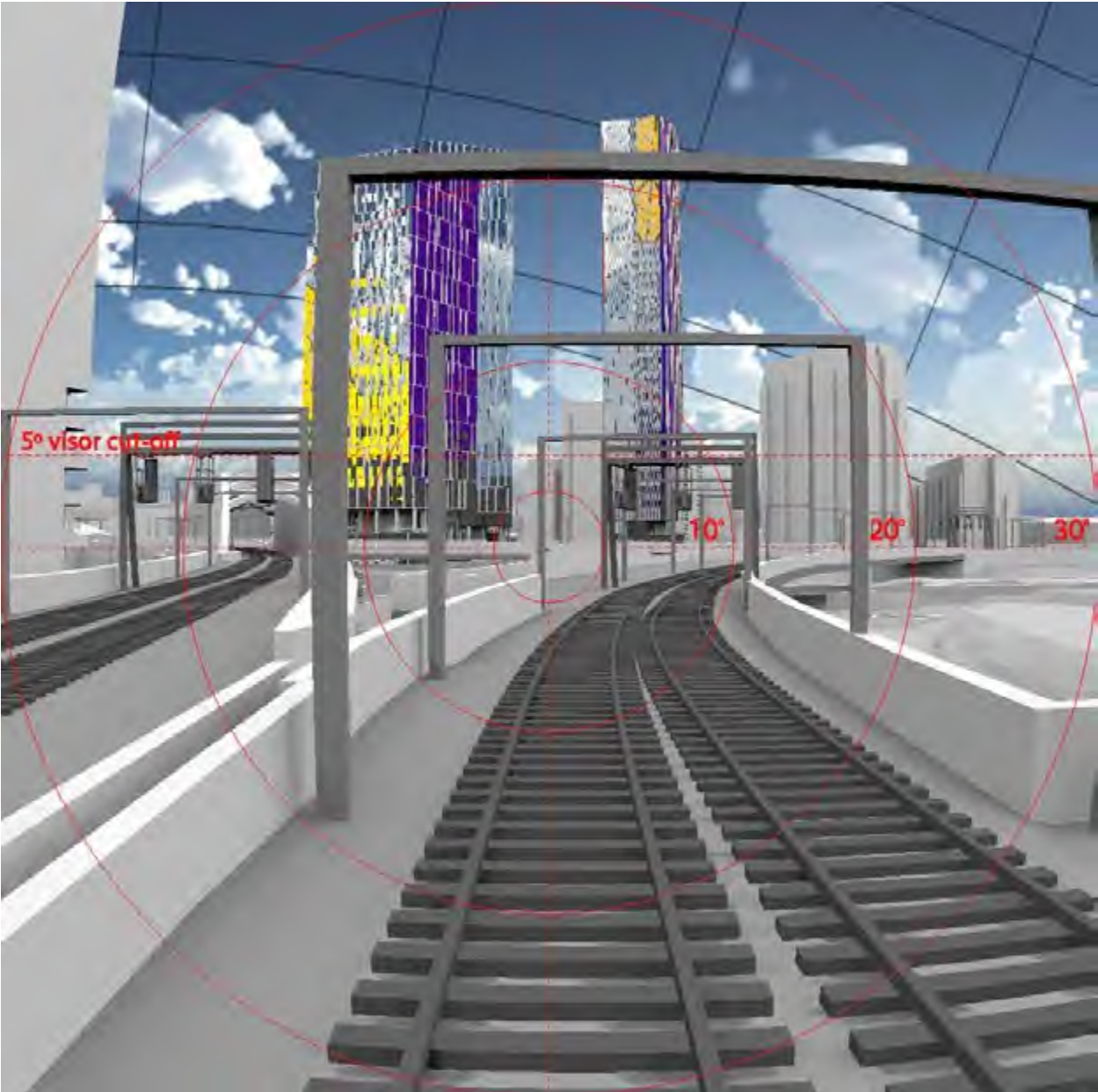


Fig. 506: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

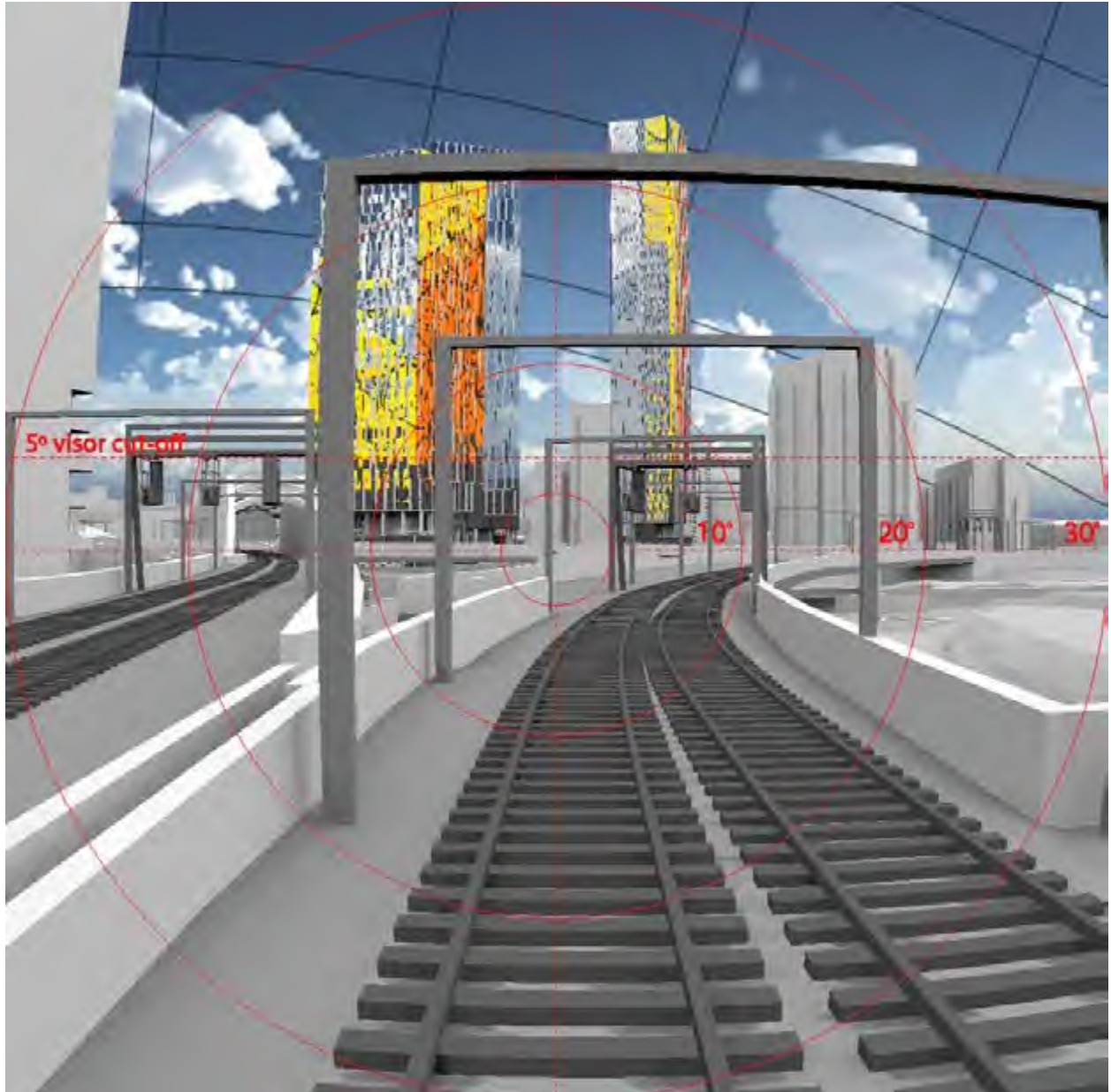


Fig. 507: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

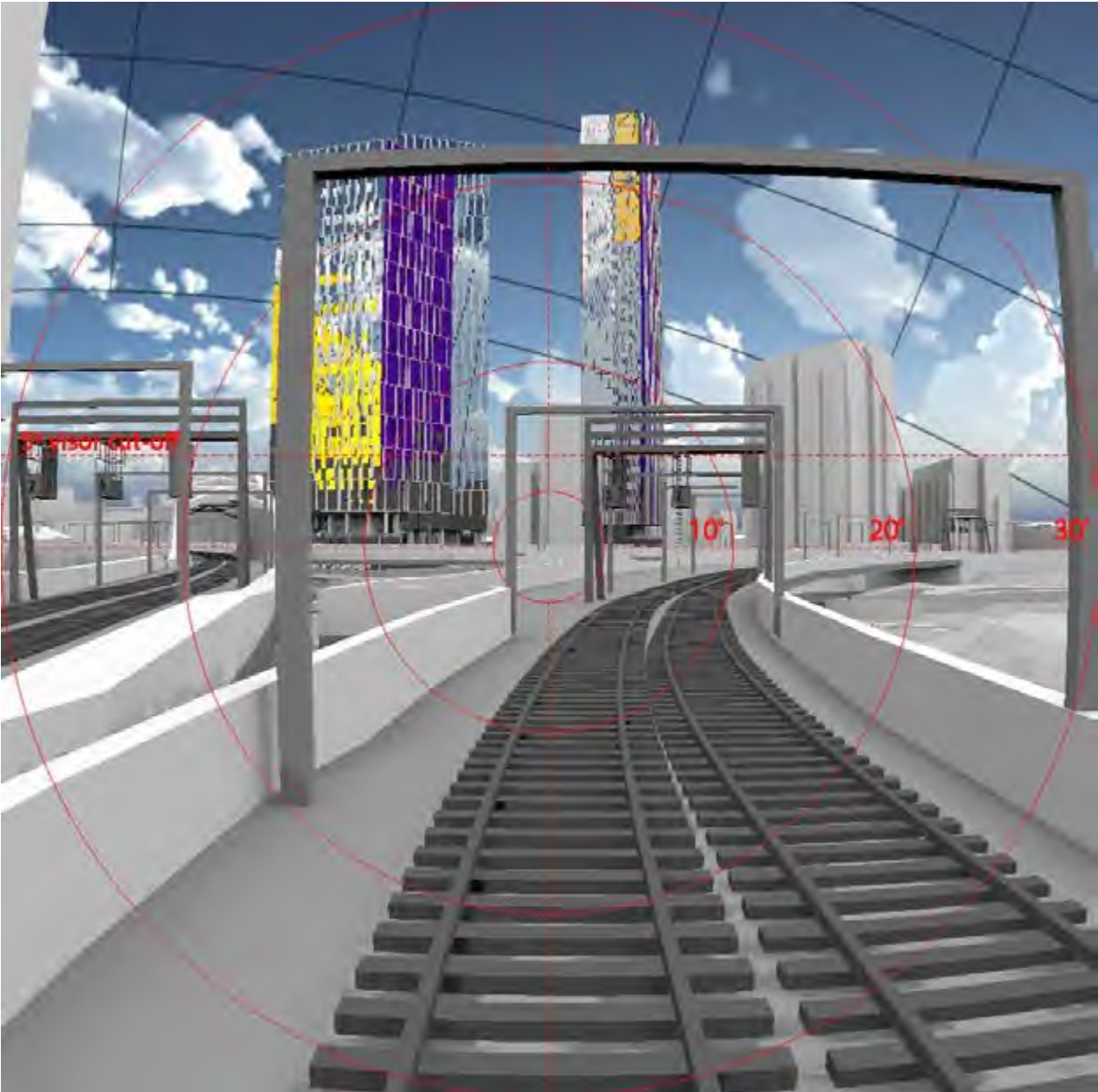


Fig. 508: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

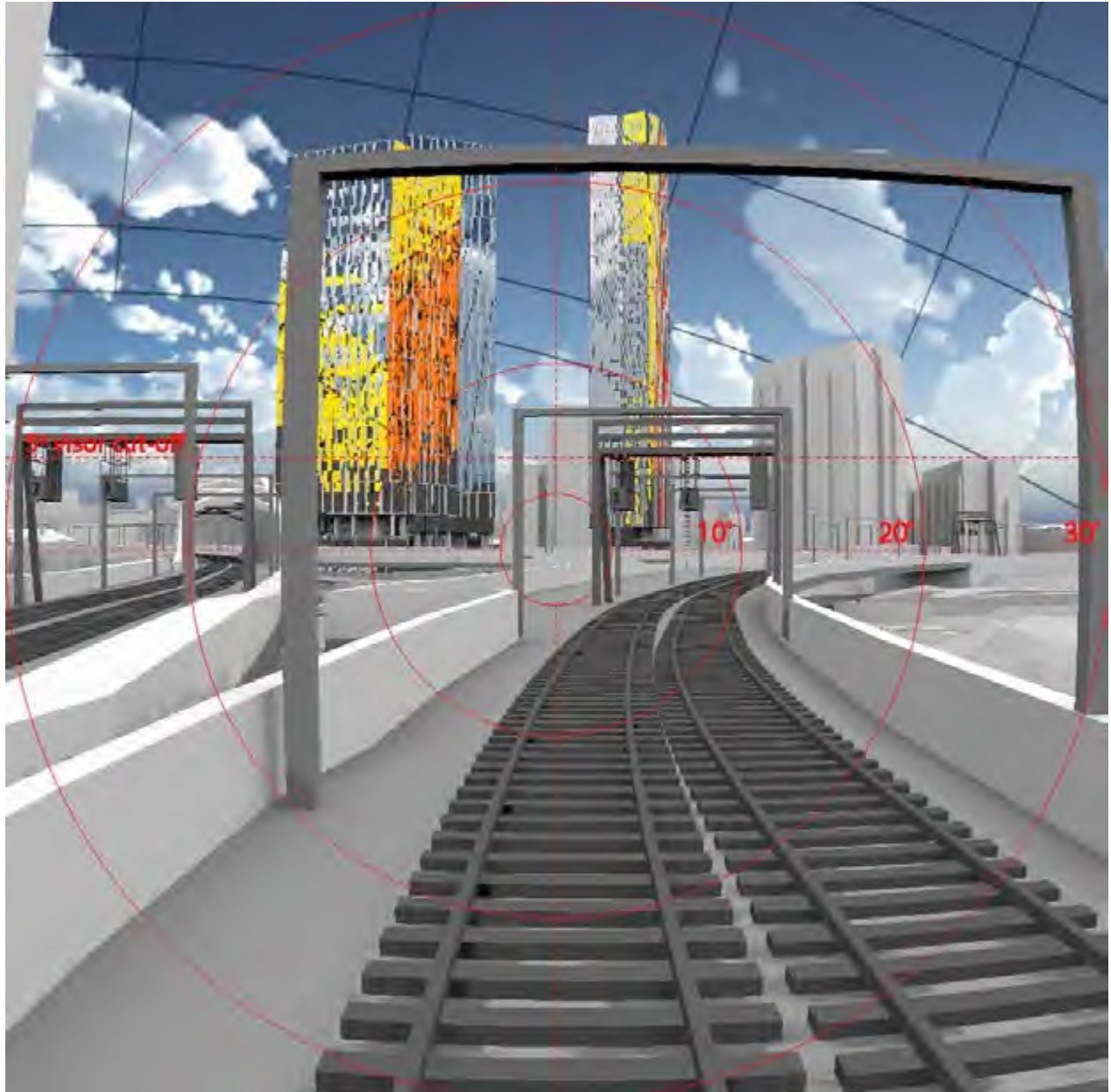


Fig. 509: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

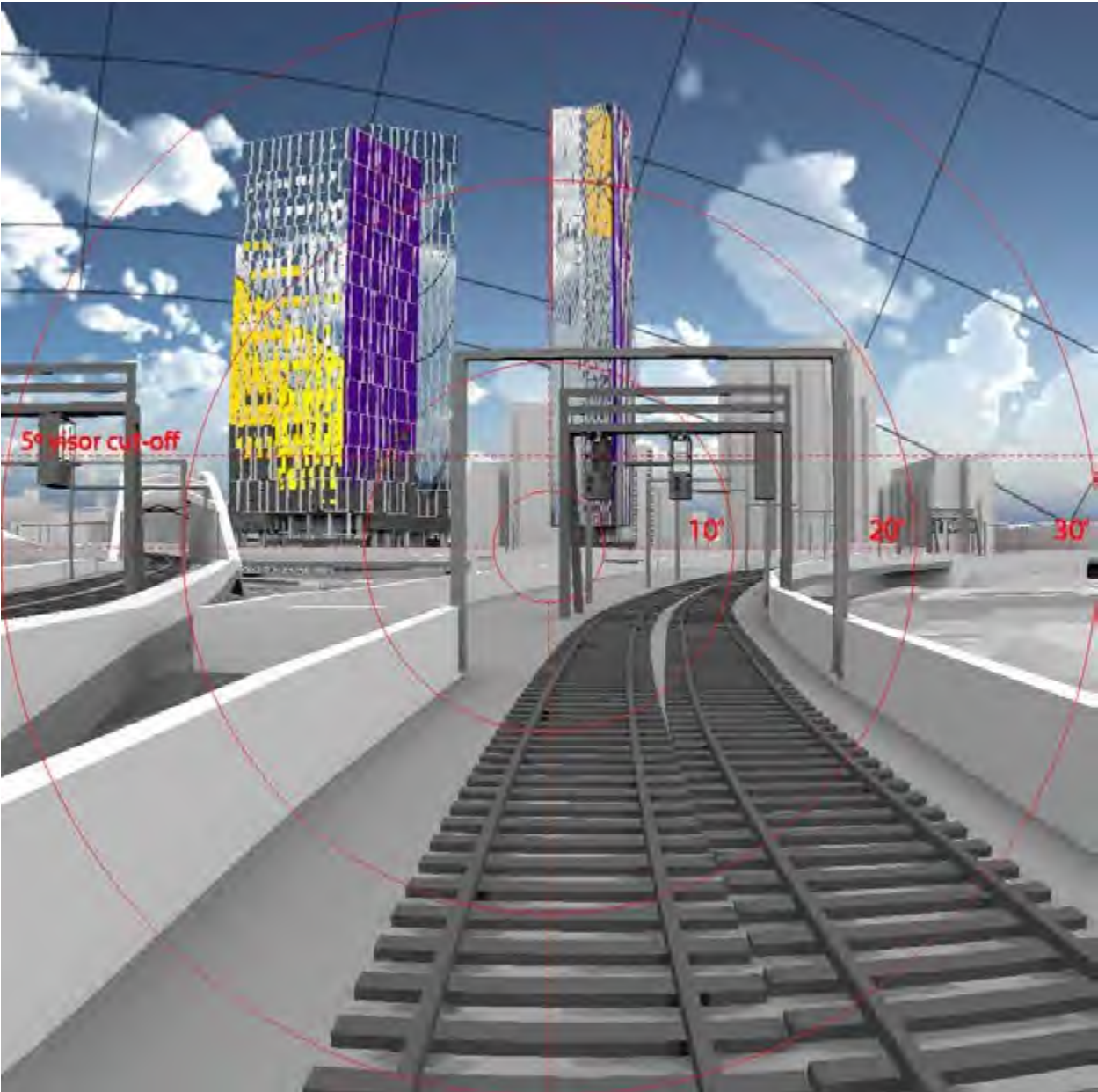


Fig. 510: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

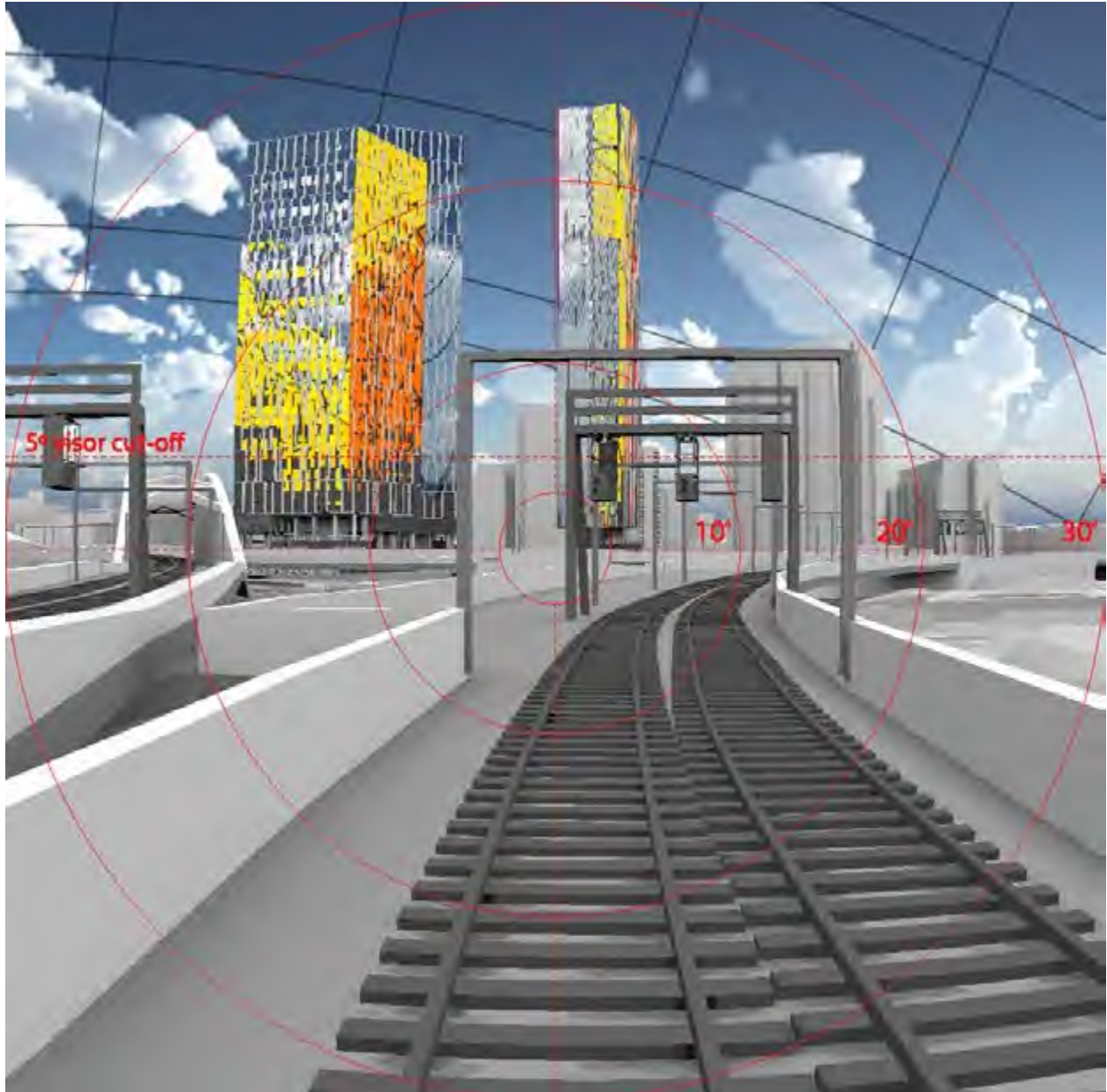


Fig. 511: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

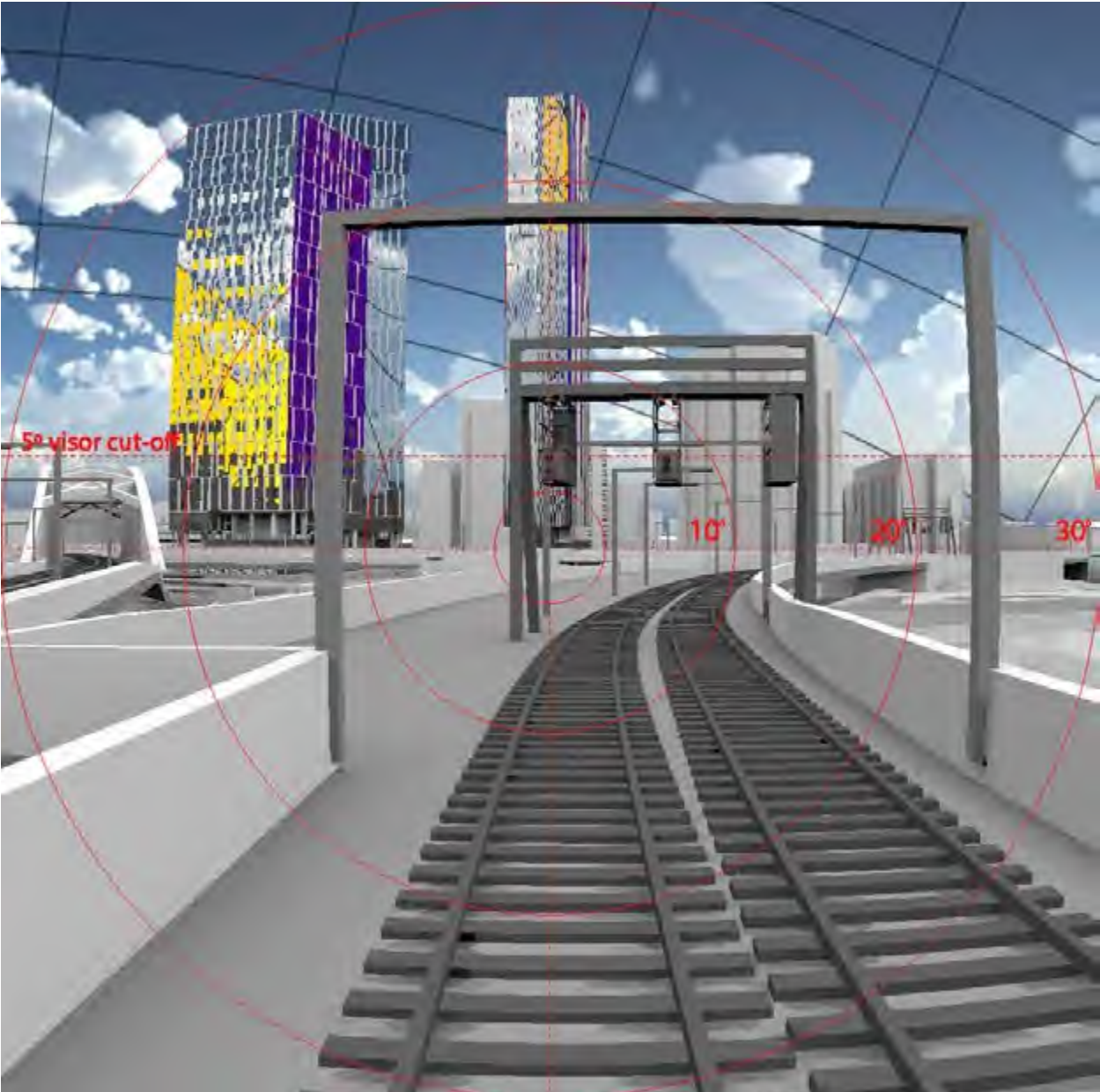


Fig. 512: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

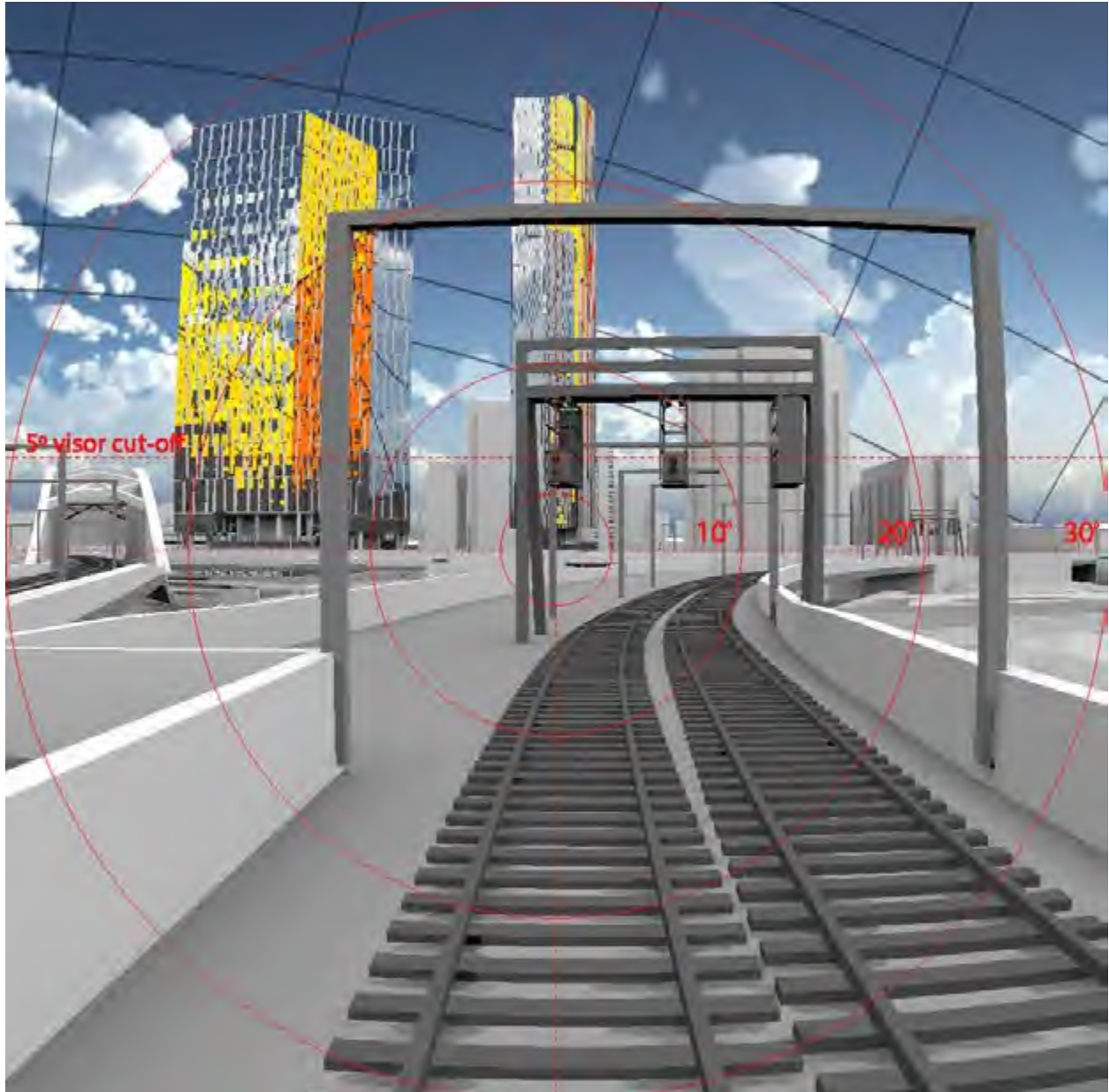


Fig. 513: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL



Fig. 514: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**



Fig. 515: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

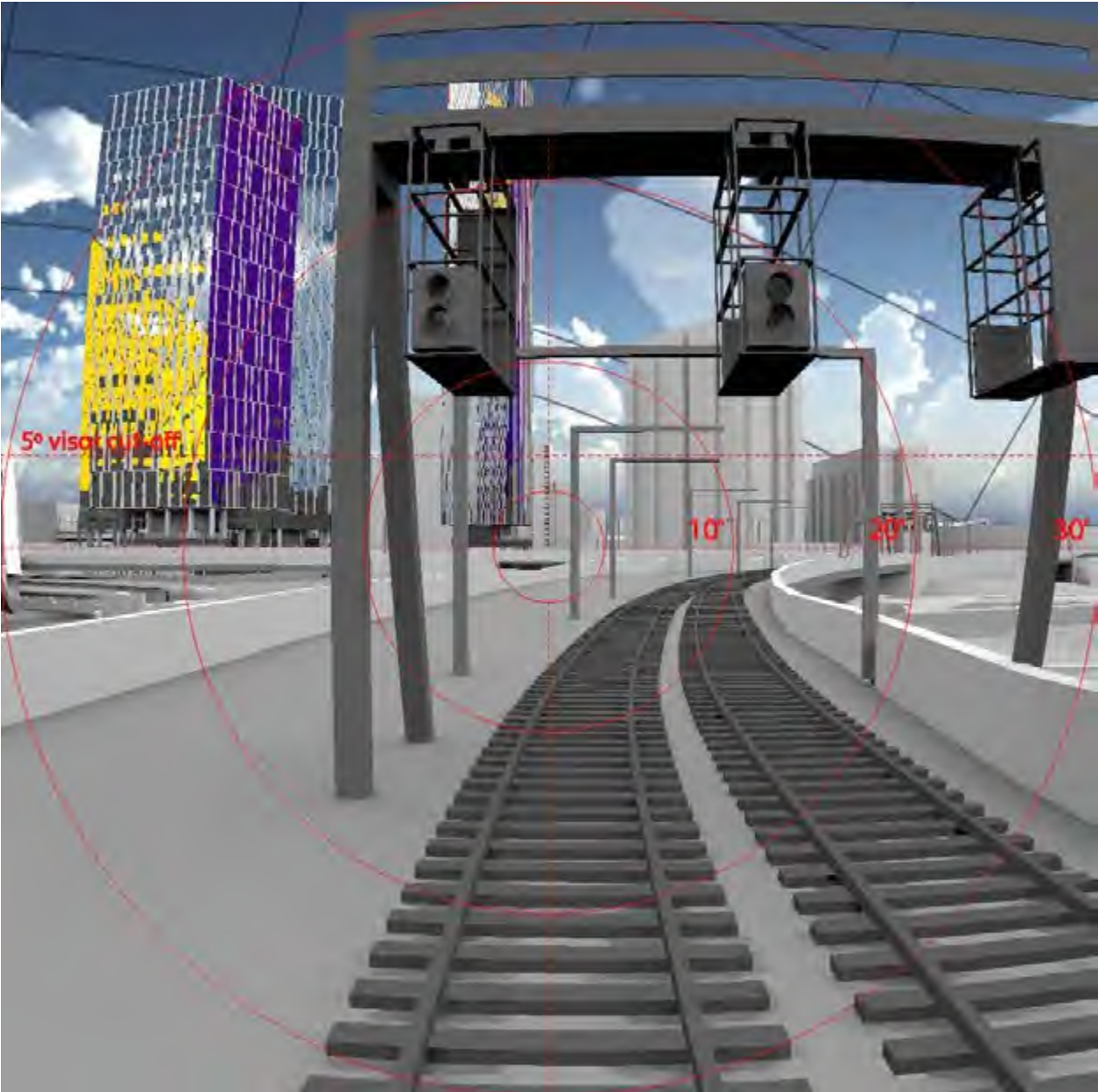


Fig. 516: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT- APPROX 10M FROM SIGNAL**

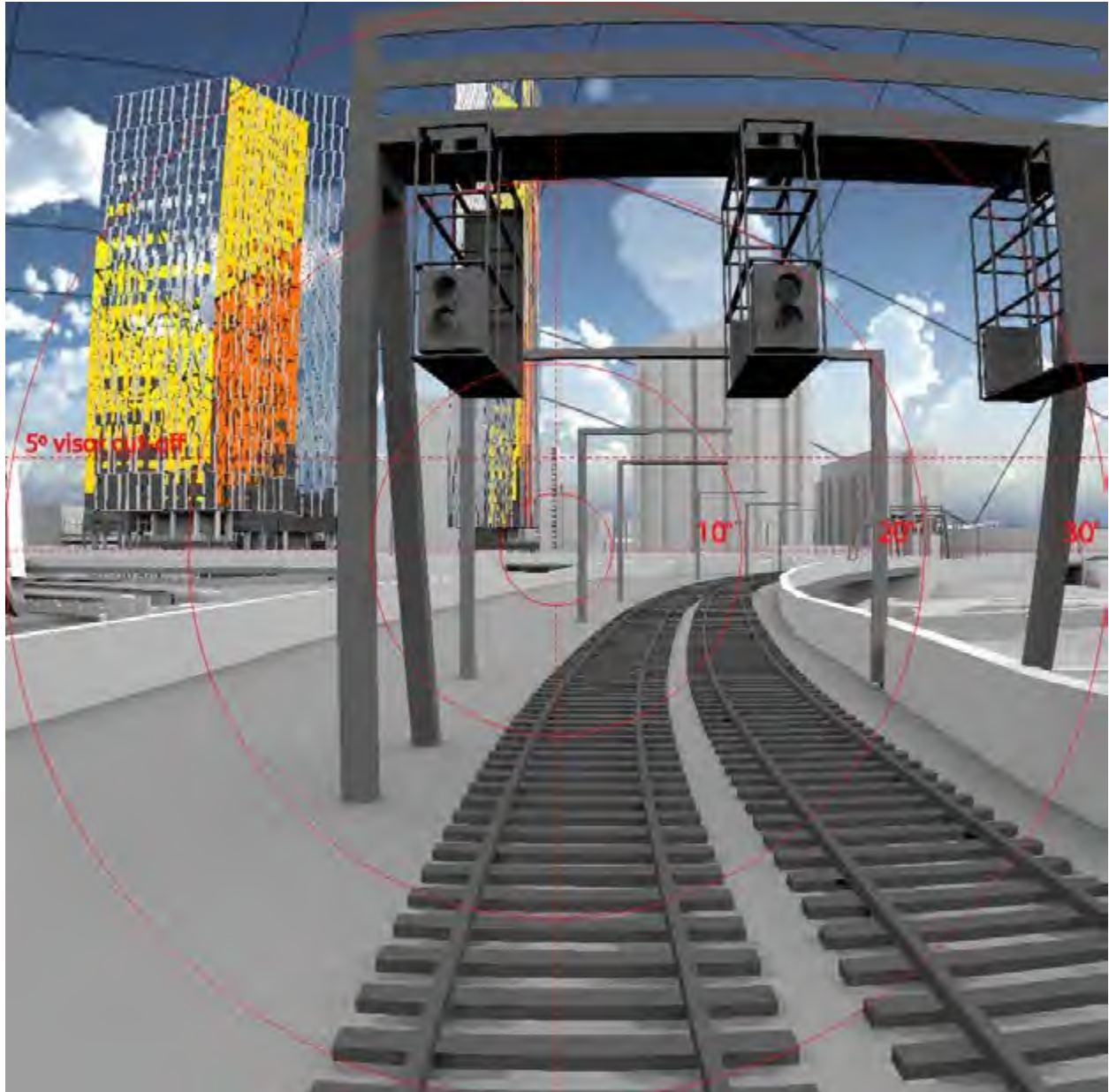


Fig. 517: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAIGHT

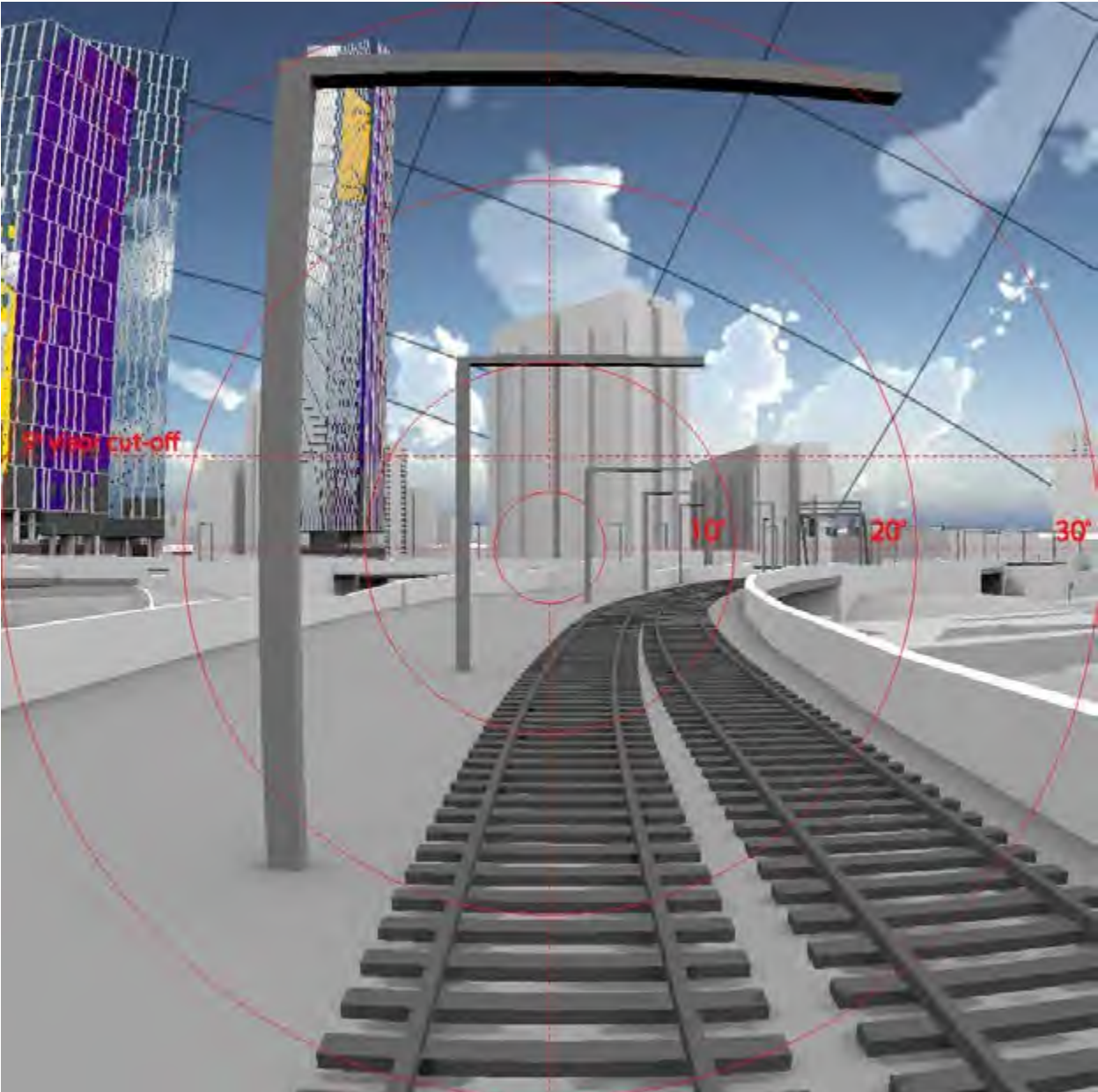
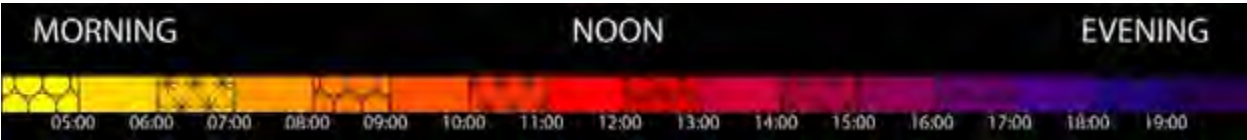


Fig. 518: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAIGHT**

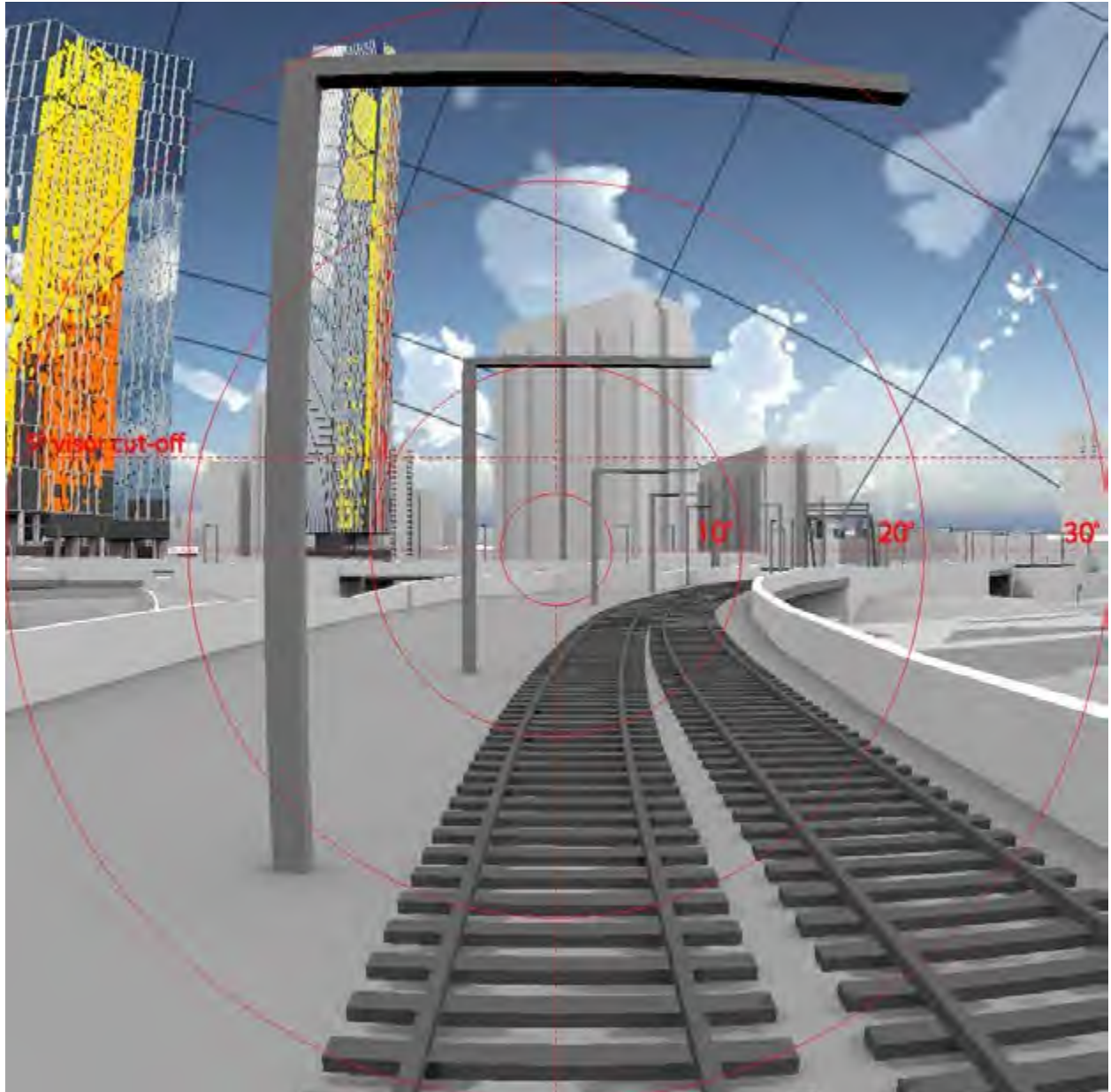


Fig. 519: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-260 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 250M FROM SITE
LOOKING STRAGHT

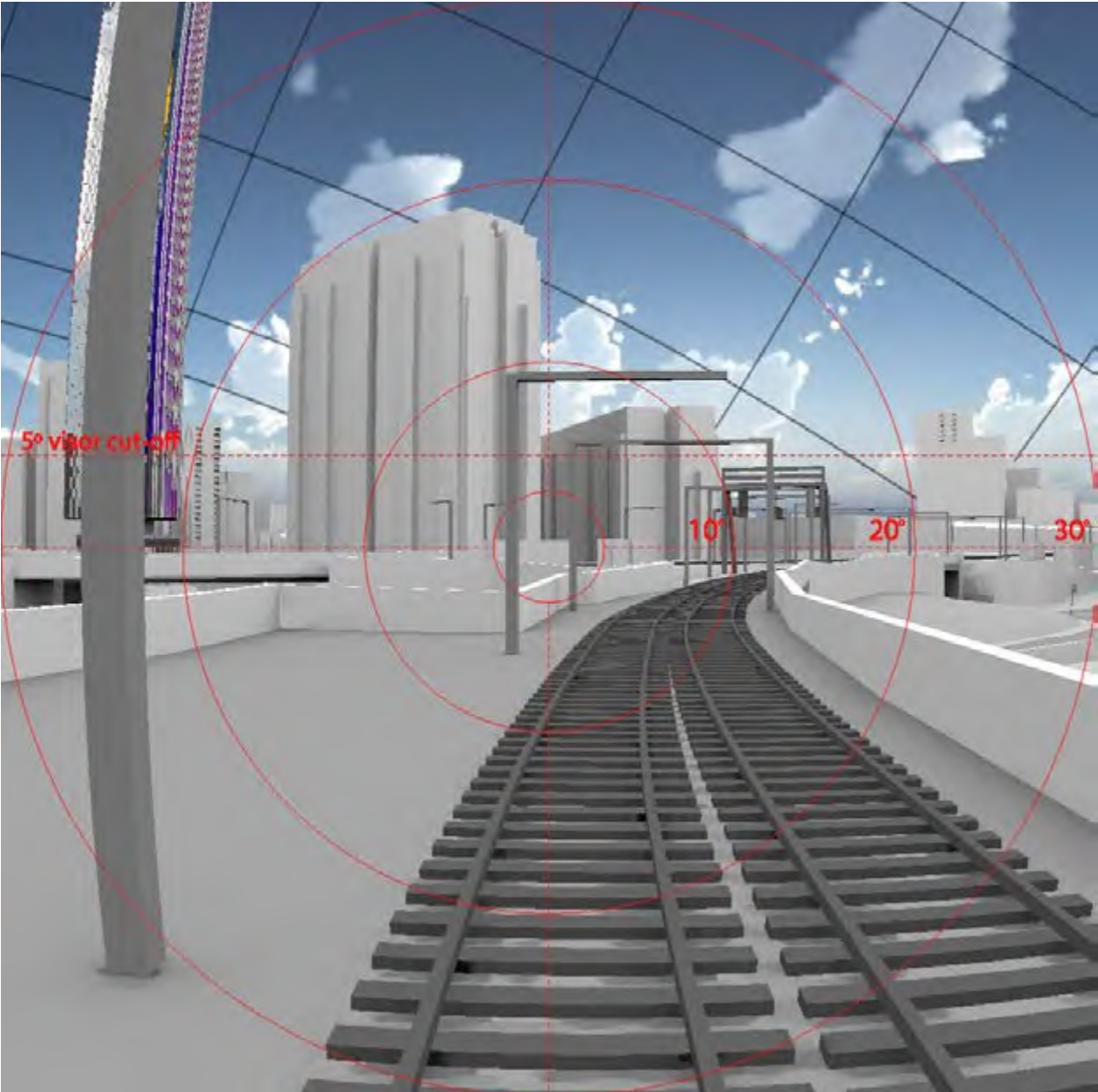


Fig. 520: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-260 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 250M FROM SITE
LOOKING STRAGHT**

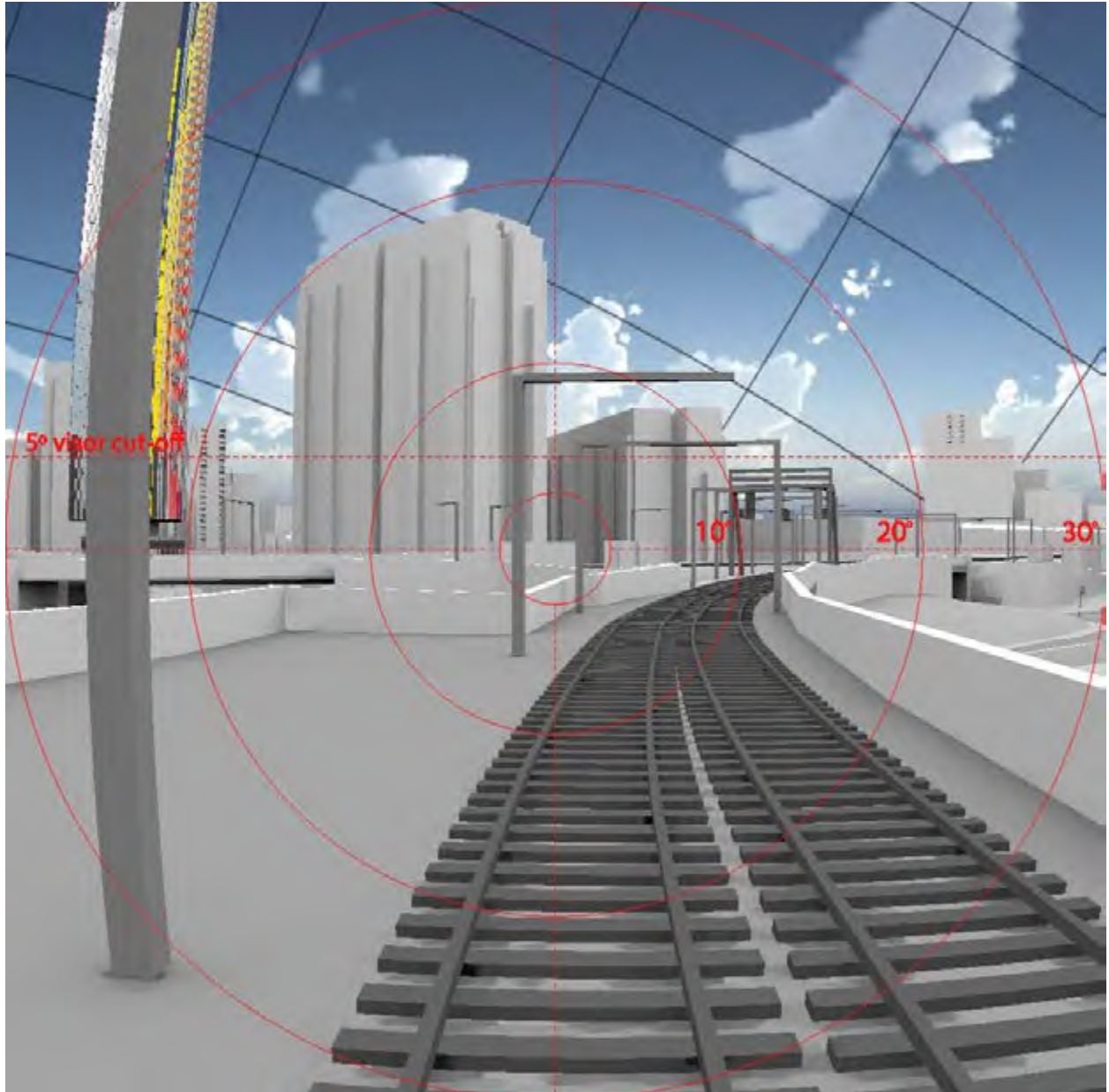


Fig. 521: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT

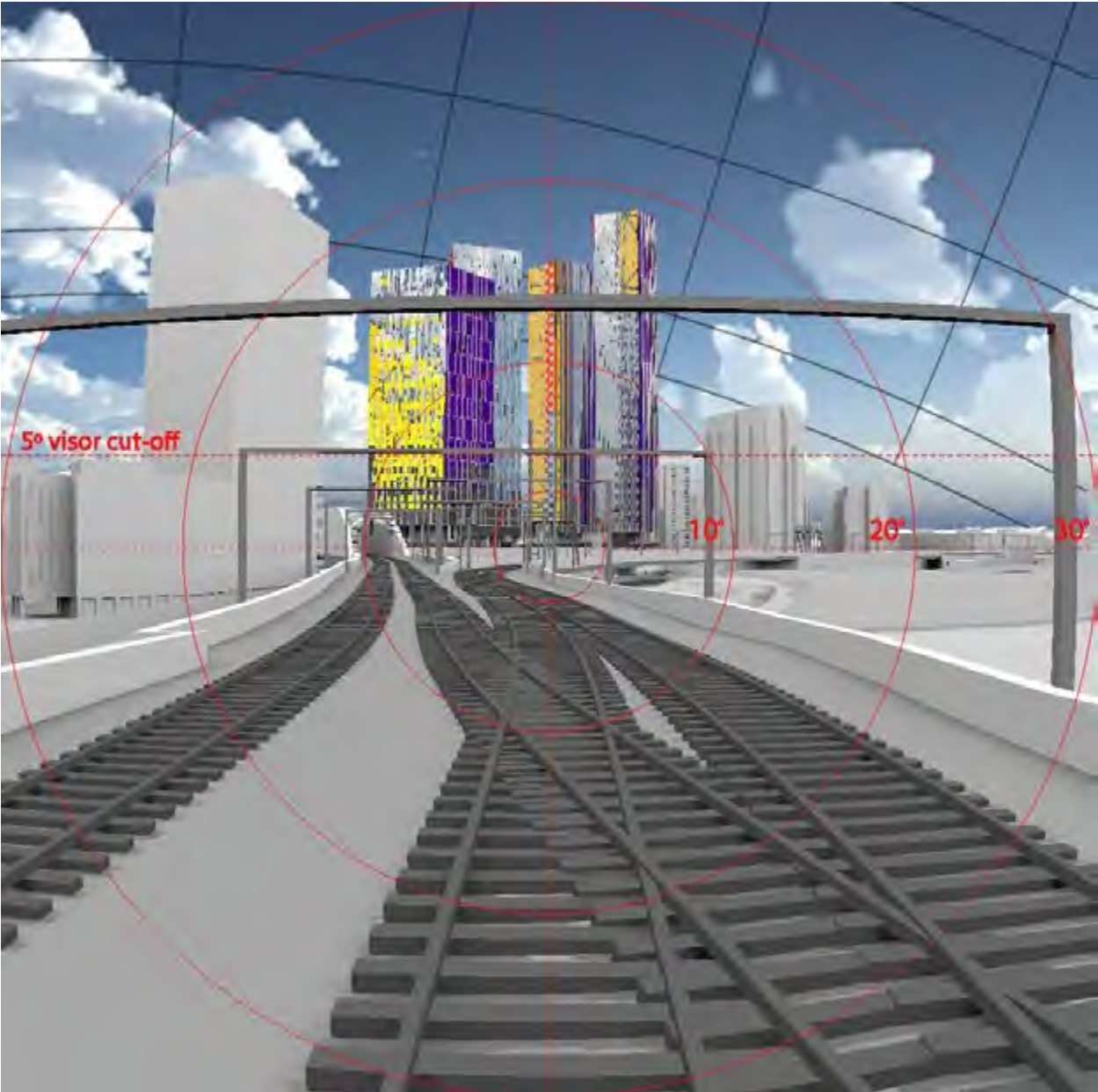


Fig. 522: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-10 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 500M FROM SITE
LOOKING STRAGHT**

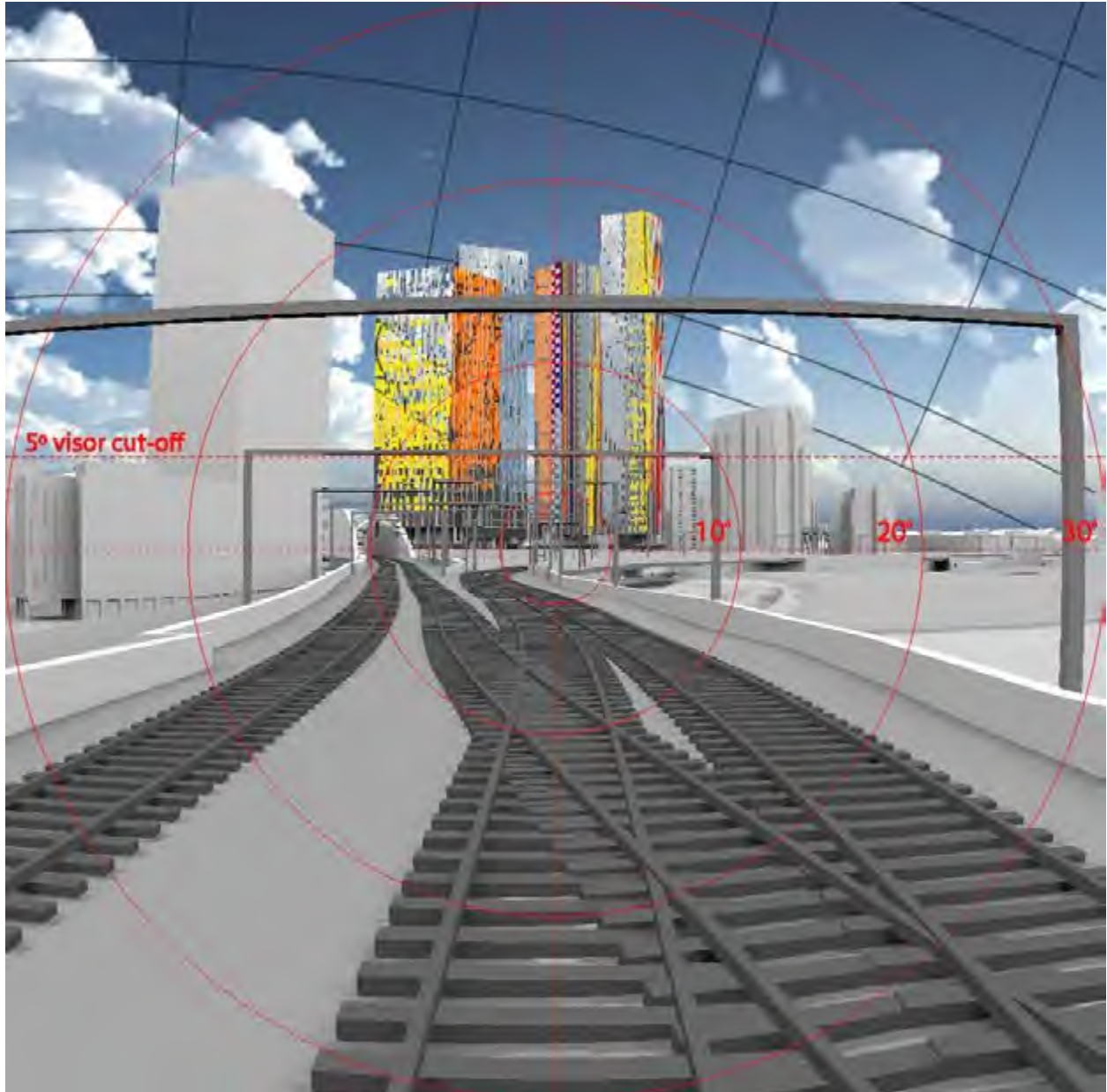


Fig. 523: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT

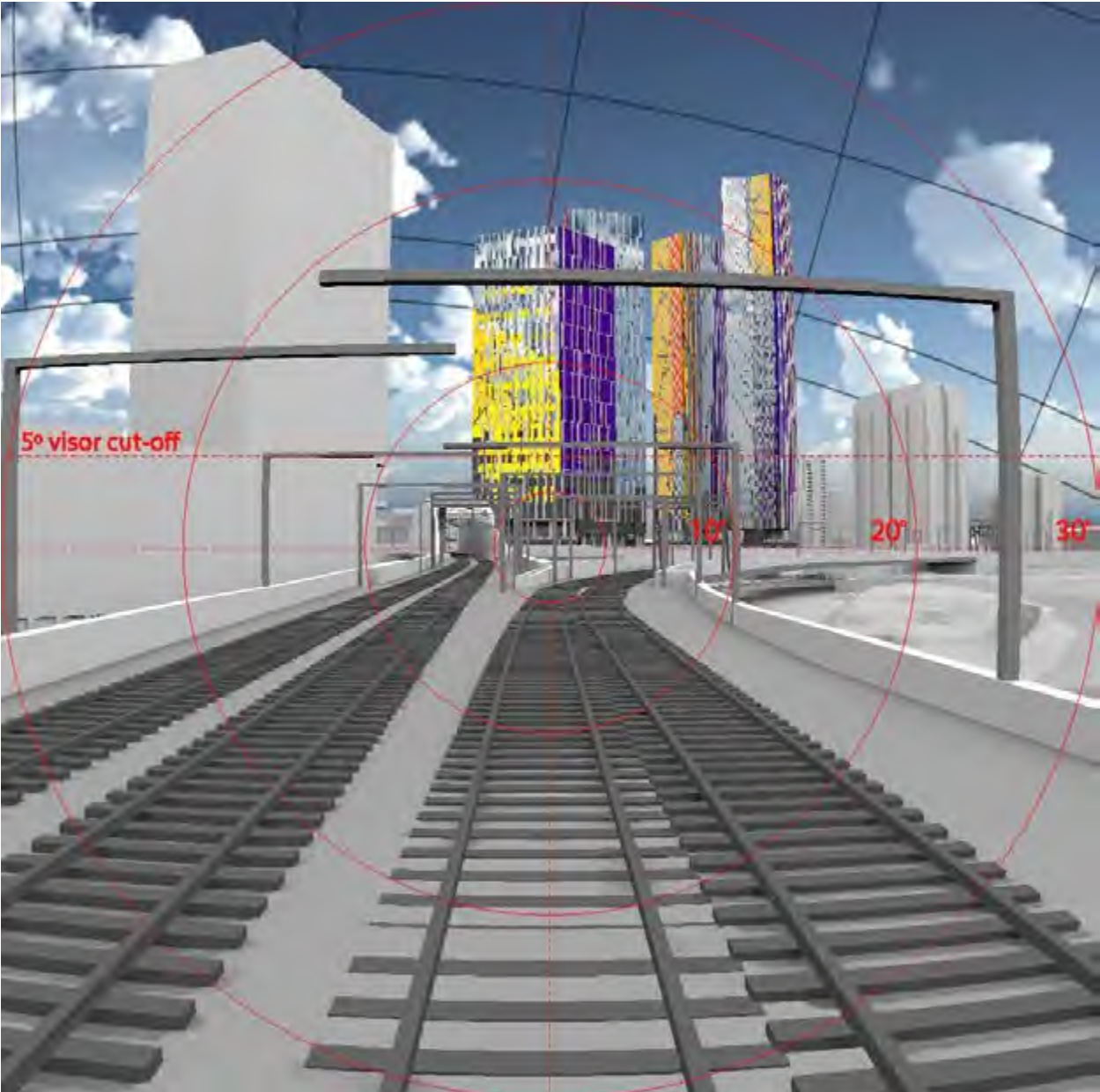


Fig. 524: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-60 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 450M FROM SITE
LOOKING STRAGHT**

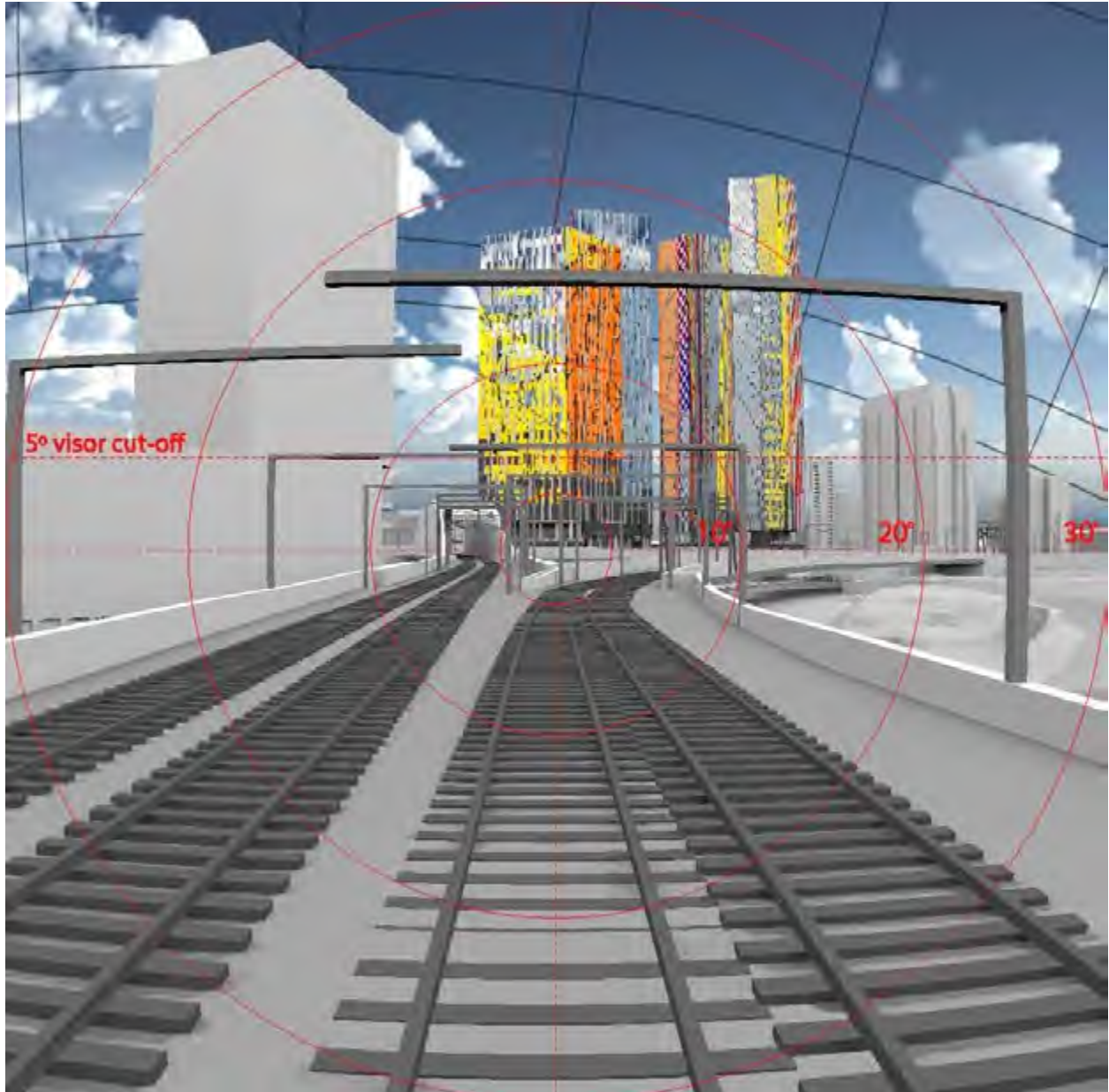


Fig. 525: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

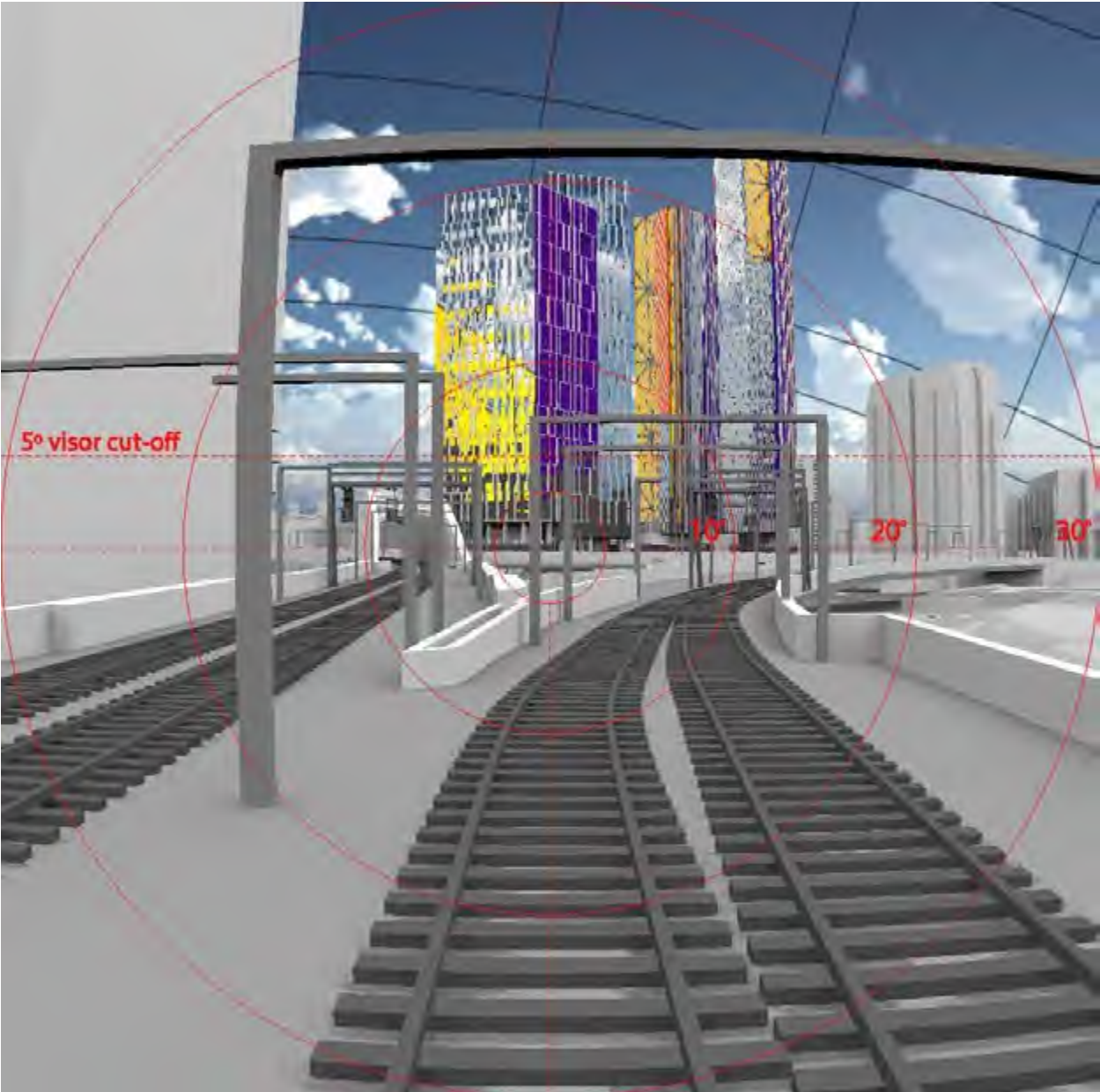


Fig. 526: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-110 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

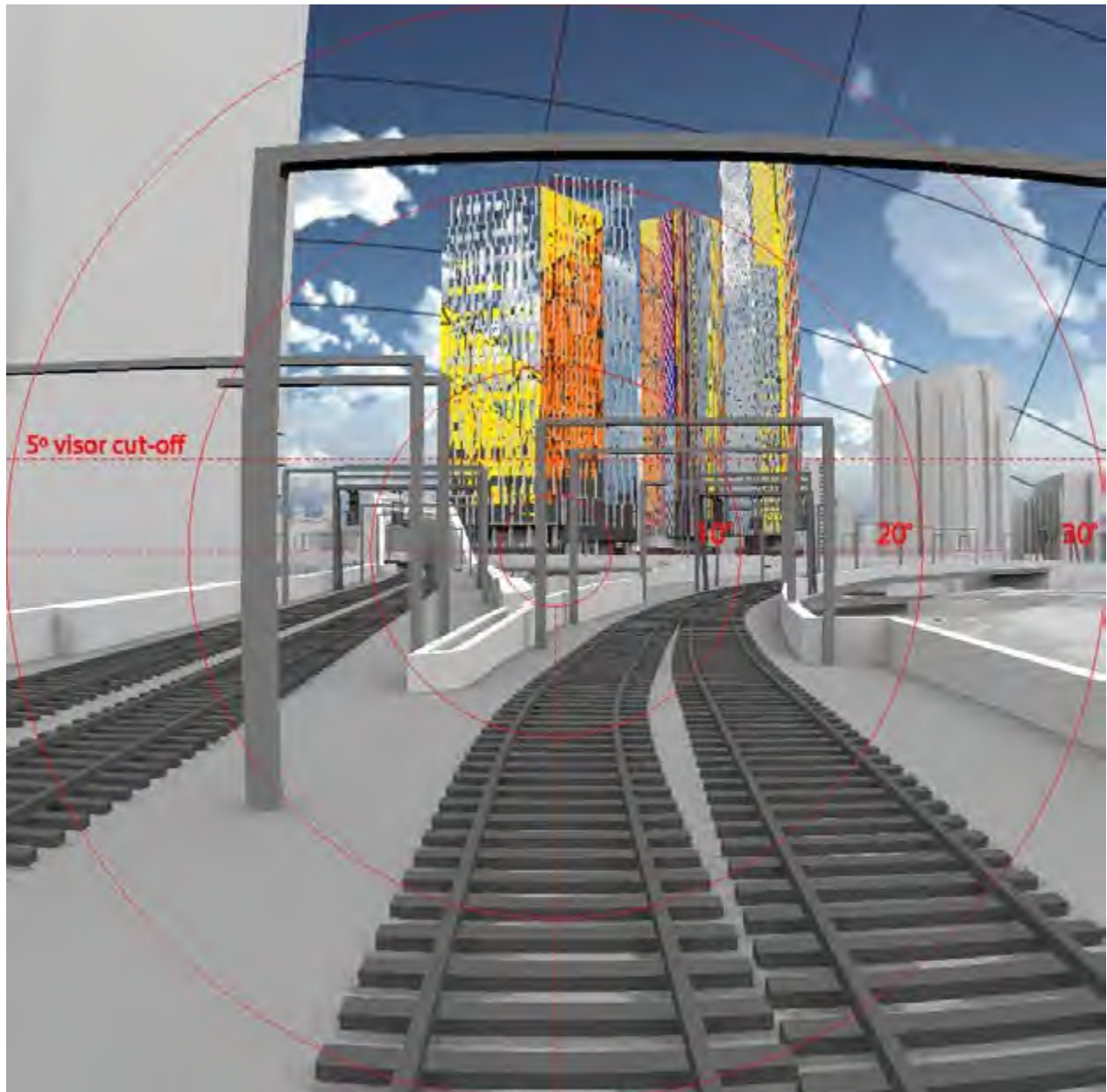


Fig. 527: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

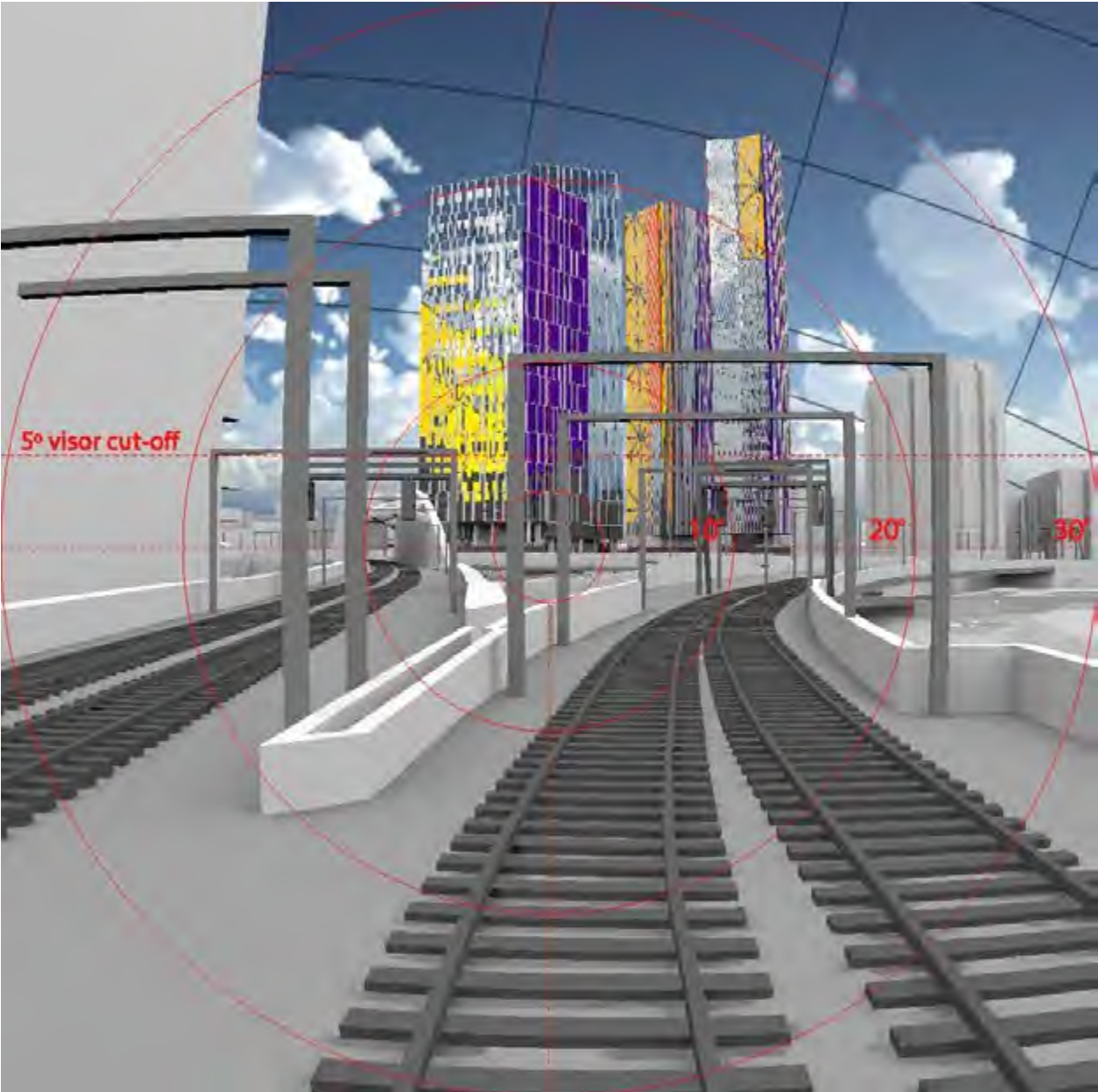


Fig. 528: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-120 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

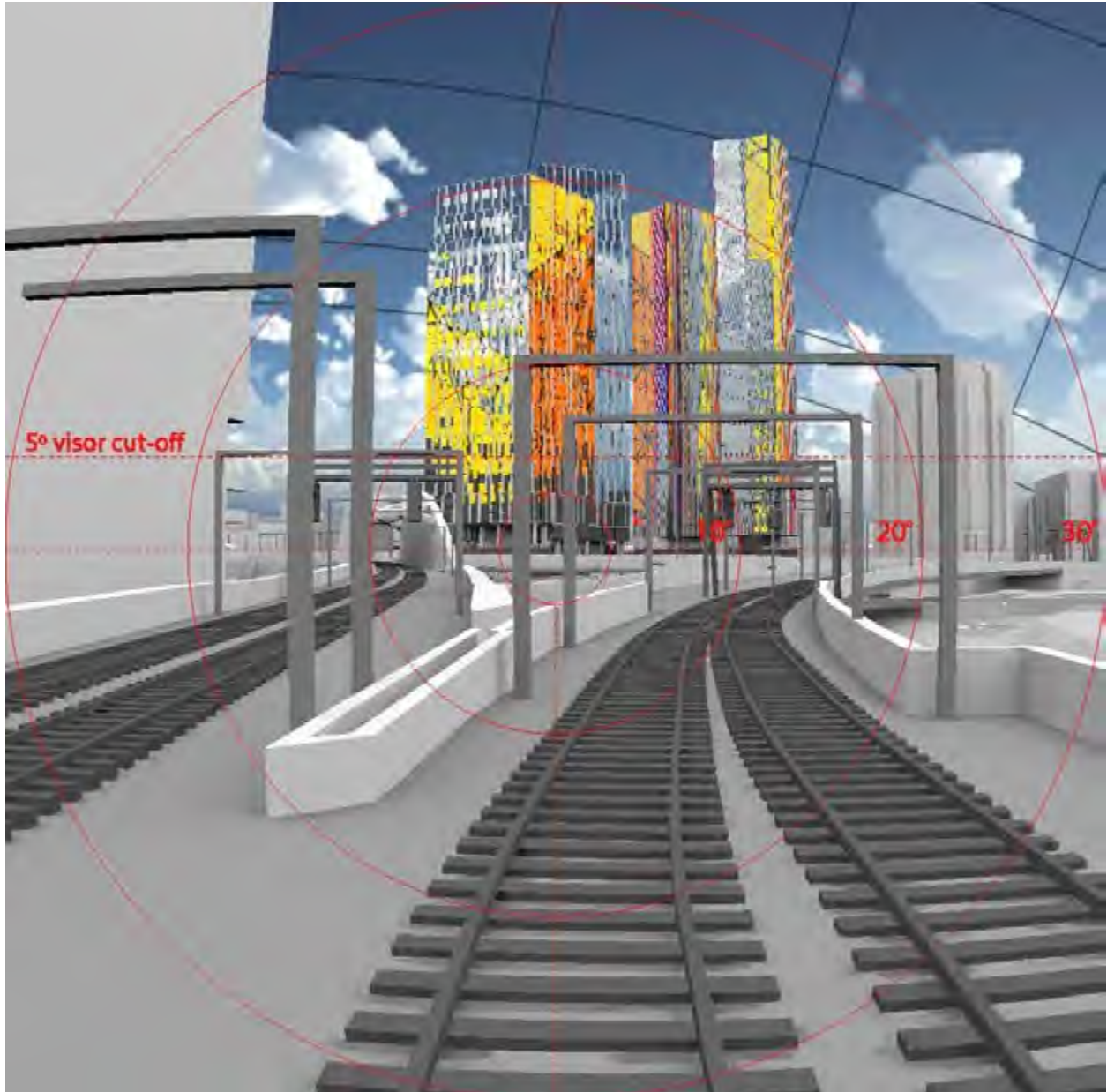


Fig. 529: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

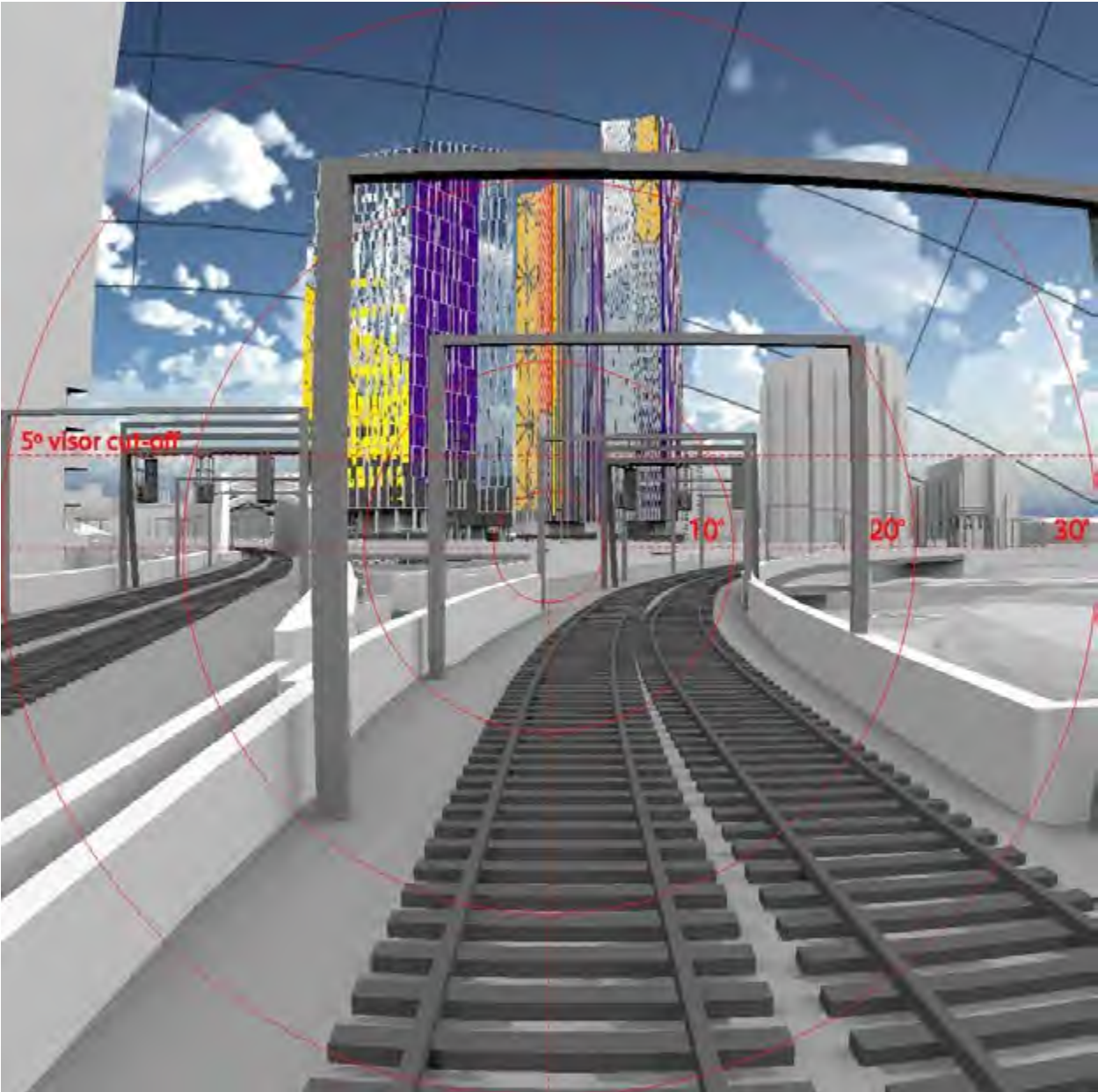


Fig. 530: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-130 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

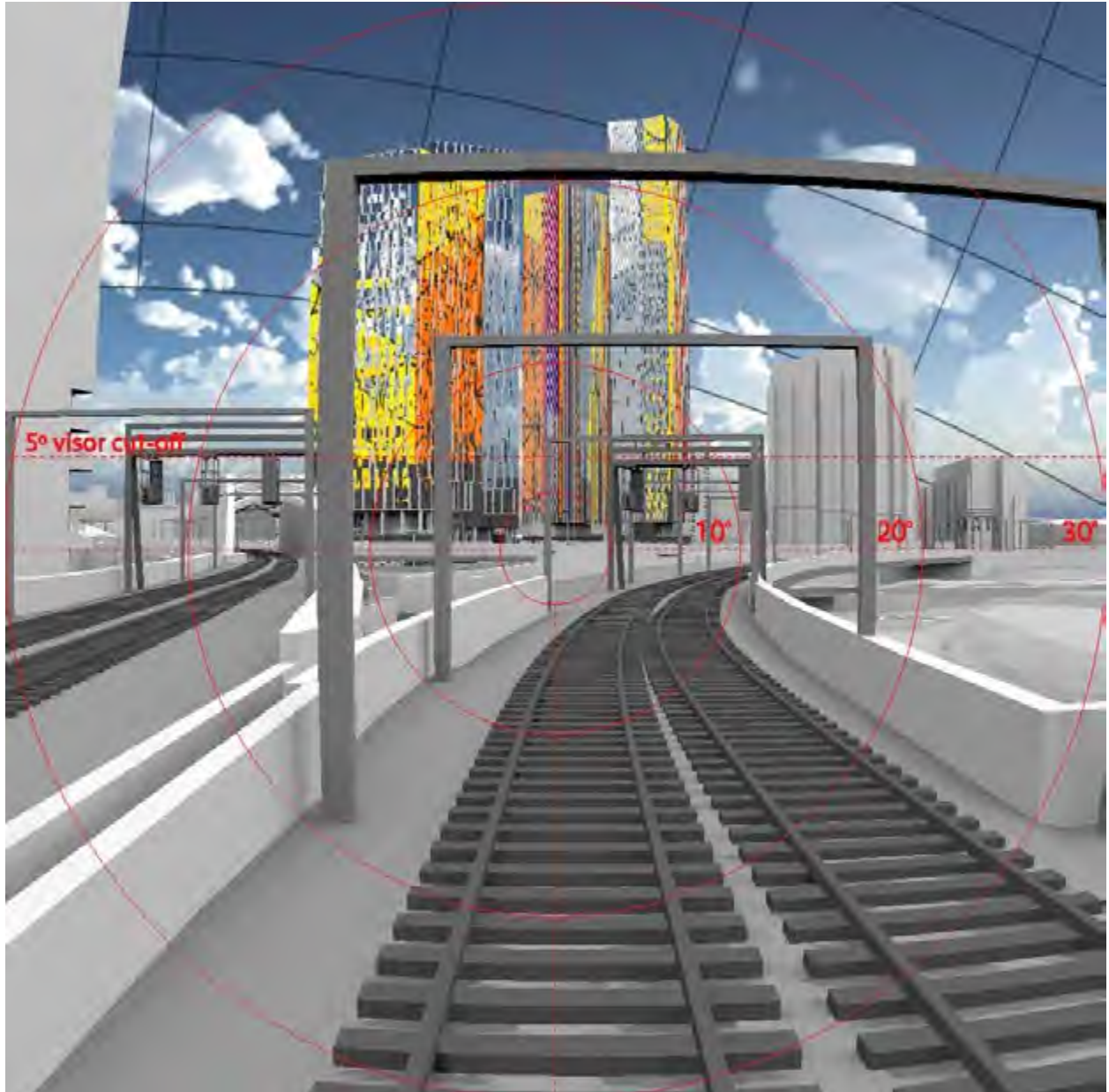


Fig. 531: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

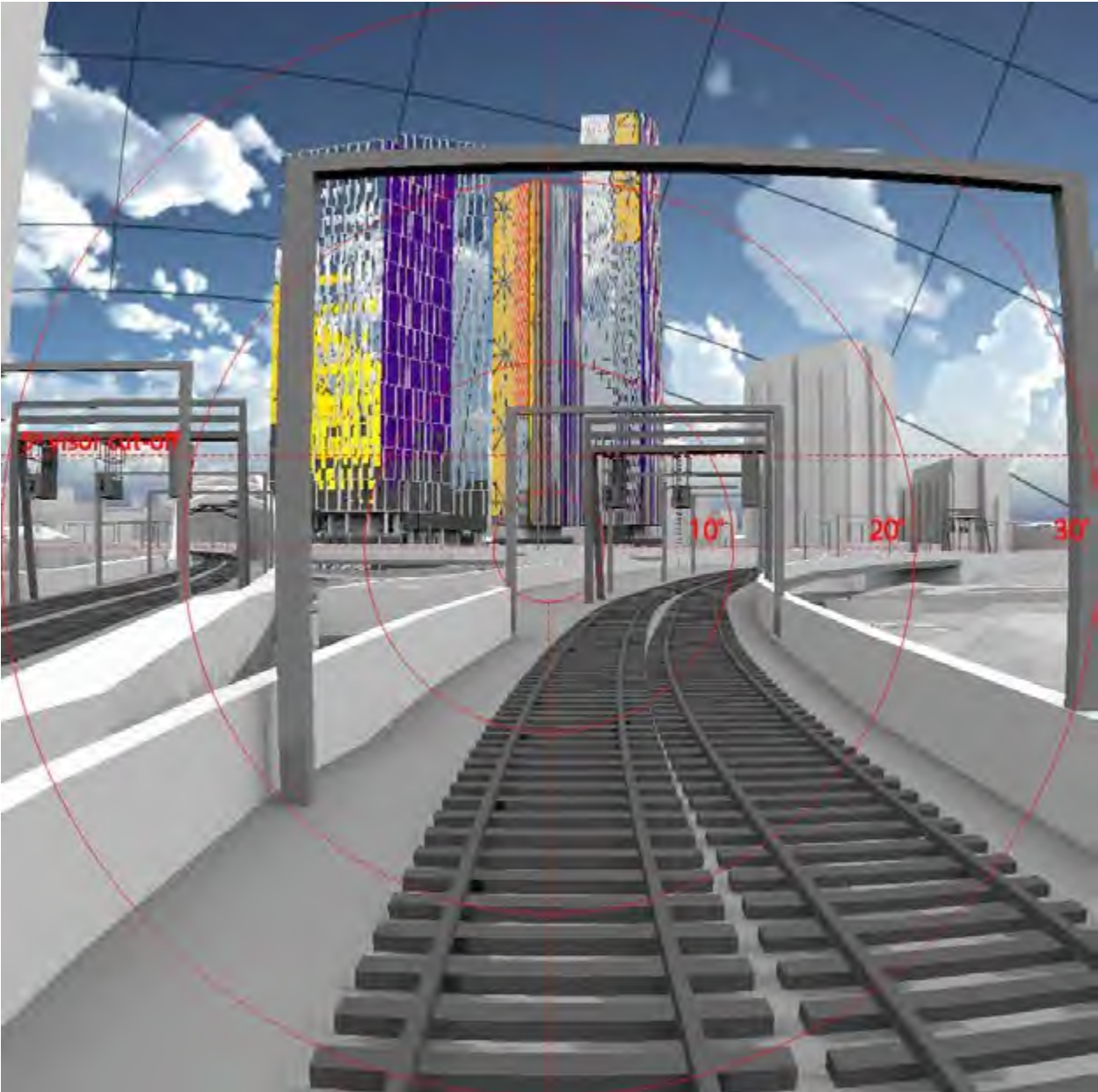


Fig. 532: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-140 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

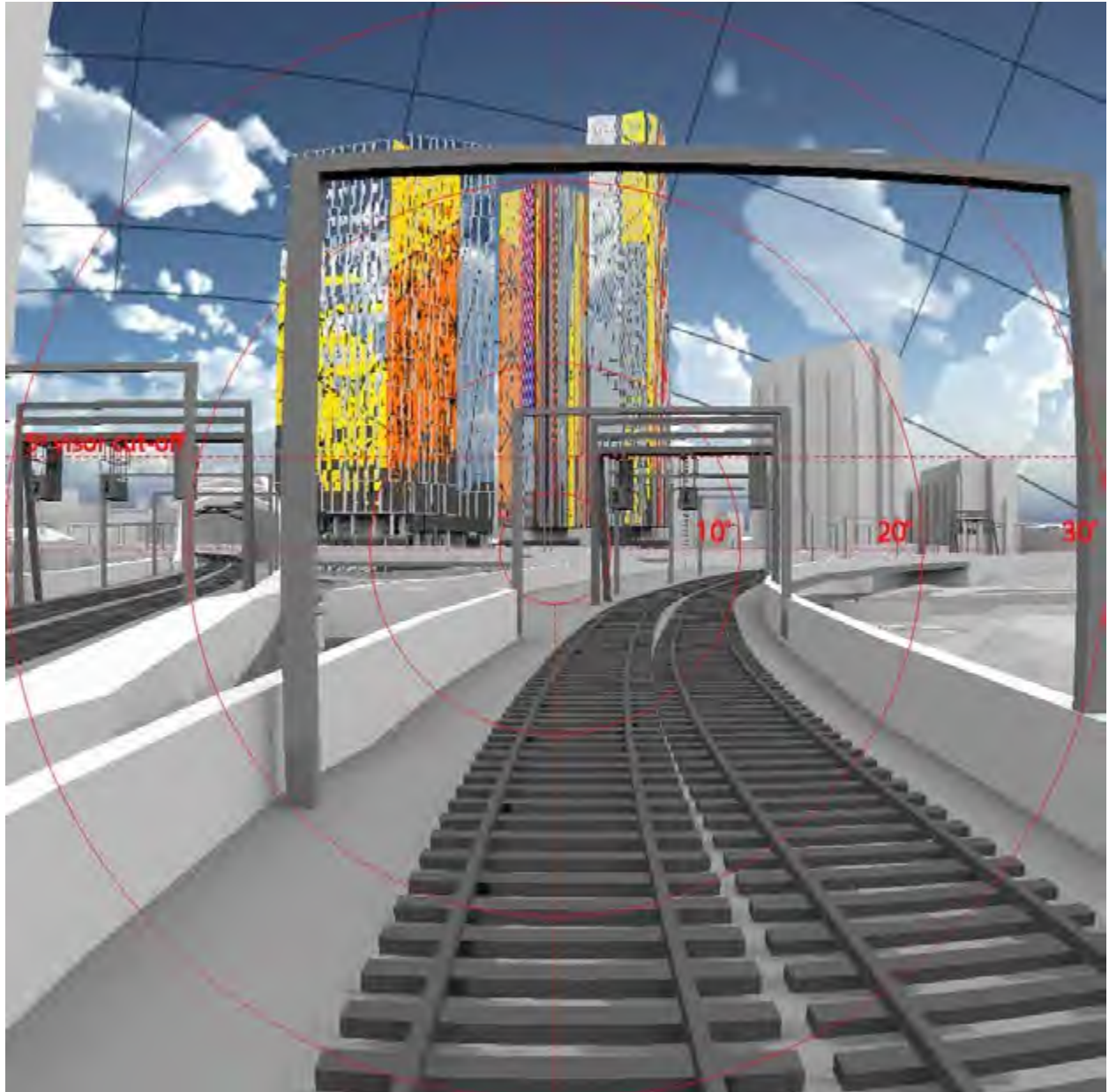


Fig. 533: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

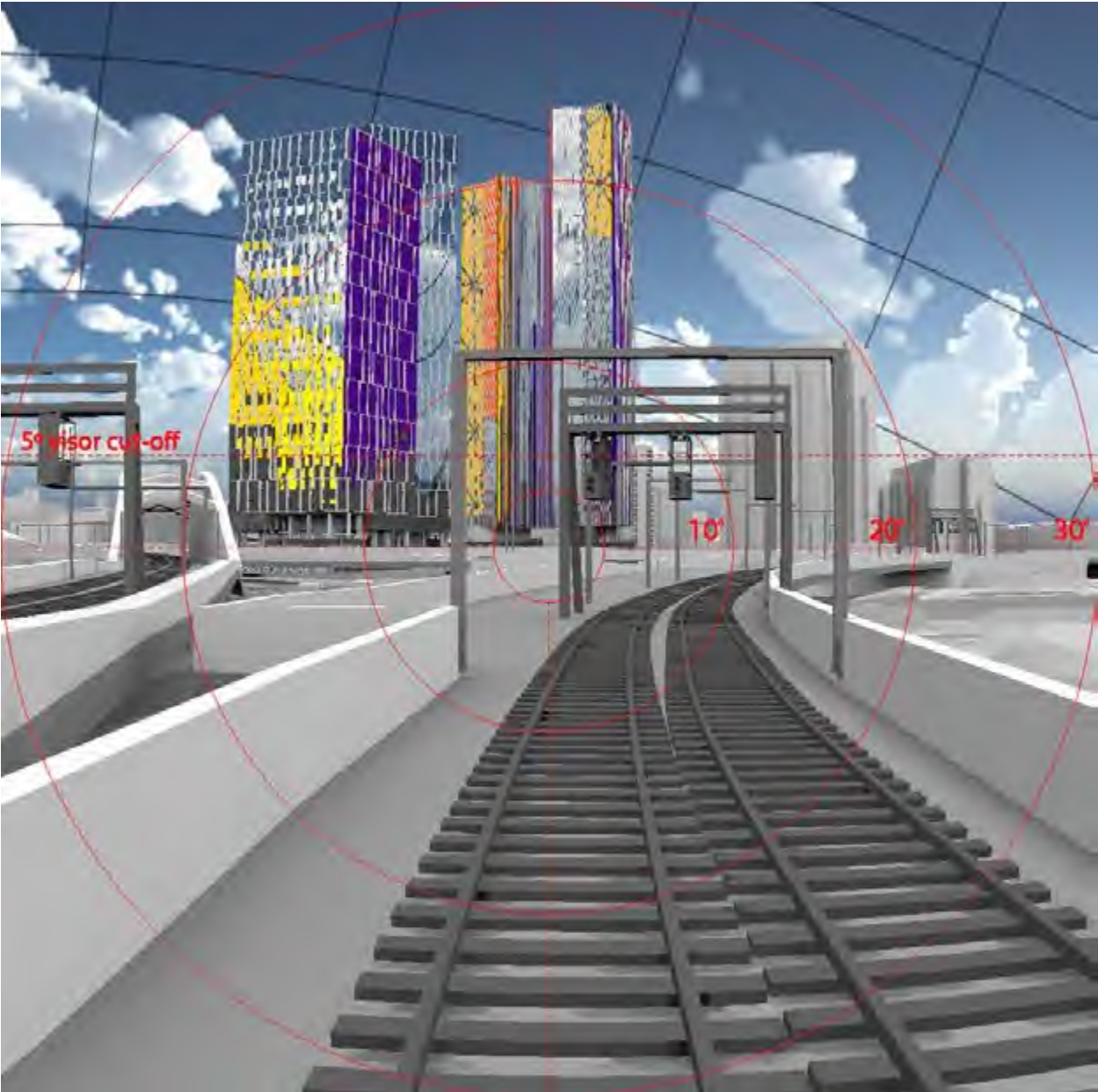


Fig. 534: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-150 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**



Fig. 535: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

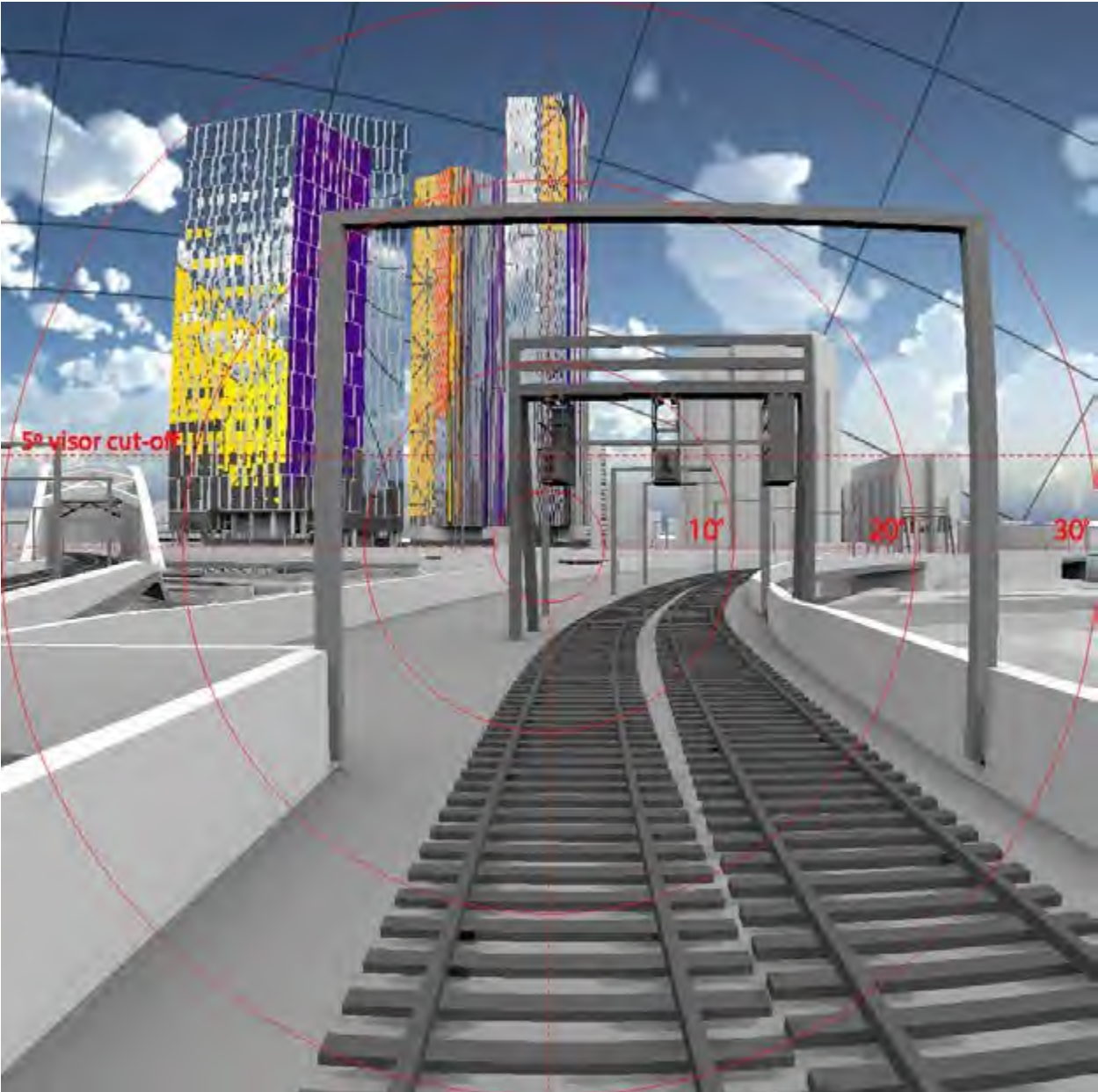


Fig. 536: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-160 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

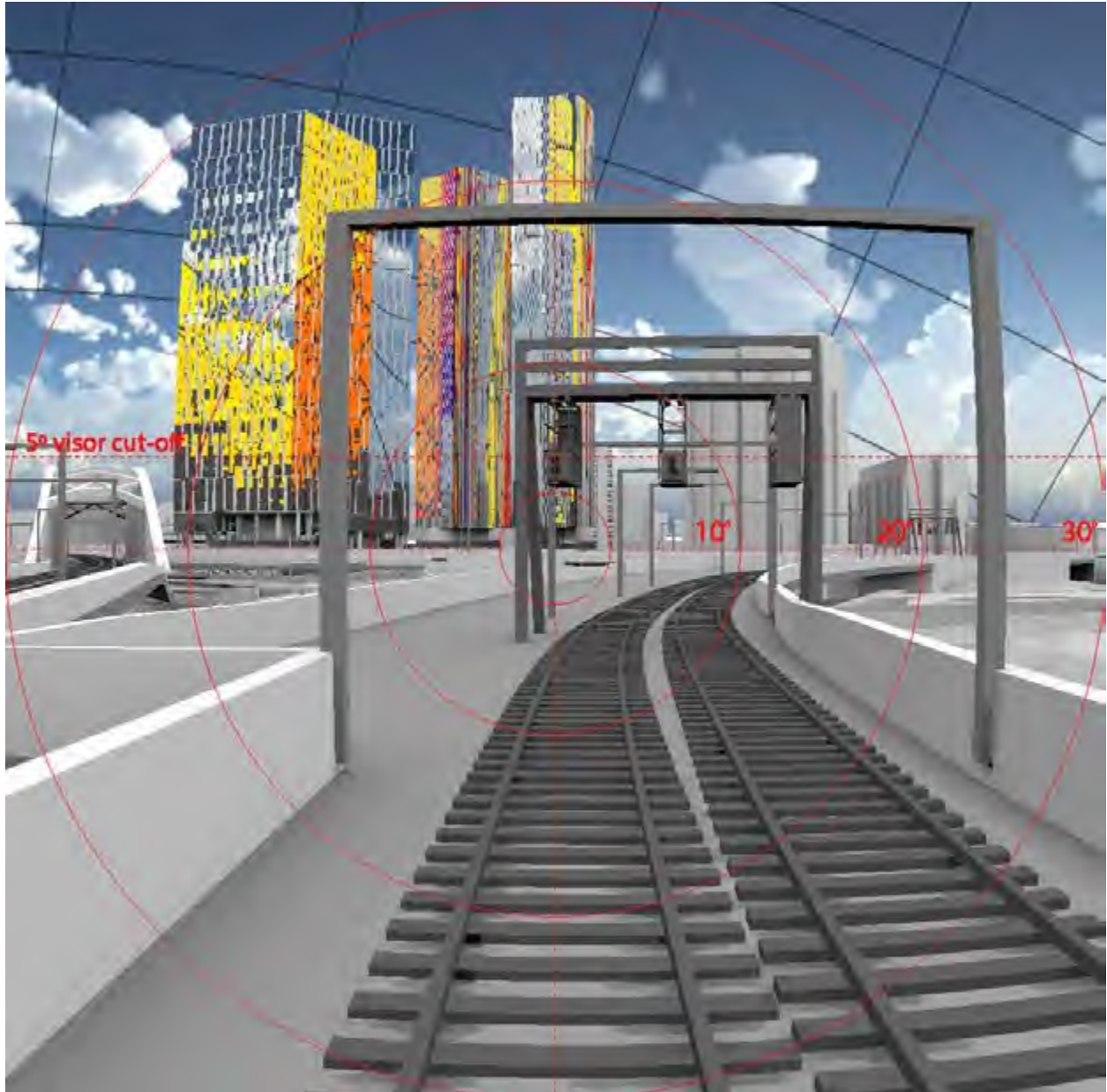


Fig. 537: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

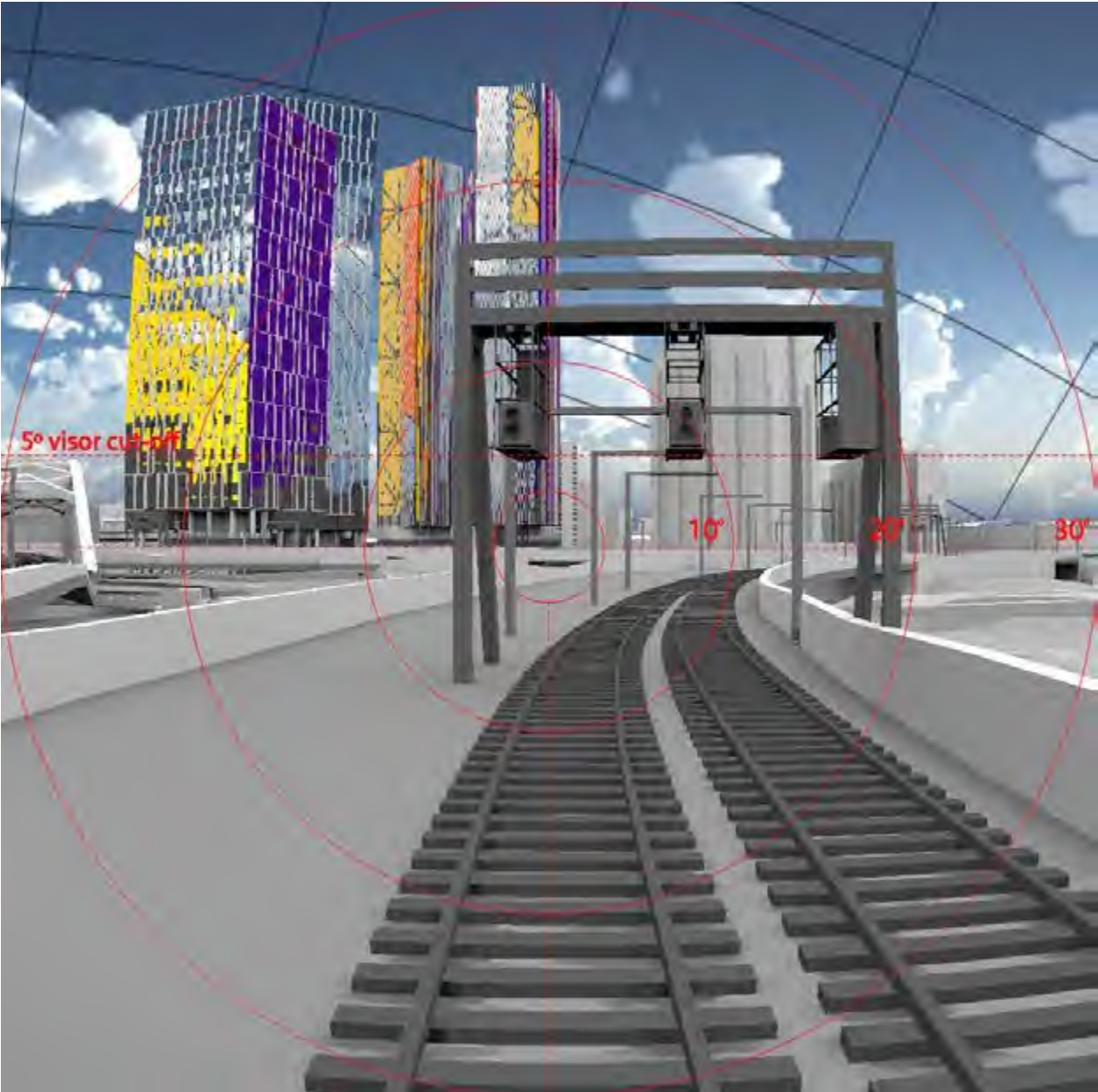


Fig. 538: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-170 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**



Fig. 539: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

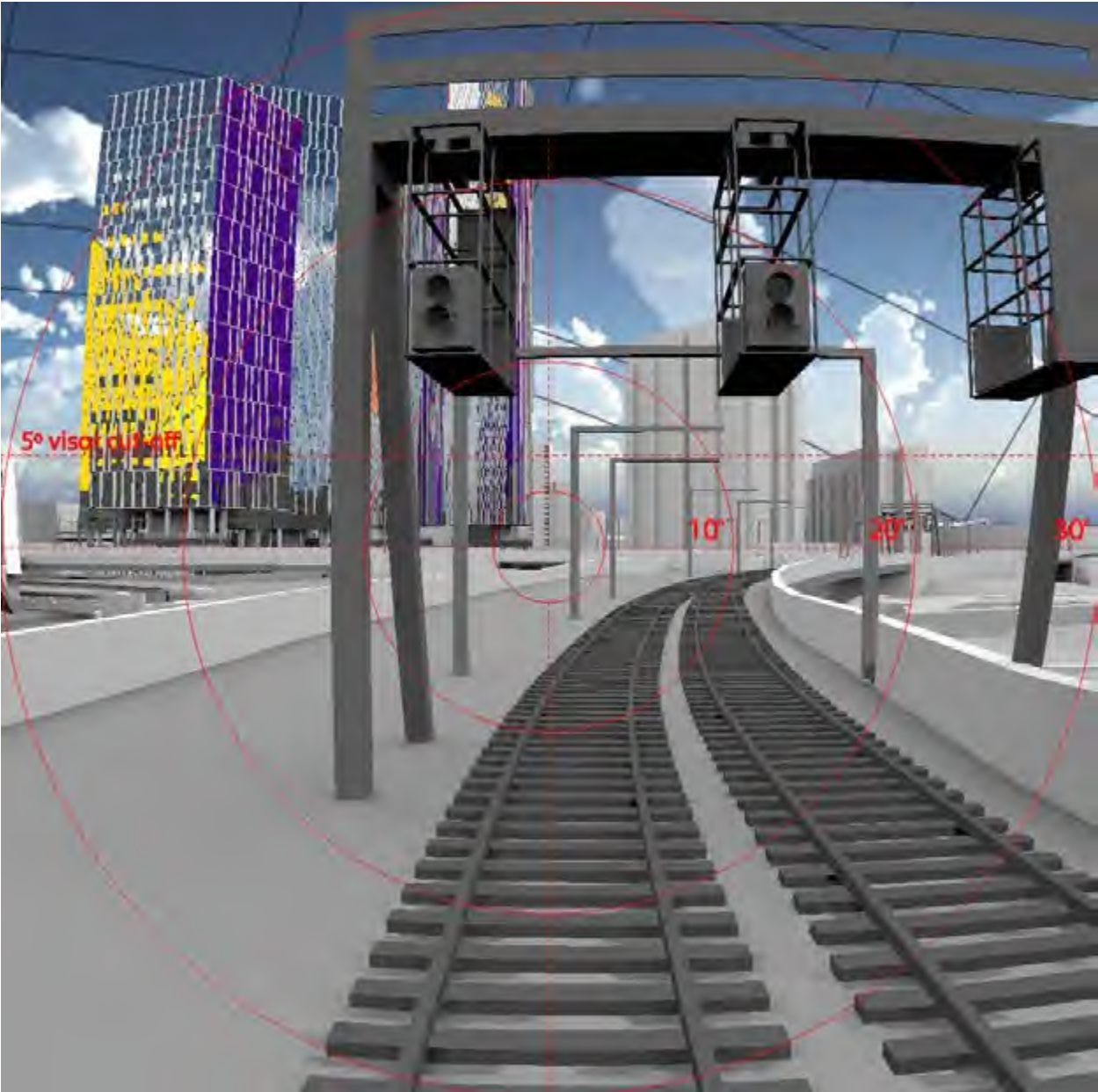


Fig. 540: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-180 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 330M FROM SITE
LOOKING STRAGHT- APPROX 10M FROM SIGNAL**

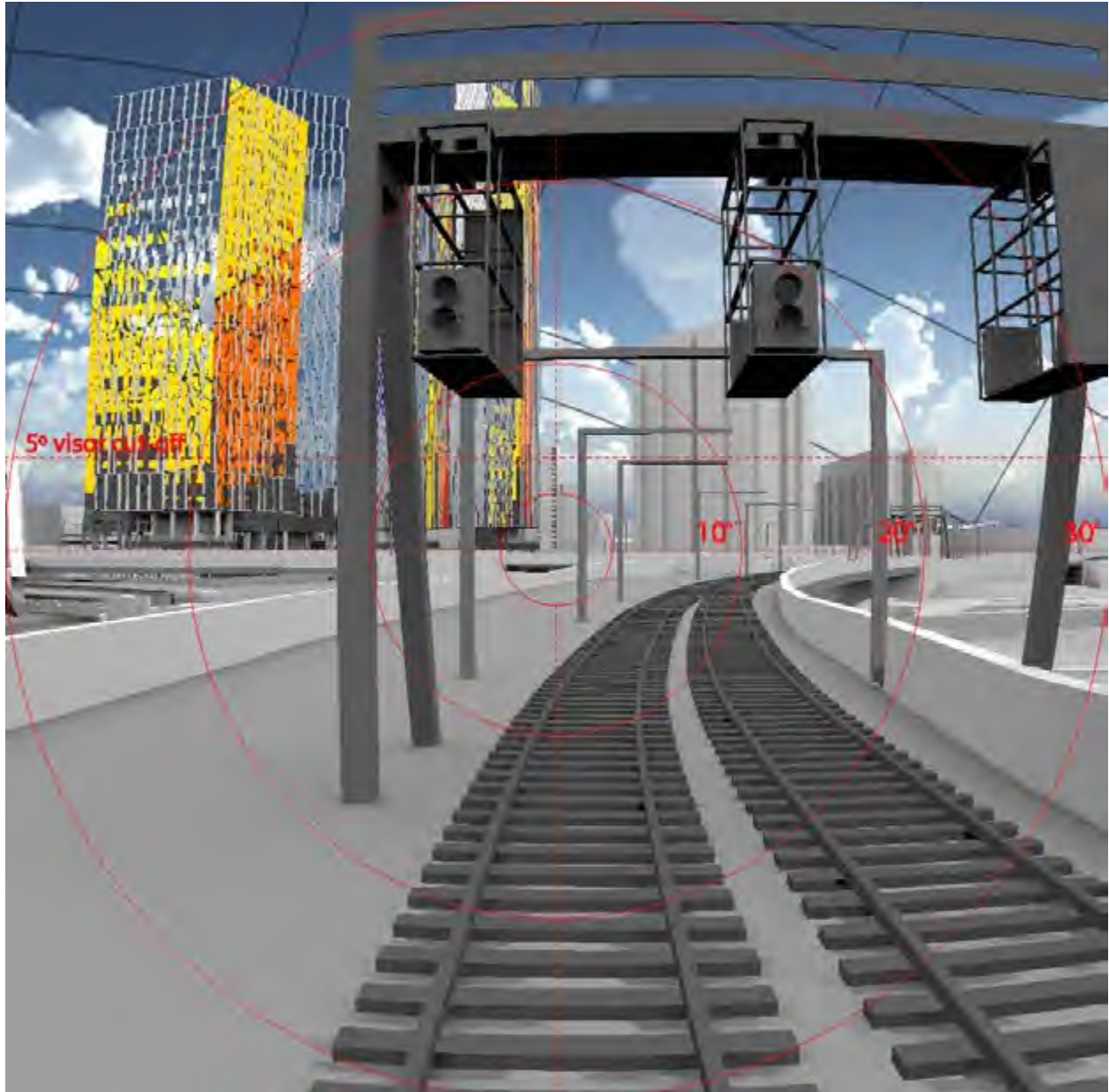


Fig. 541: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAIGHT

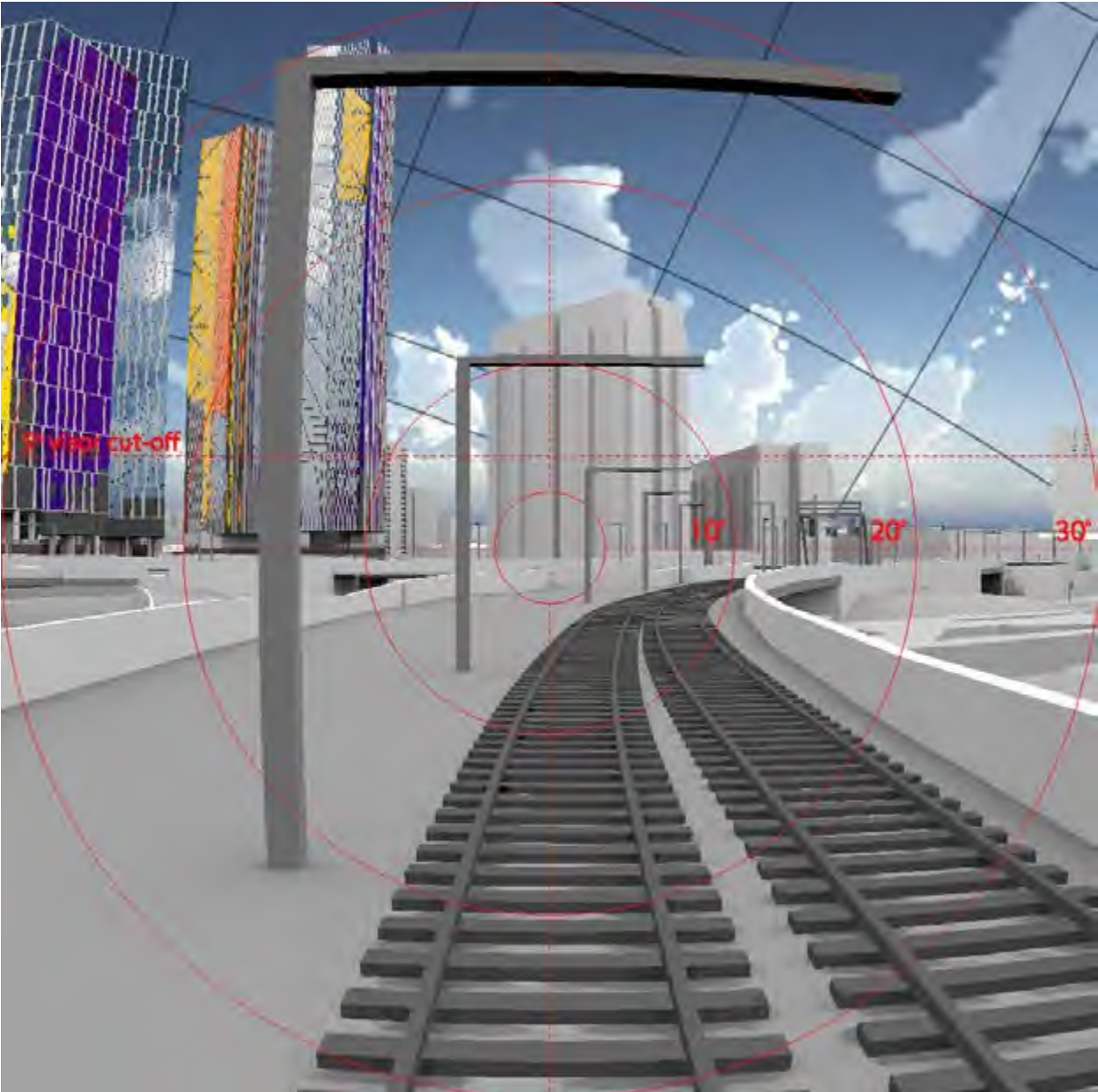
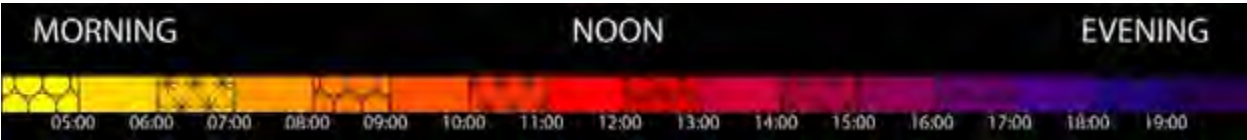


Fig. 542: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-210 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 300M FROM SITE
LOOKING STRAIGHT**

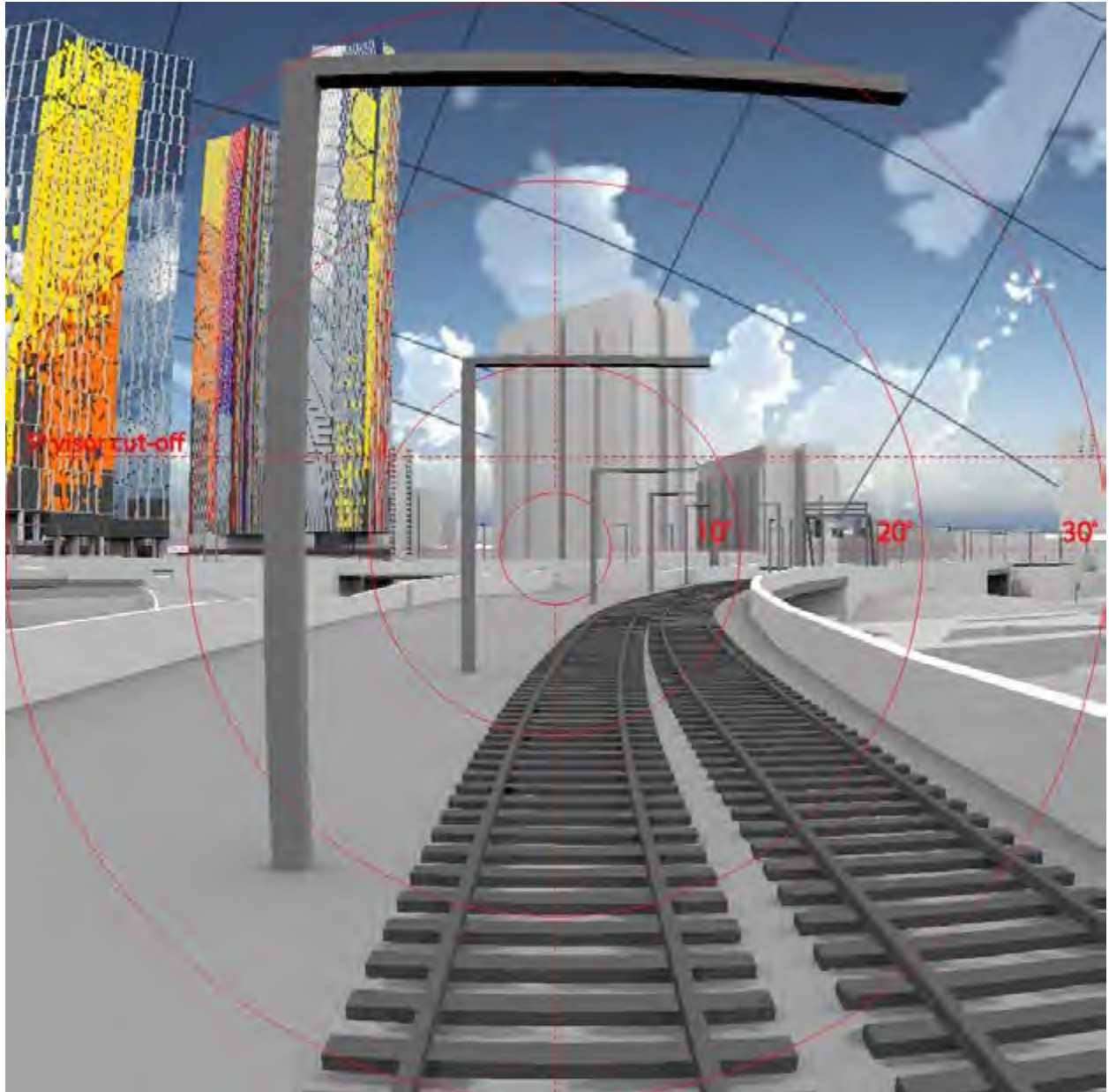


Fig. 543: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N2-260 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 250M FROM SITE
LOOKING STRAGHT

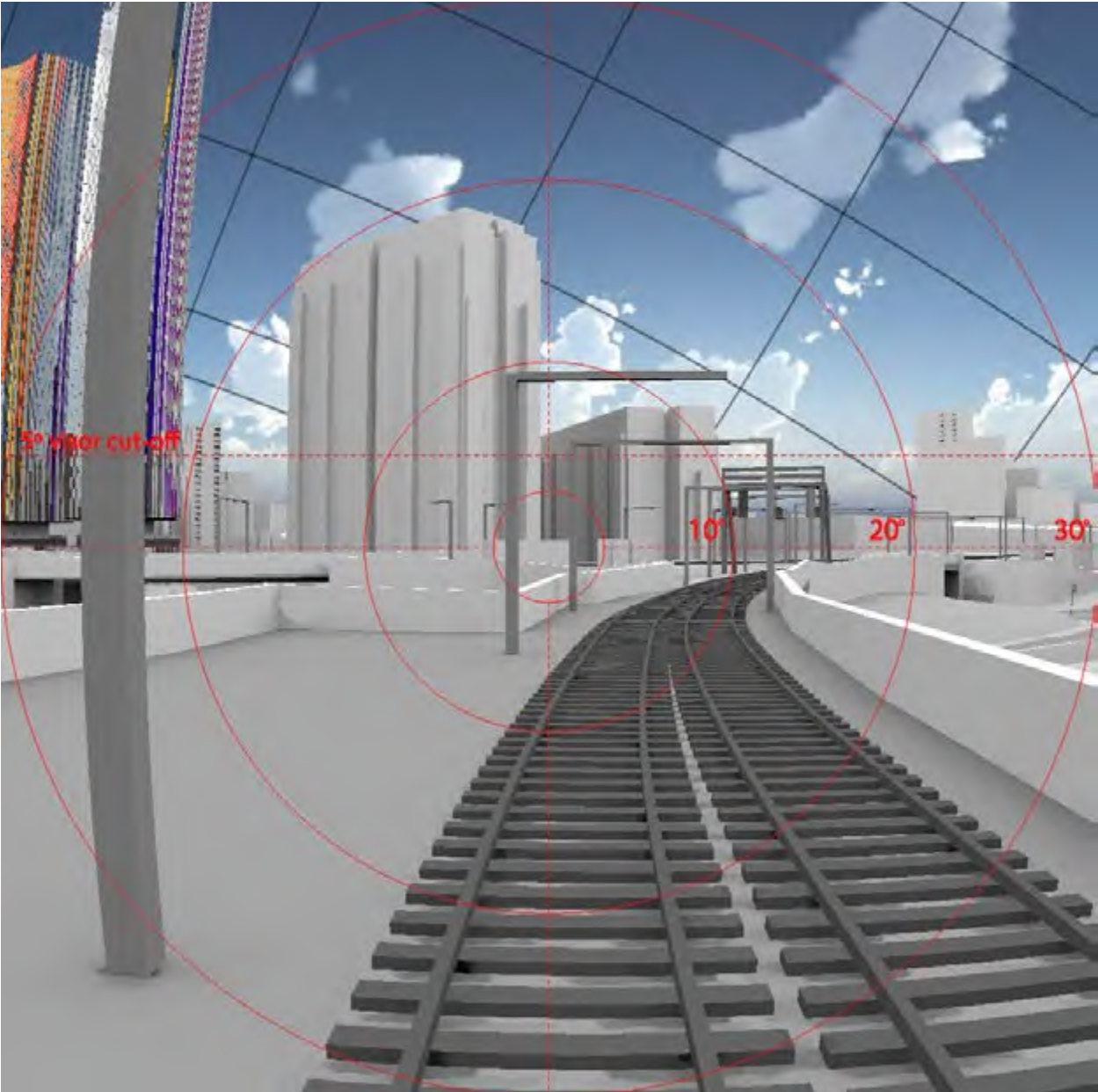


Fig. 544: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N2-260 - NORTHERN LINE SOUTHBOUND TRACK 2 - APPROX 250M FROM SITE
LOOKING STRAGHT**

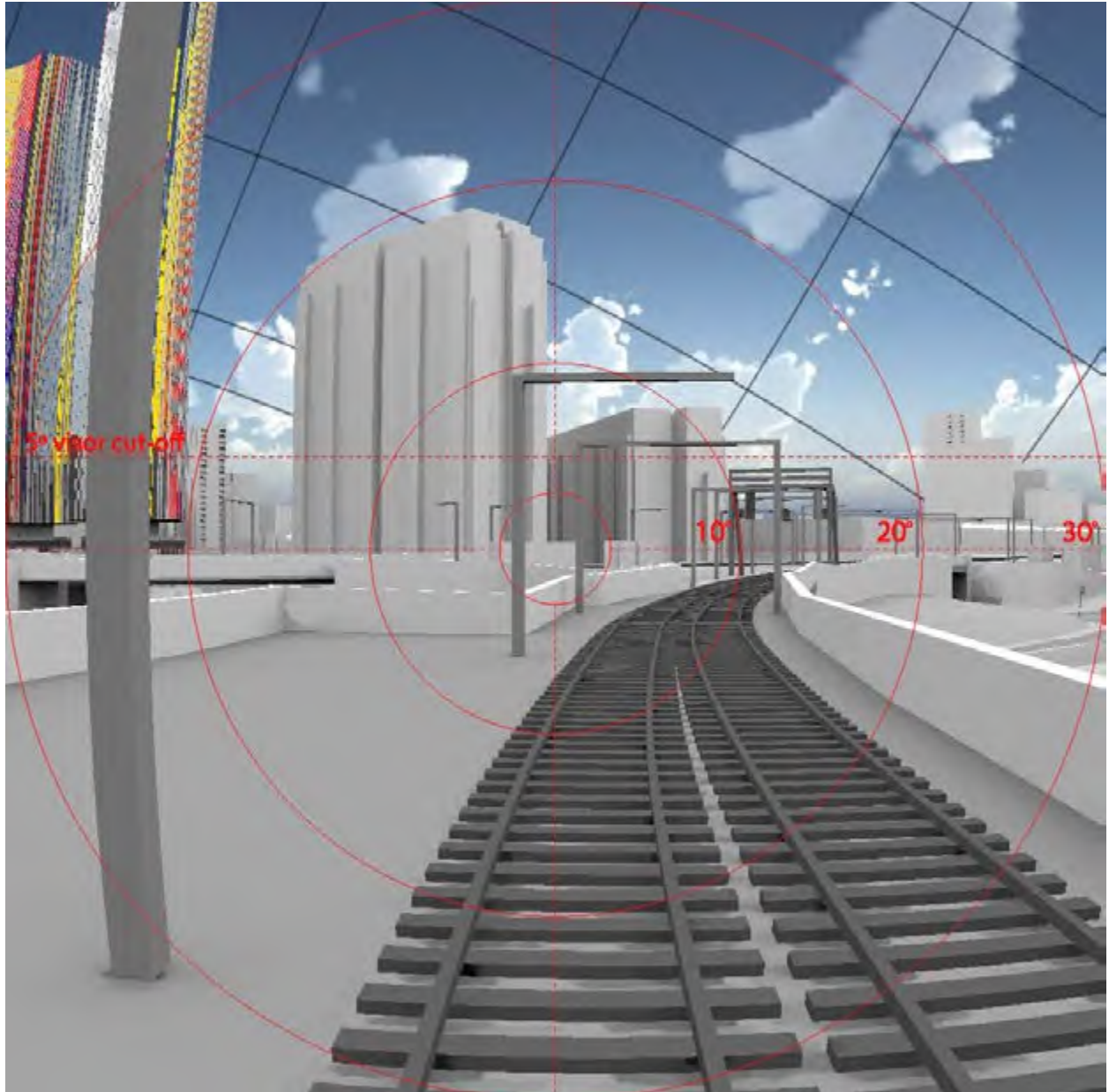


Fig. 545: Solar reflections



34 **SOLAR GLARE ASSESSMENT**
N3 - NORTHERN LINE SOUTHBOUND 3

N3 - Nothern Line - Southbound from Salford Central to Deansgate

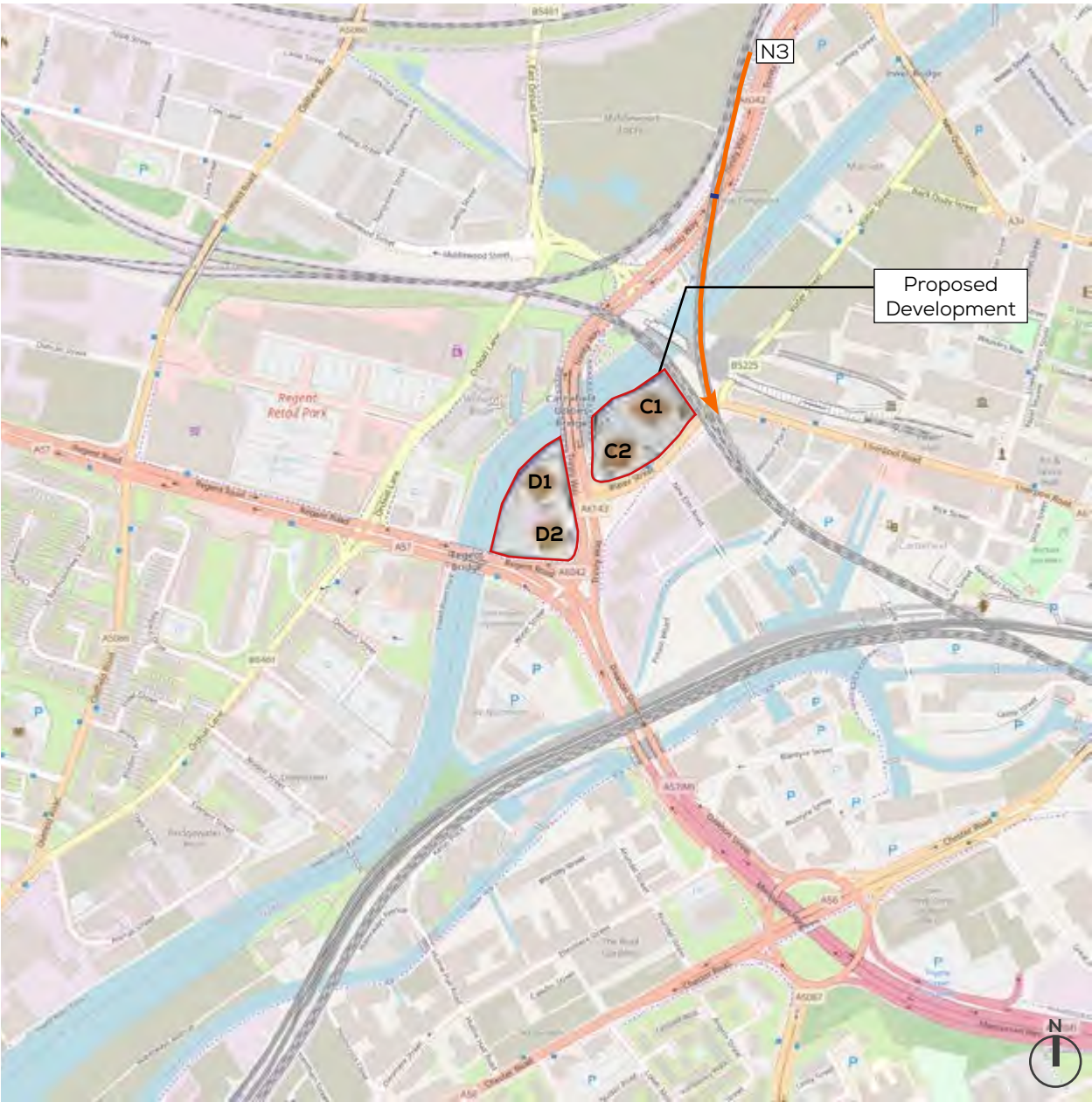


Fig. 546: Junction Location



Fig. 547: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAGHT

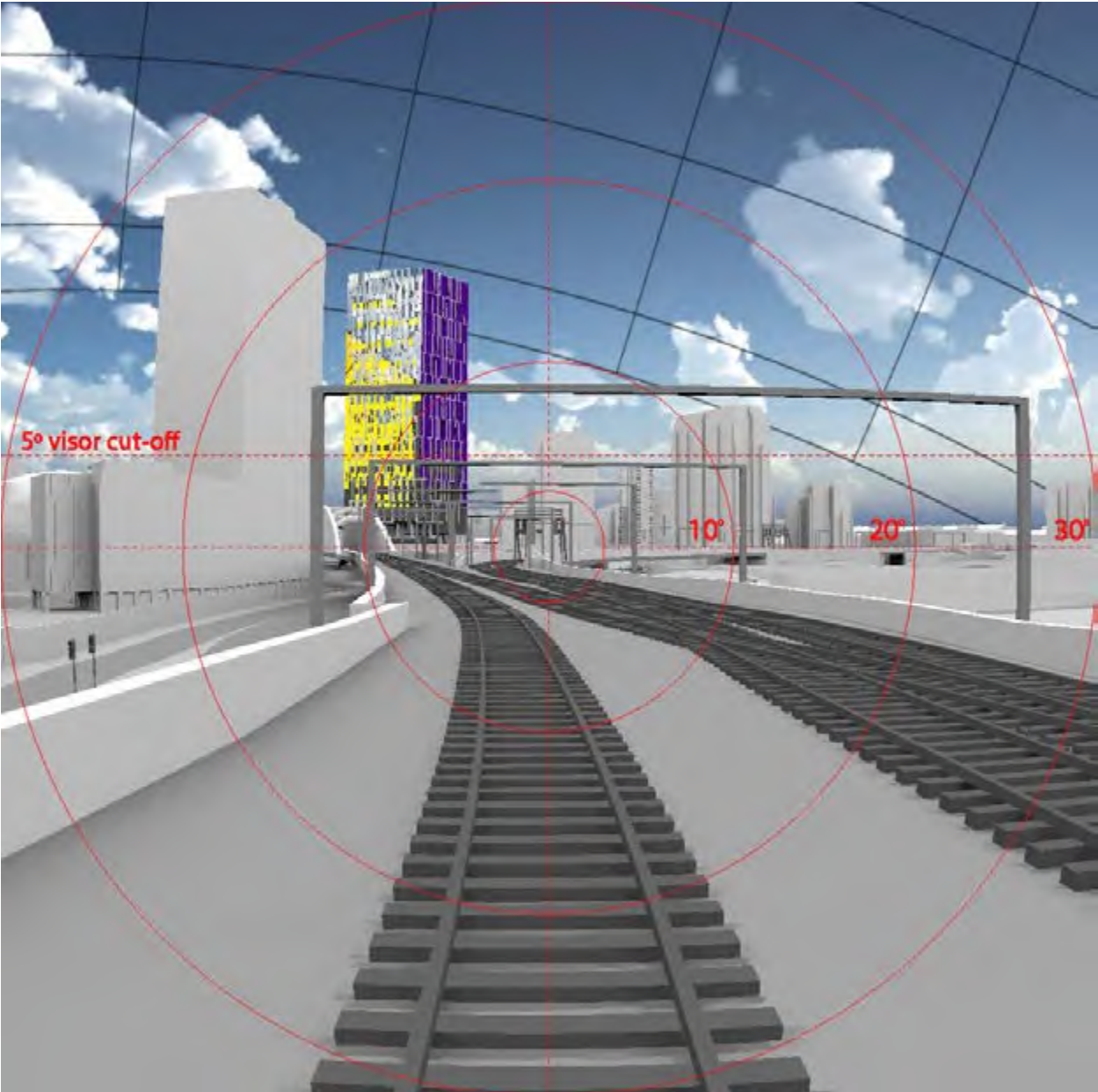


Fig. 548: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAGHT**

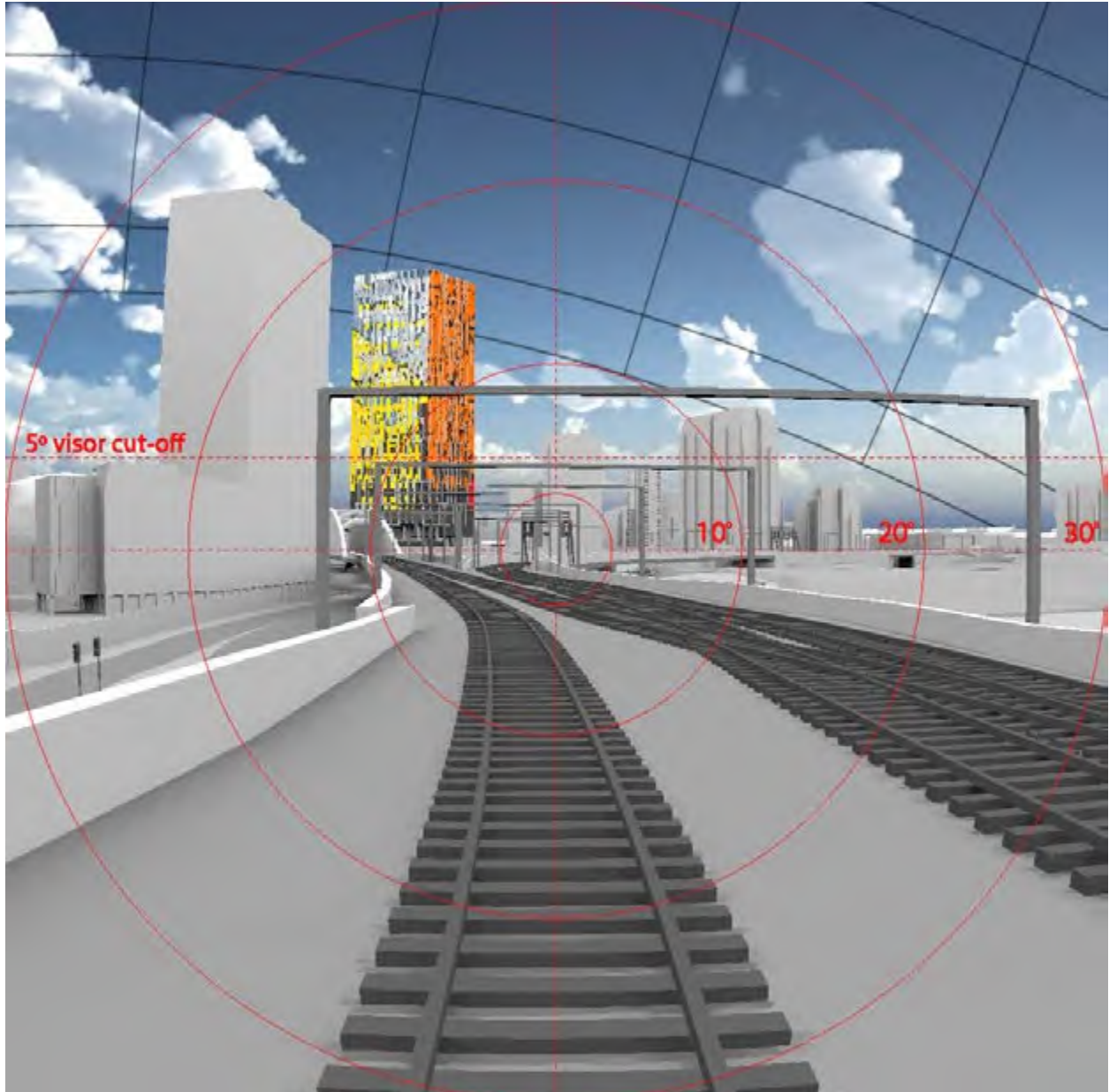


Fig. 549: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT

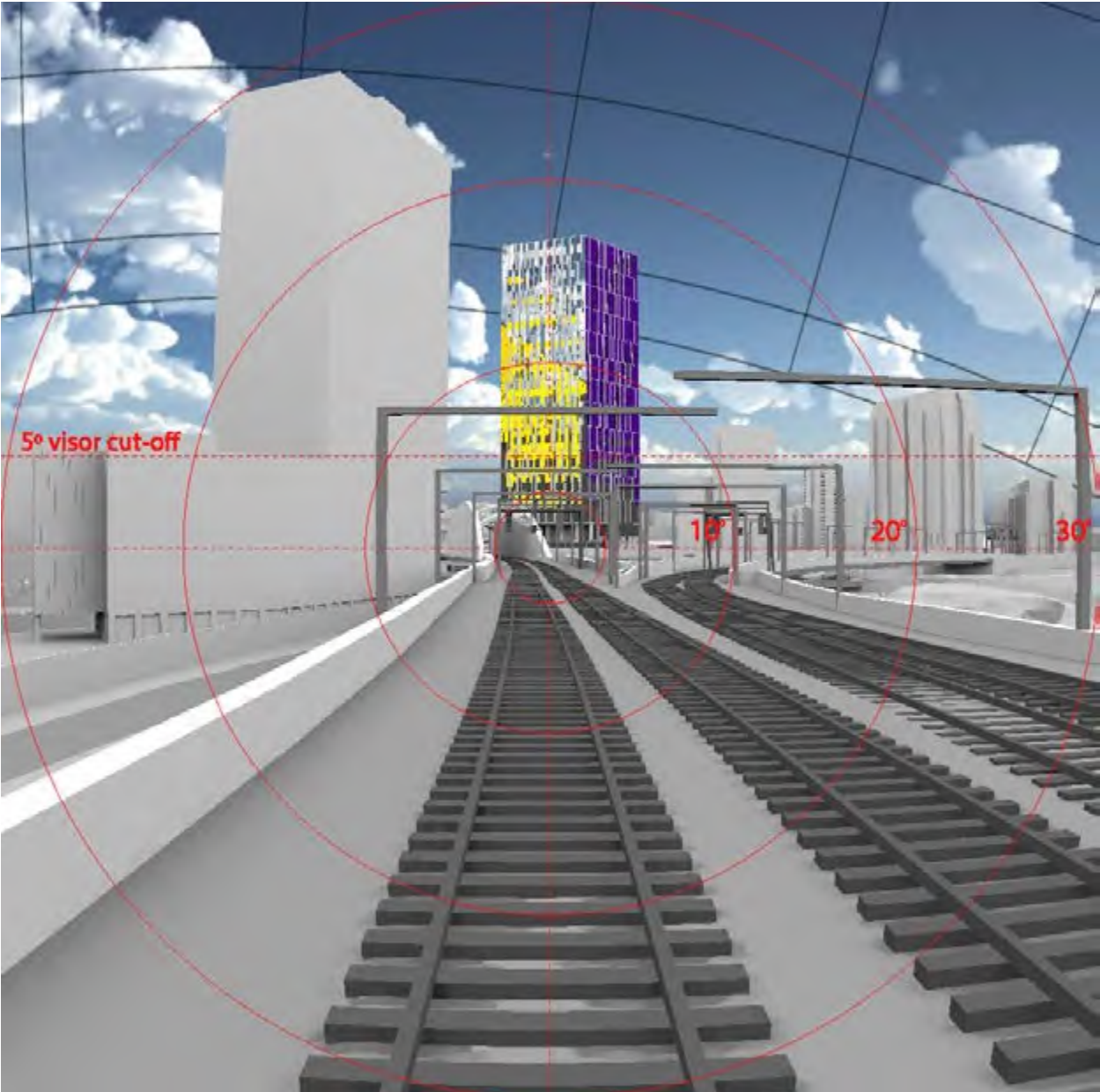


Fig. 550: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT**

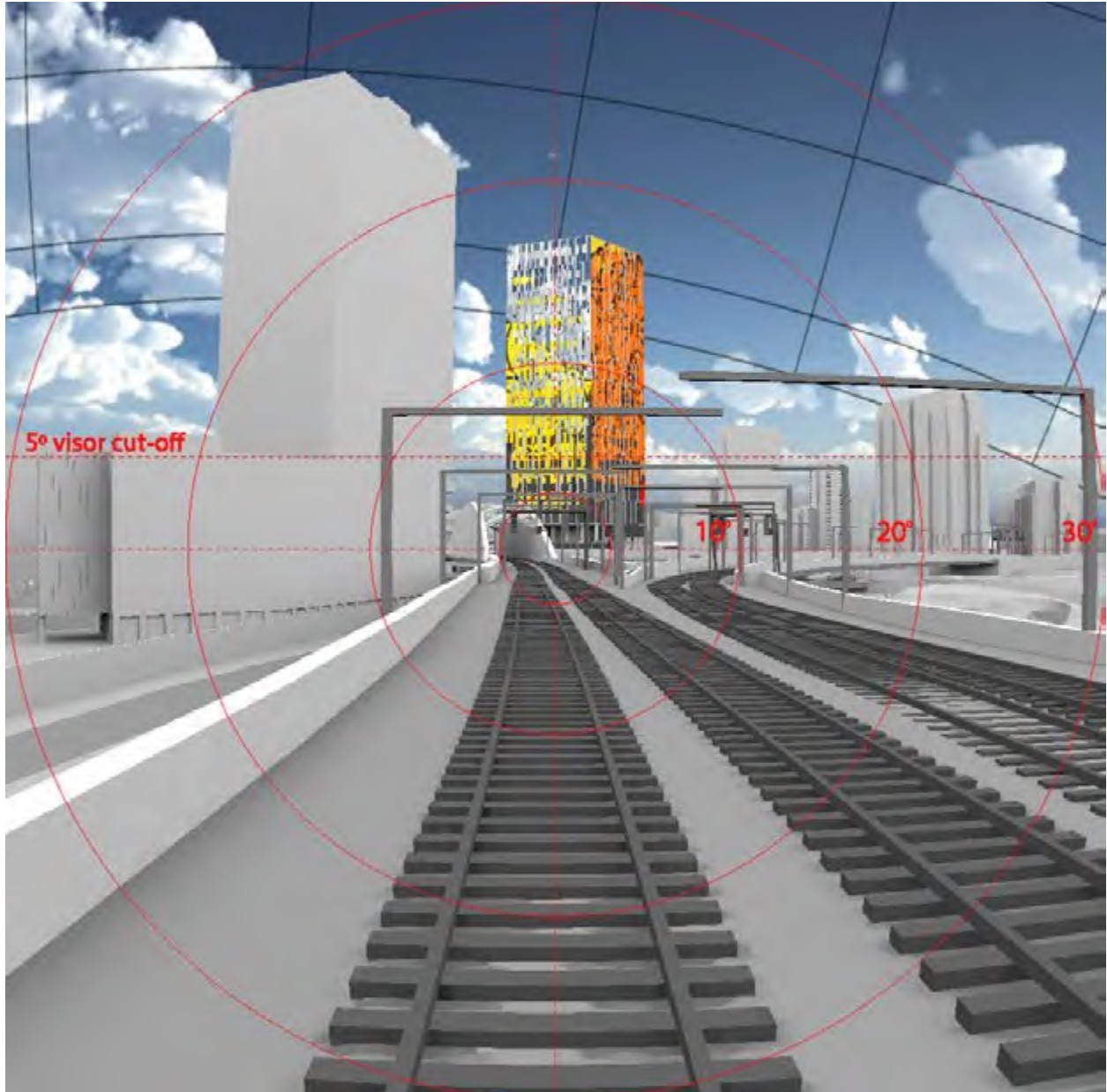


Fig. 551: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

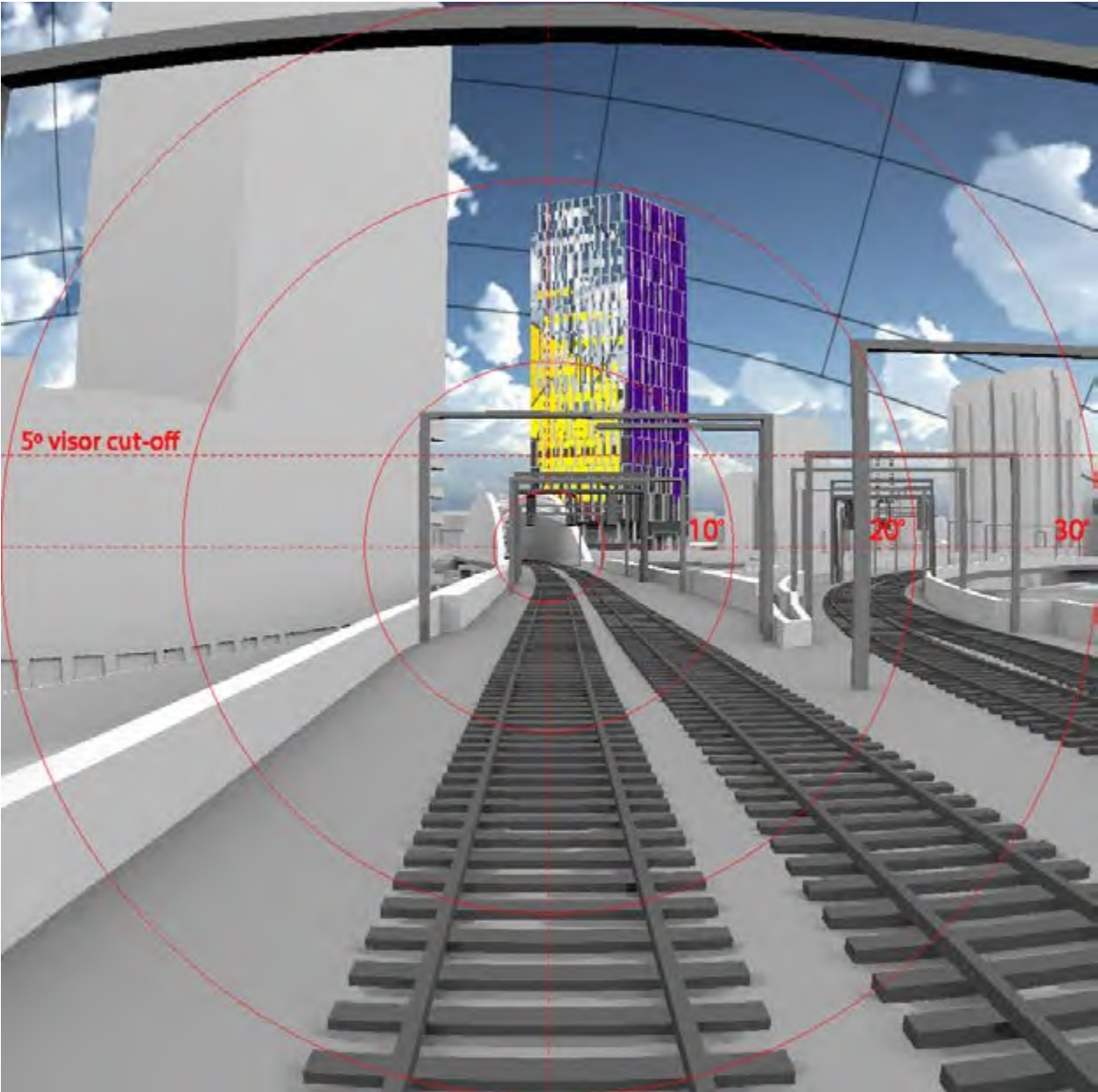


Fig. 552: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

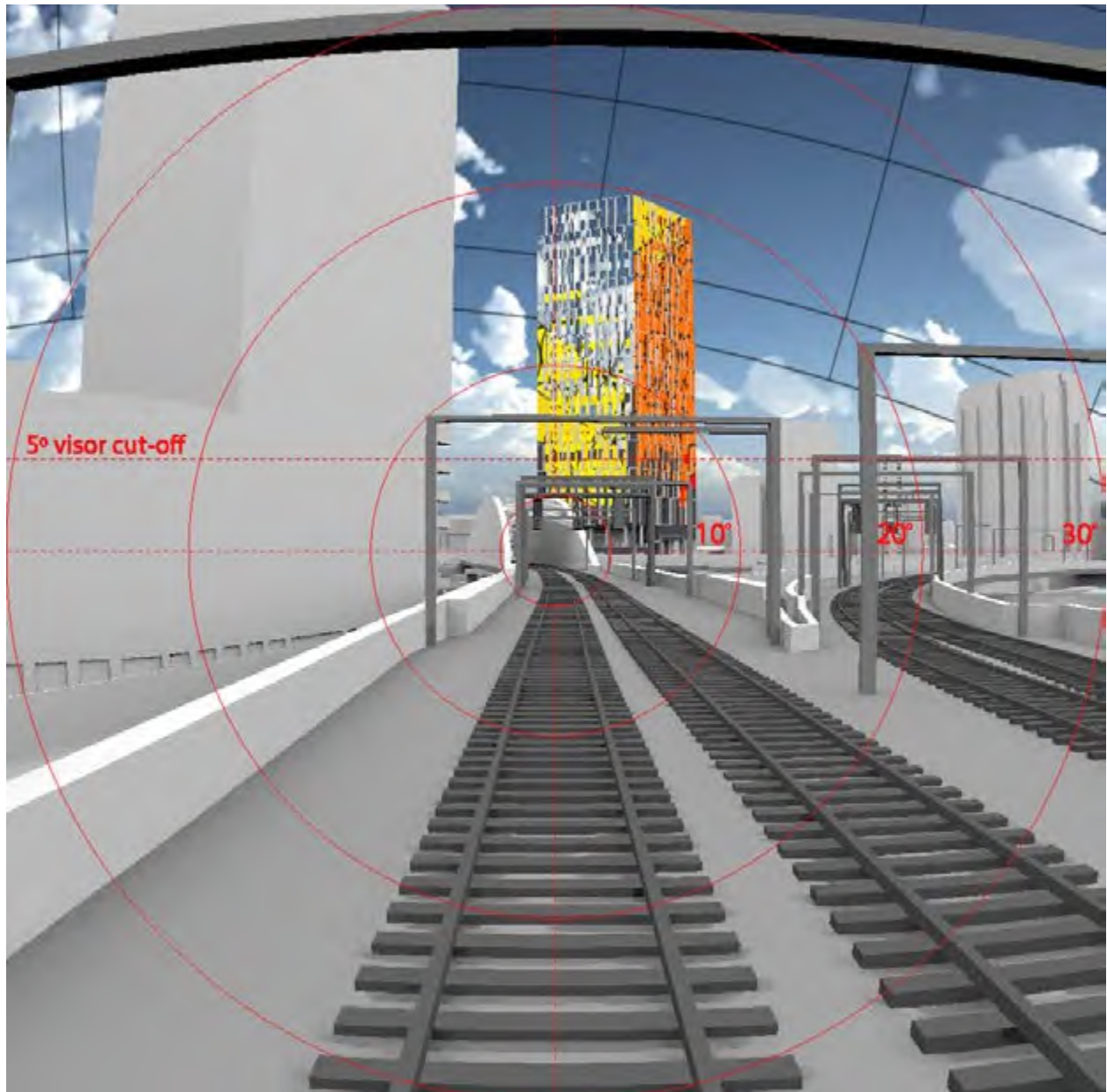


Fig. 553: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

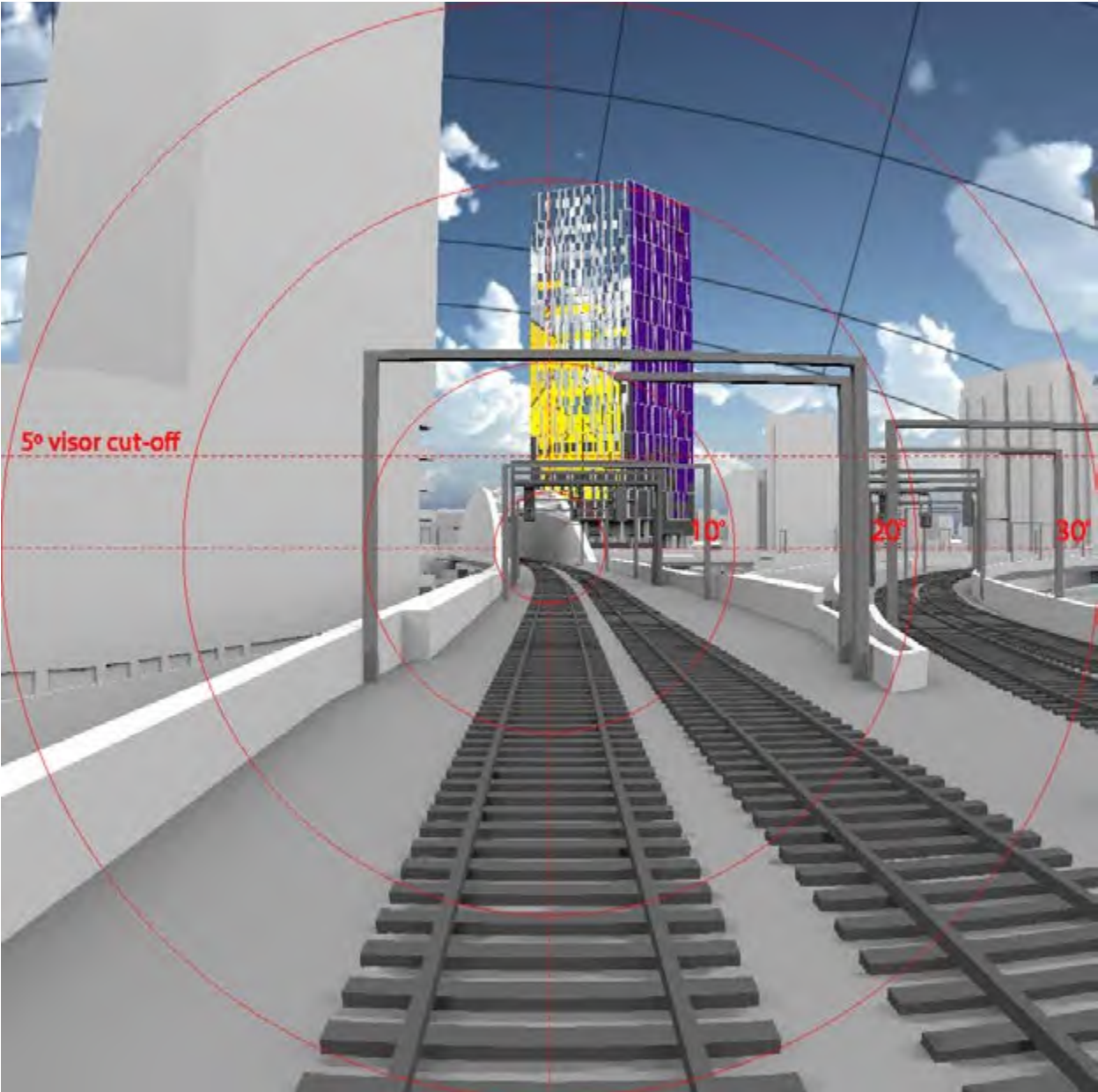
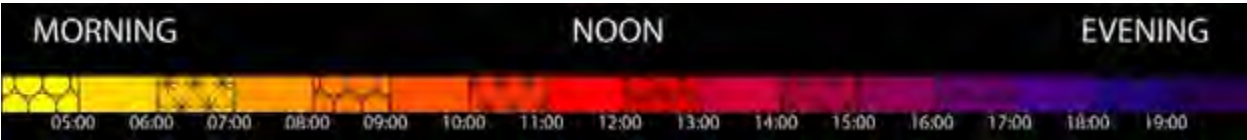


Fig. 554: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

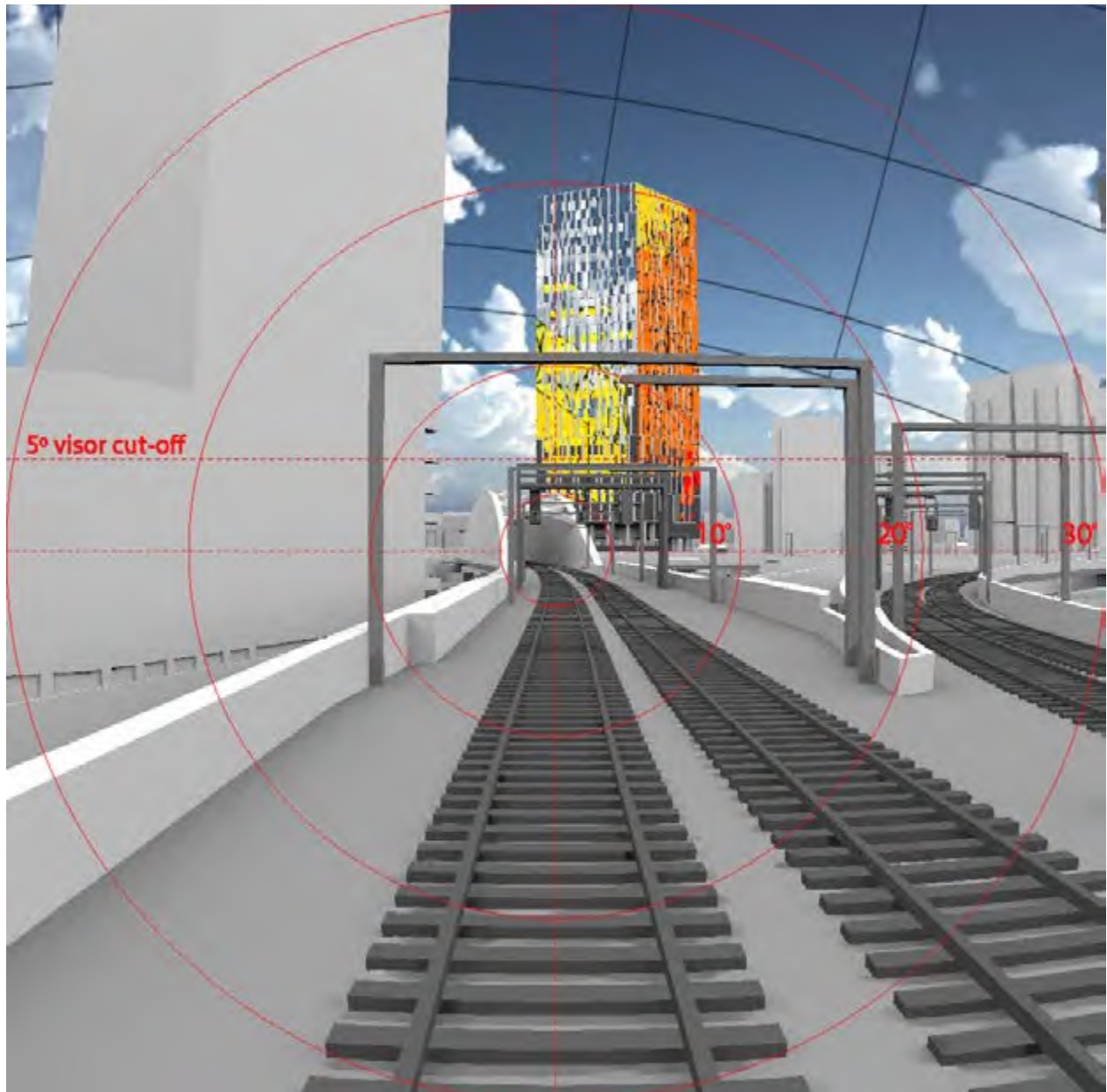


Fig. 555: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

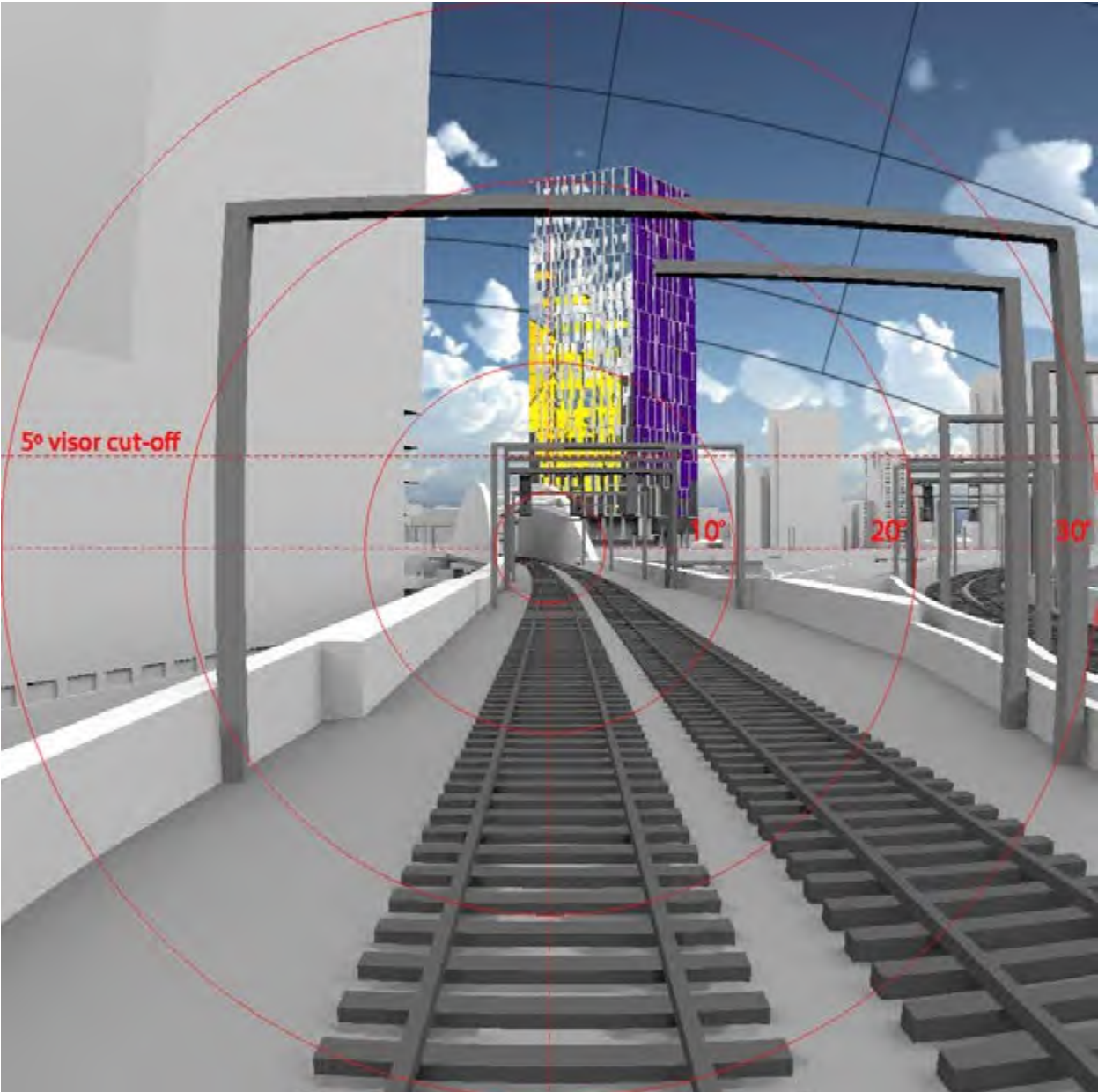
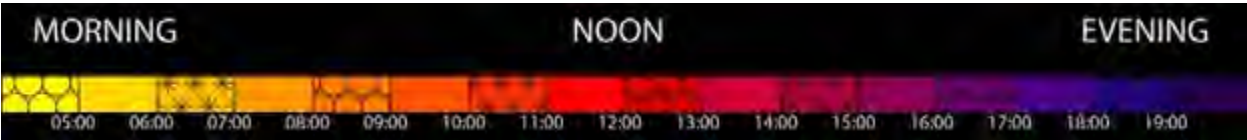


Fig. 556: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

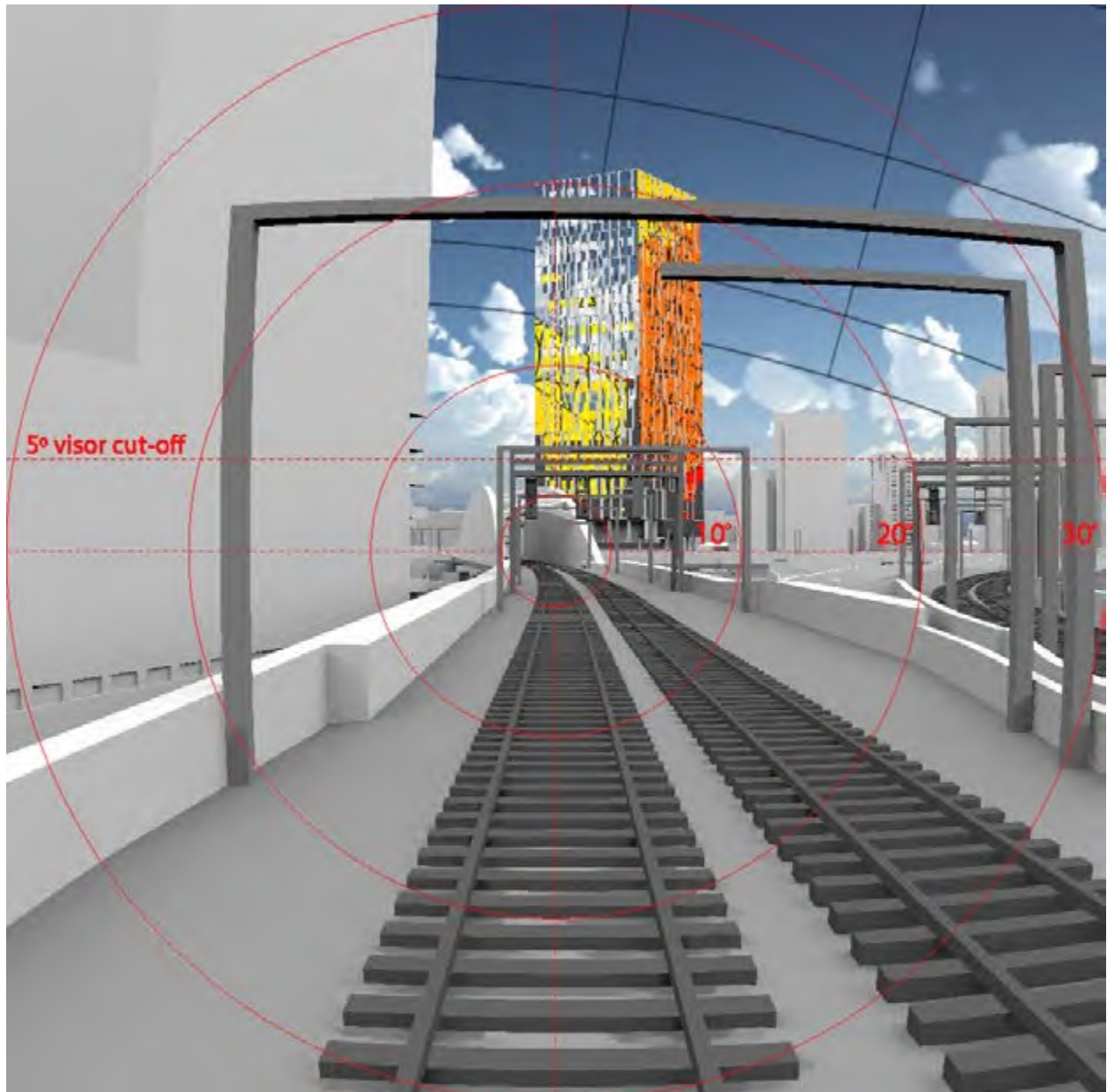


Fig. 557: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

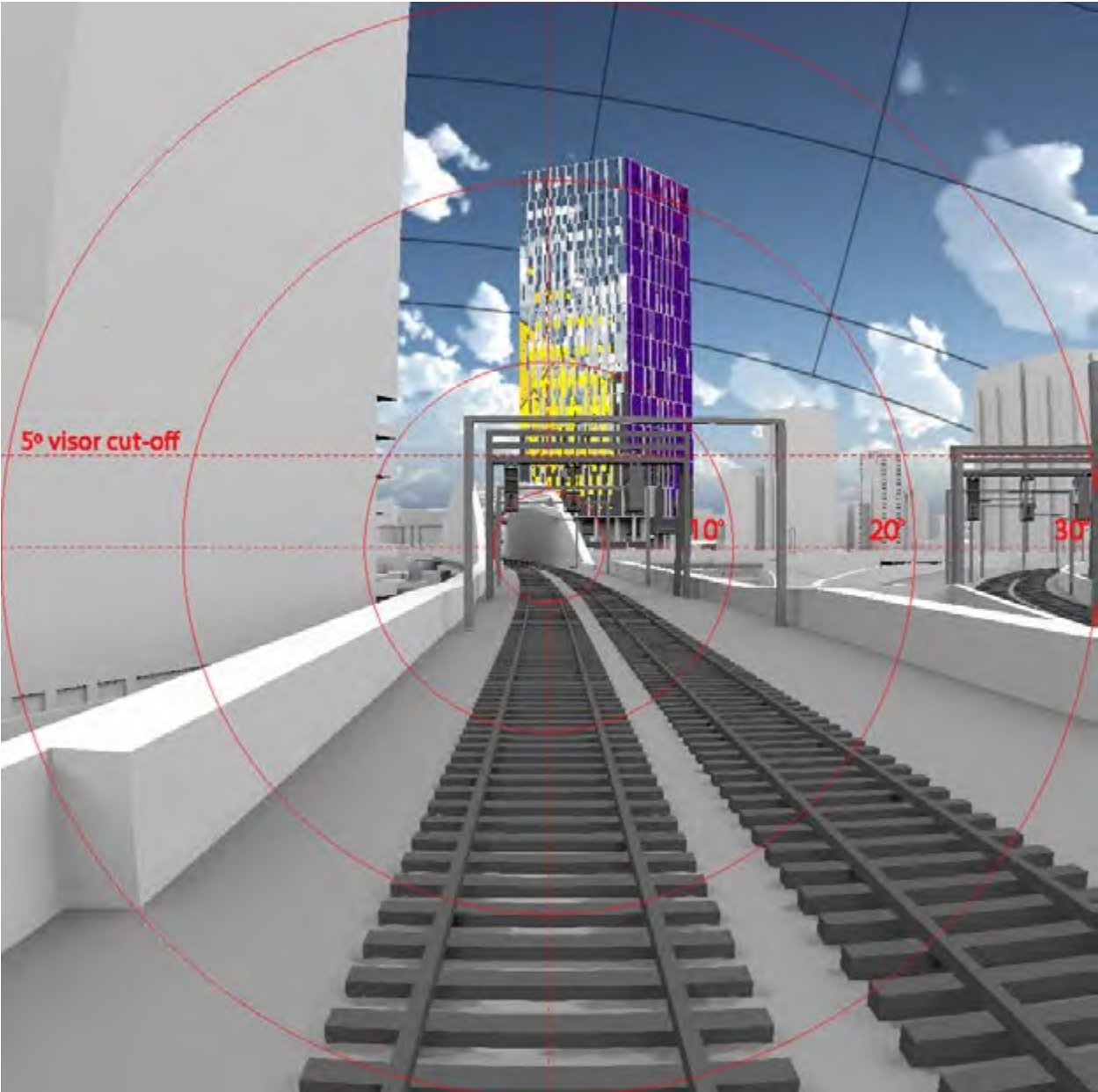


Fig. 558: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

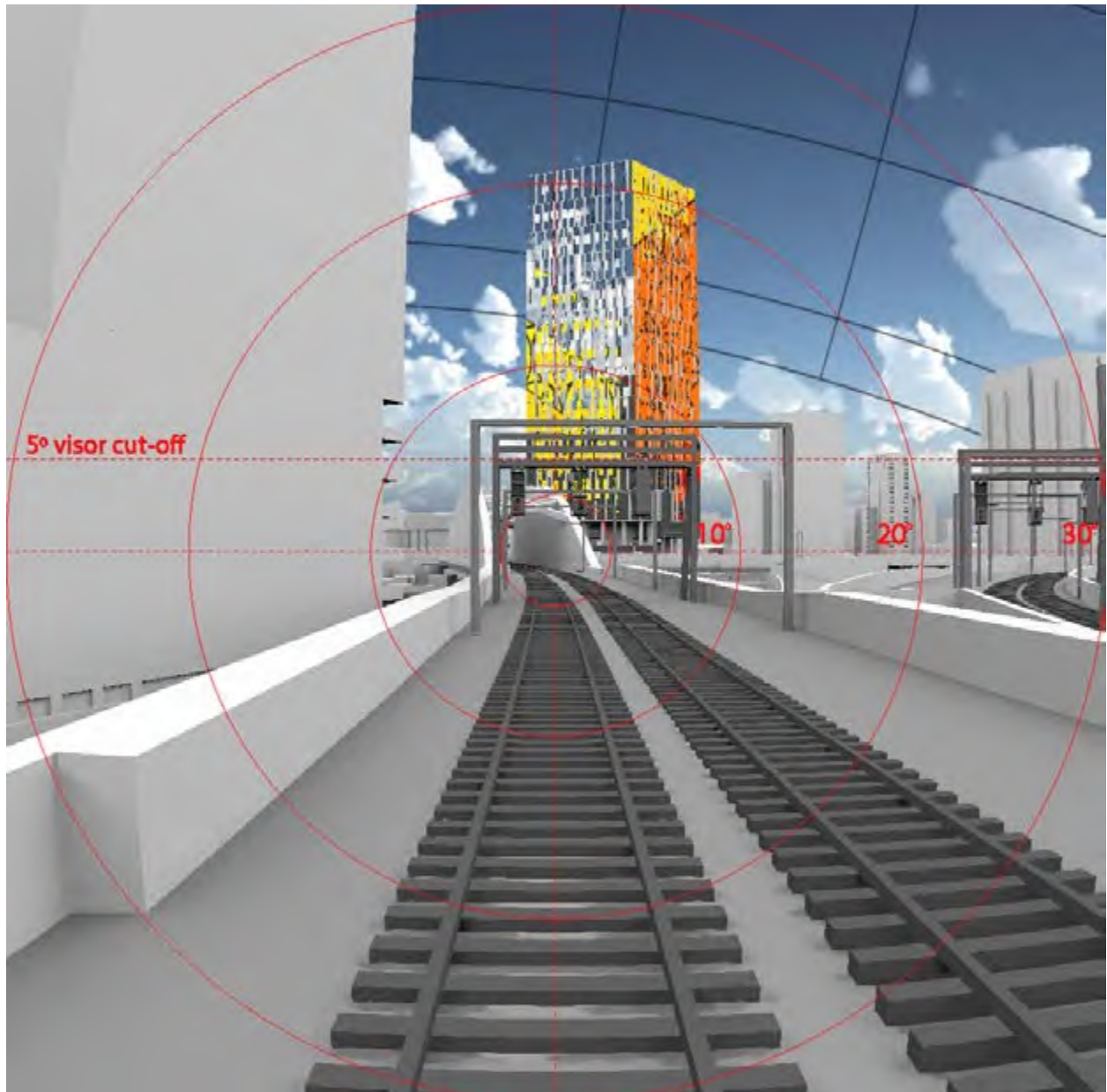


Fig. 559: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

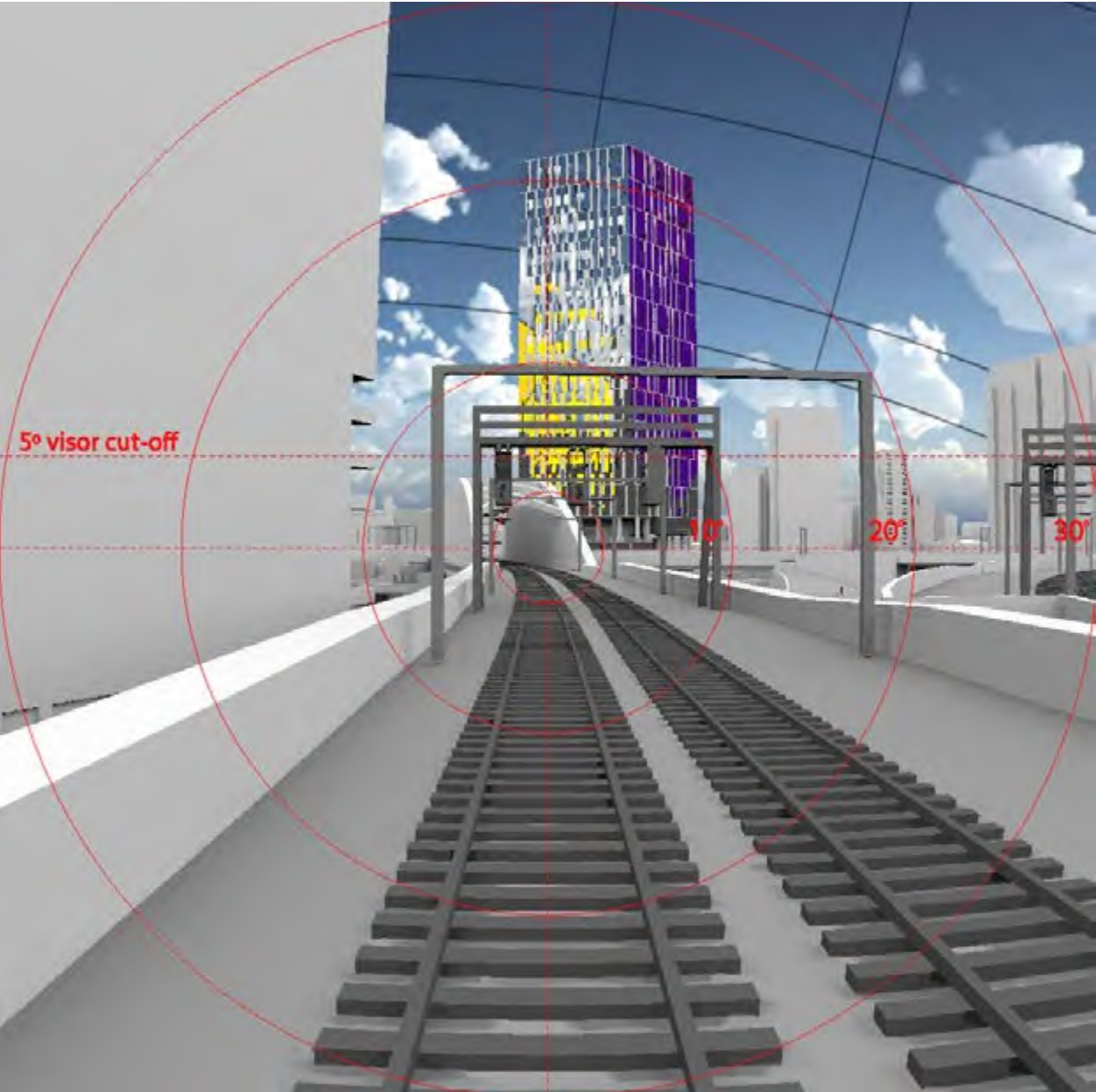
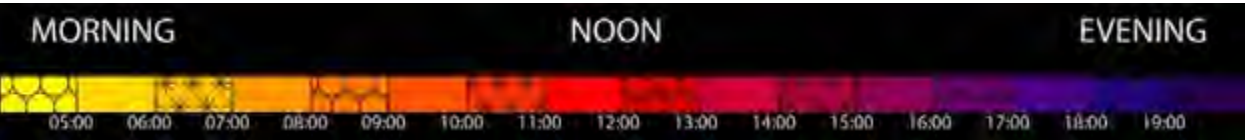


Fig. 560: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

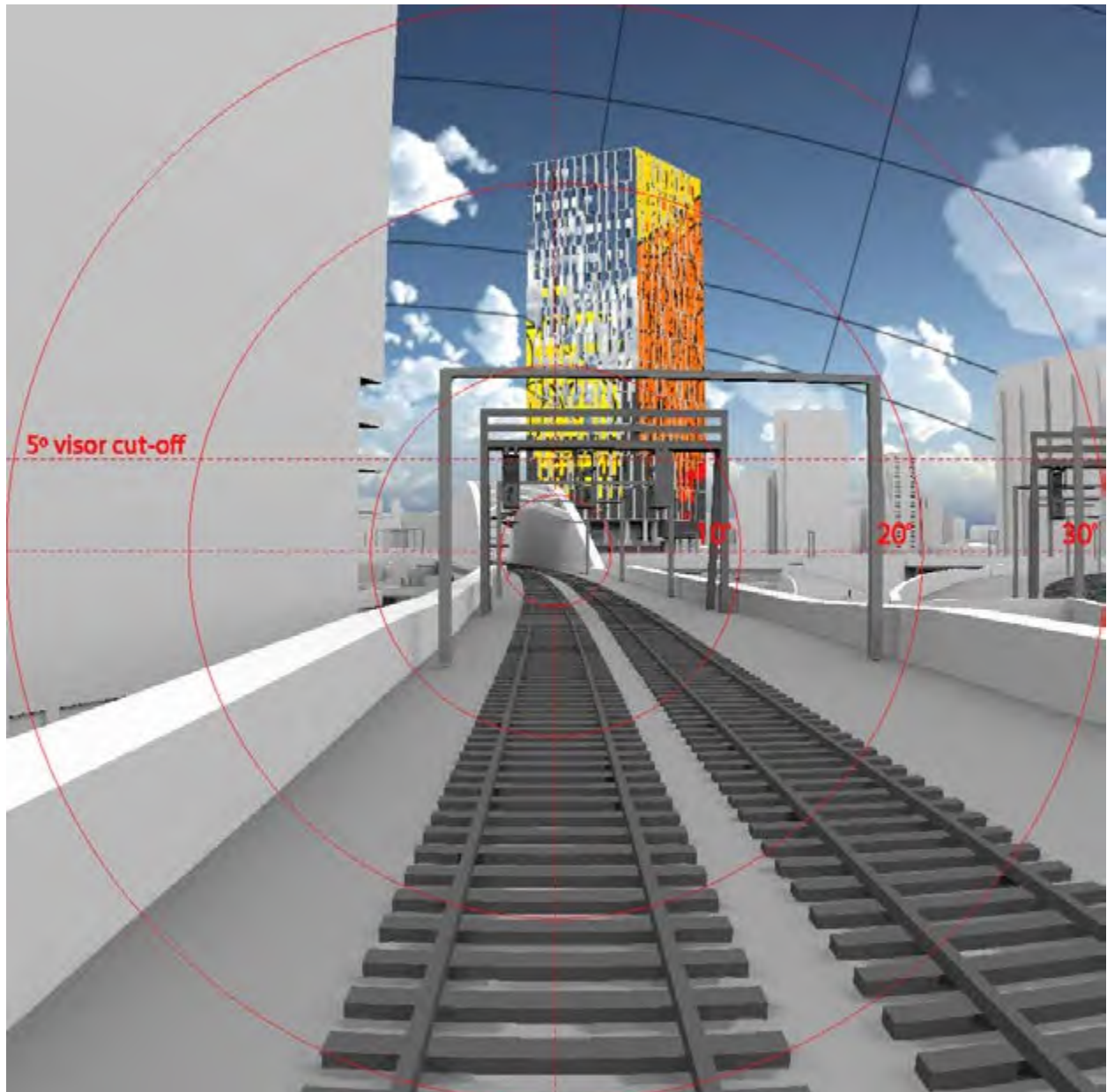


Fig. 561: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

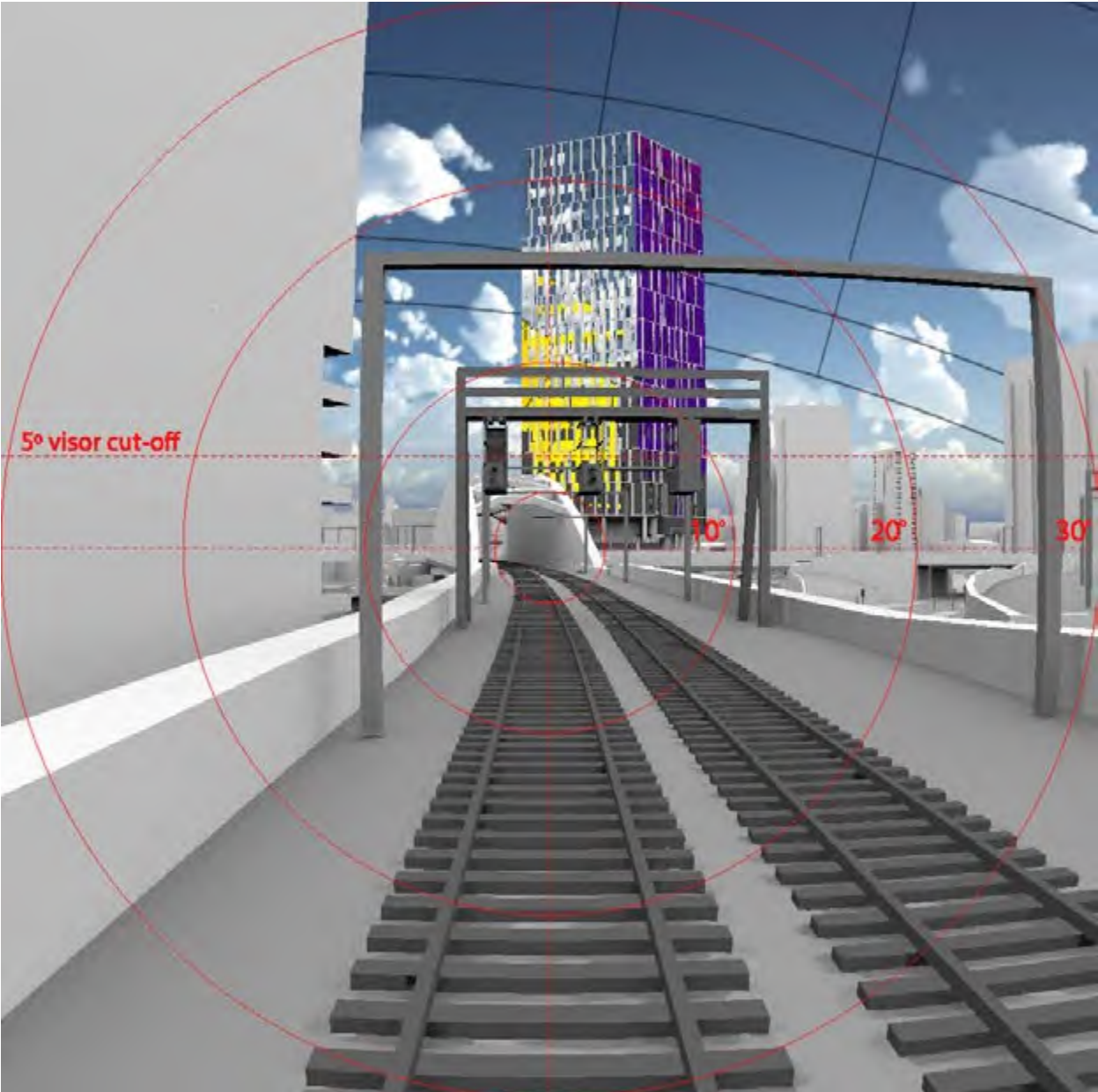
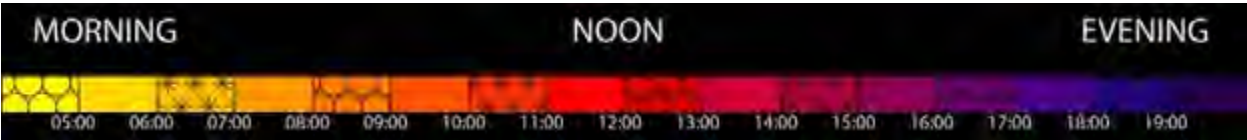


Fig. 562: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

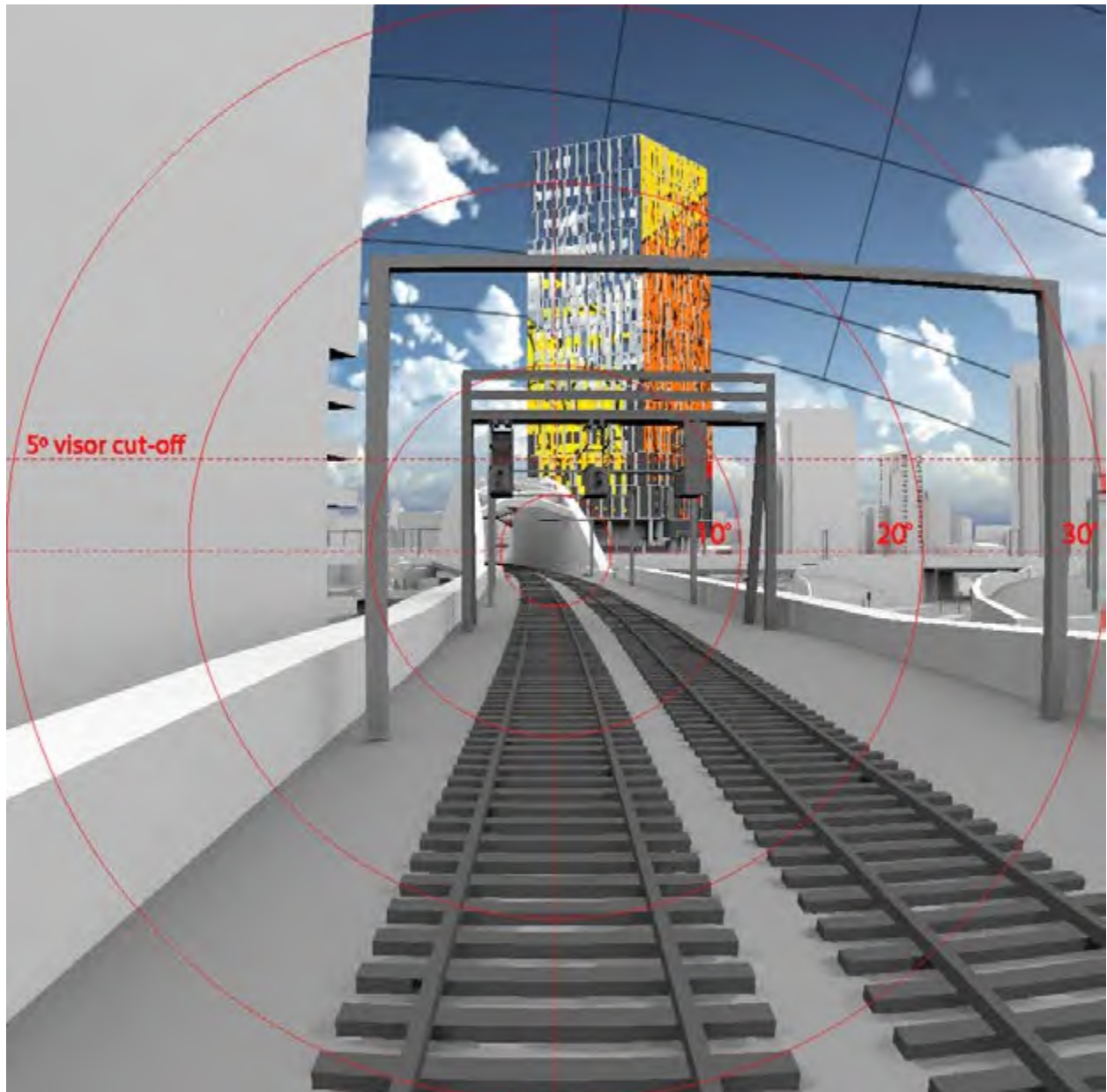


Fig. 563: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

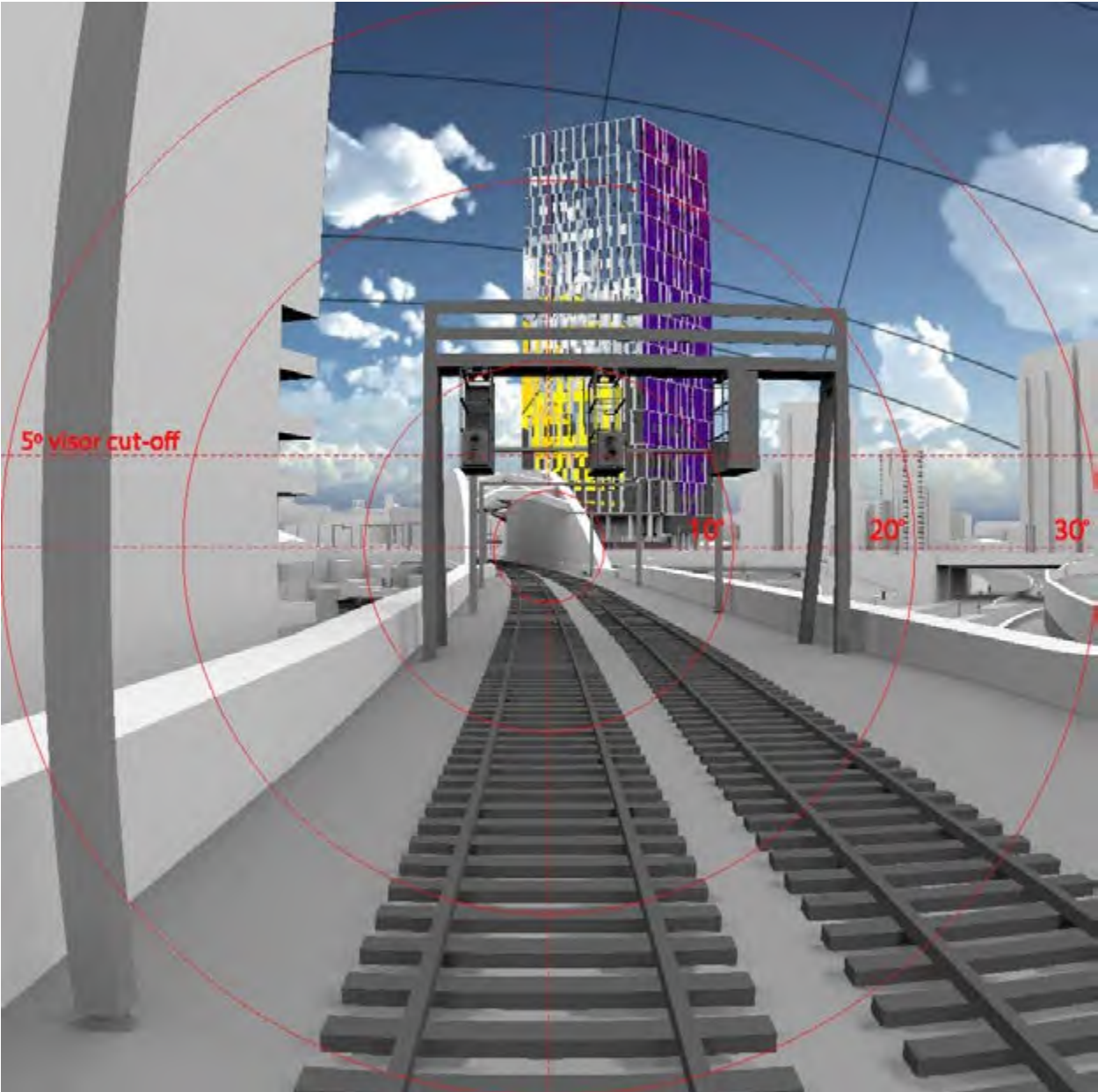


Fig. 564: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

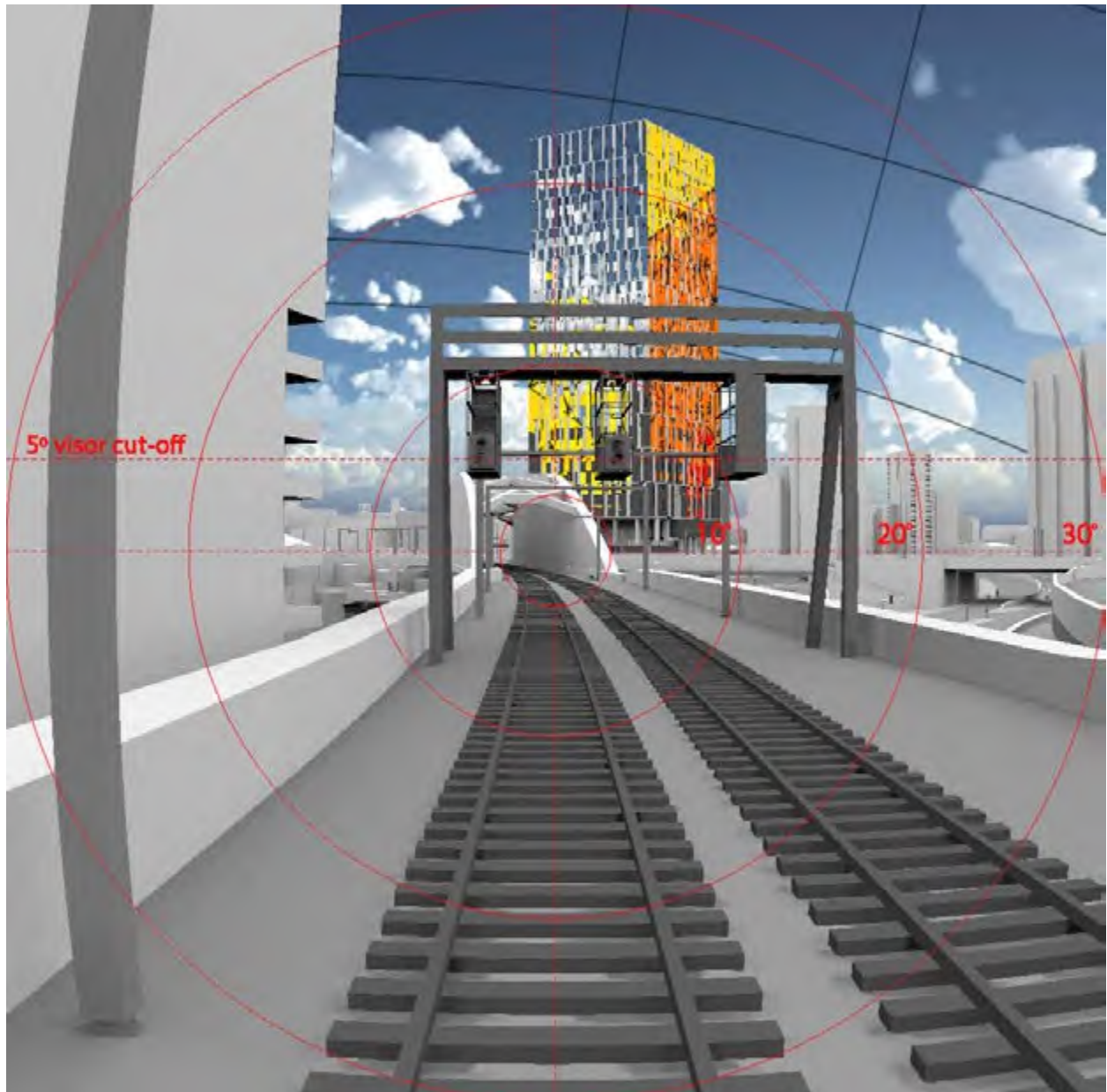


Fig. 565: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

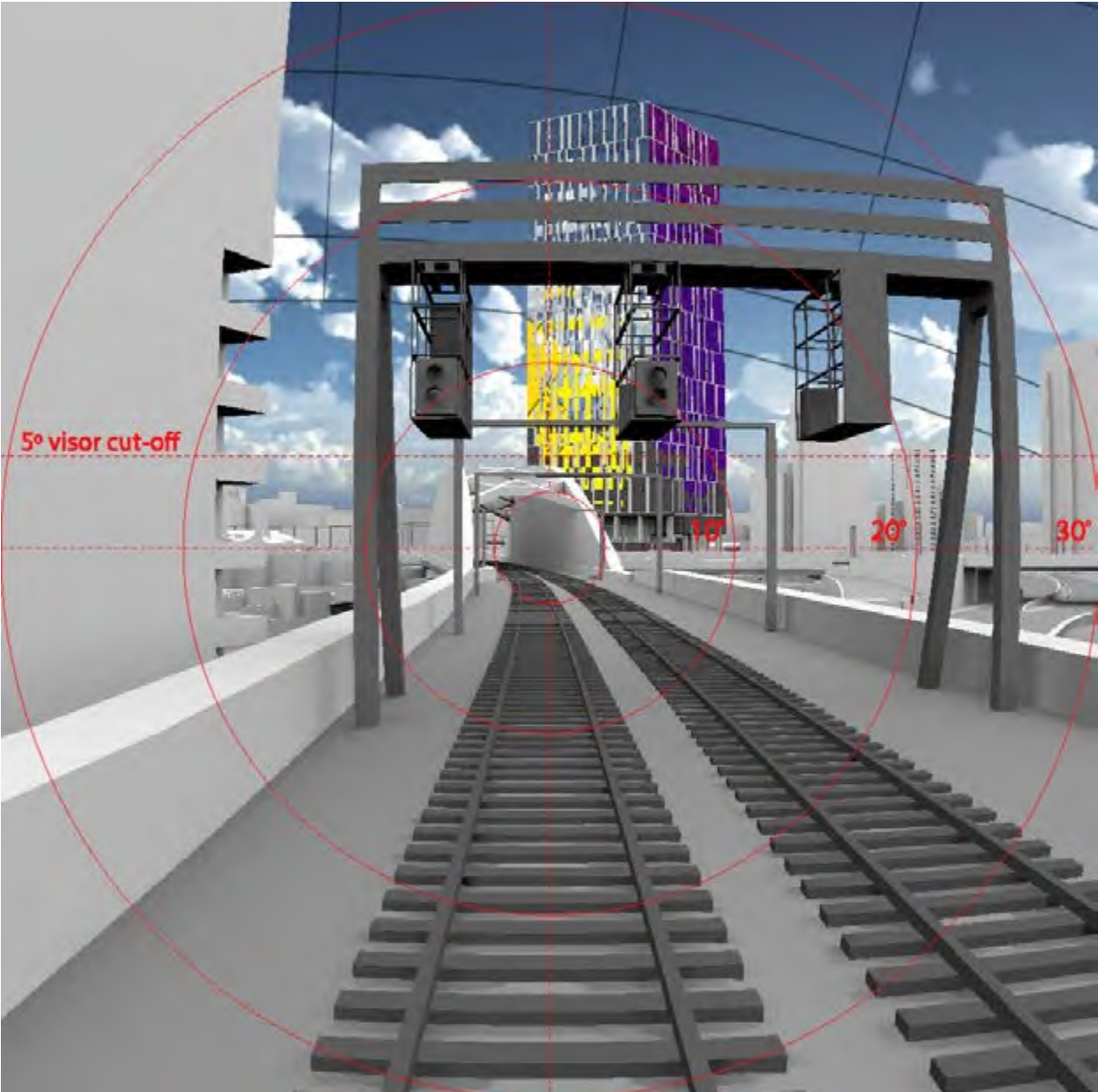
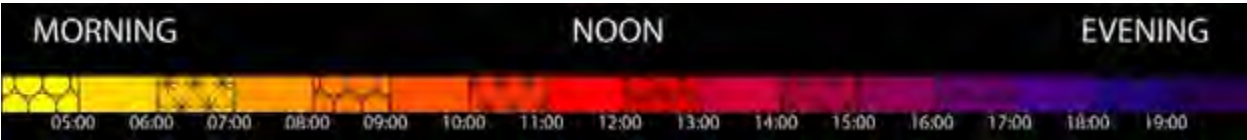


Fig. 566: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

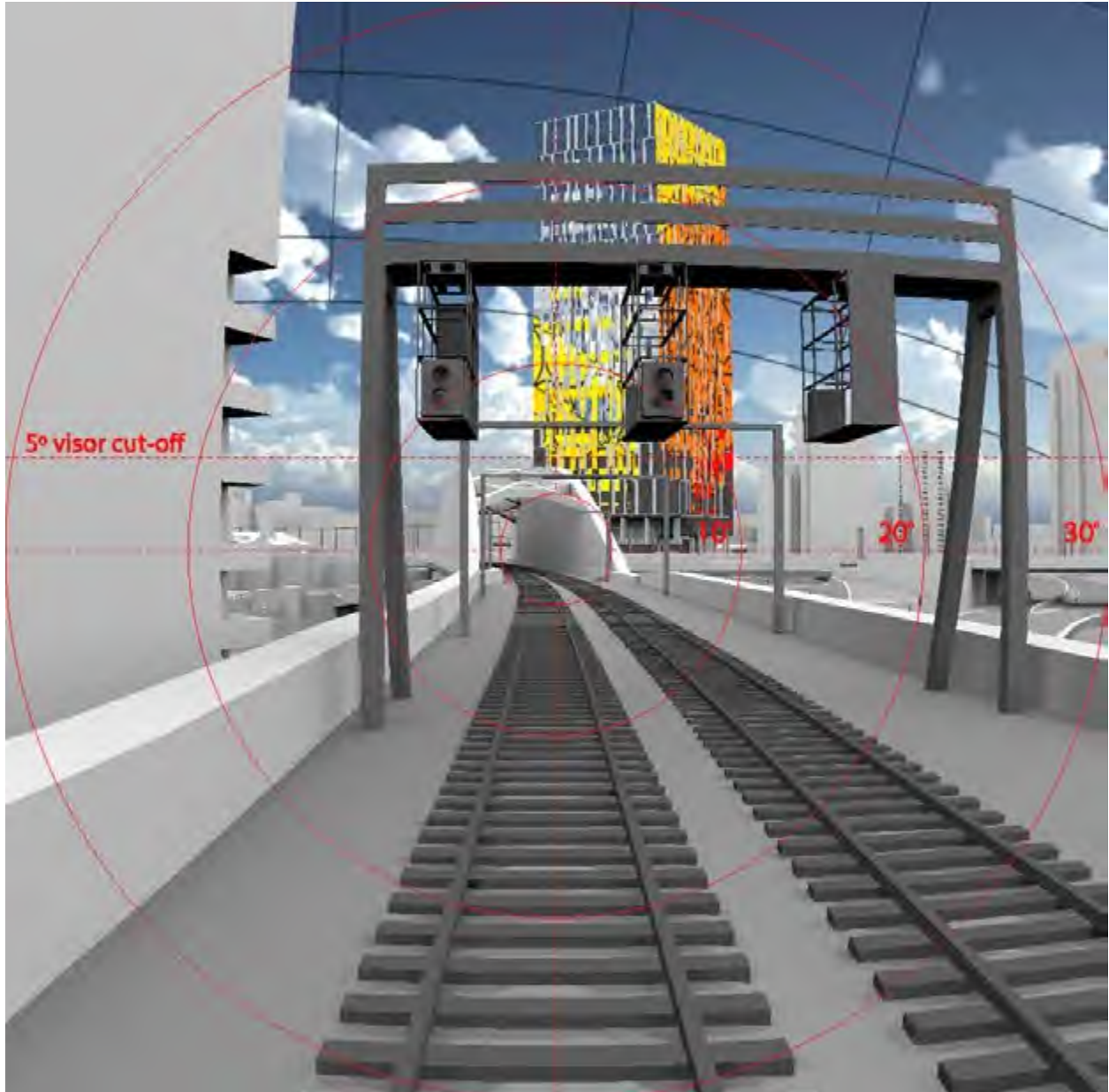


Fig. 567: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAIGHT

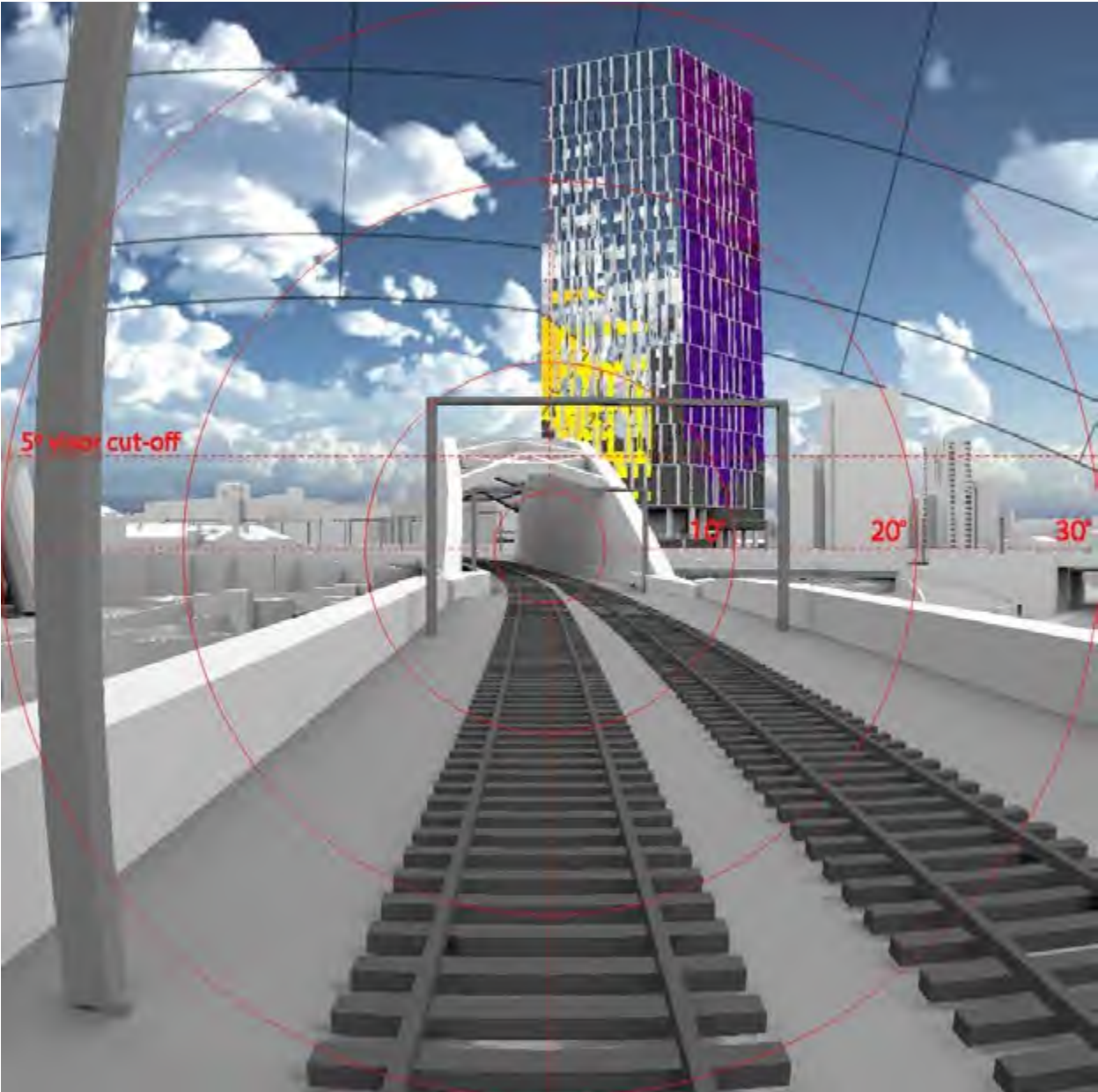
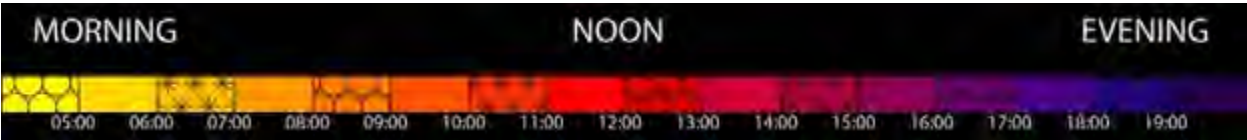


Fig. 568: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAGHT**

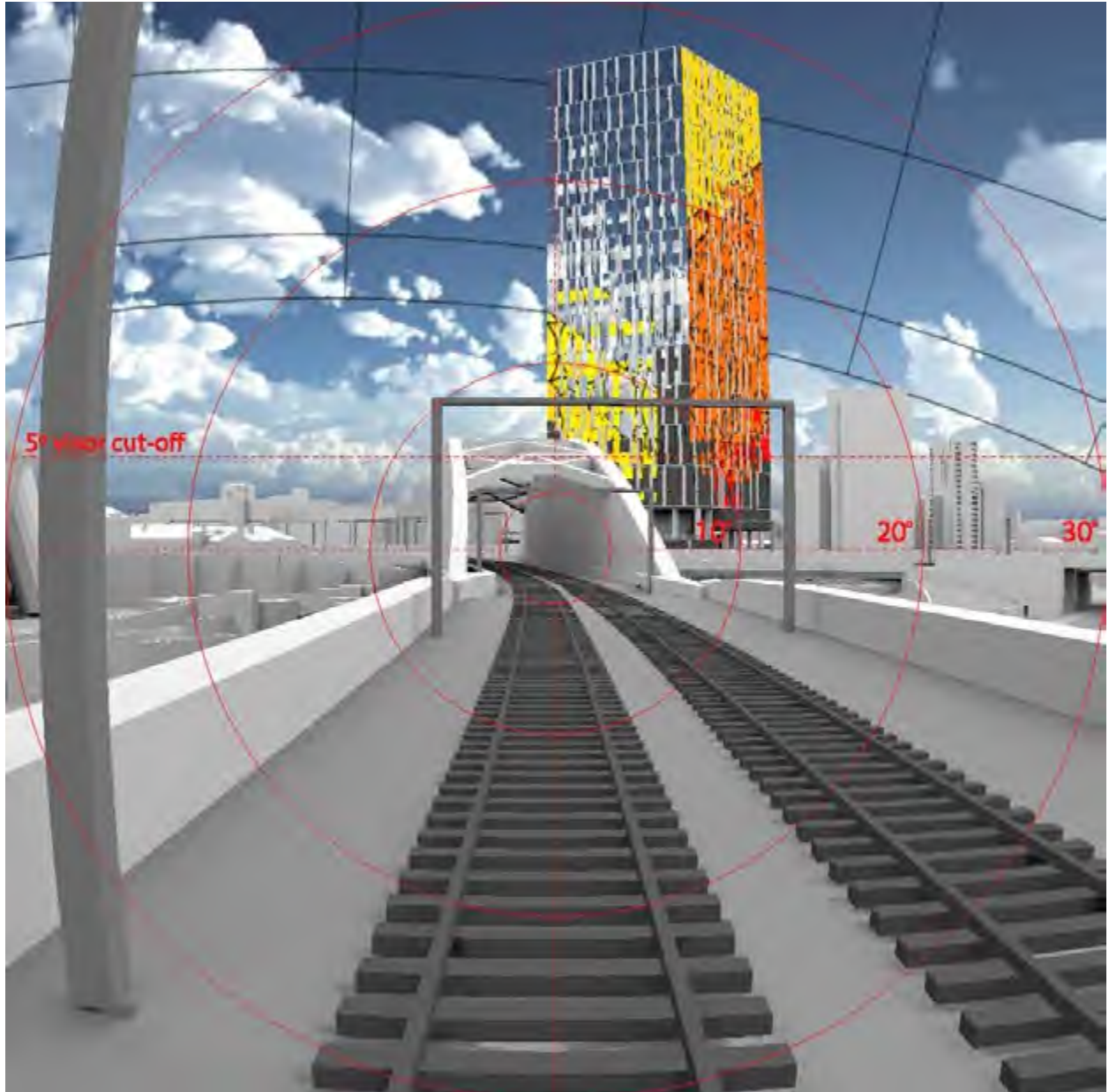


Fig. 569: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT

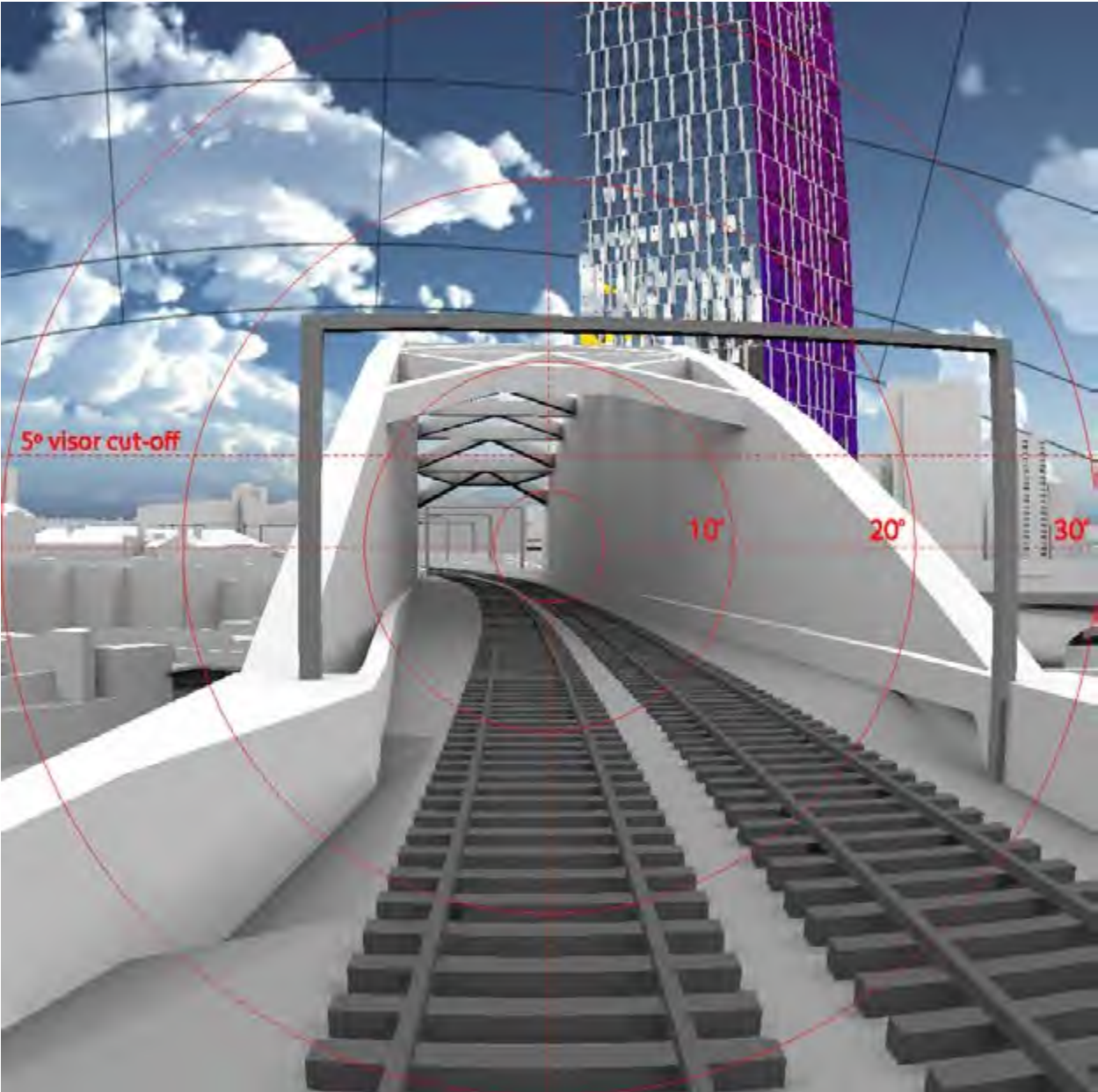


Fig. 570: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT**

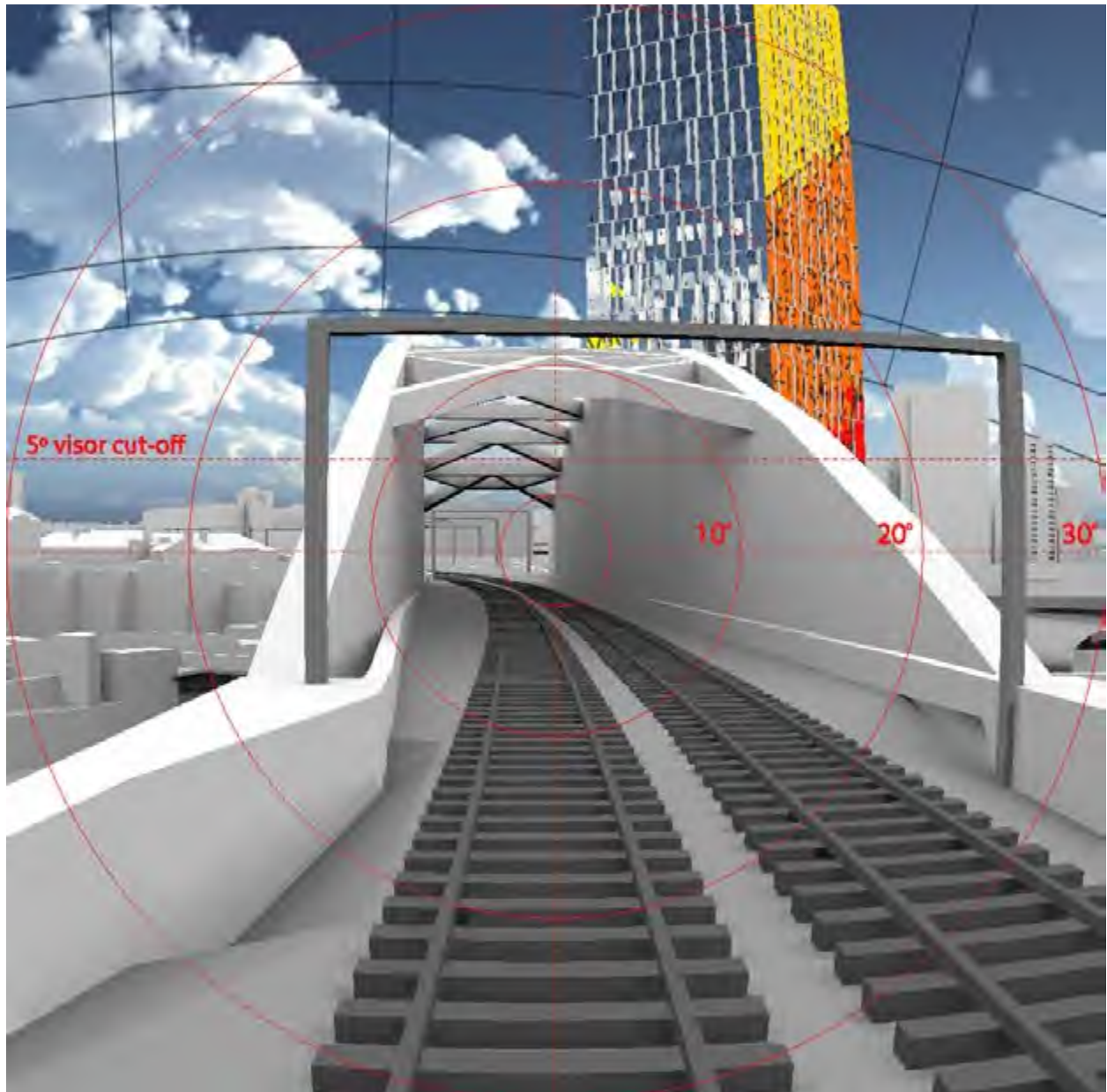


Fig. 571: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT

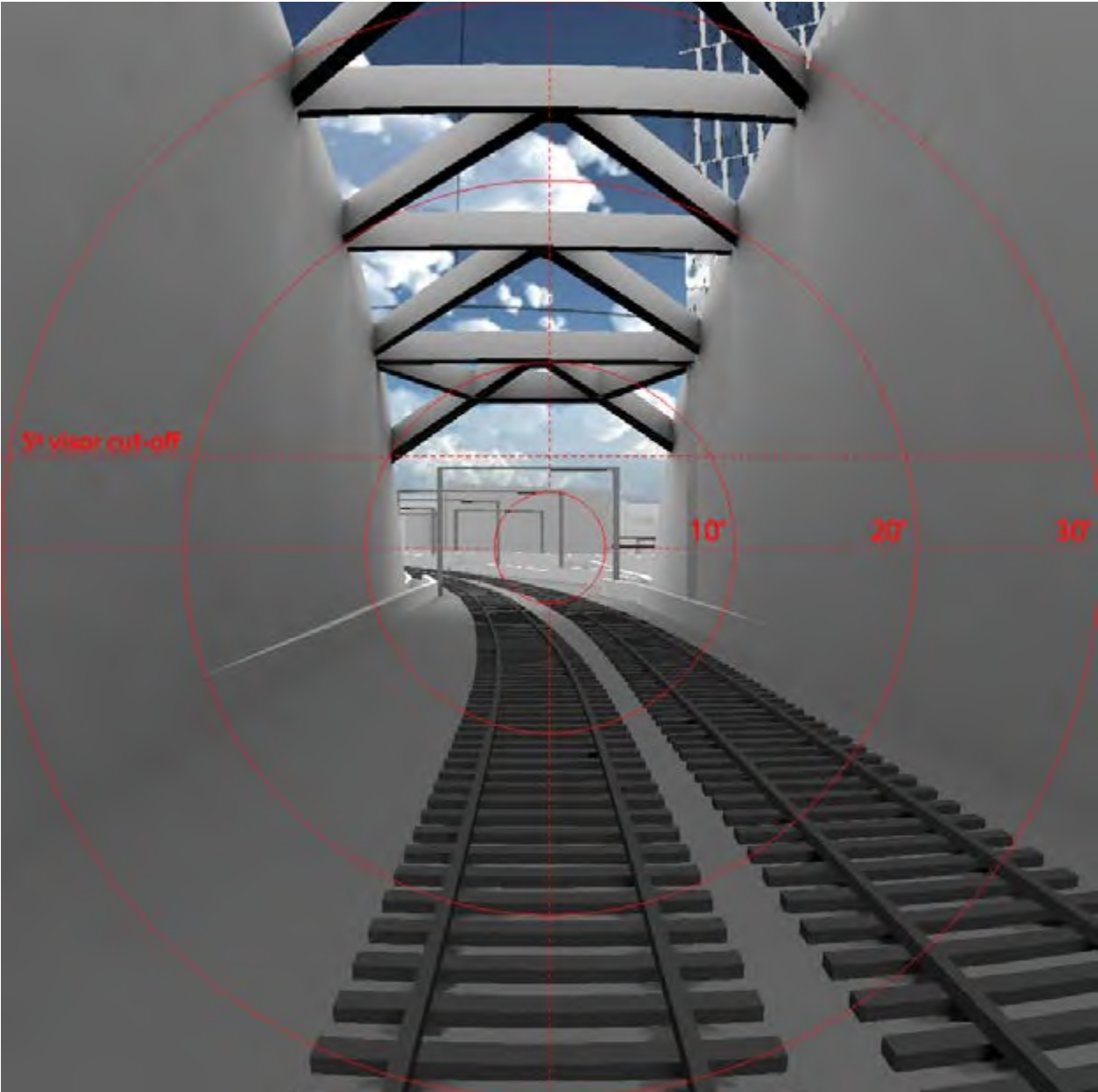
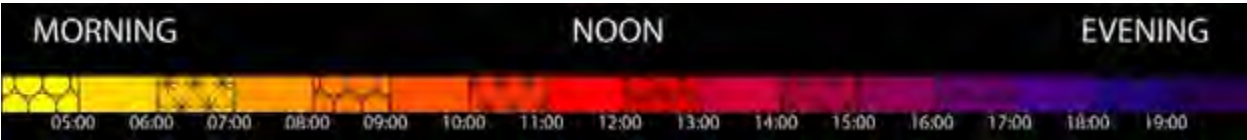


Fig. 572: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT**

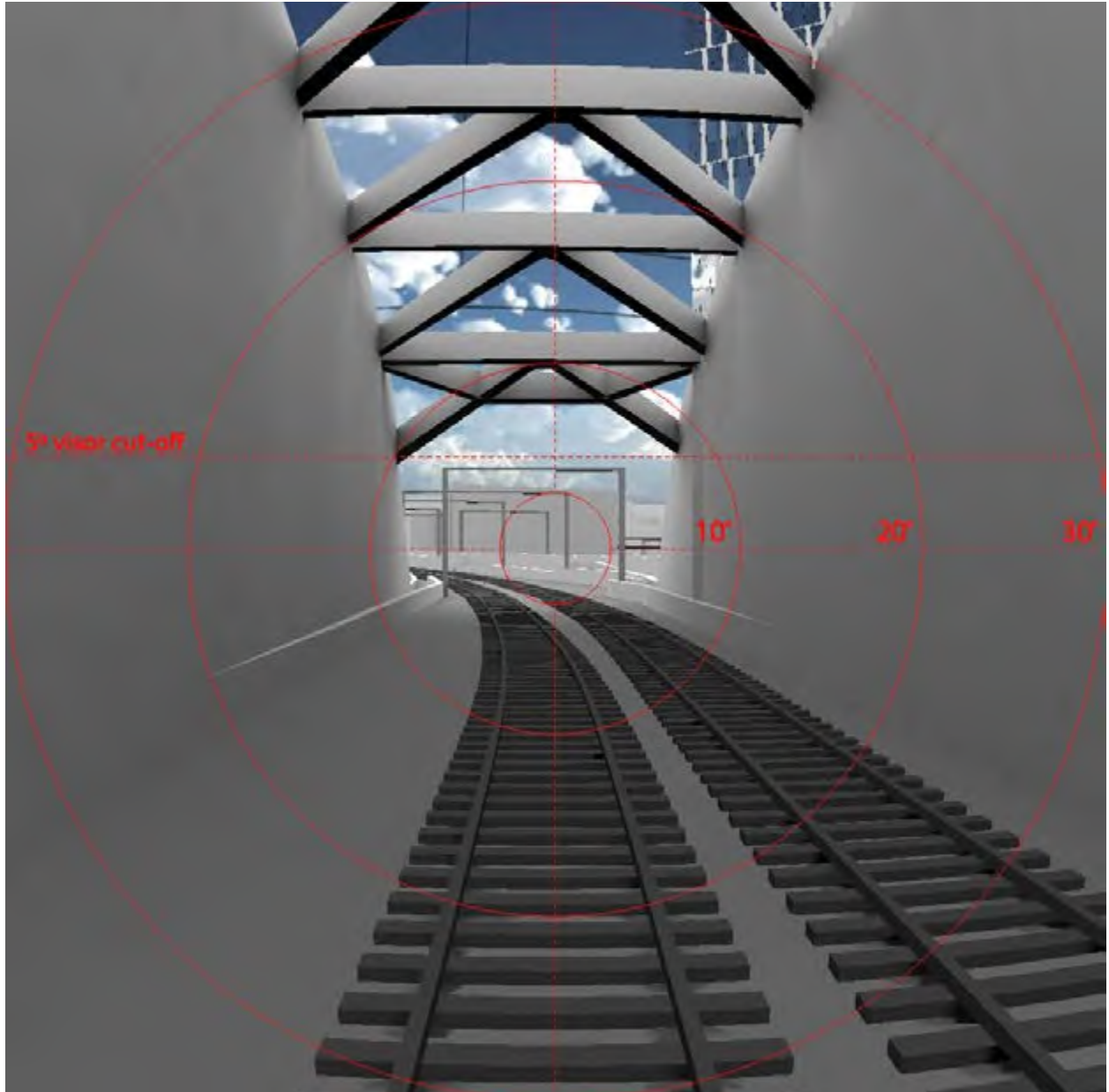


Fig. 573: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT

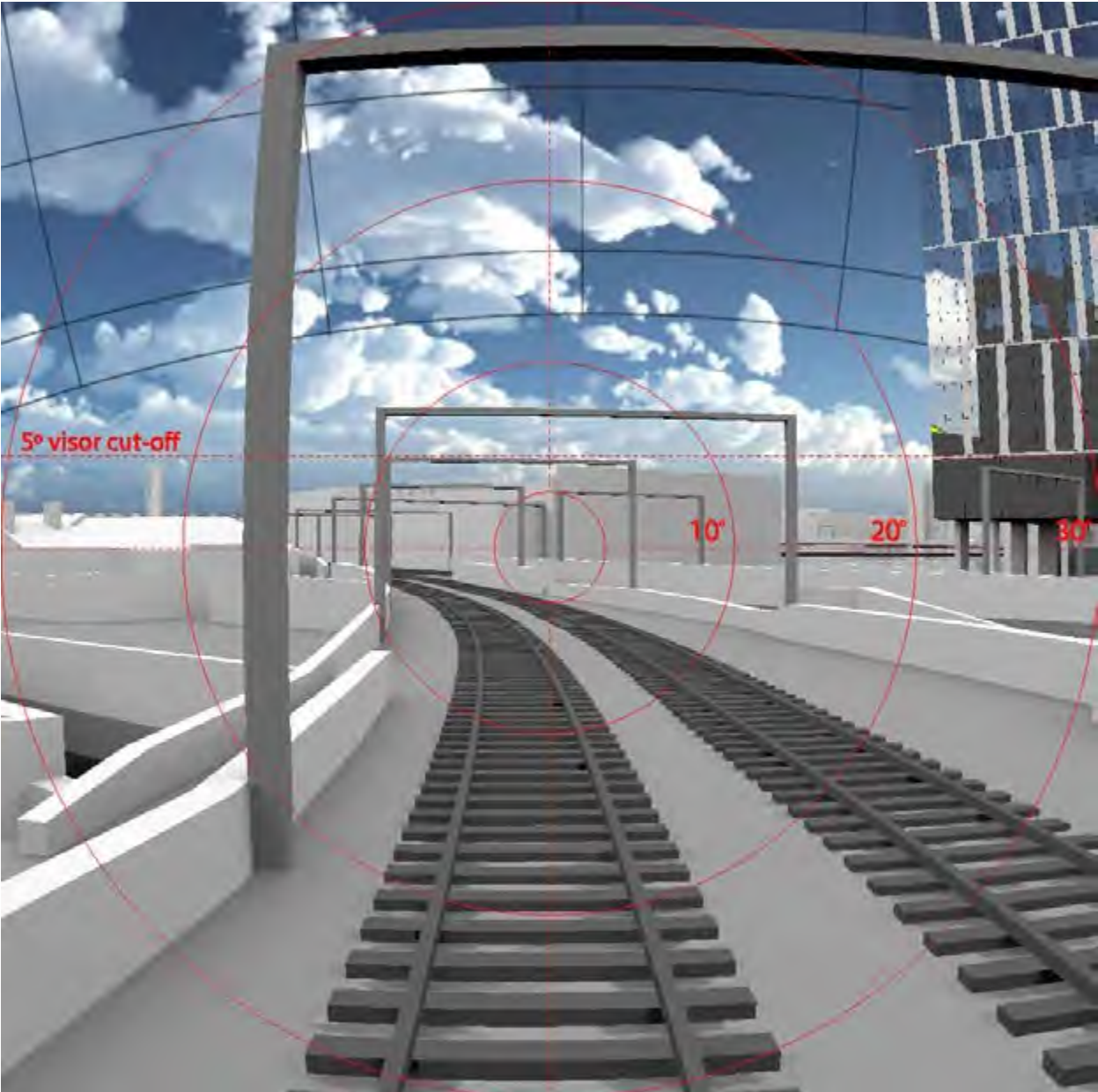
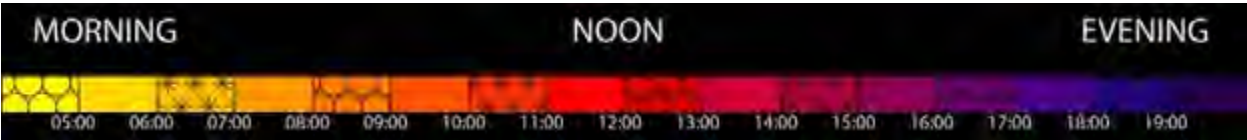


Fig. 574: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT**

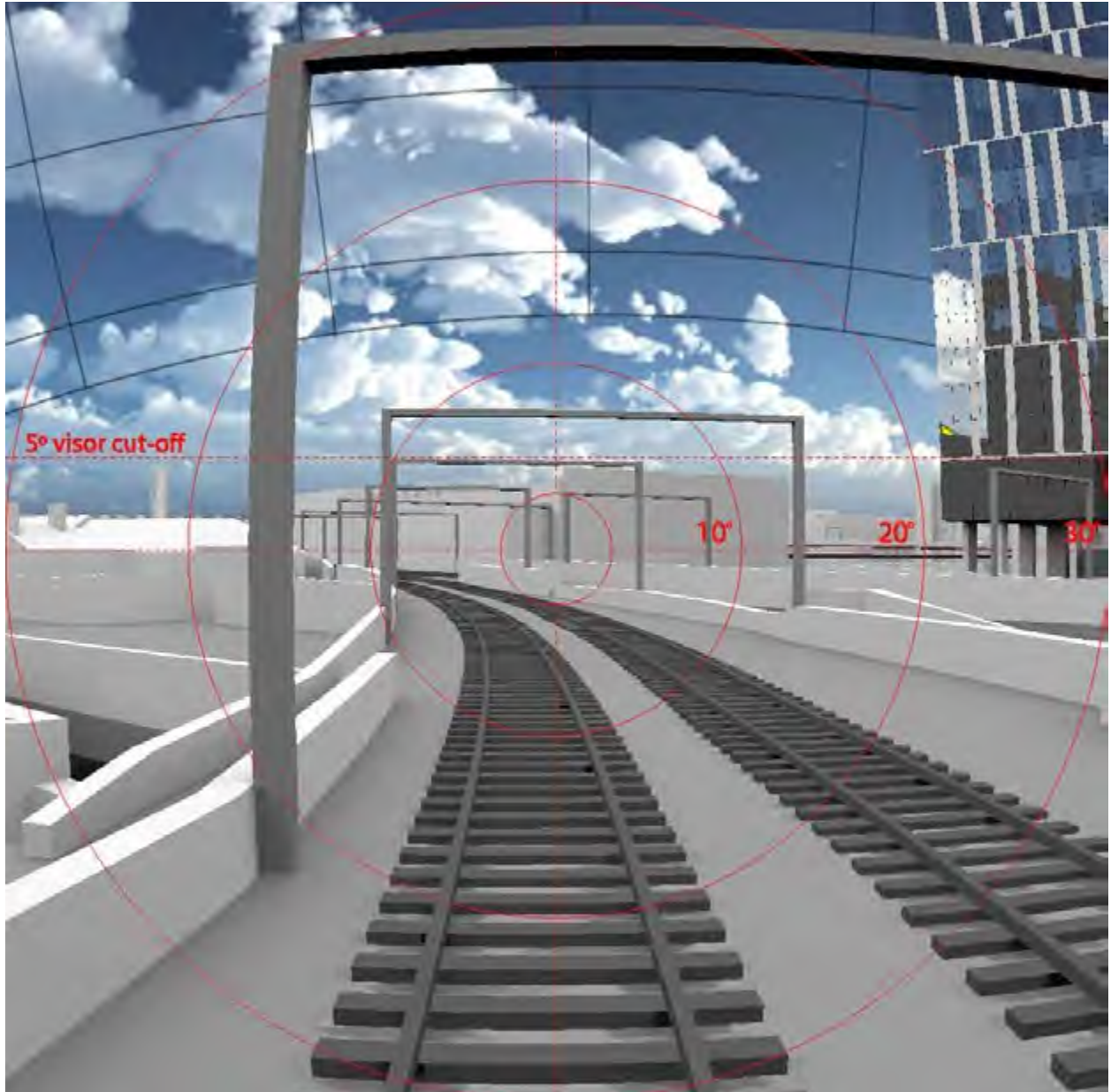


Fig. 575: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAGHT

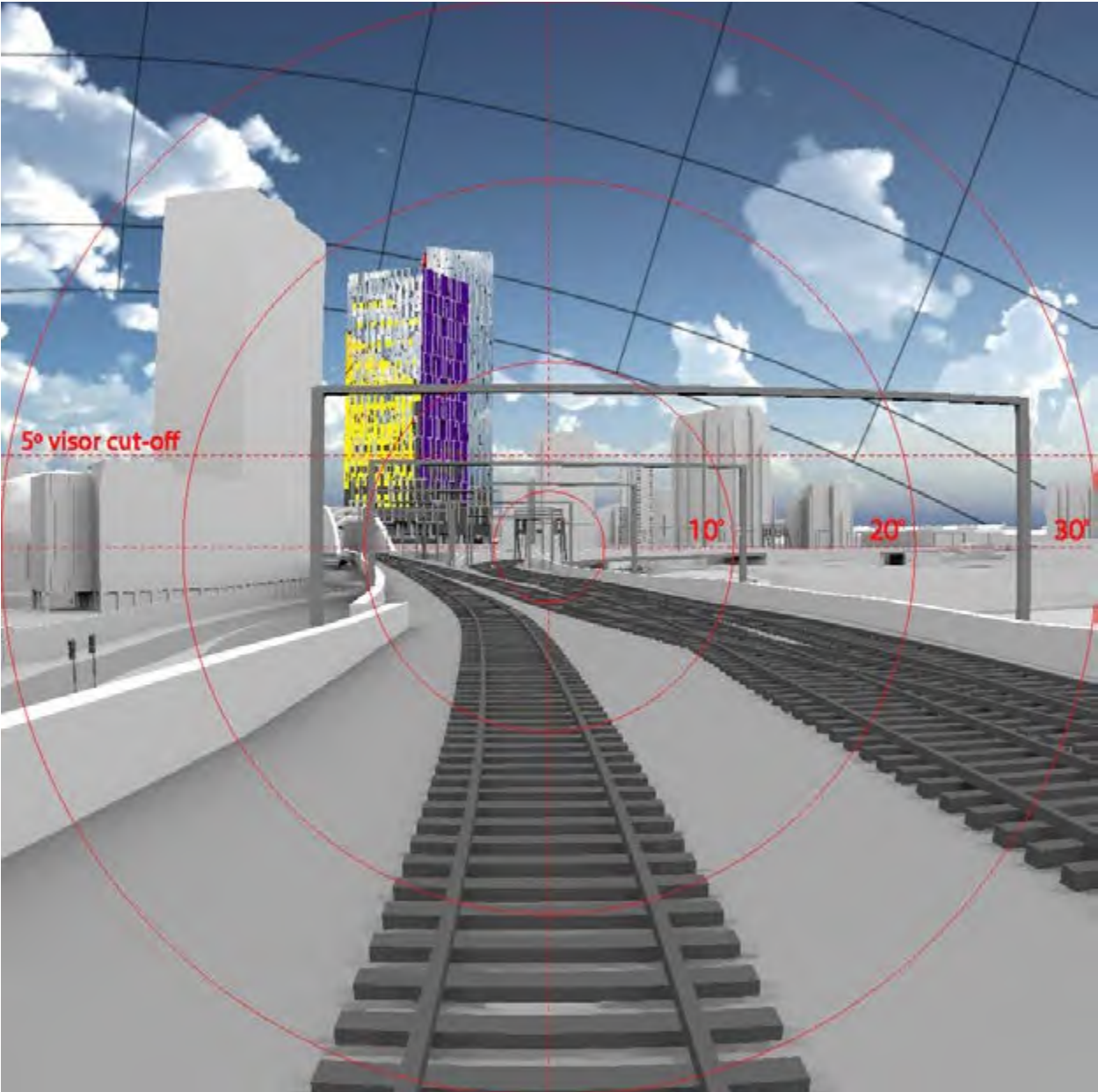


Fig. 576: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAGHT**

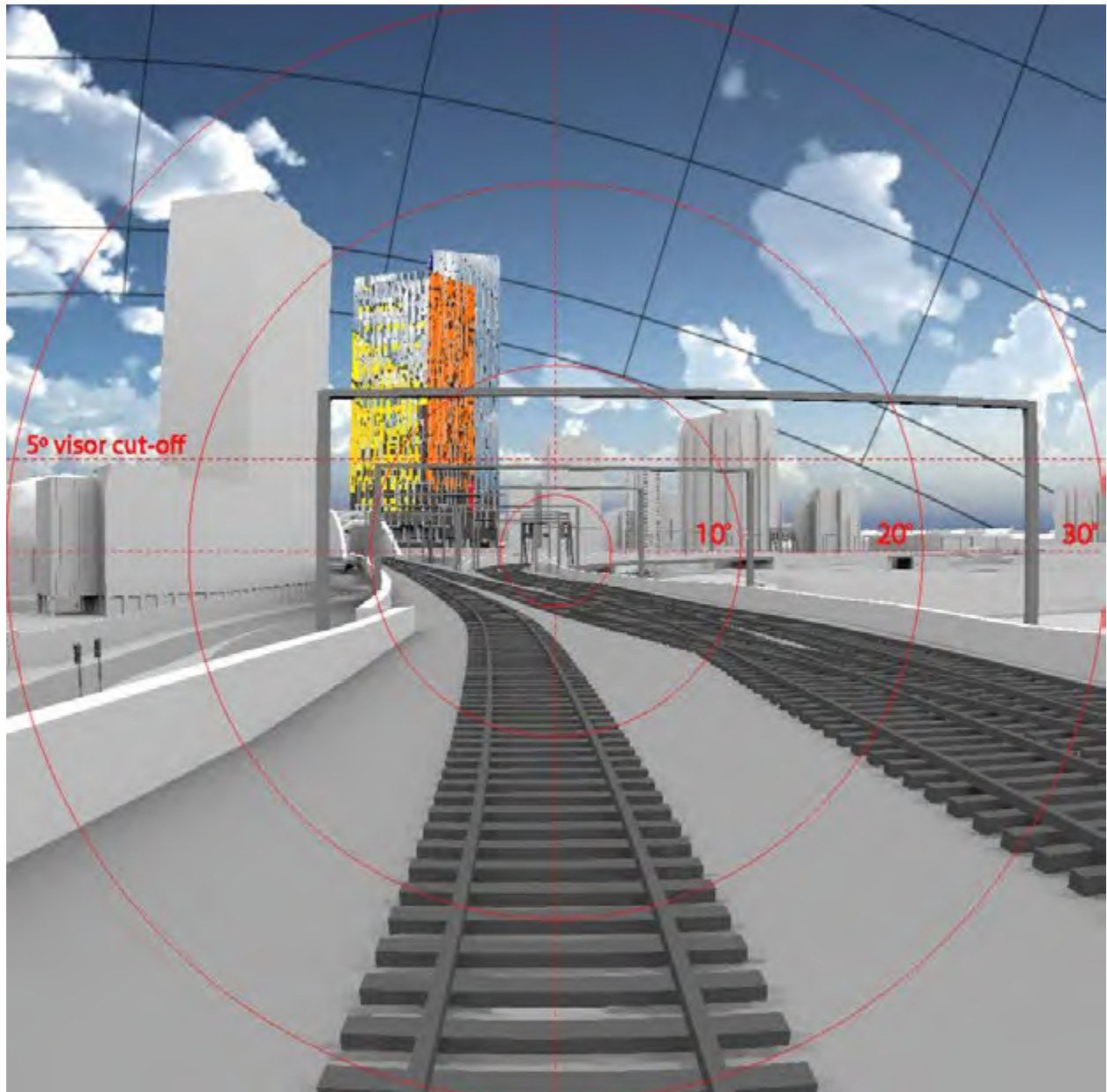


Fig. 577: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT

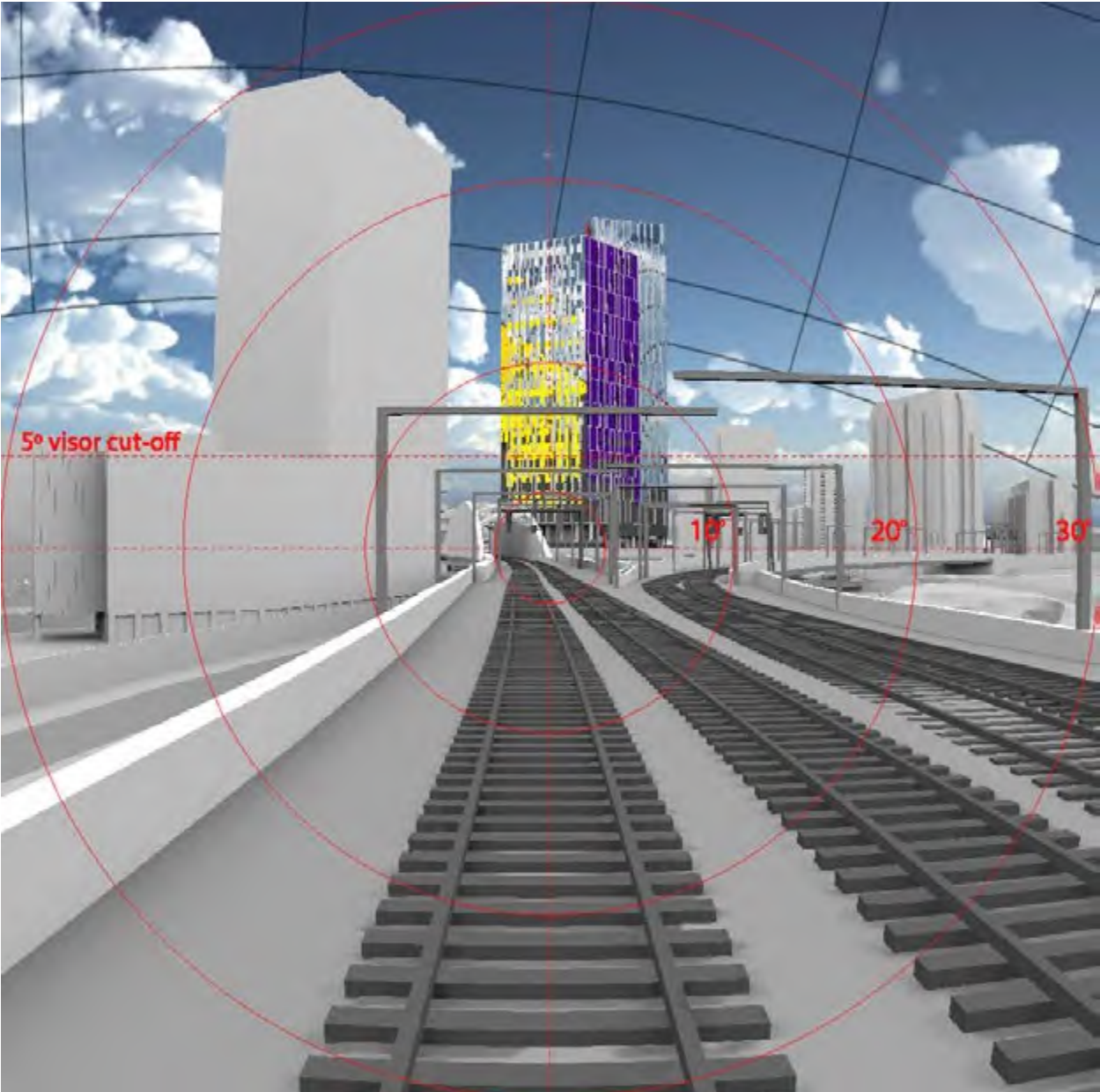


Fig. 578: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT**

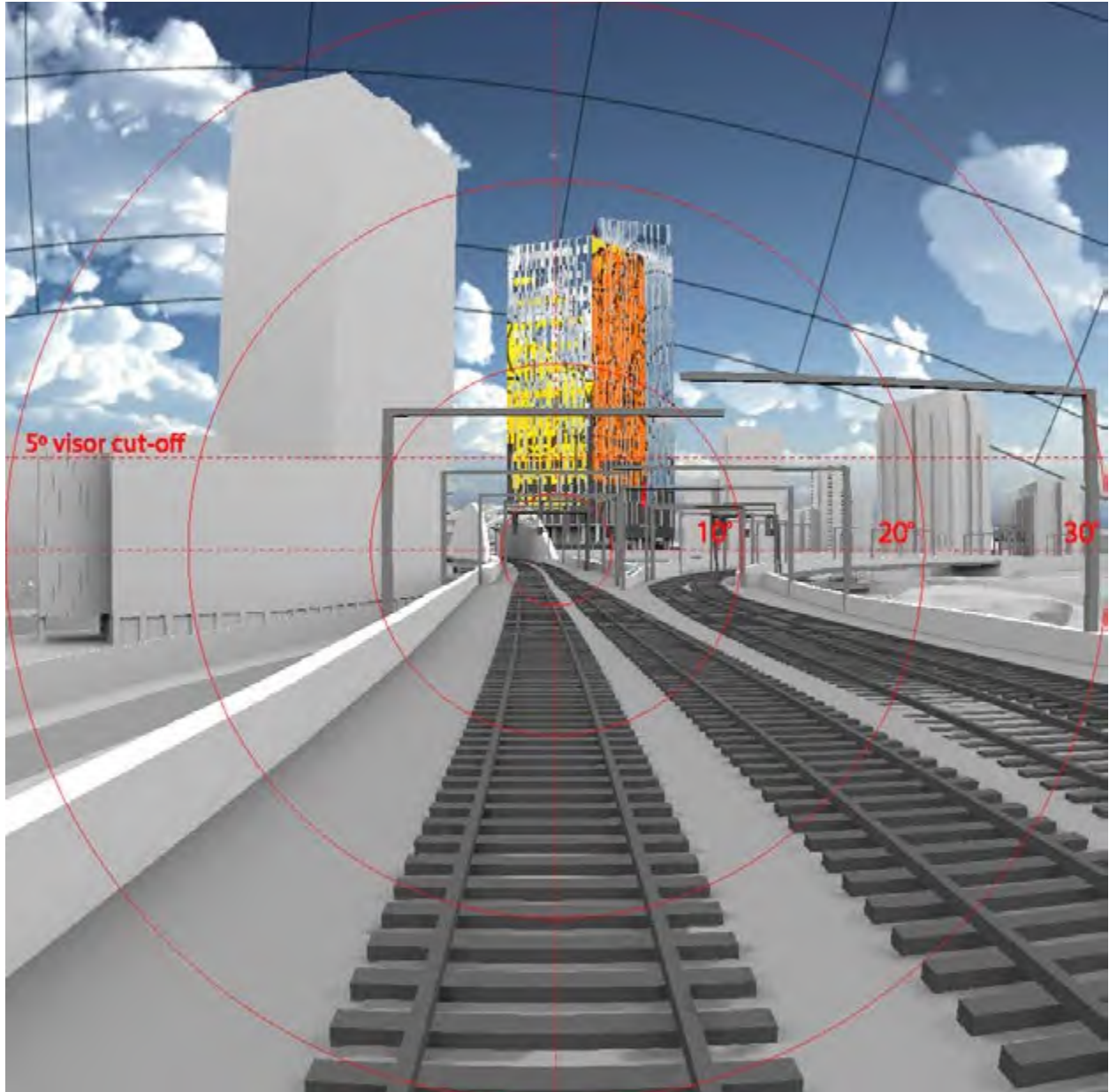


Fig. 579: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

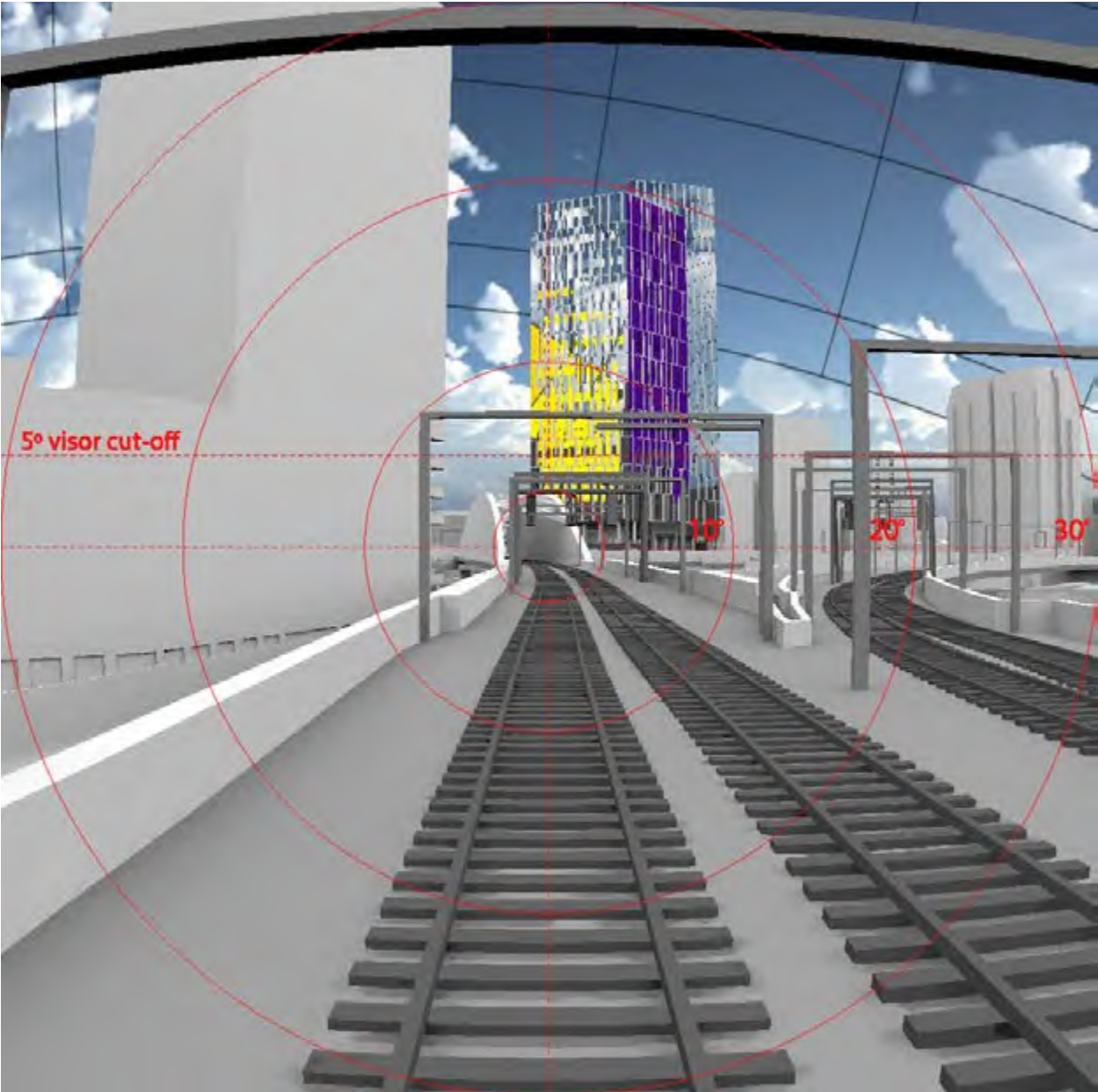


Fig. 580: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

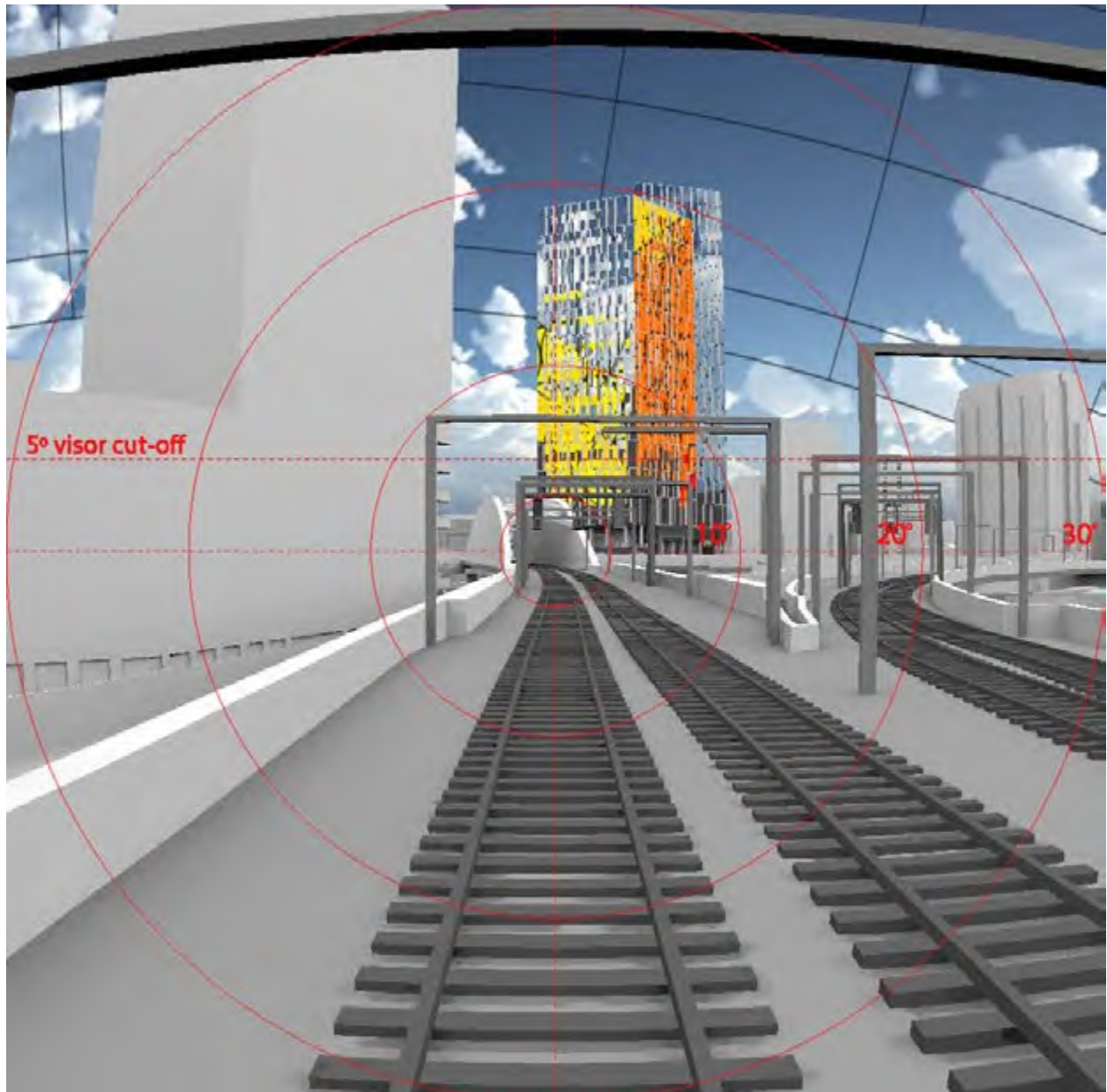


Fig. 581: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

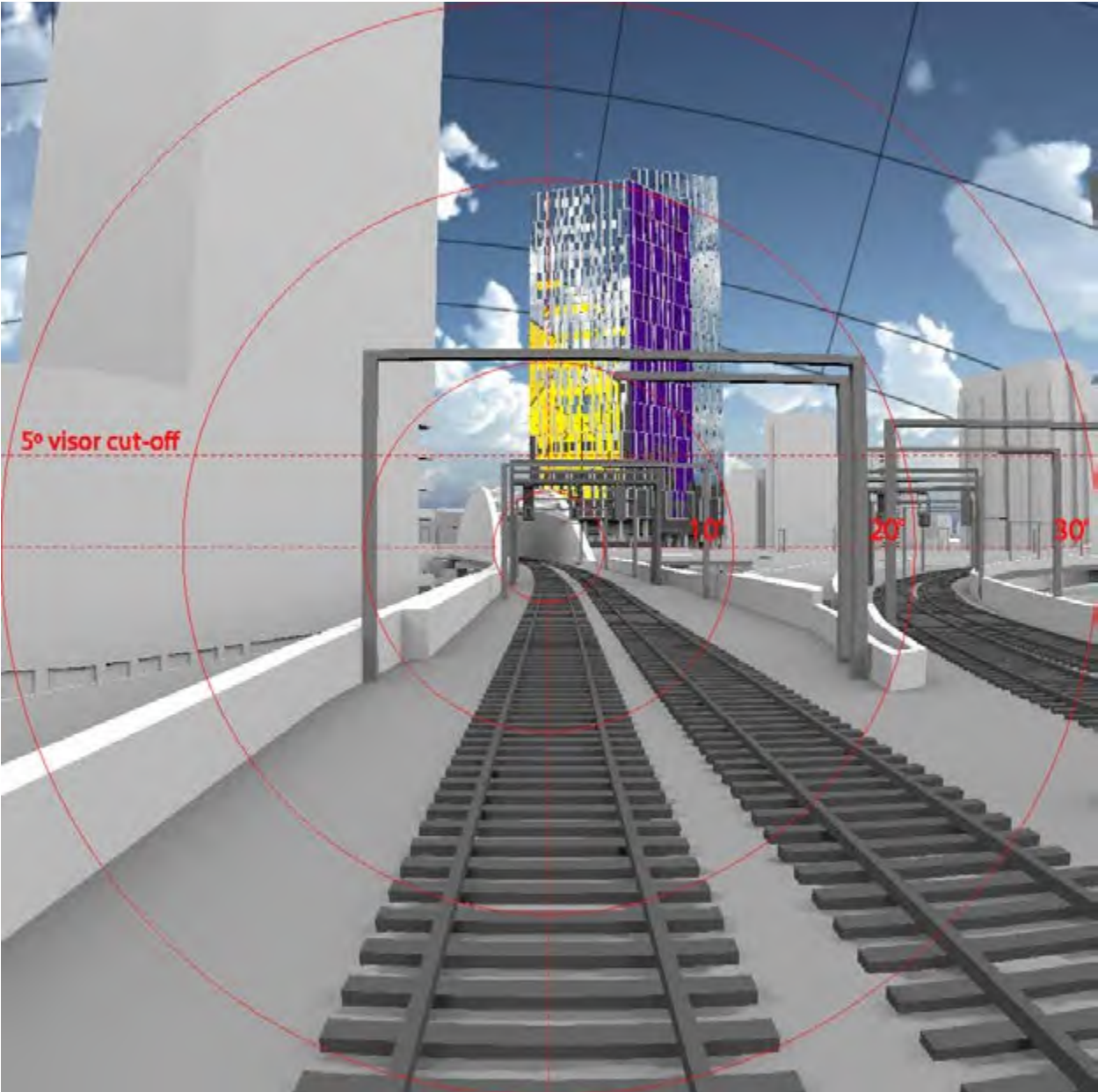


Fig. 582: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

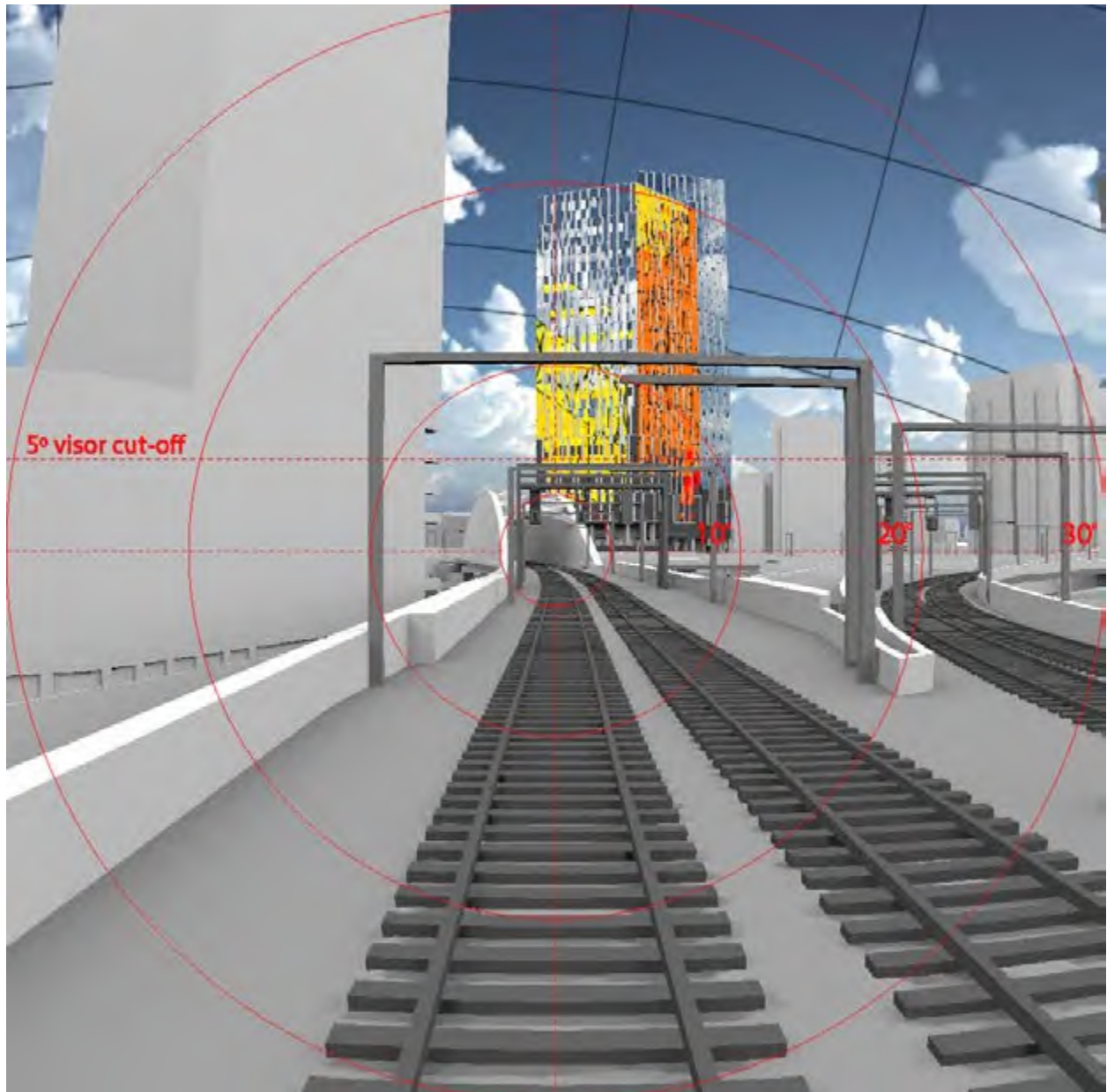


Fig. 583: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

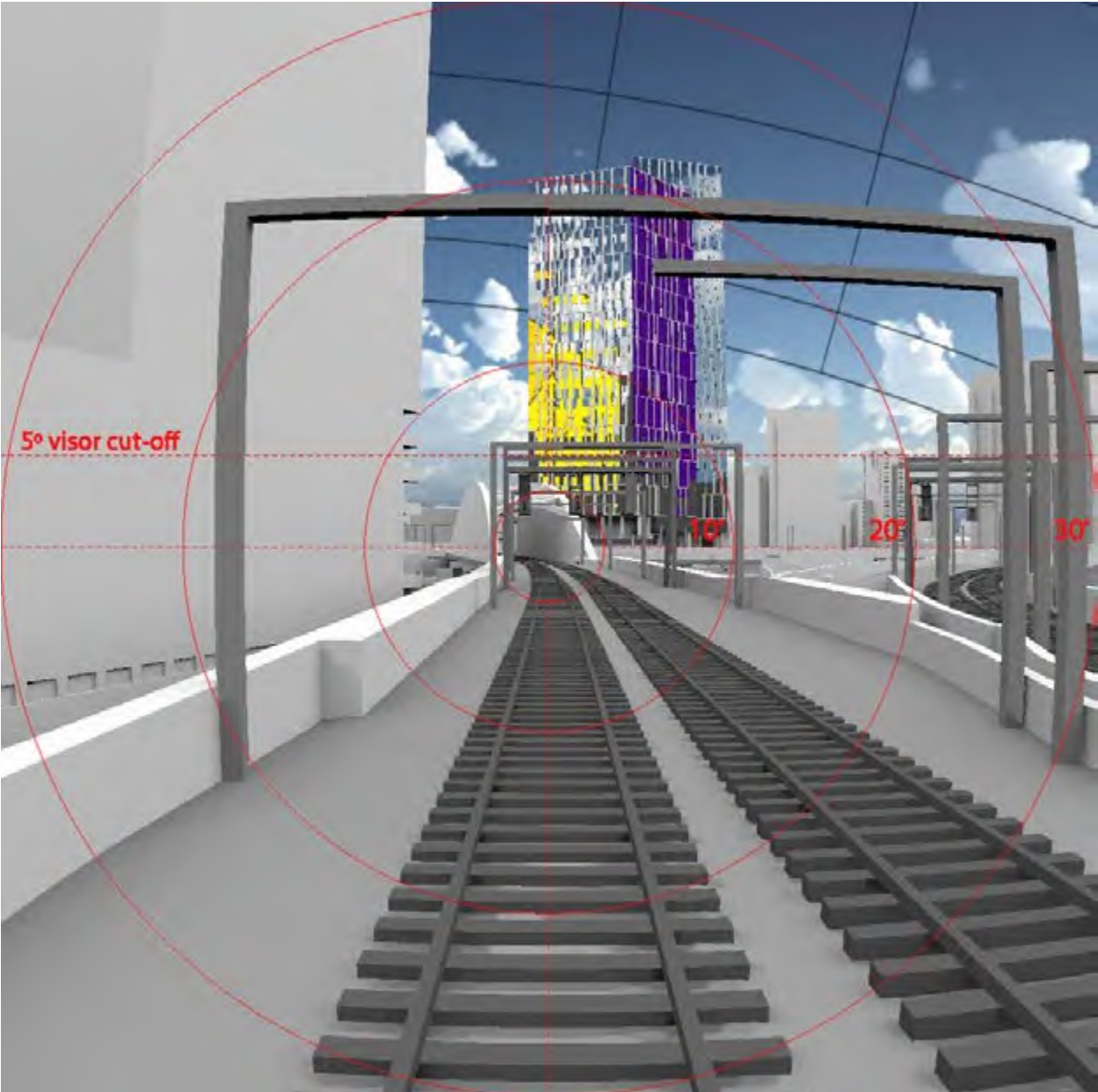


Fig. 584: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

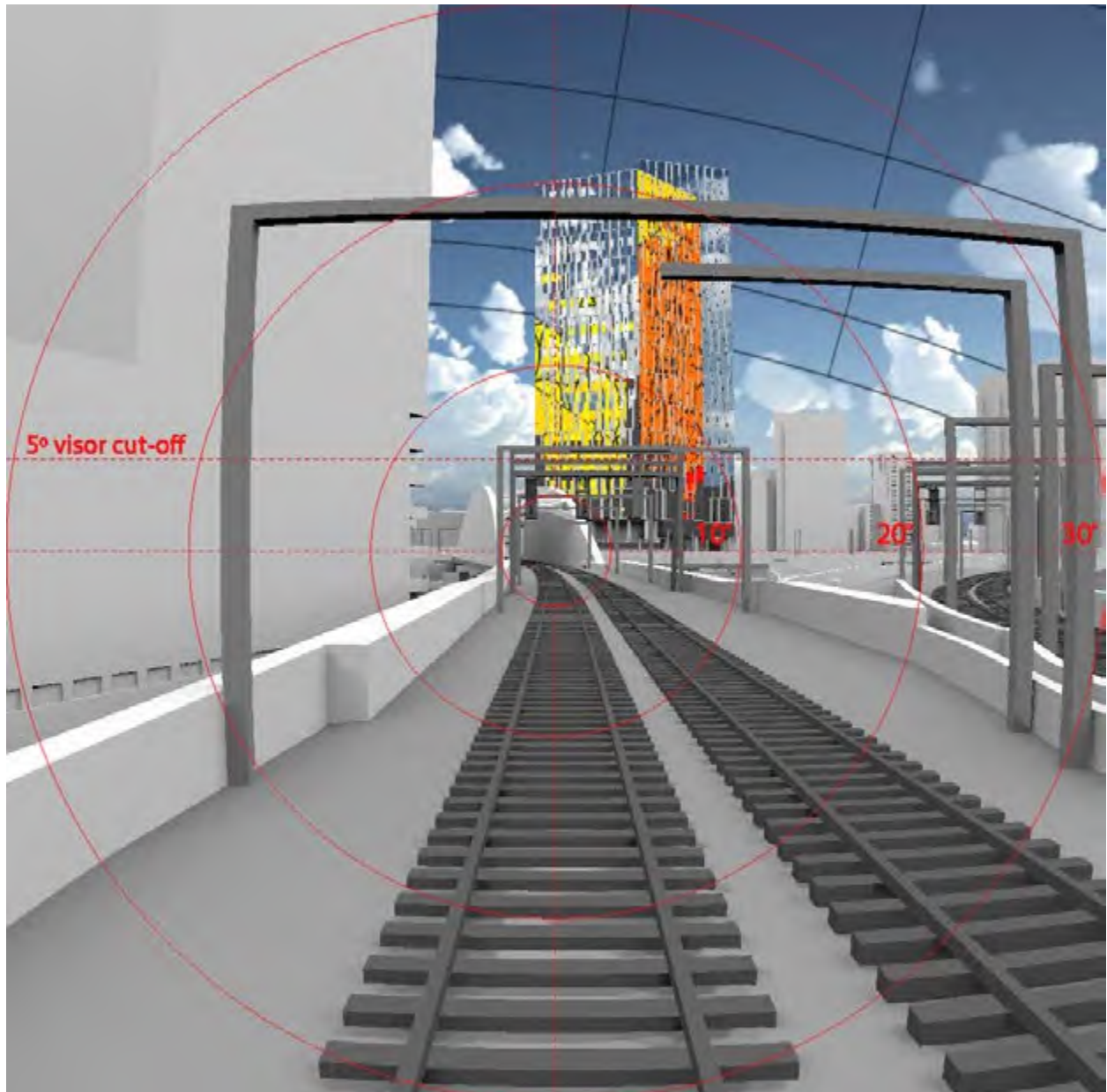


Fig. 585: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

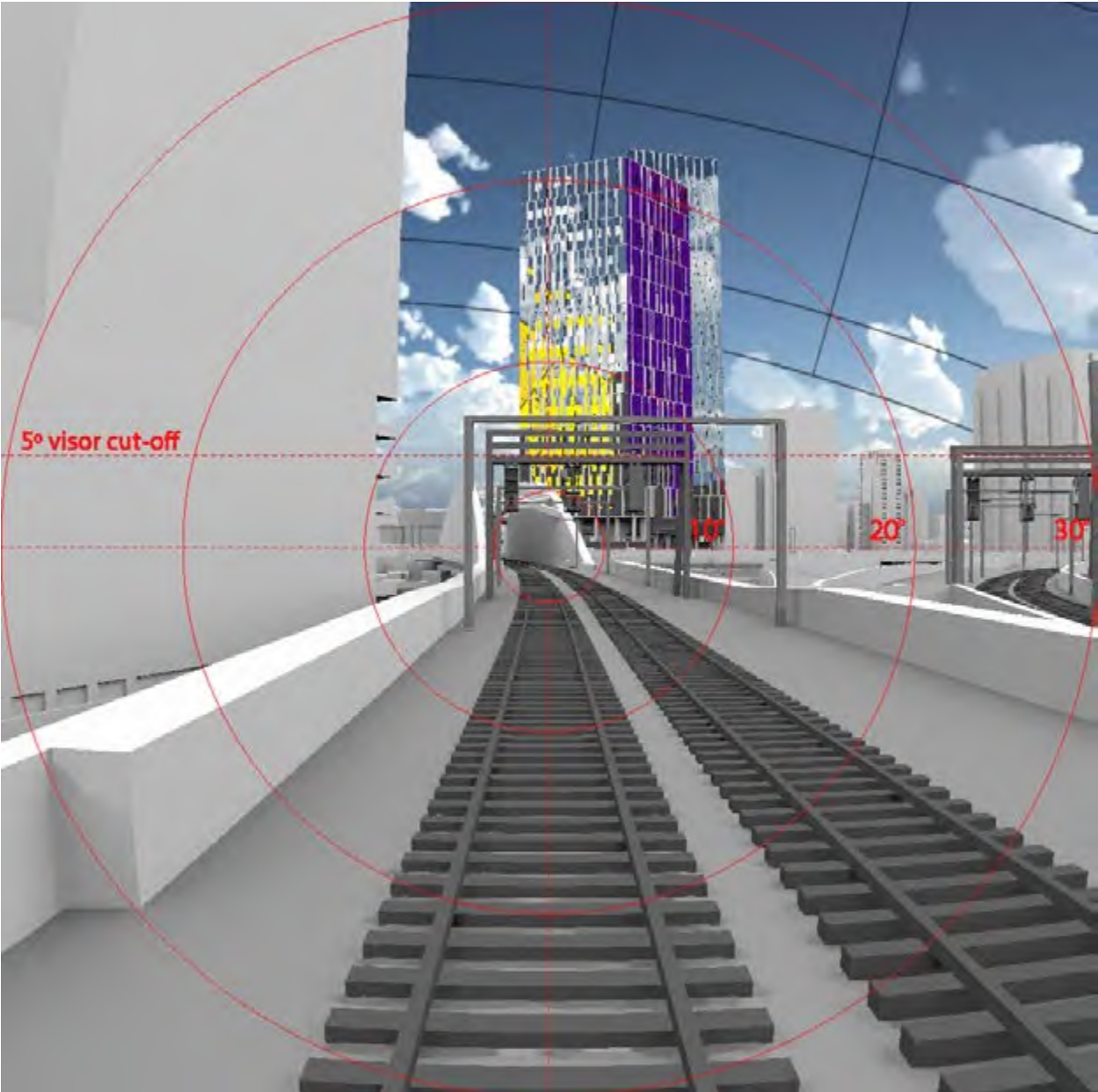


Fig. 586: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

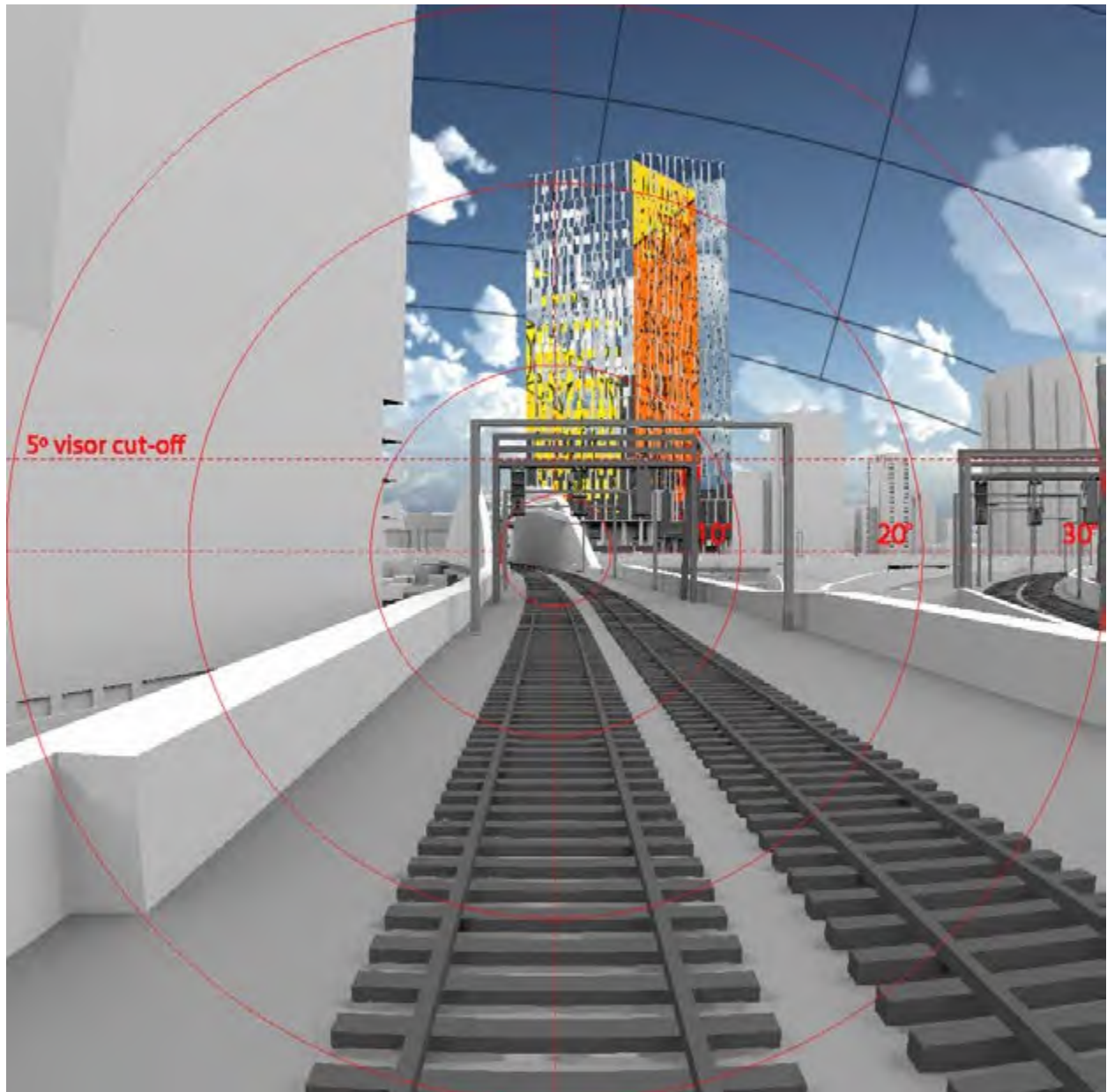


Fig. 587: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

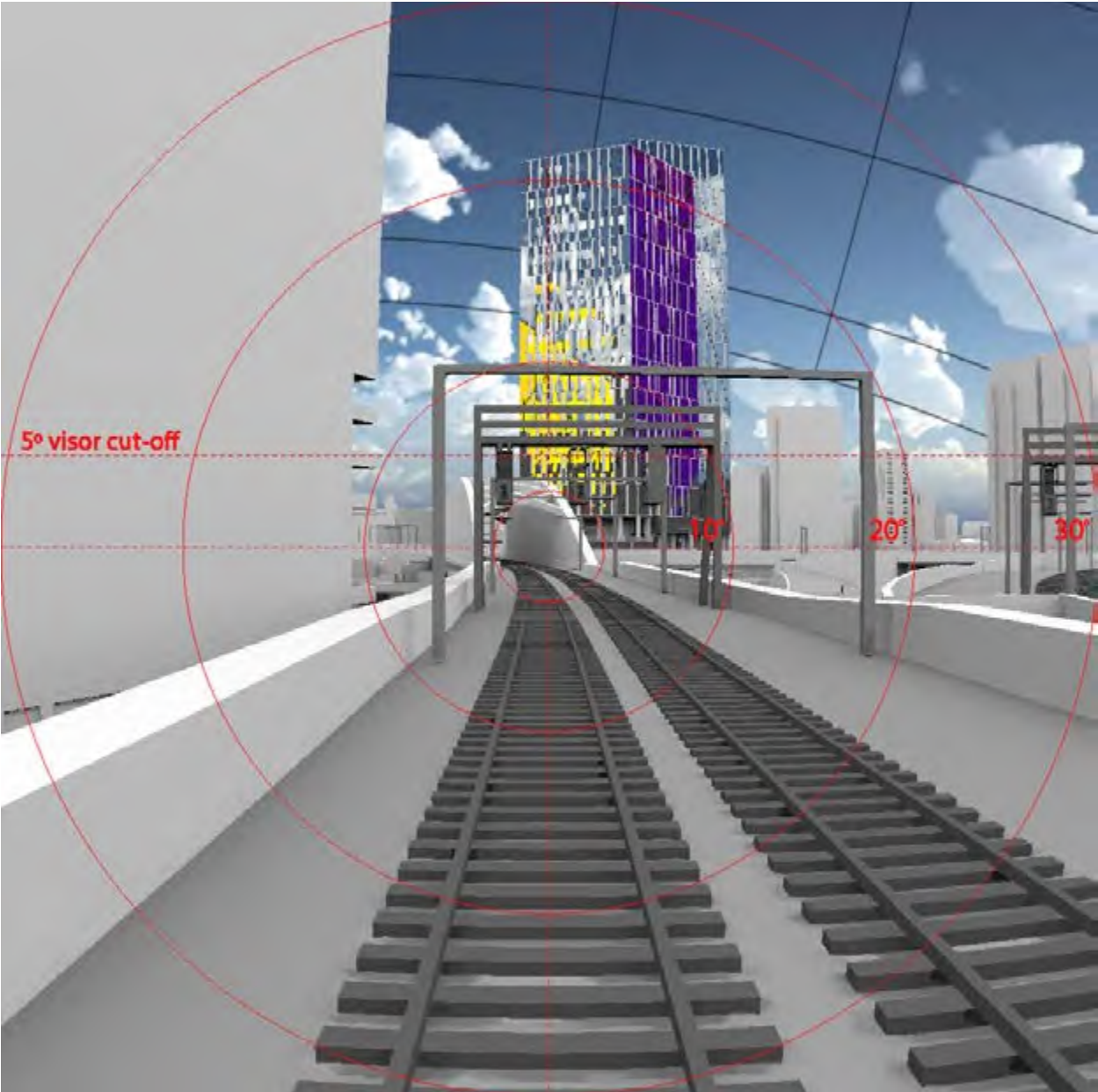


Fig. 588: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

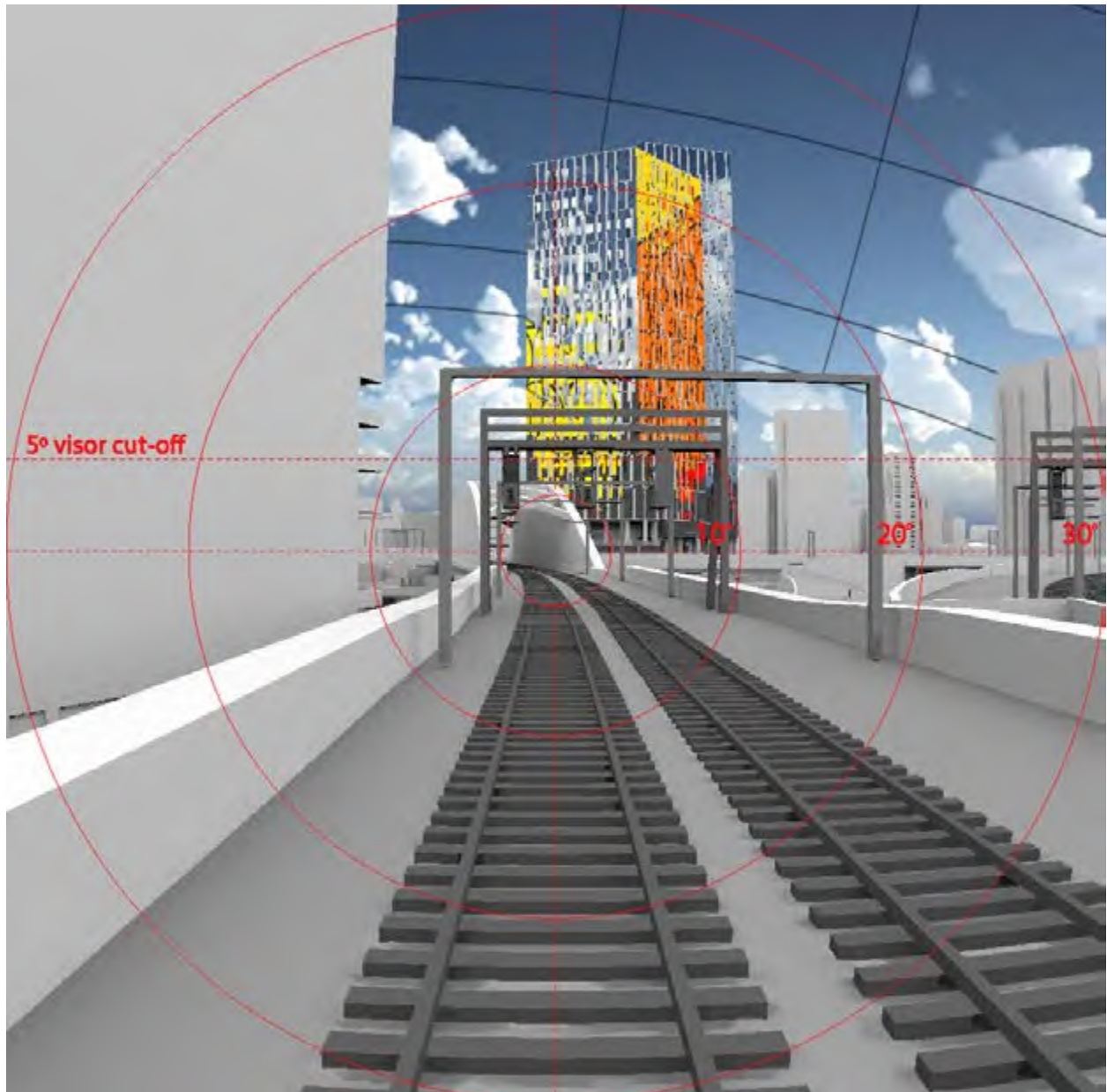


Fig. 589: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

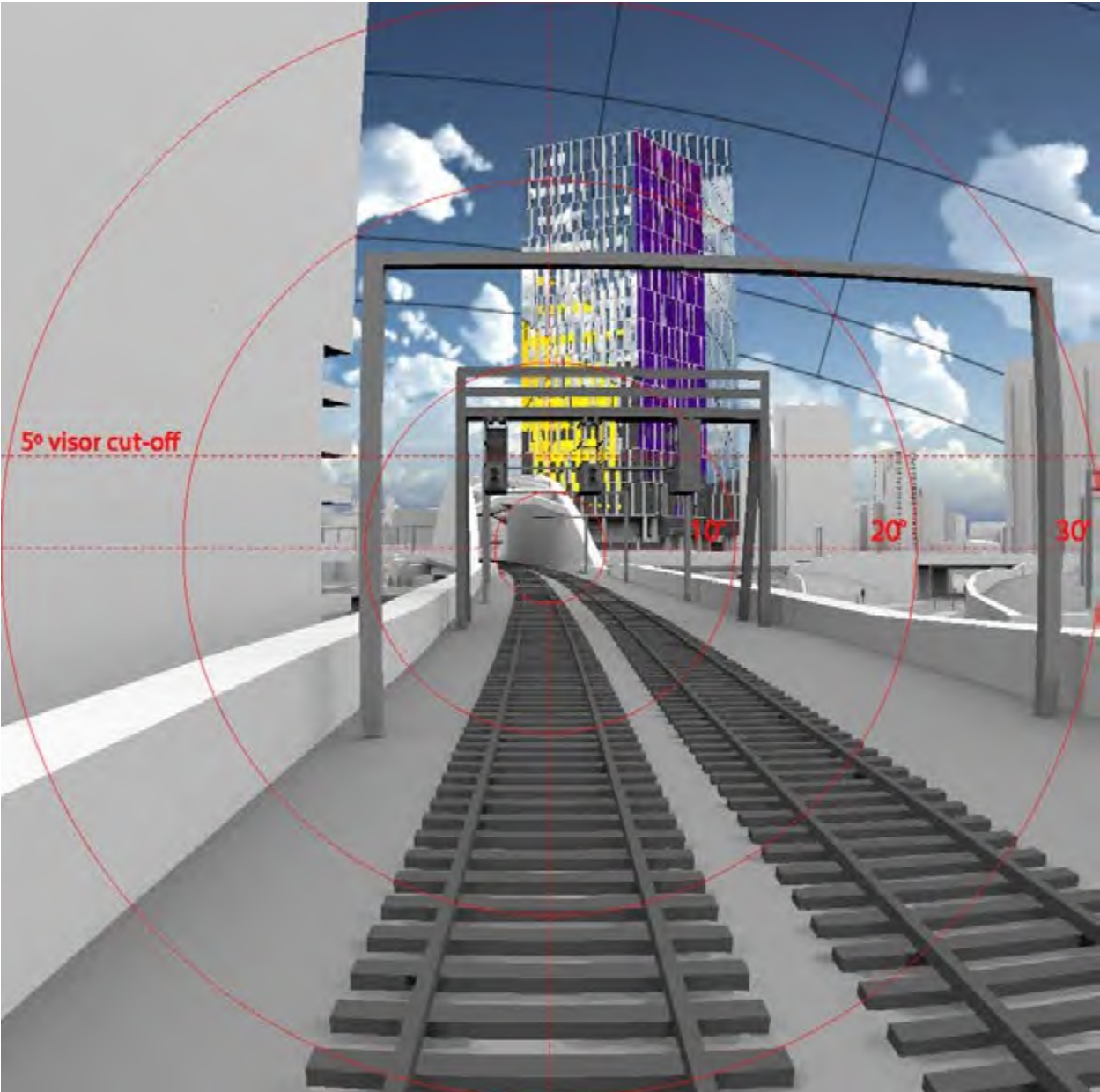


Fig. 590: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

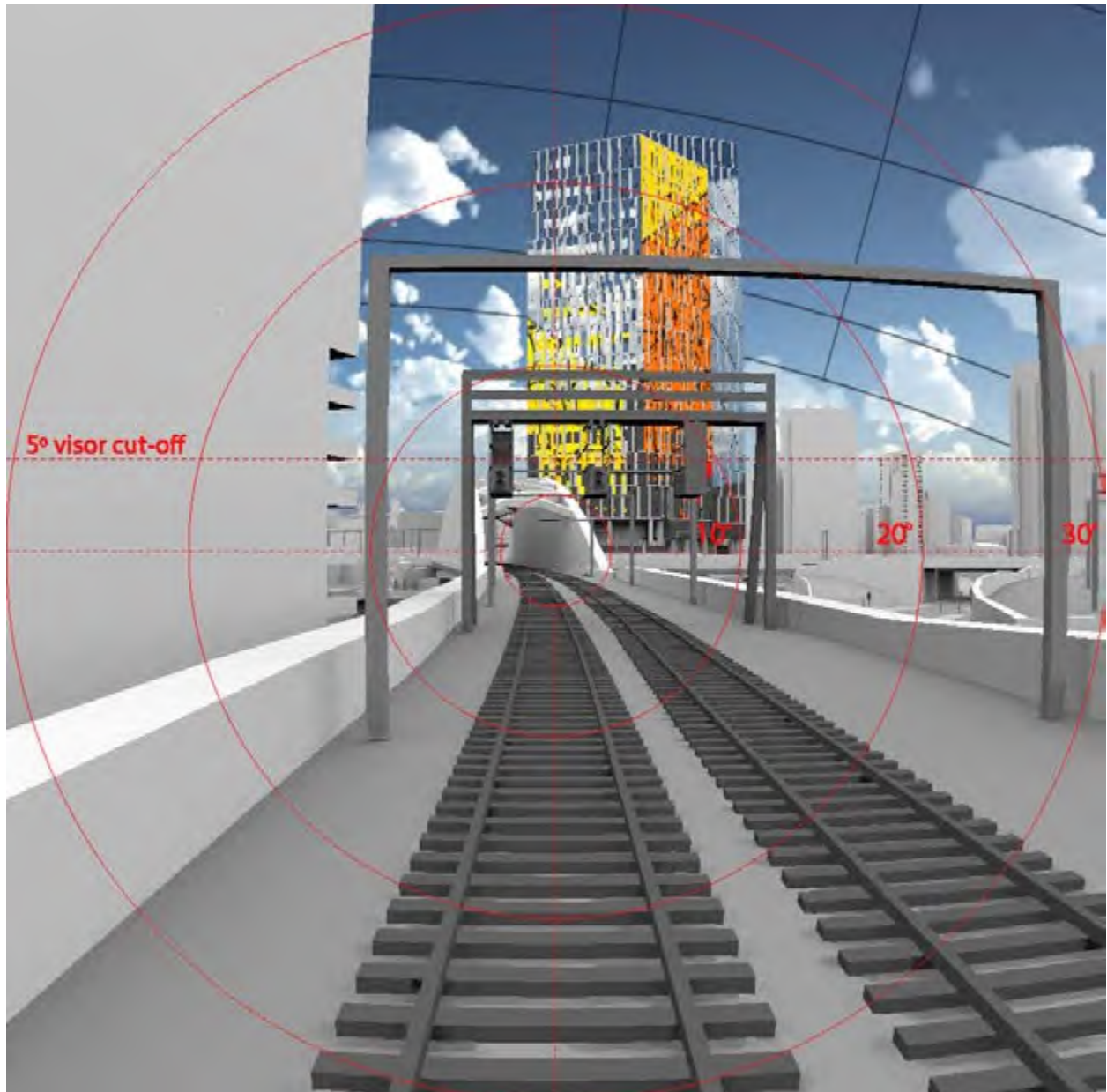


Fig. 591: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

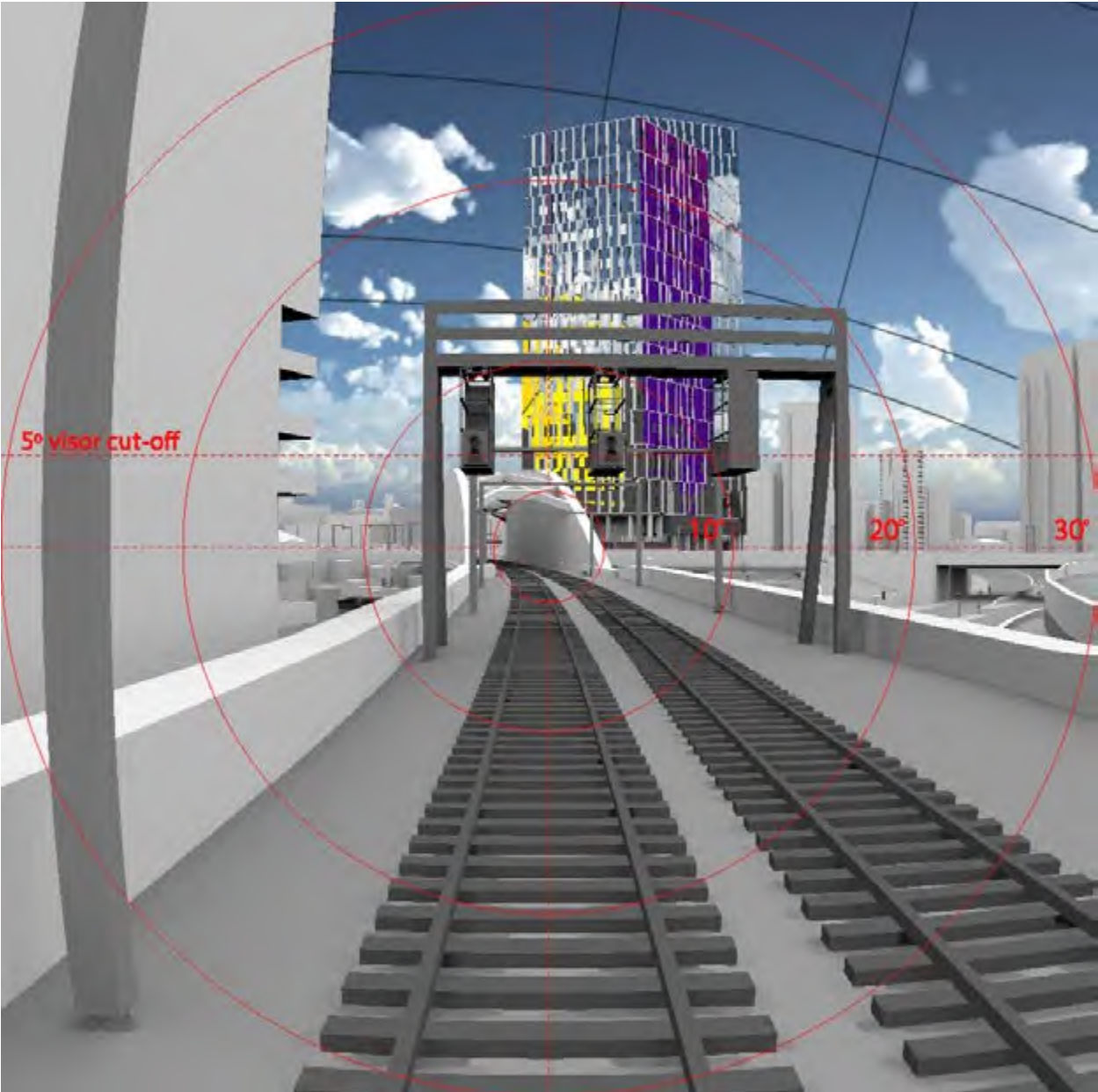


Fig. 592: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

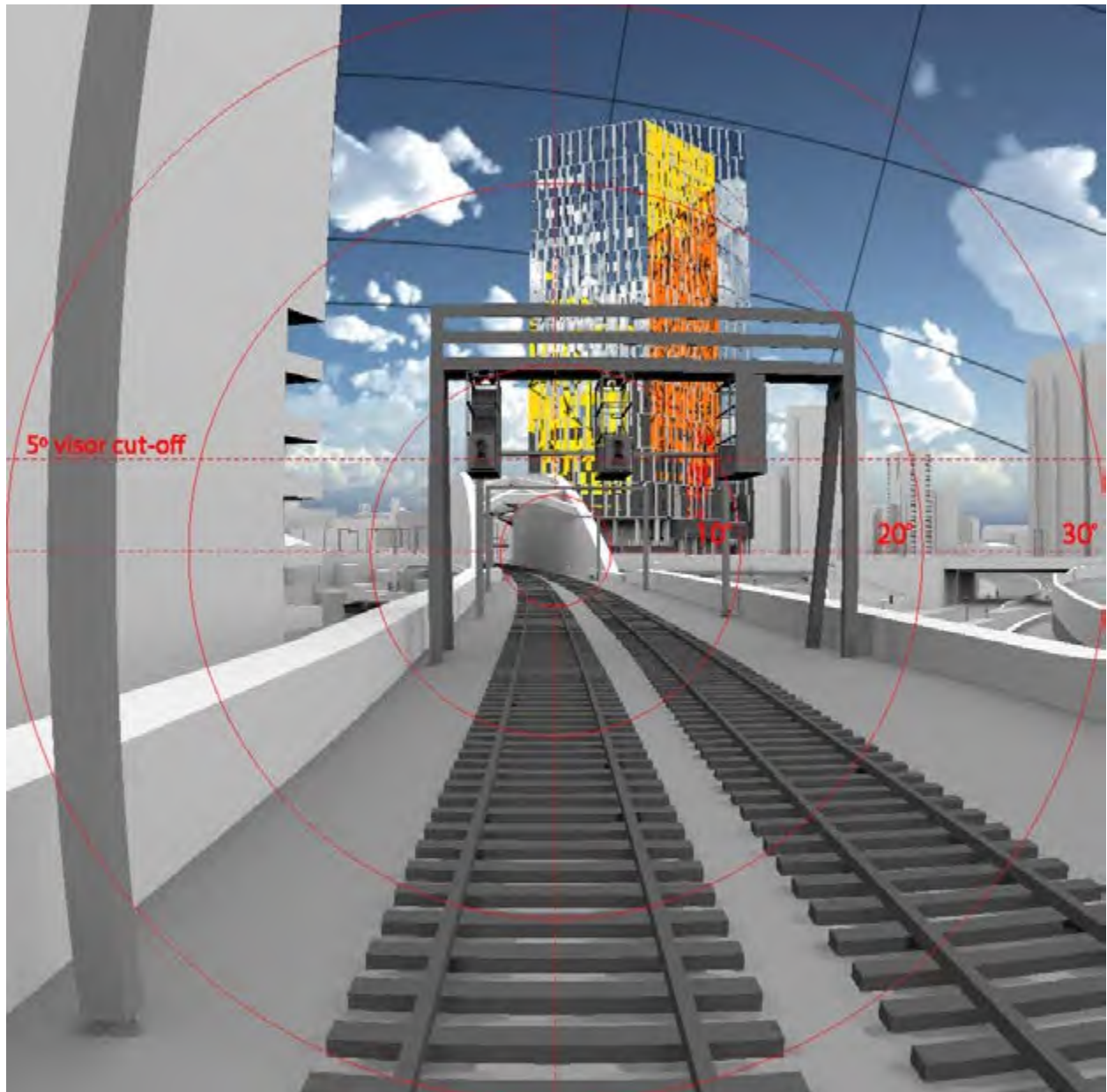


Fig. 593: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

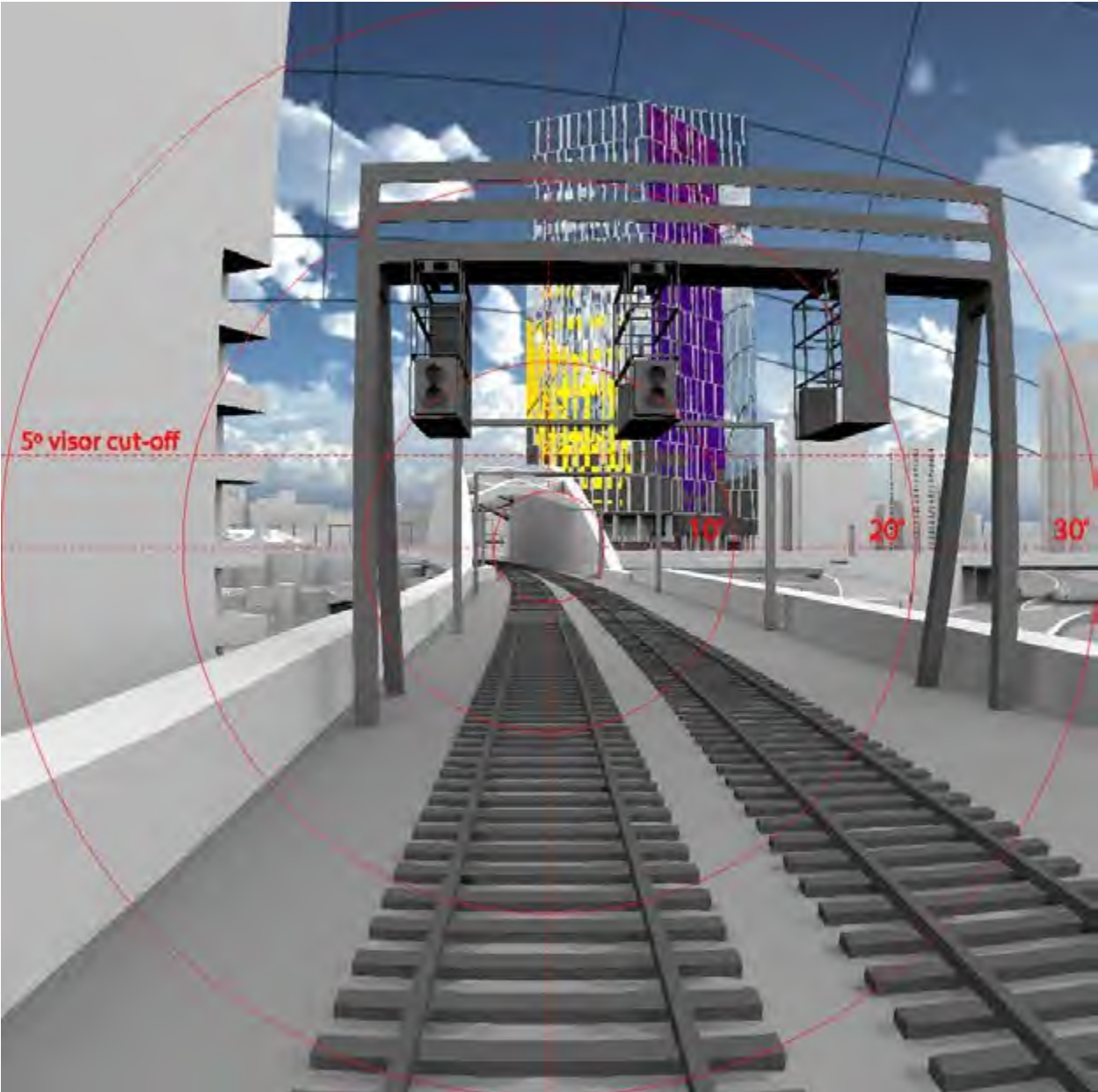


Fig. 594: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

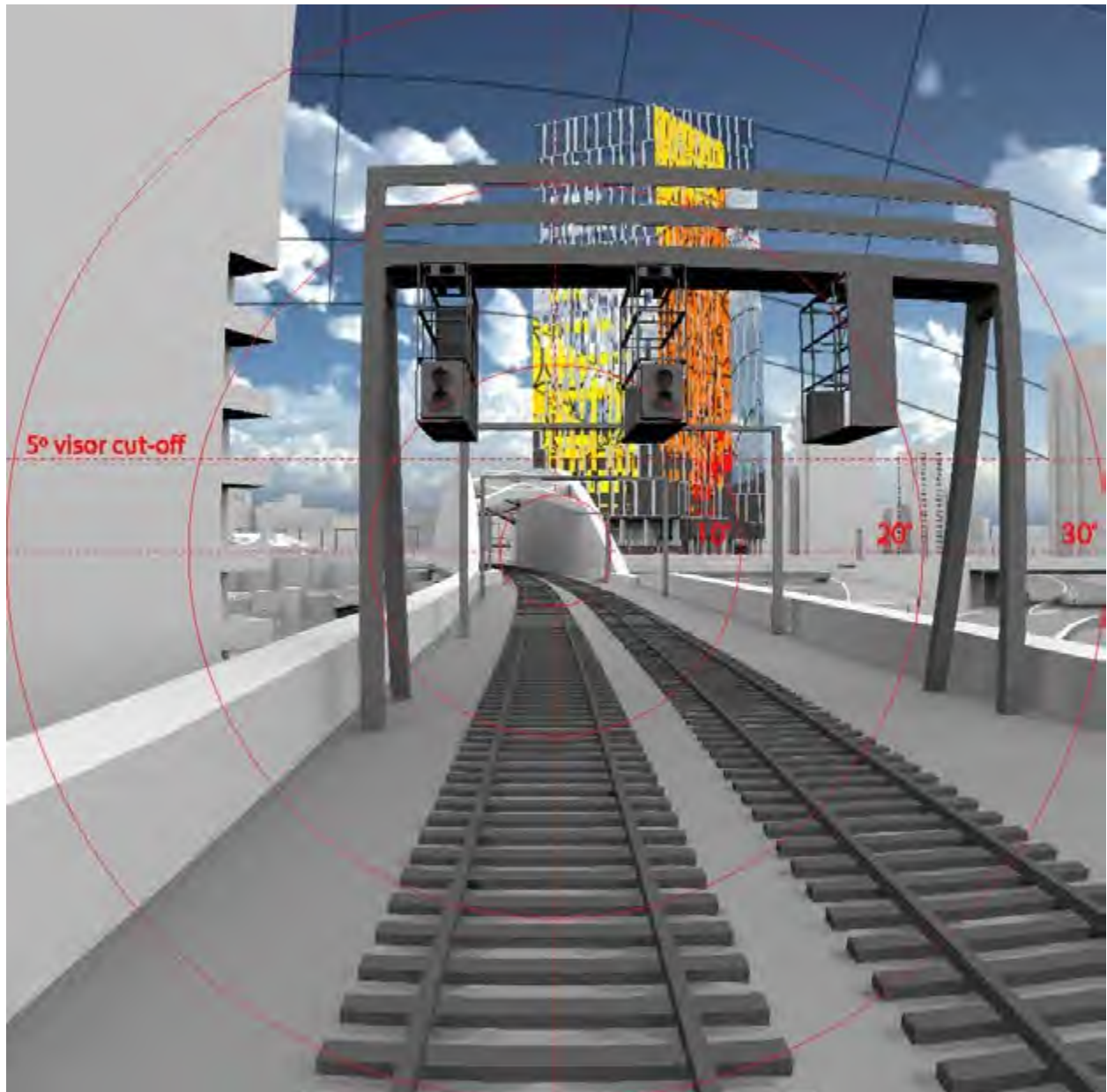


Fig. 595: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAGHT

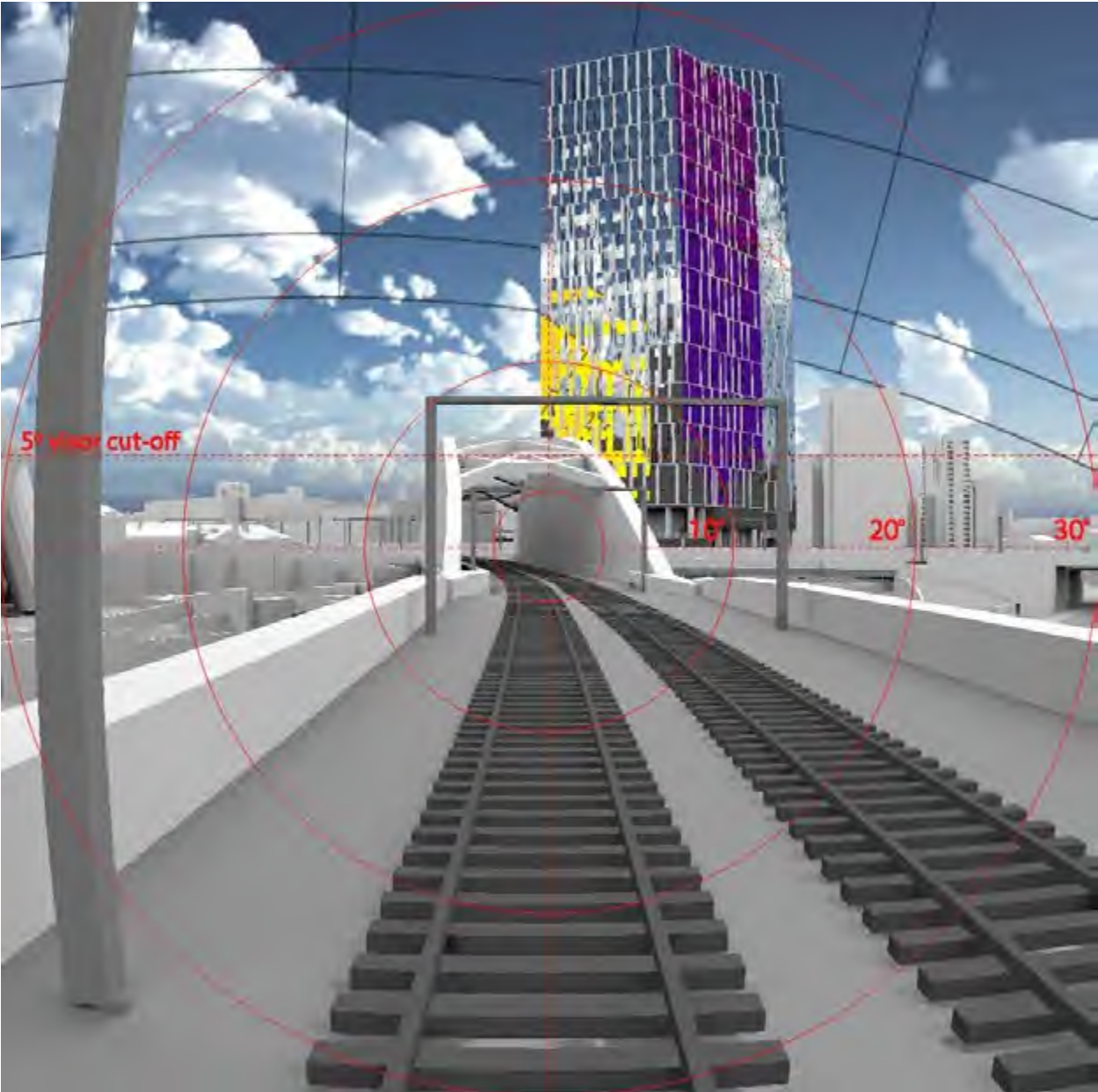


Fig. 596: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAGHT**

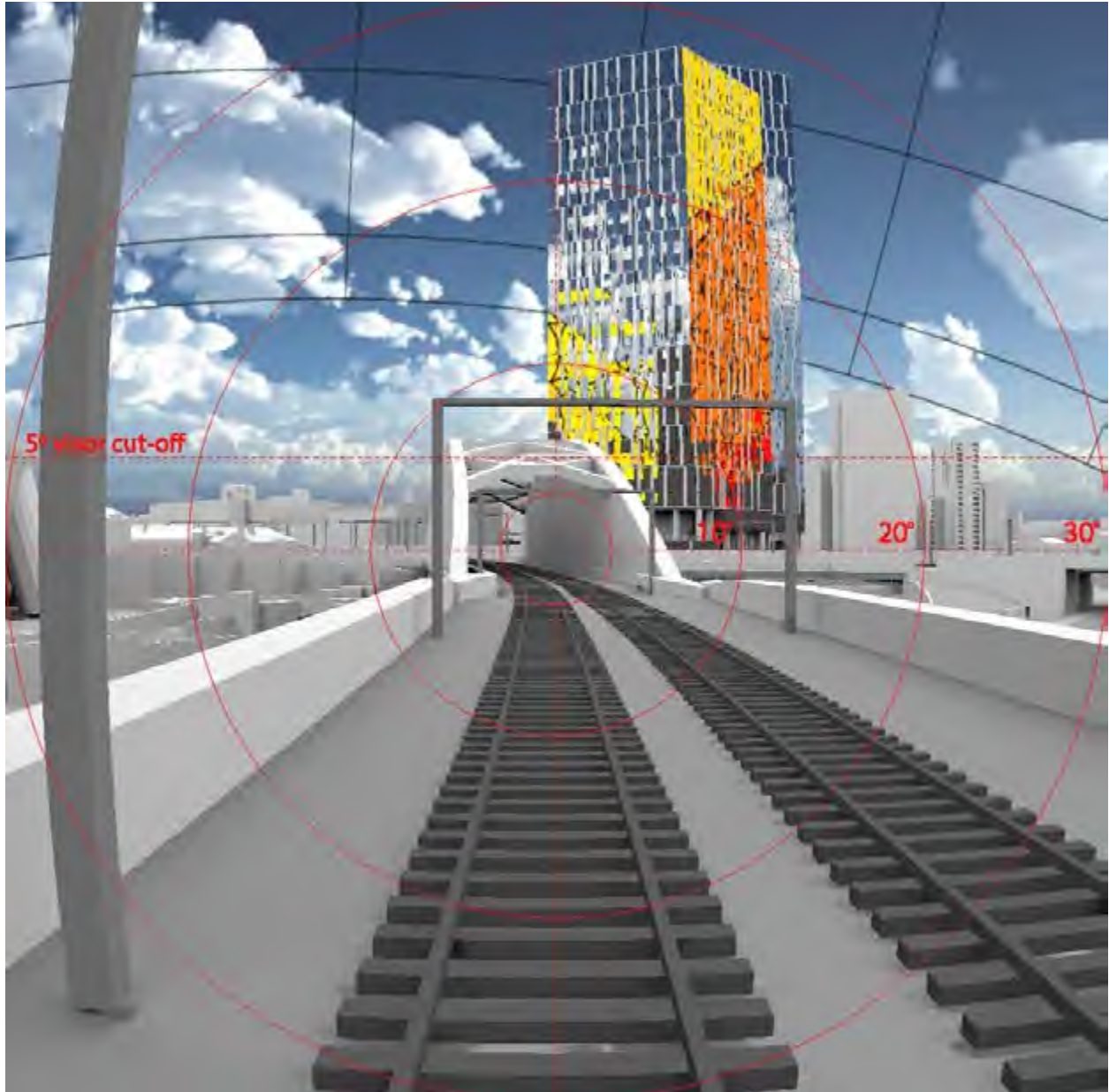


Fig. 597: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT

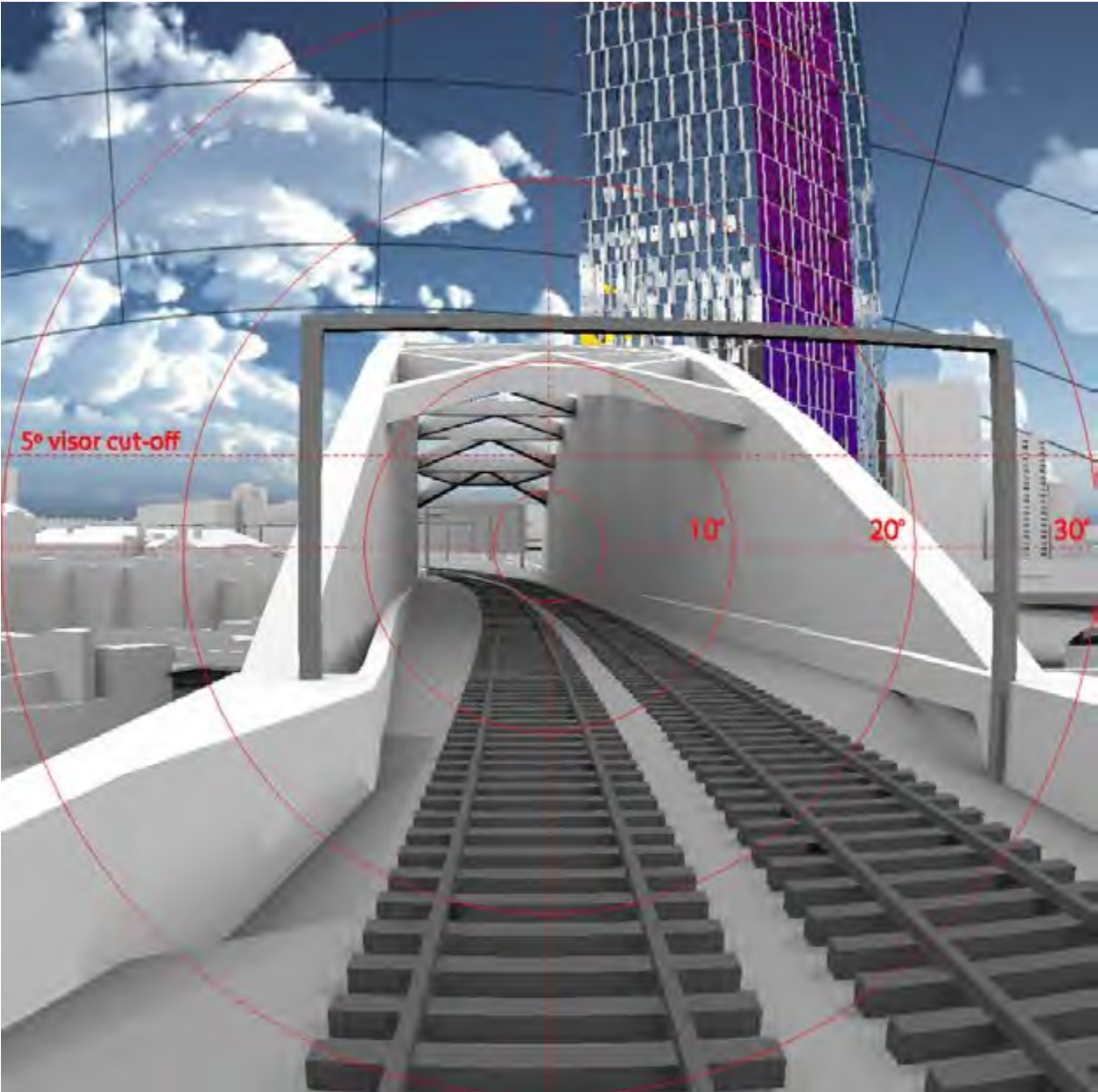


Fig. 598: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT**

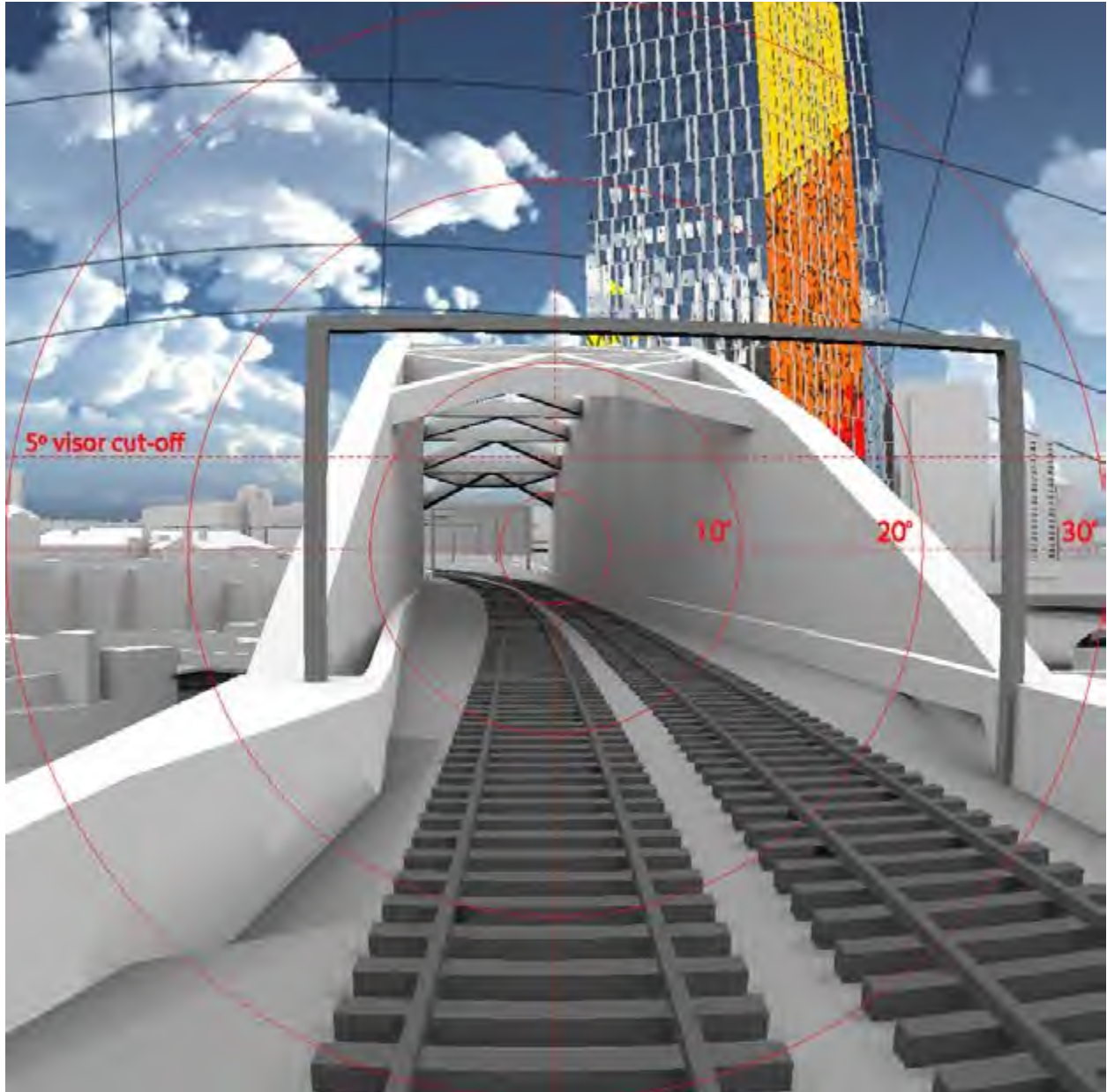


Fig. 599: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT

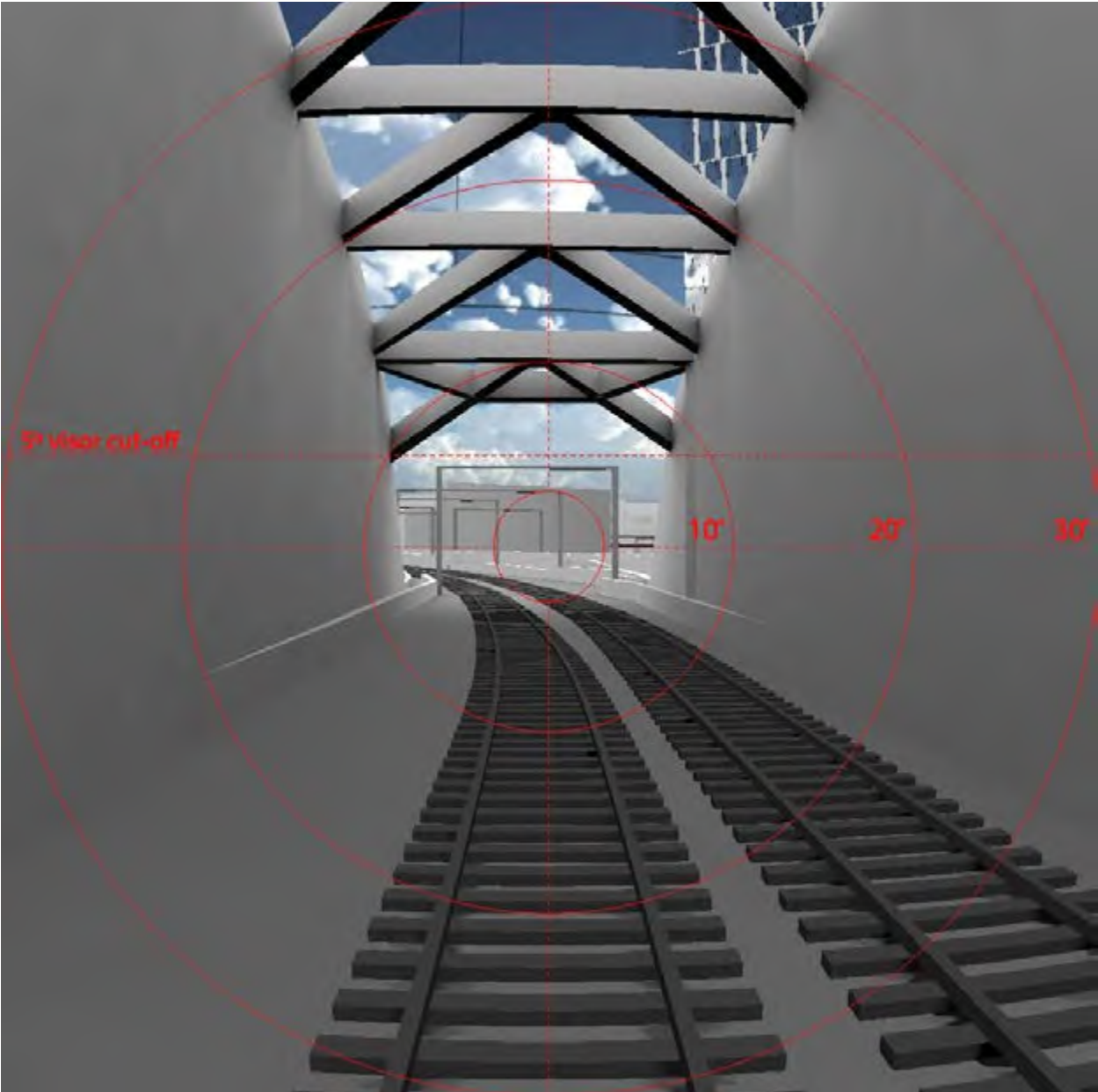


Fig. 600: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT**

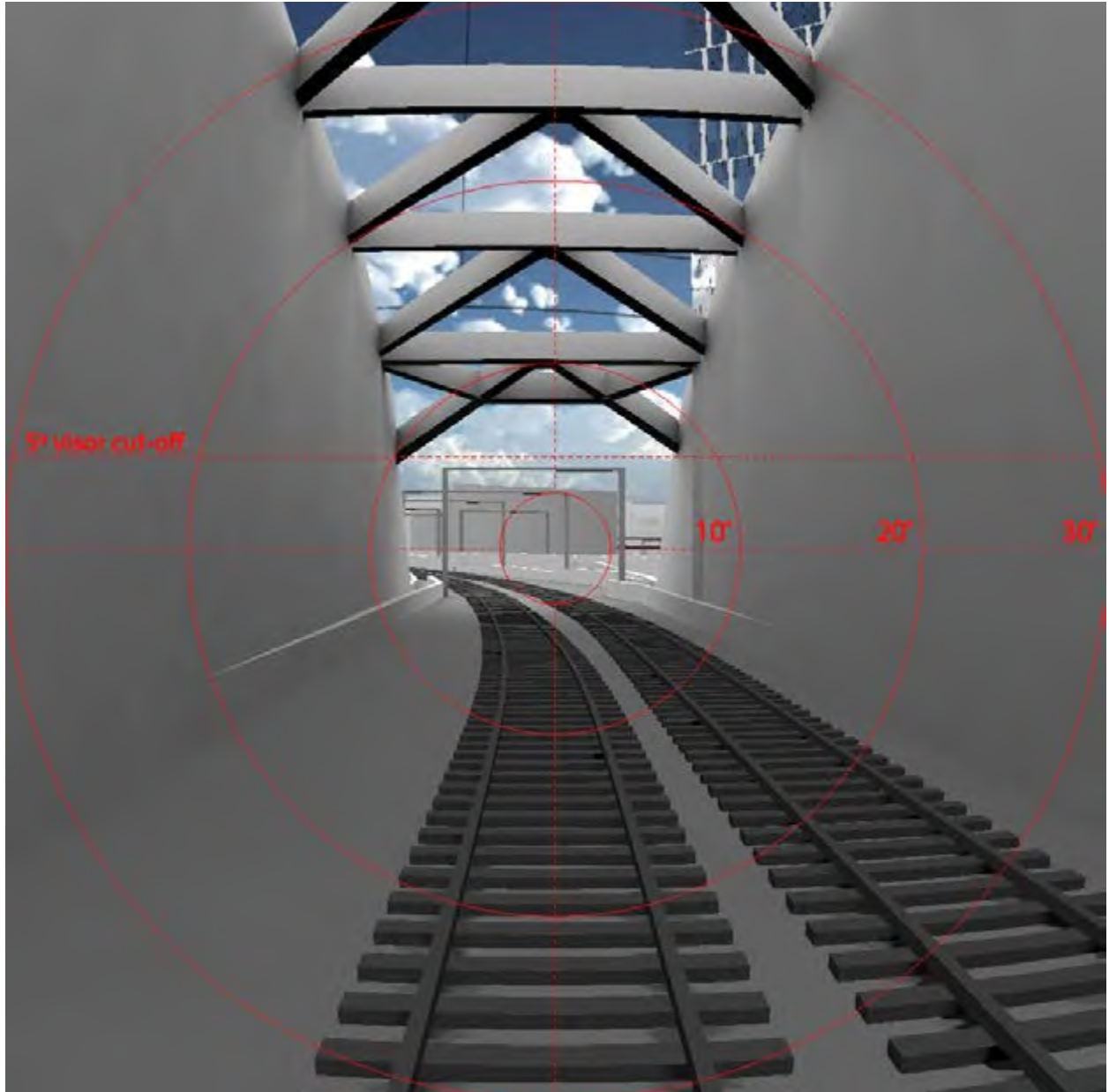


Fig. 601: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT

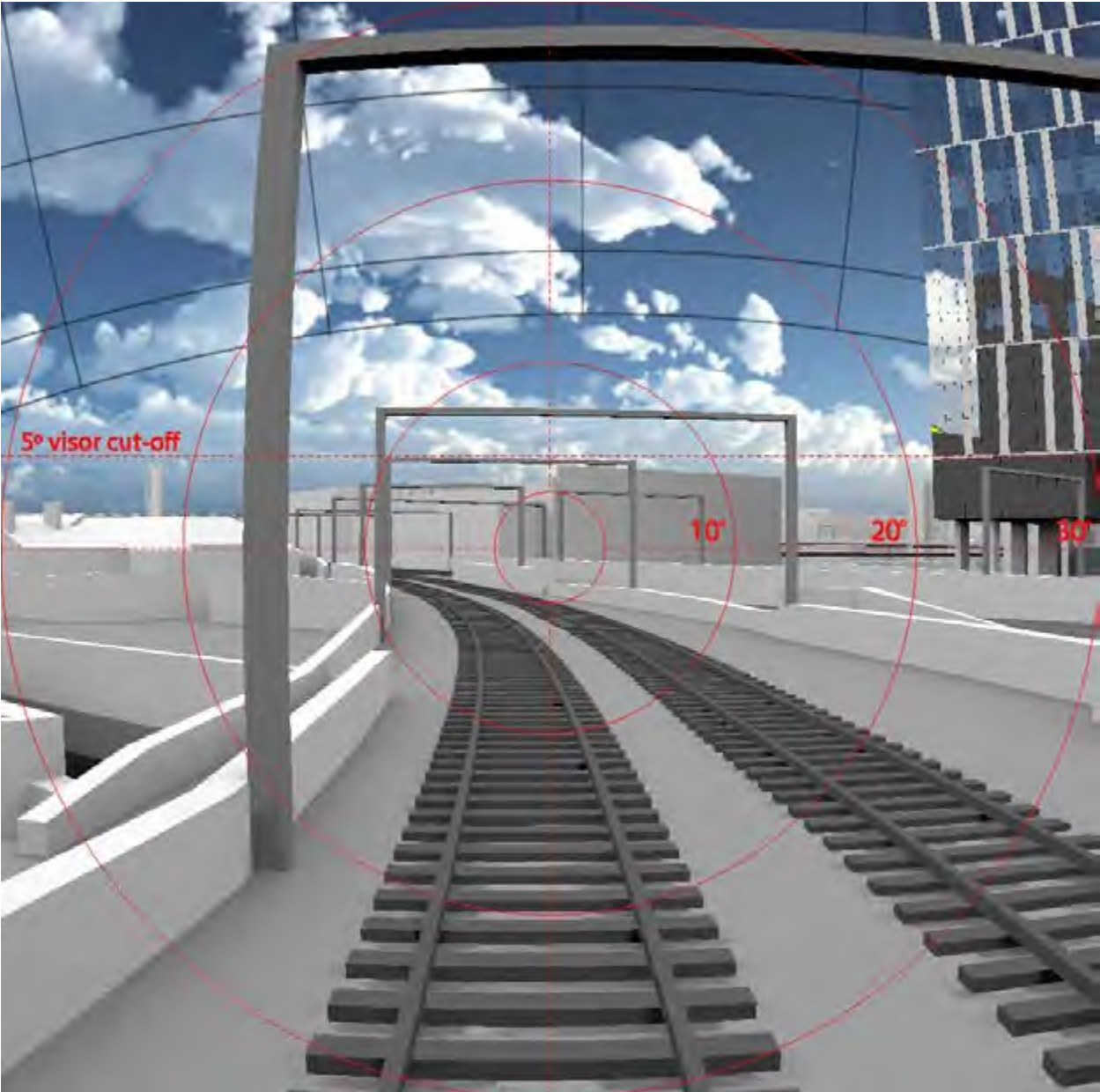
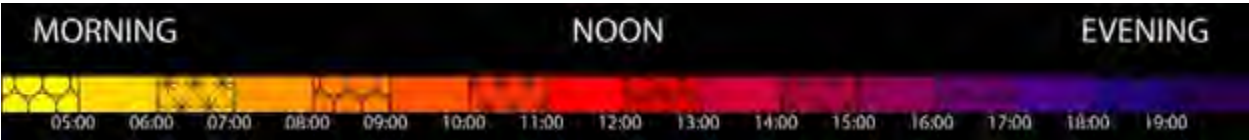


Fig. 602: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT**

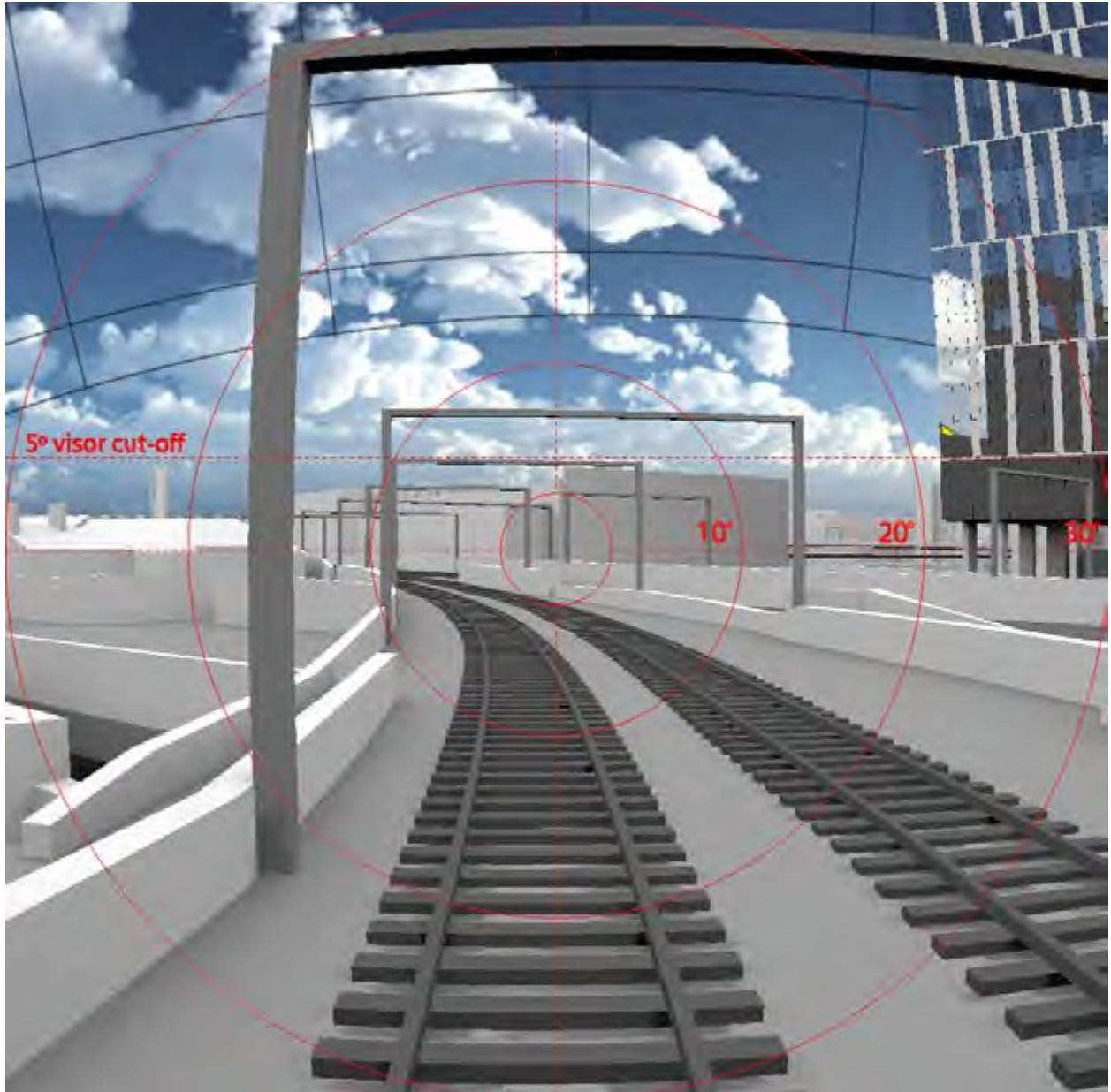


Fig. 603: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAIGHT

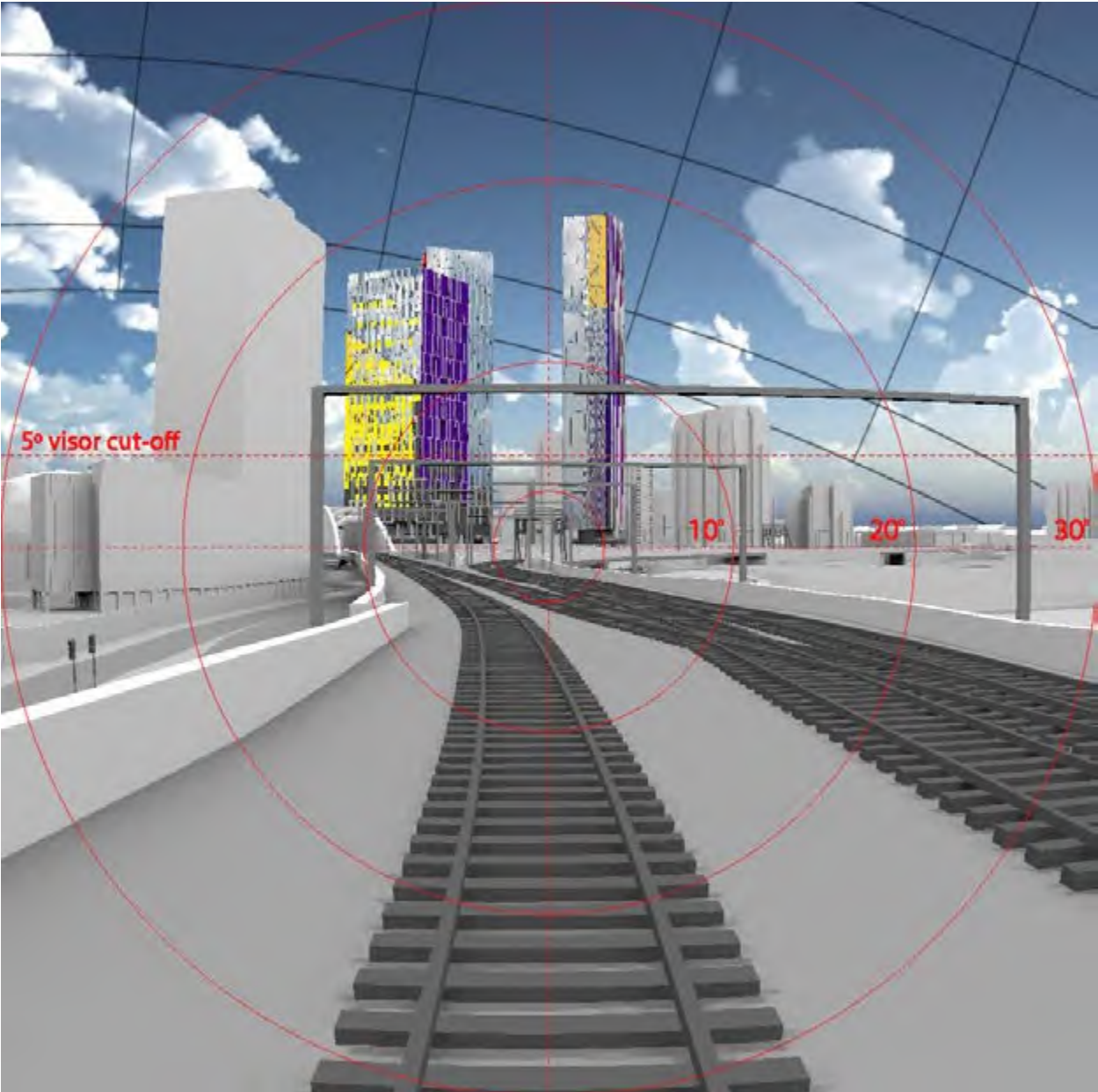


Fig. 604: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAGHT**

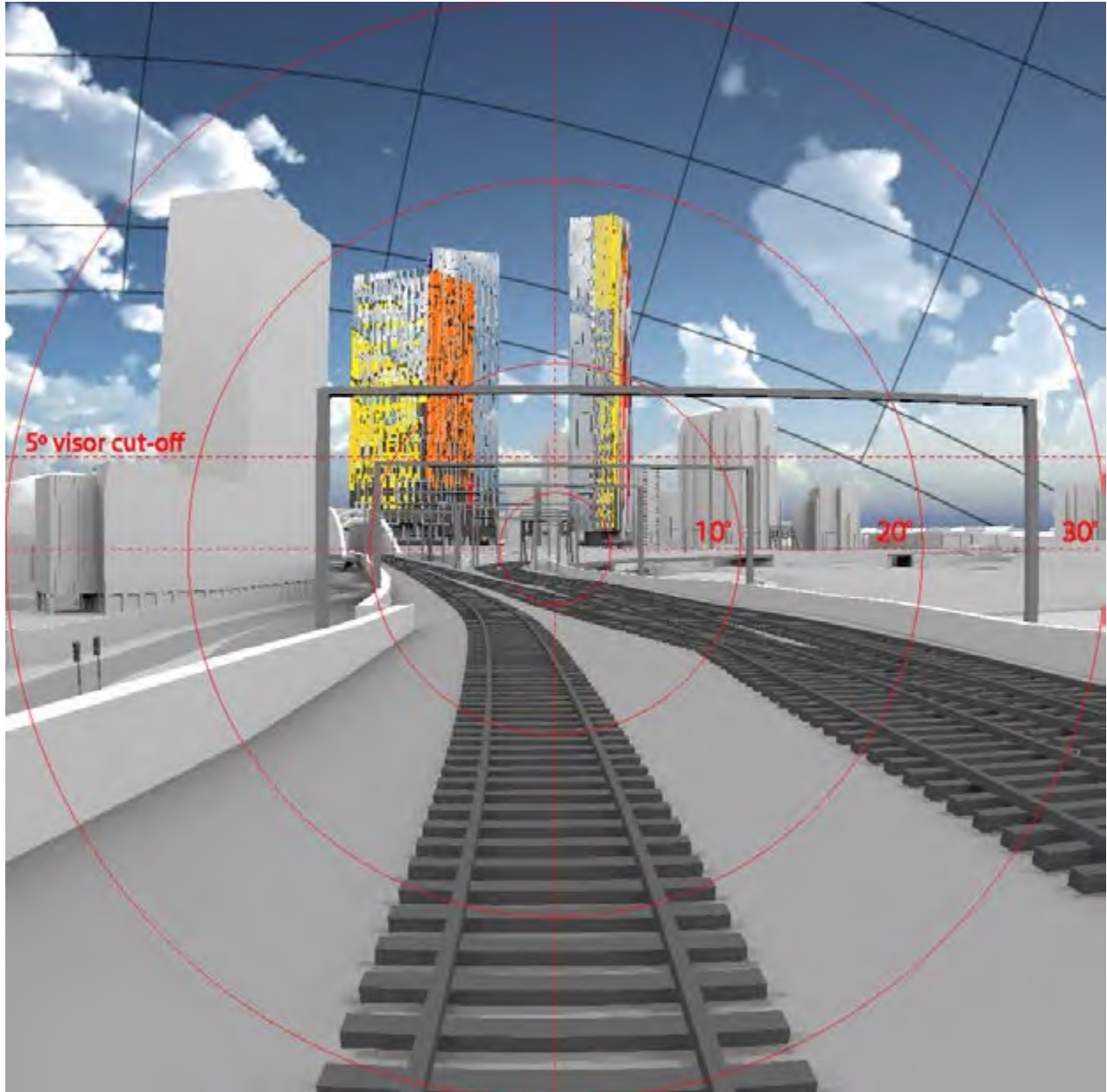


Fig. 605: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT

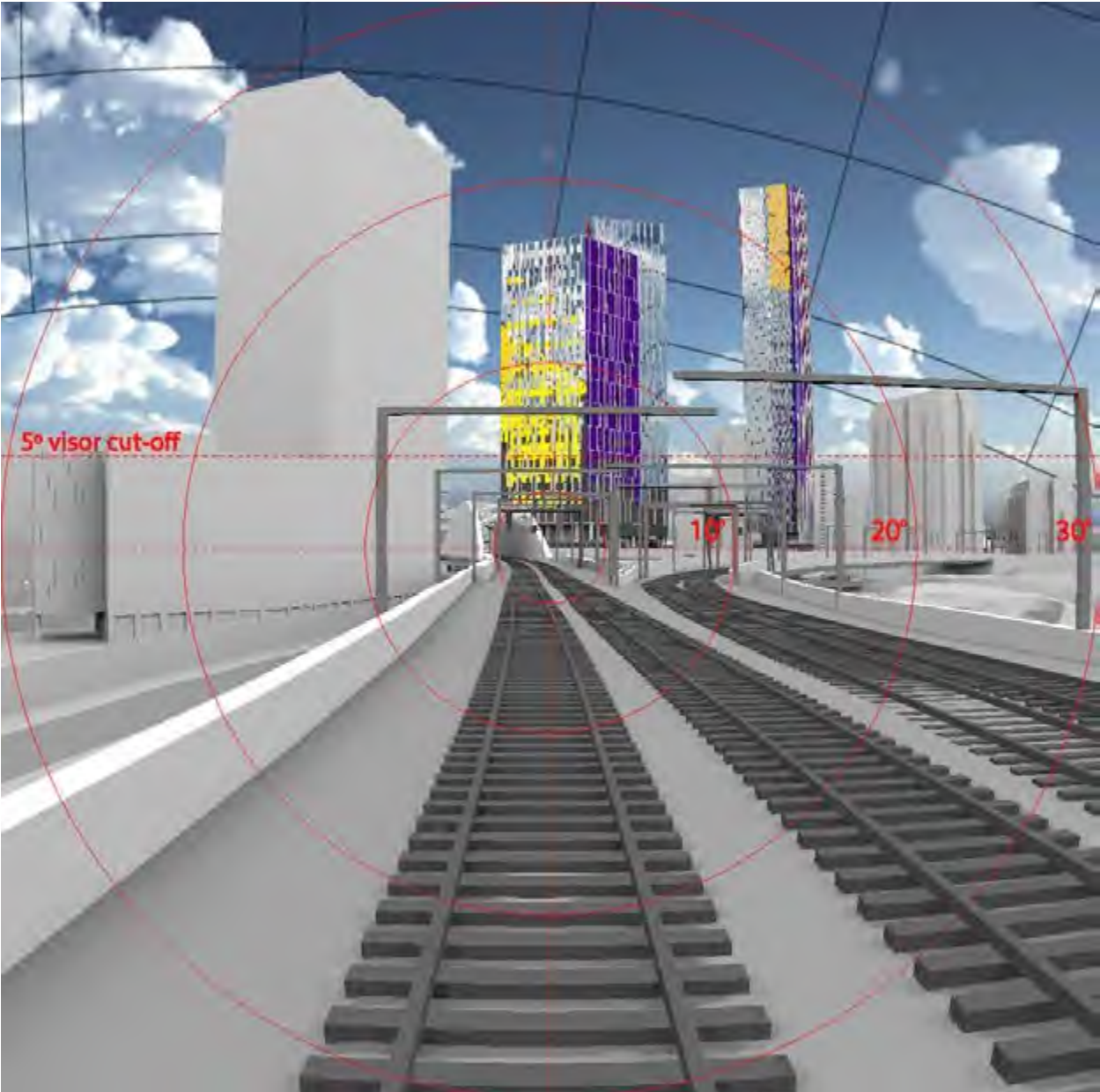


Fig. 606: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT**

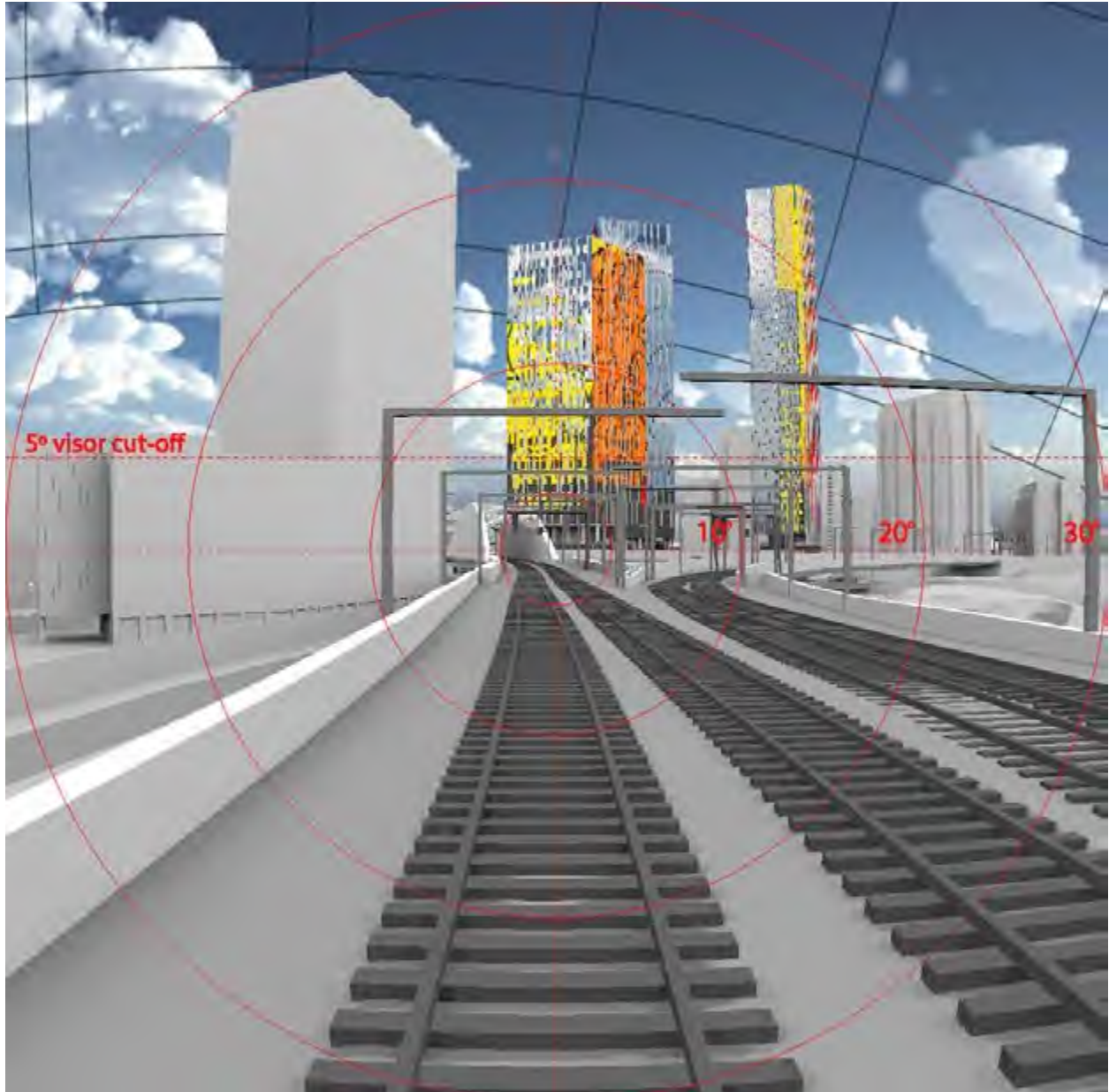


Fig. 607: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

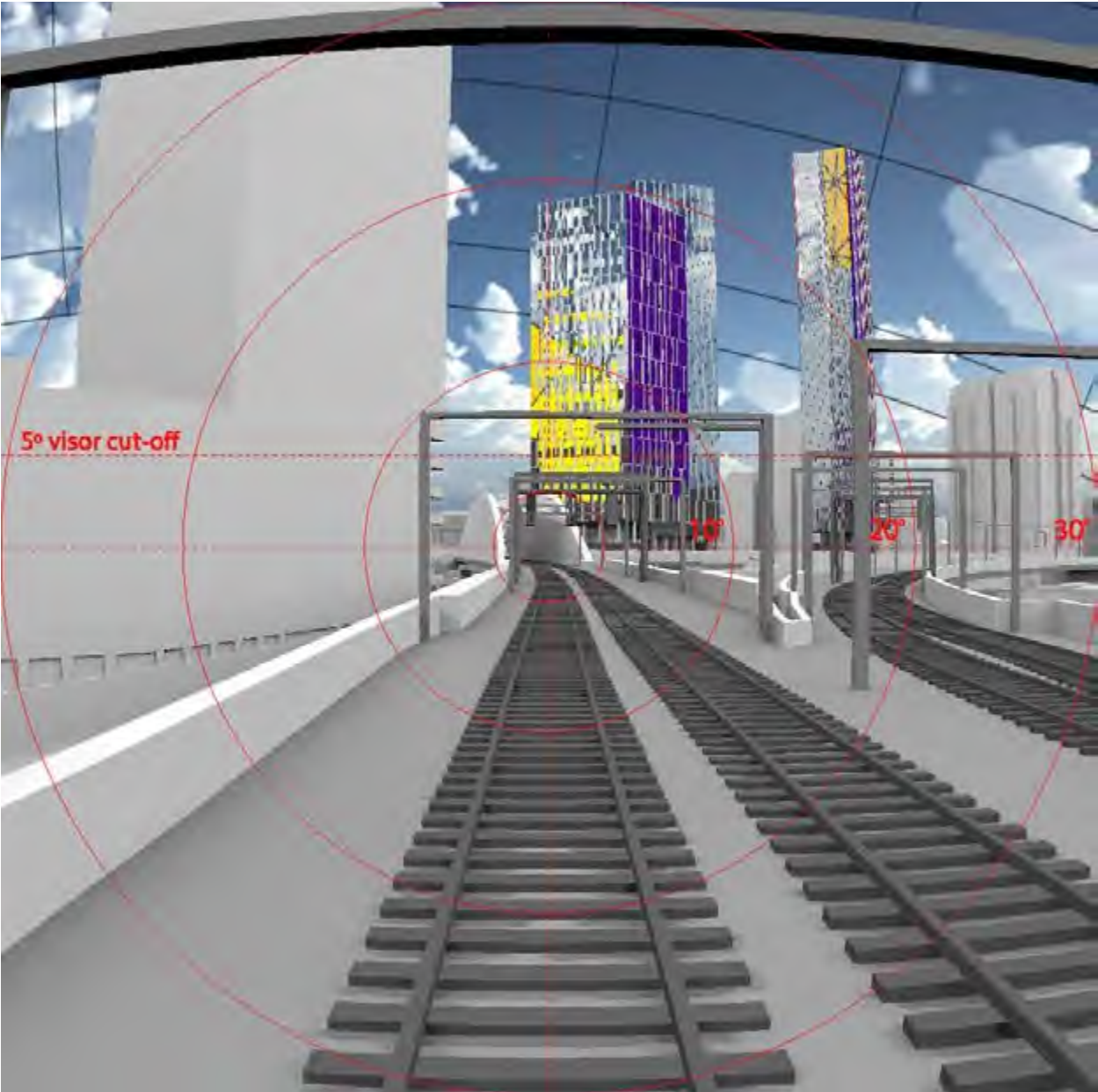


Fig. 608: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

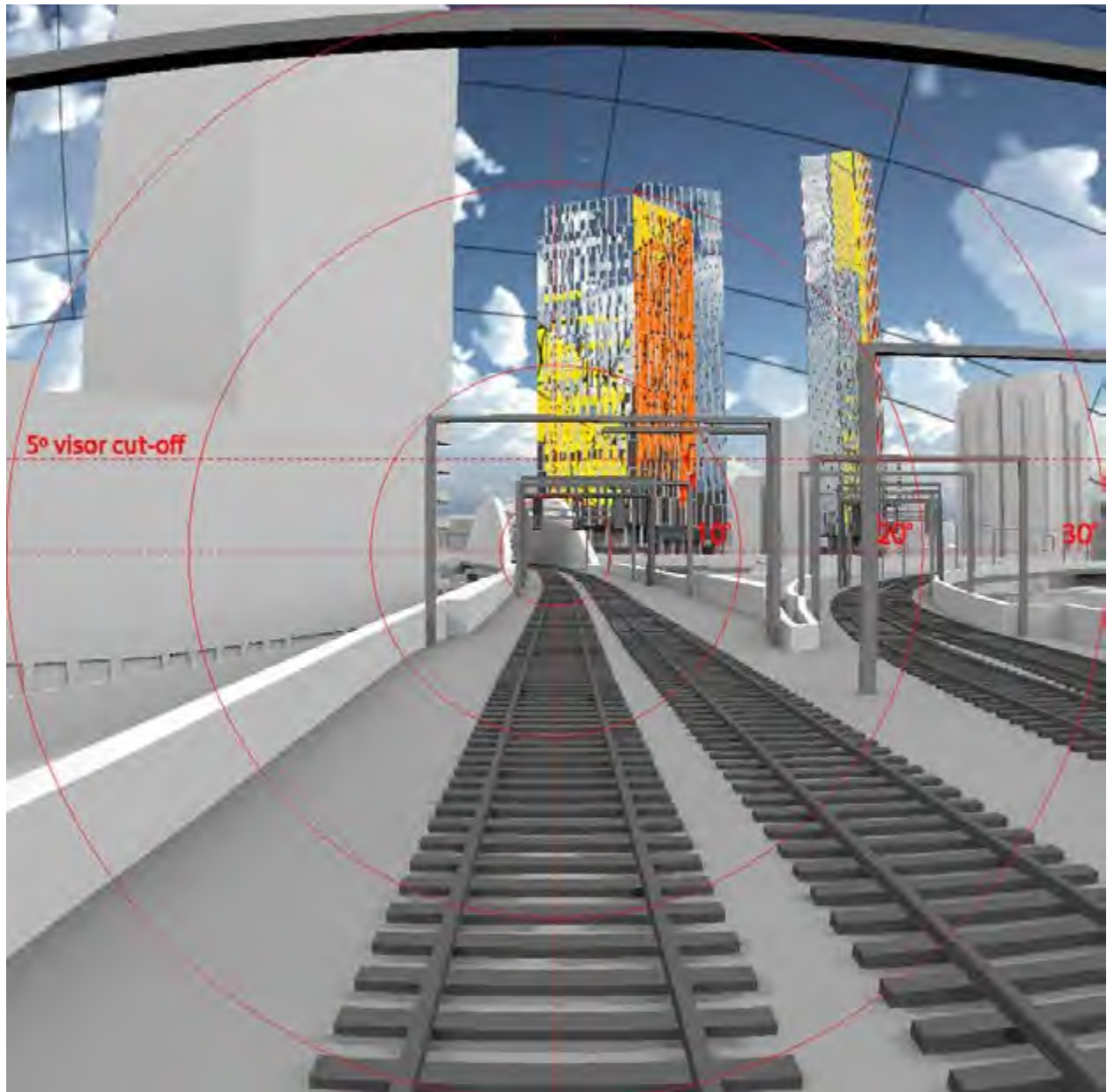


Fig. 609: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

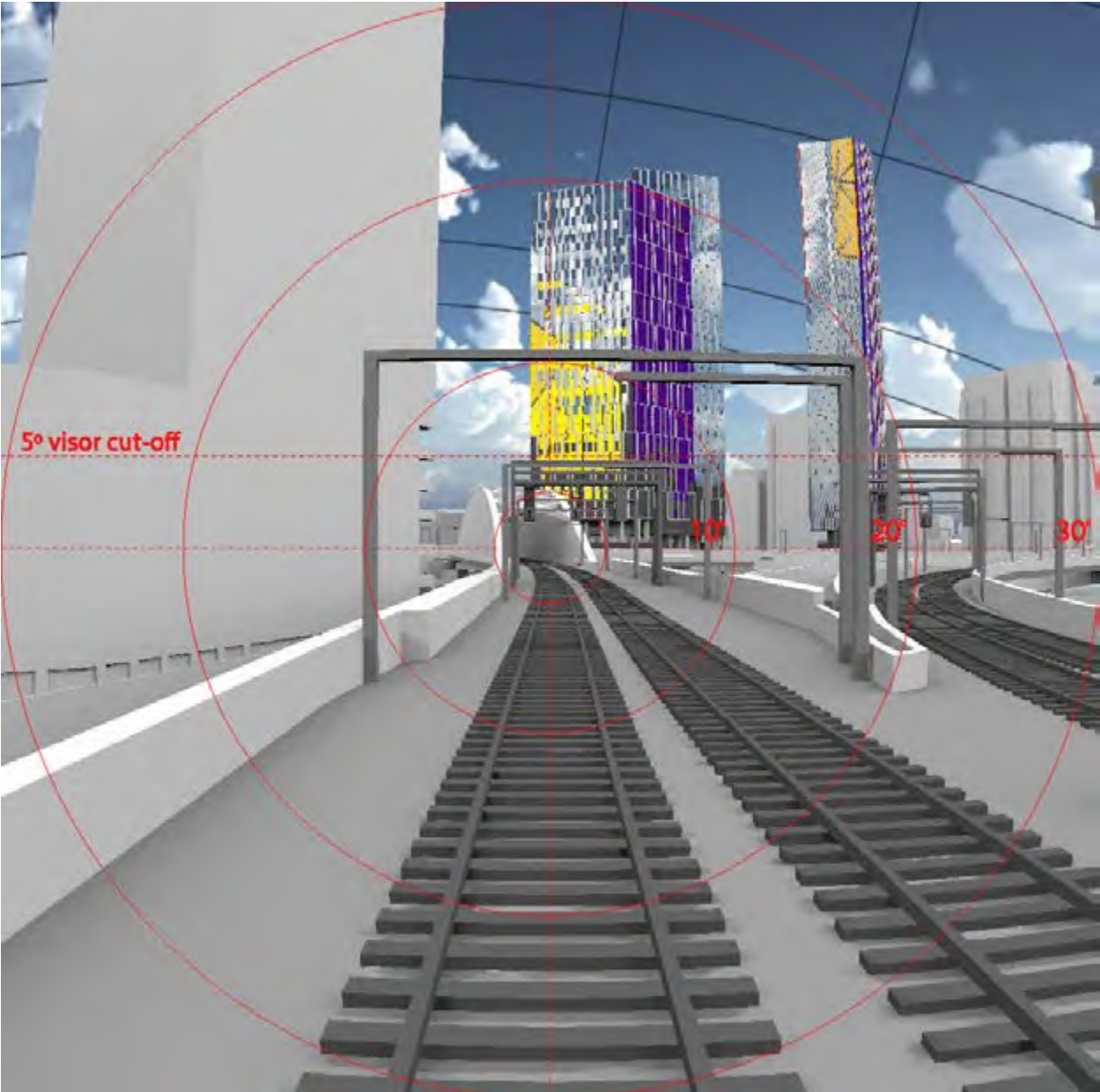


Fig. 610: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

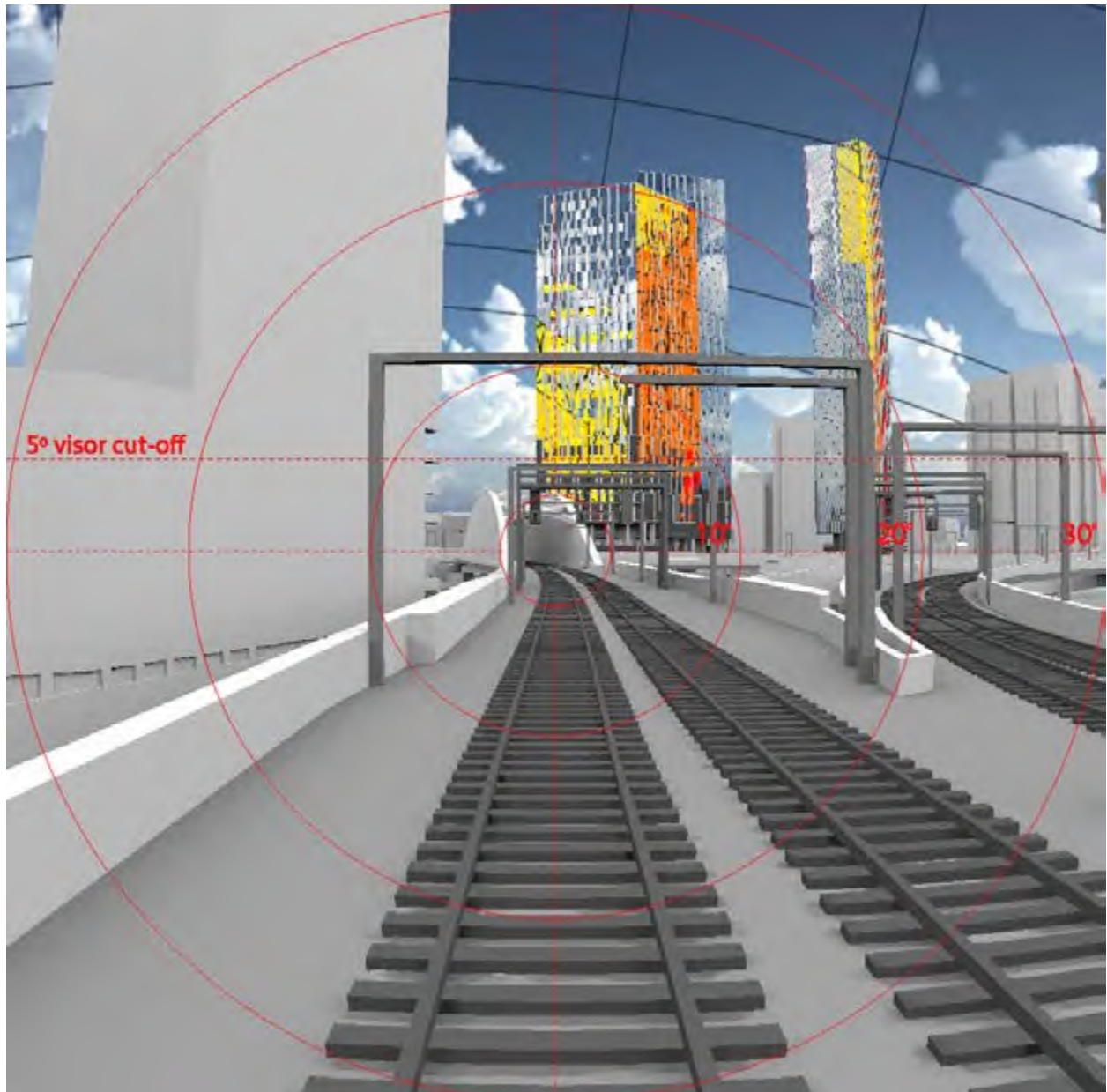


Fig. 611: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

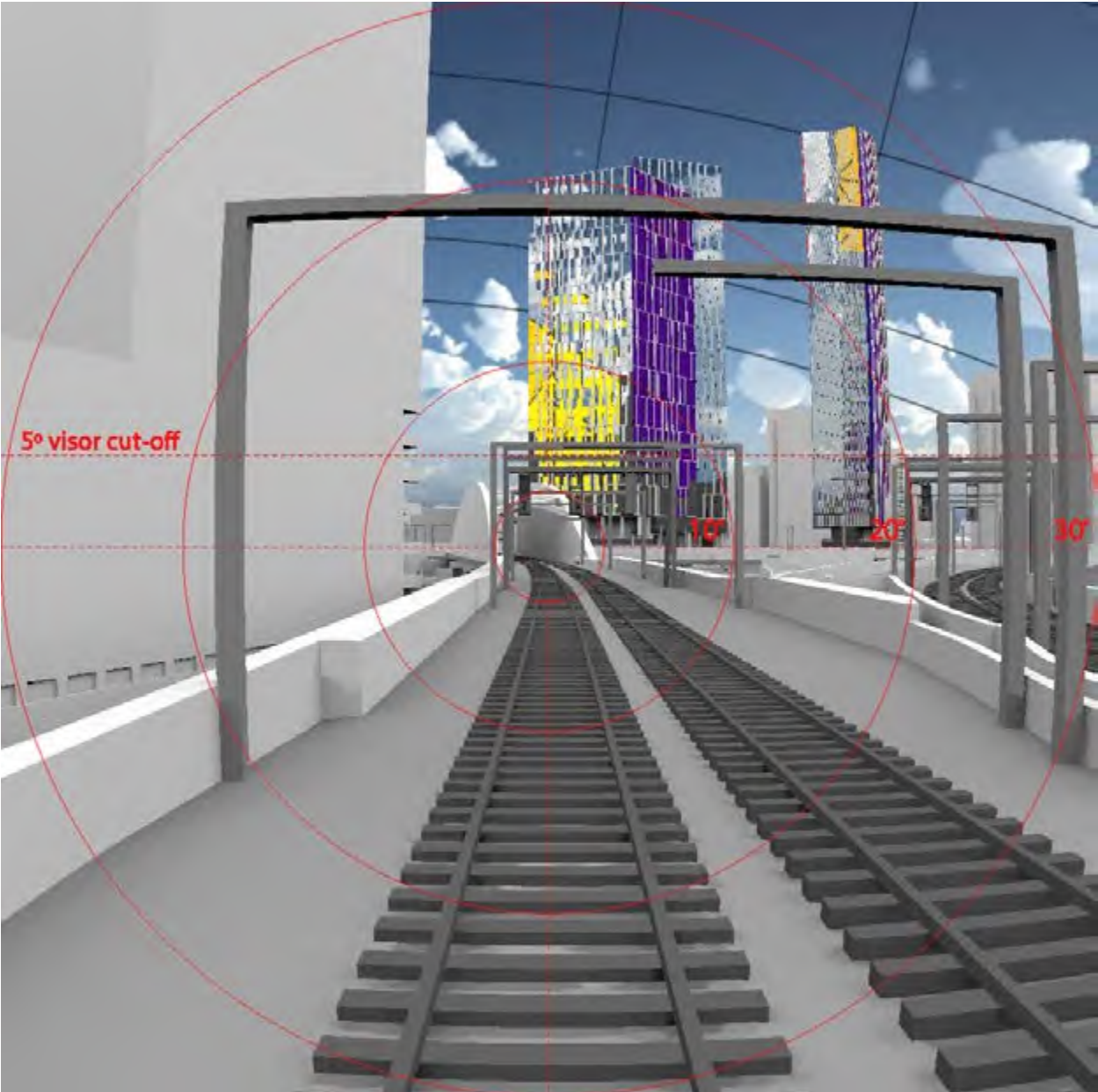


Fig. 612: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

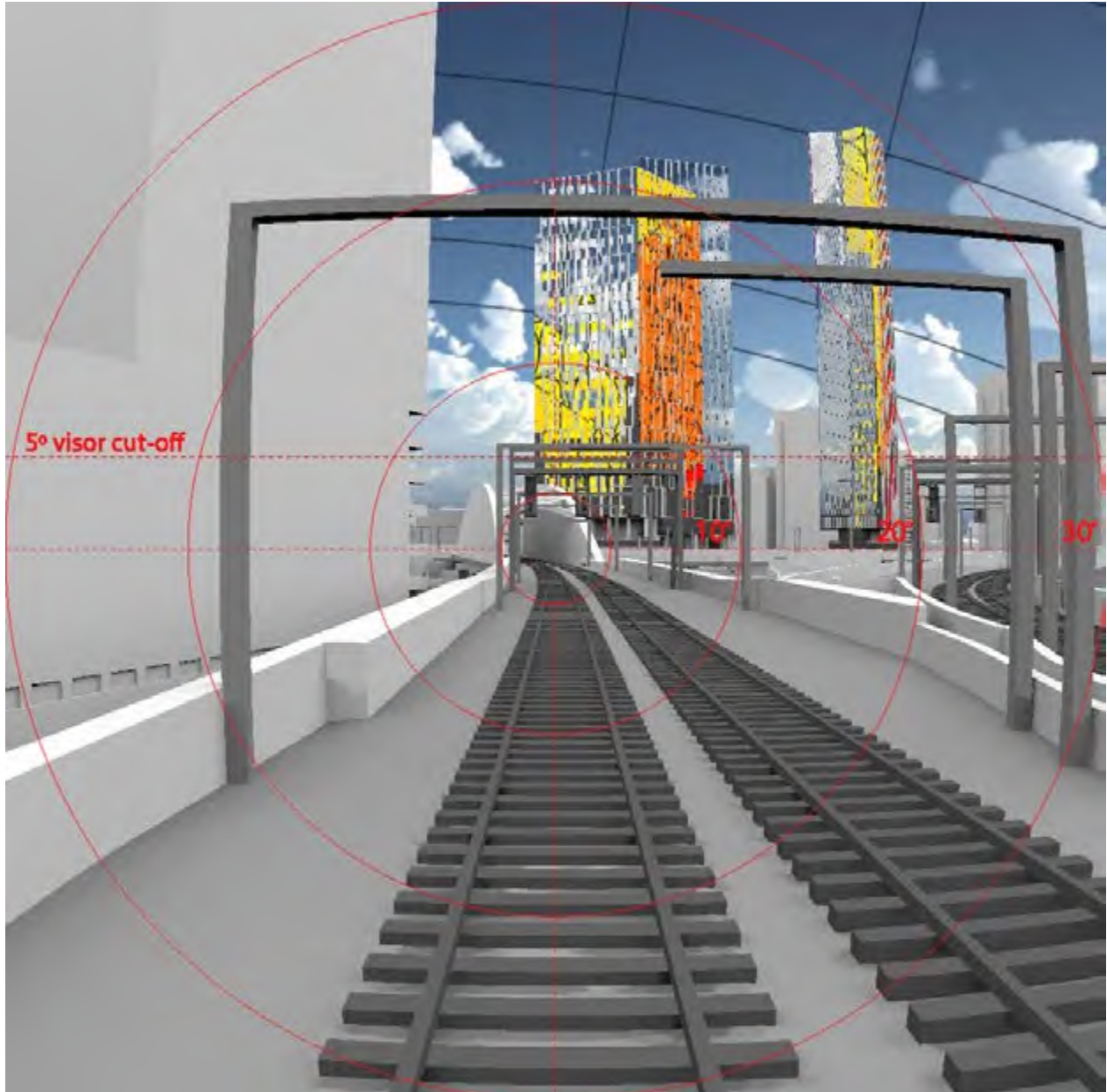


Fig. 613: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

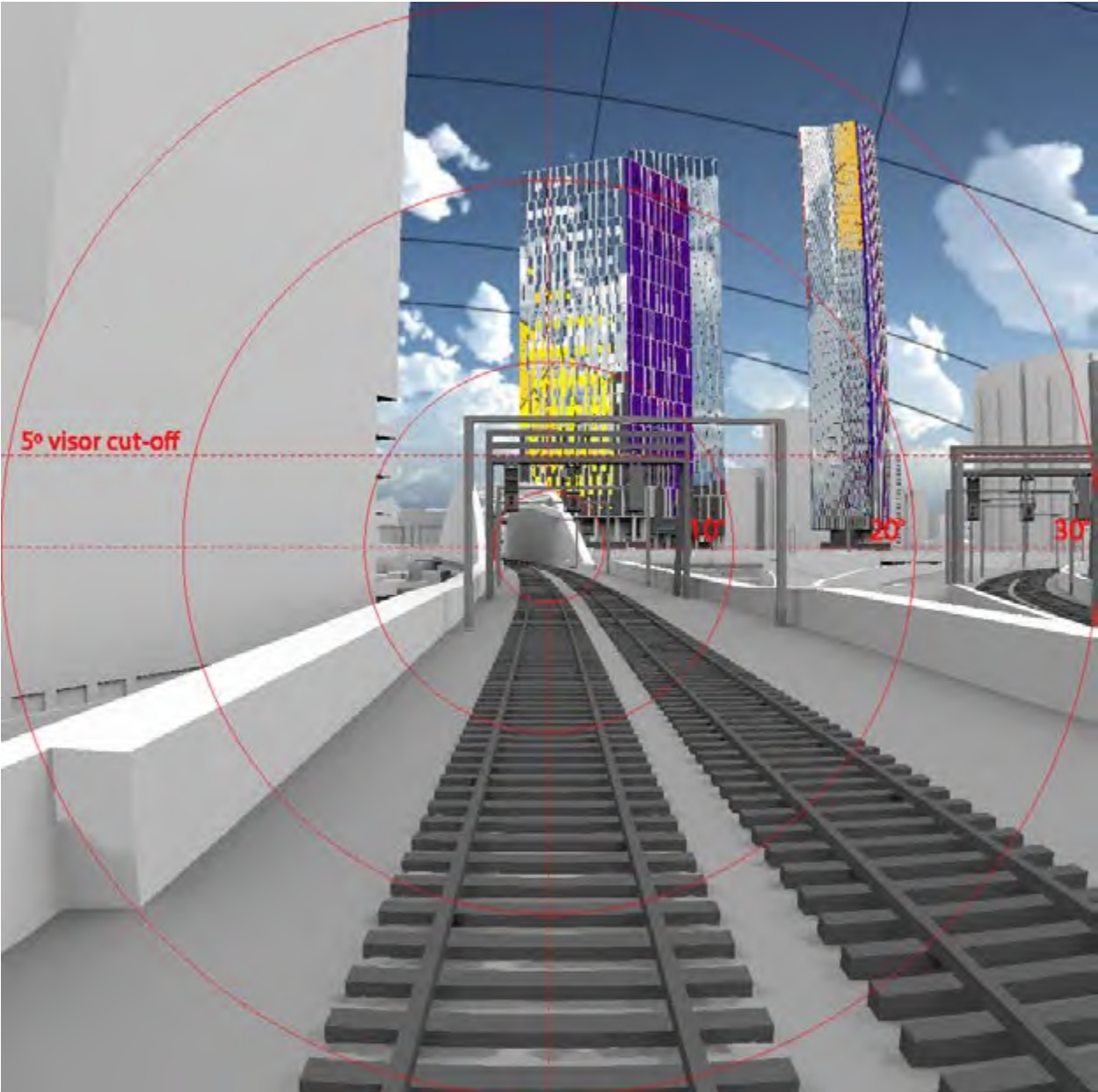


Fig. 614: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

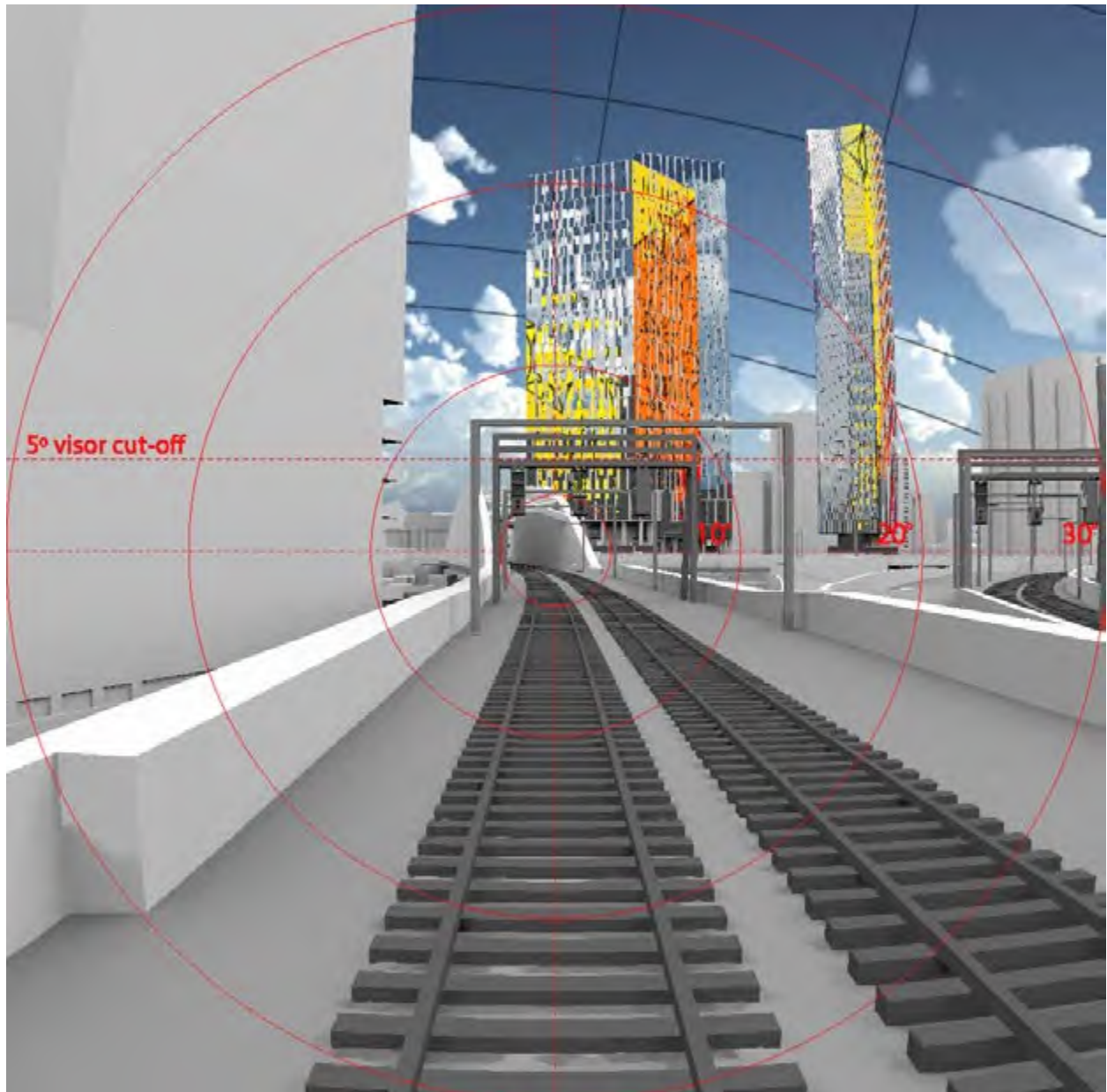


Fig. 615: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

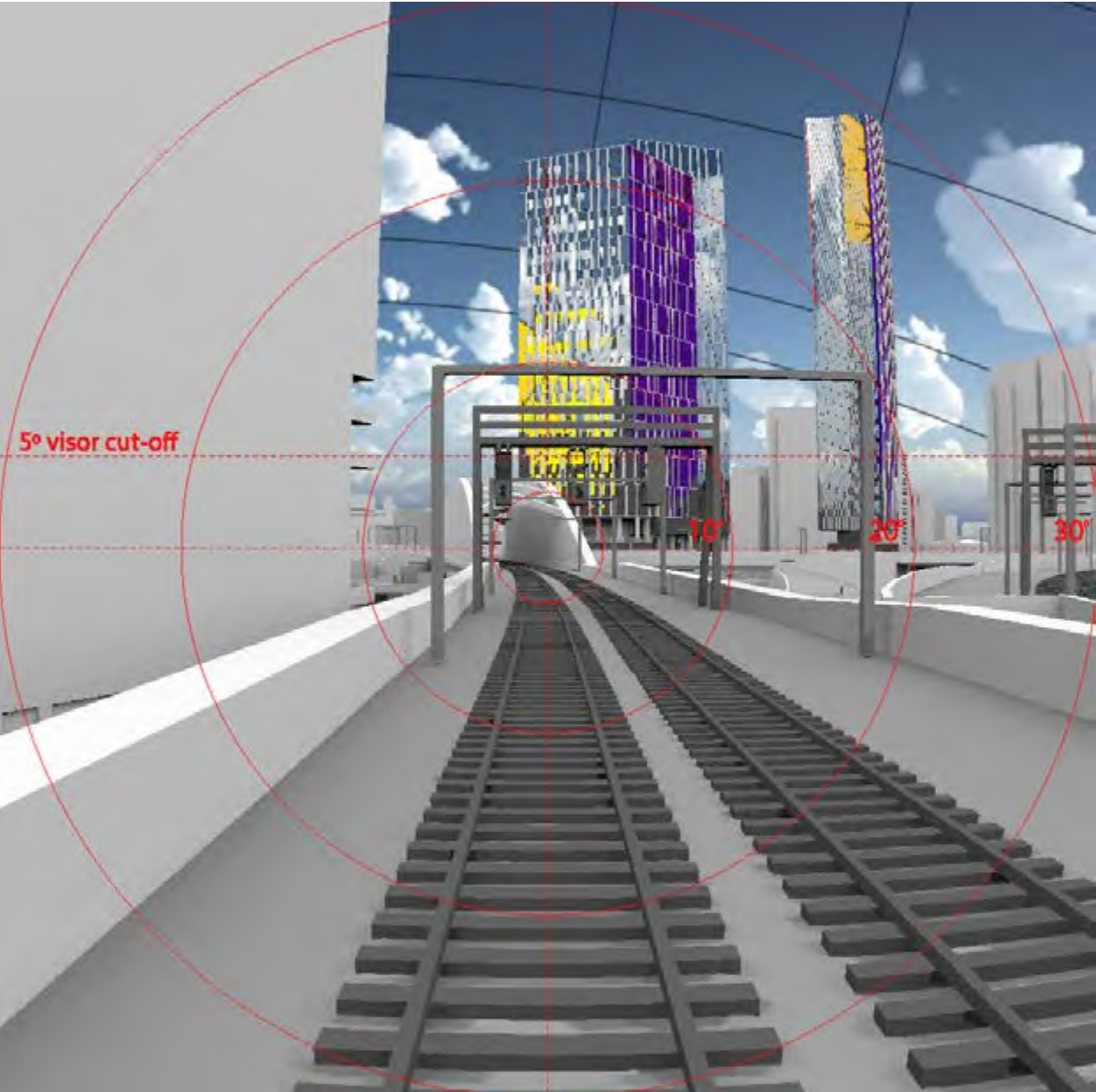
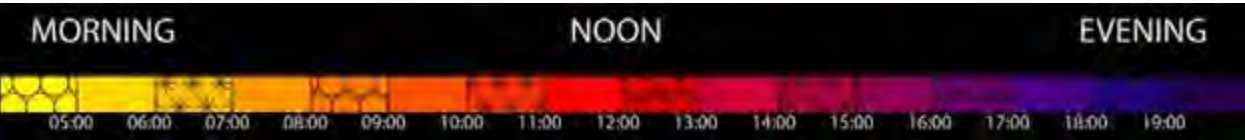


Fig. 616: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

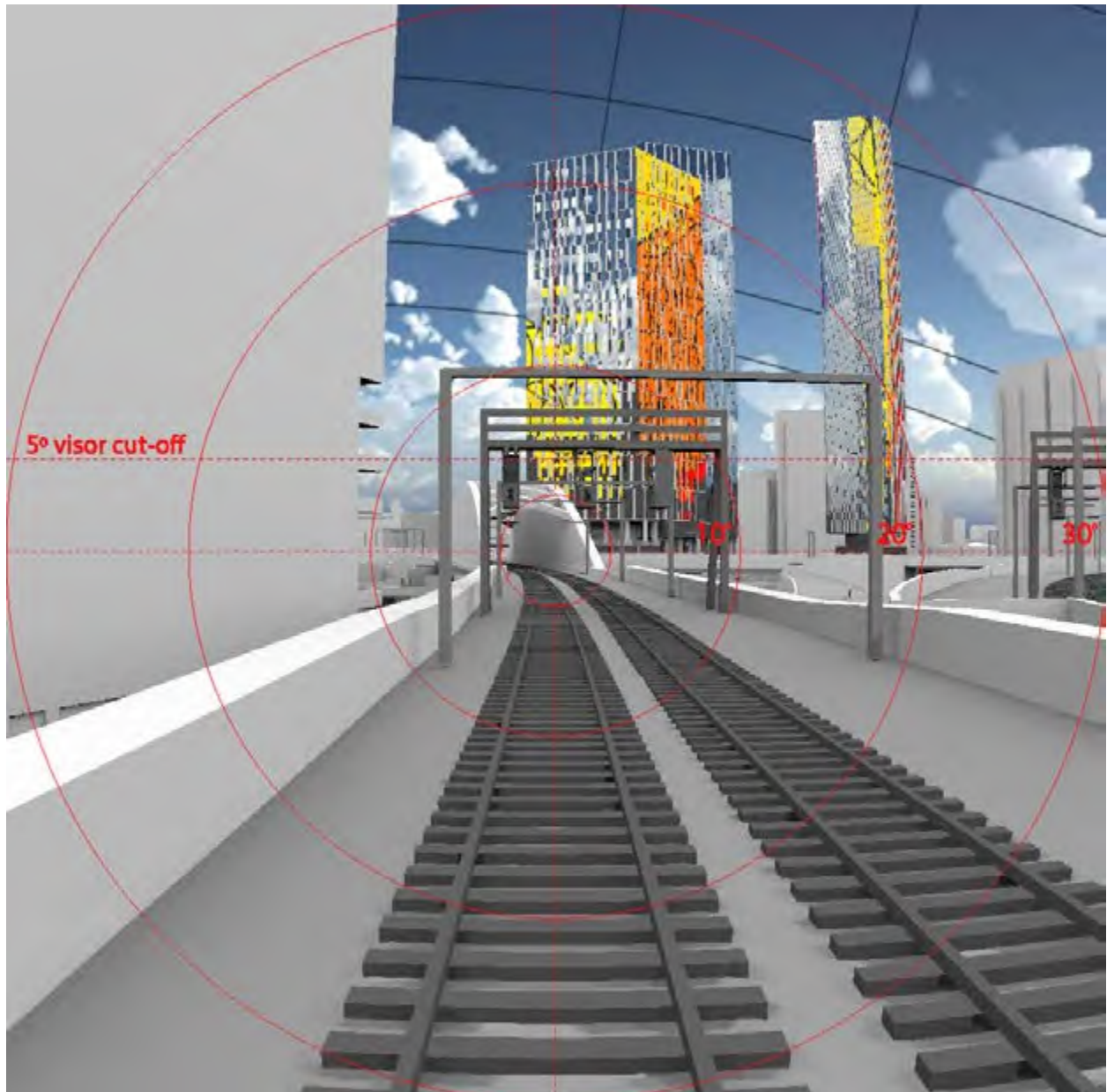


Fig. 617: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

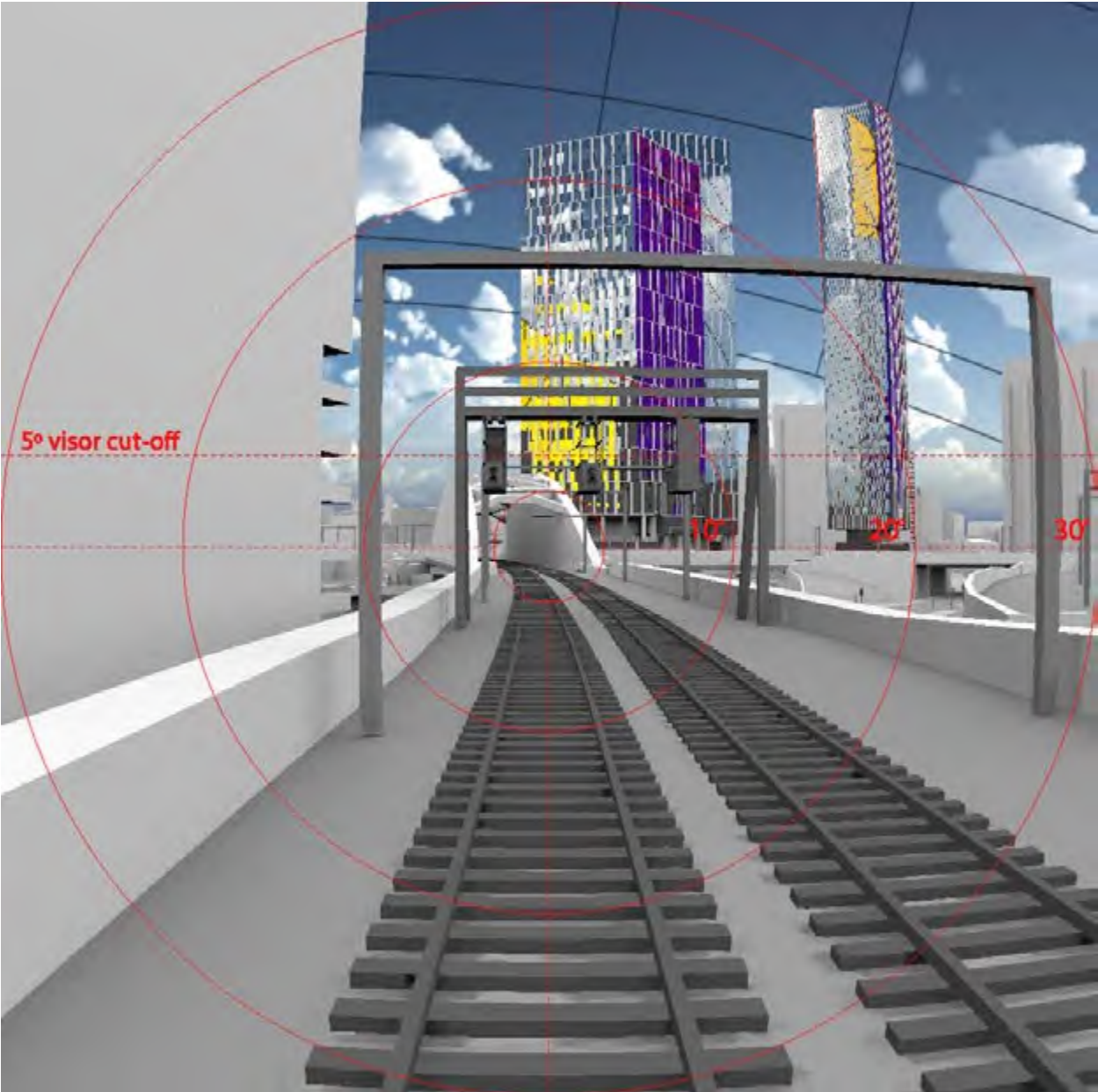


Fig. 618: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

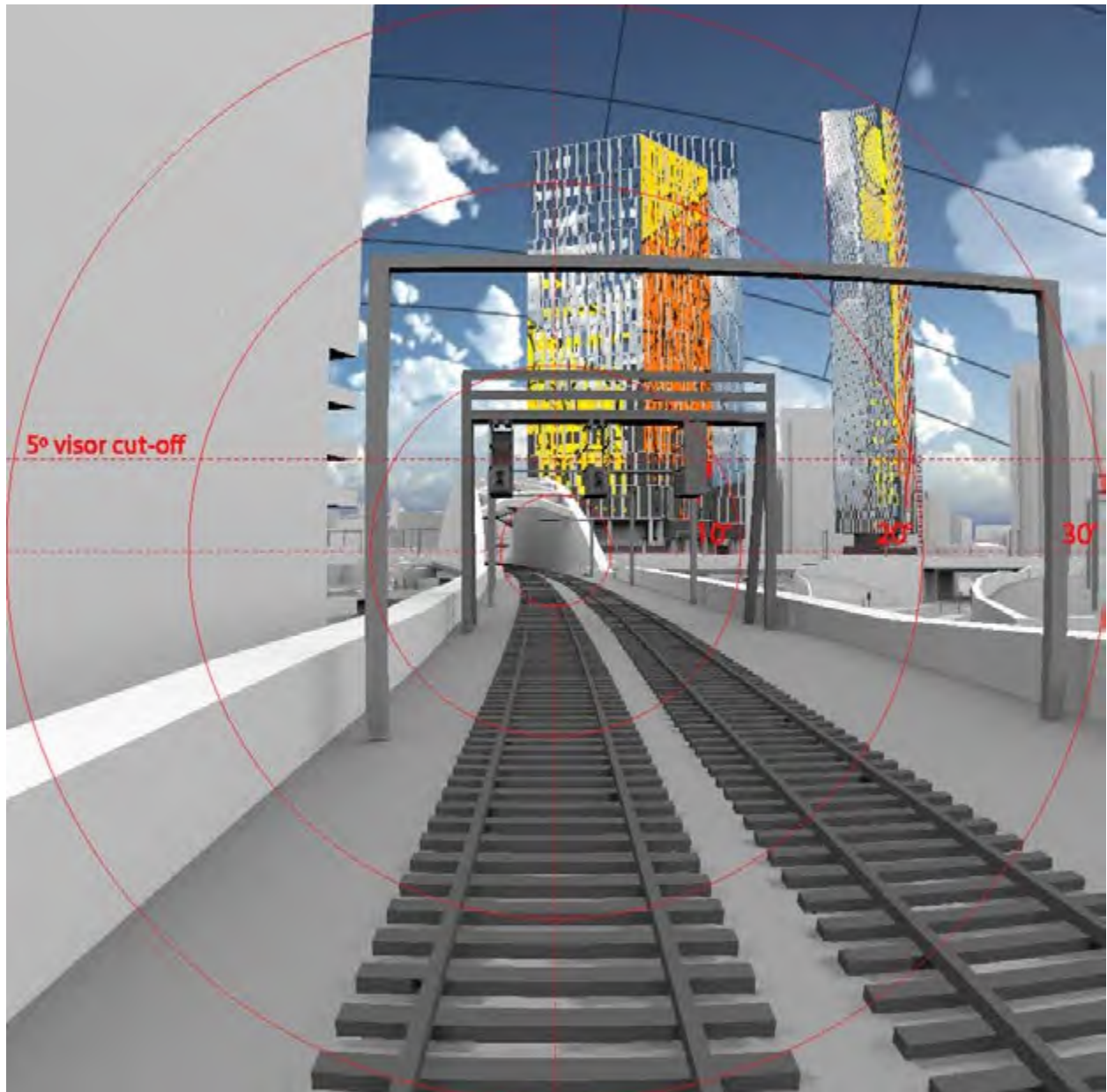


Fig. 619: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

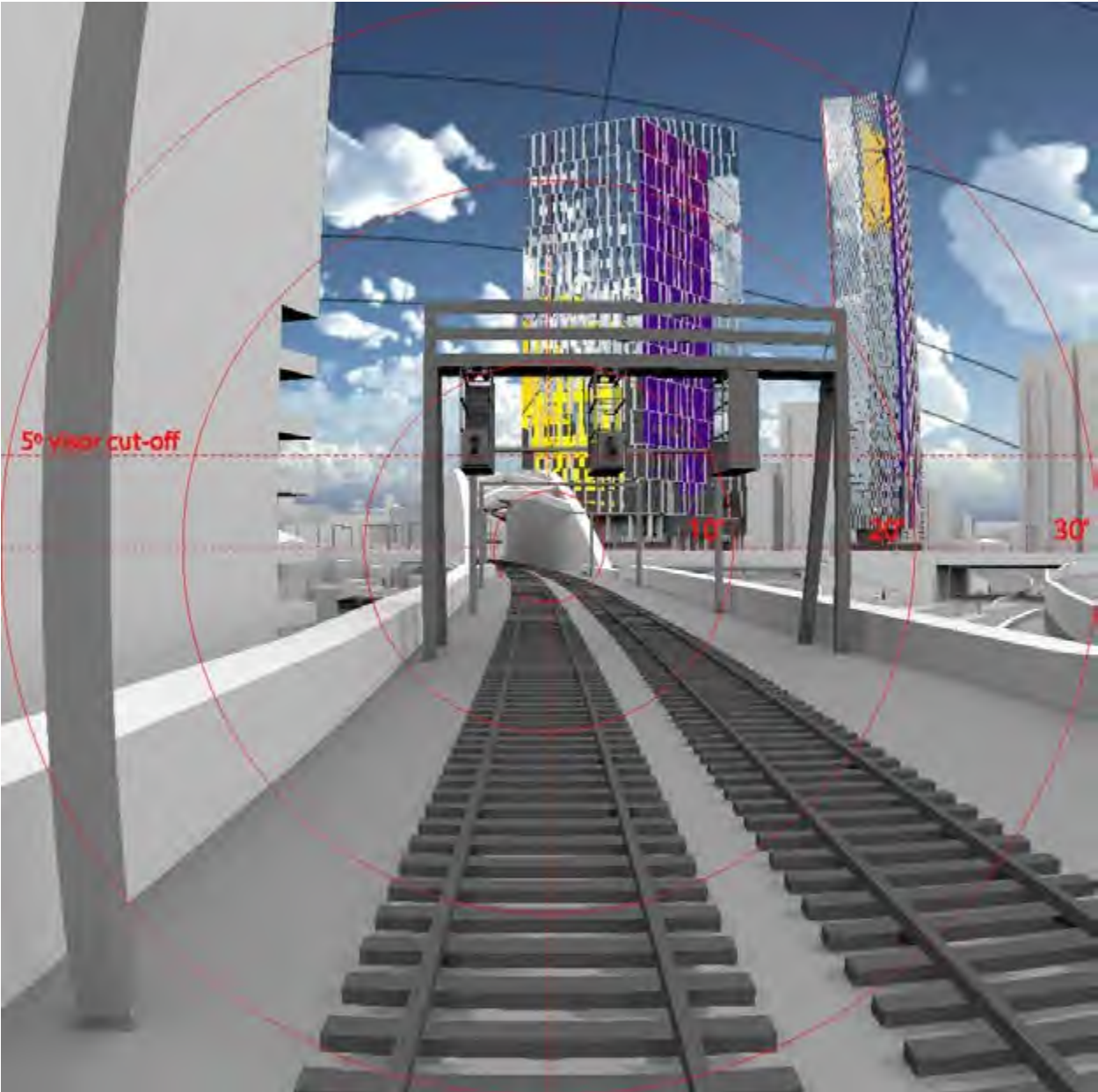


Fig. 620: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

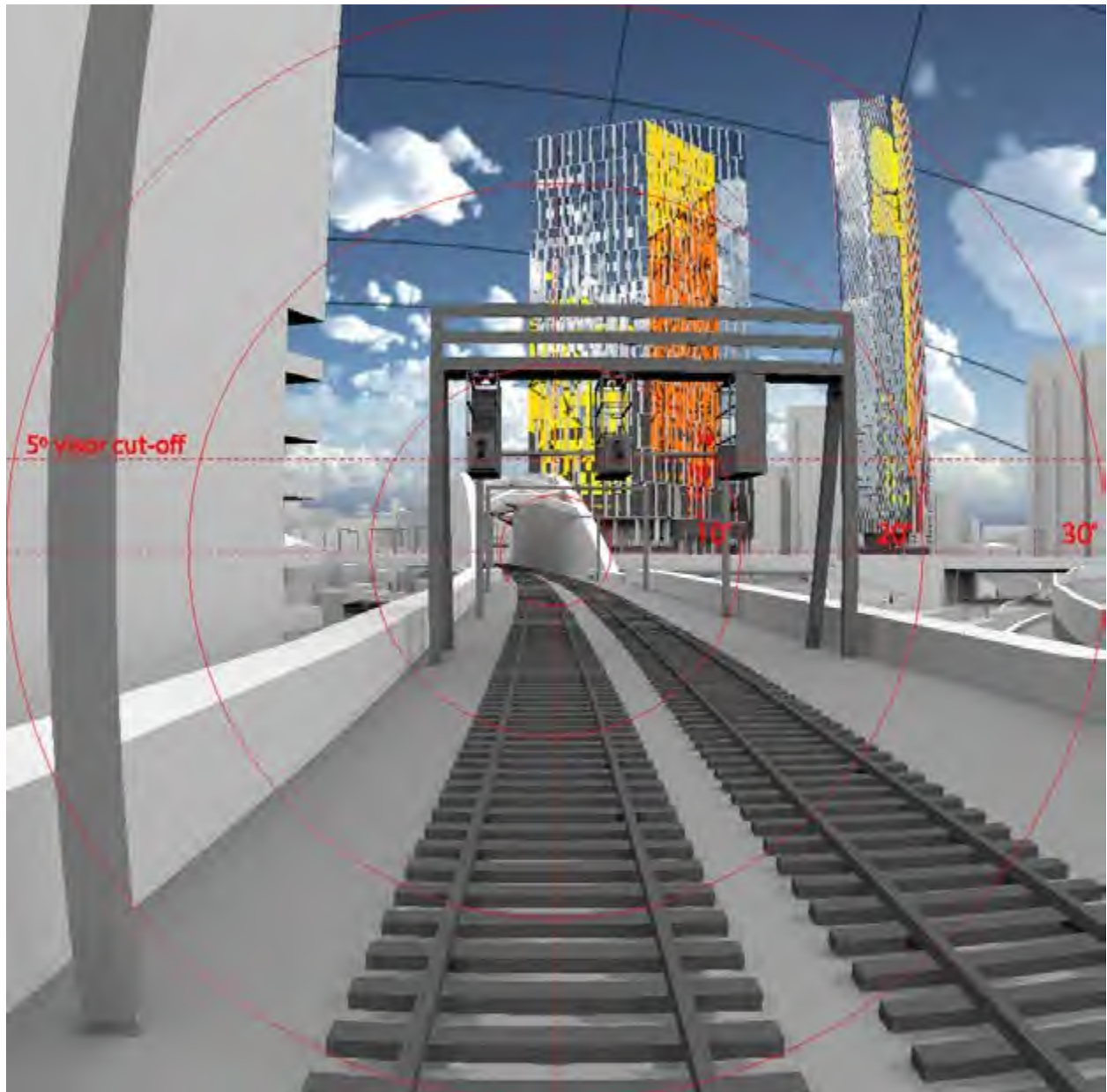


Fig. 621: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

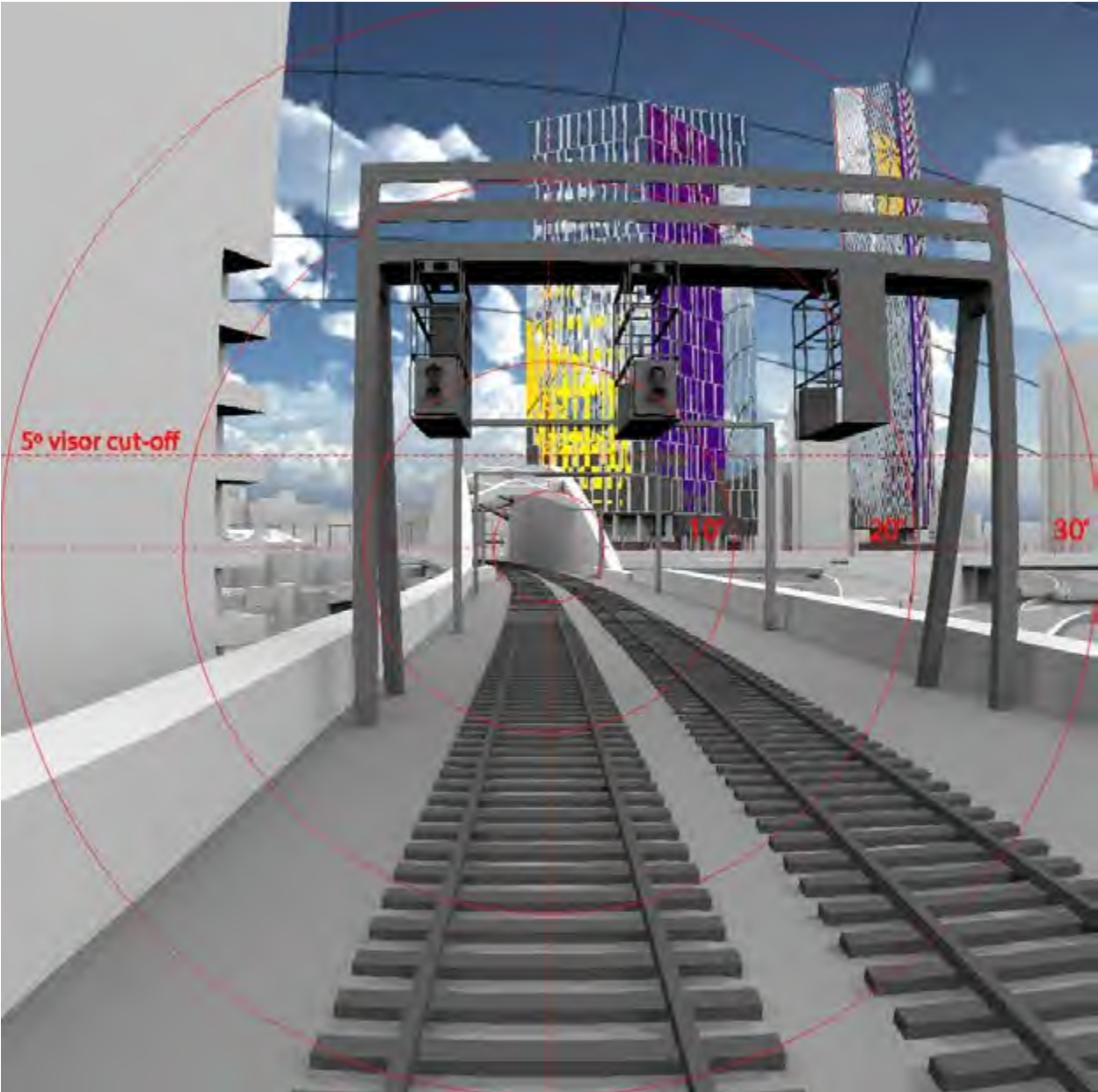


Fig. 622: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

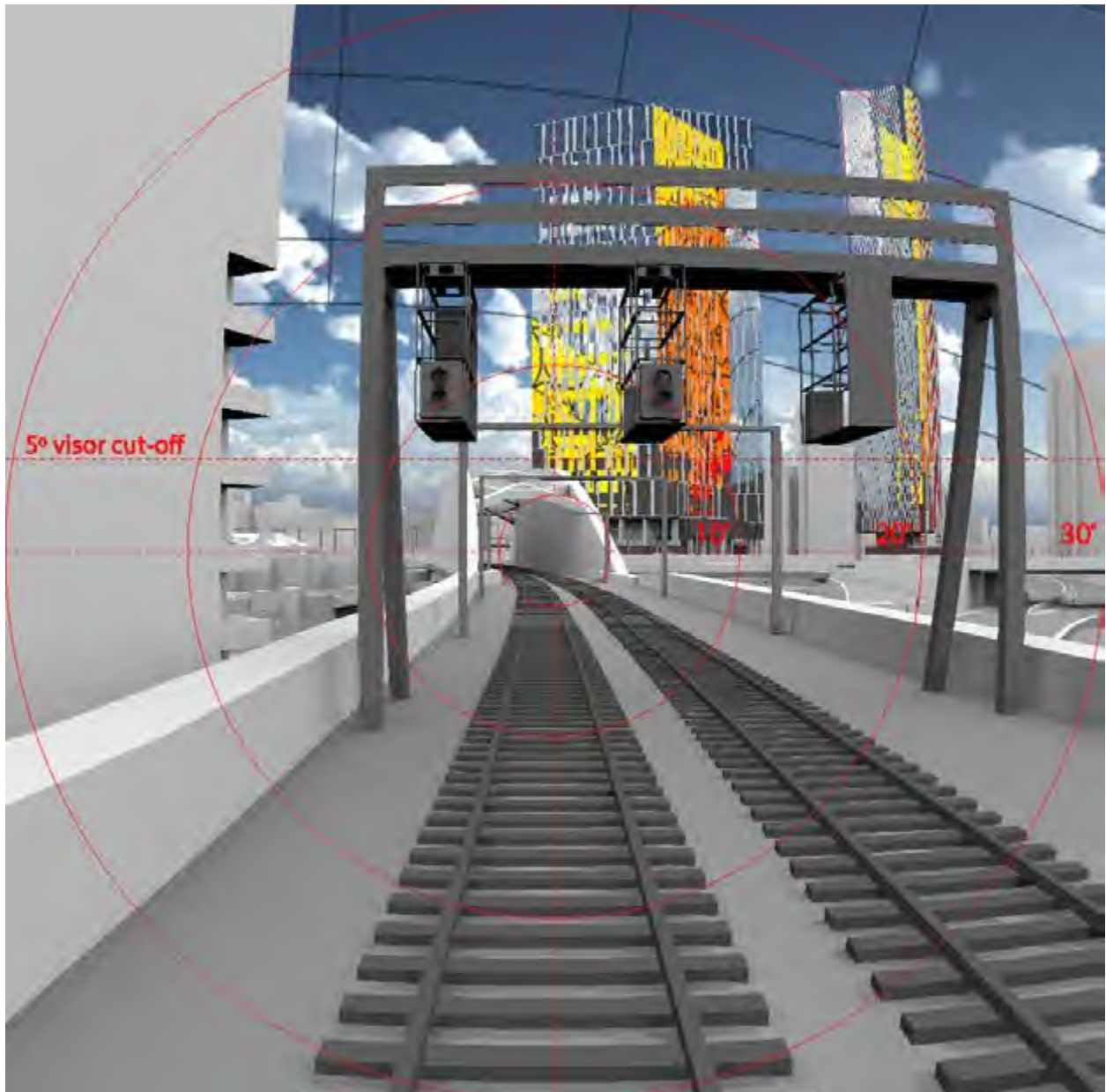


Fig. 623: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAGHT

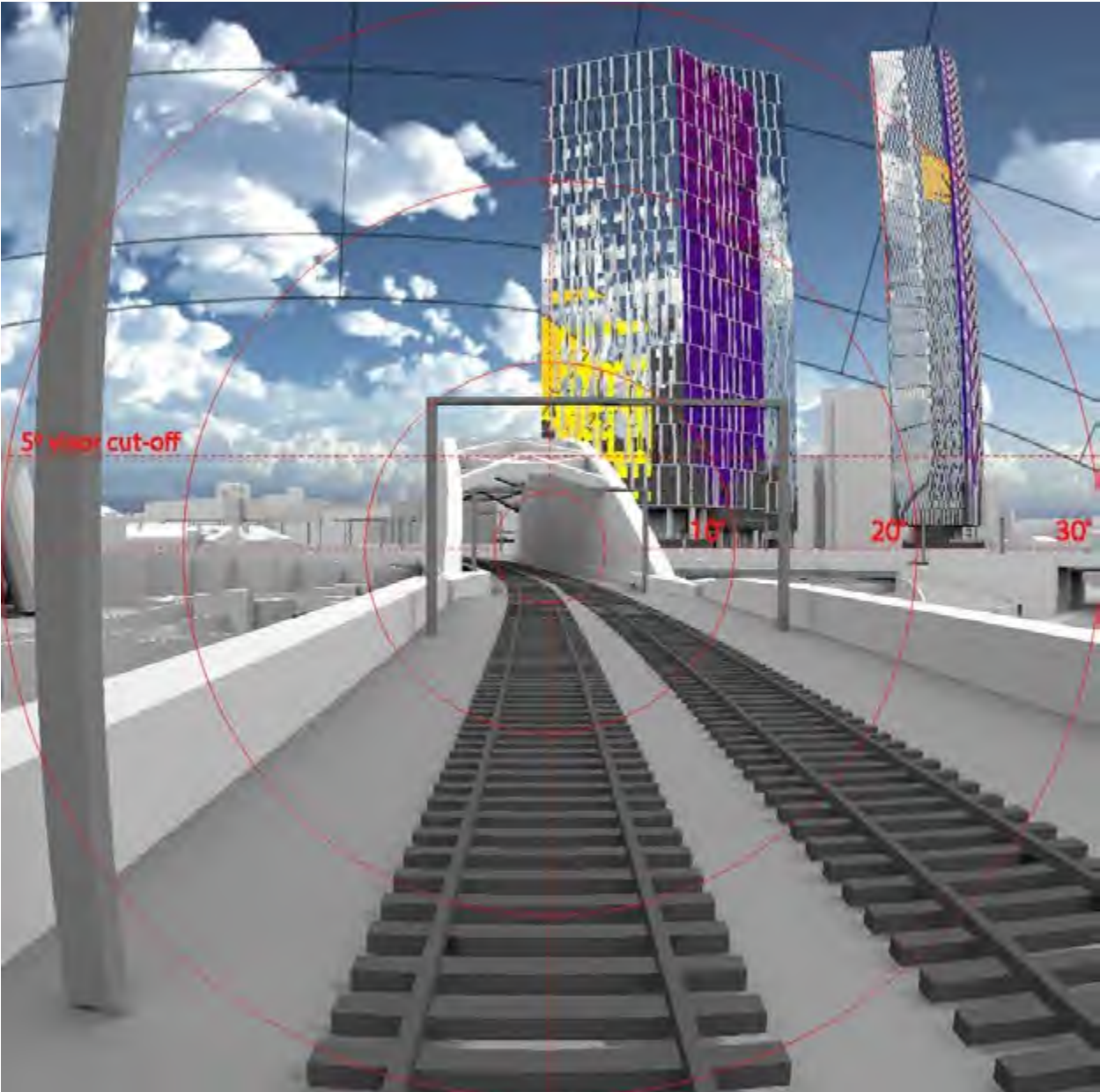


Fig. 624: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAGHT**

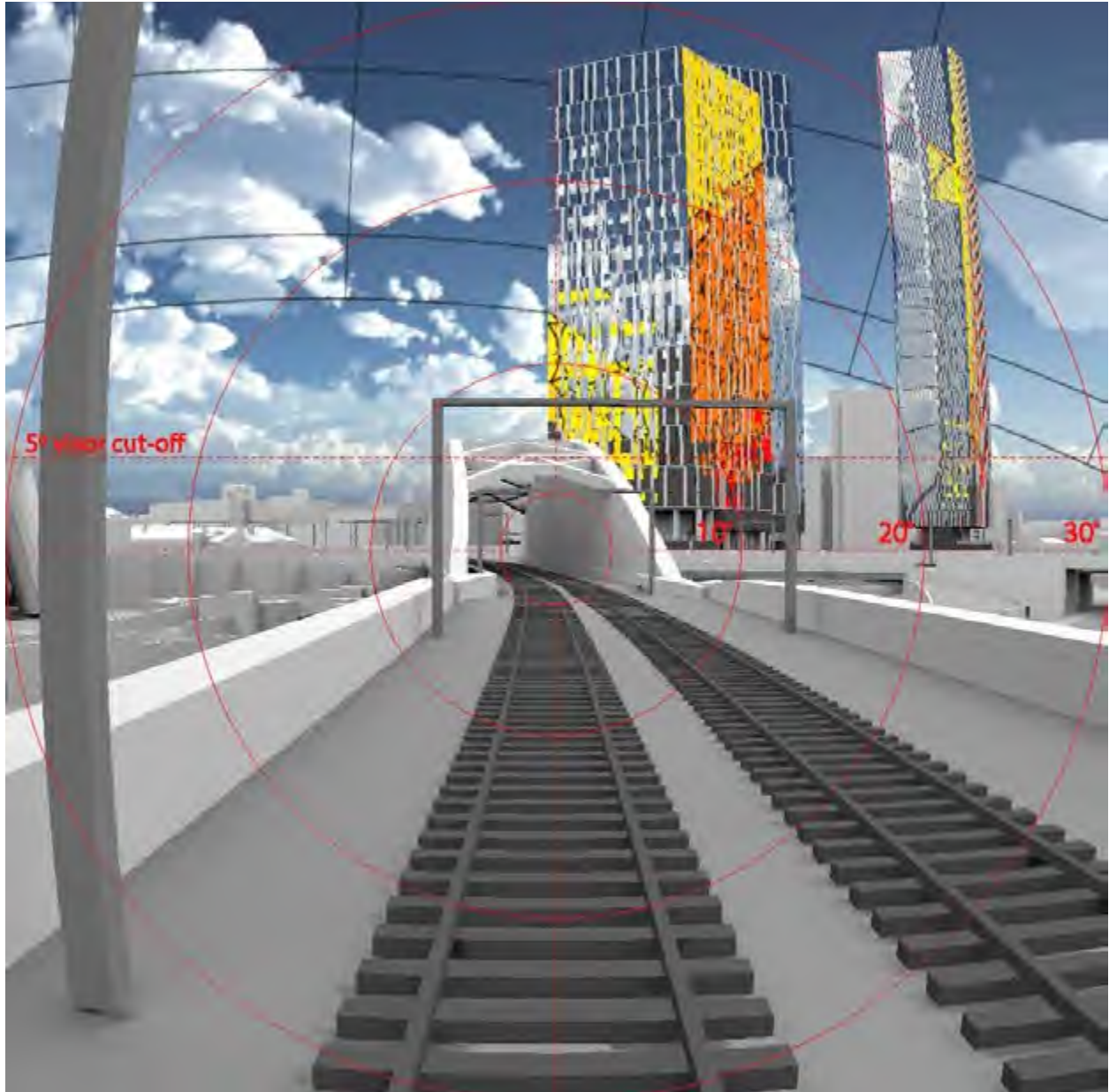


Fig. 625: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT

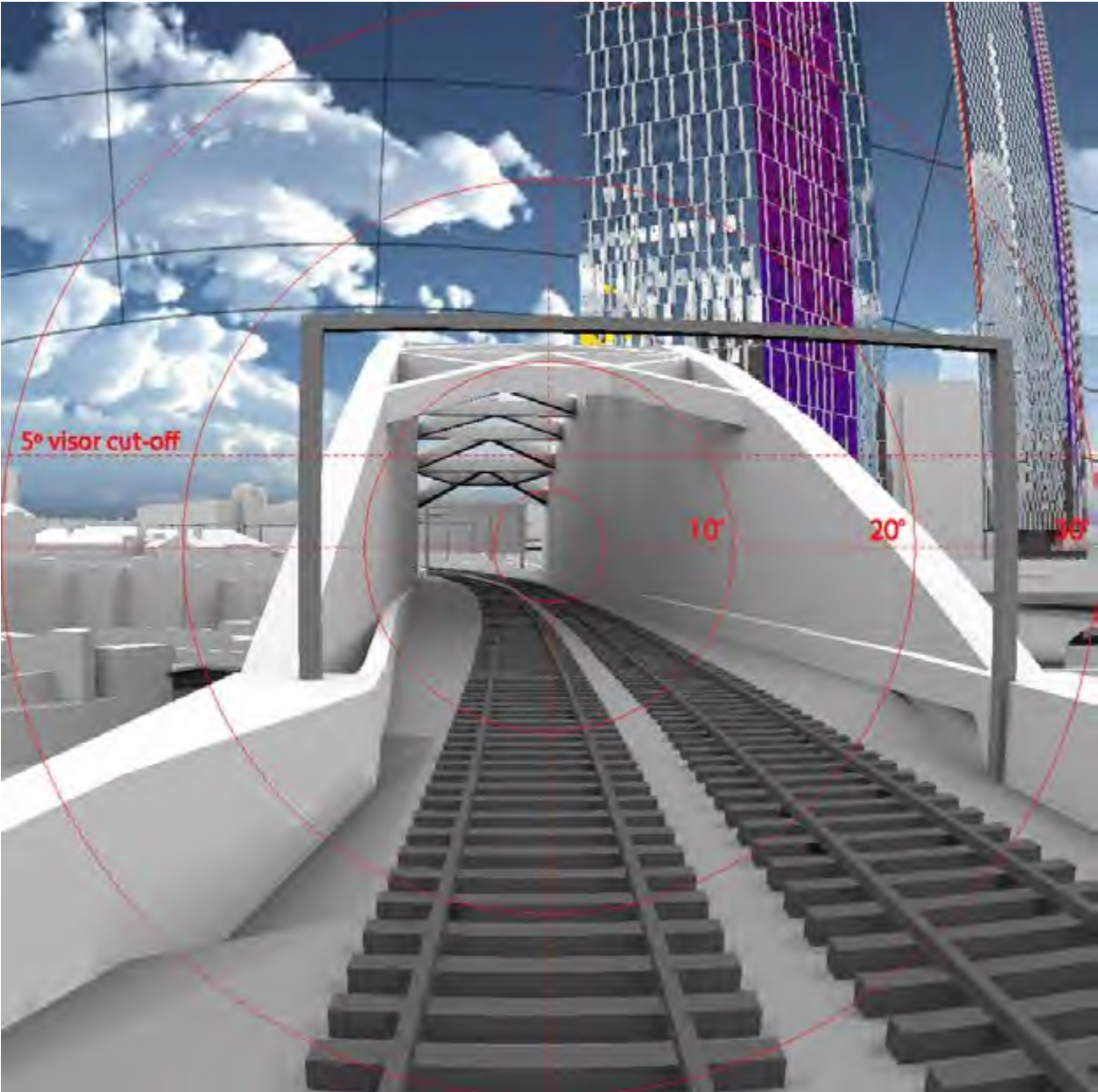


Fig. 626: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT**

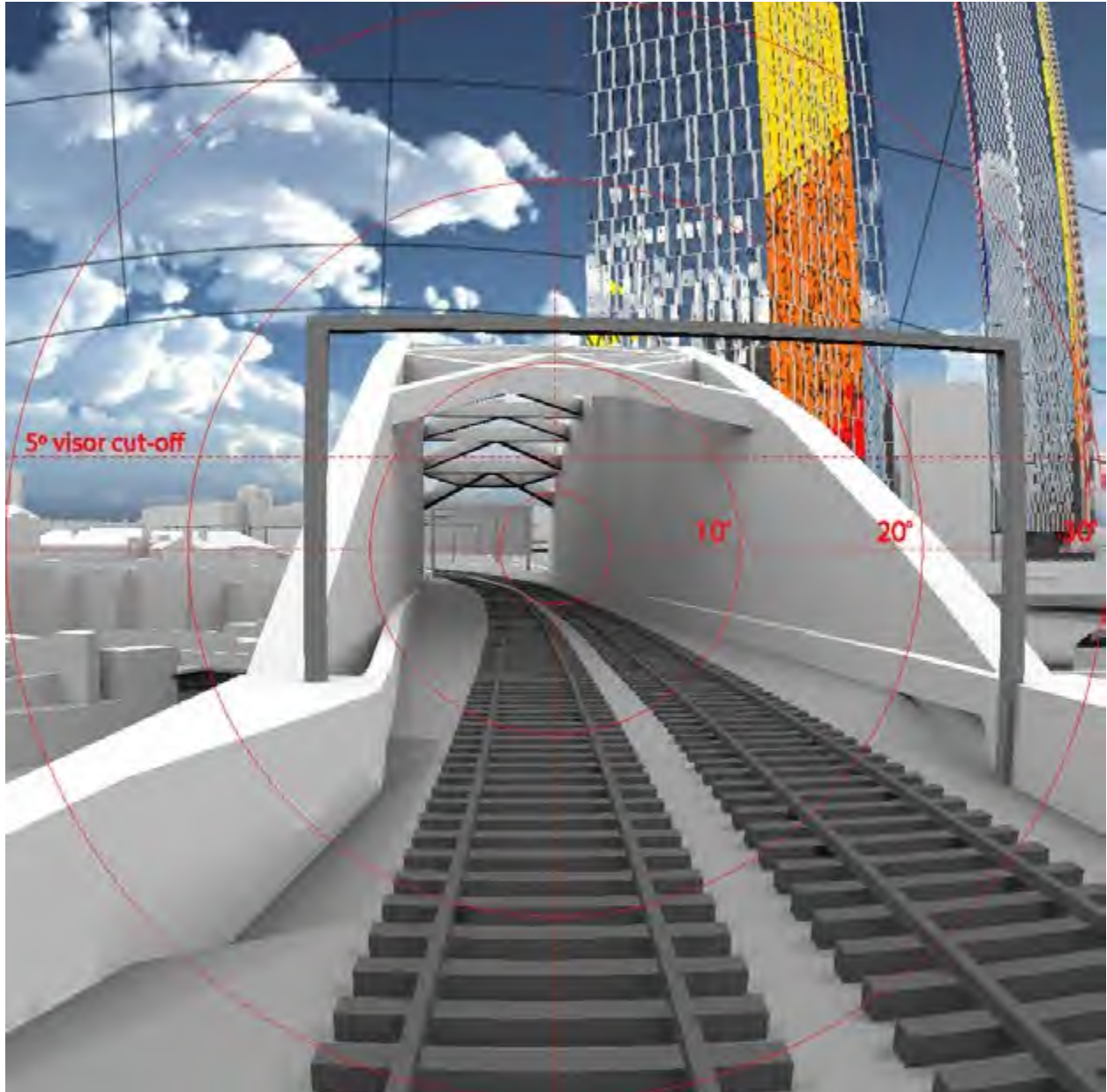


Fig. 627: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT

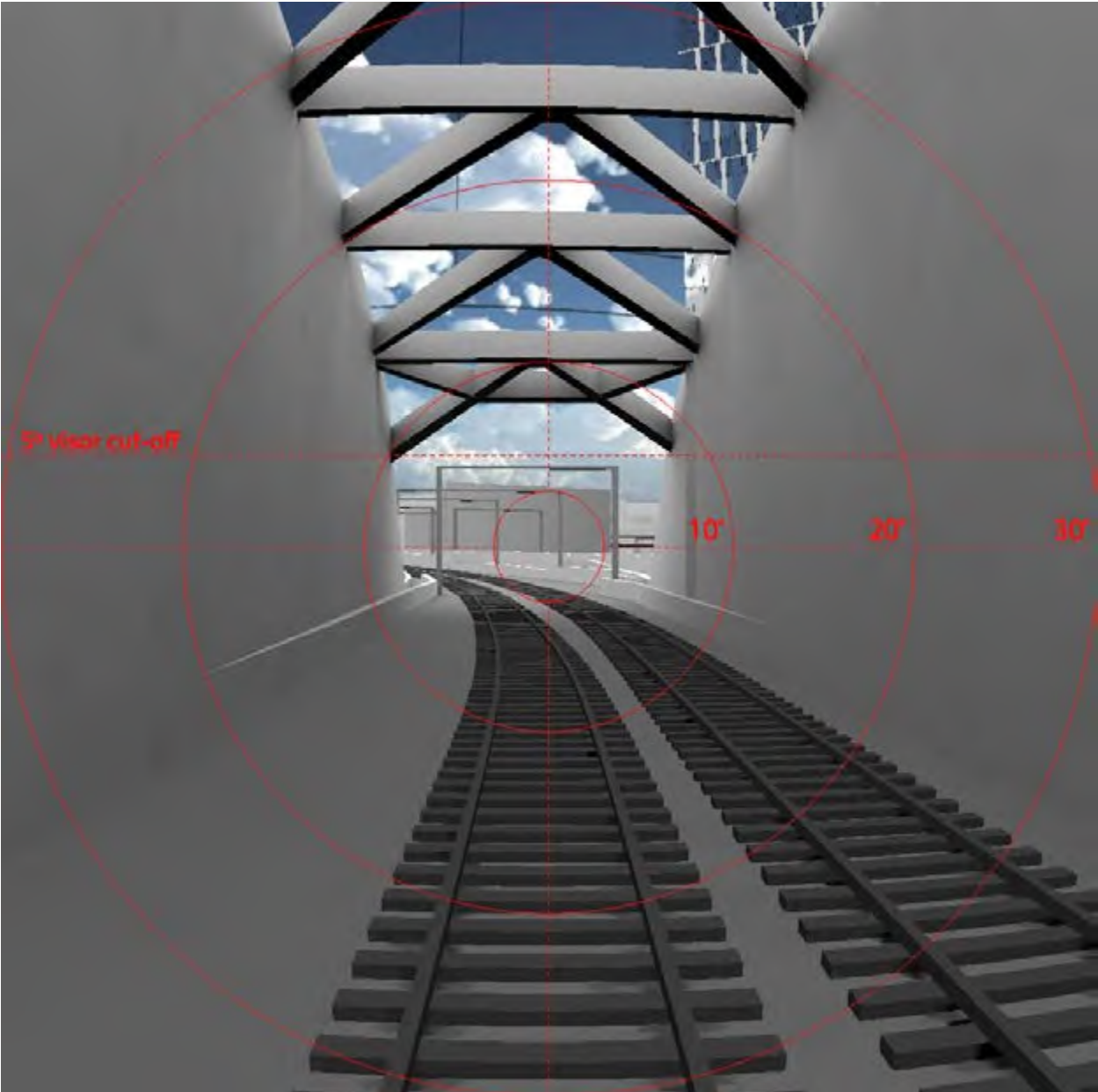


Fig. 628: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT**

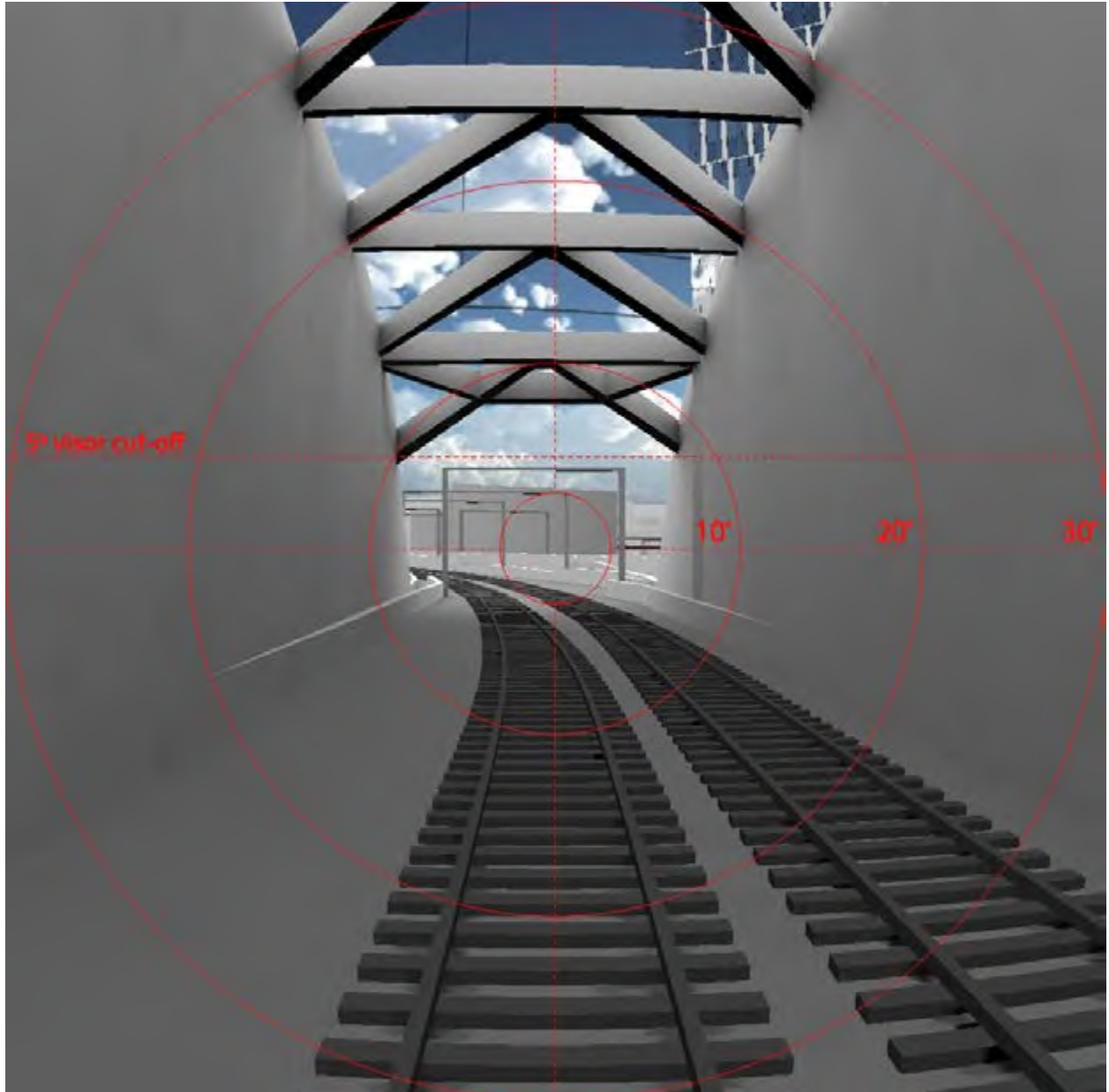


Fig. 629: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT

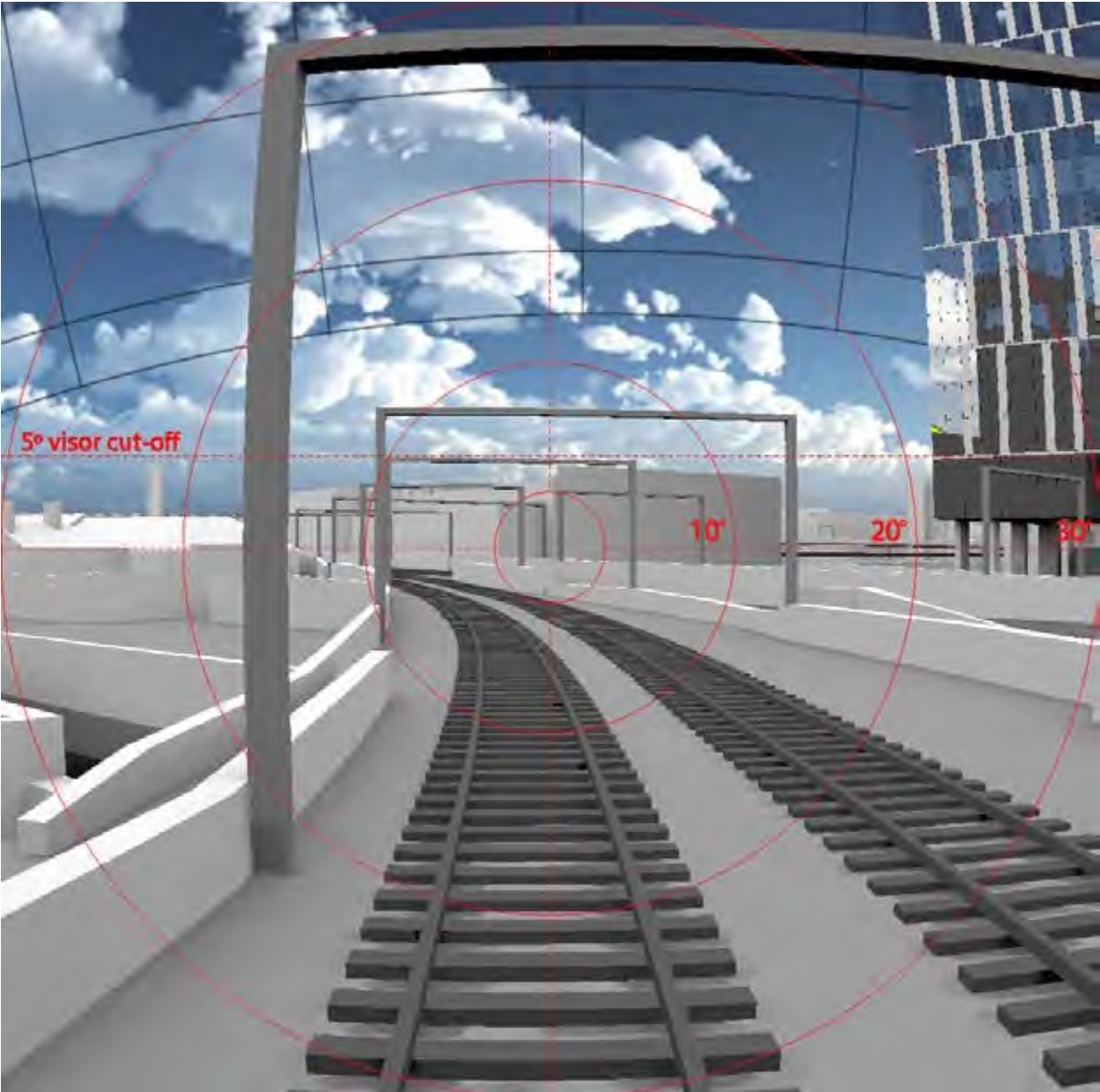


Fig. 630: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT**

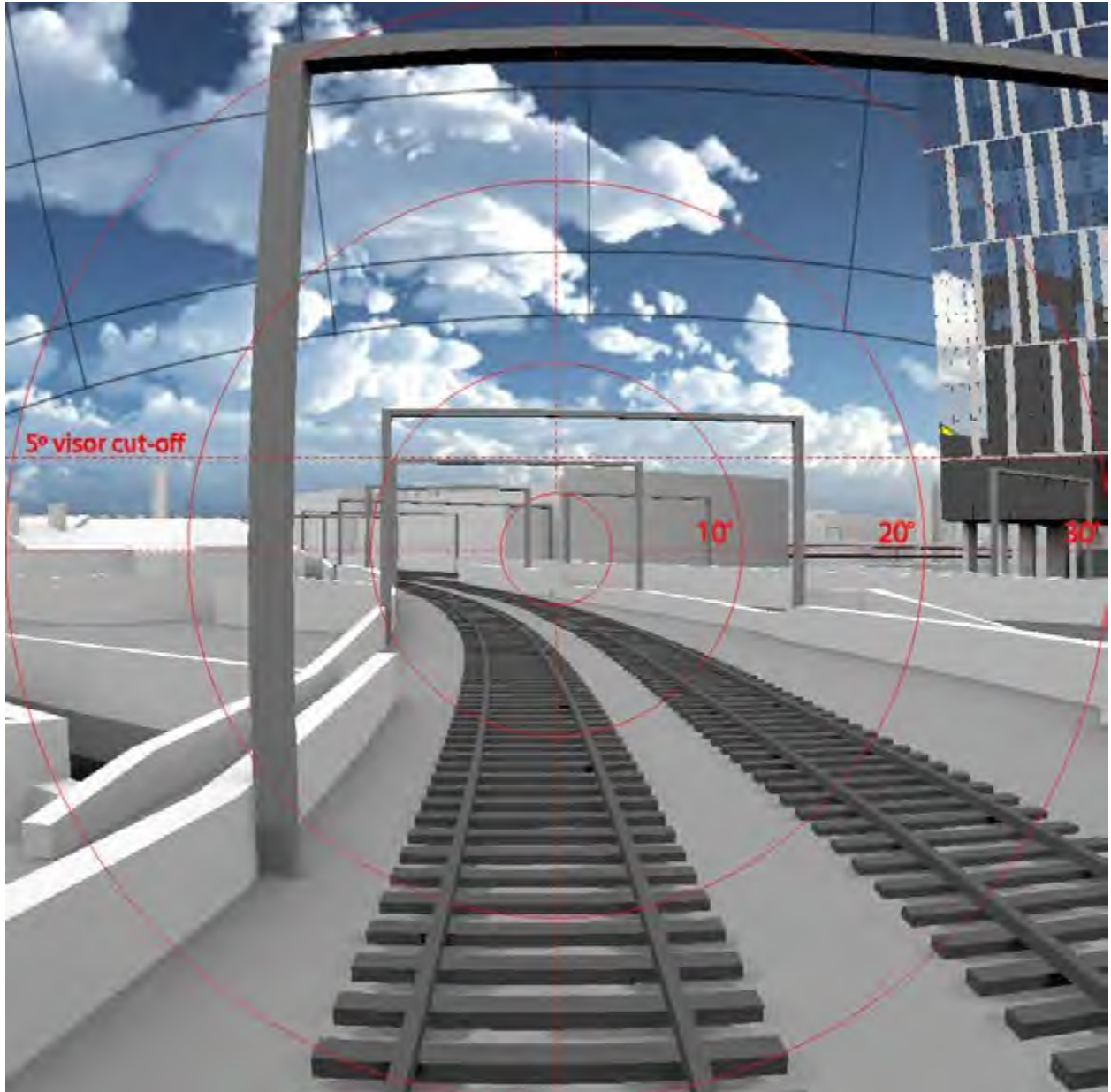


Fig. 631: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAIGHT

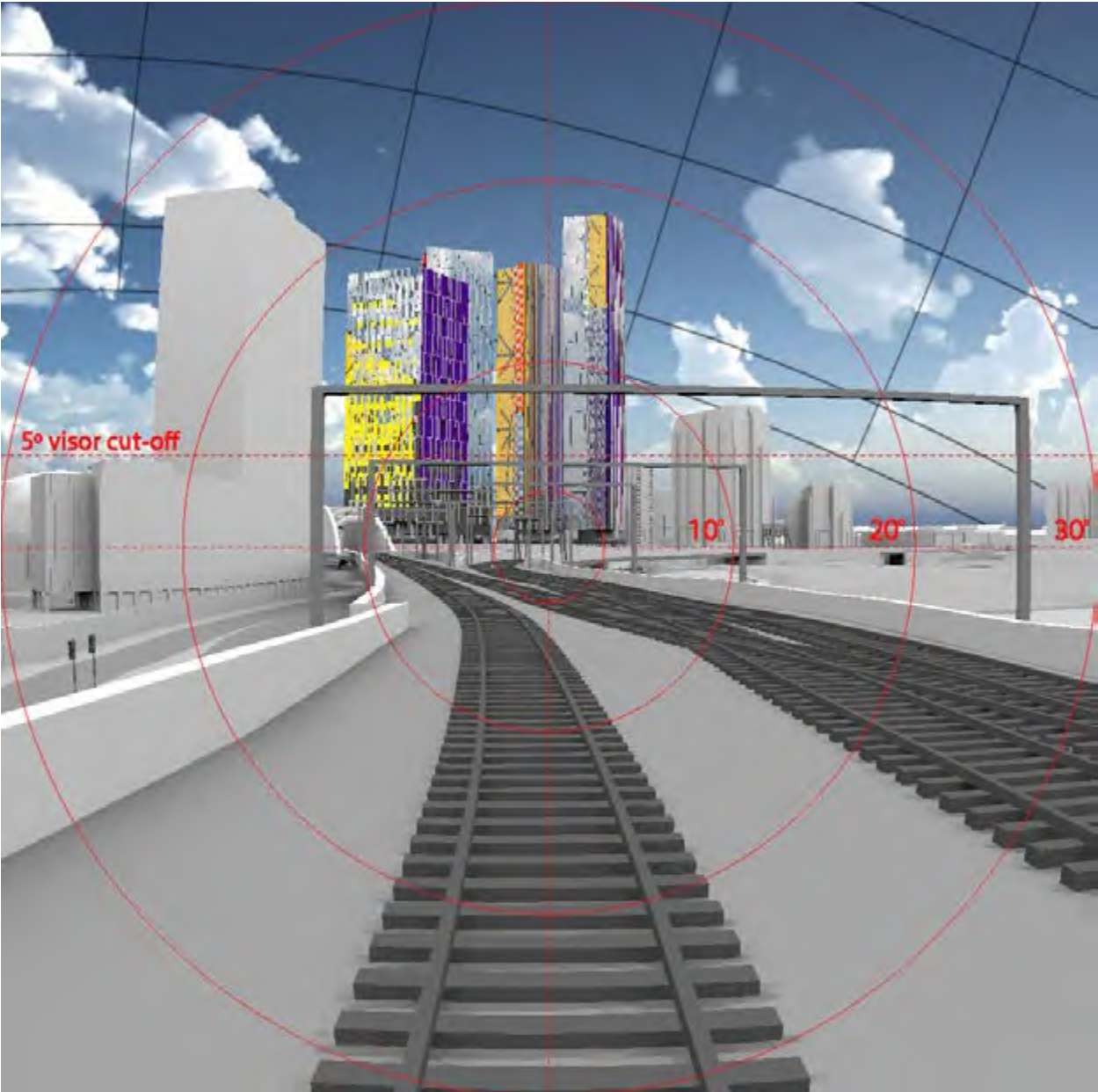


Fig. 632: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-10 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 500M FROM SITE
LOOKING STRAIGHT**

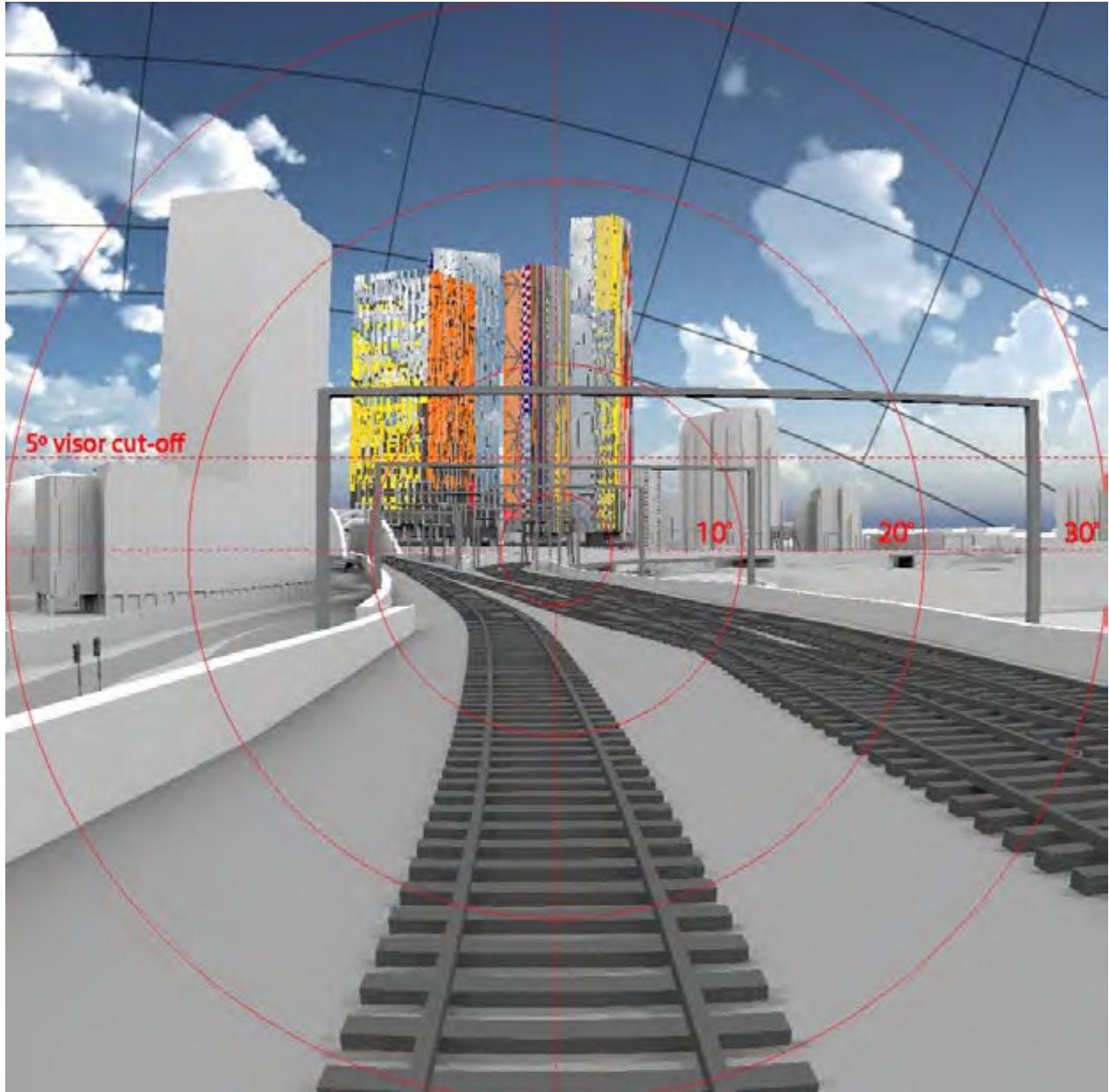


Fig. 633: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT

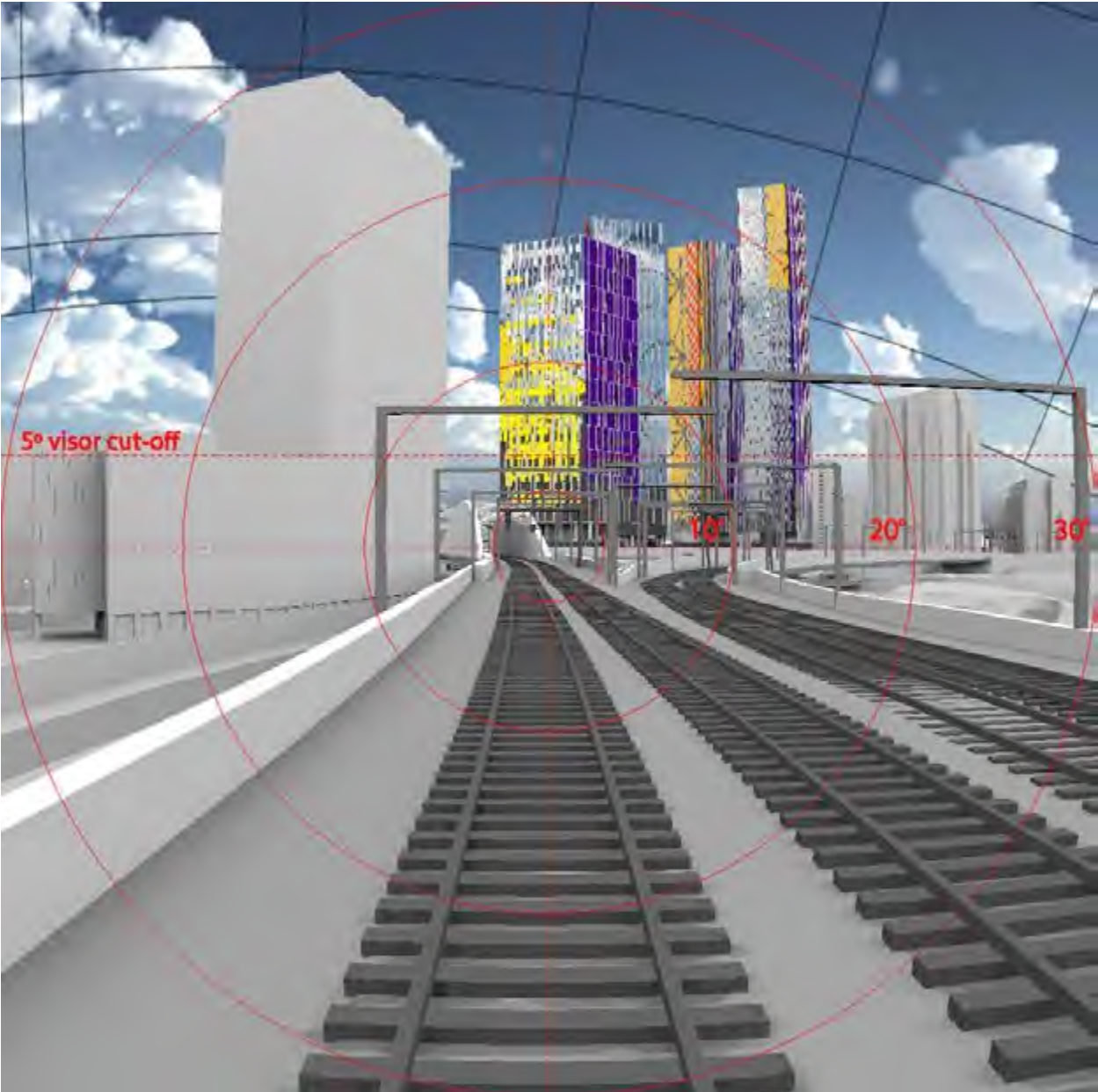


Fig. 634: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-60 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 450M FROM SITE
LOOKING STRAGHT**

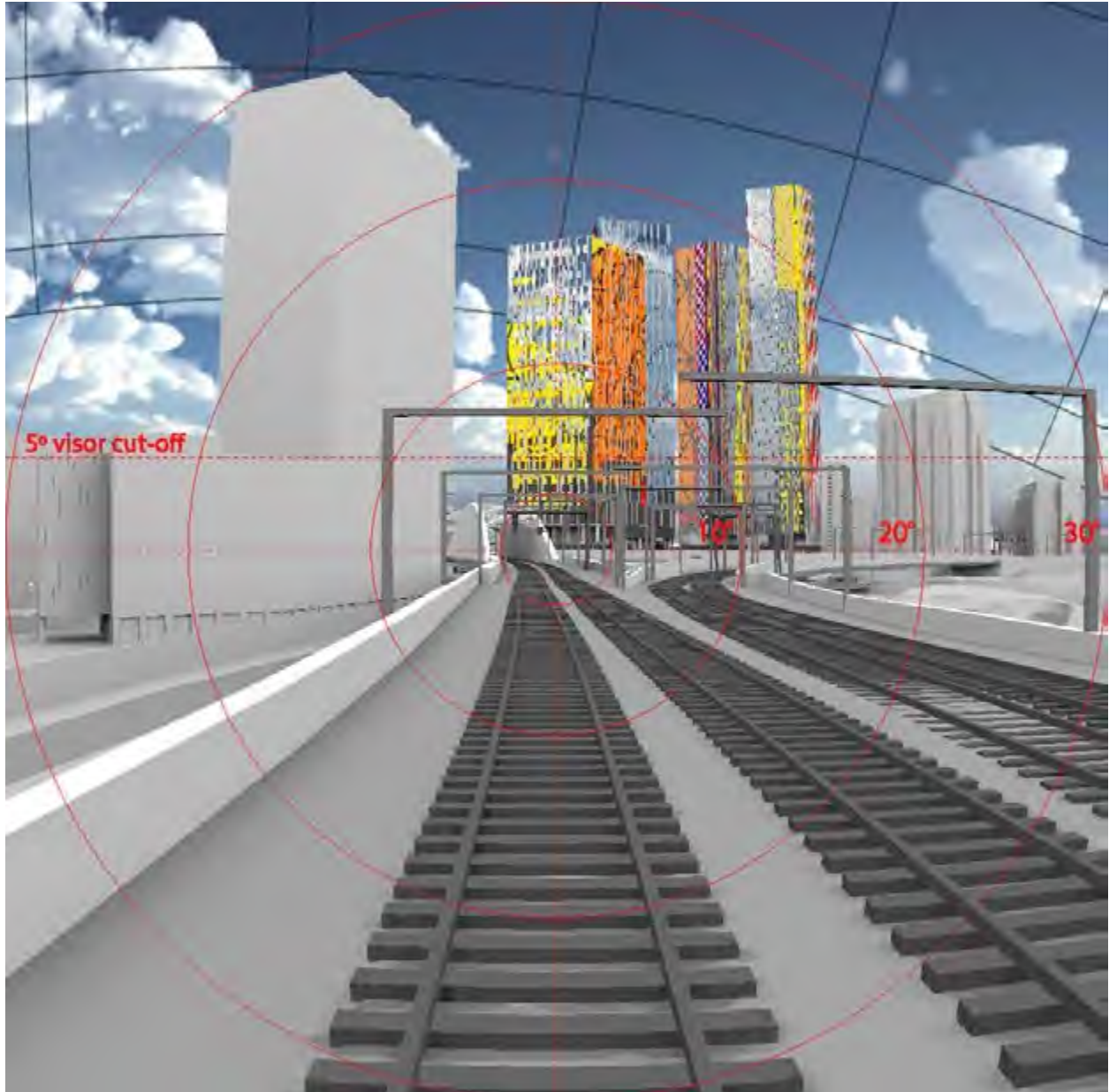


Fig. 635: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

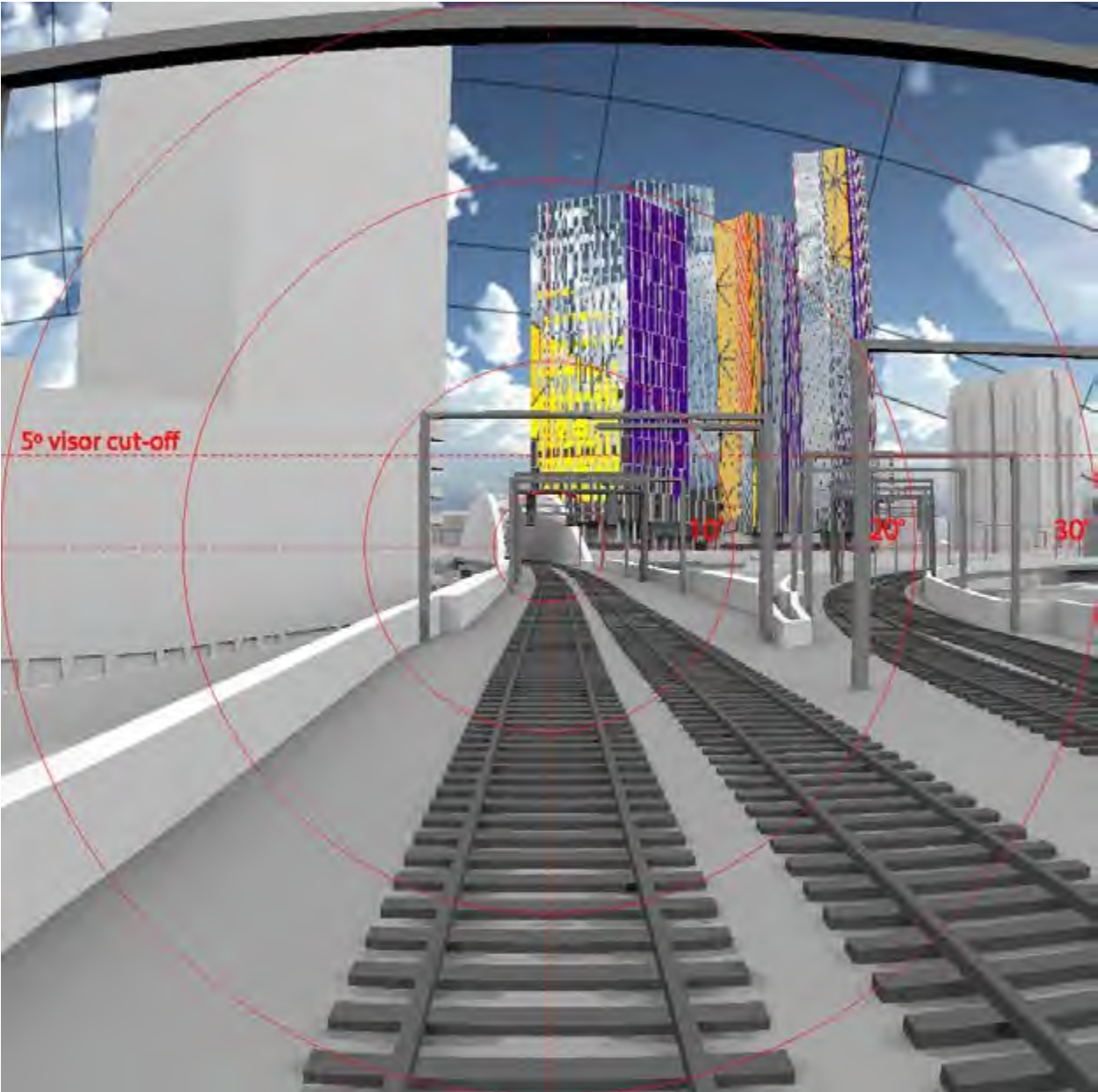


Fig. 636: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-110 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 400M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

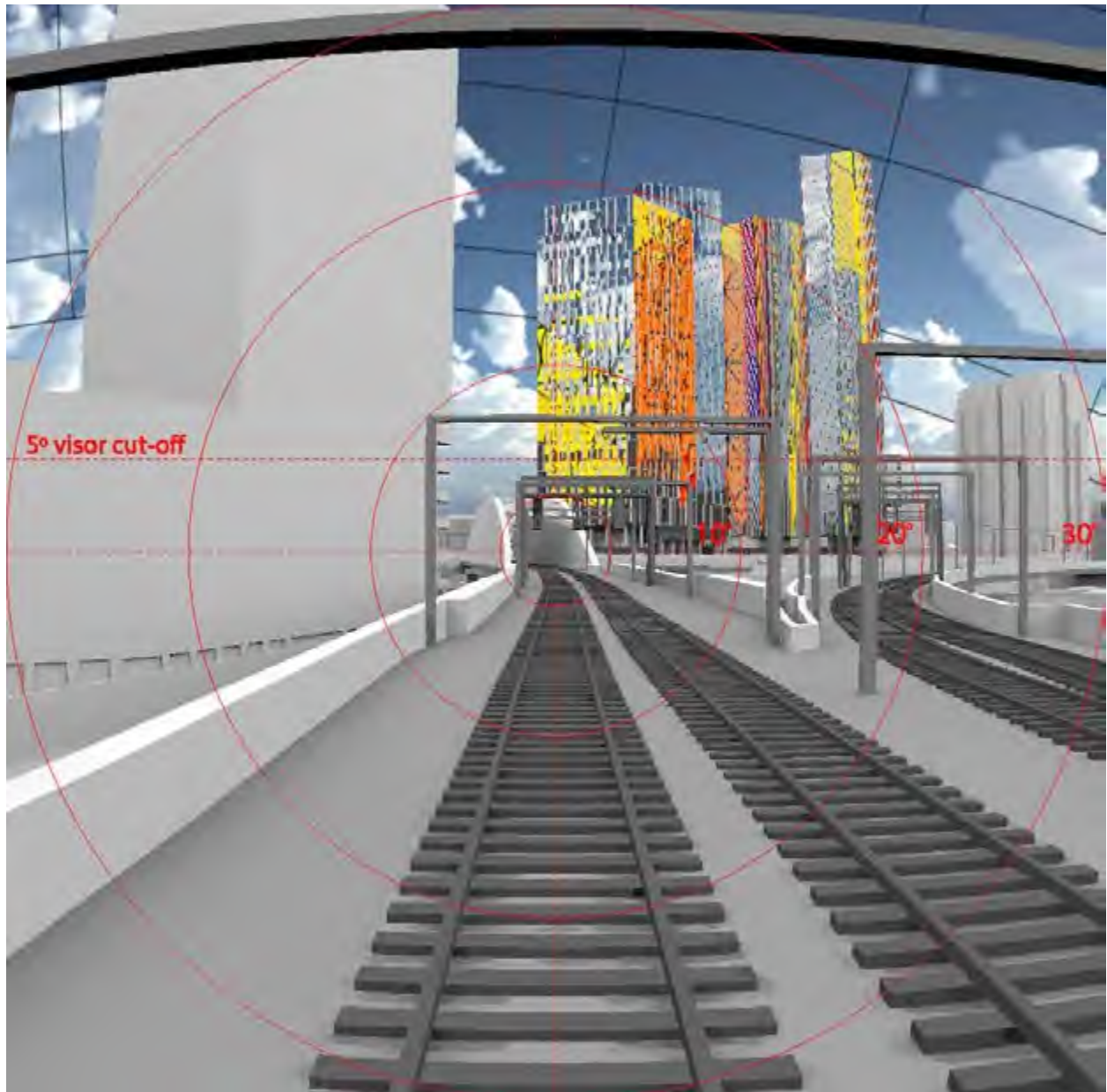


Fig. 637: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

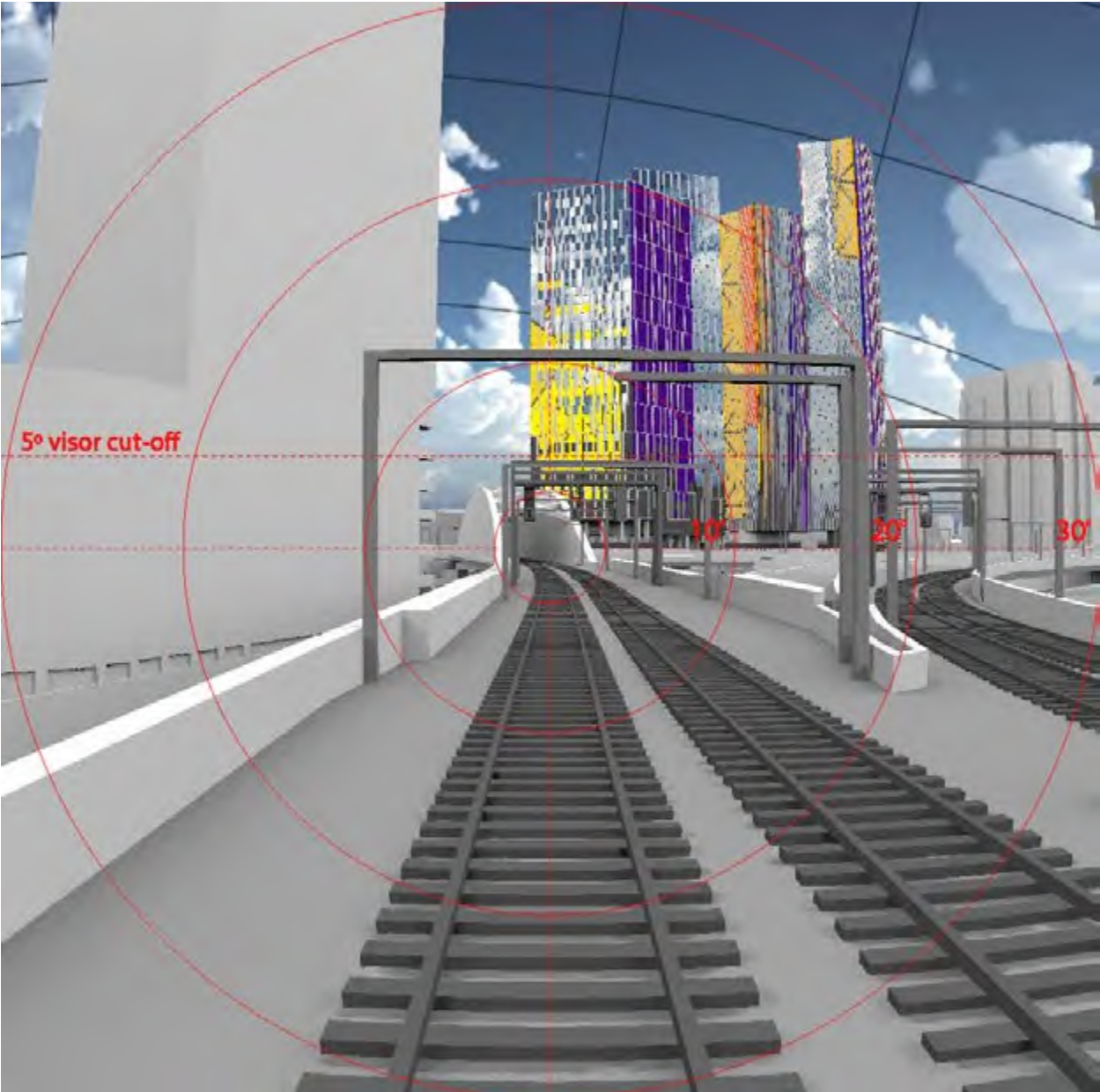


Fig. 638: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-120 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 390M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

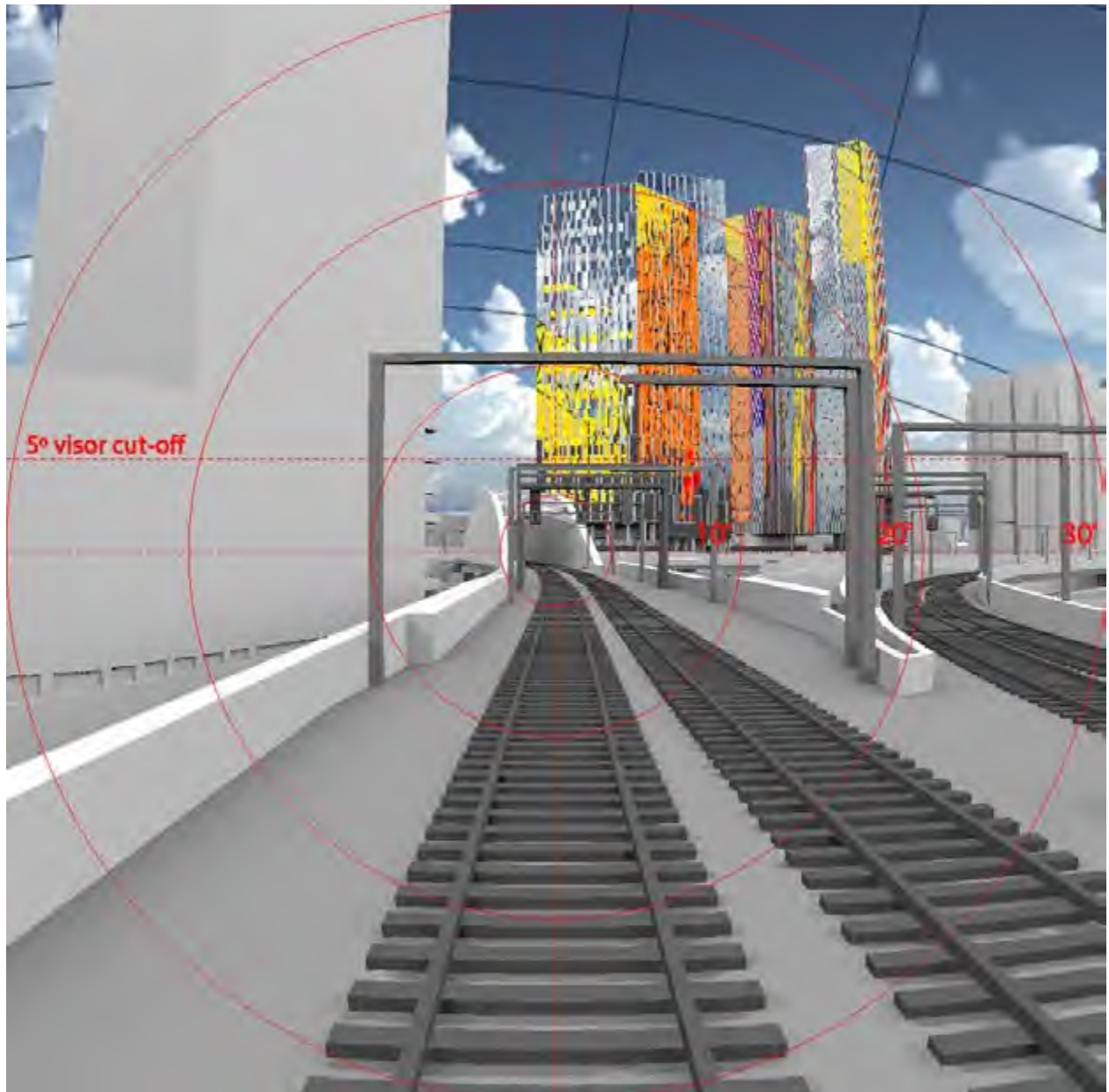


Fig. 639: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

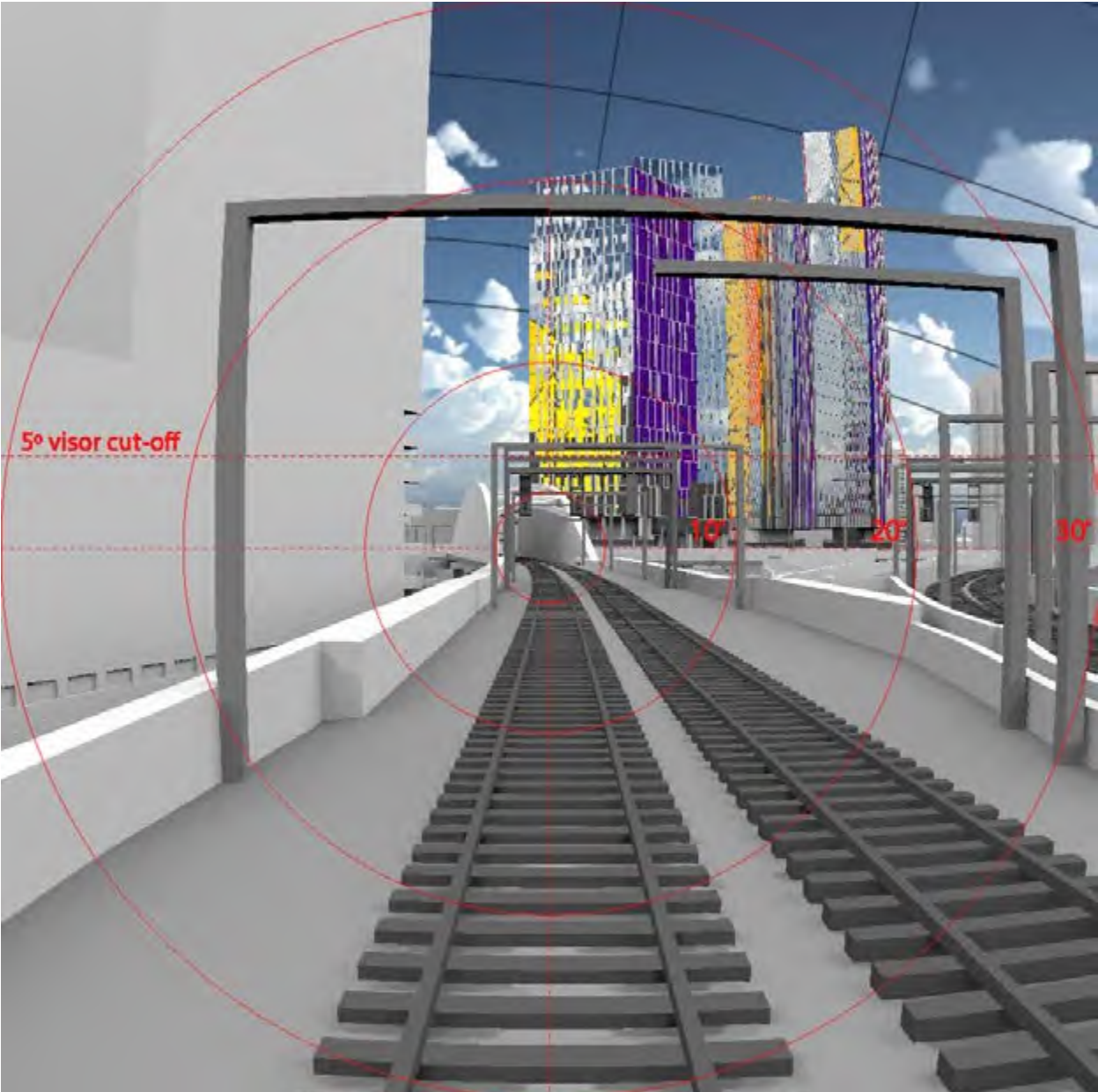
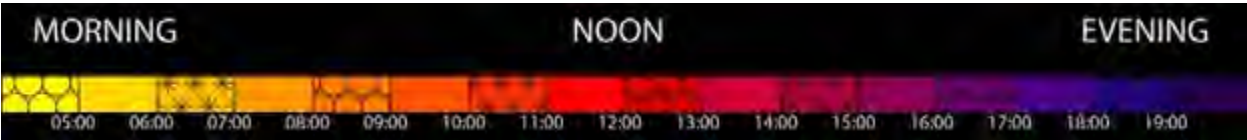


Fig. 640: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-130 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 380M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

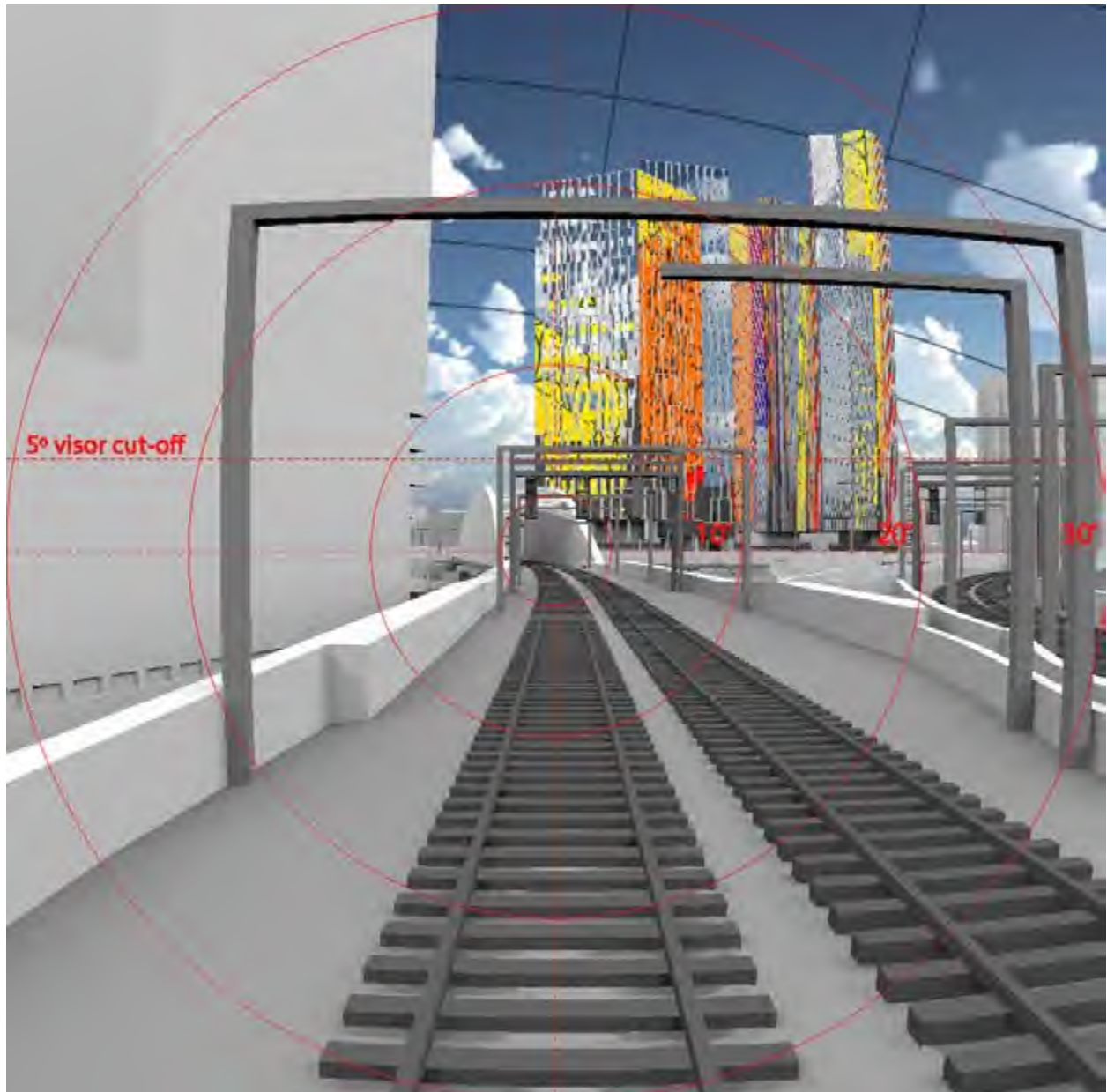


Fig. 641: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

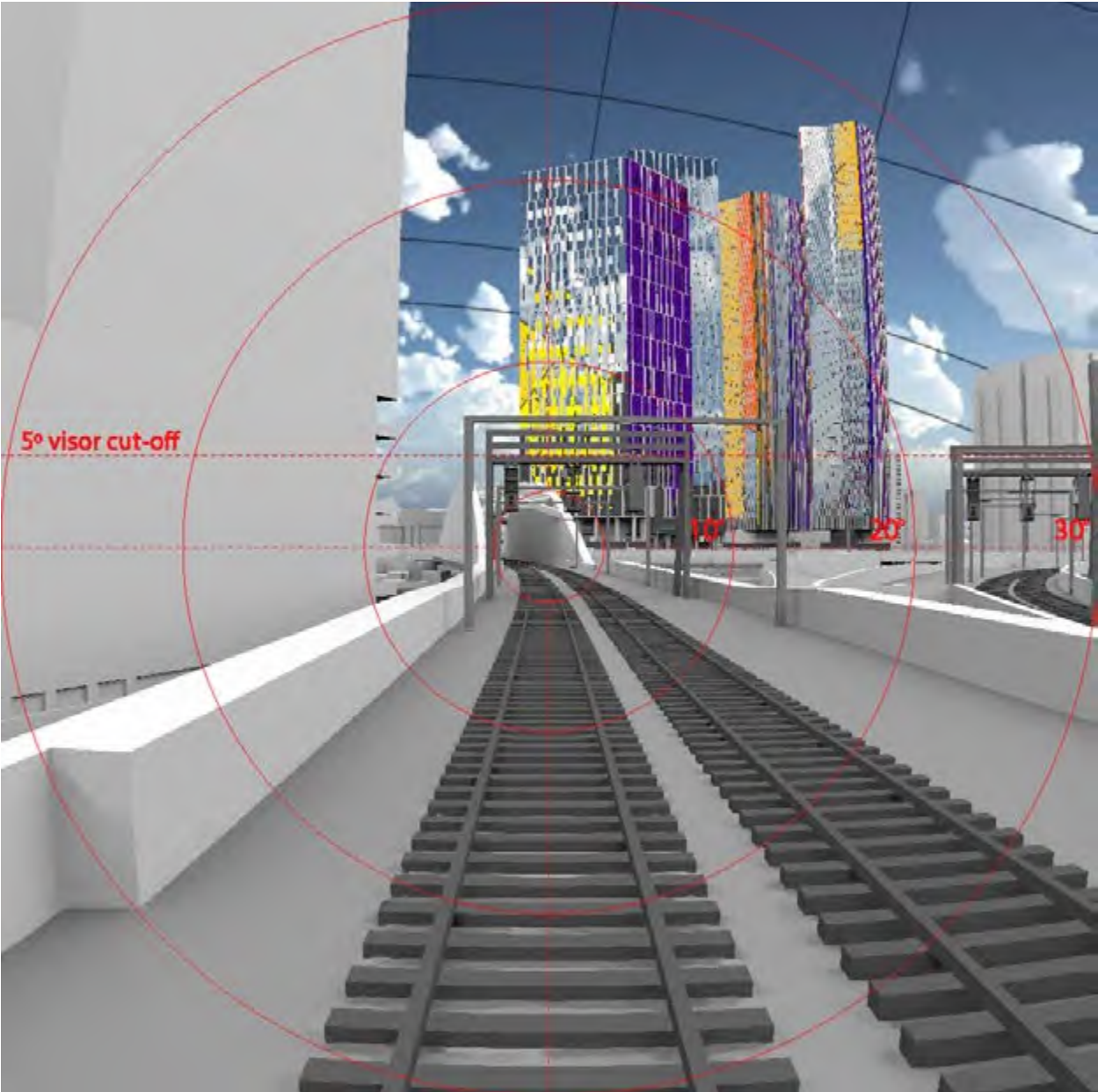


Fig. 642: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-140 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 370M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

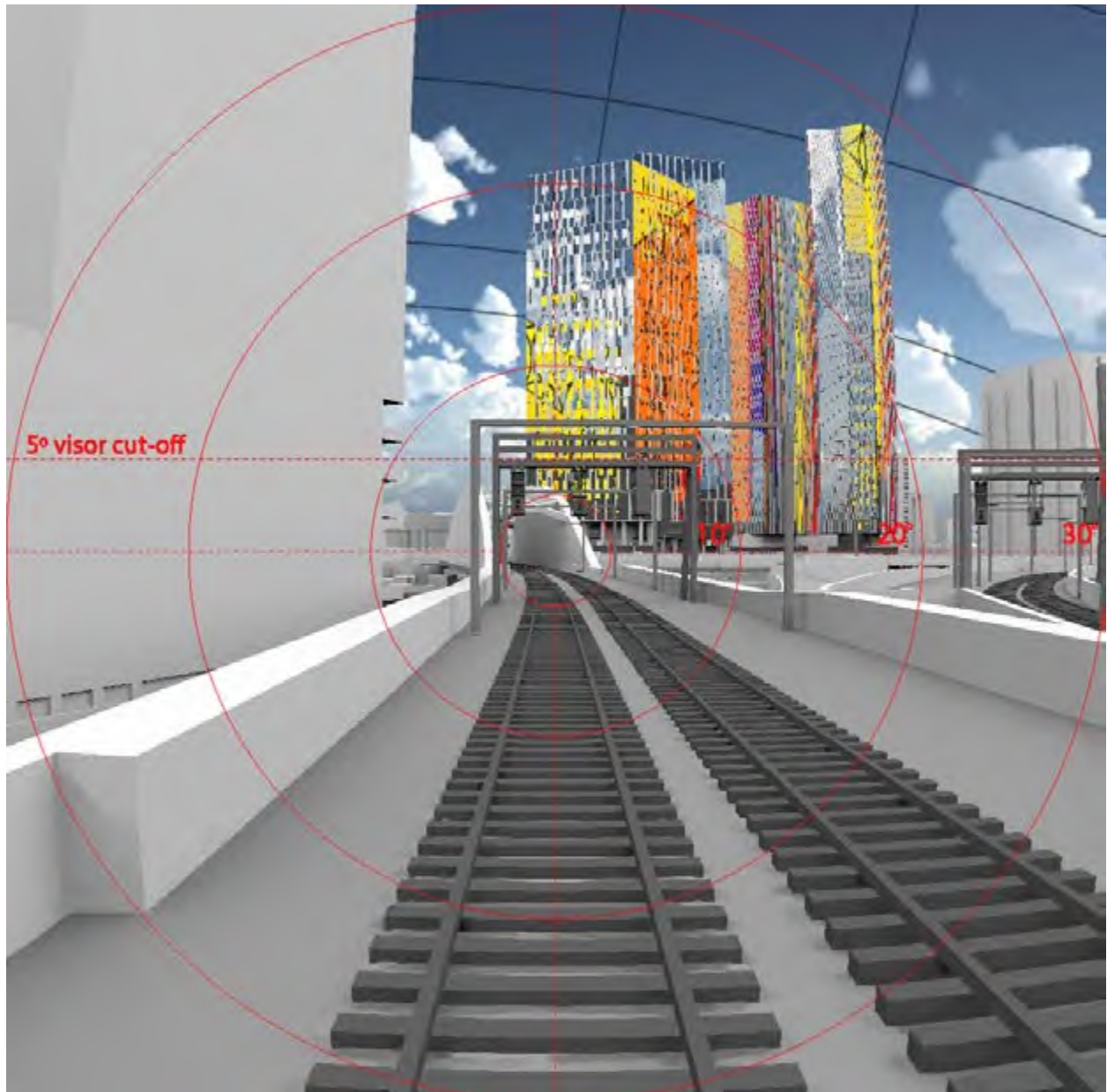


Fig. 643: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

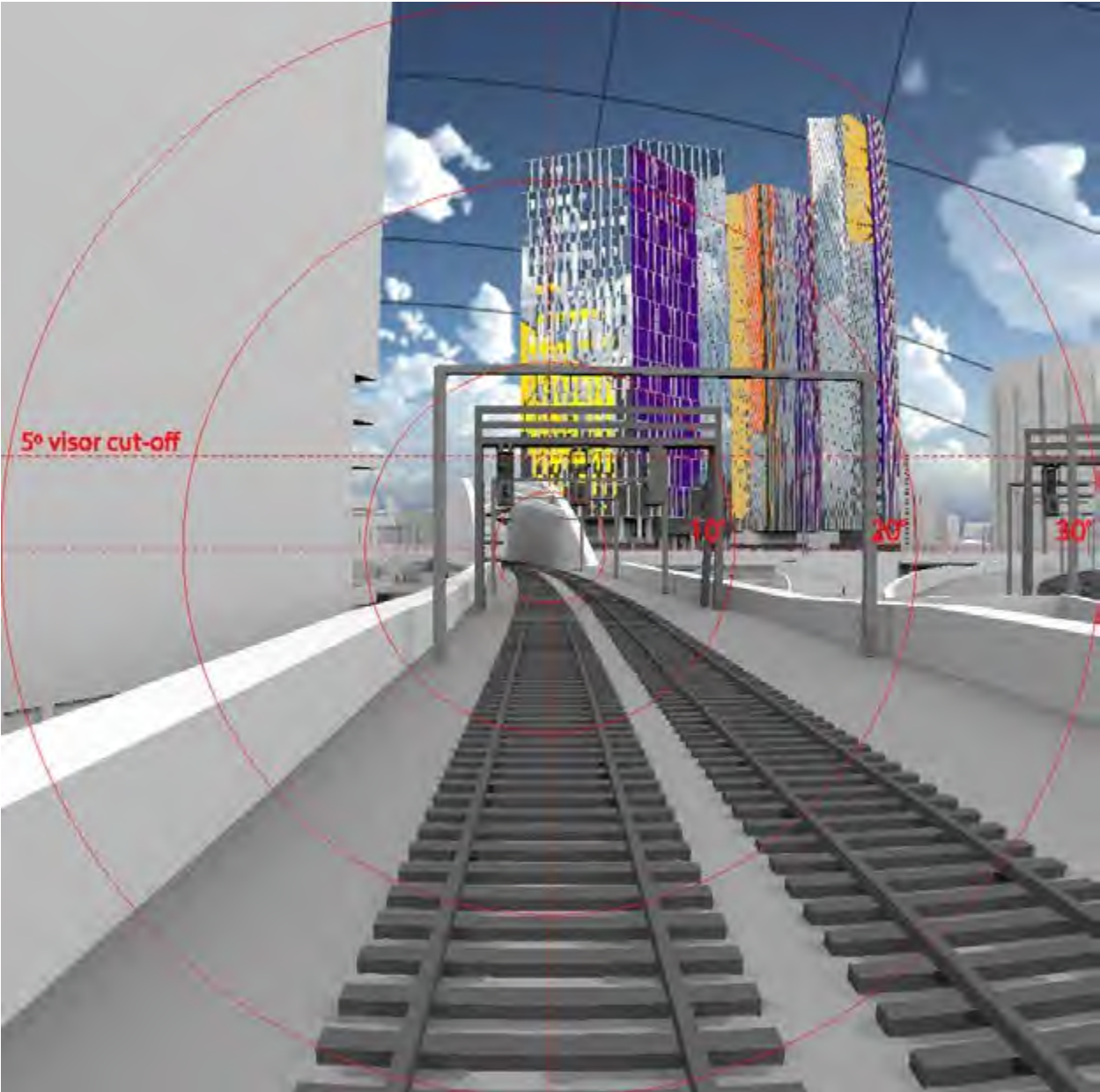


Fig. 644: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-150 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 360M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

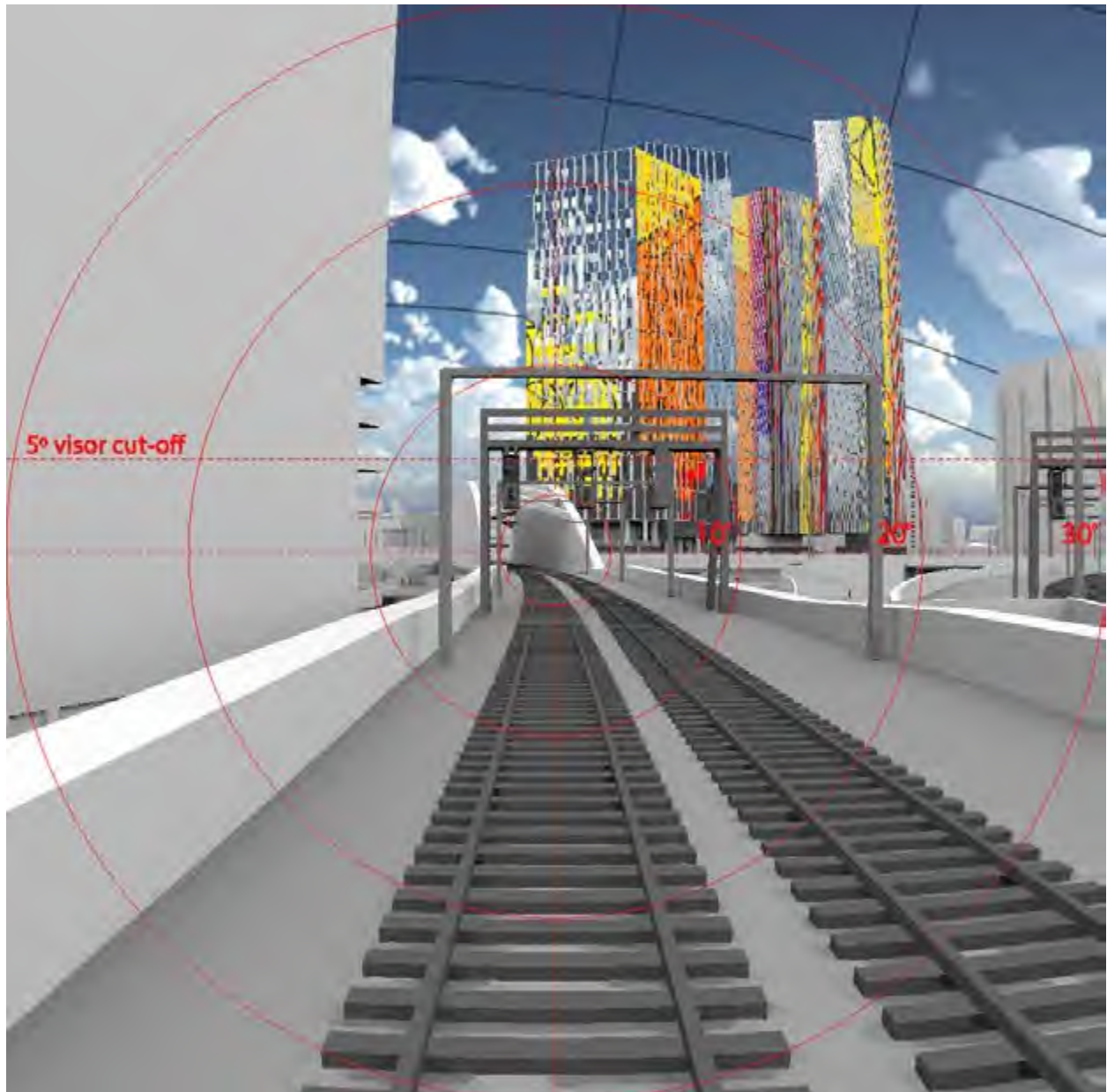


Fig. 645: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAIGHT - APPROX 30M FROM SIGNAL

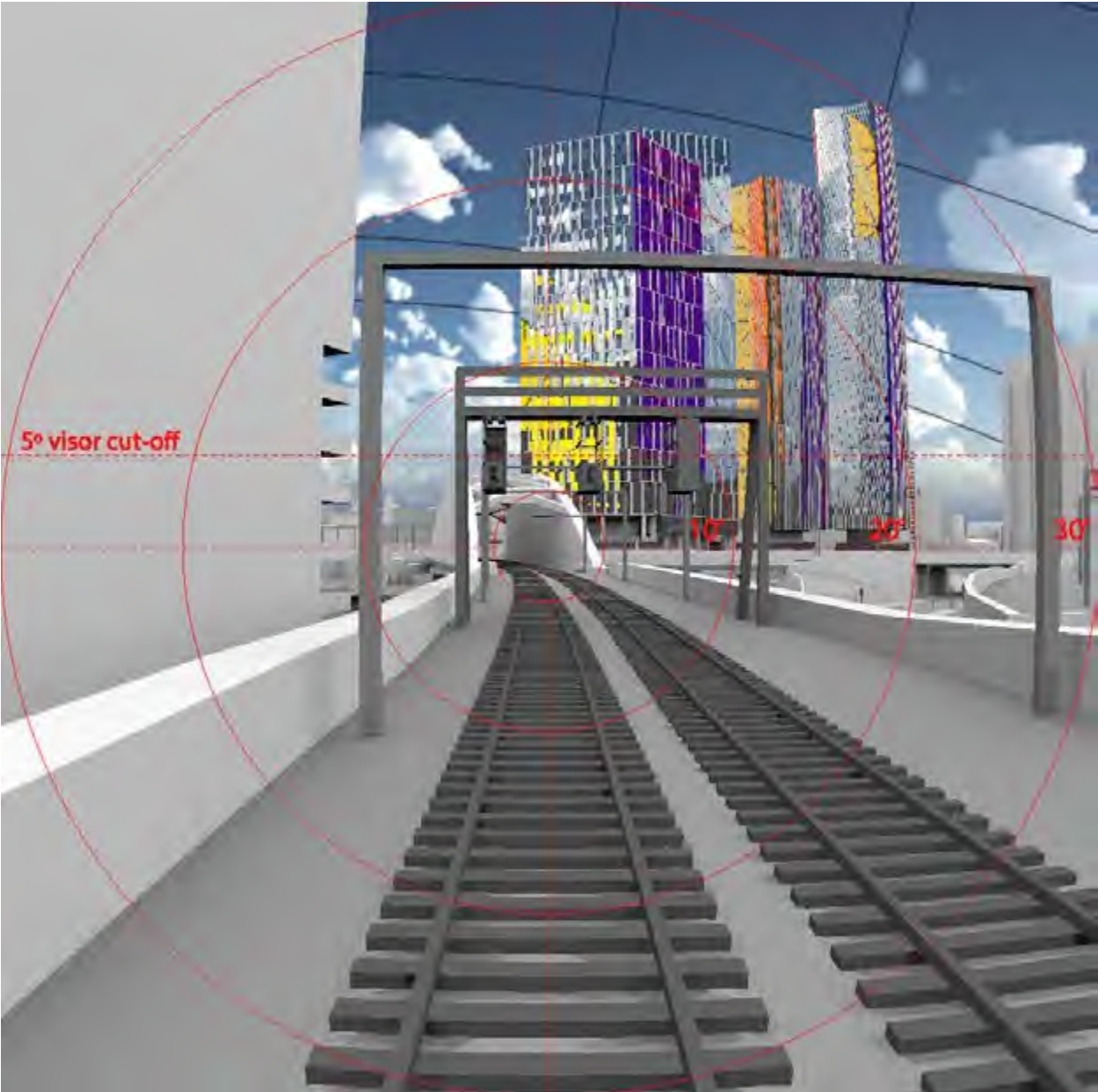


Fig. 646: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-160 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

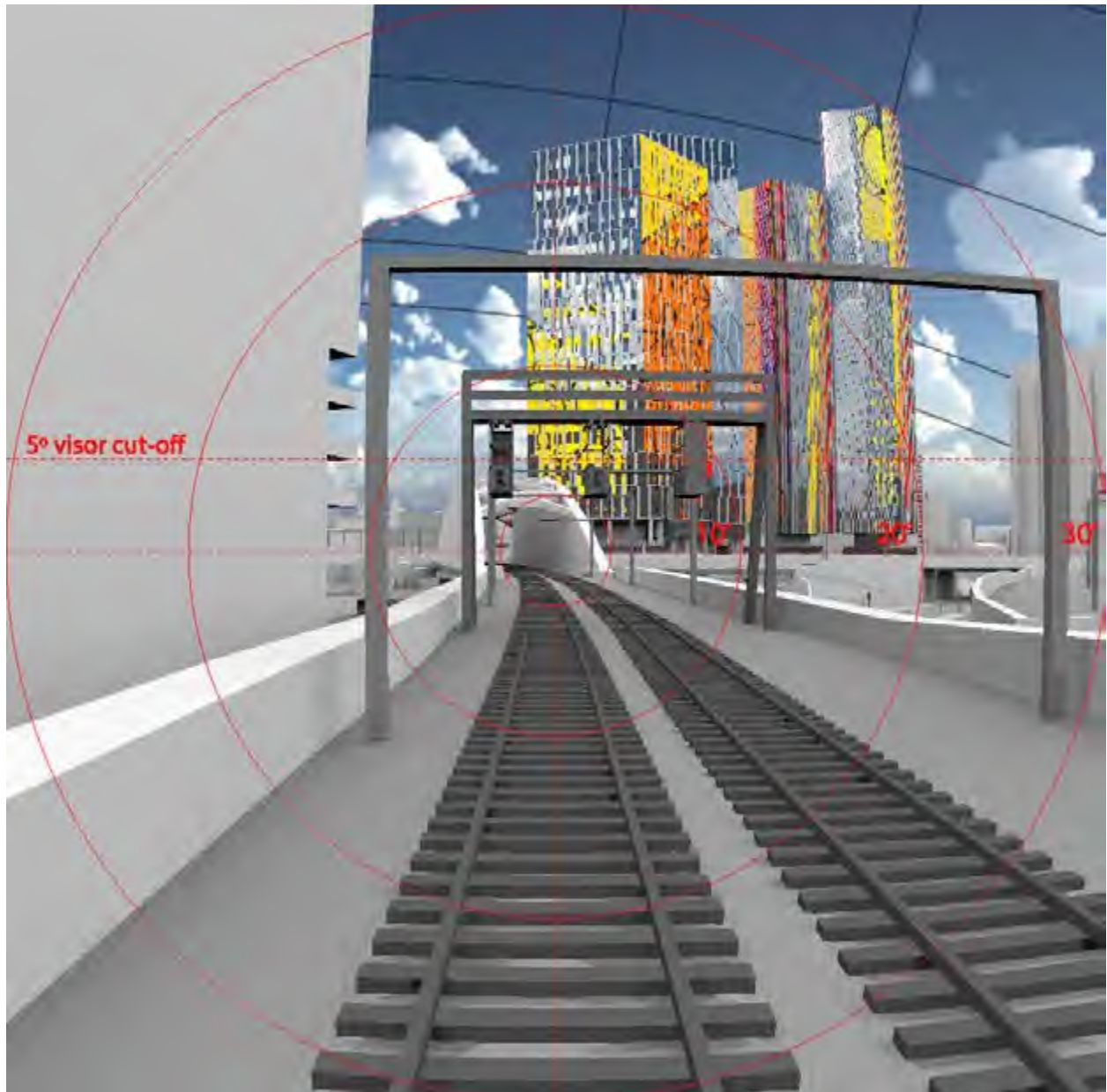


Fig. 647: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

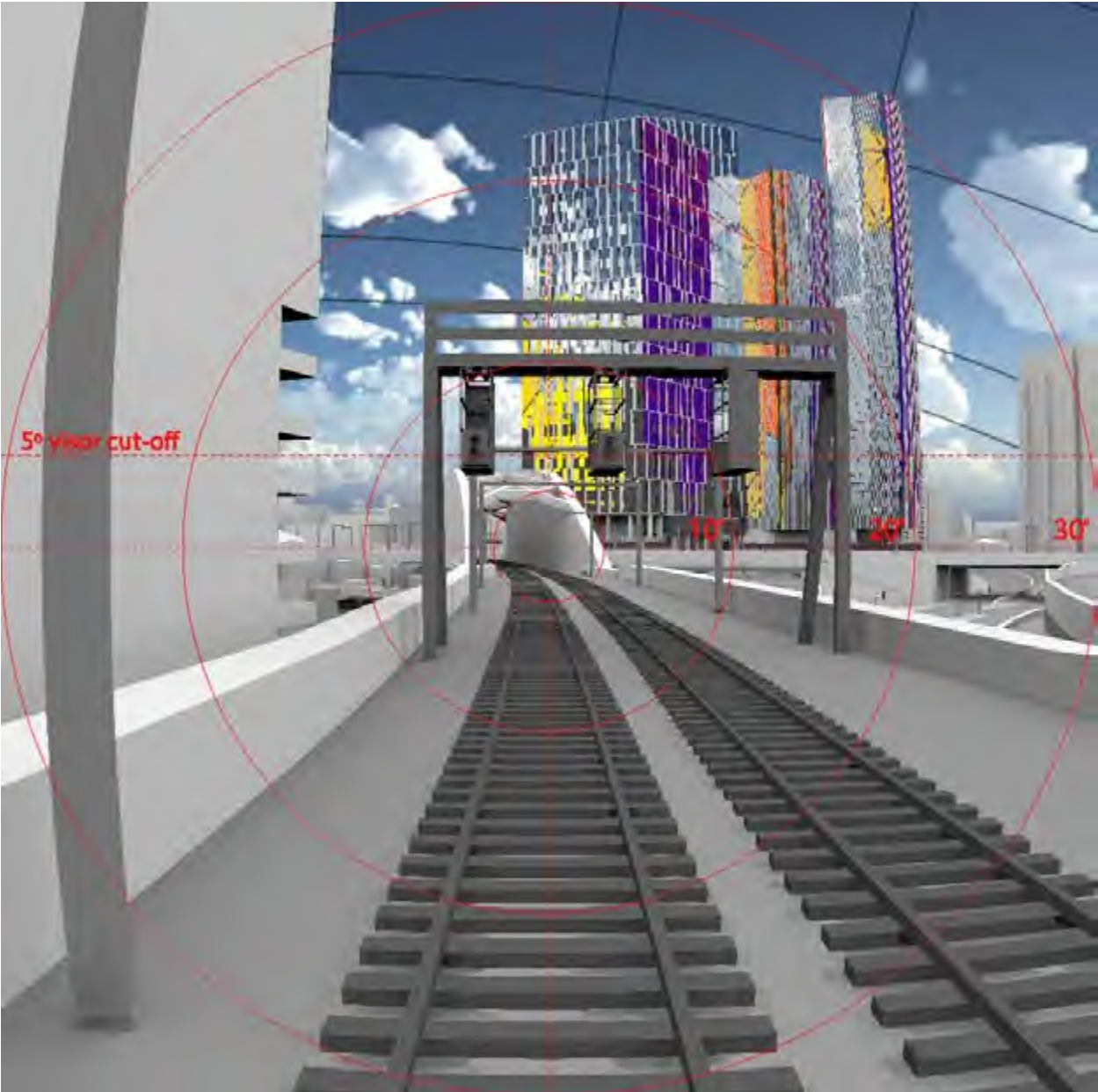


Fig. 648: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-170 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

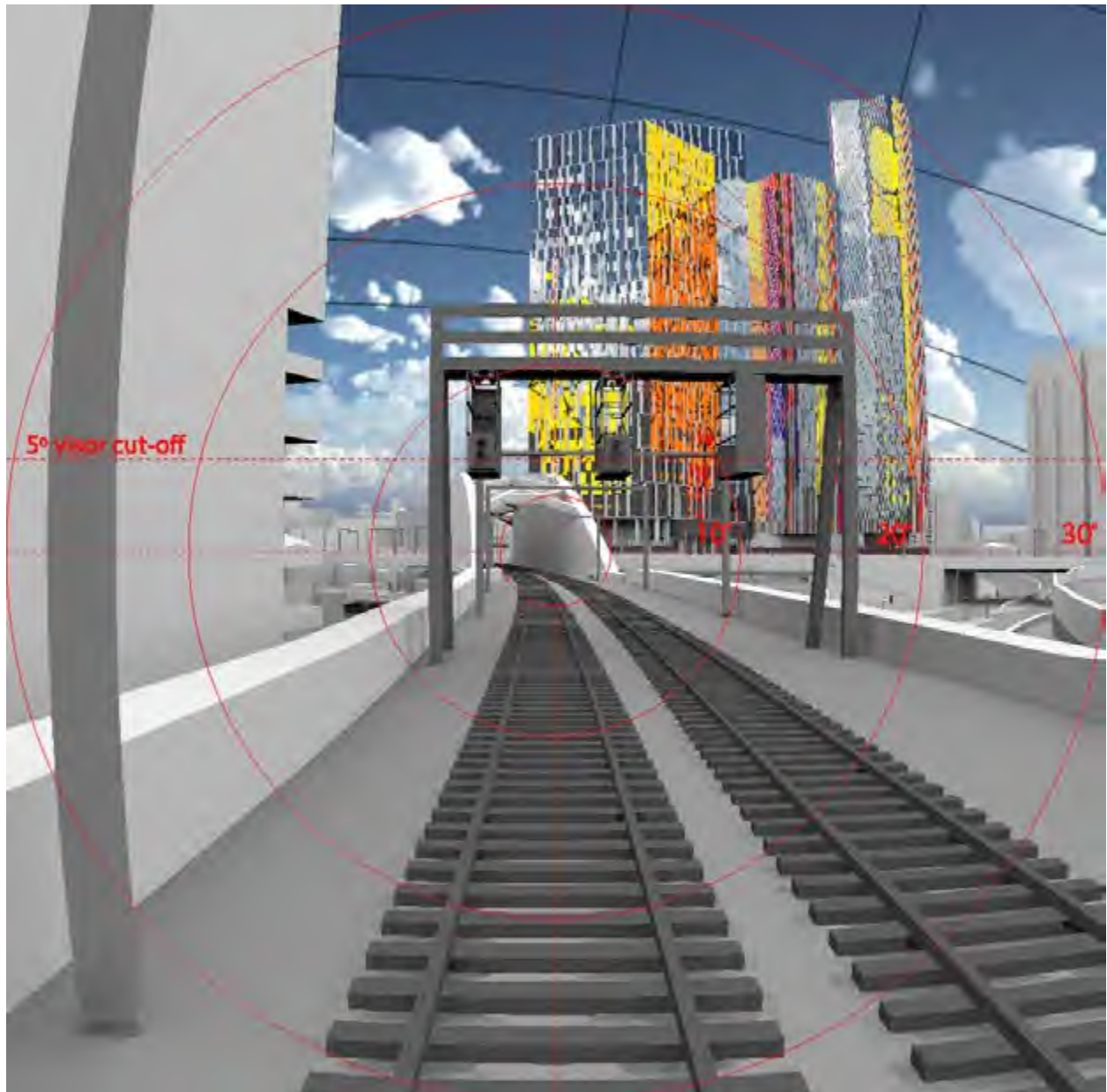


Fig. 649: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

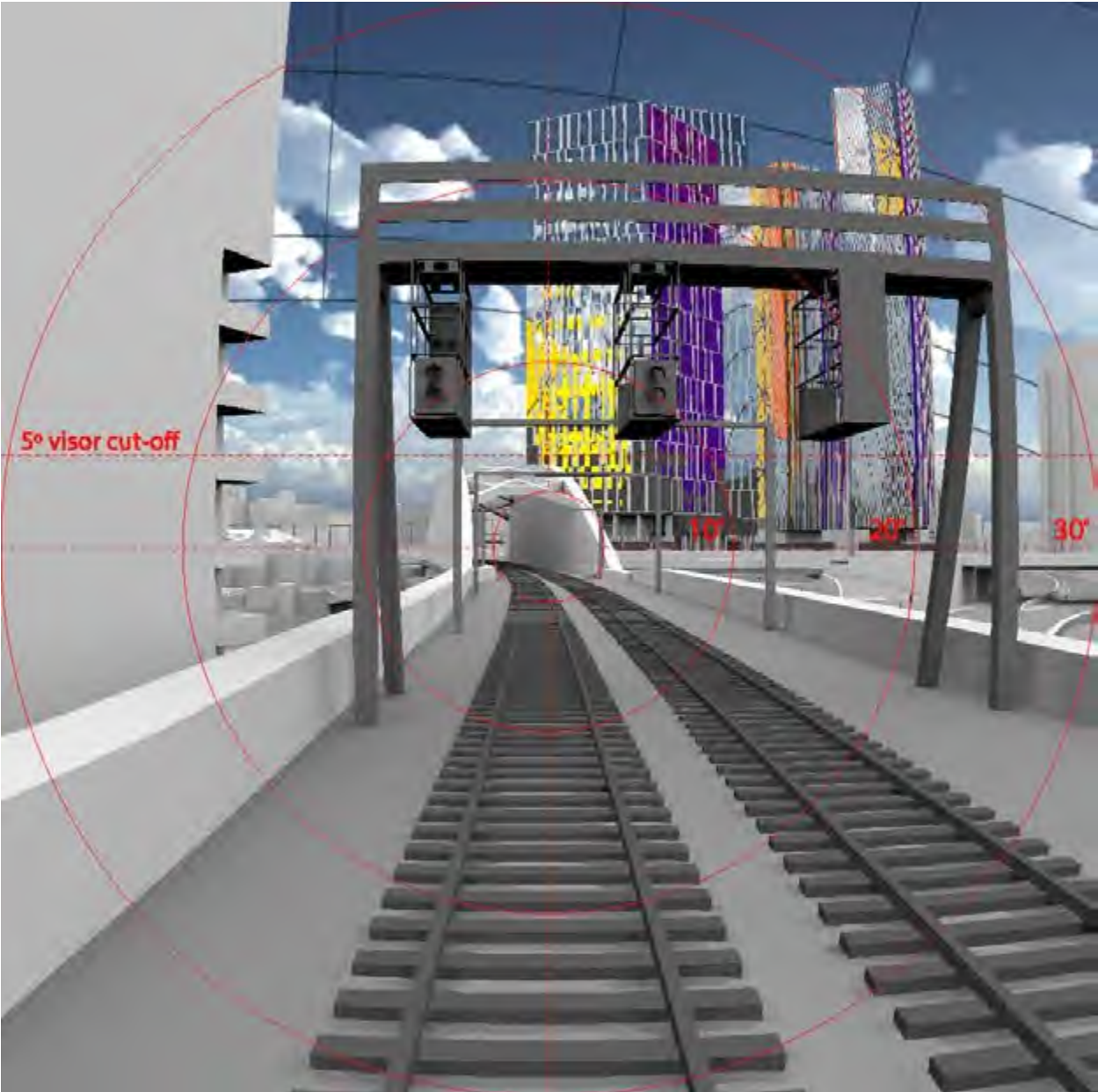


Fig. 650: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-180 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

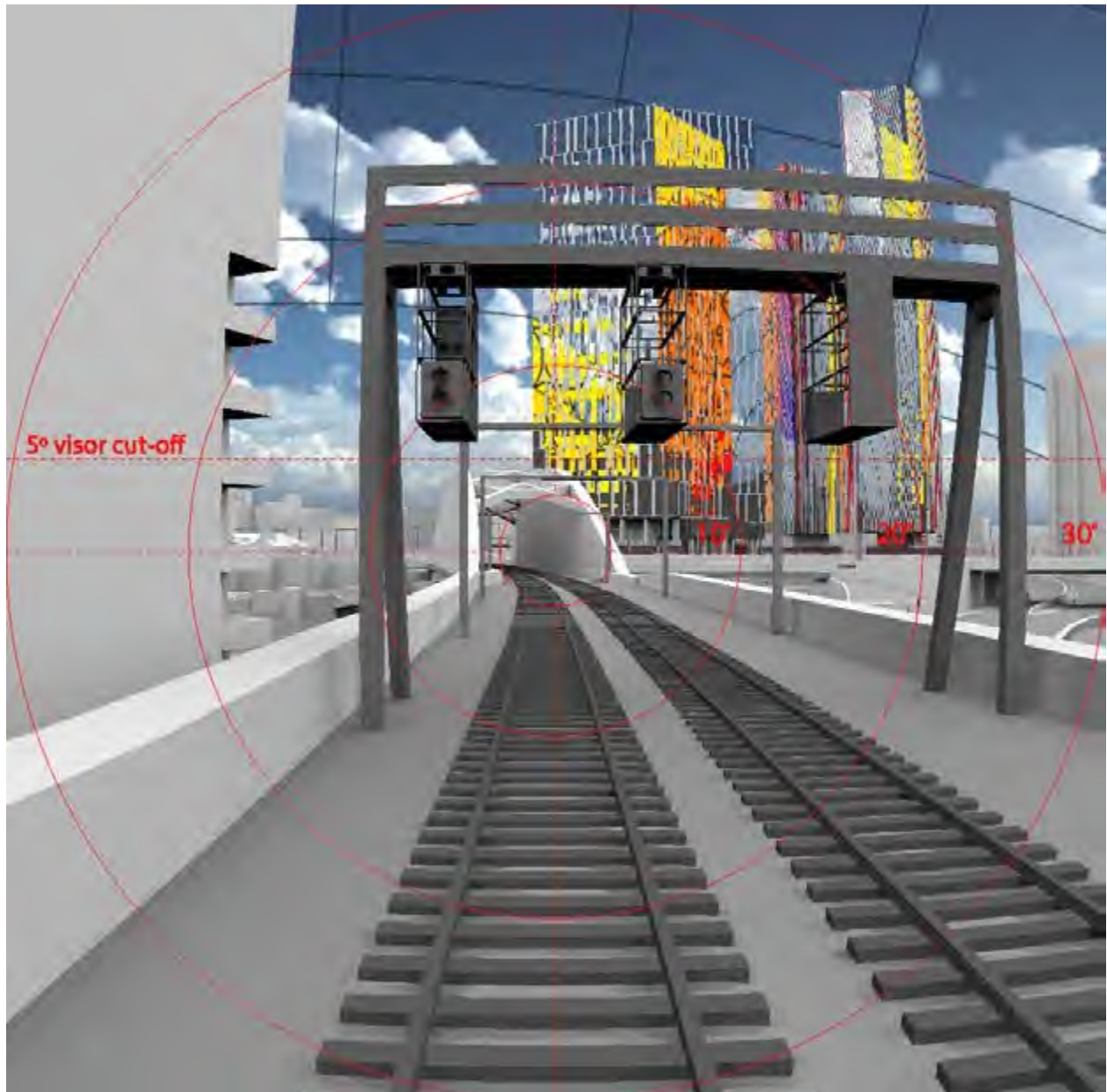


Fig. 651: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAGHT

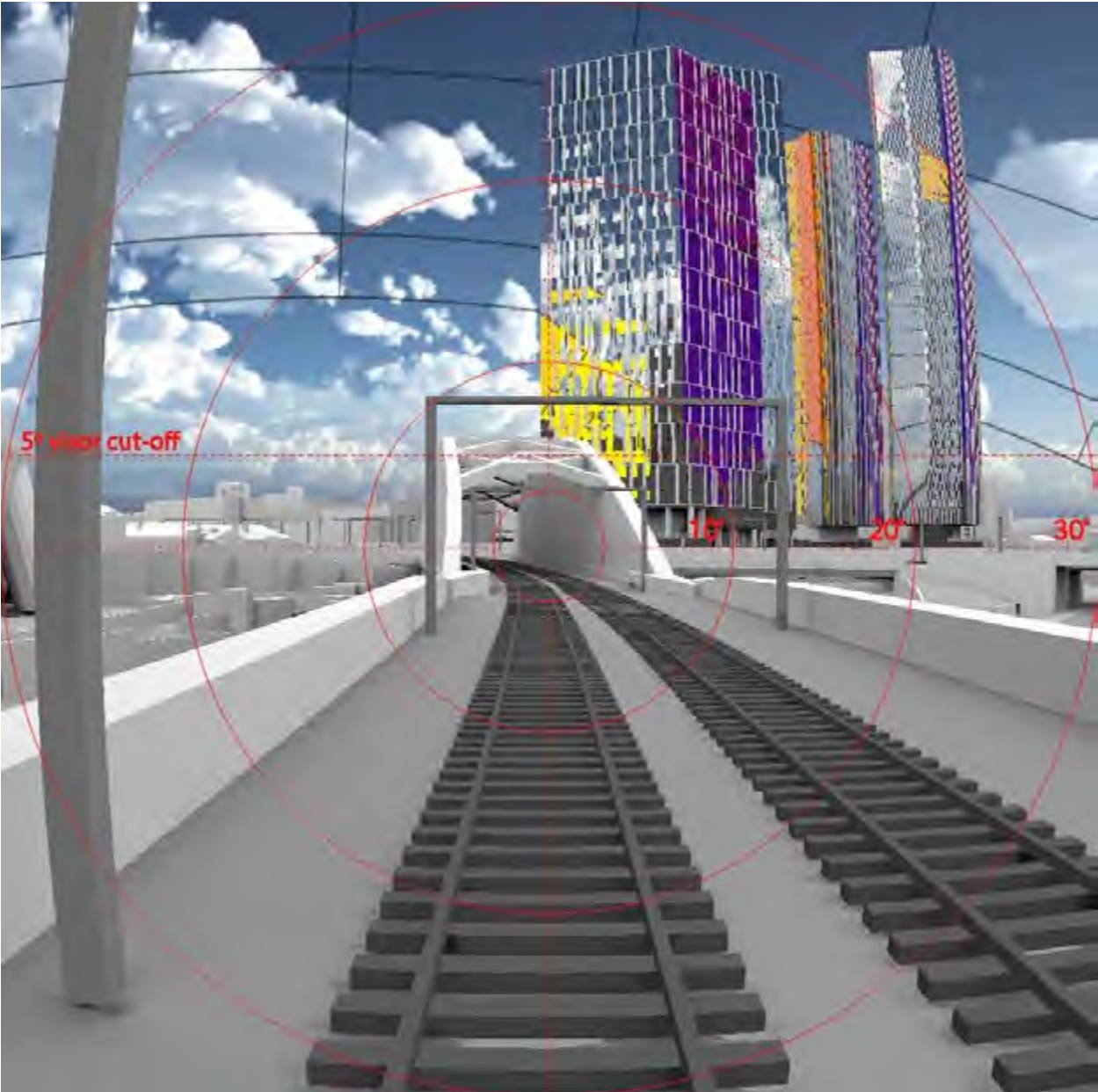


Fig. 652: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-210 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 300M FROM SITE
LOOKING STRAGHT**

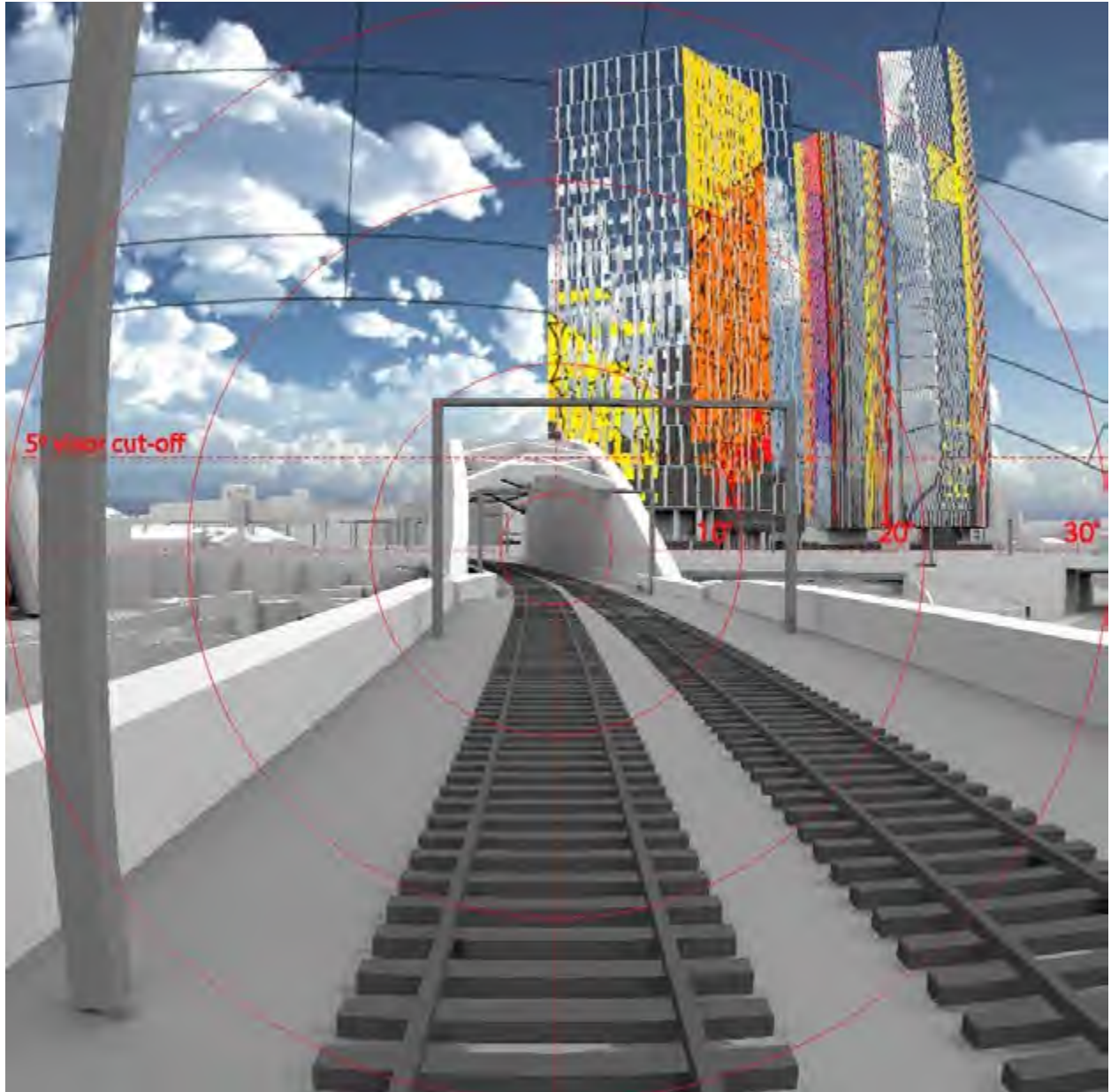


Fig. 653: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT

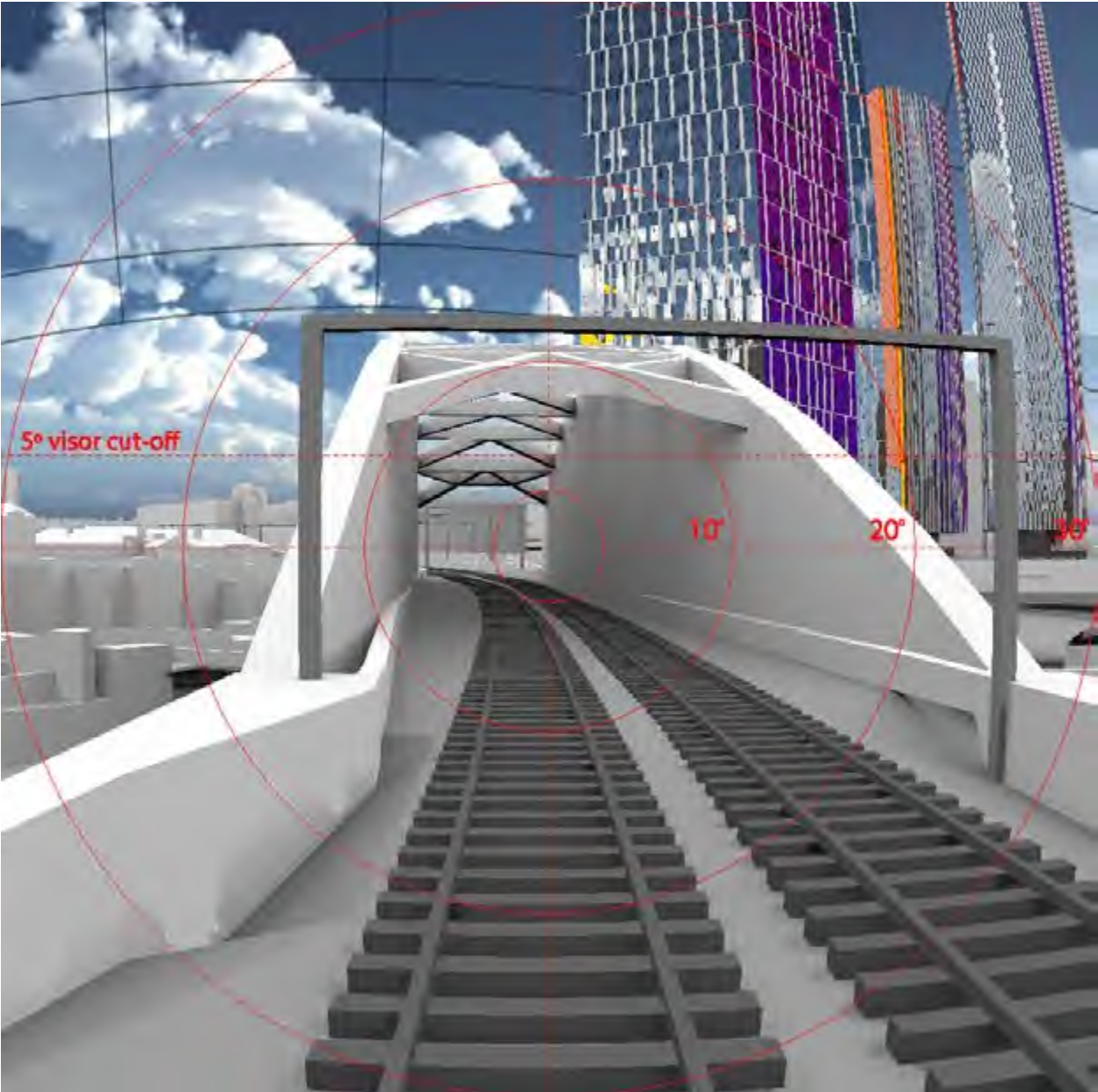


Fig. 654: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-260 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 250M FROM SITE
LOOKING STRAGHT**

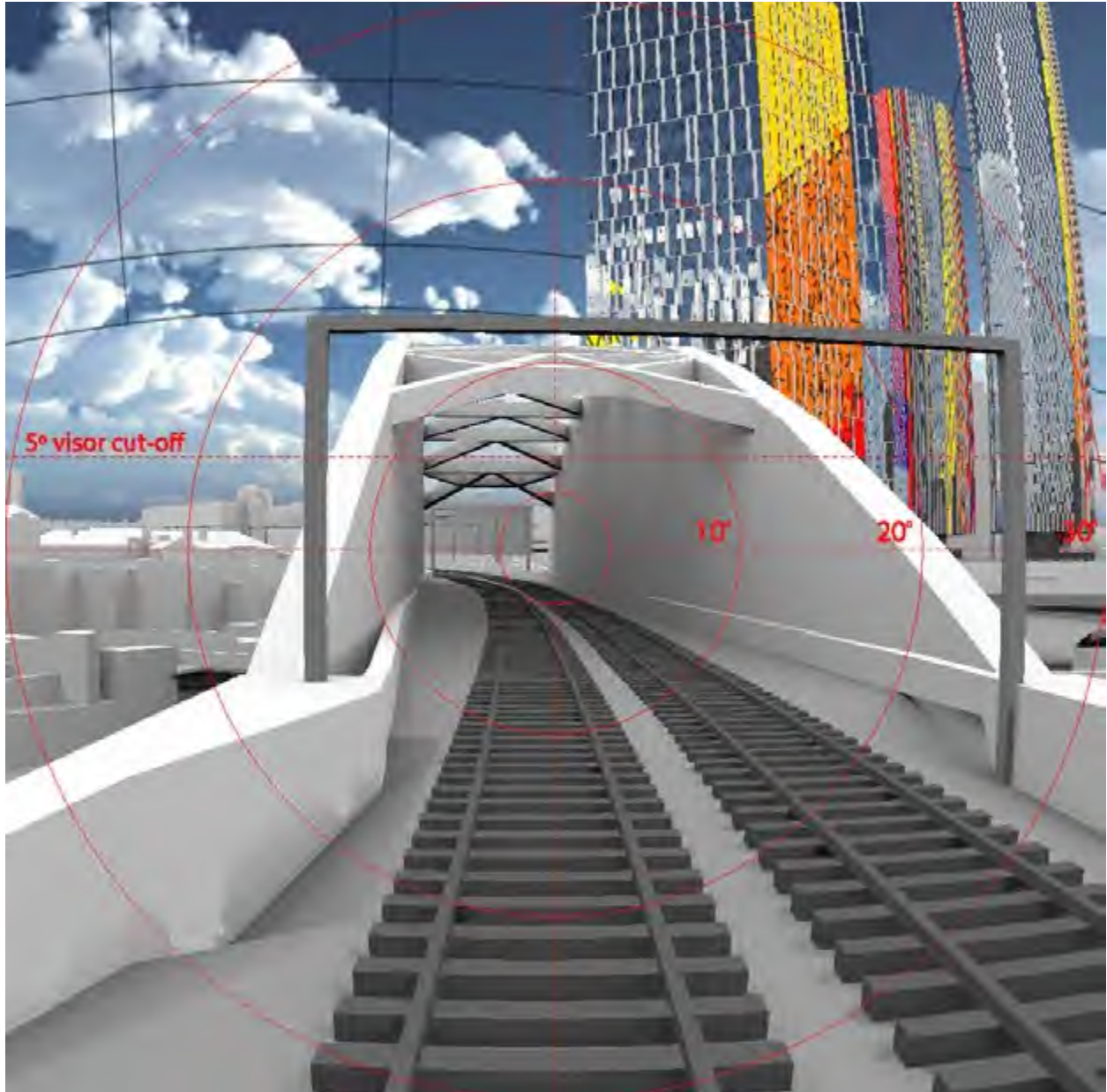


Fig. 655: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT

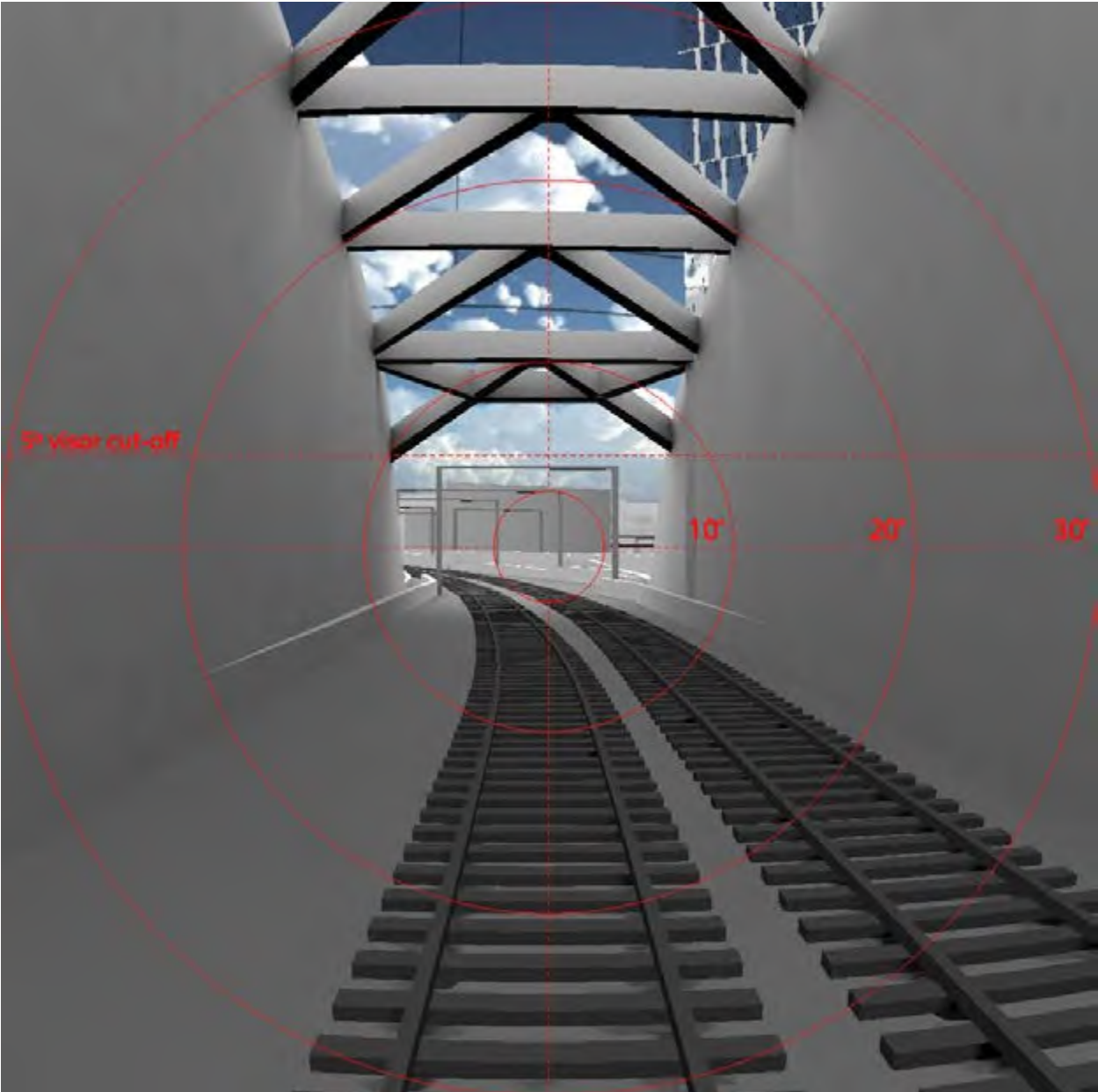


Fig. 656: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-310 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 200M FROM SITE
LOOKING STRAGHT**

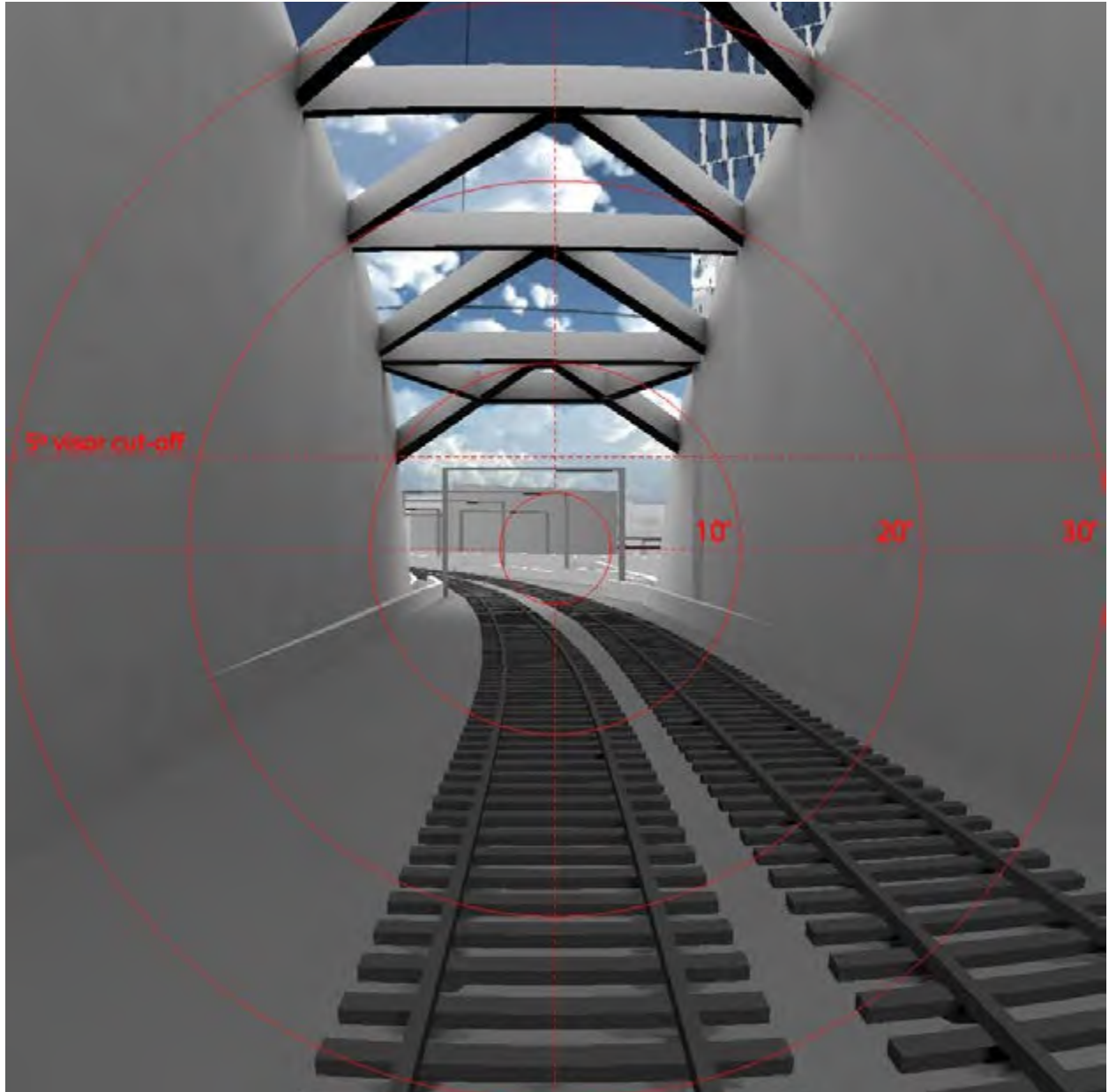


Fig. 657: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT

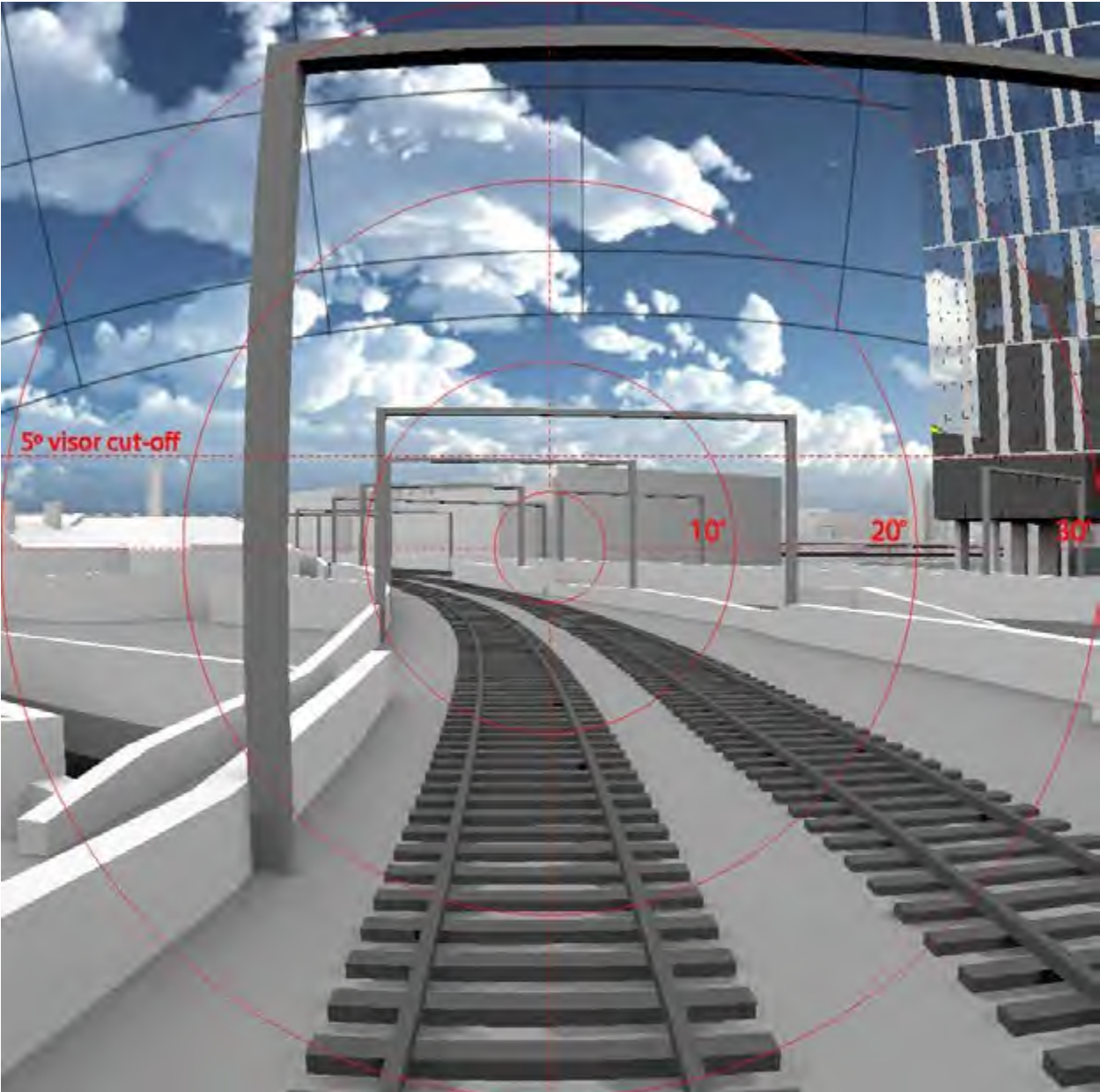


Fig. 658: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N3-360 - NORTHERN LINE SOUTHBOUND TRACK 3 - APPROX 150M FROM SITE
LOOKING STRAGHT**

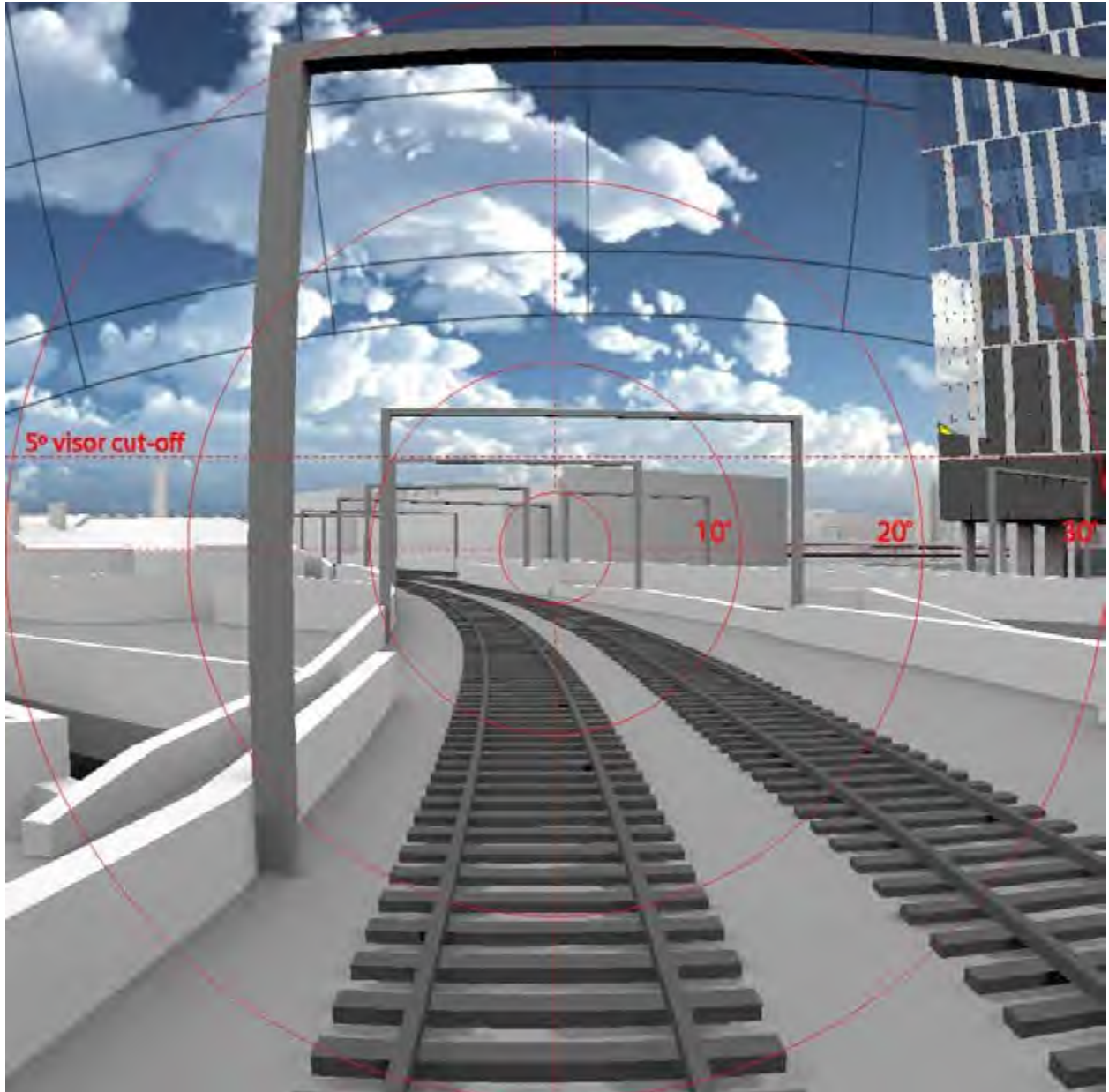


Fig. 659: Solar reflections



35 **SOLAR GLARE ASSESSMENT**
N4 - NORTHERN LINE NORTHBOUND

N4 - Nothern Line - Northbound from Deansgate to Salford Crescent/Eccles

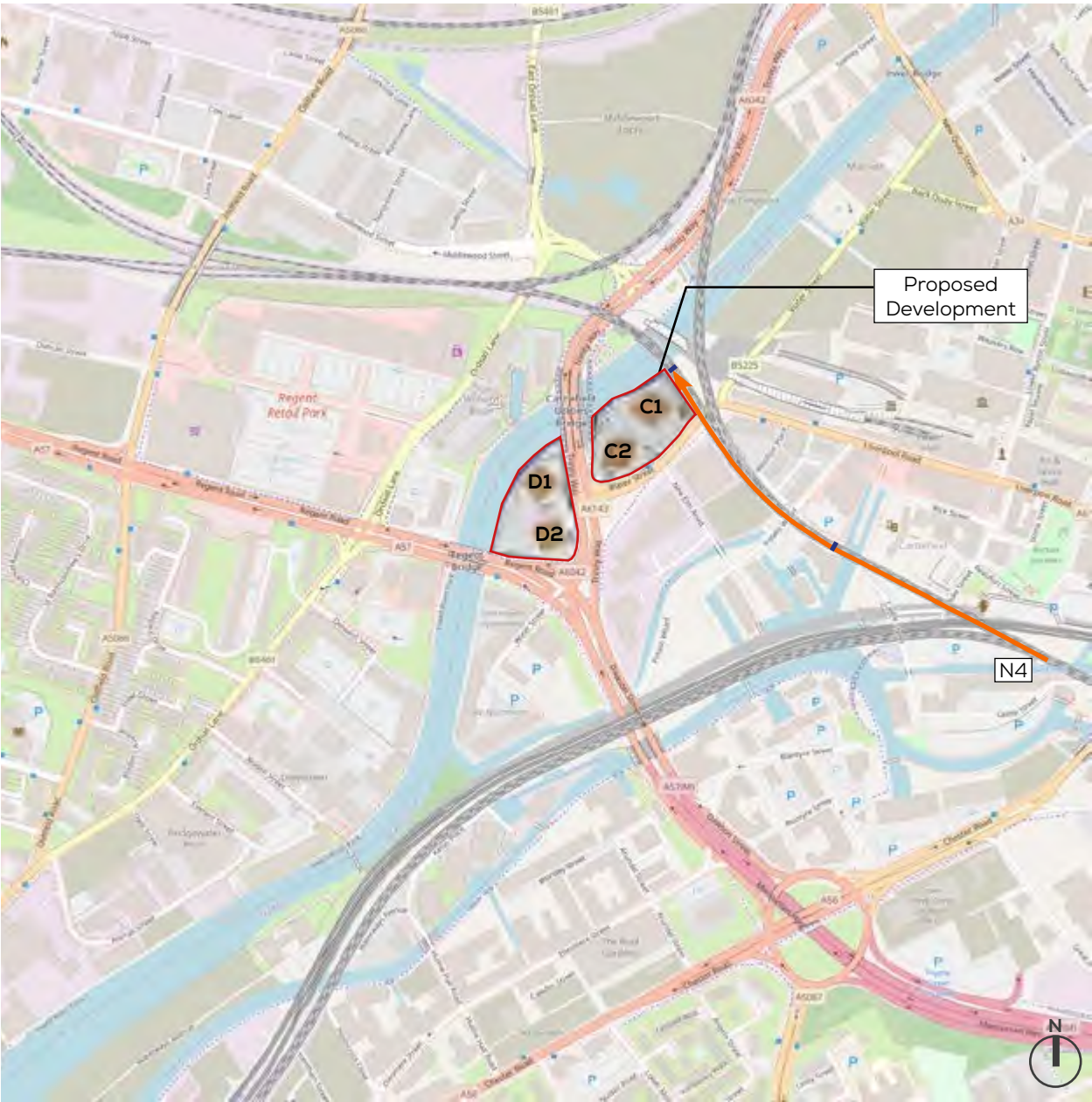


Fig. 660: Junction Location

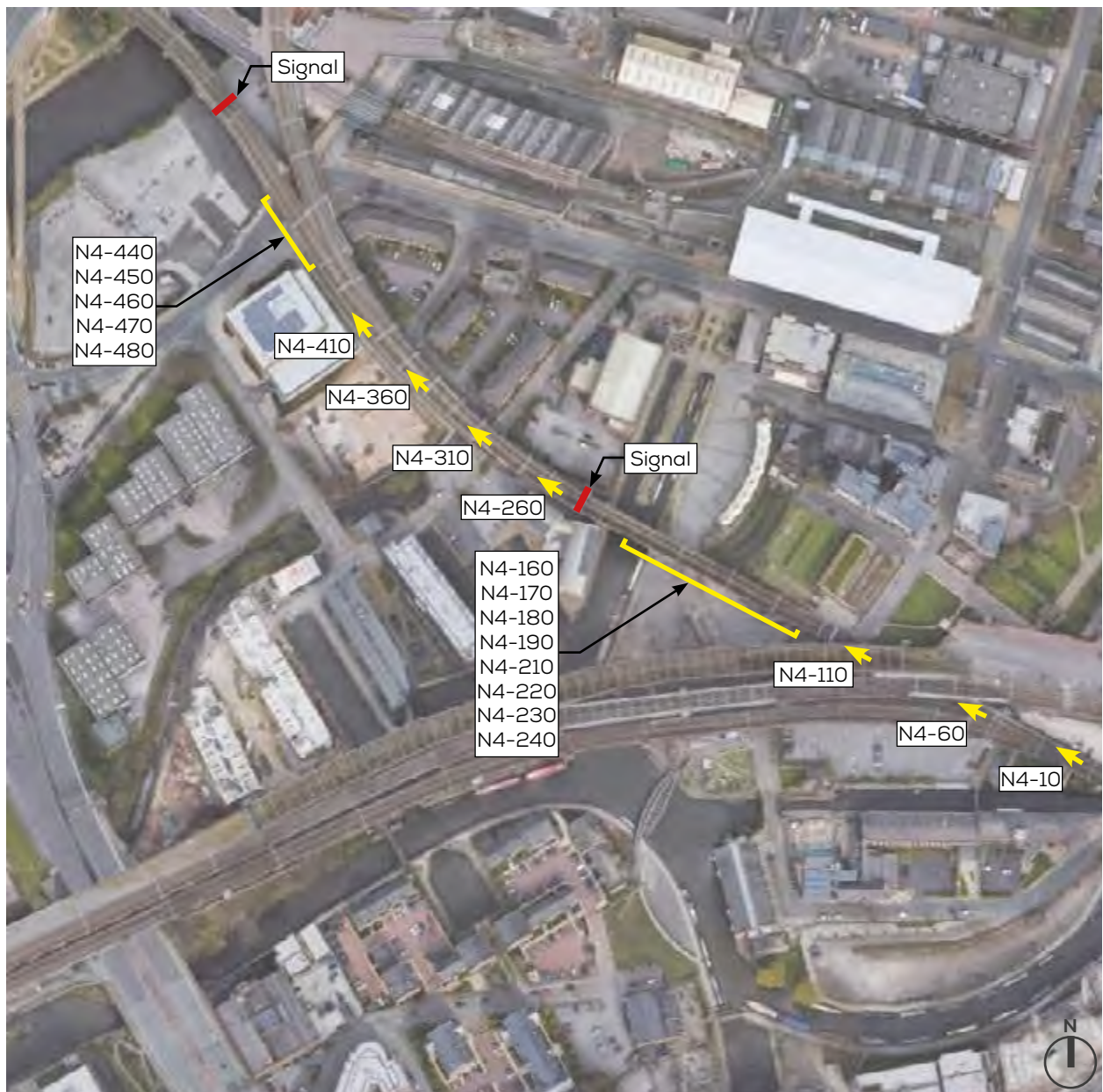


Fig. 661: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT



Fig. 662: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAIGHT**

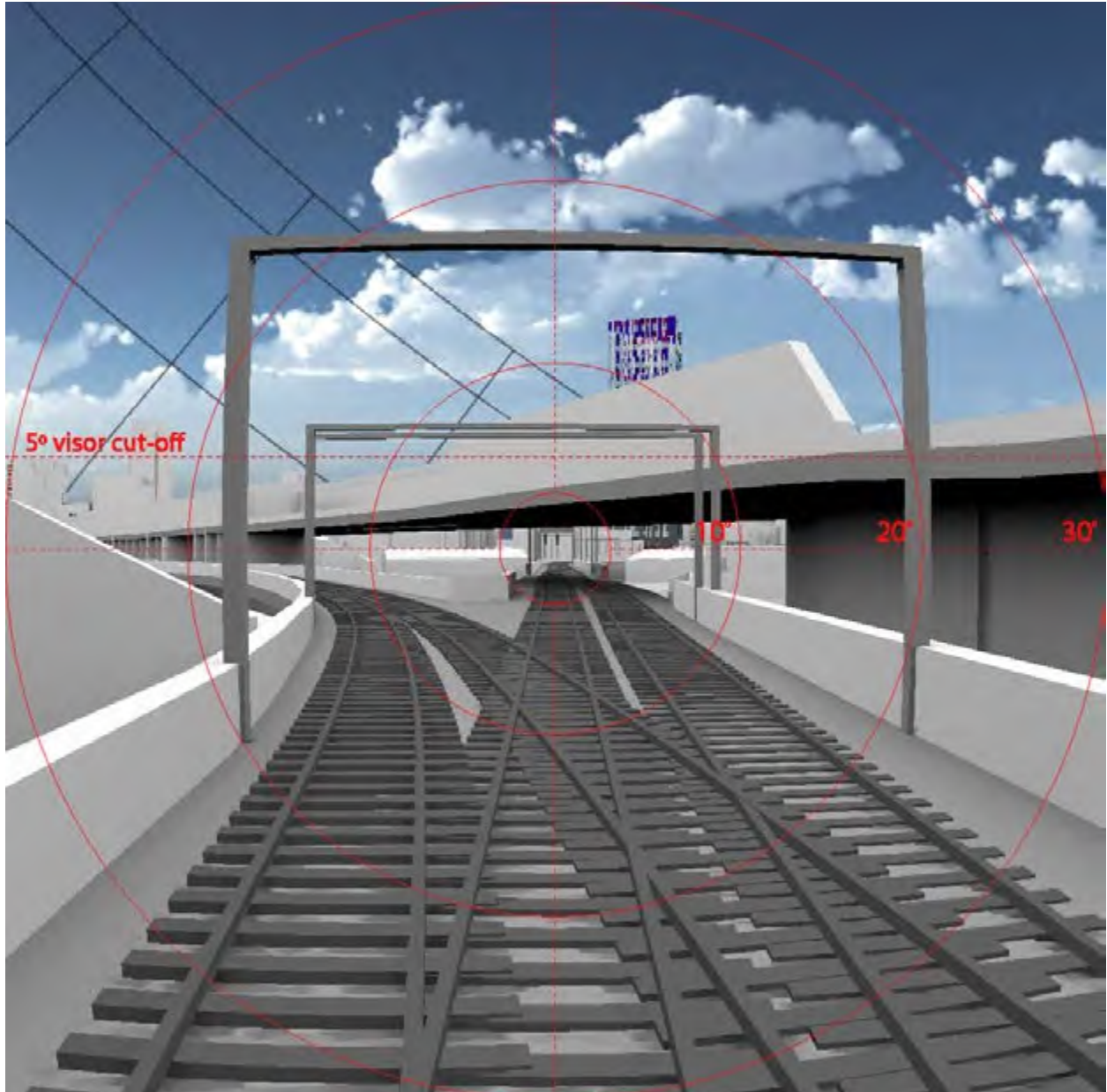


Fig. 663: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

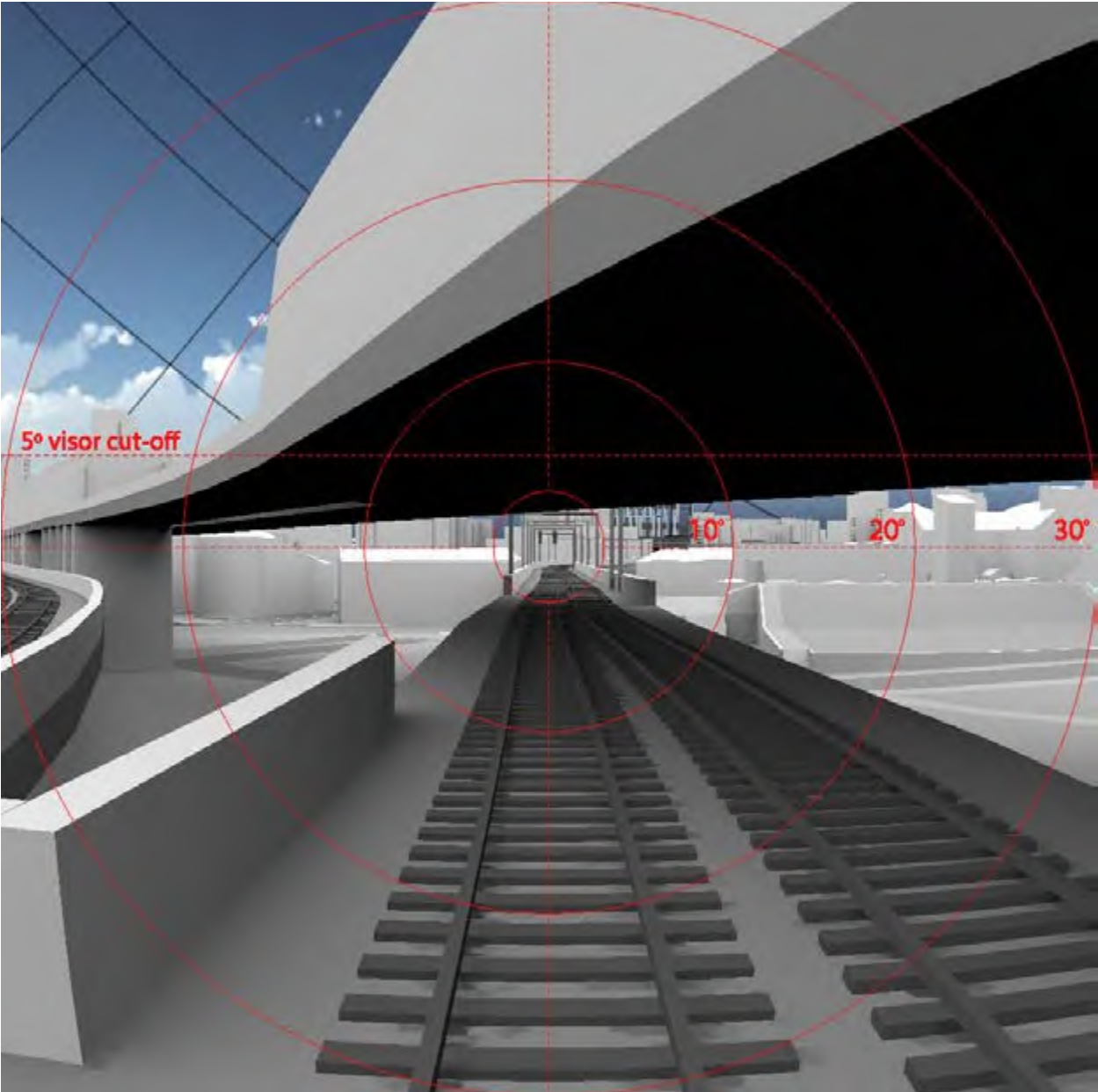


Fig. 664: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT**

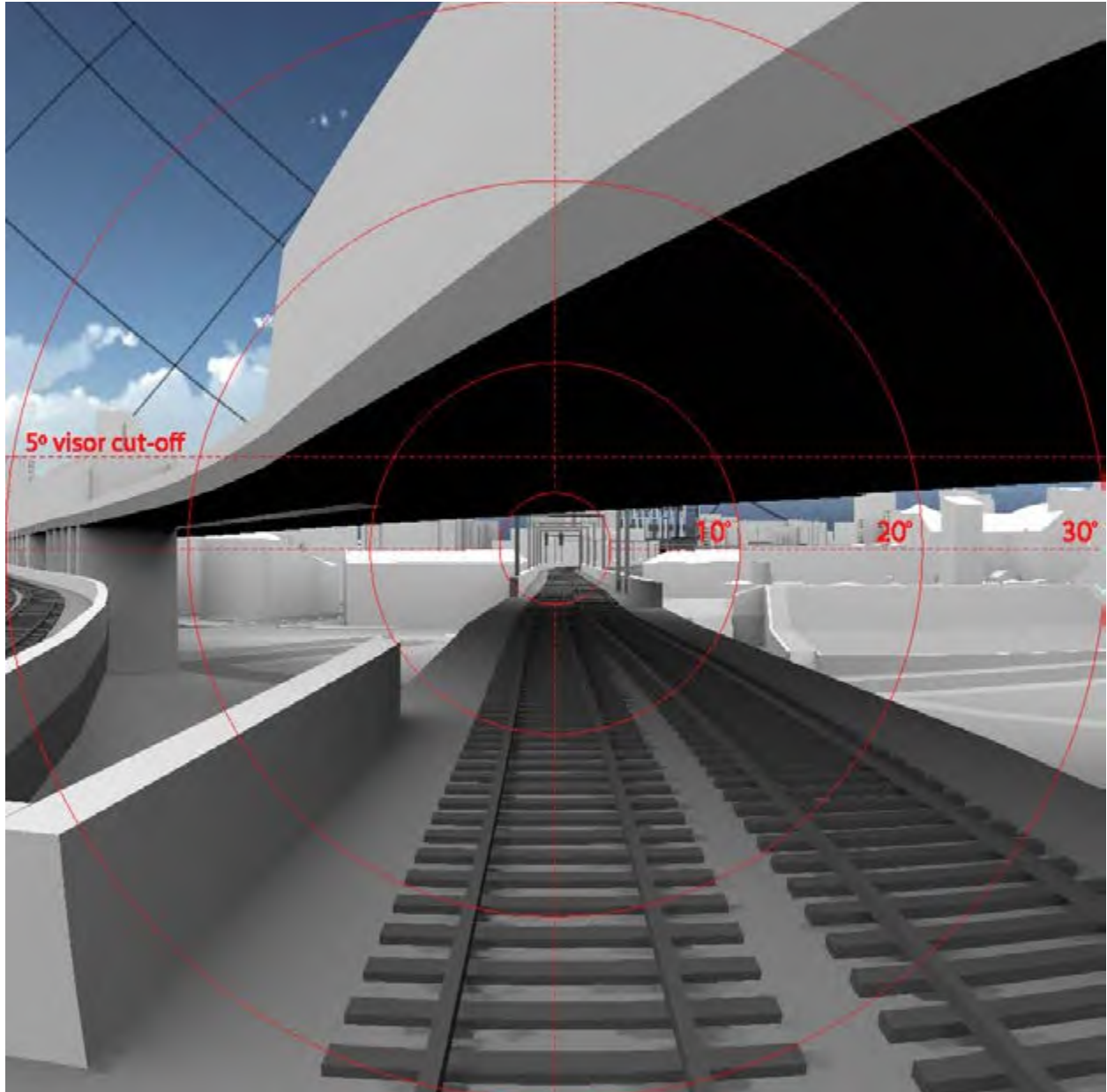


Fig. 665: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAGHT

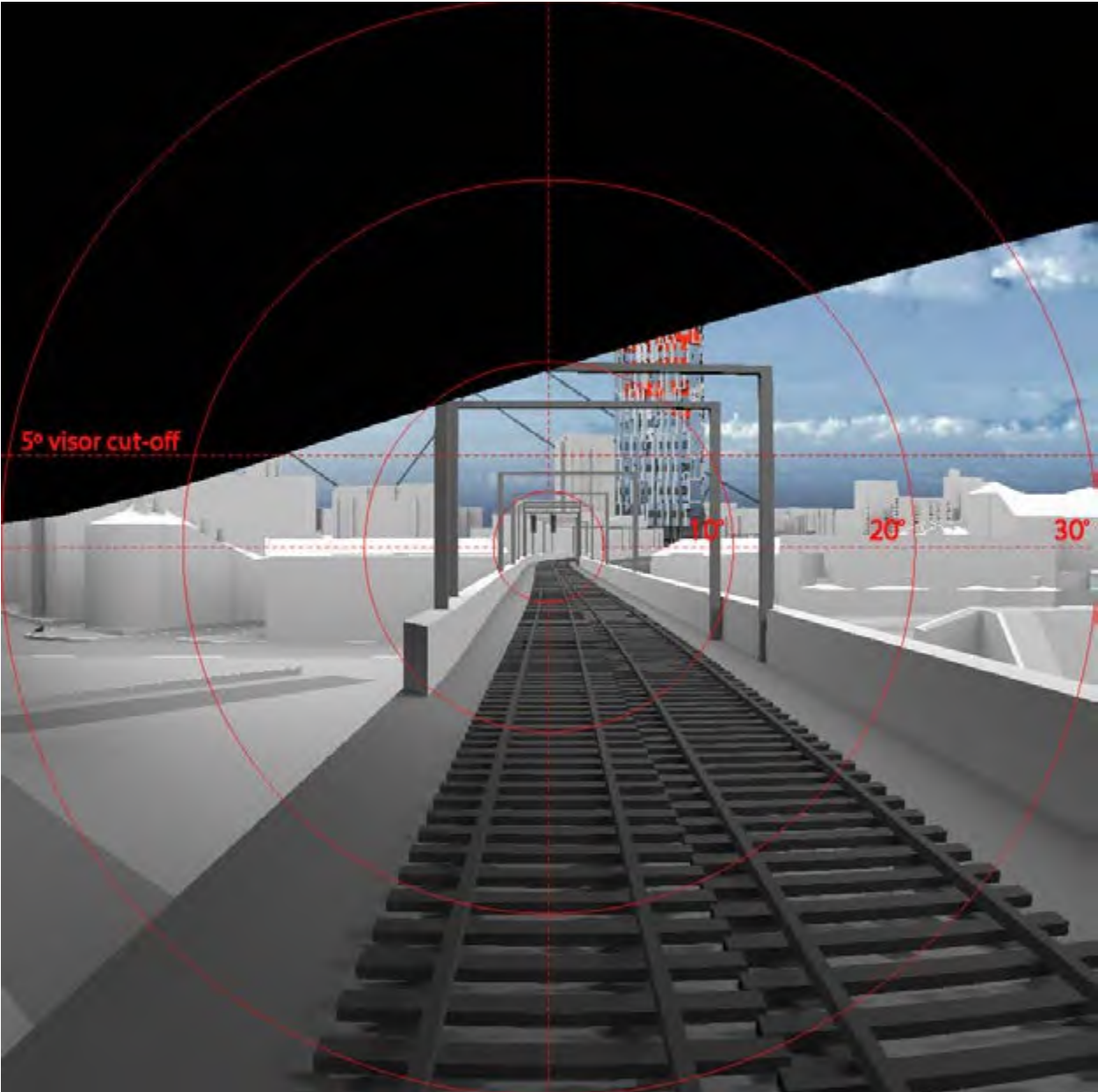


Fig. 666: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAGHT**

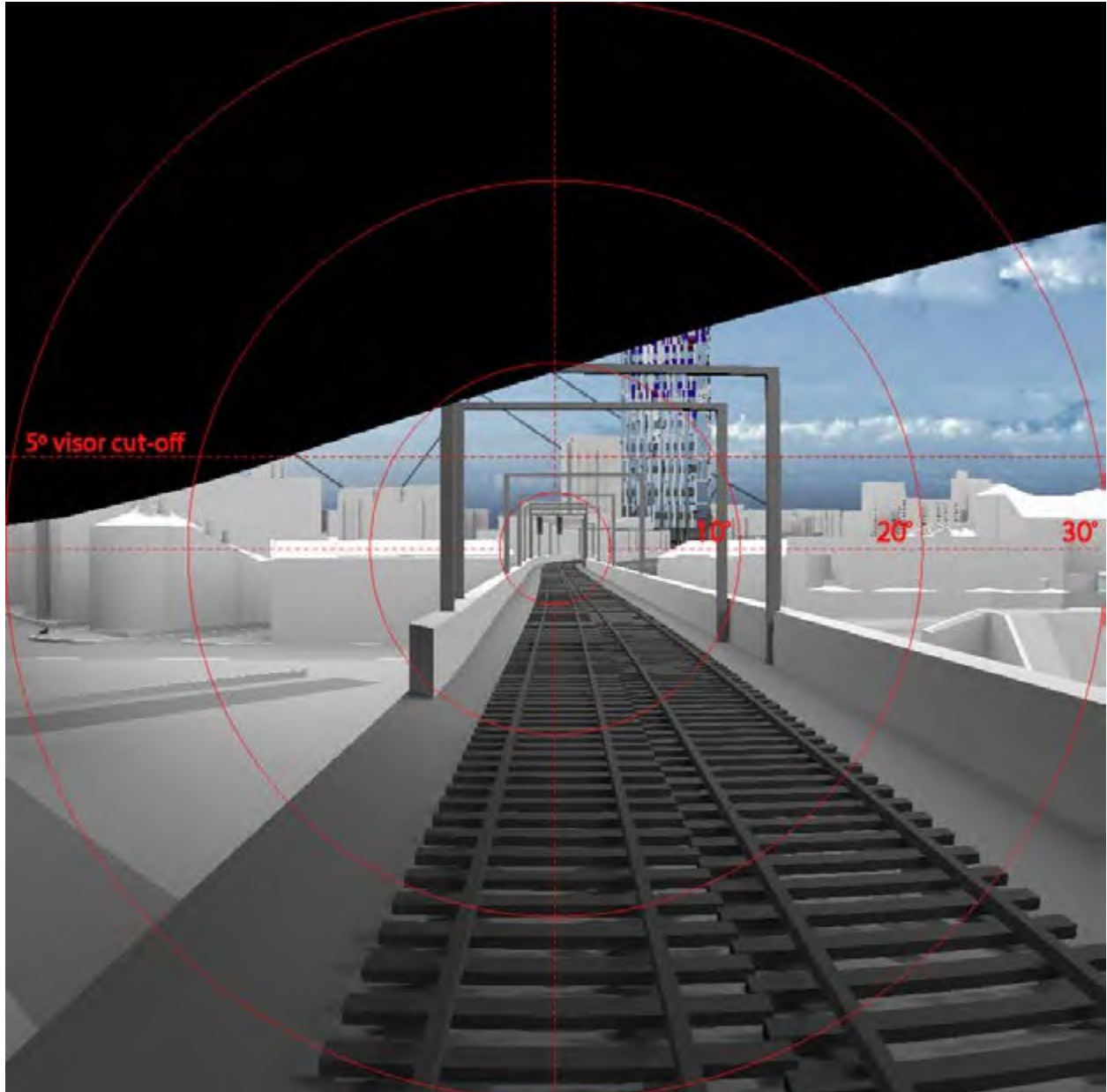


Fig. 667: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

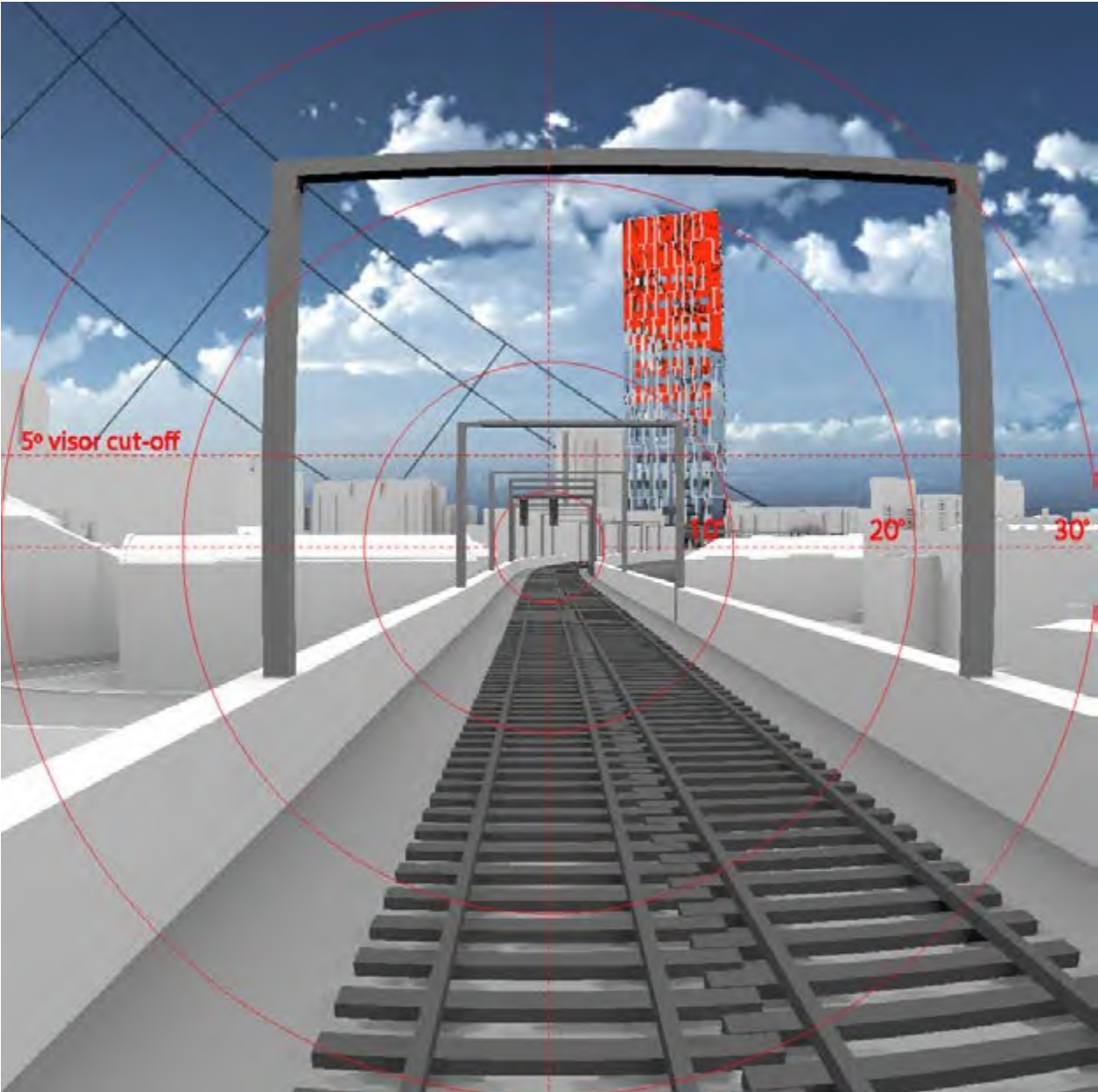


Fig. 668: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

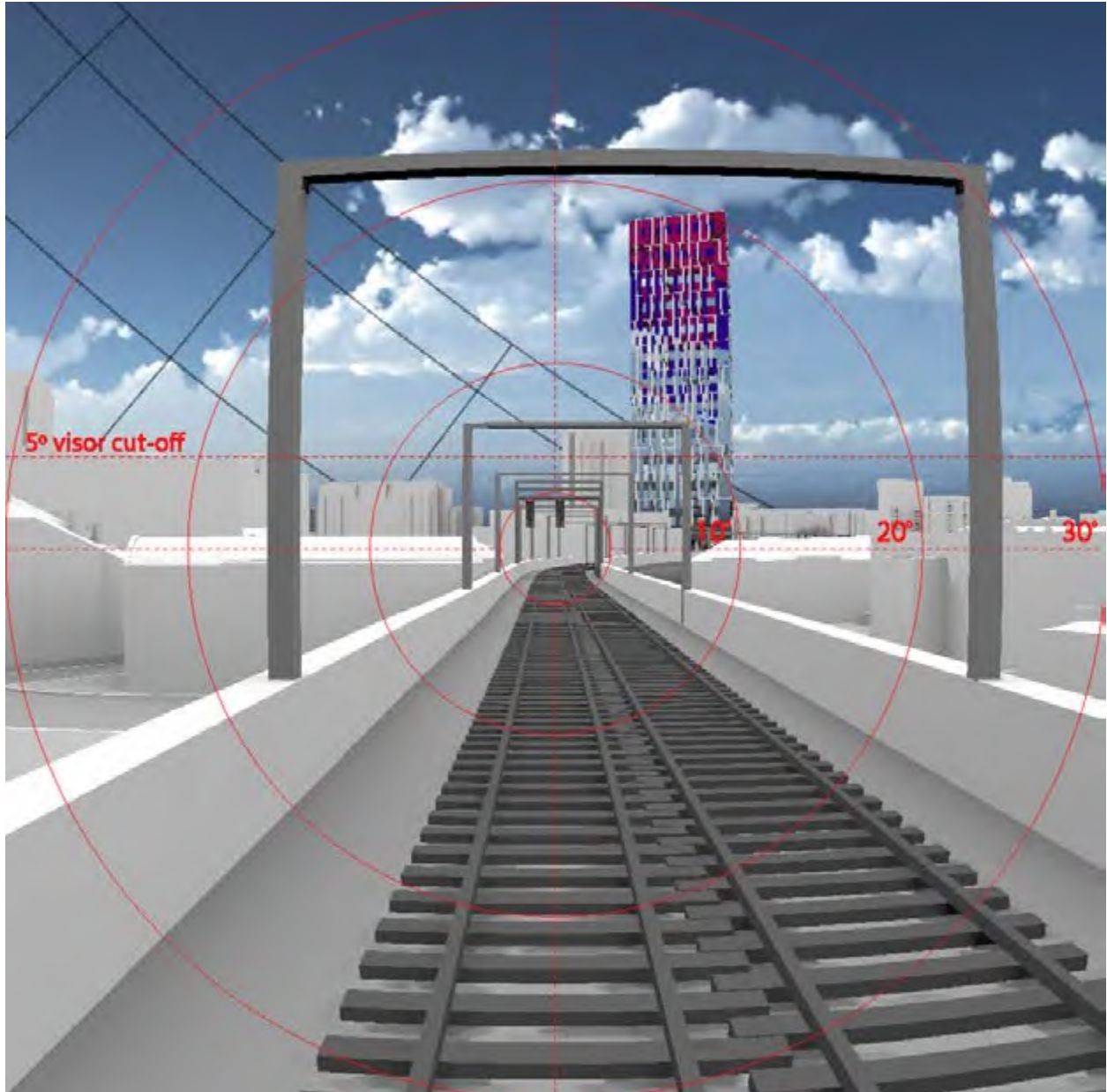


Fig. 669: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

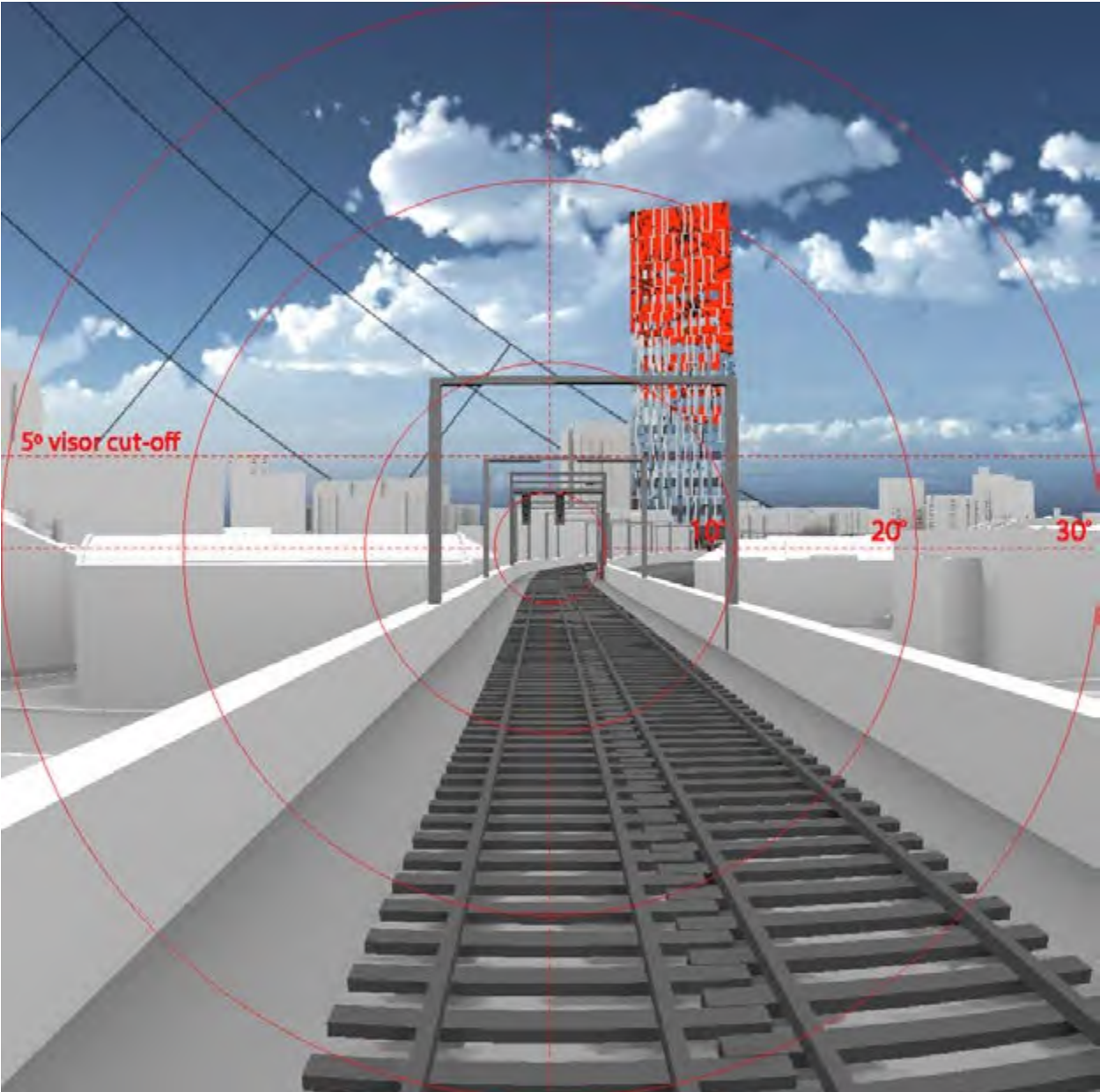


Fig. 670: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

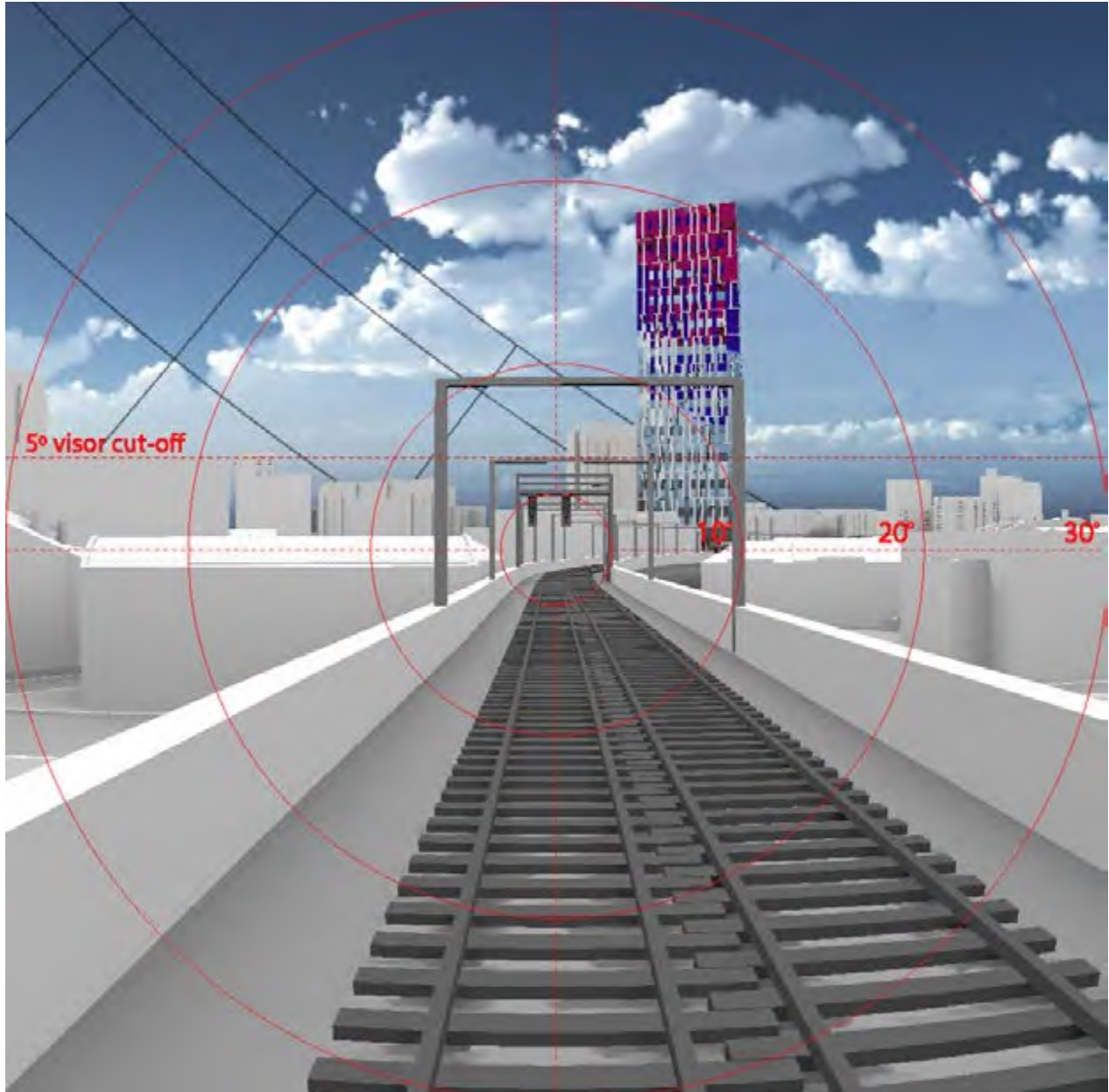


Fig. 671: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

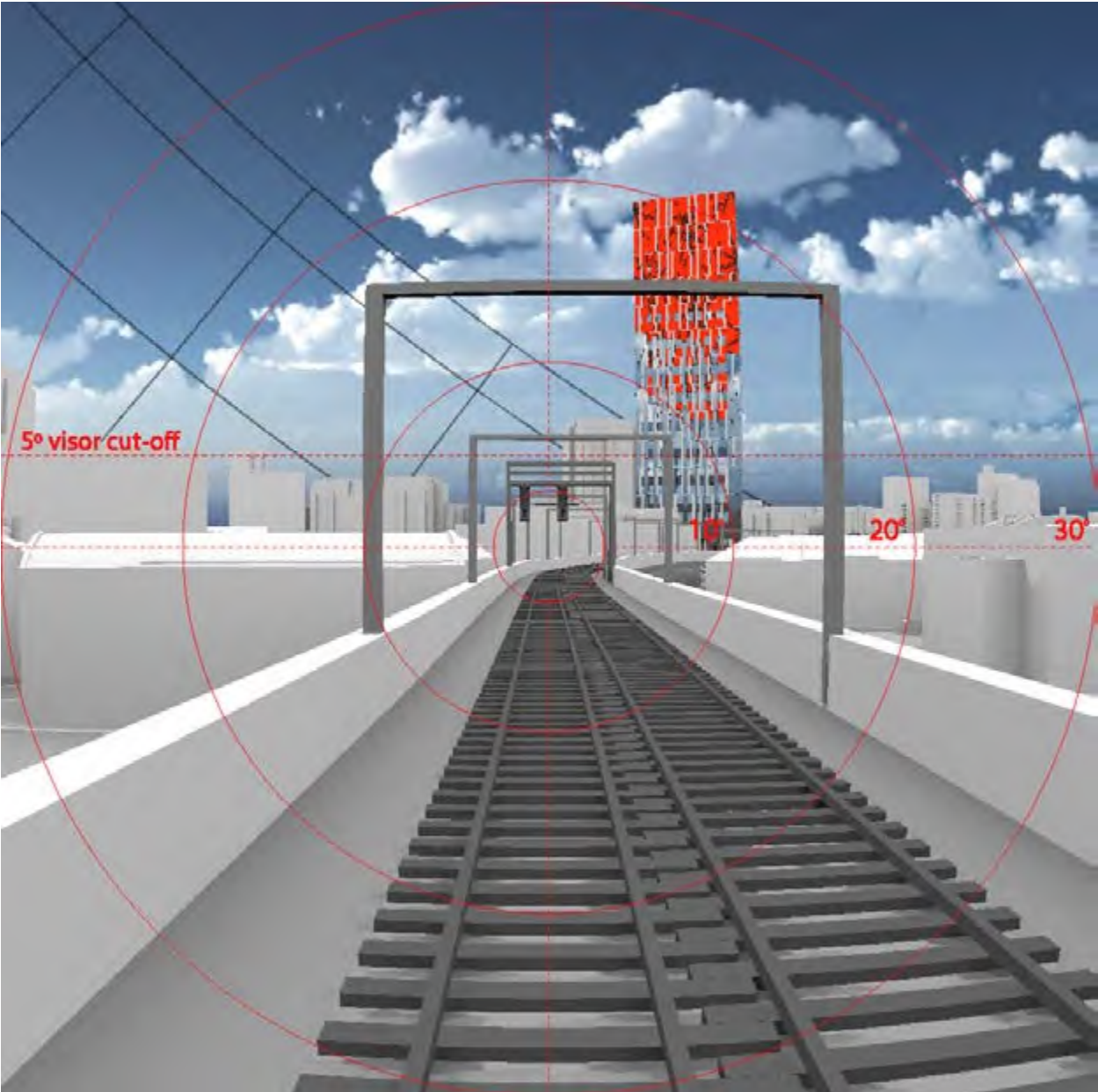


Fig. 672: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

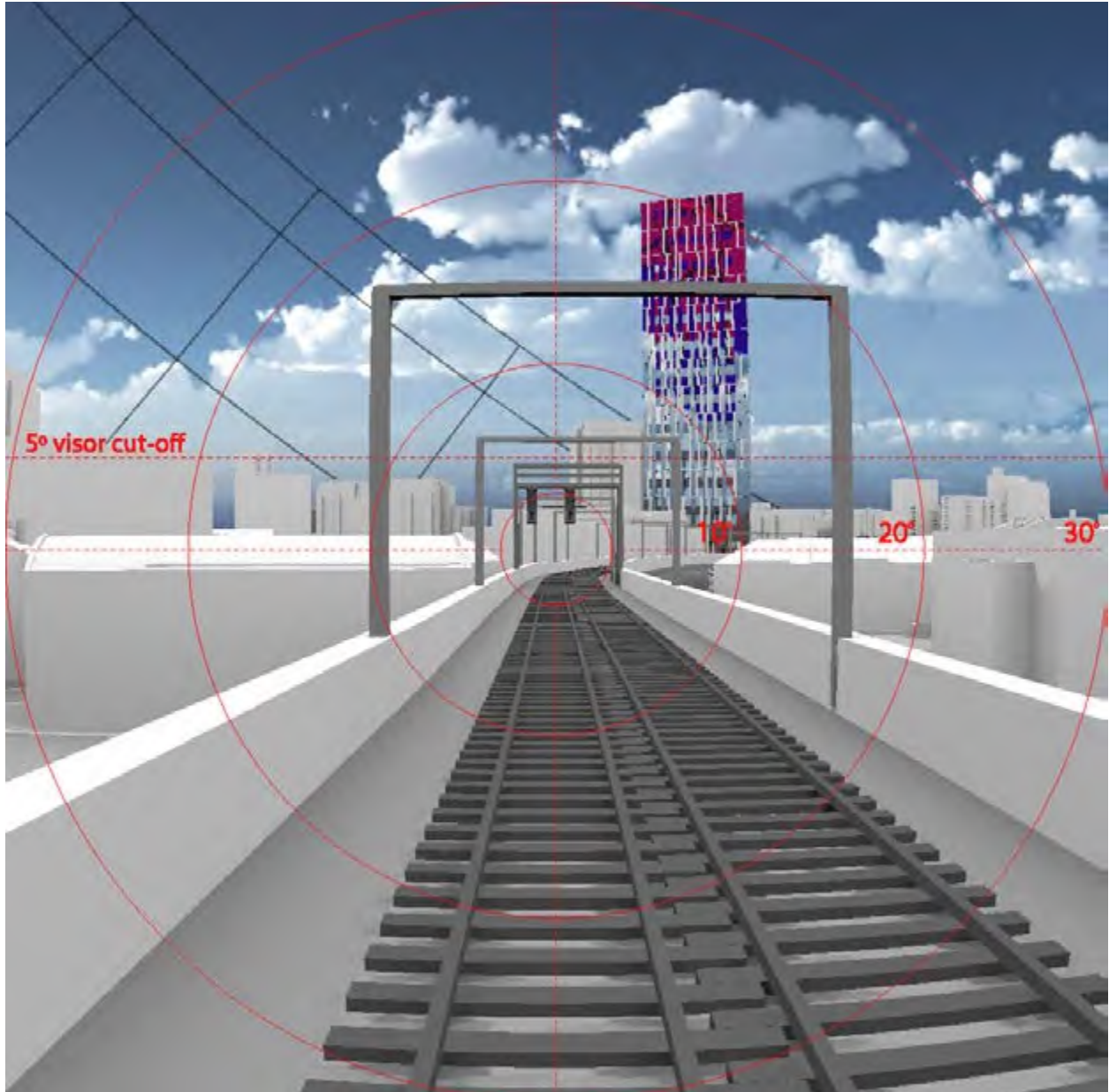


Fig. 673: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

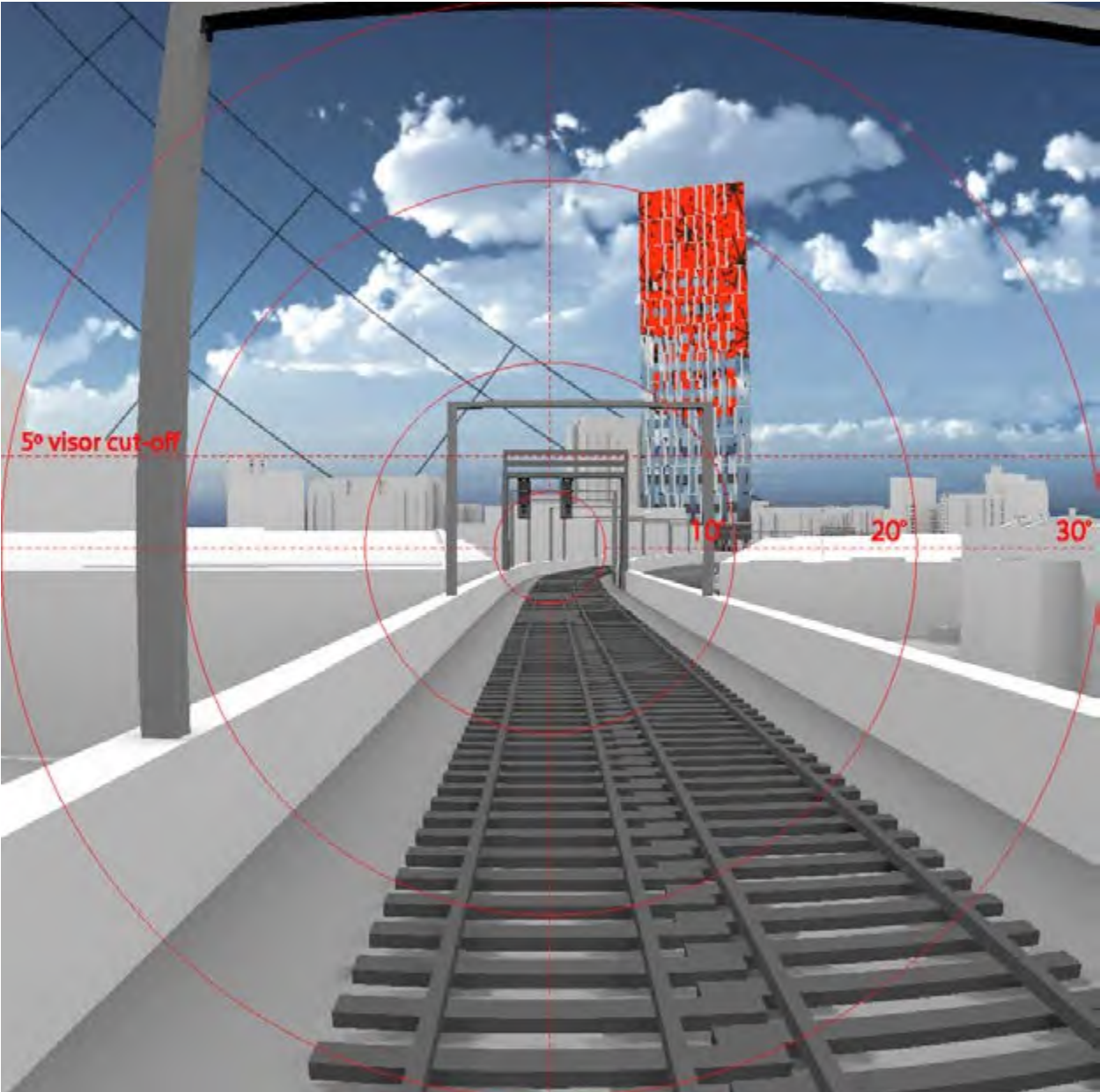


Fig. 674: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

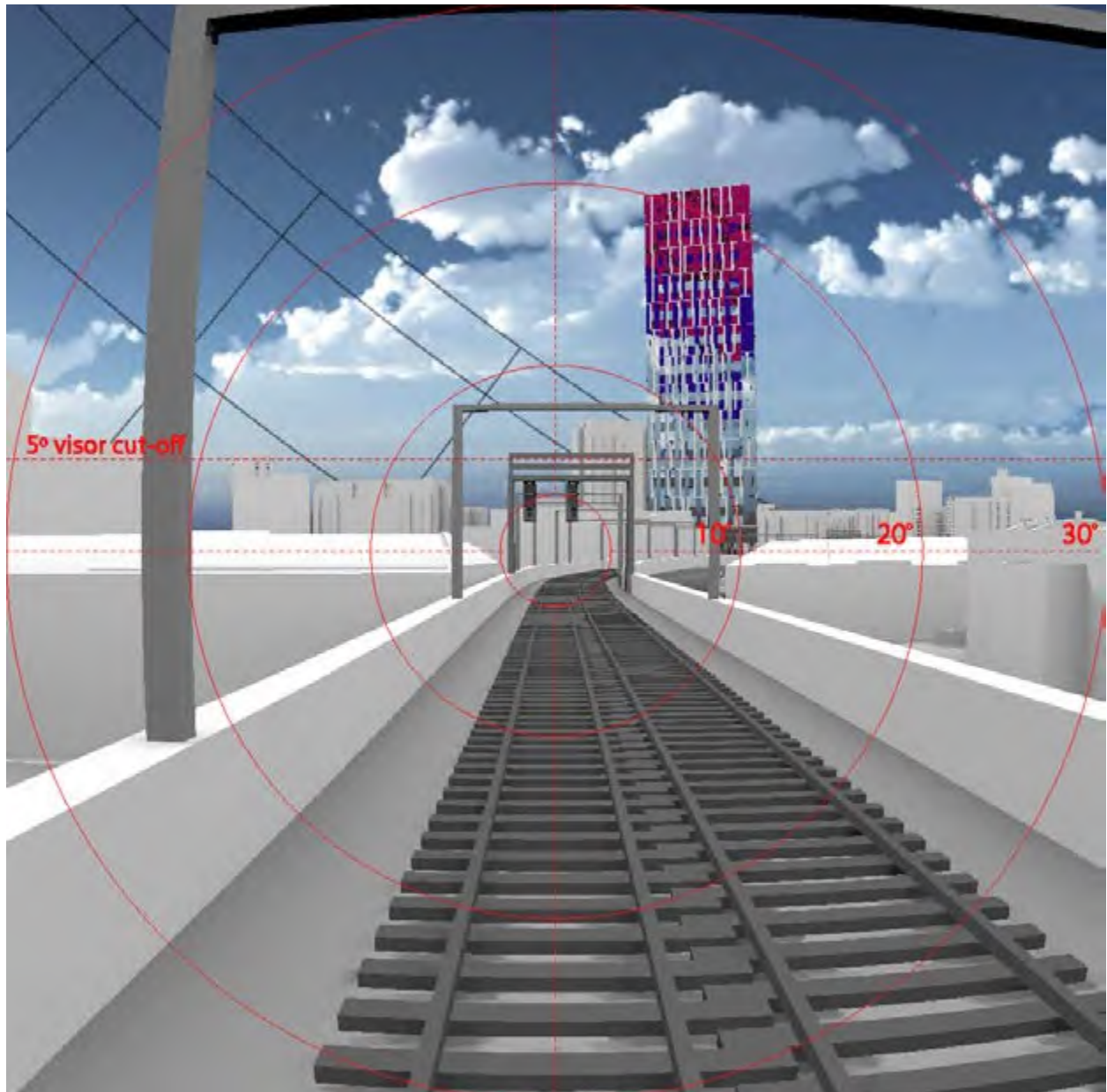


Fig. 675: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAIGHT - APPROX 50M FROM SIGNAL

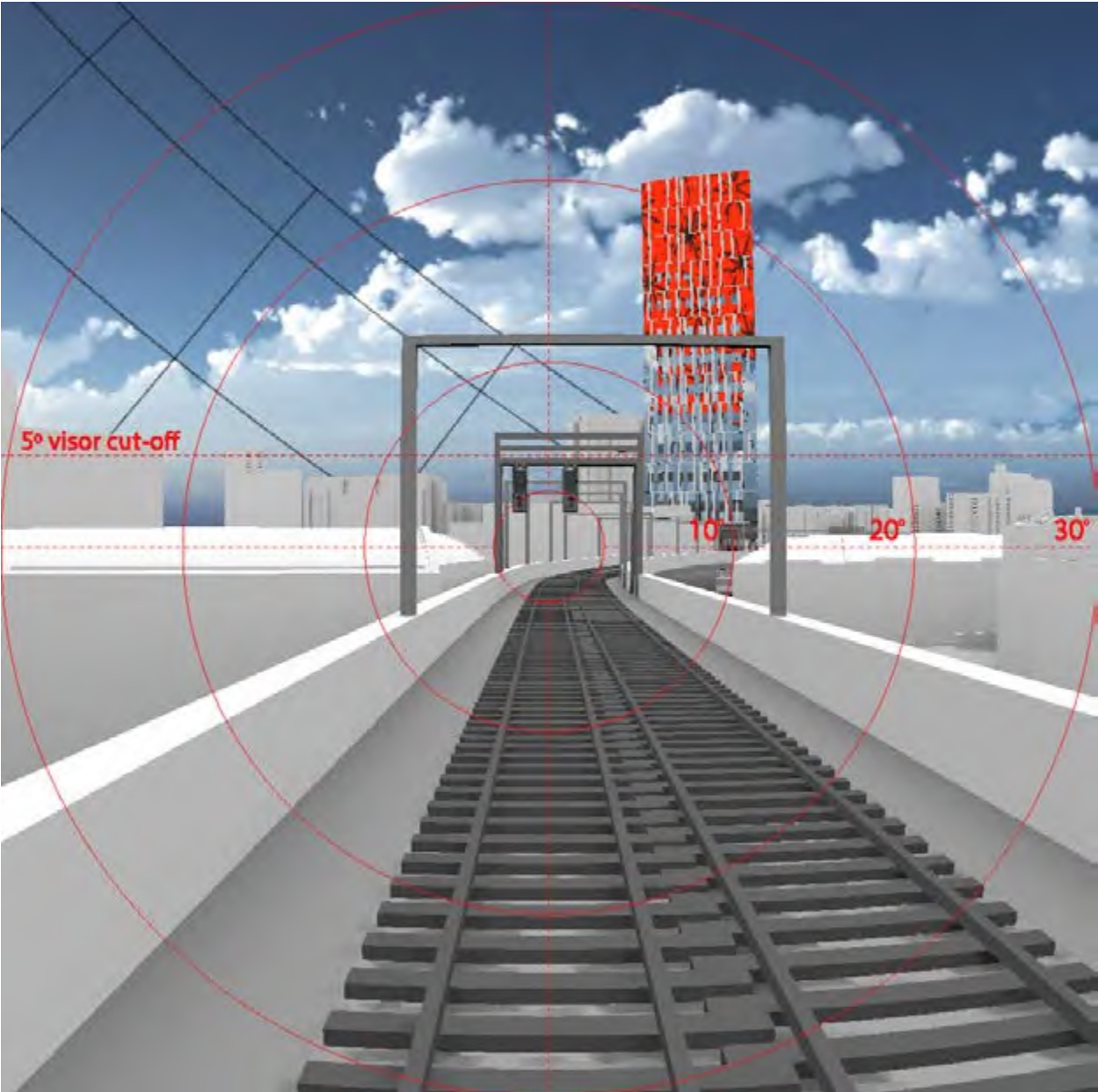


Fig. 676: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

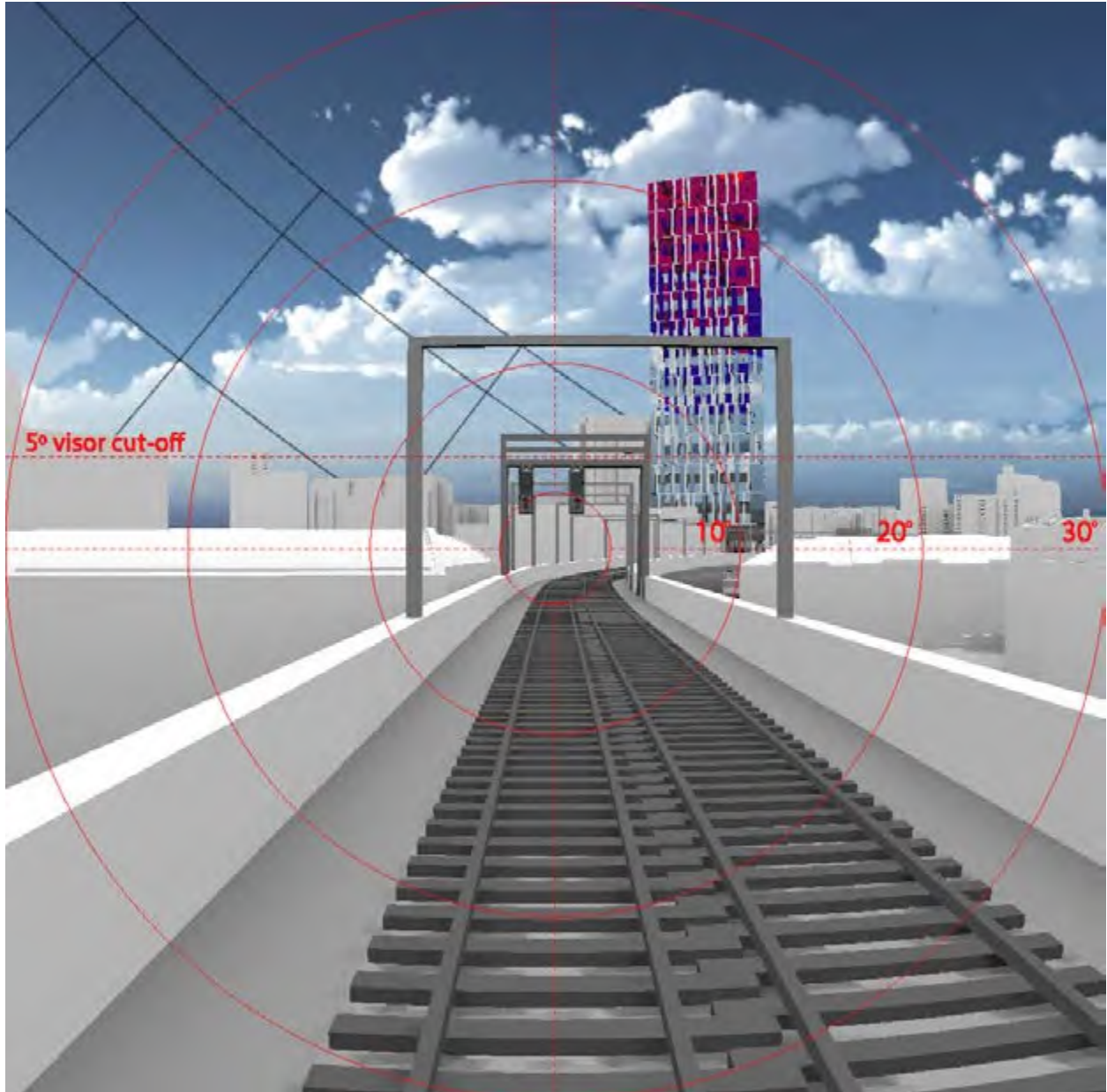


Fig. 677: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

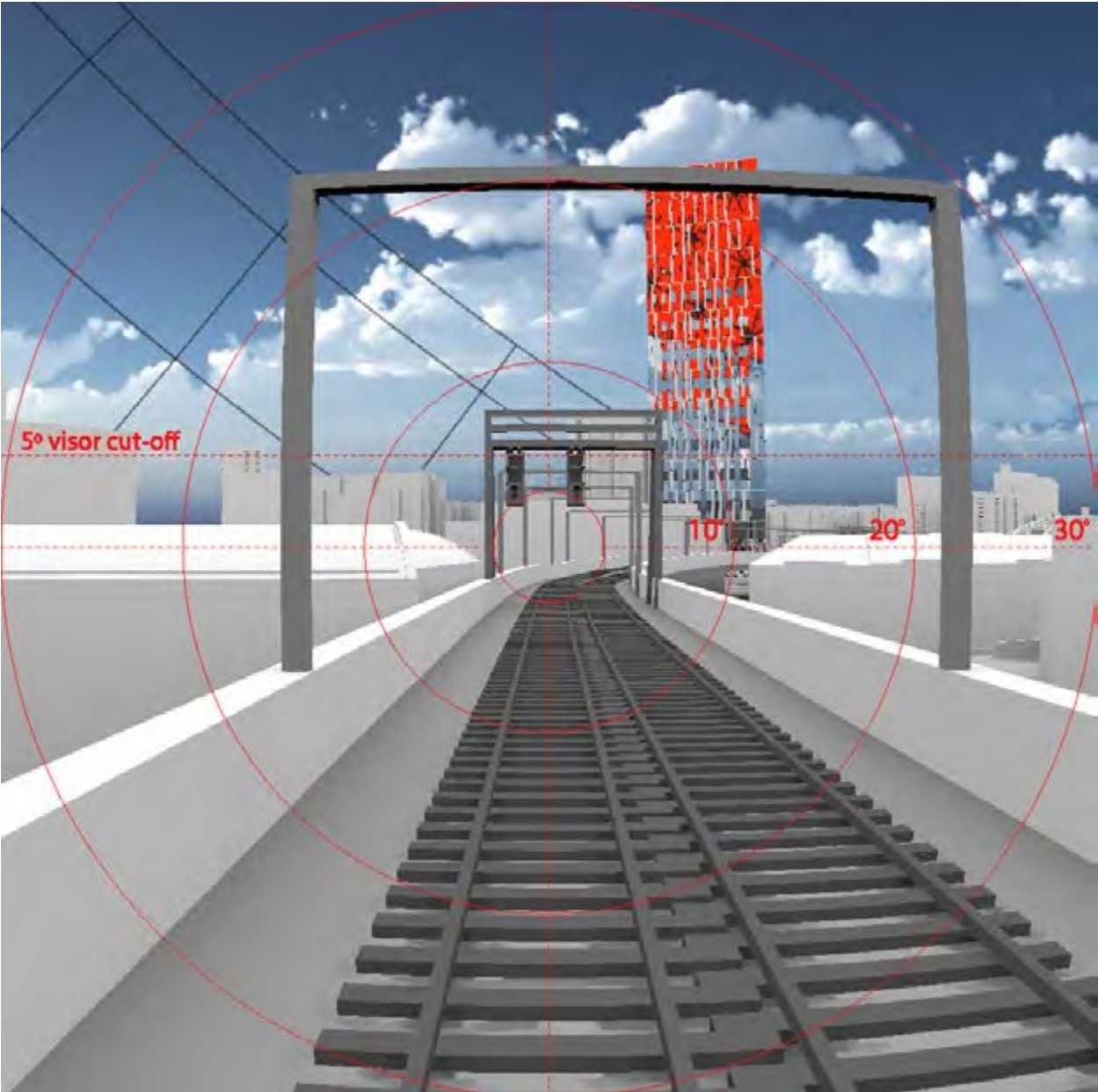


Fig. 678: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

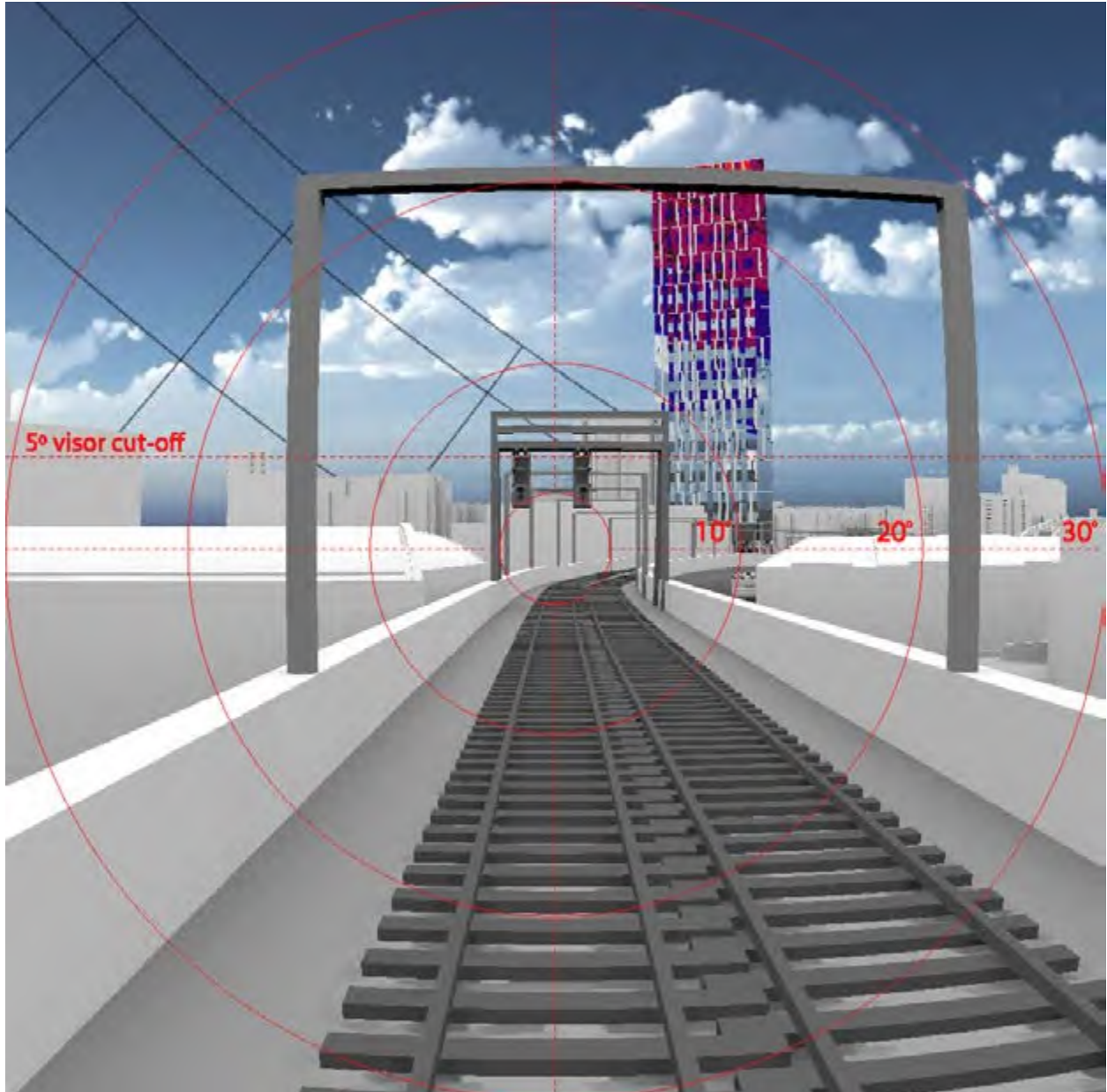


Fig. 679: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

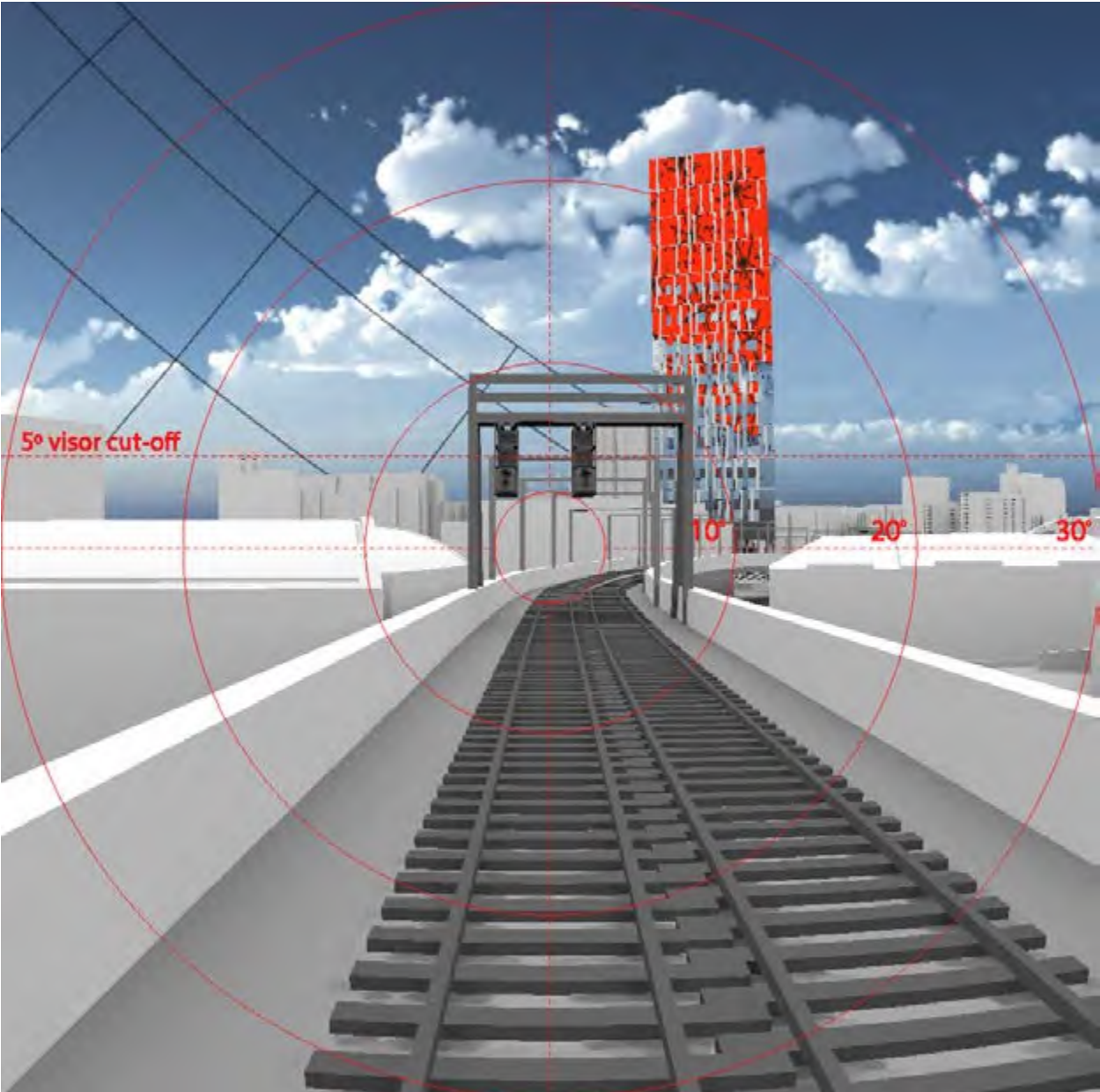


Fig. 680: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

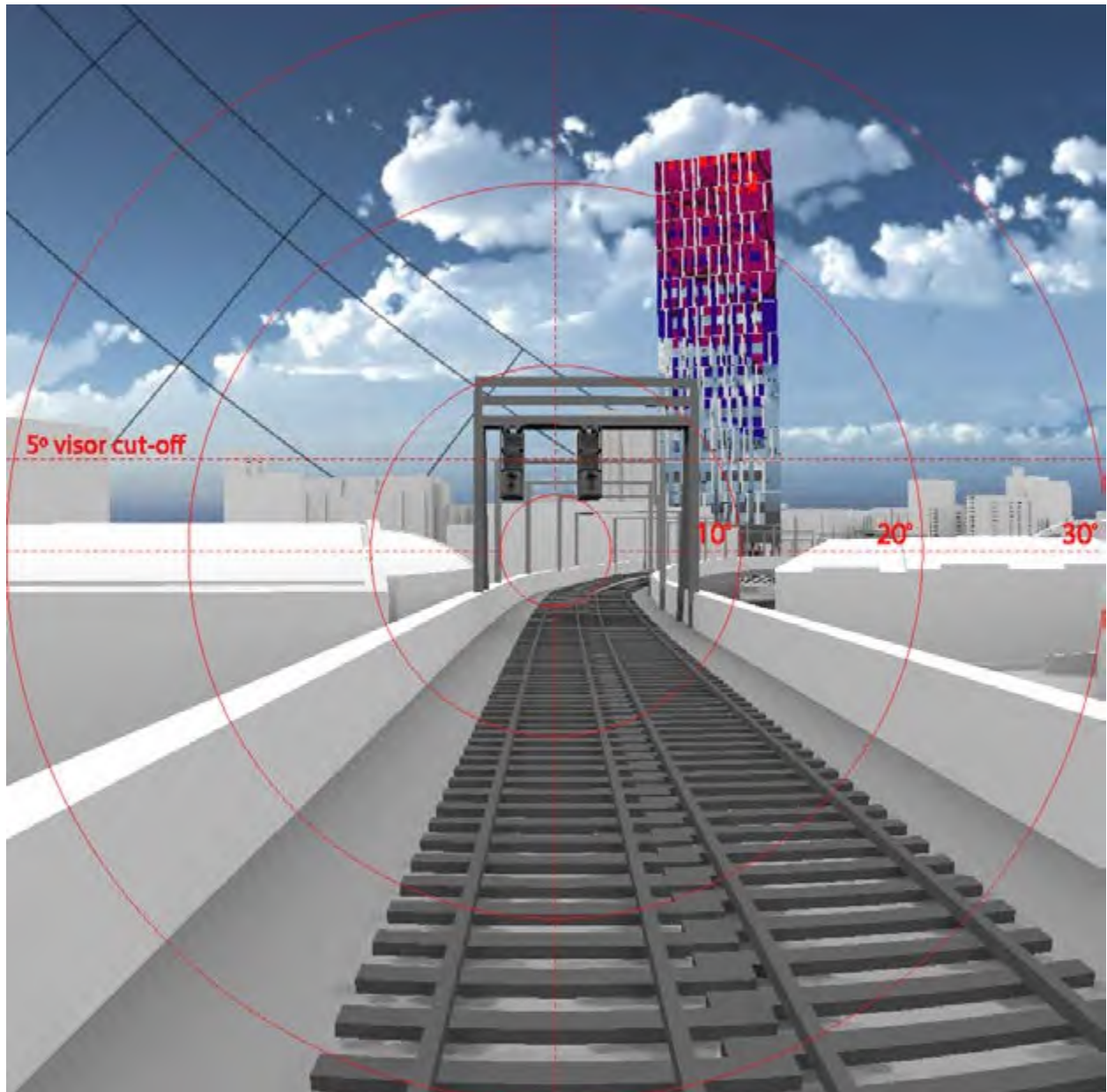


Fig. 681: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAIGHT - APPROX 20M FROM SIGNAL

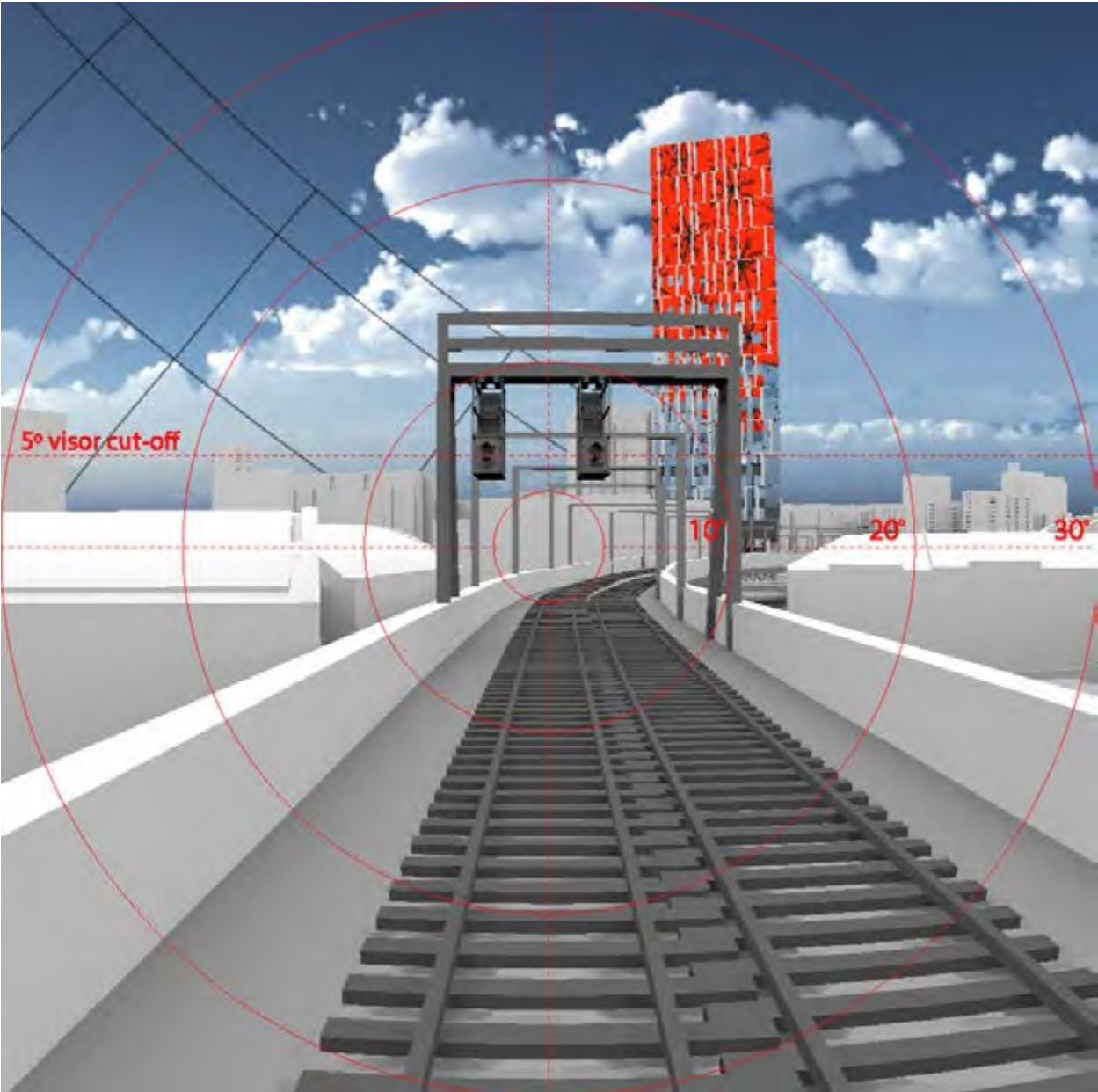


Fig. 682: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

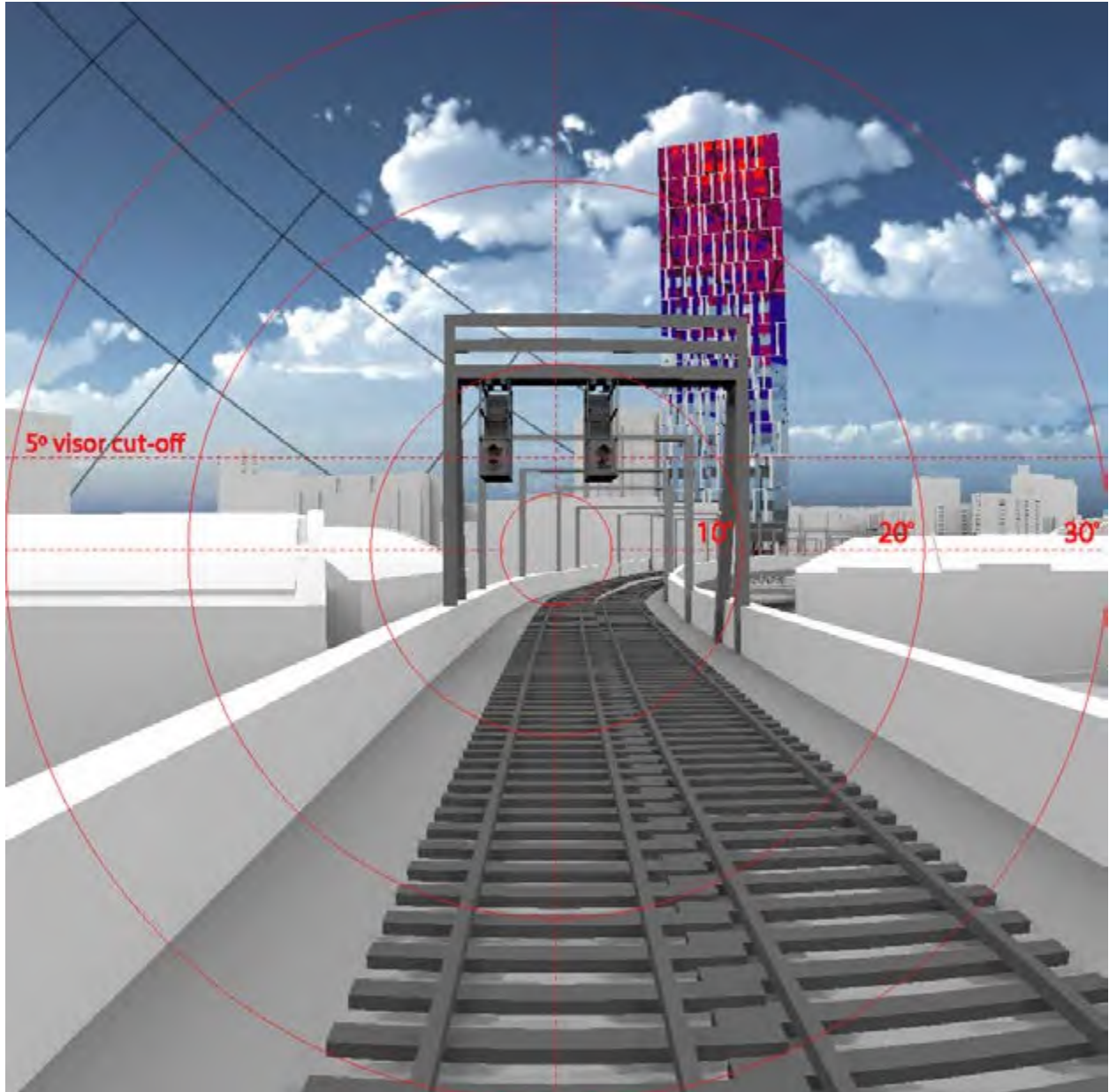


Fig. 683: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

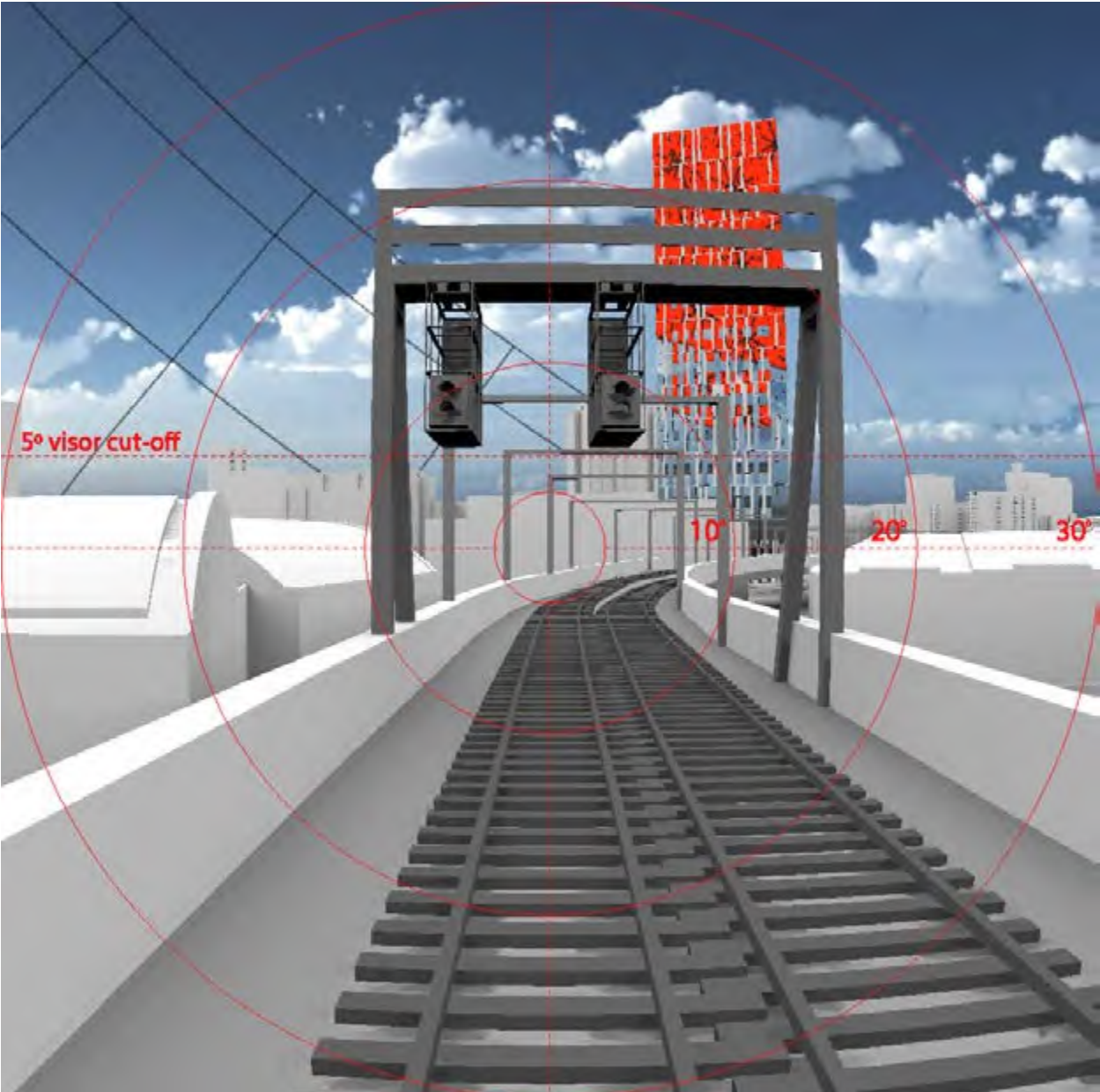


Fig. 684: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

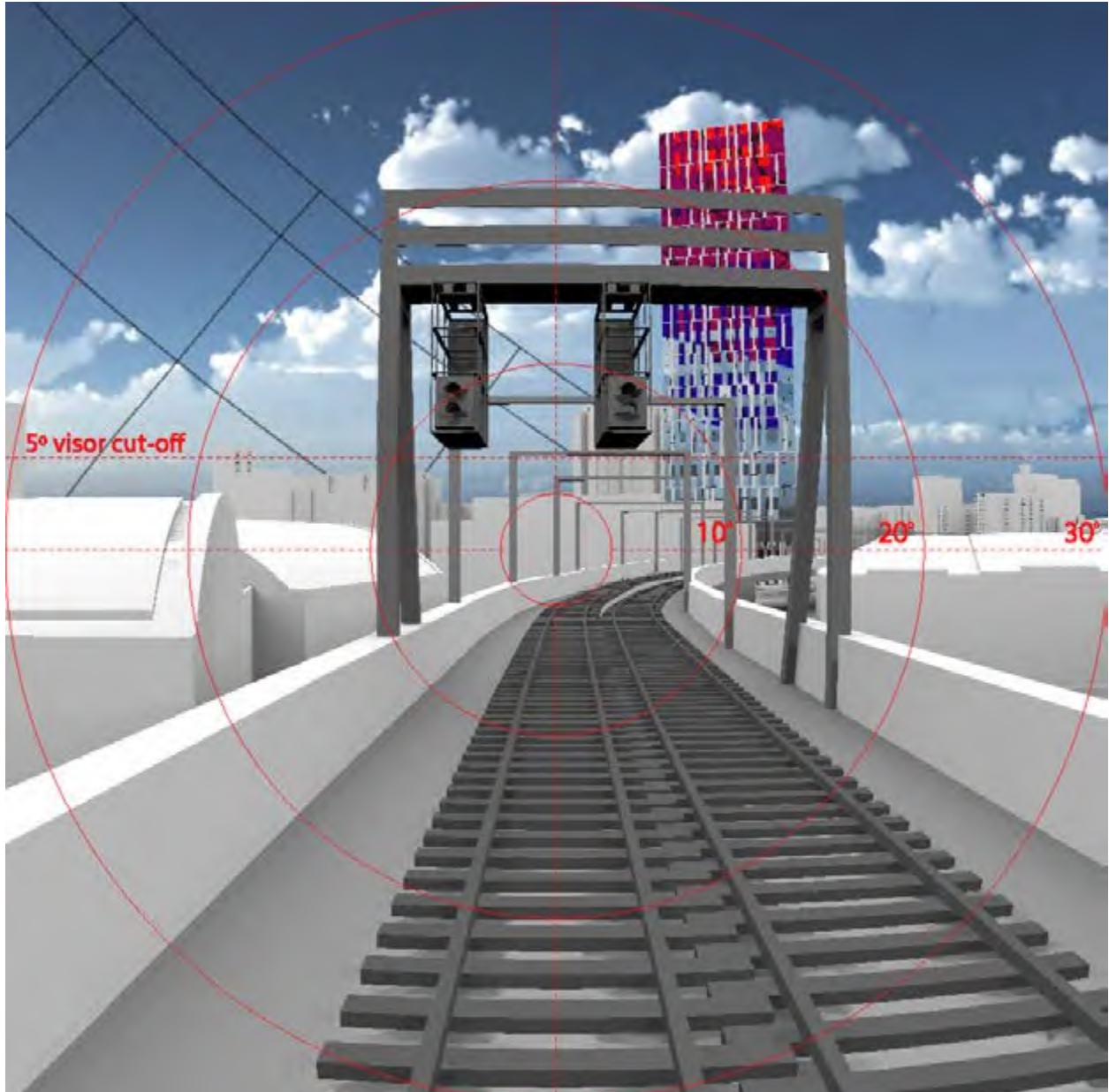


Fig. 685: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAGHT

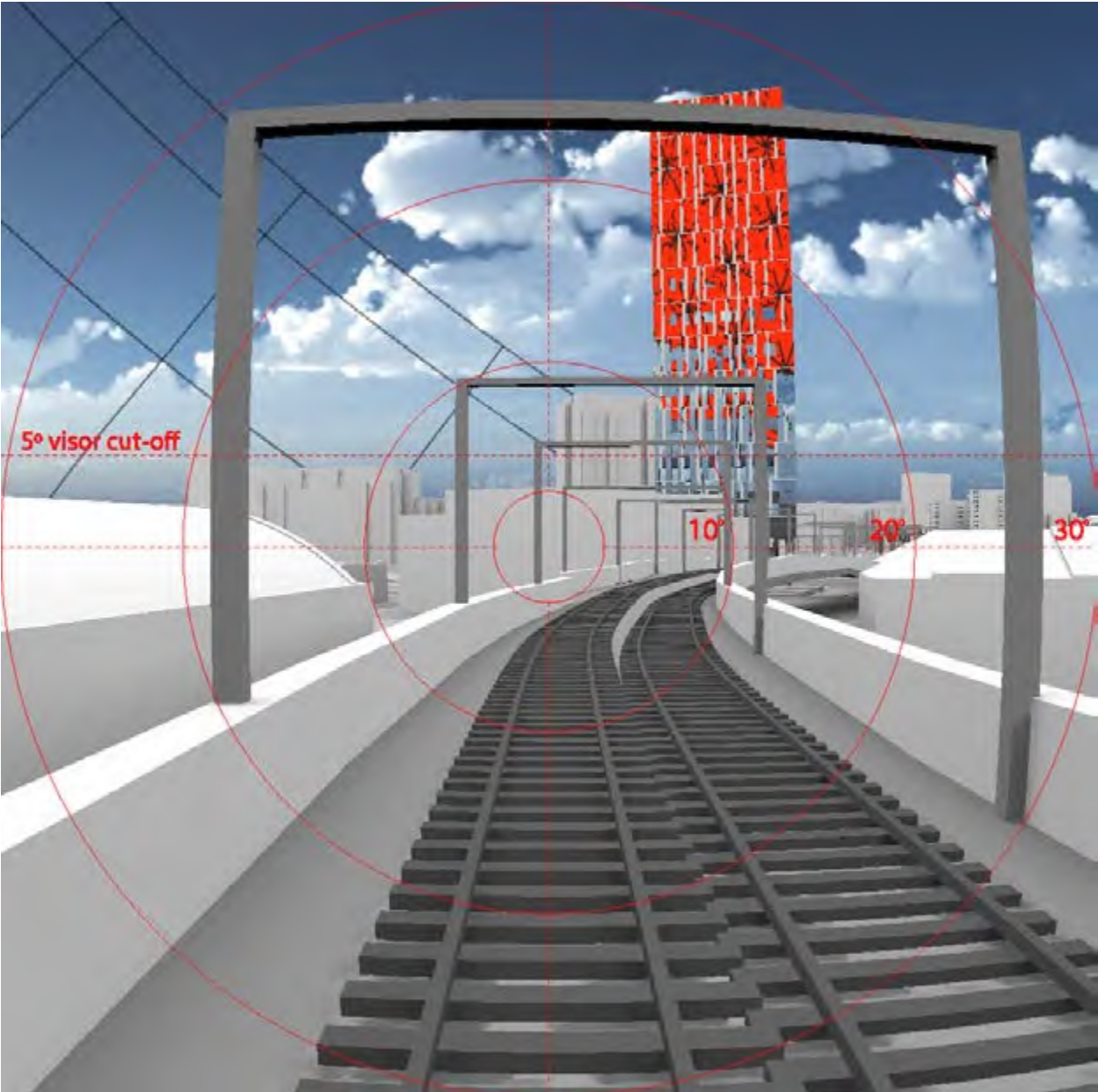


Fig. 686: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAGHT**

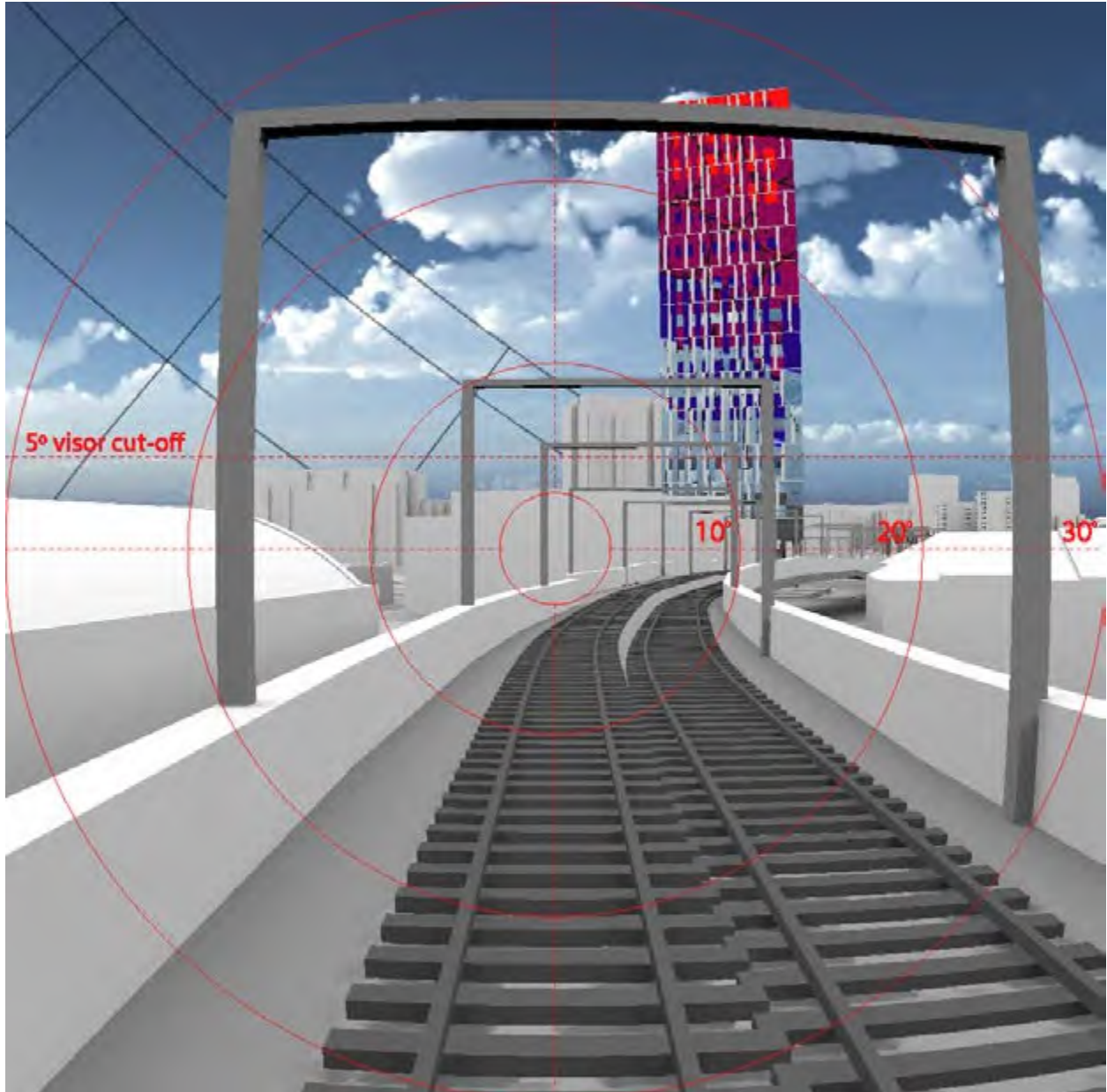


Fig. 687: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAGHT

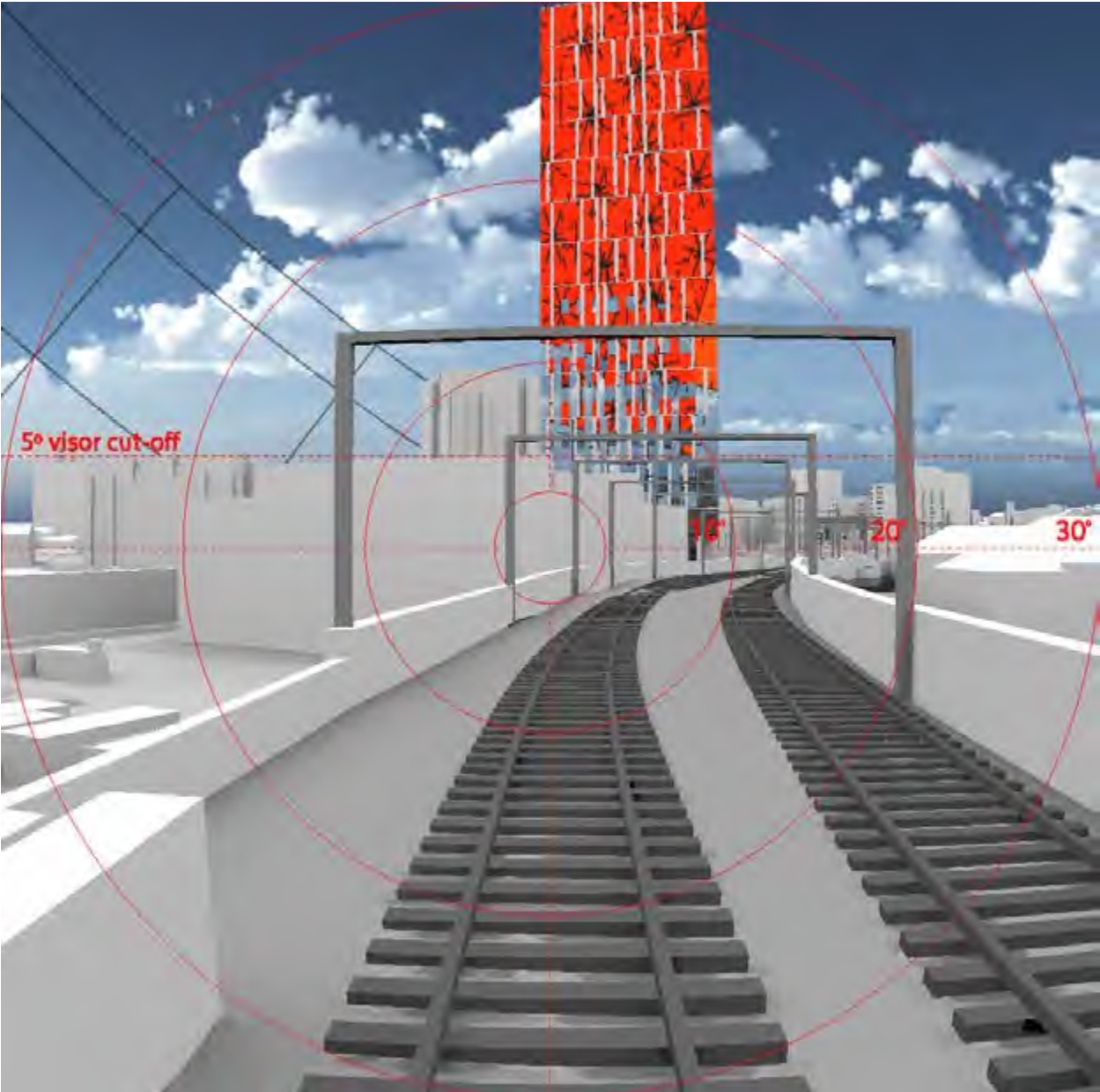


Fig. 688: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAGHT**

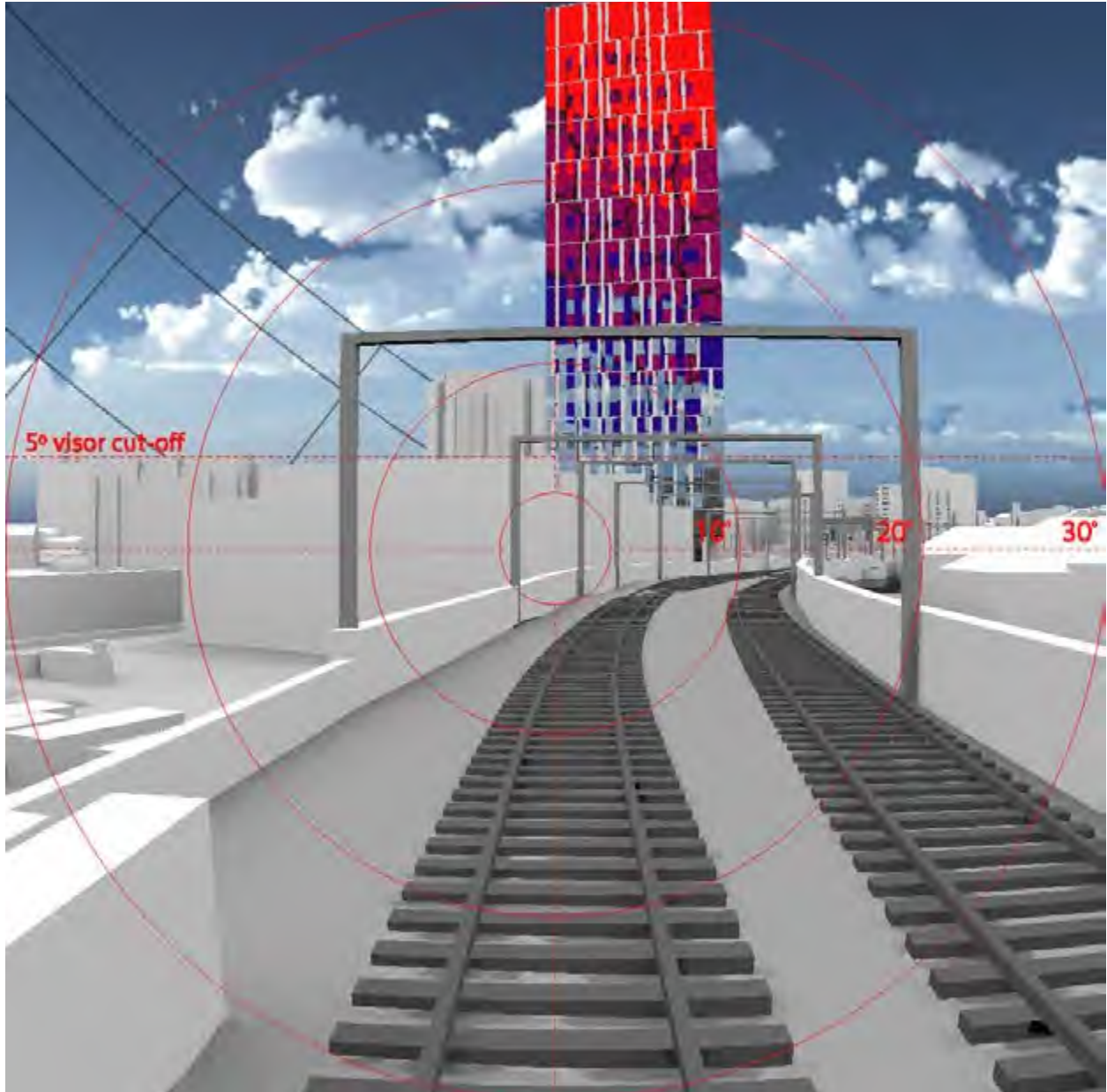


Fig. 689: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT

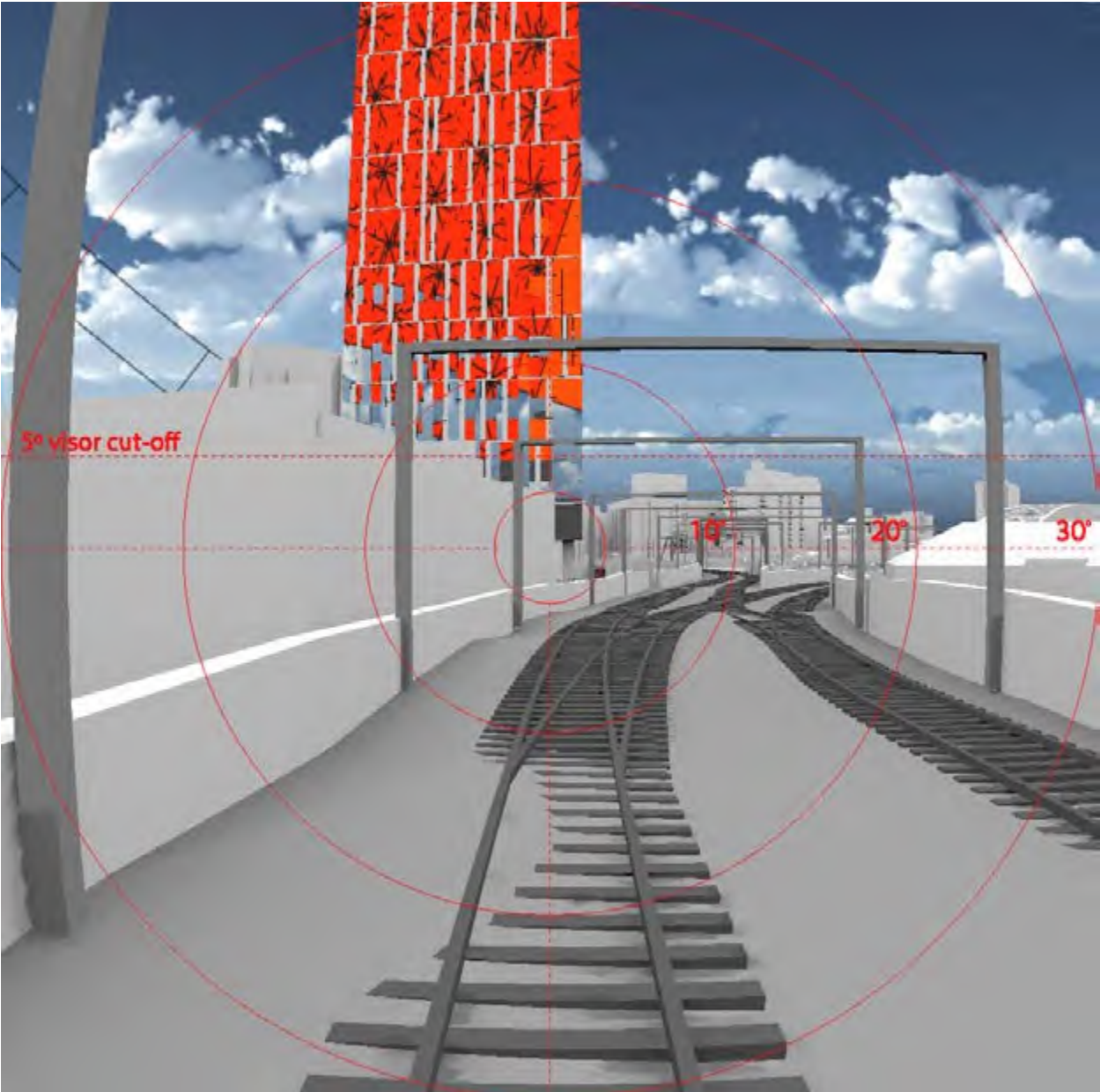


Fig. 690: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT**

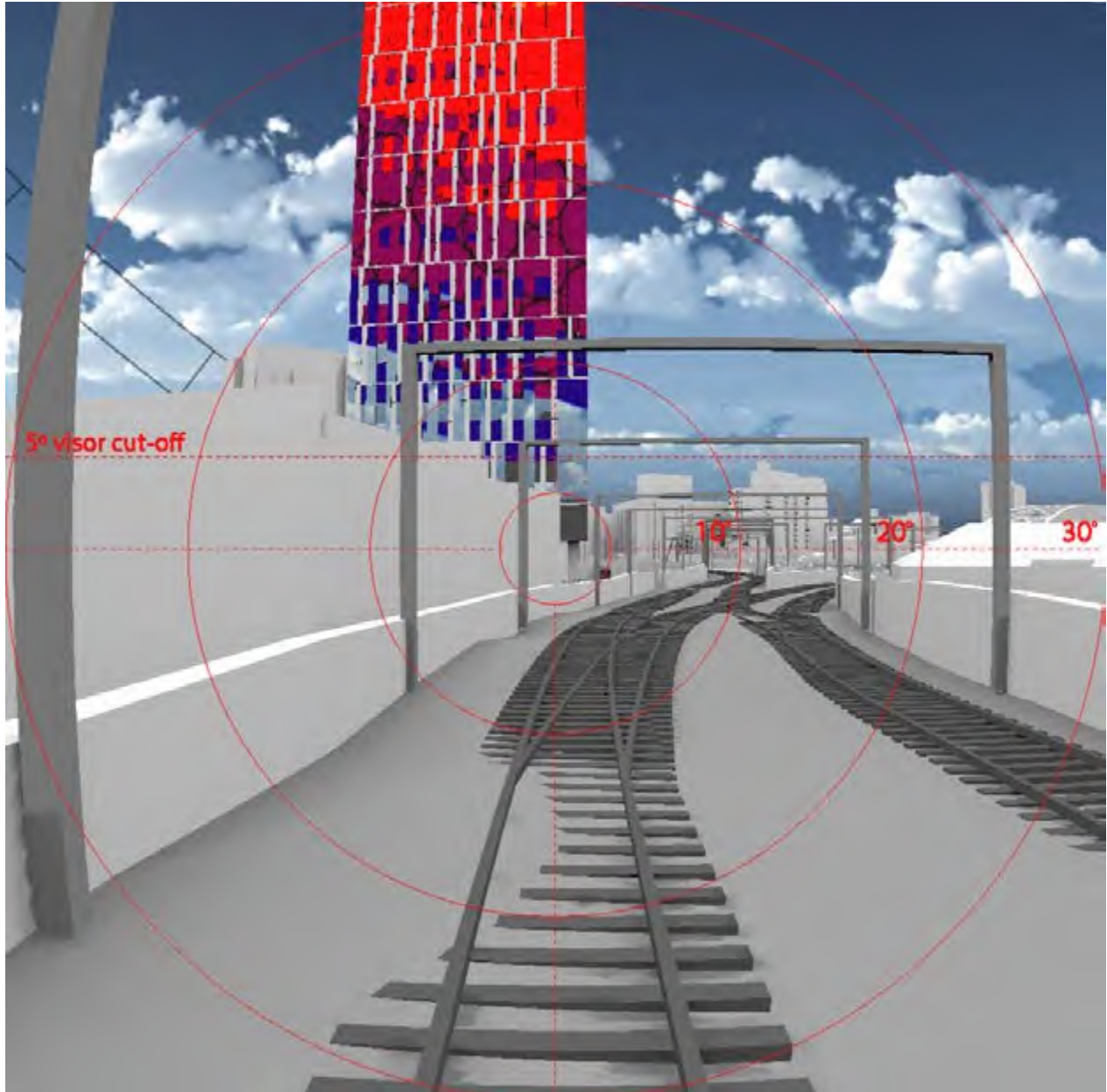


Fig. 691: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT

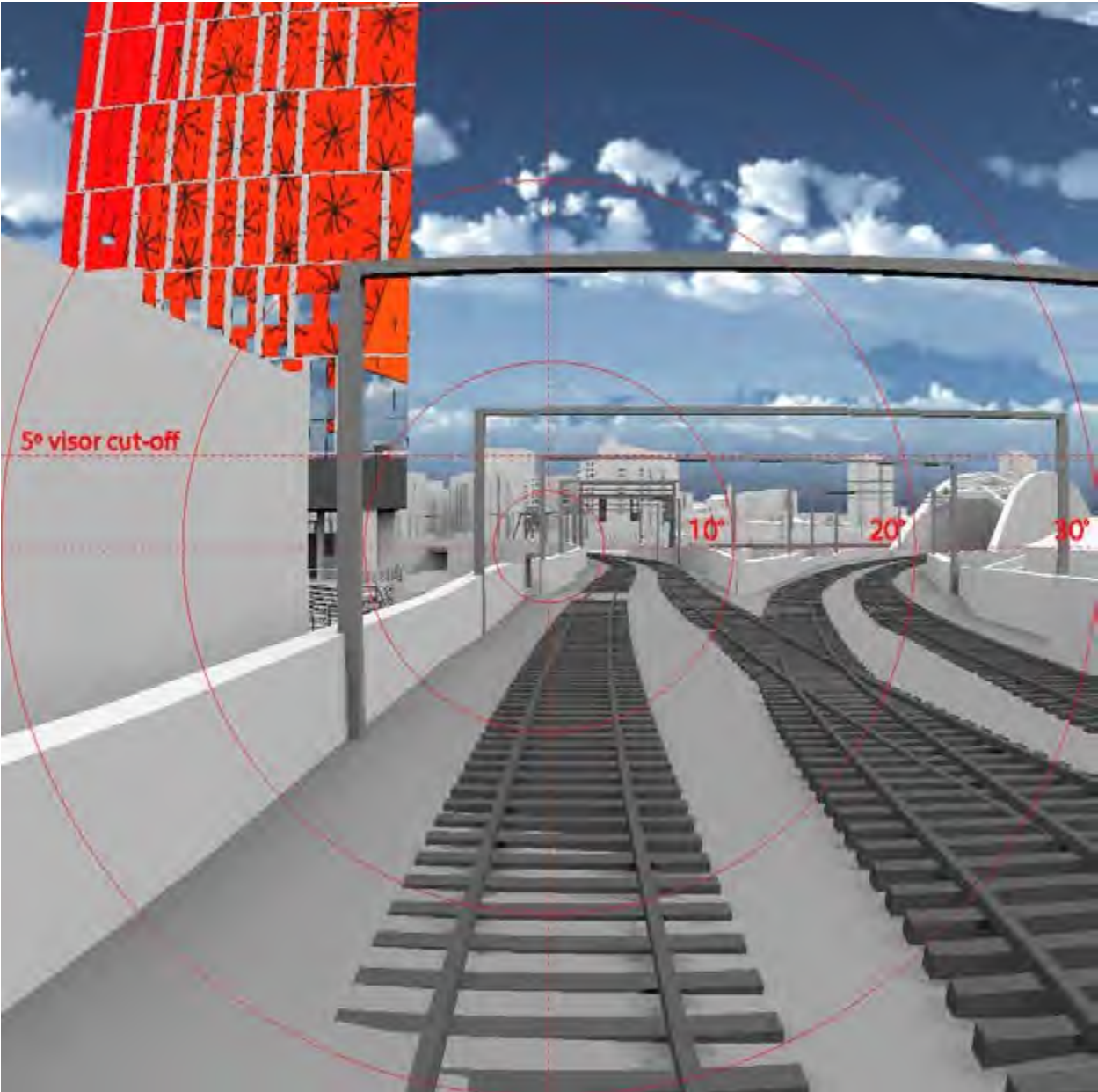


Fig. 692: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT**

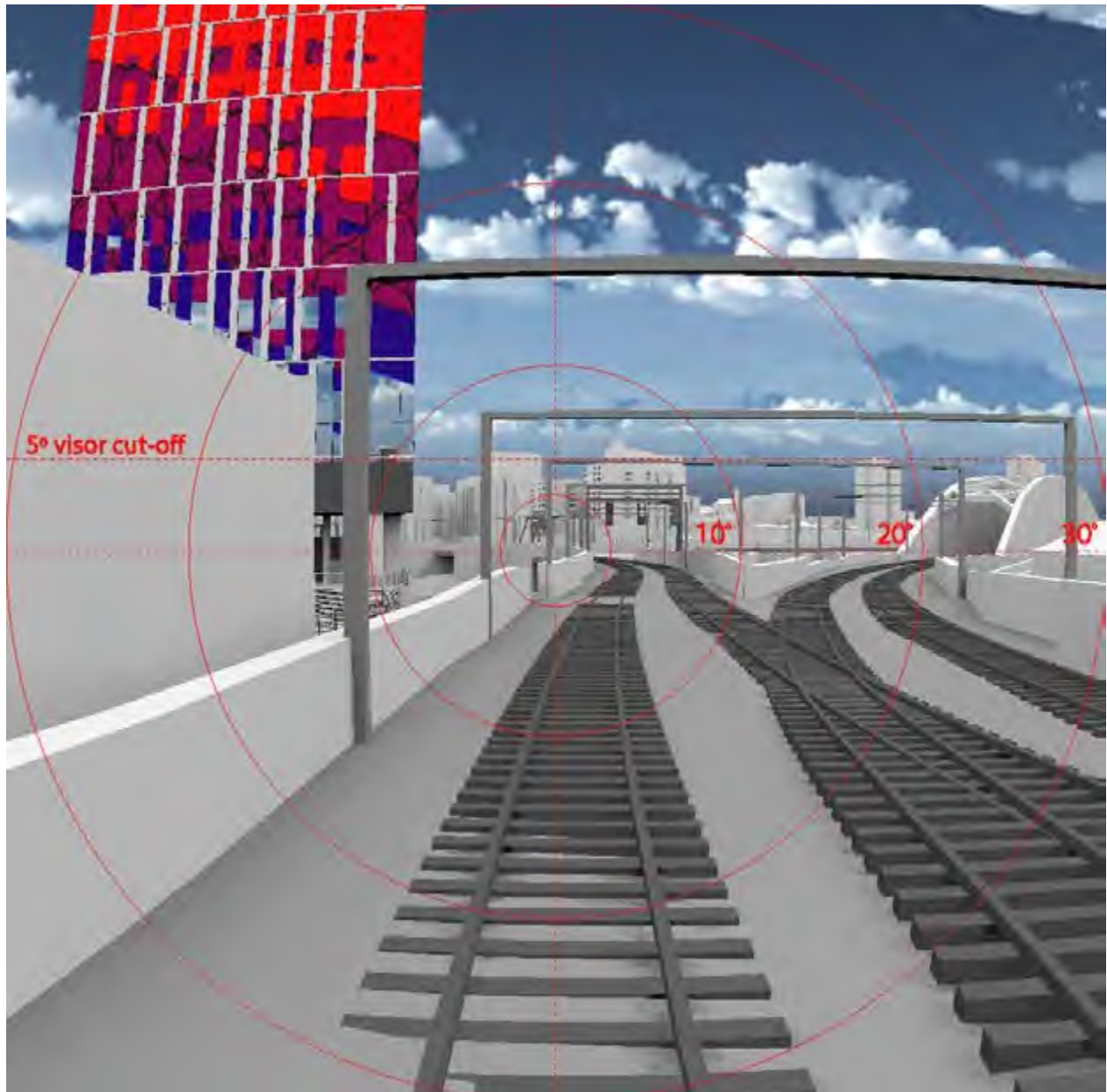


Fig. 693: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

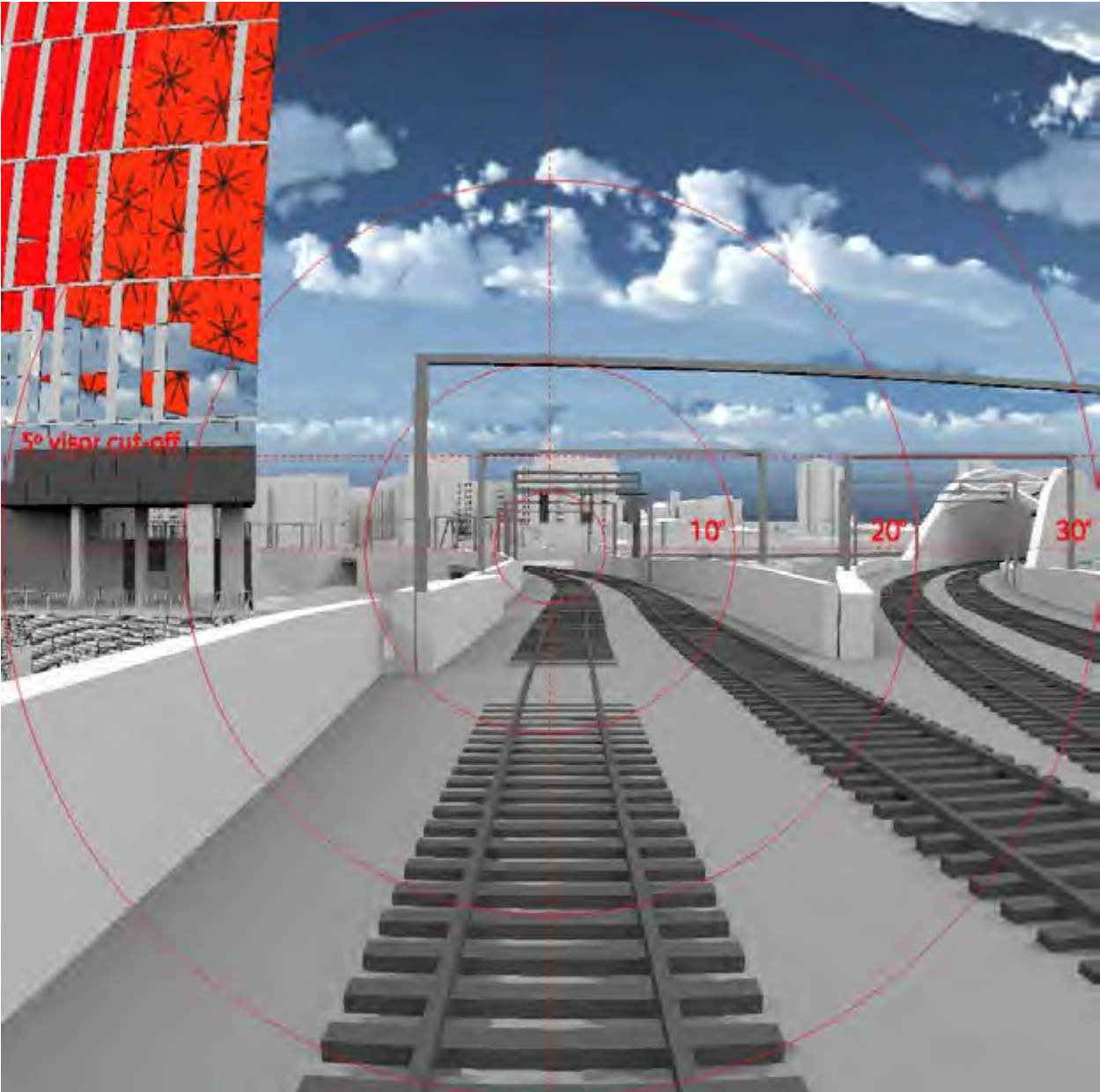


Fig. 694: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

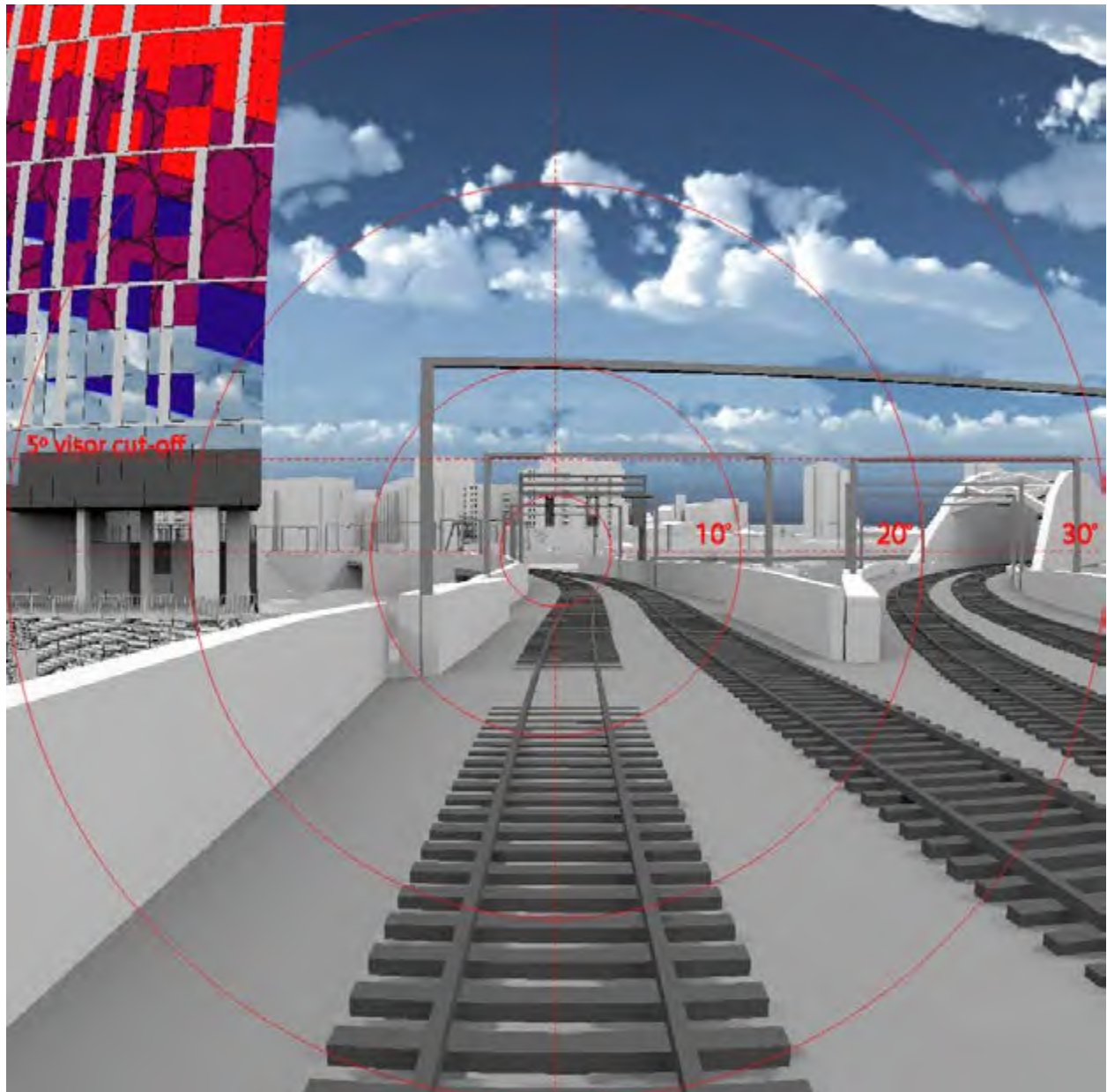


Fig. 695: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

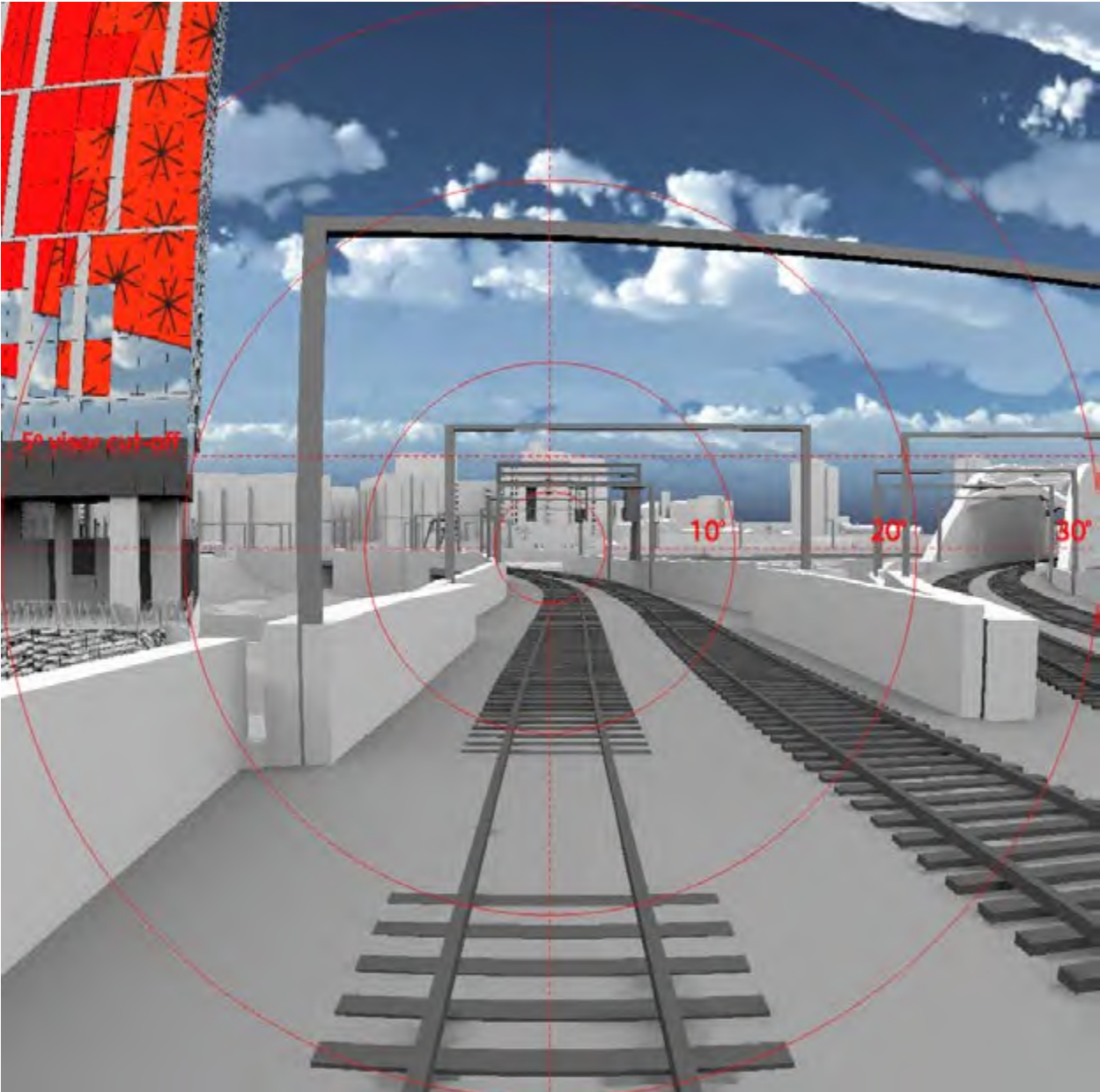


Fig. 696: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

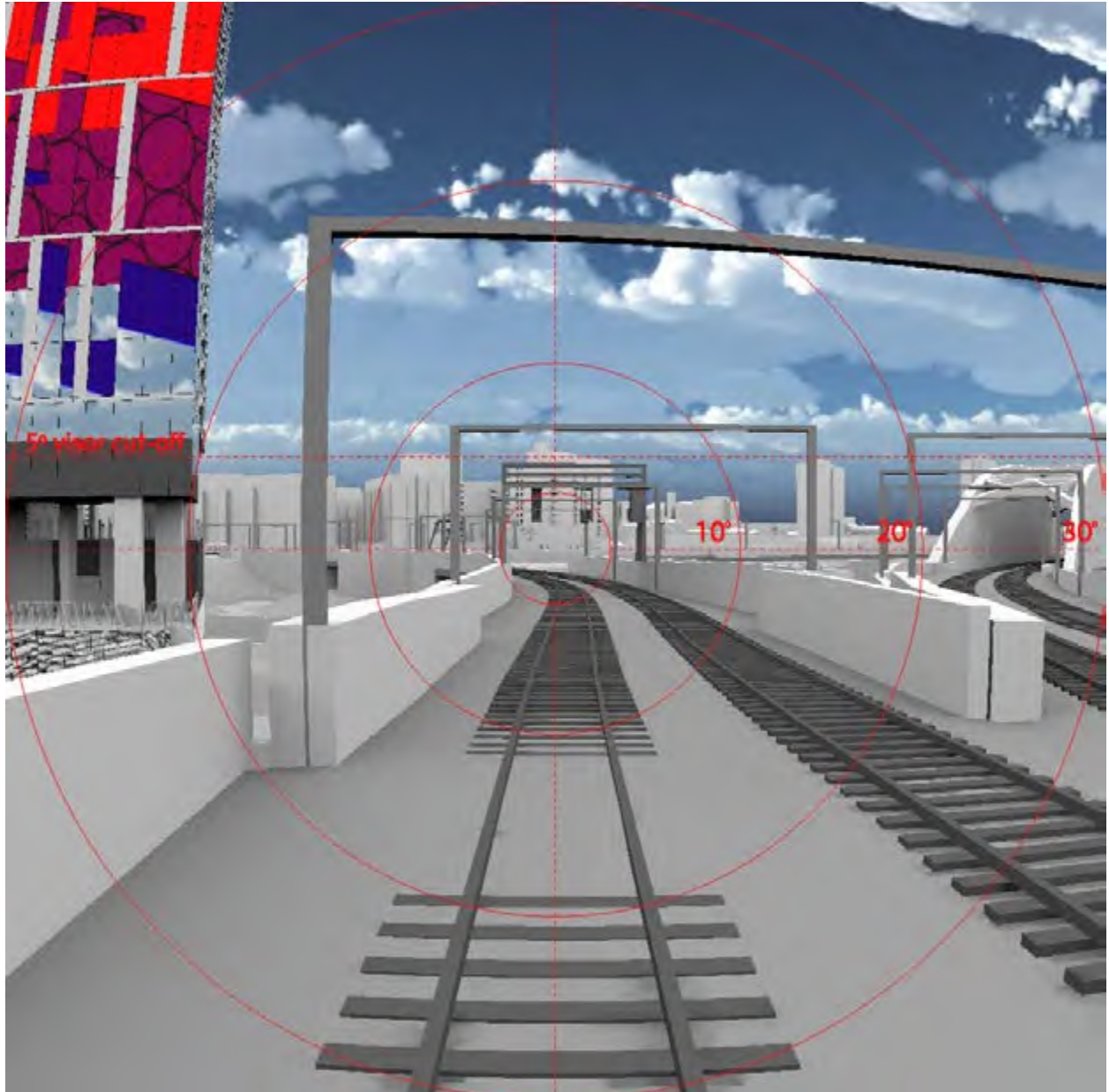


Fig. 697: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

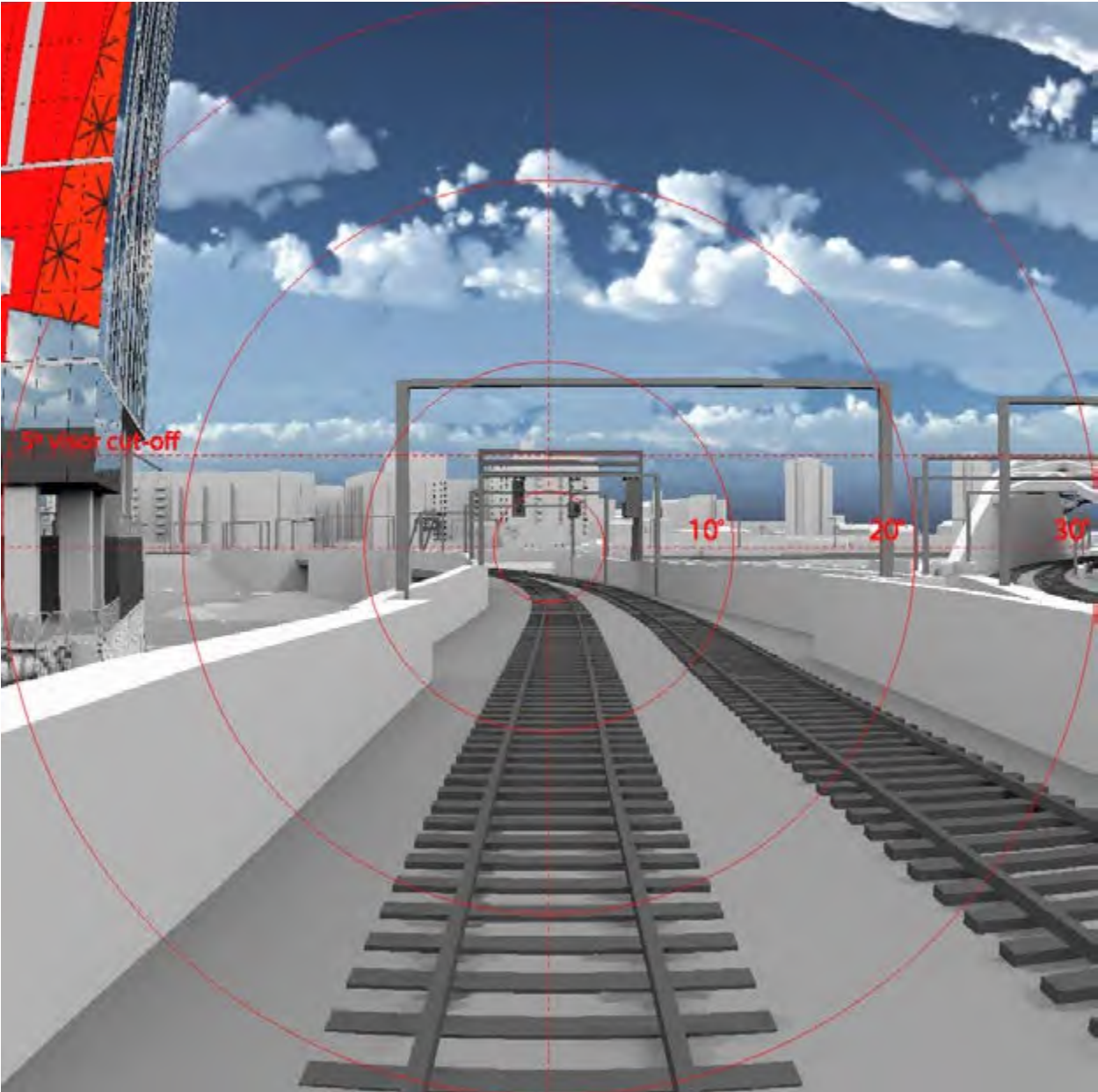


Fig. 698: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

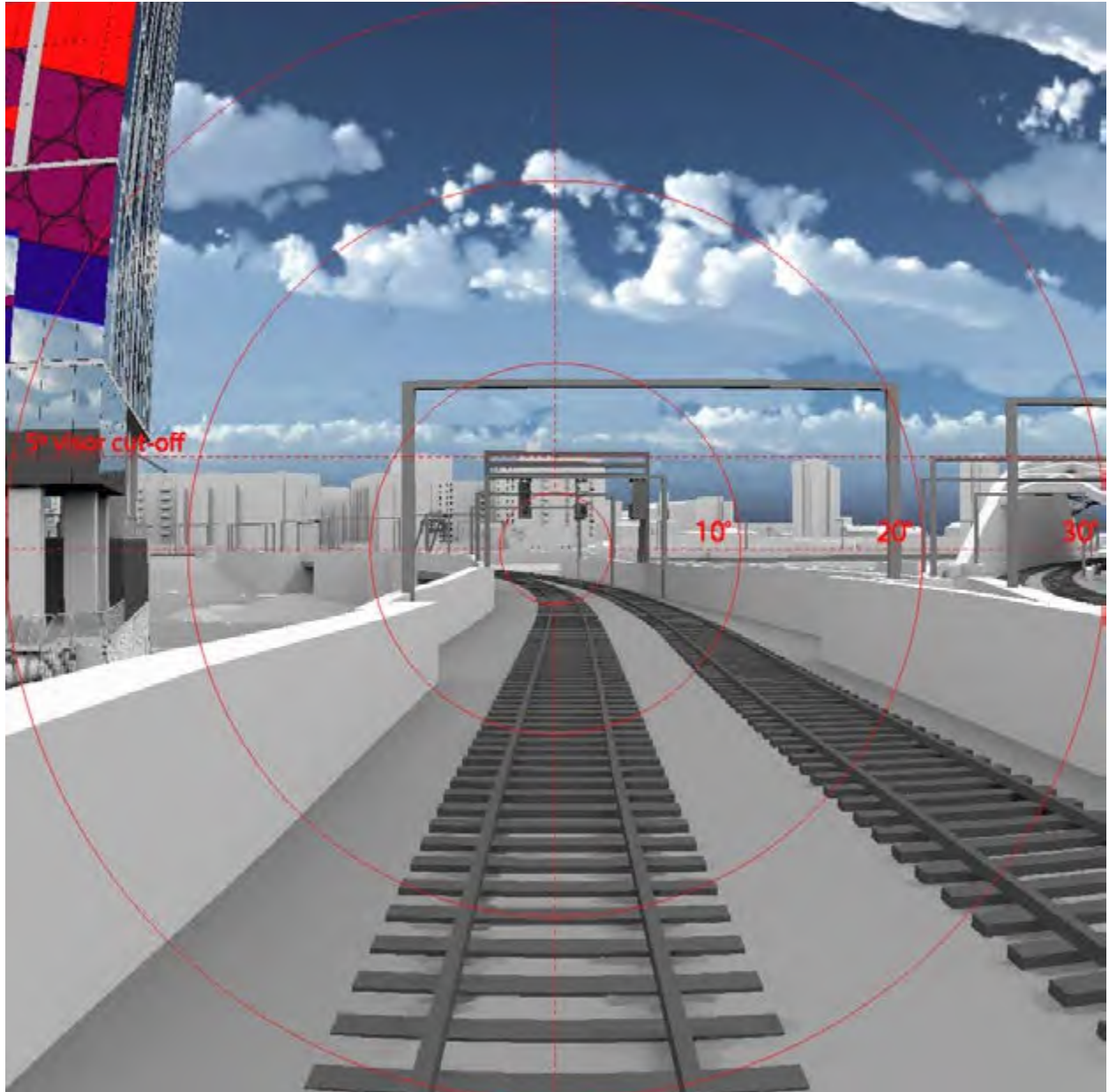


Fig. 699: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

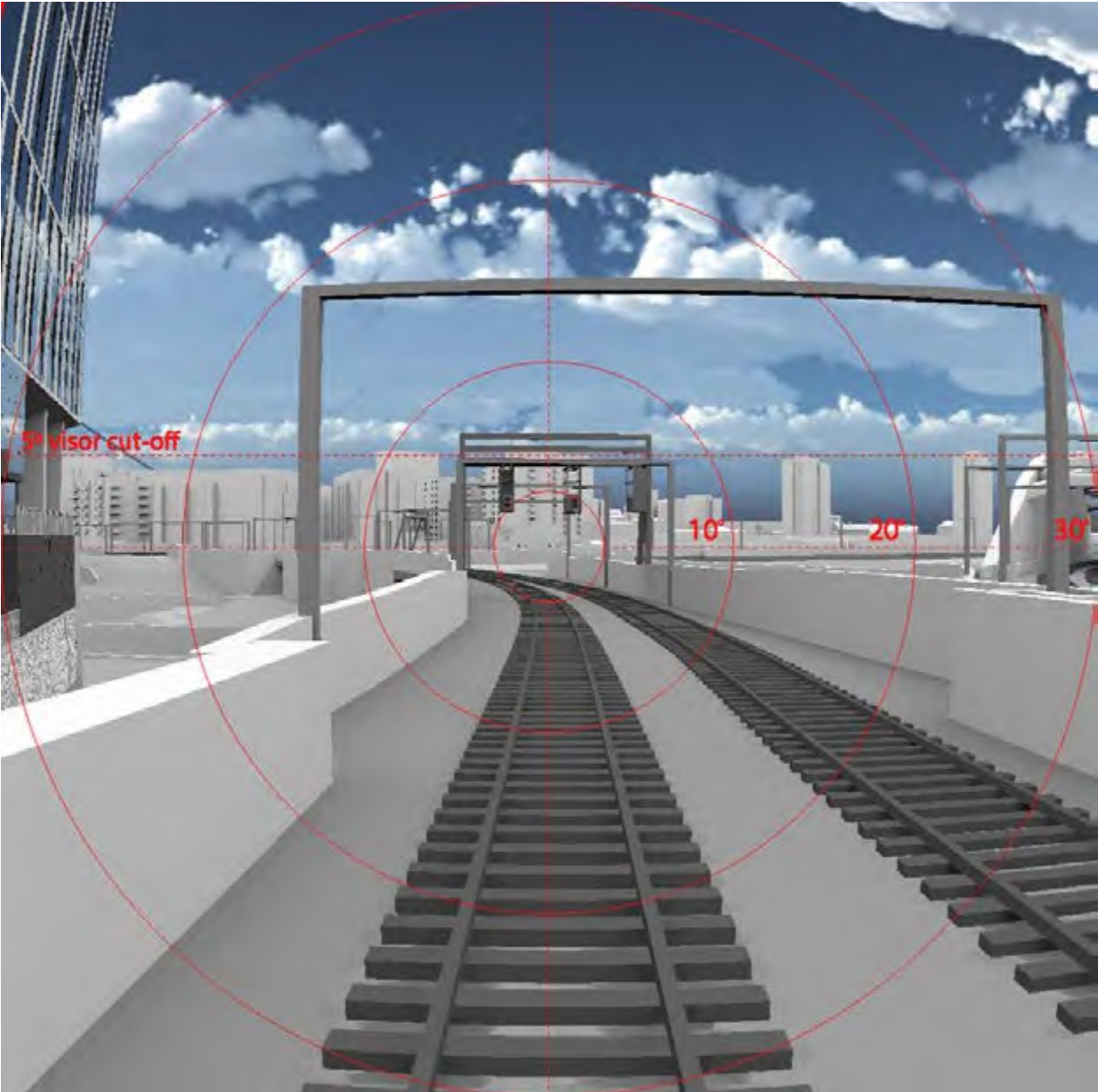


Fig. 700: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

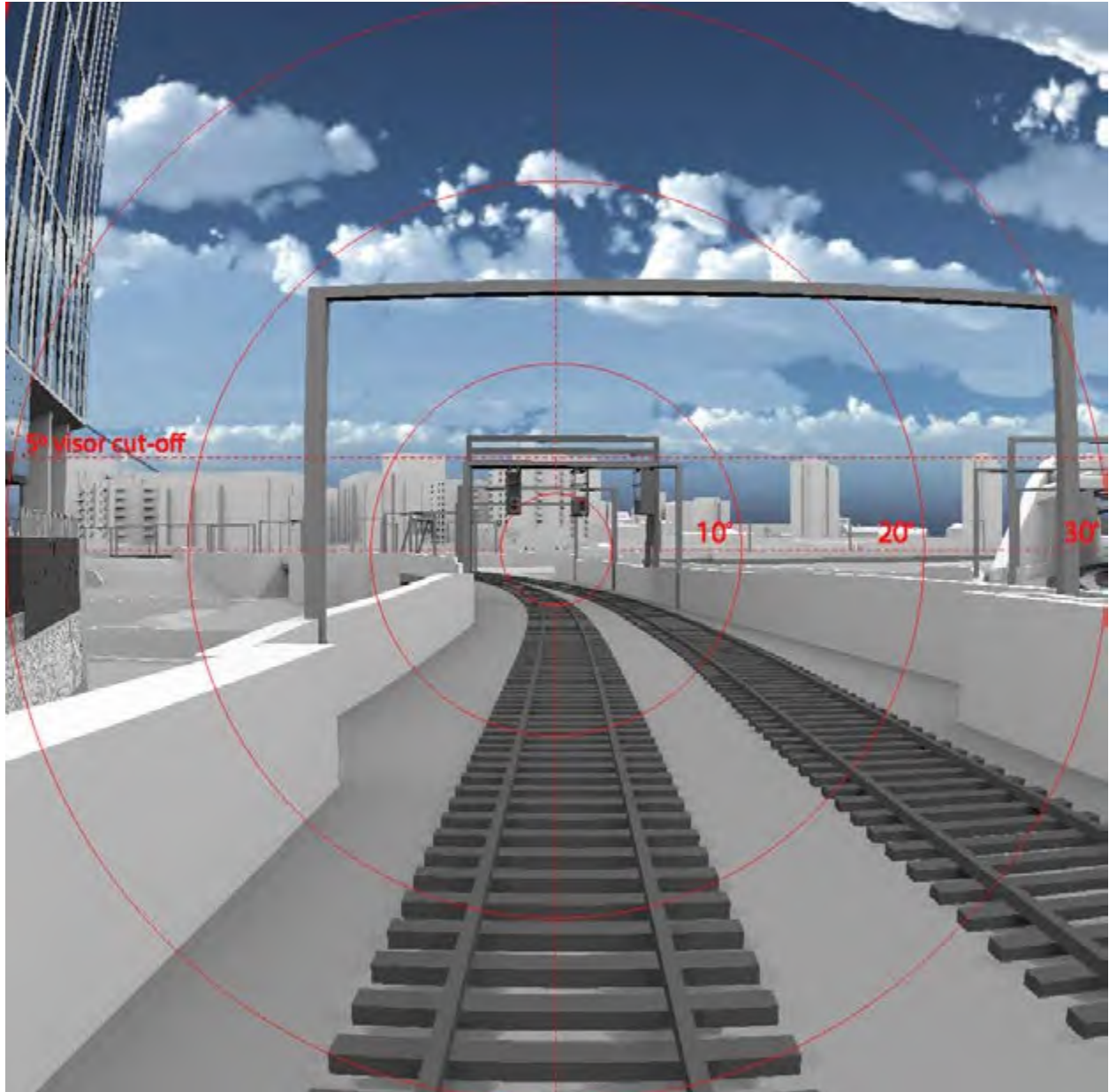


Fig. 701: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAIGHT - APPROX 50M FROM SIGNAL

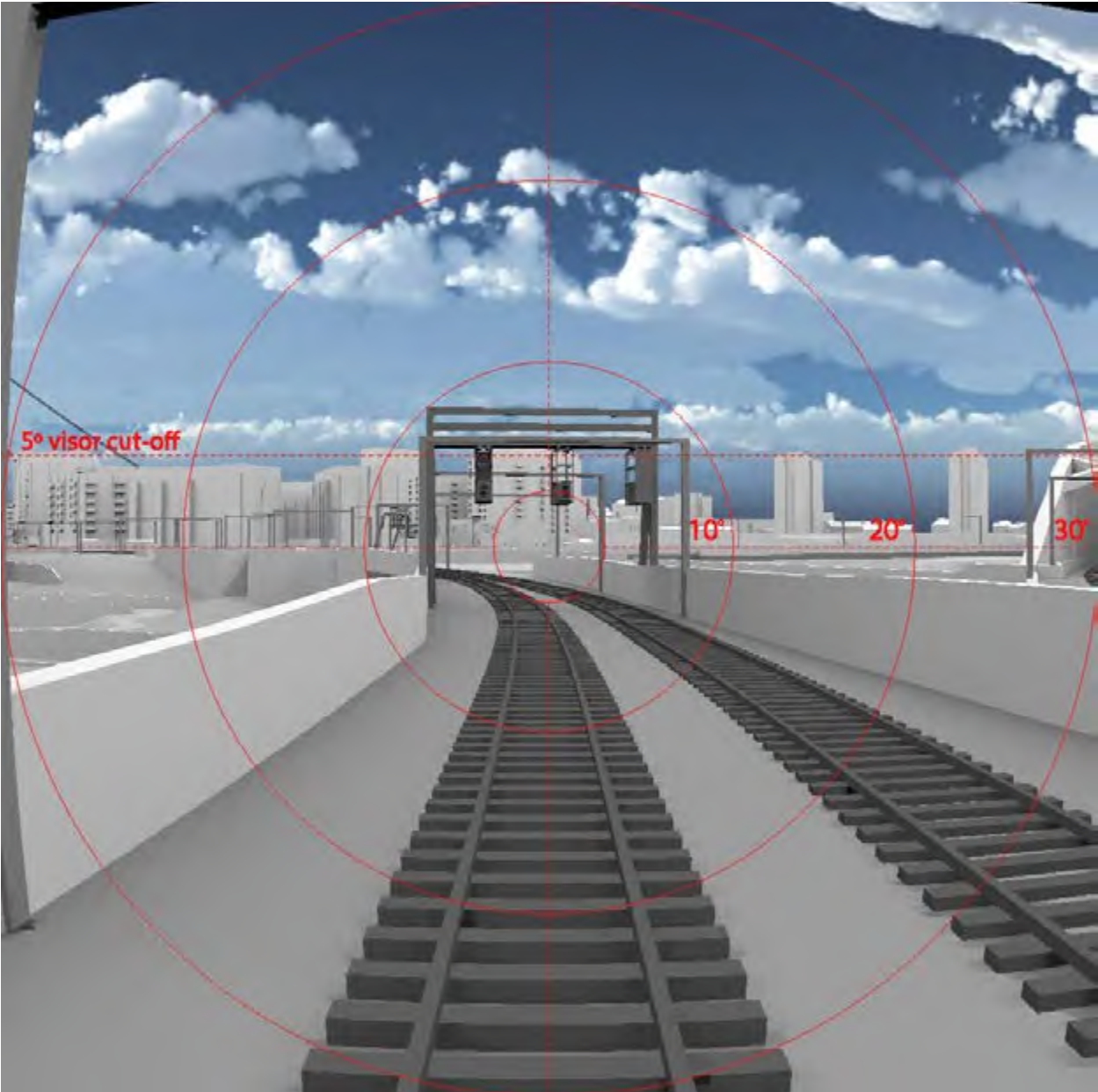


Fig. 702: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

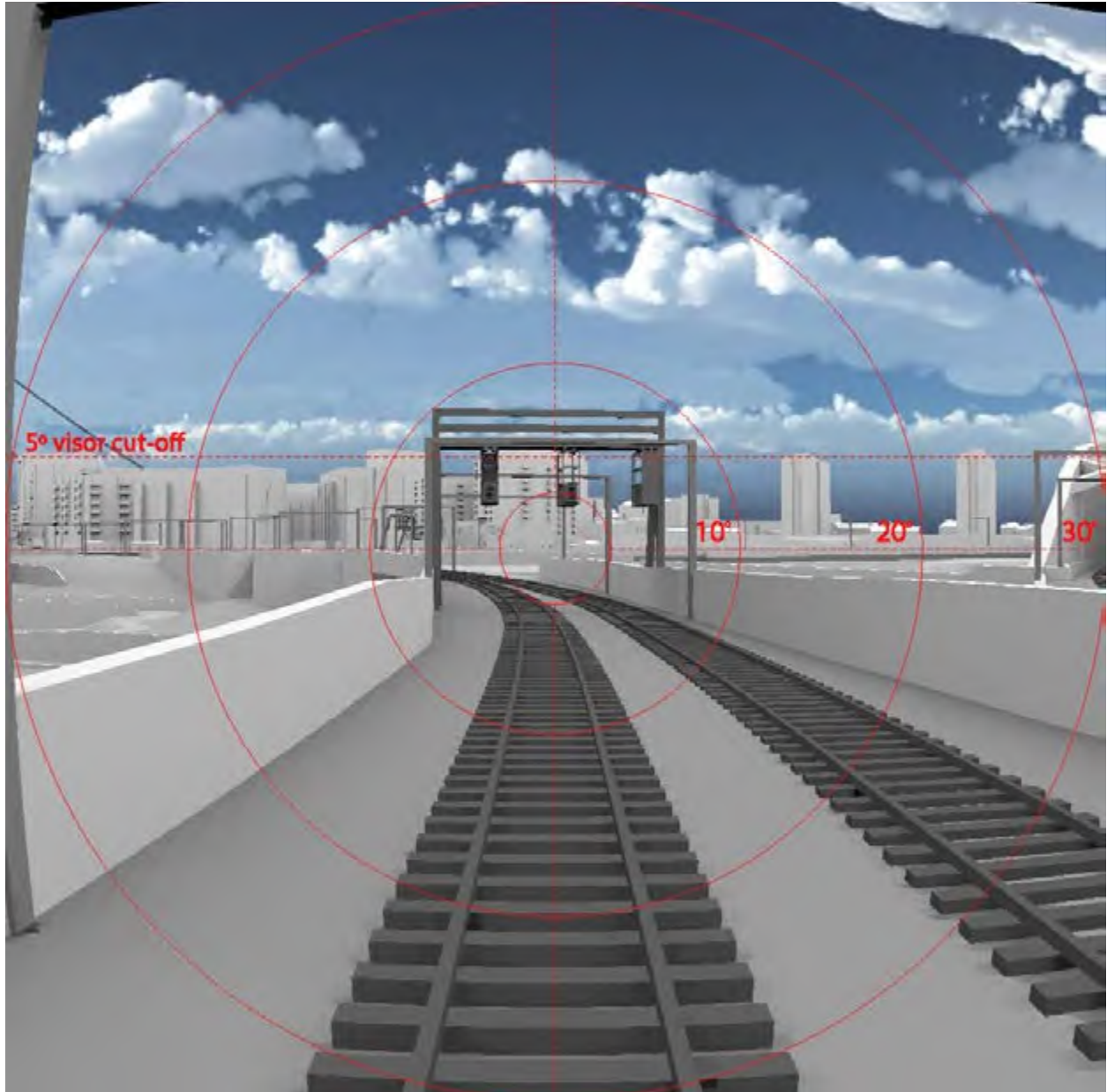


Fig. 703: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT



Fig. 704: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT**



Fig. 705: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

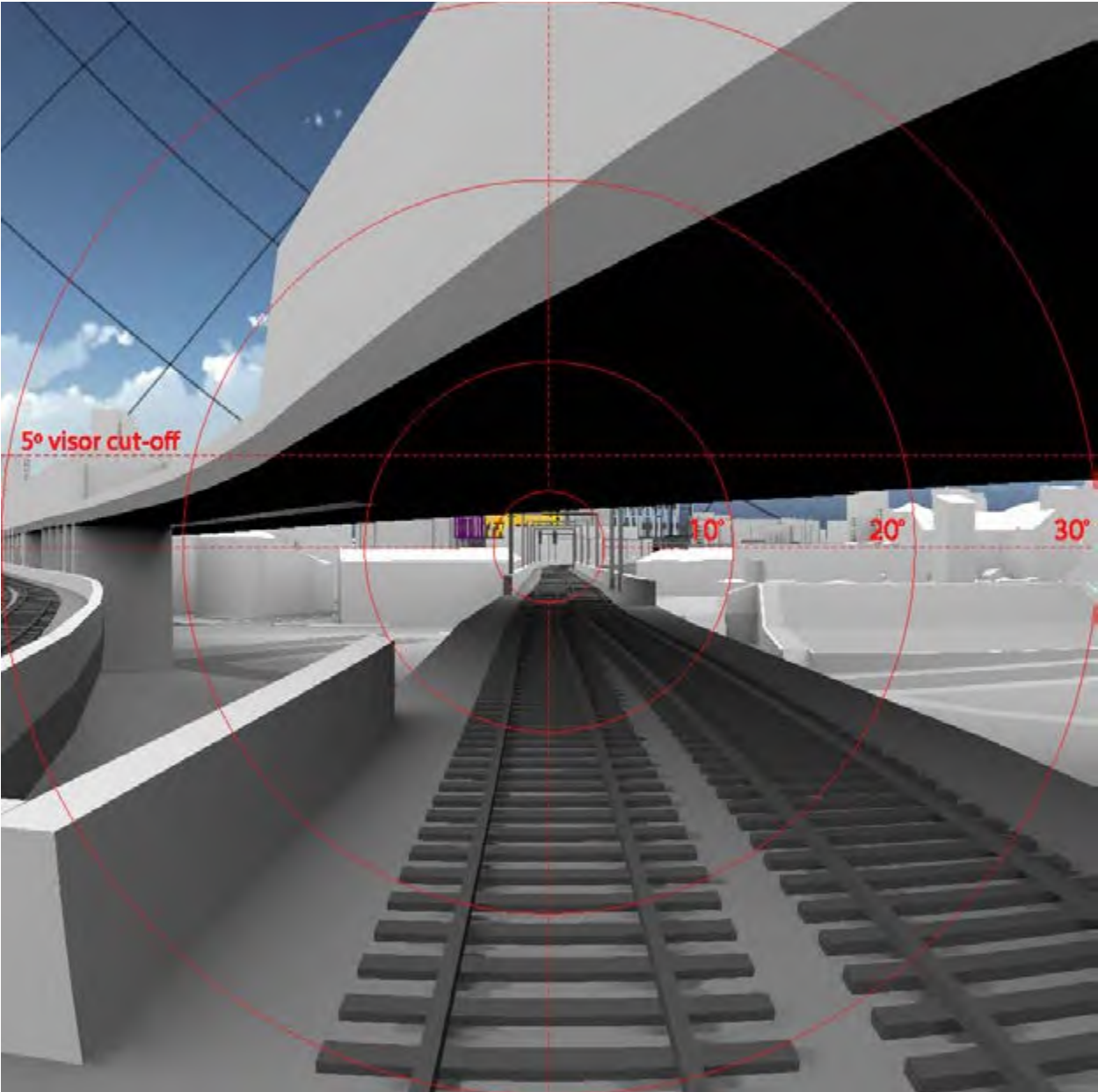


Fig. 706: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT**

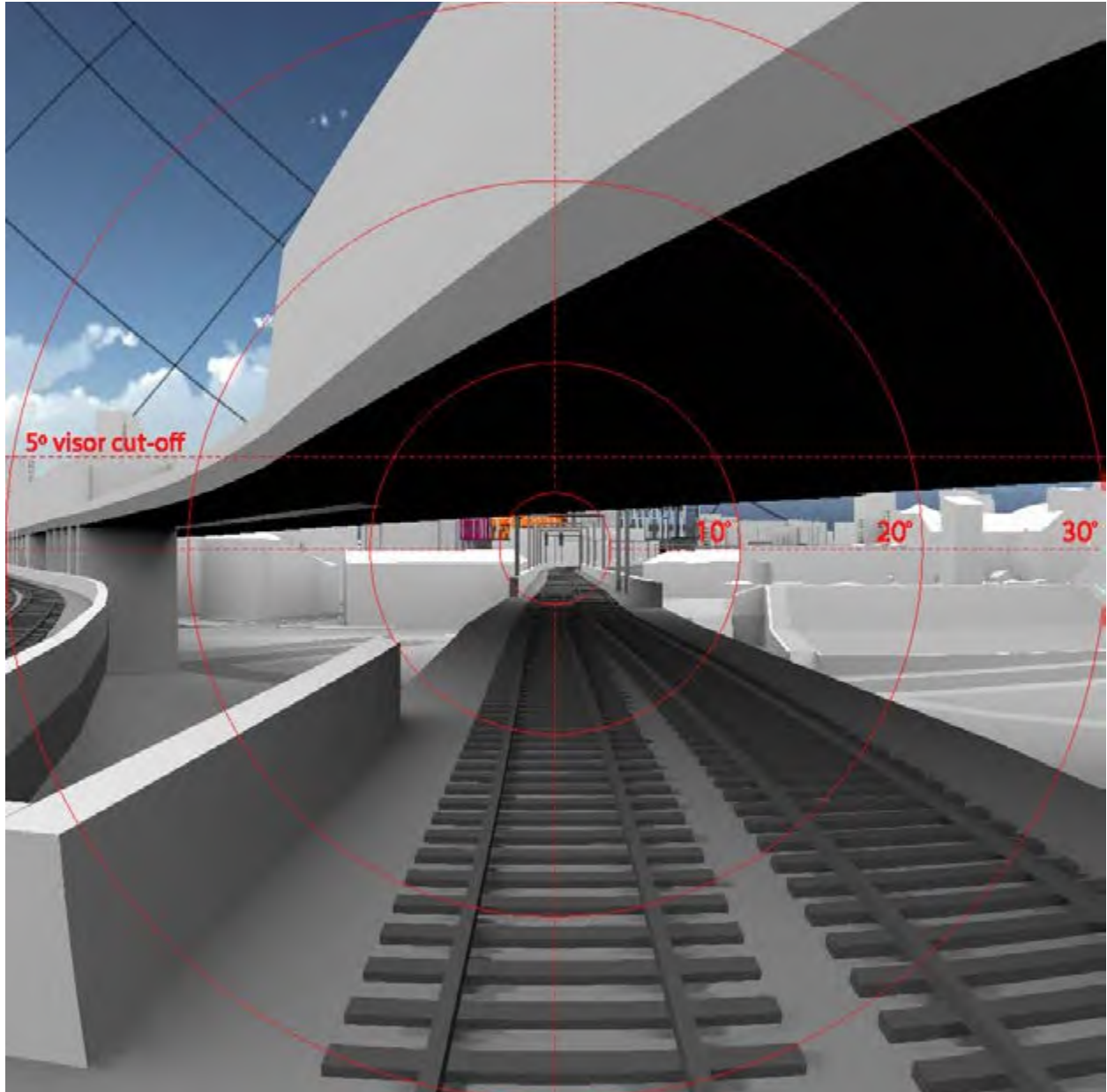


Fig. 707: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAIGHT

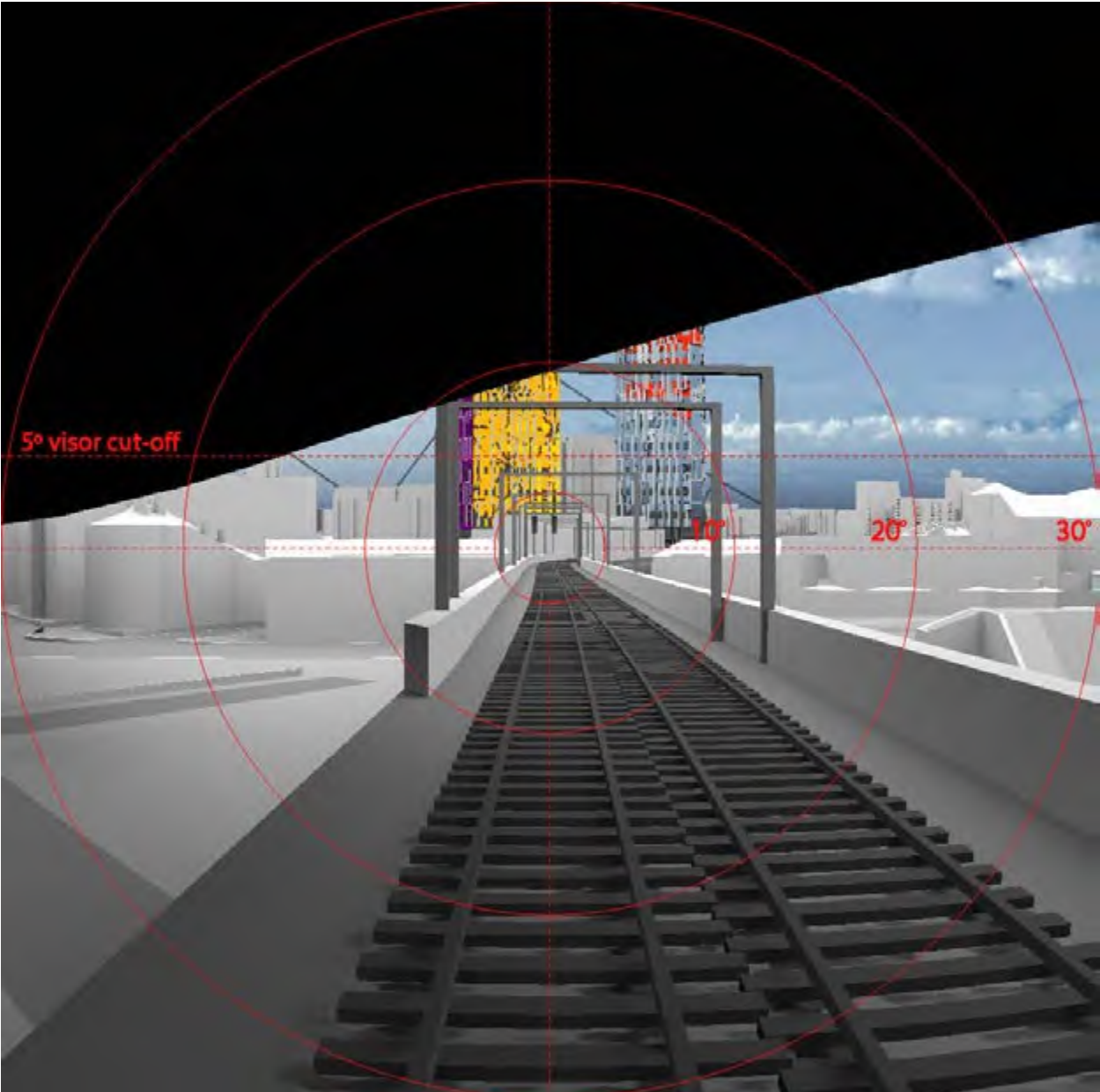
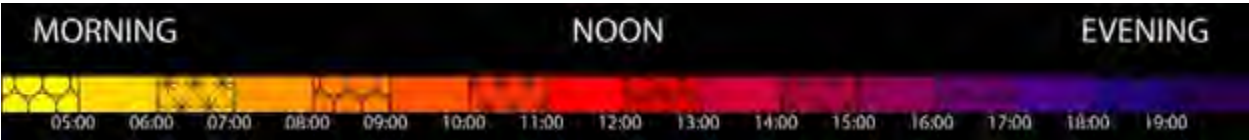


Fig. 708: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAIGHT**

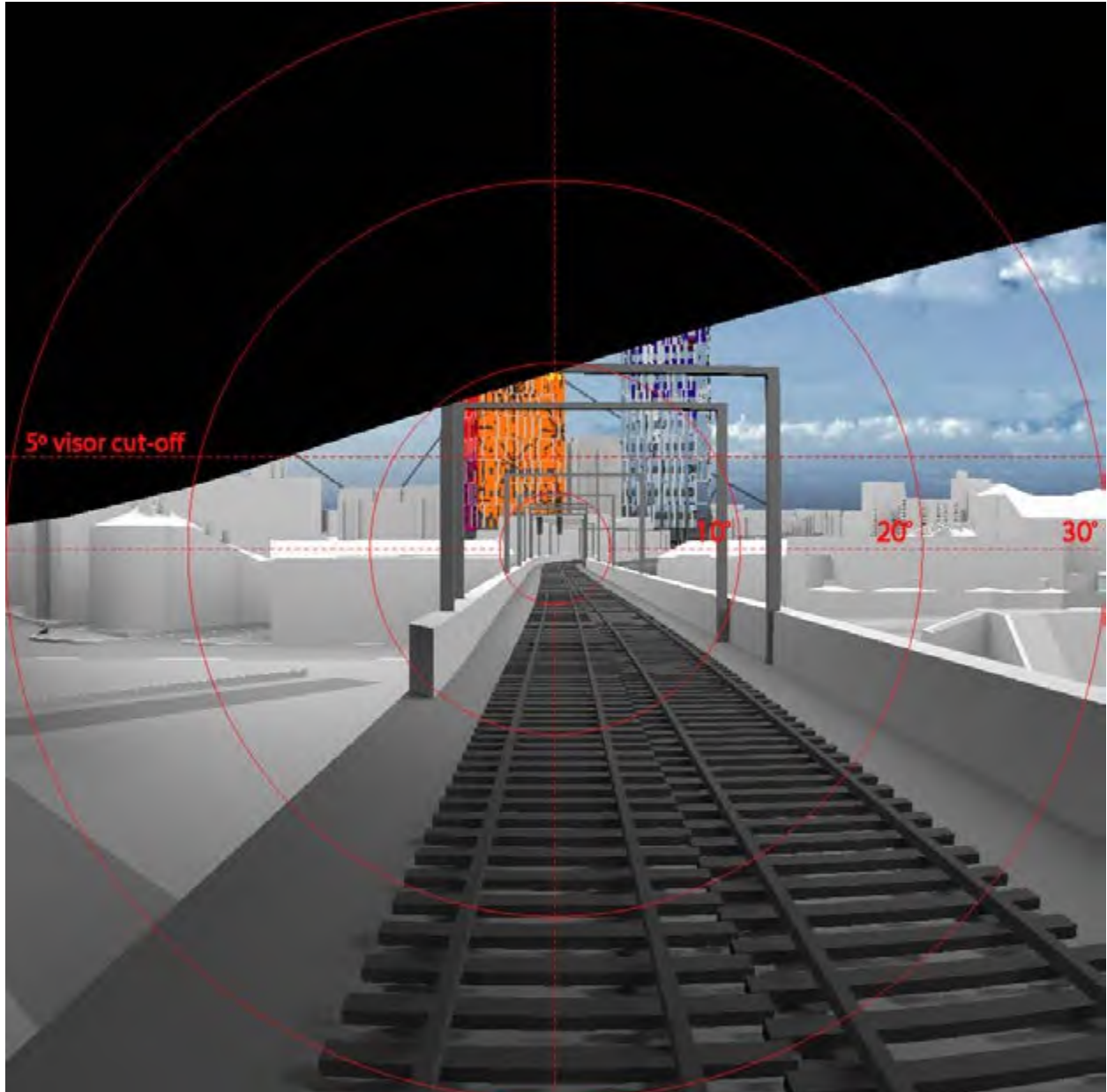


Fig. 709: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

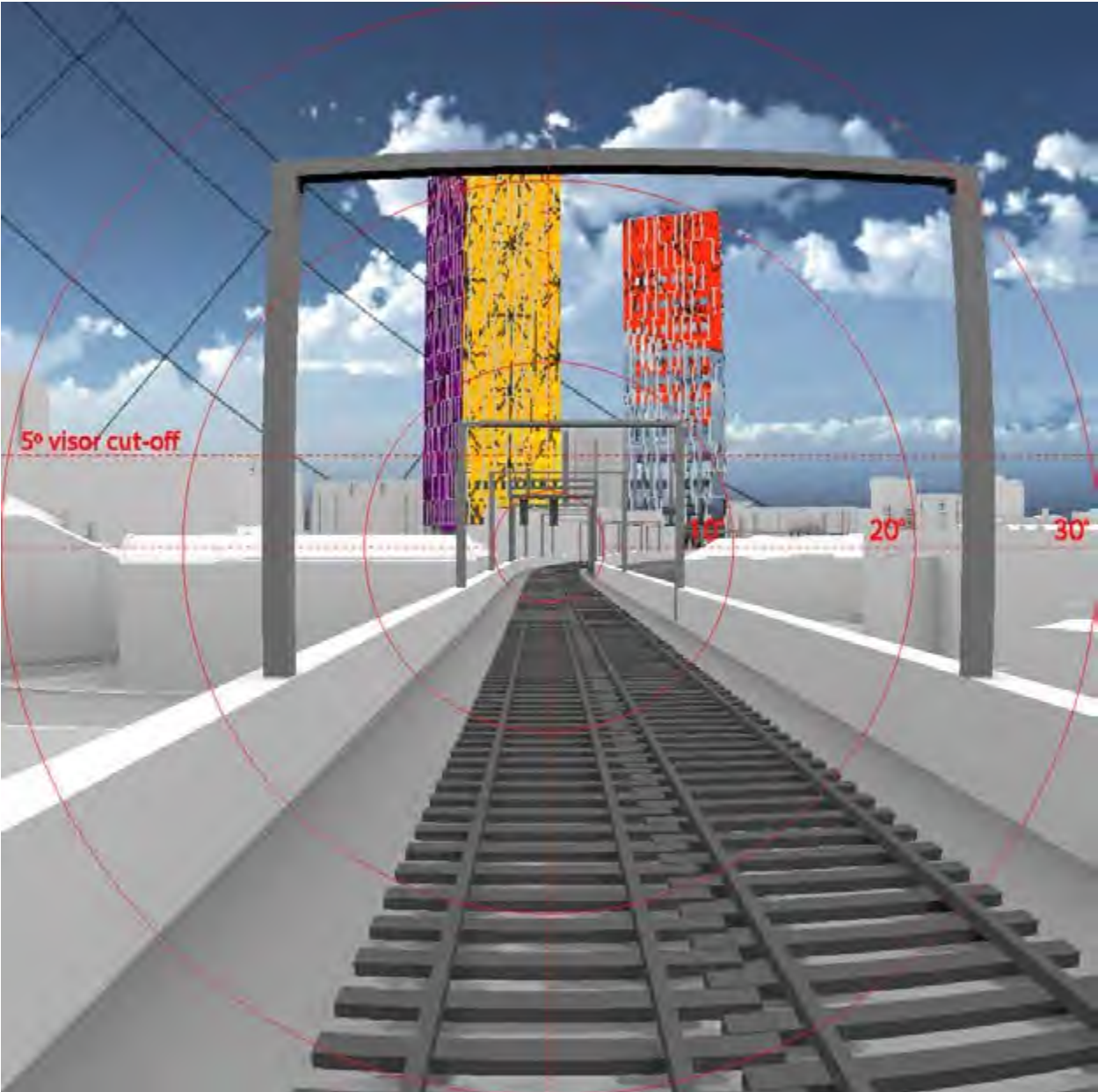


Fig. 710: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

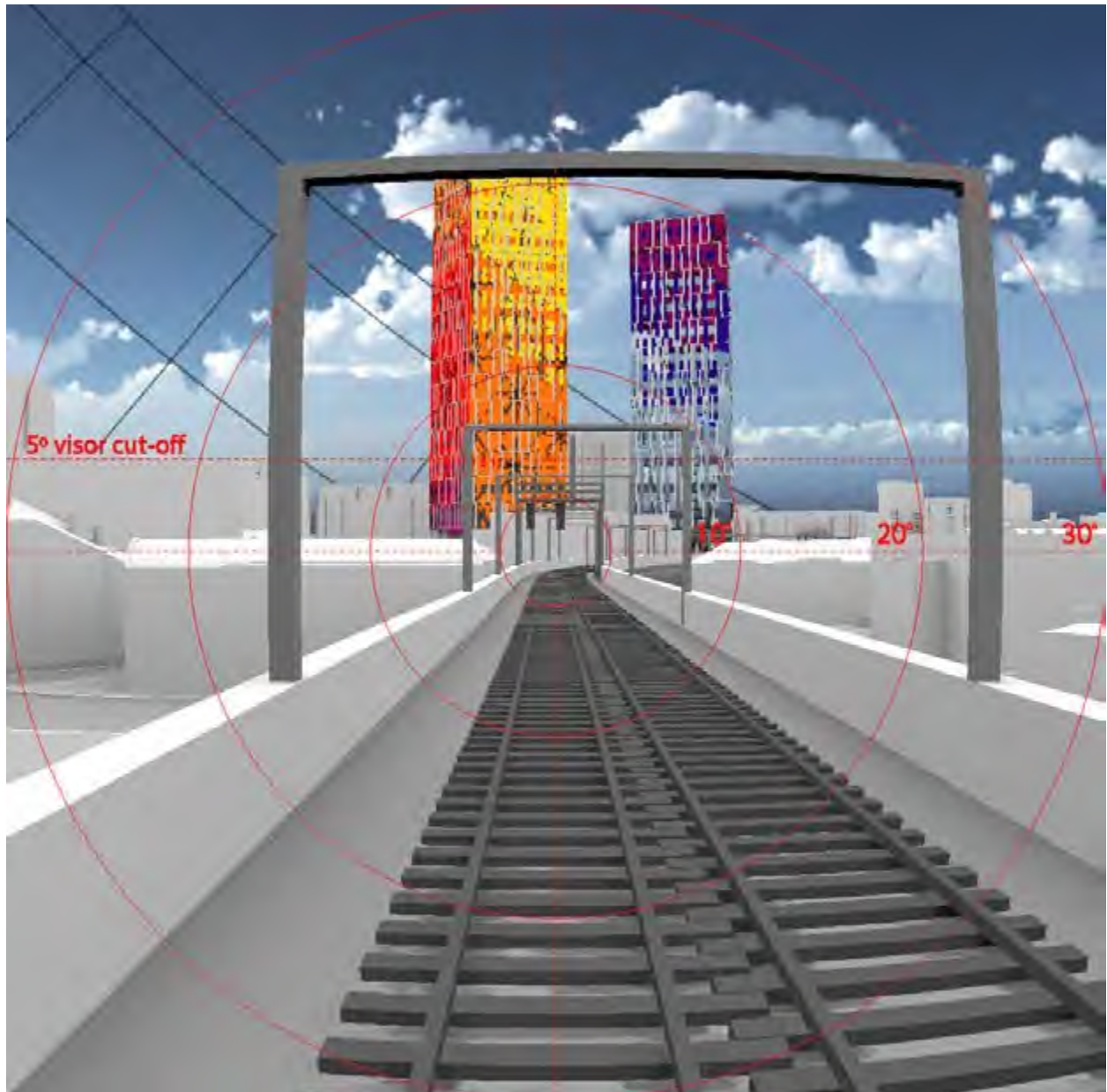


Fig. 711: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

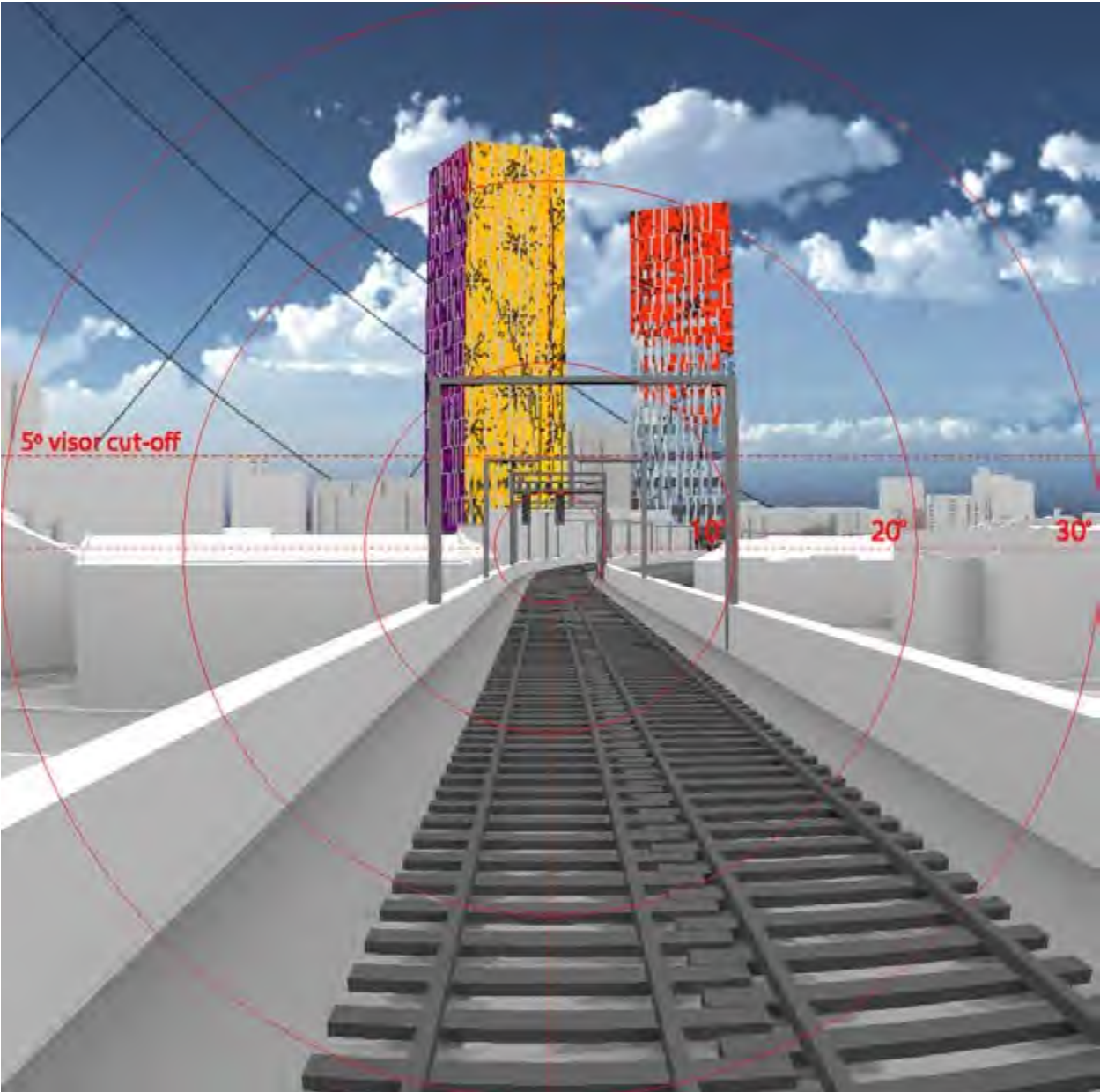


Fig. 712: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

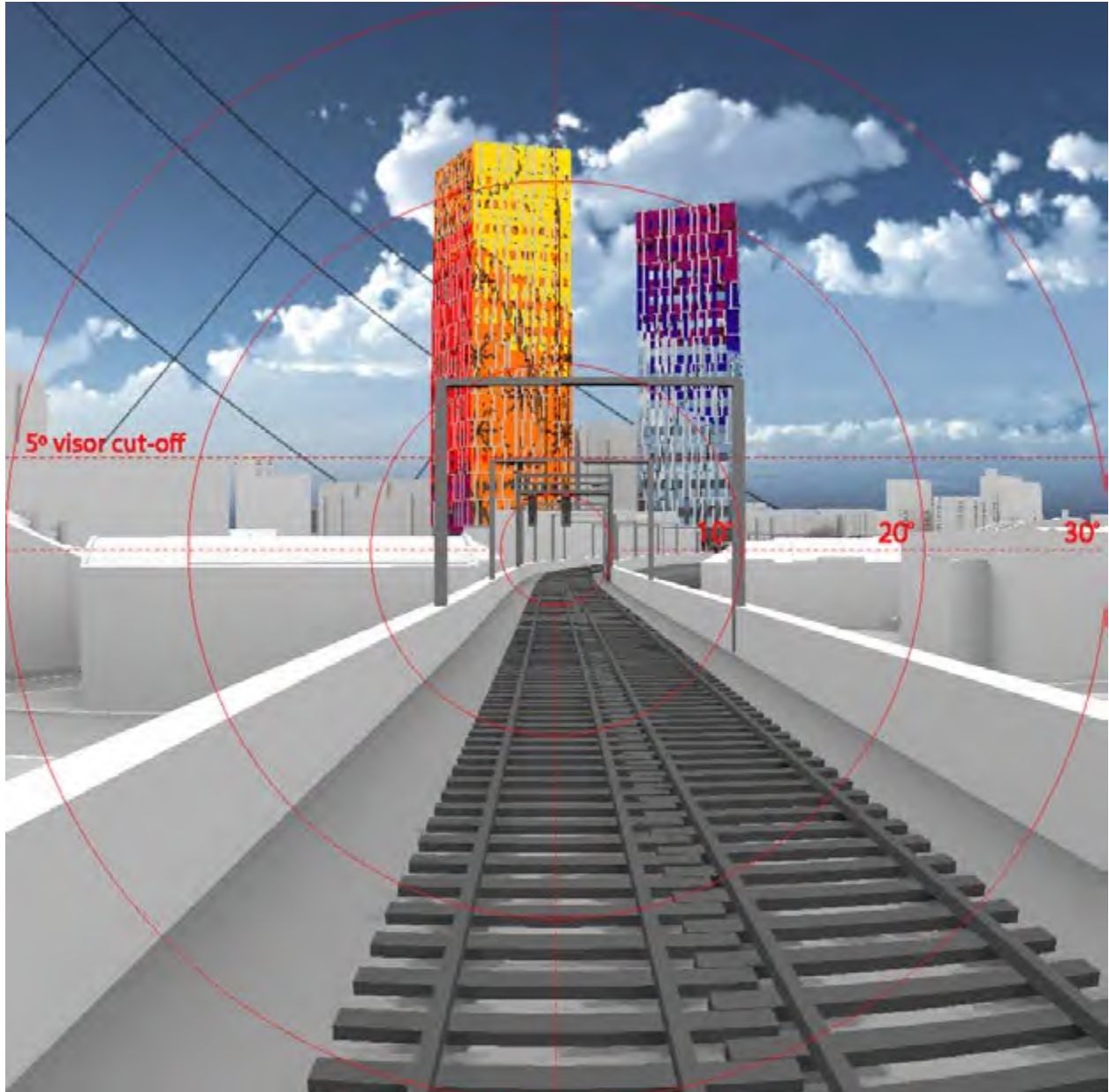


Fig. 713: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

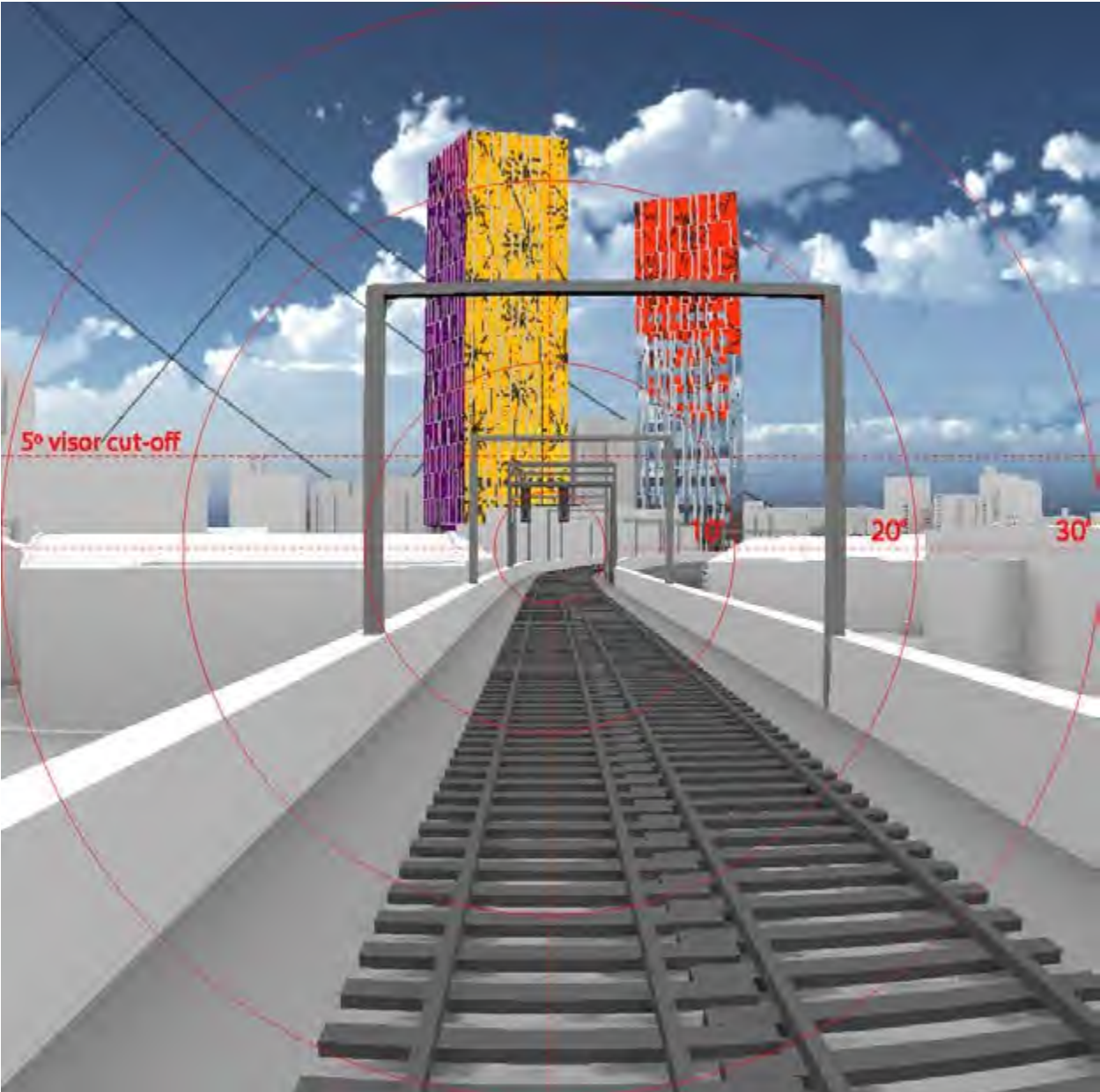


Fig. 714: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

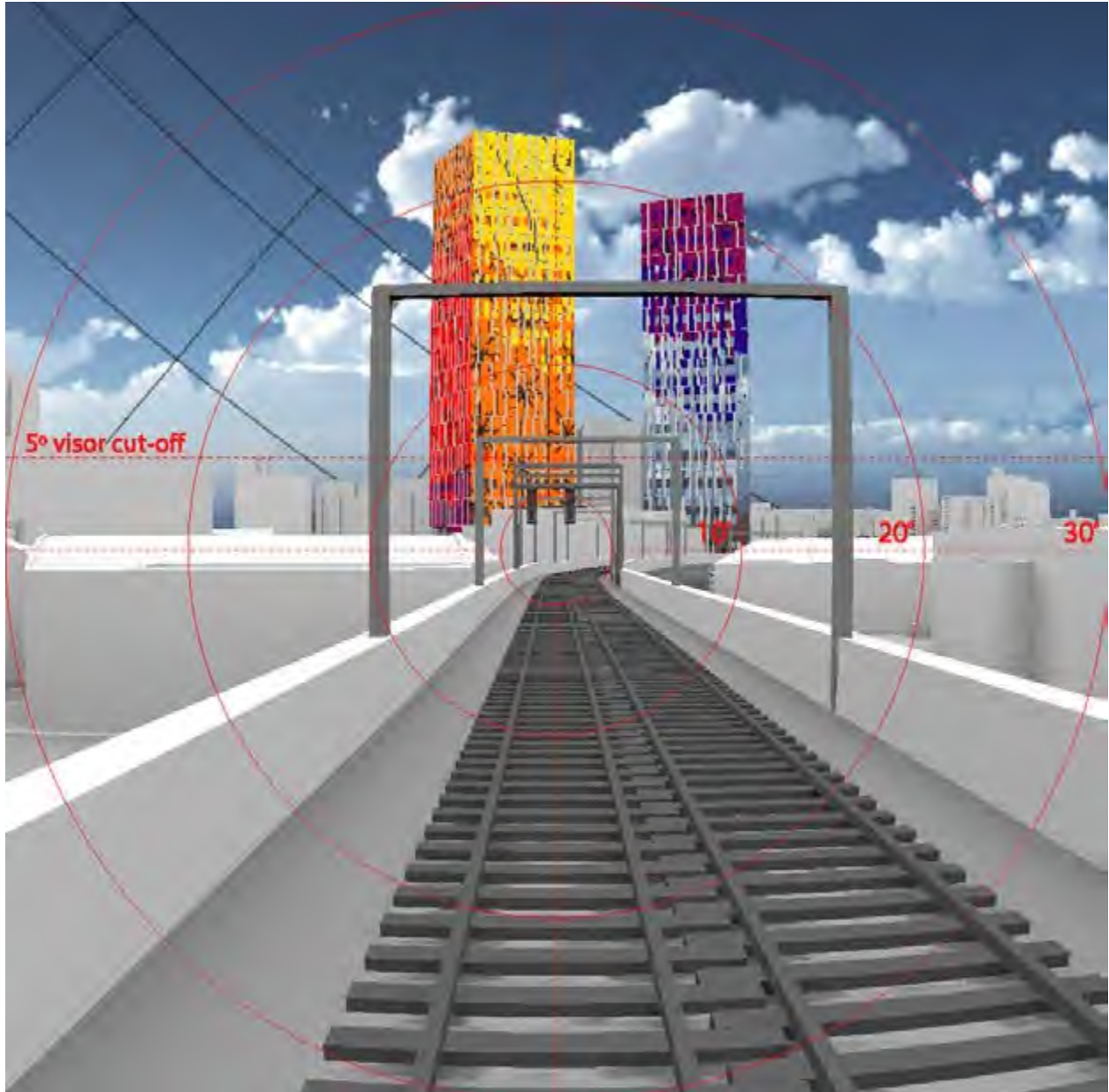


Fig. 715: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

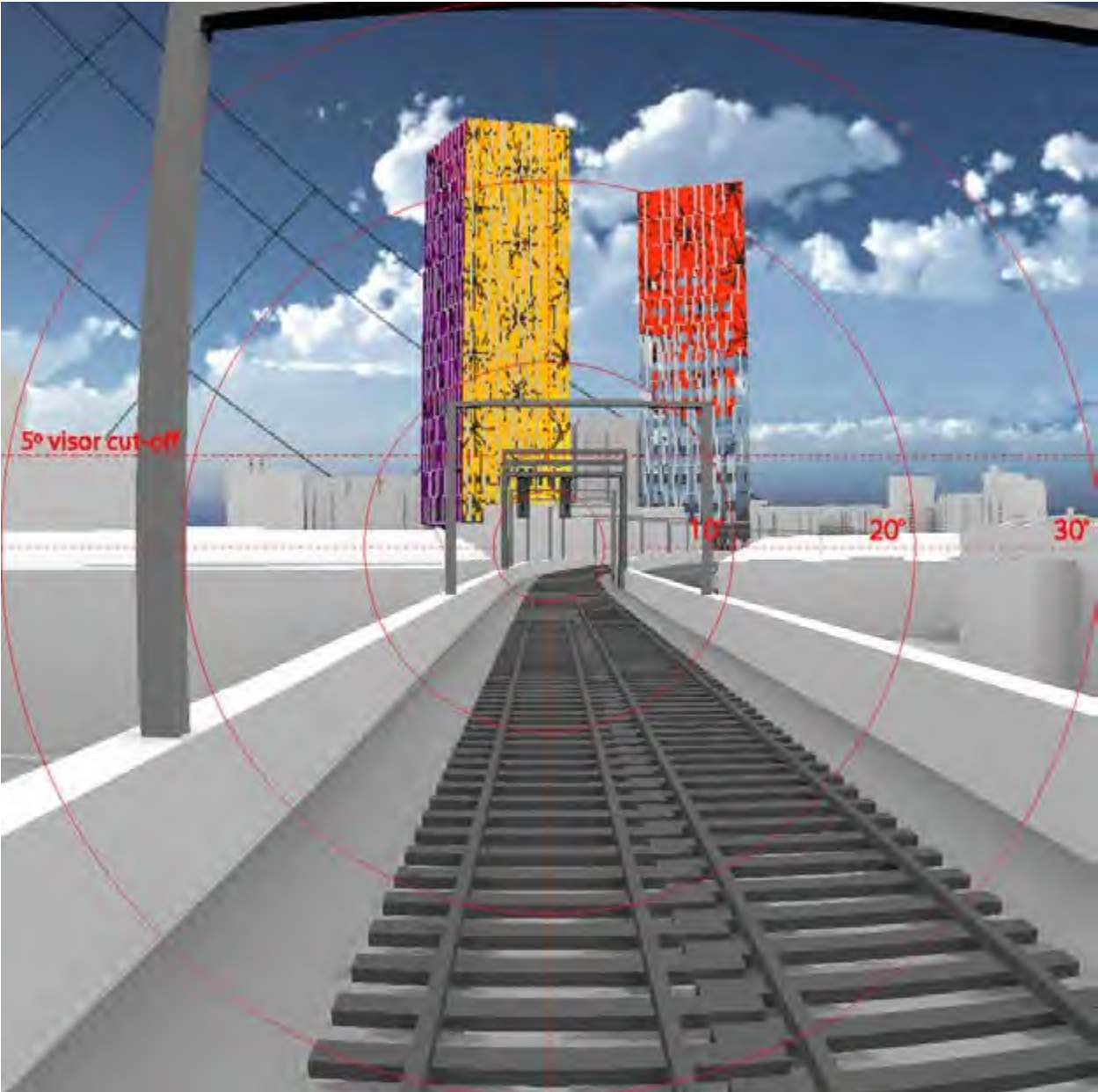


Fig. 716: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

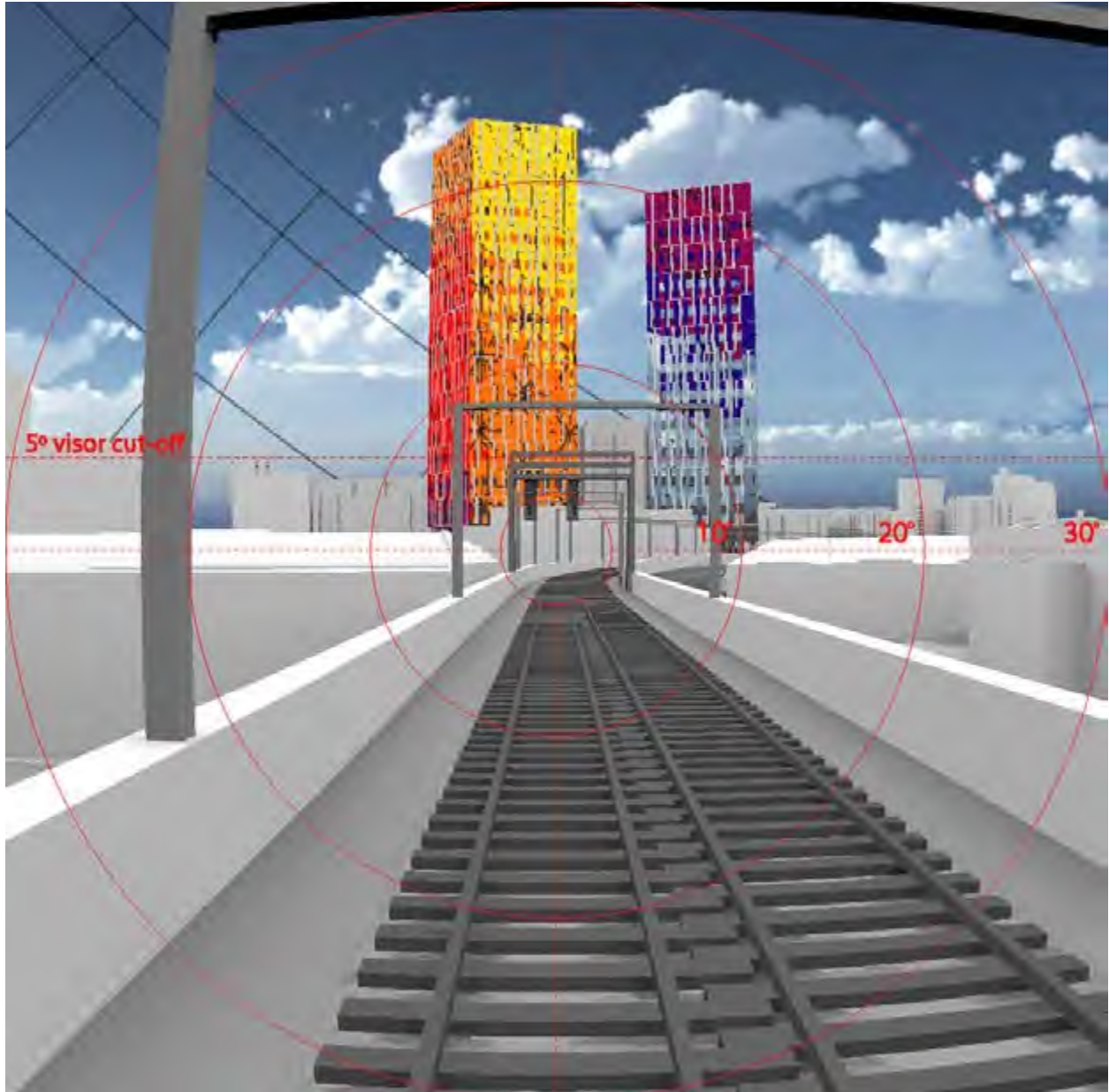


Fig. 717: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

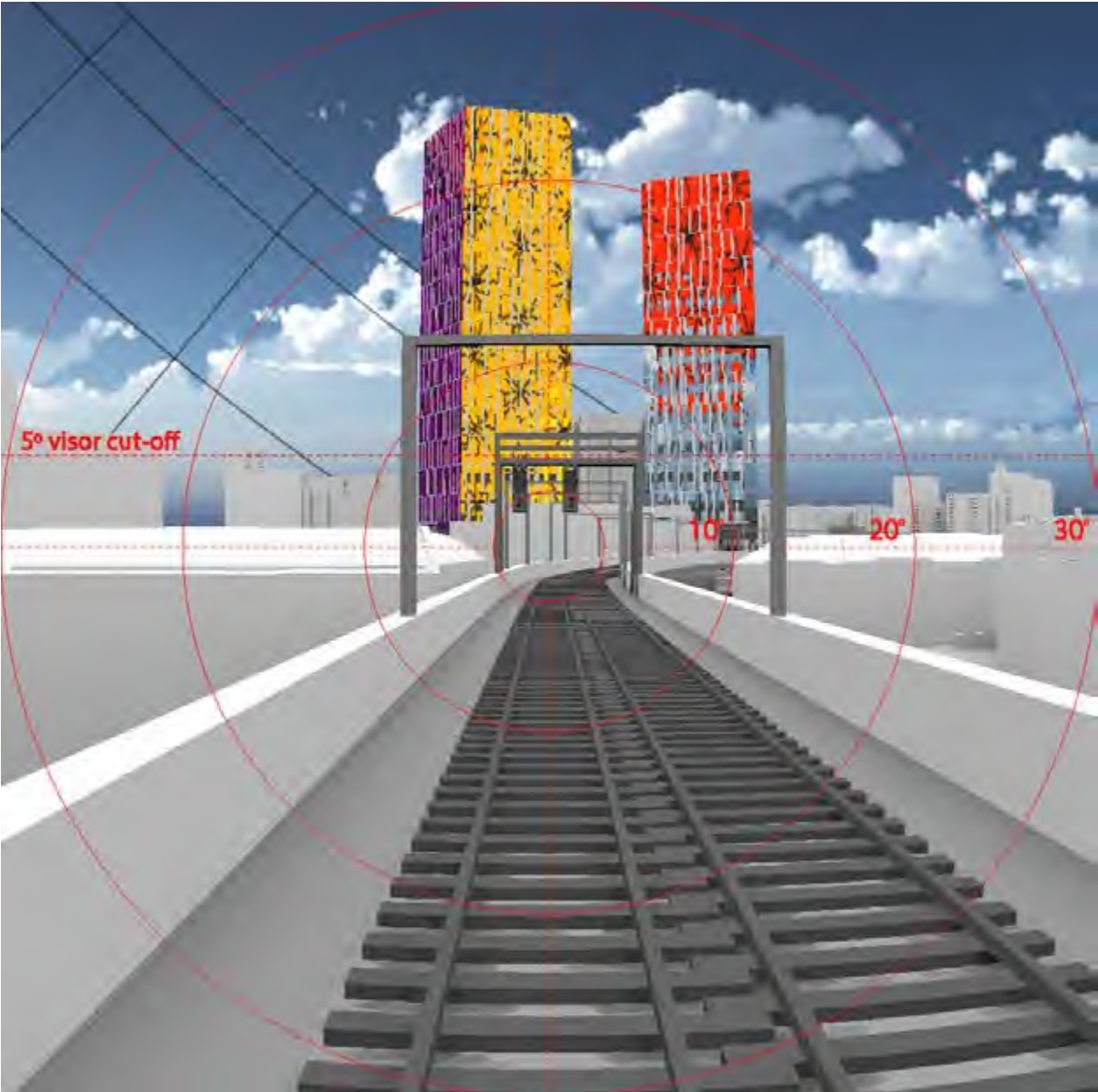


Fig. 718: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**



Fig. 719: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

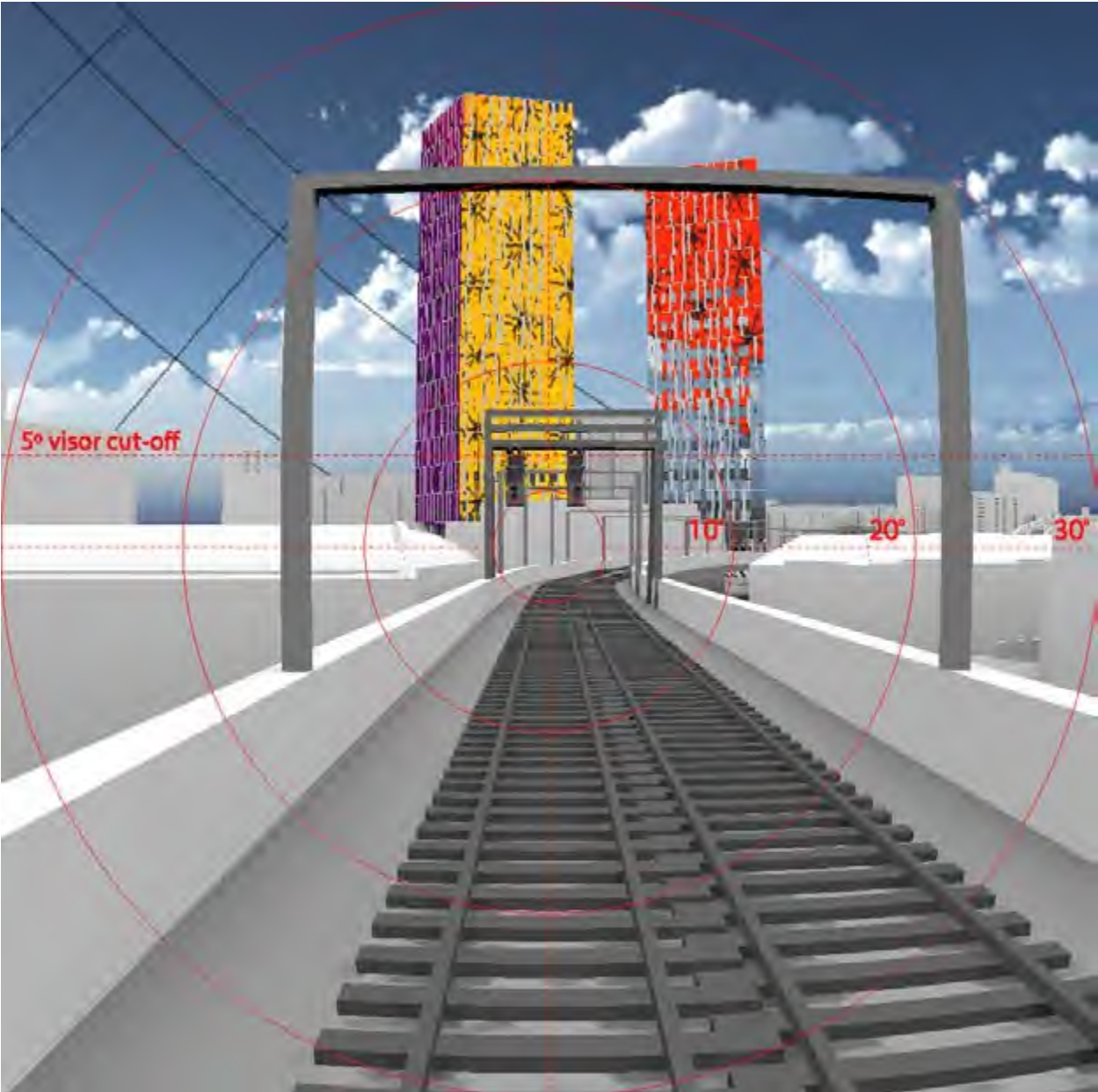


Fig. 720: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

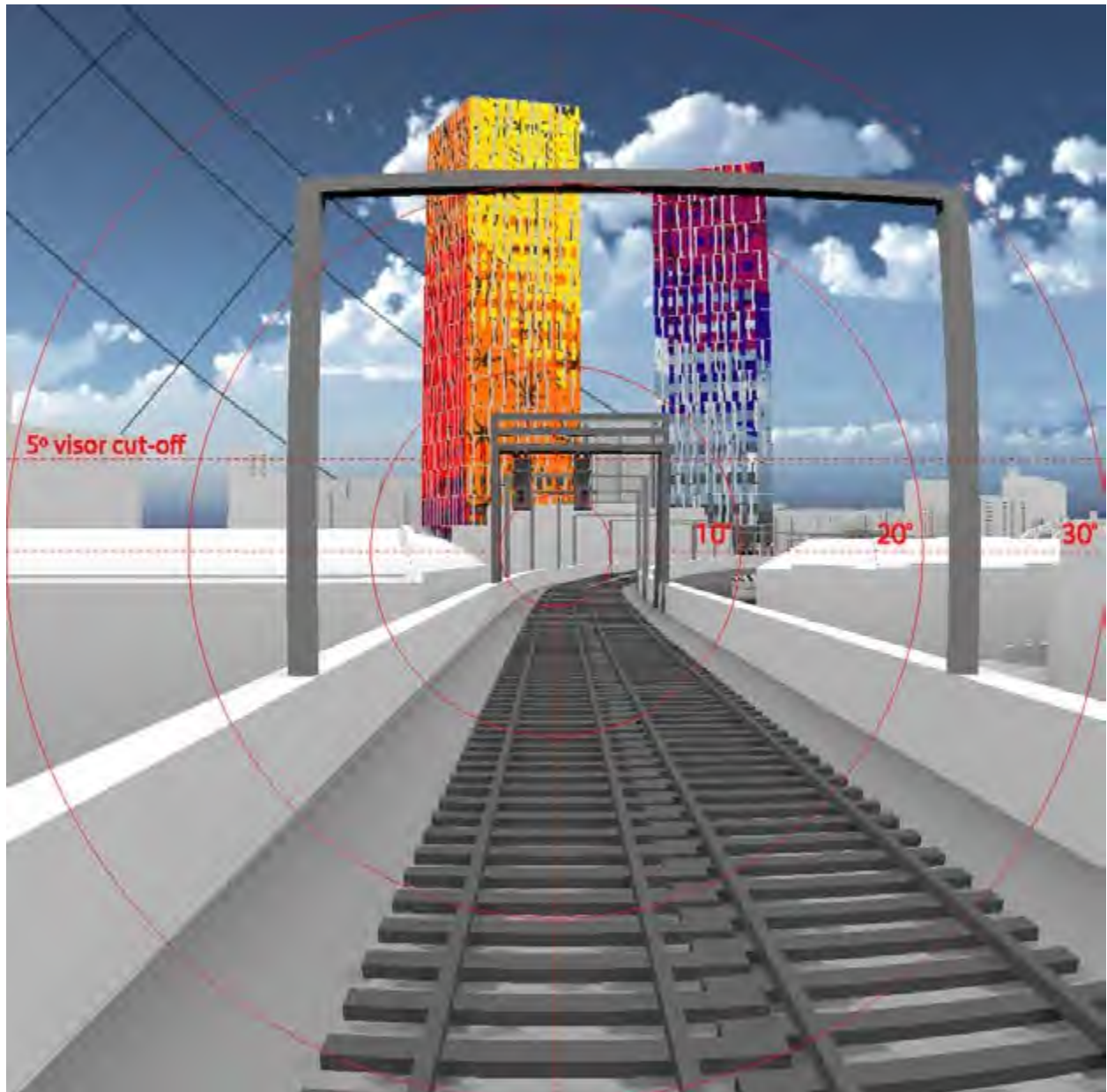


Fig. 721: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

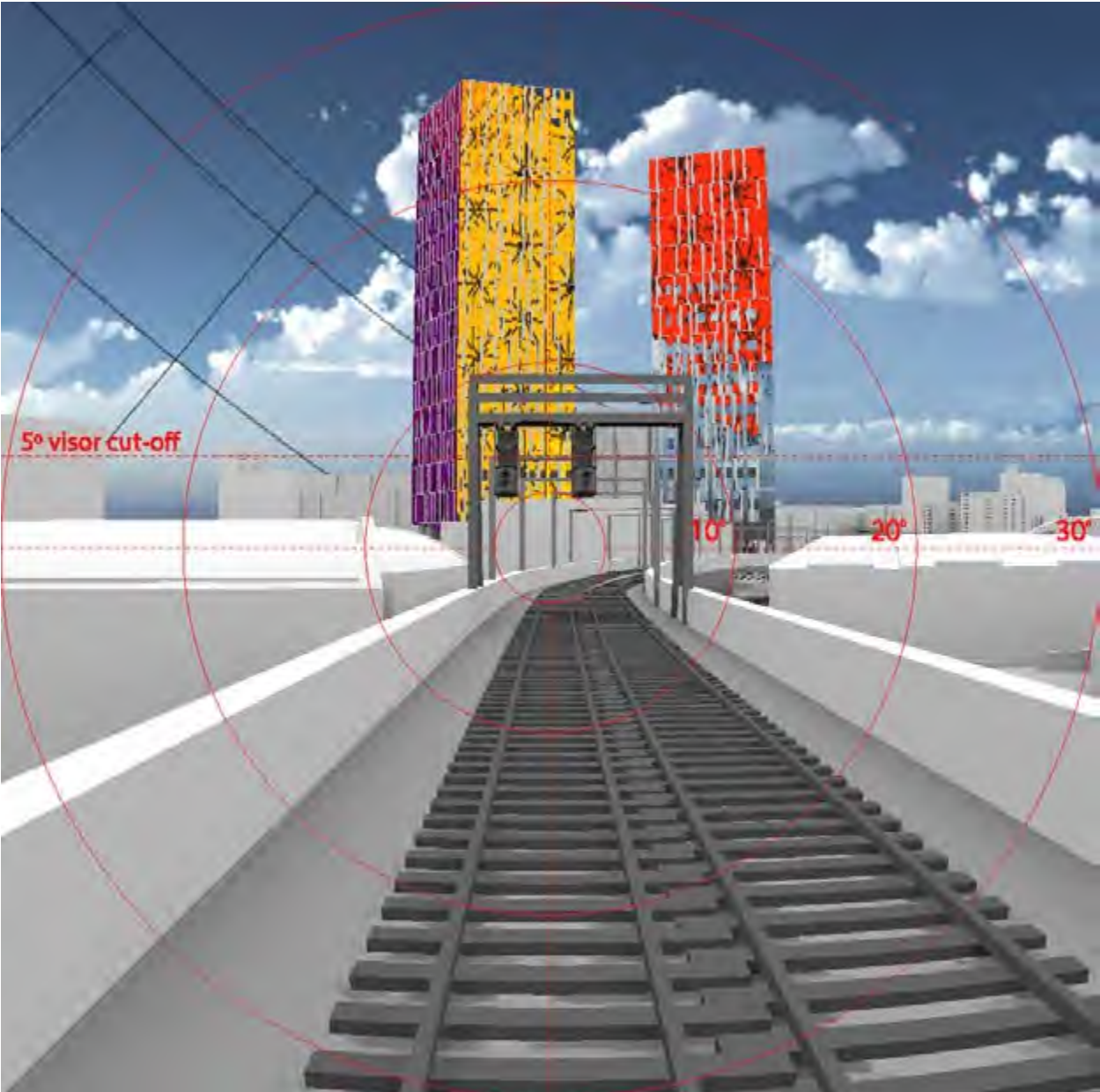


Fig. 722: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

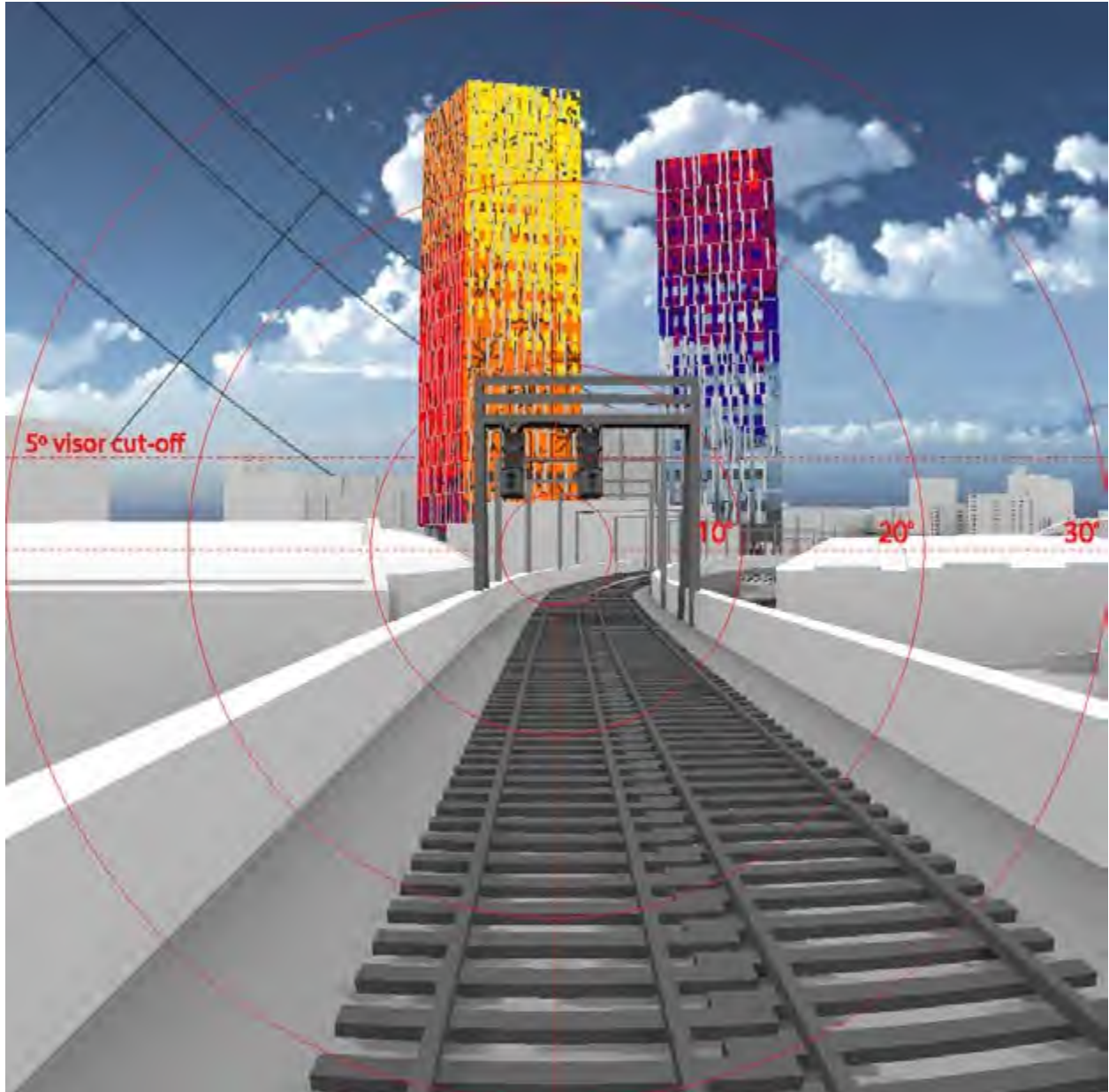


Fig. 723: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

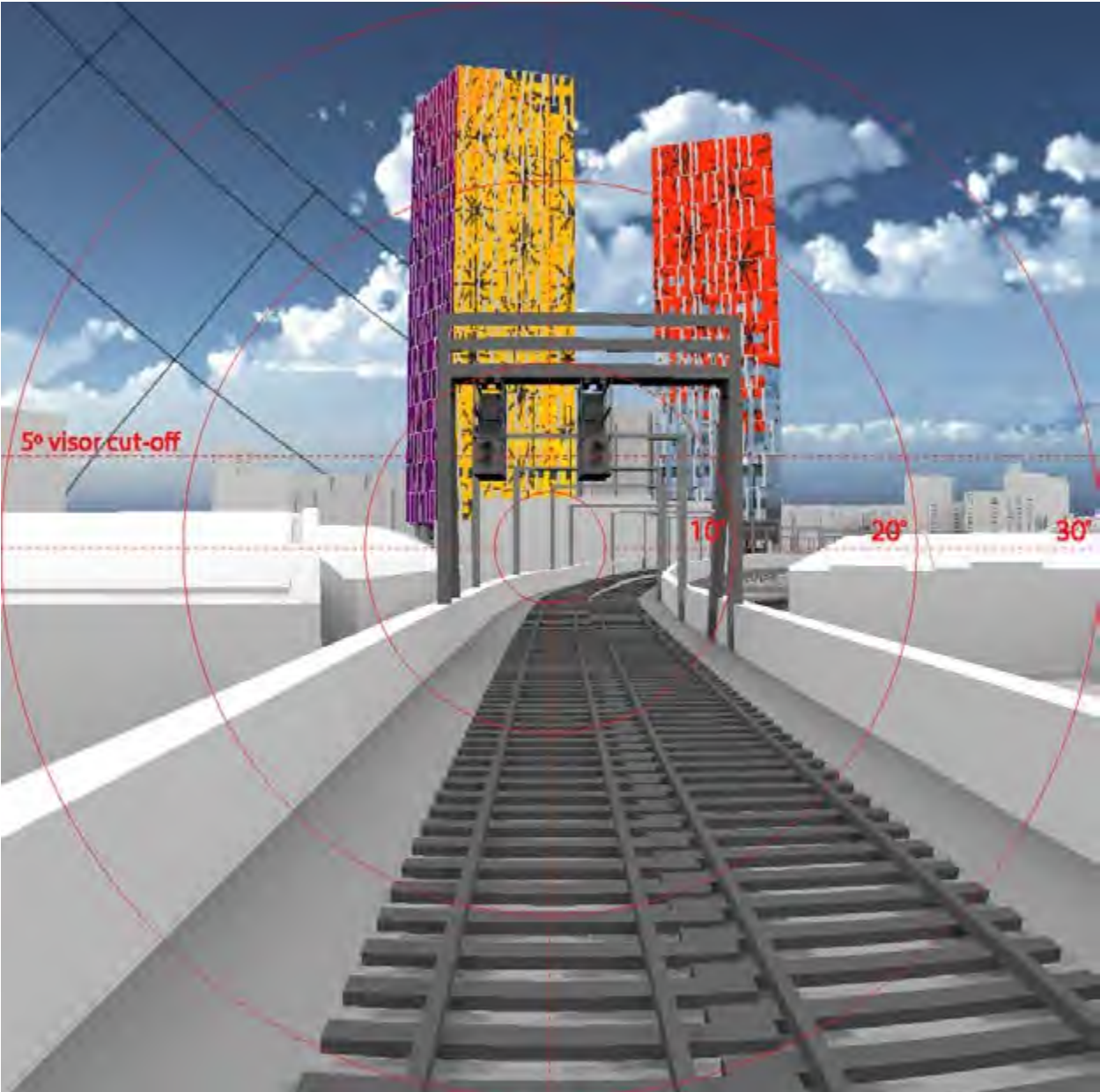


Fig. 724: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

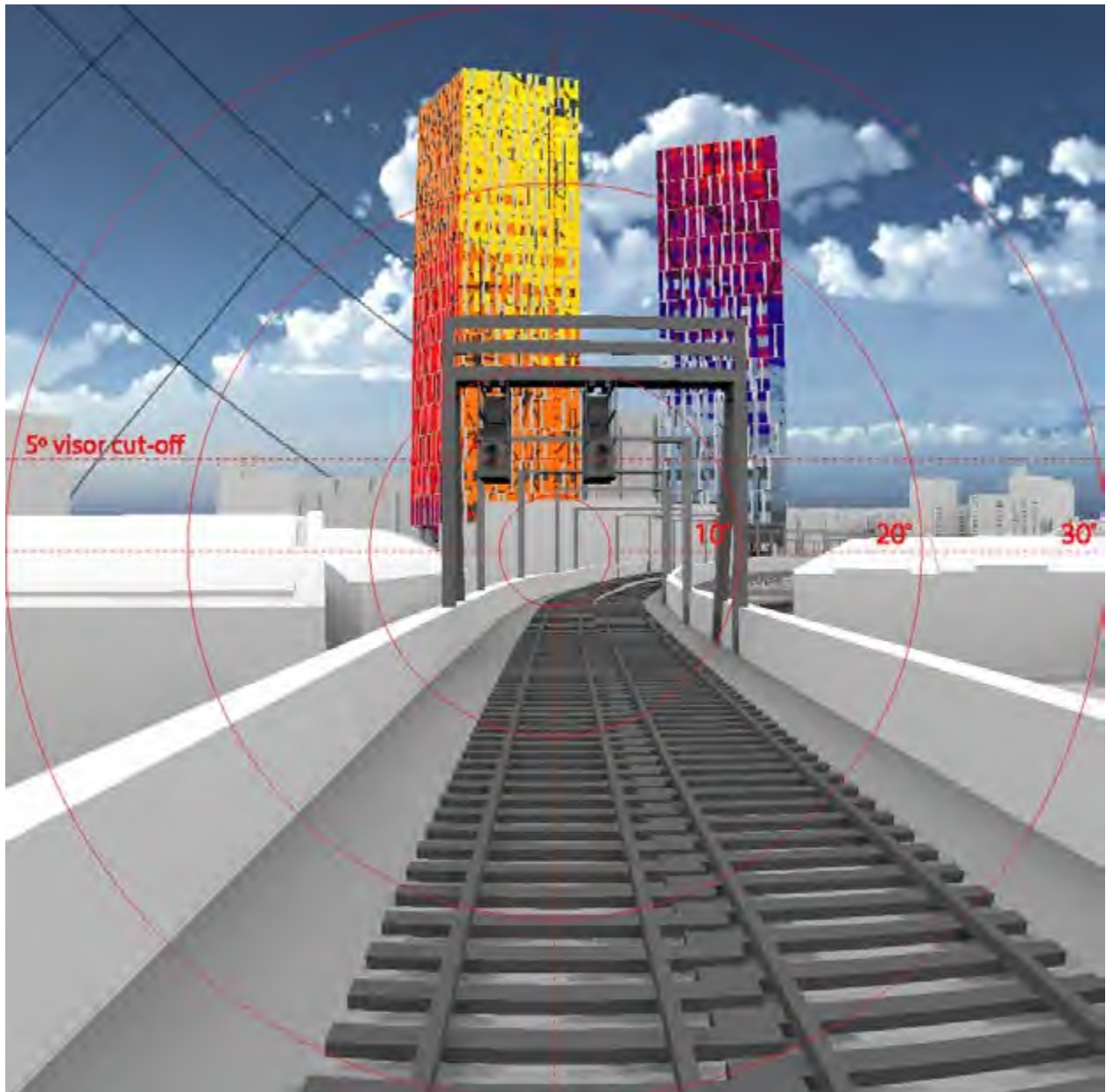


Fig. 725: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

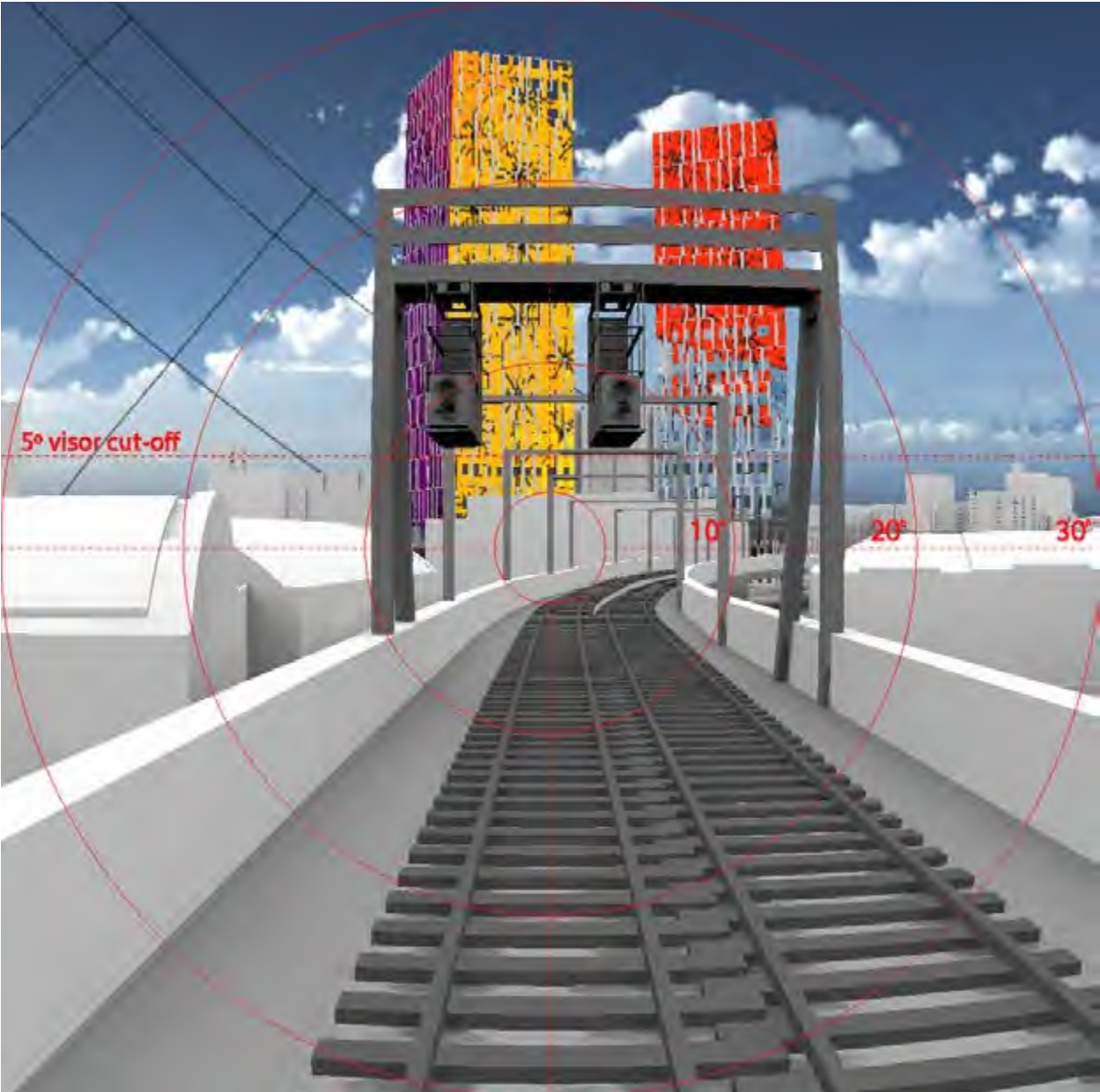


Fig. 726: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

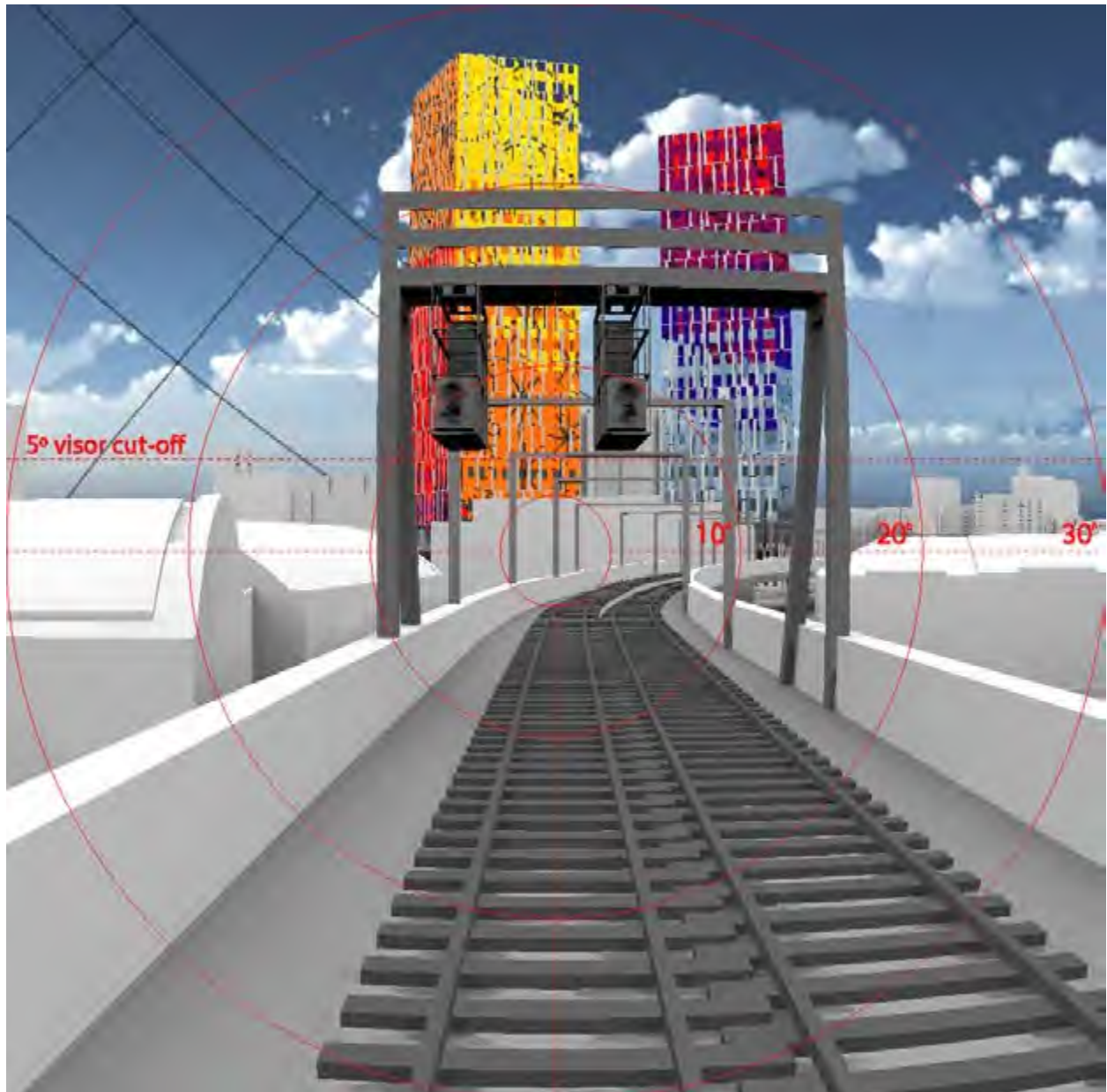


Fig. 727: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAIGHT

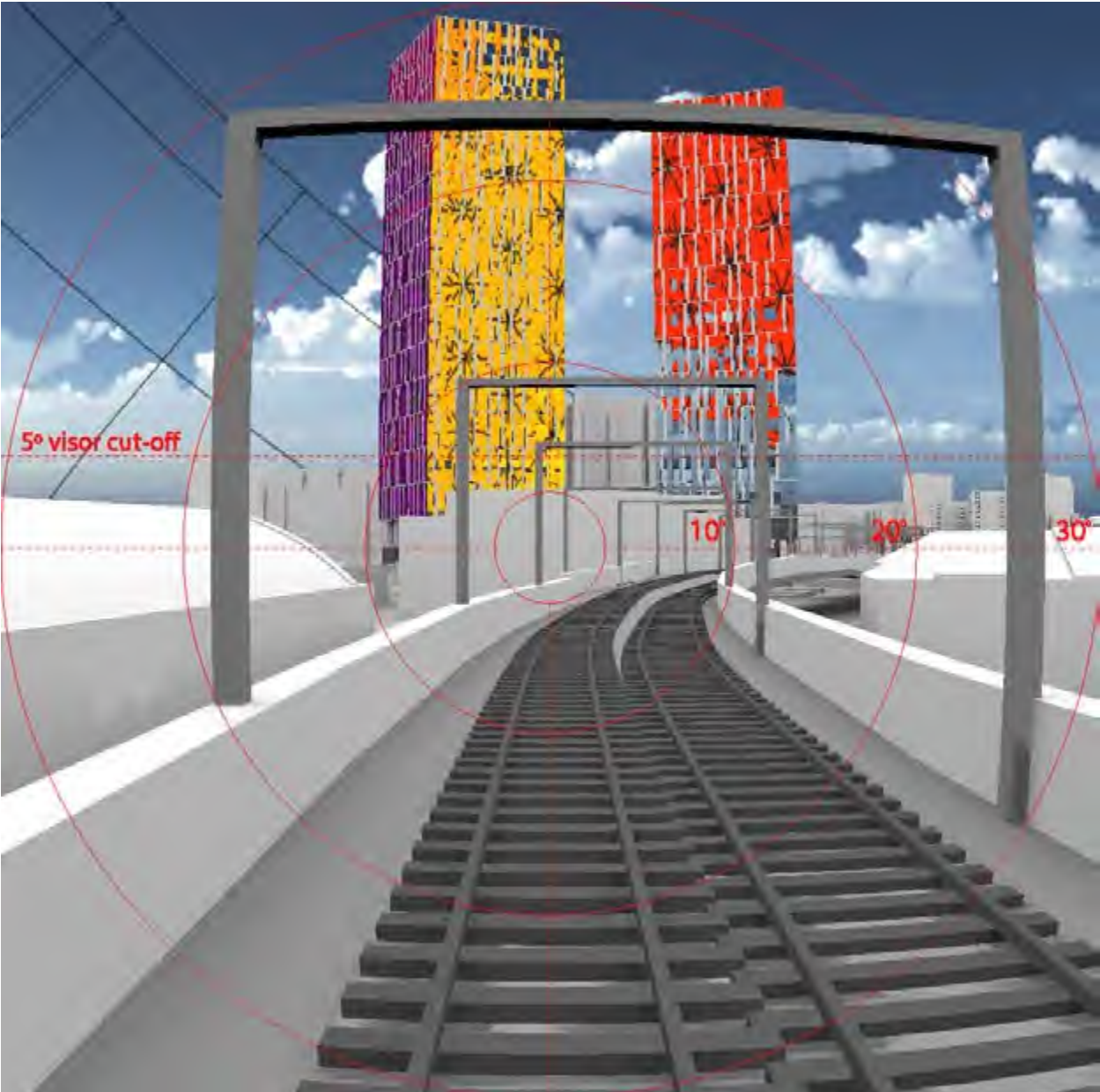


Fig. 728: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAGHT**

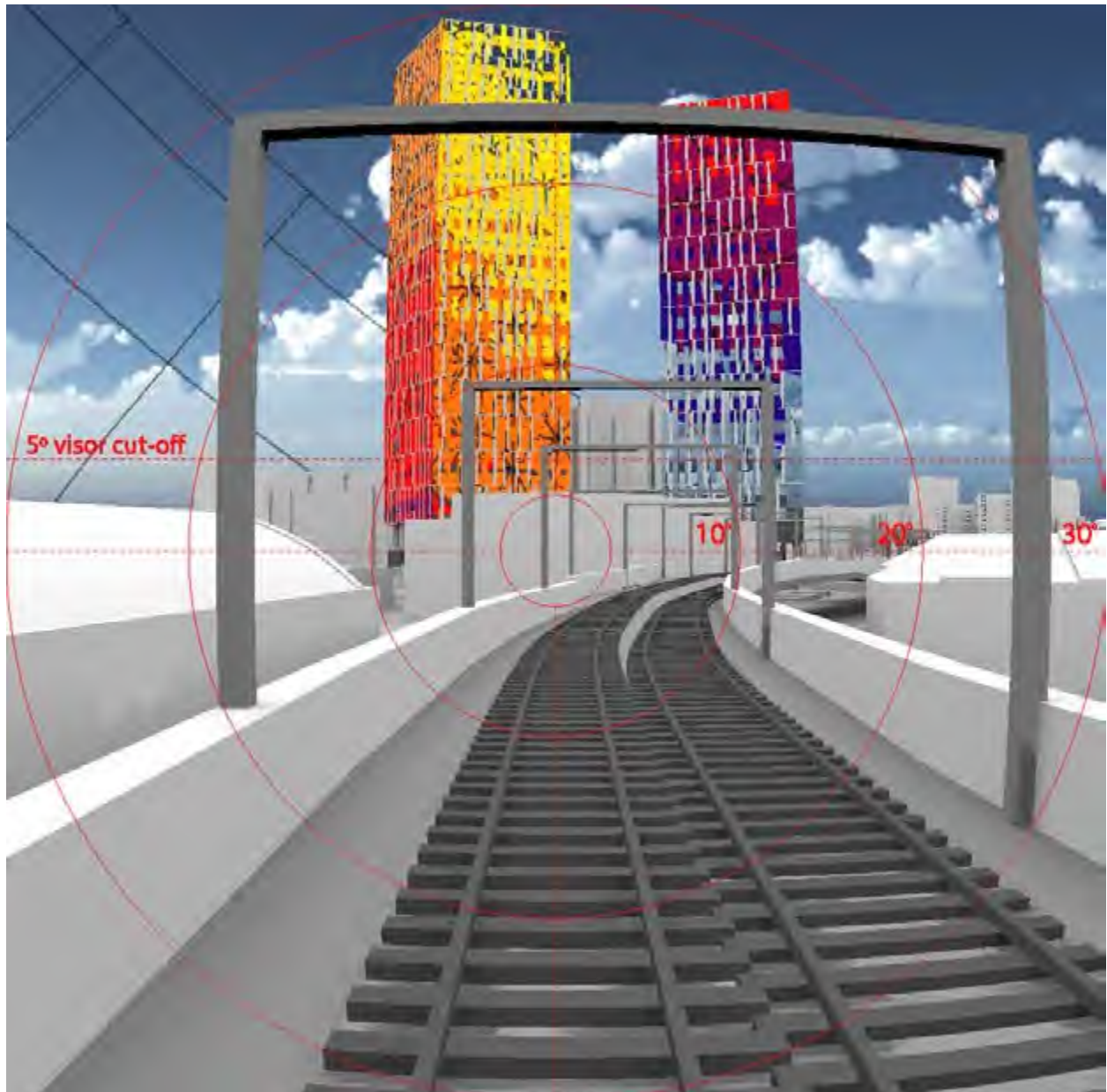


Fig. 729: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAGHT

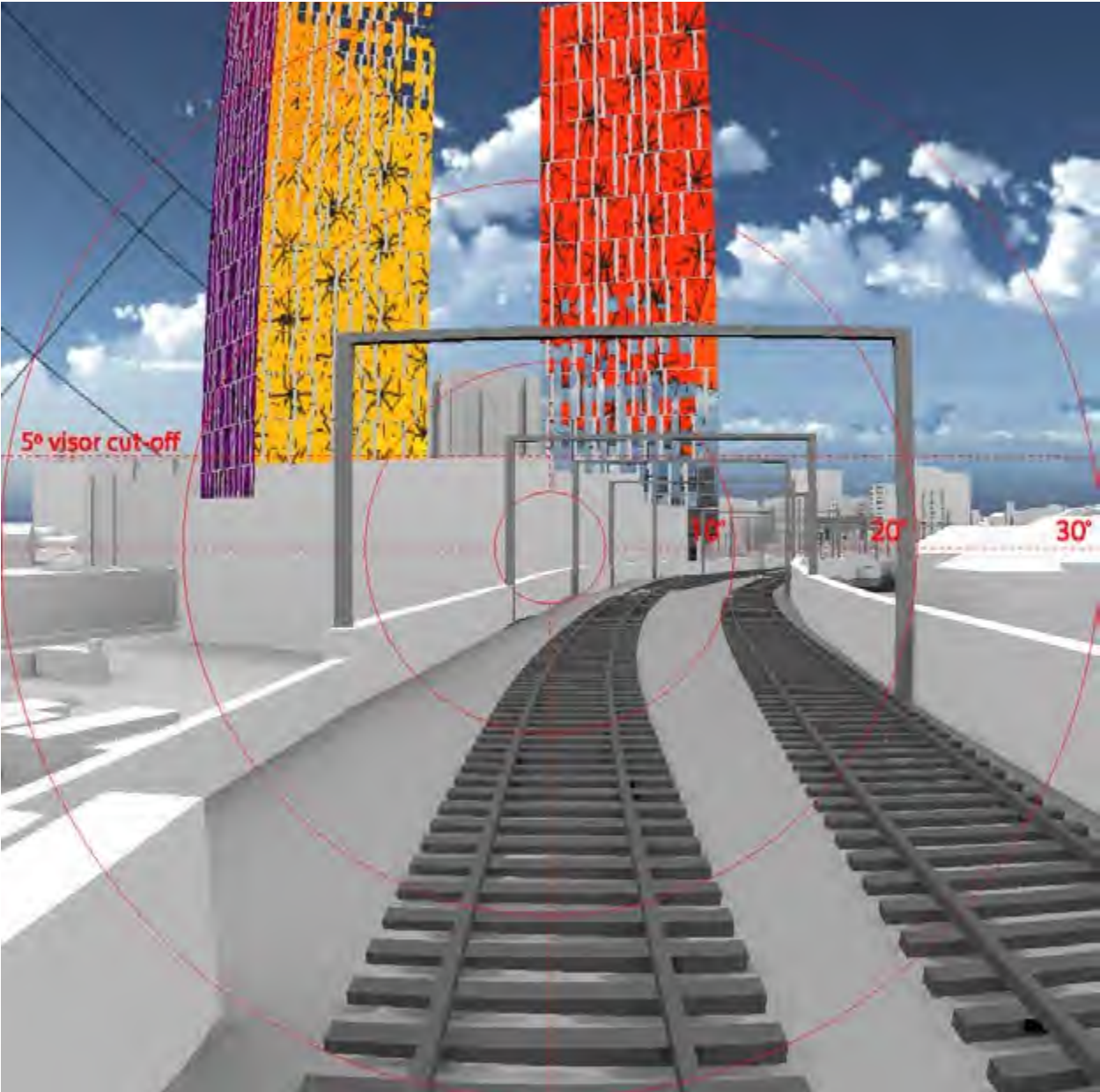


Fig. 730: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAGHT**

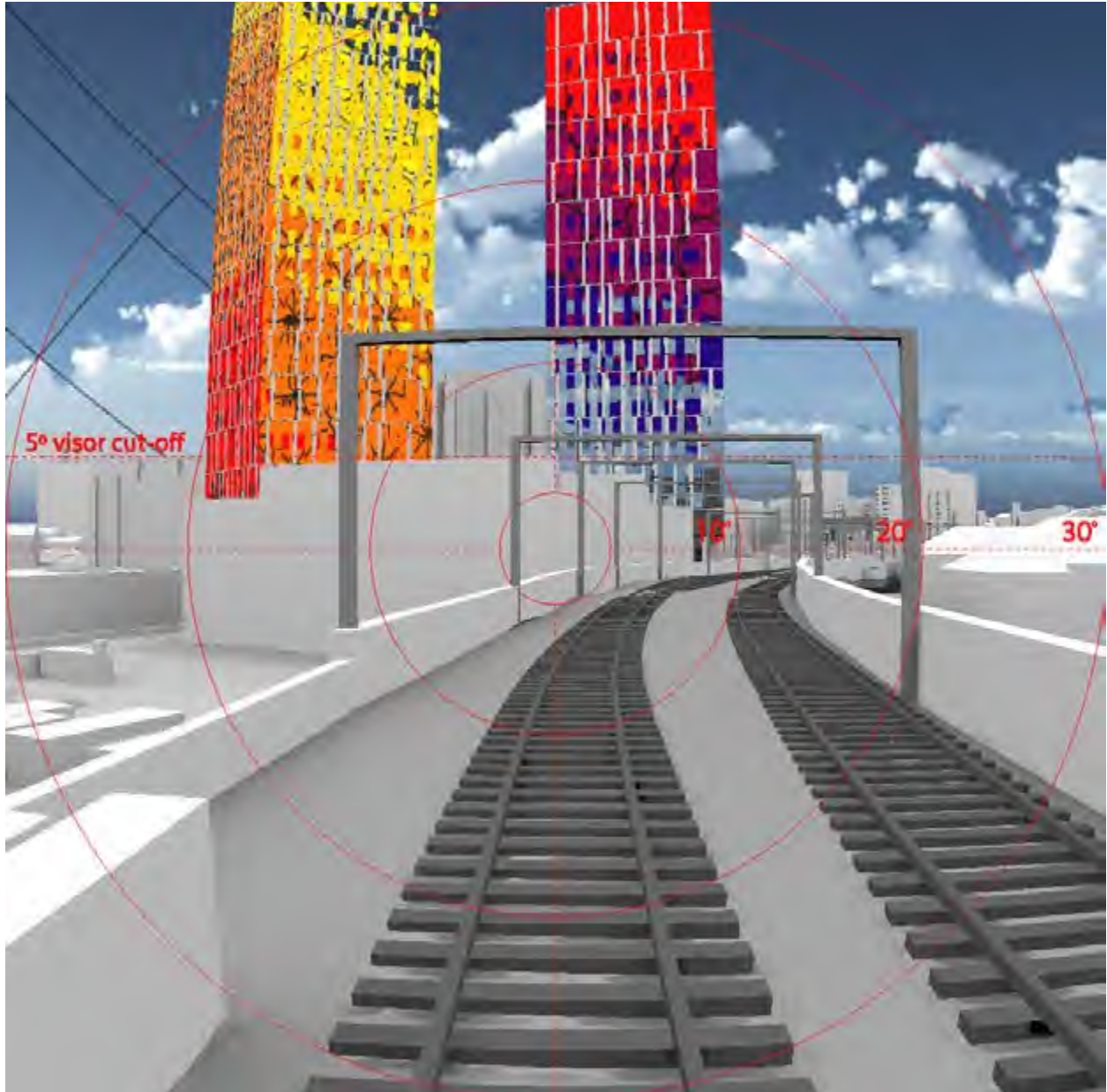


Fig. 731: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT

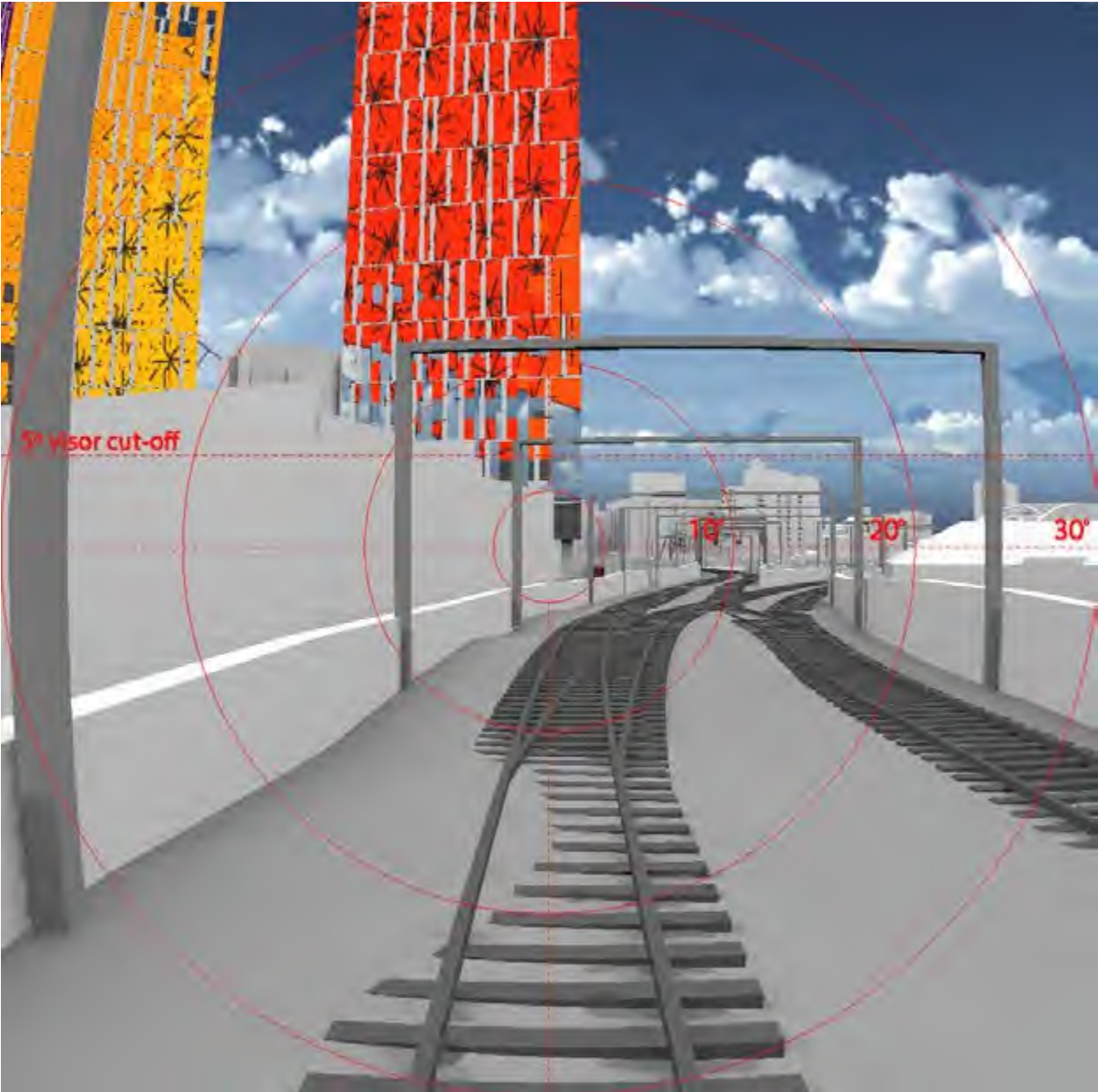


Fig. 732: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT**

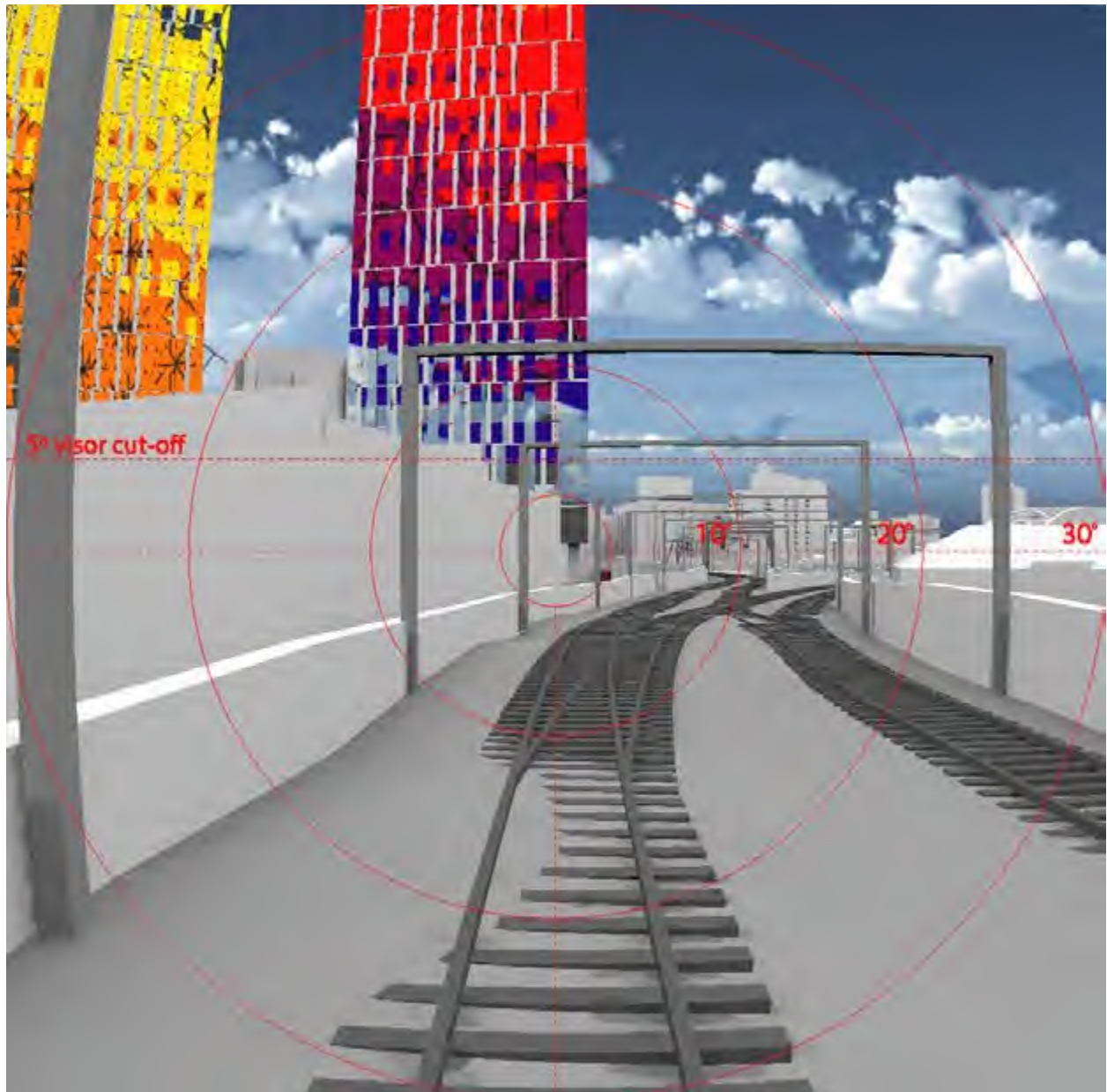


Fig. 733: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT

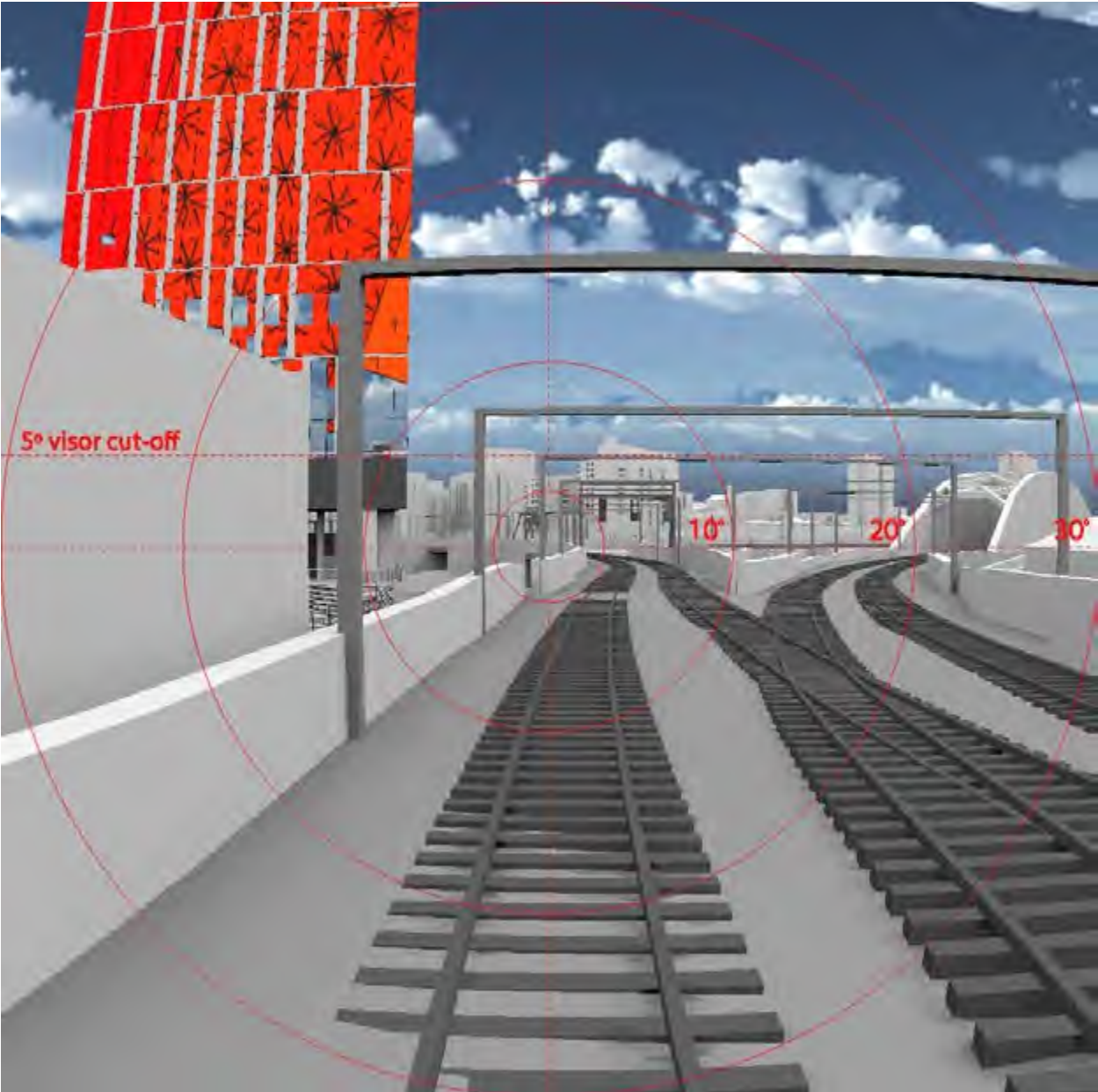


Fig. 734: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT**

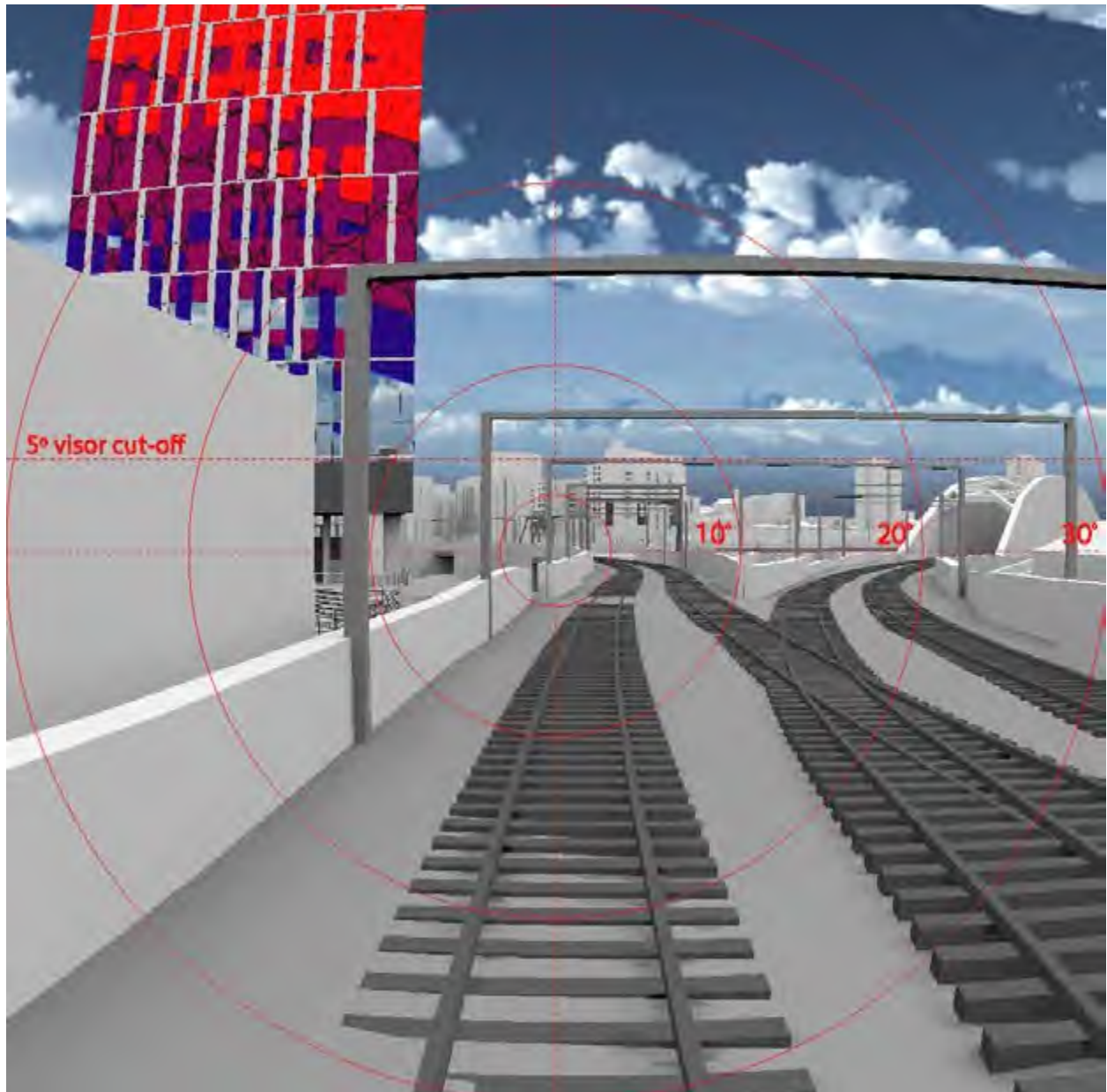


Fig. 735: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

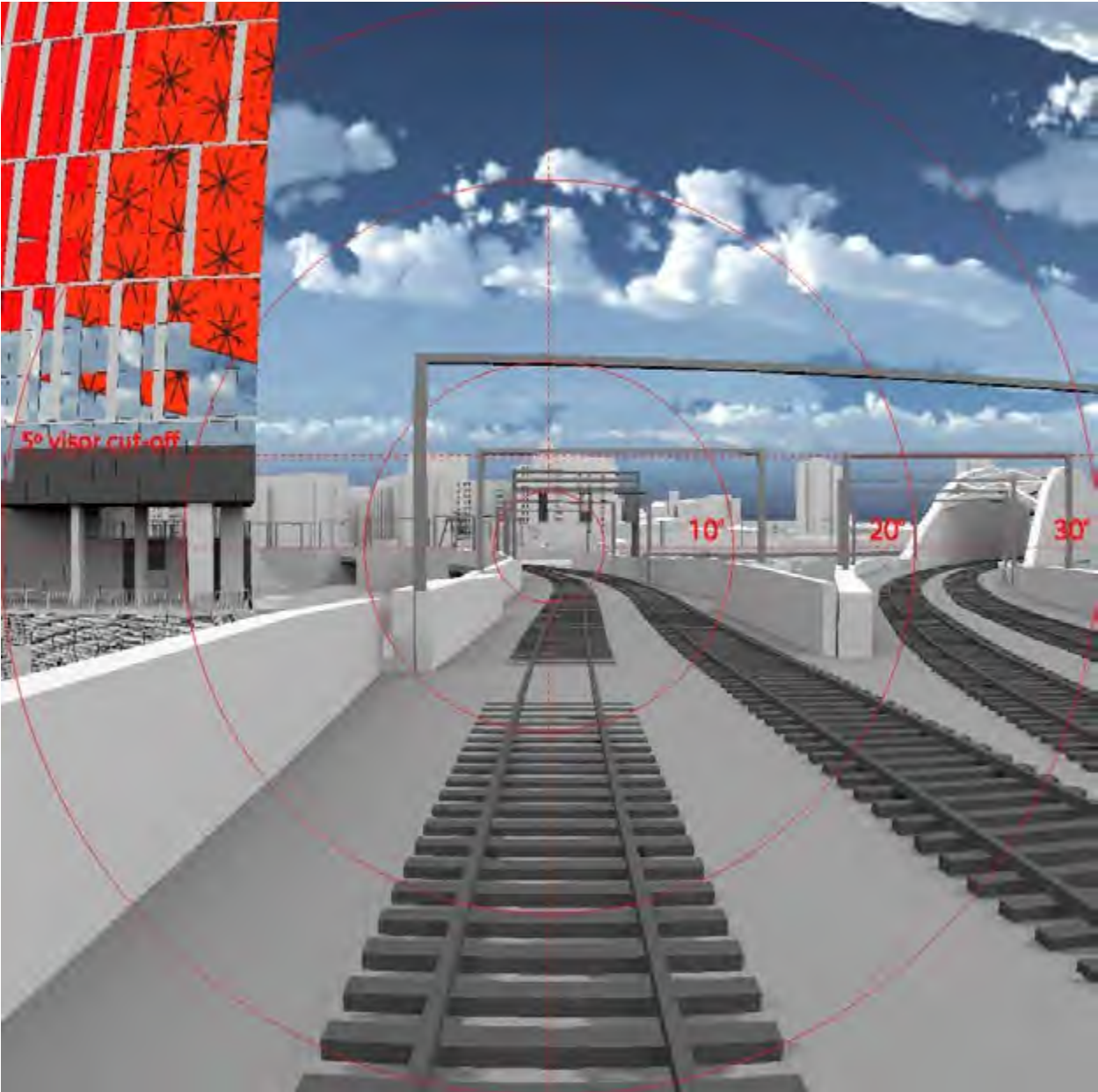


Fig. 736: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

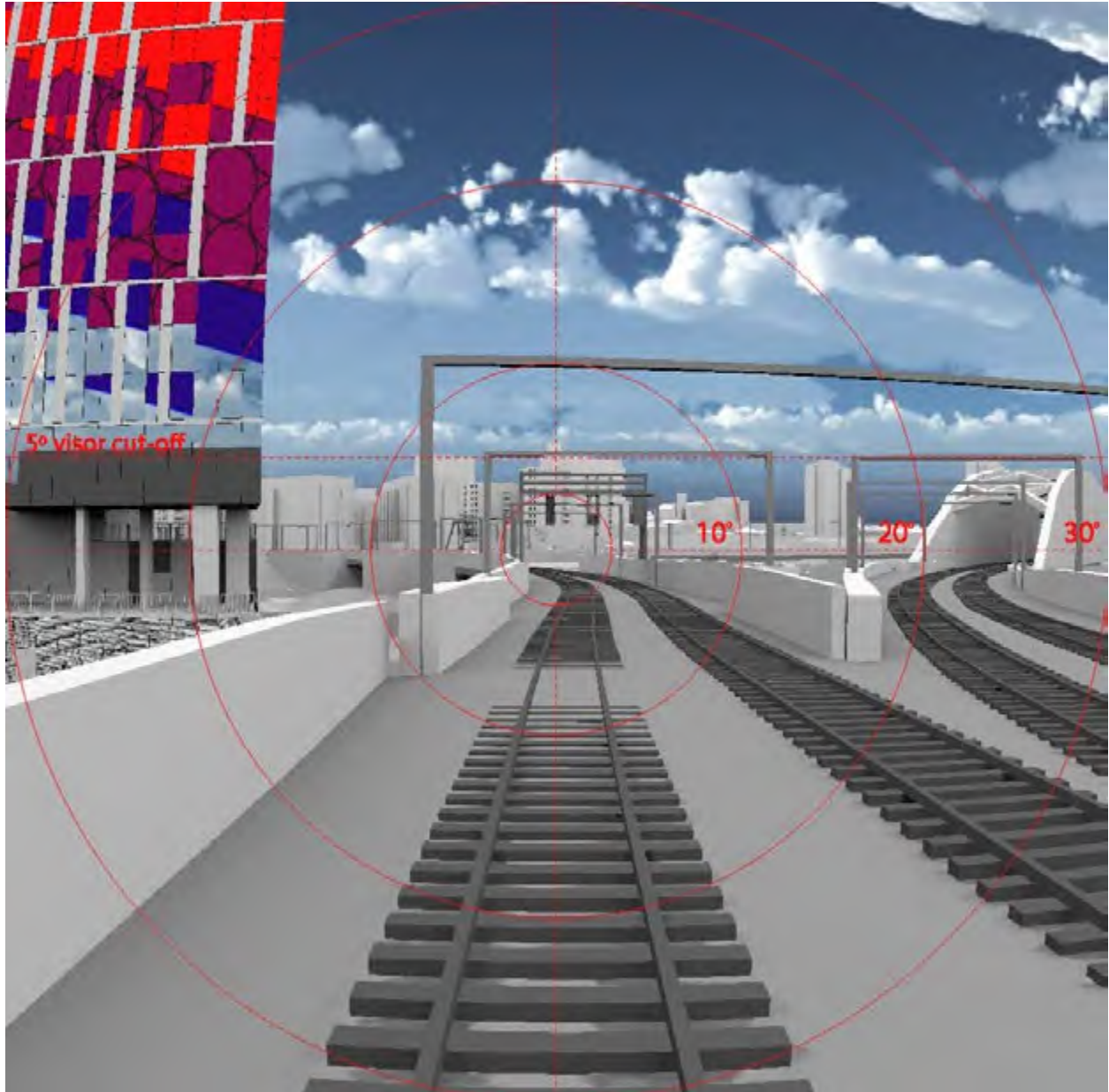


Fig. 737: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

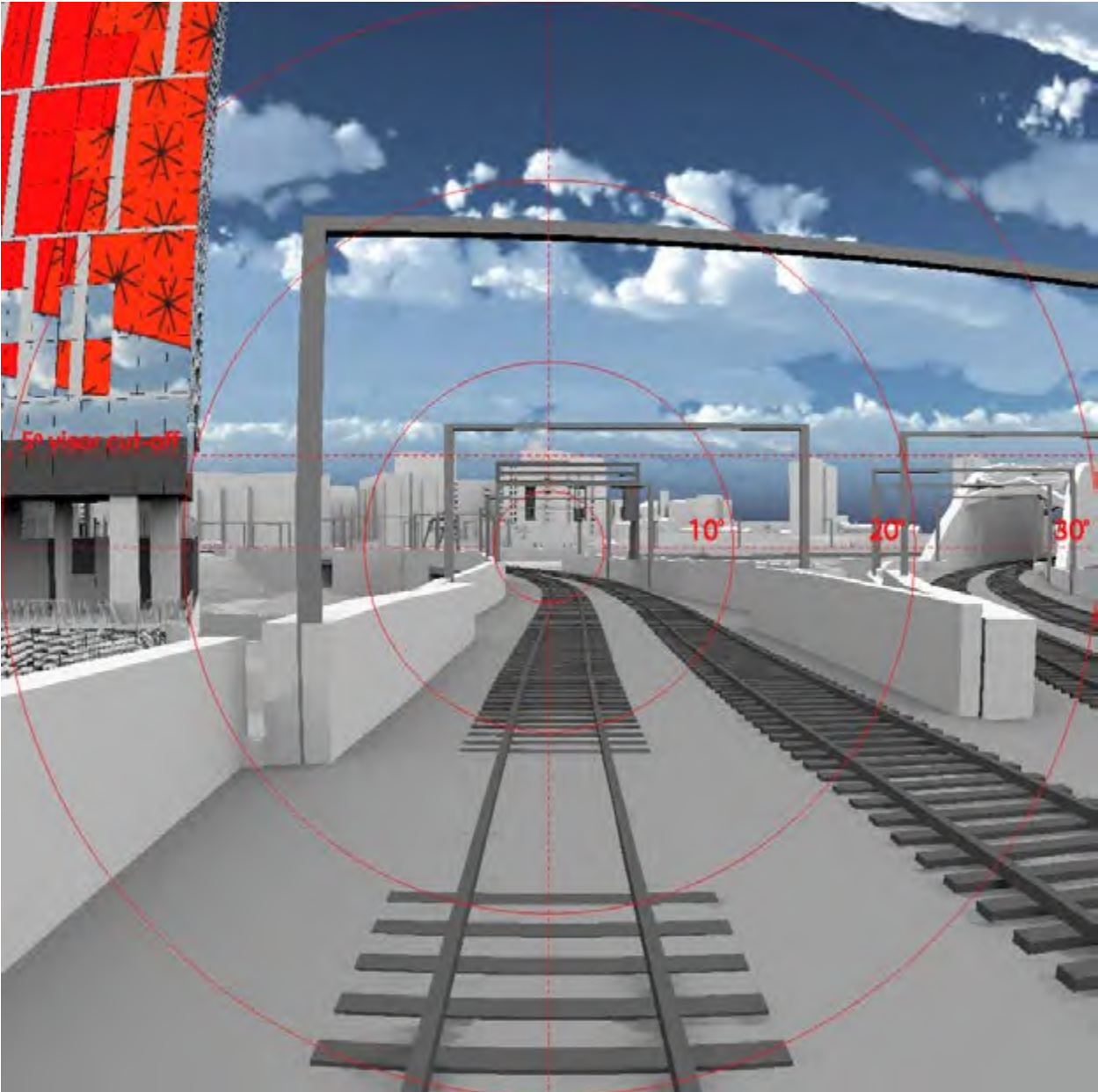


Fig. 738: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

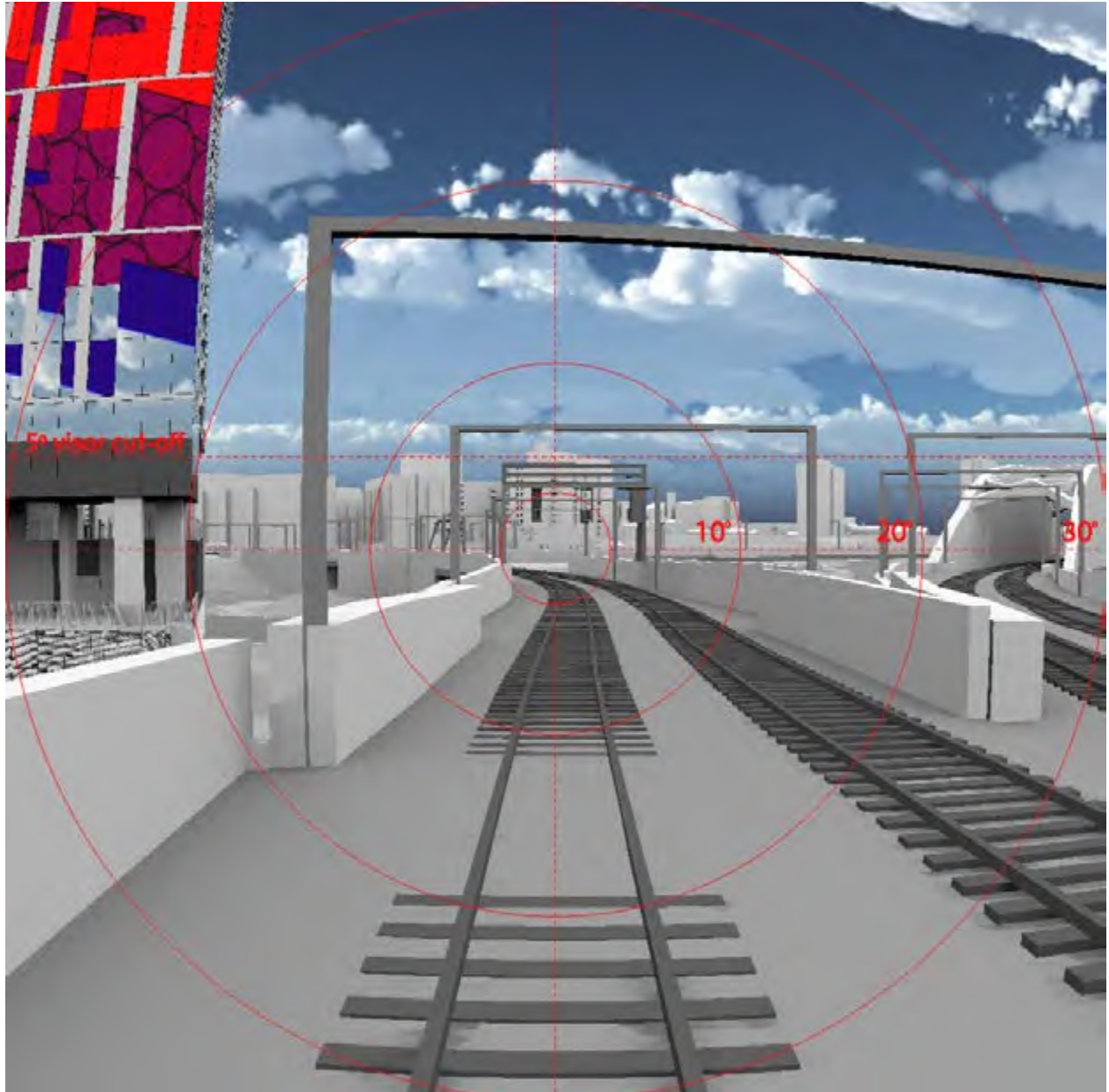


Fig. 739: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

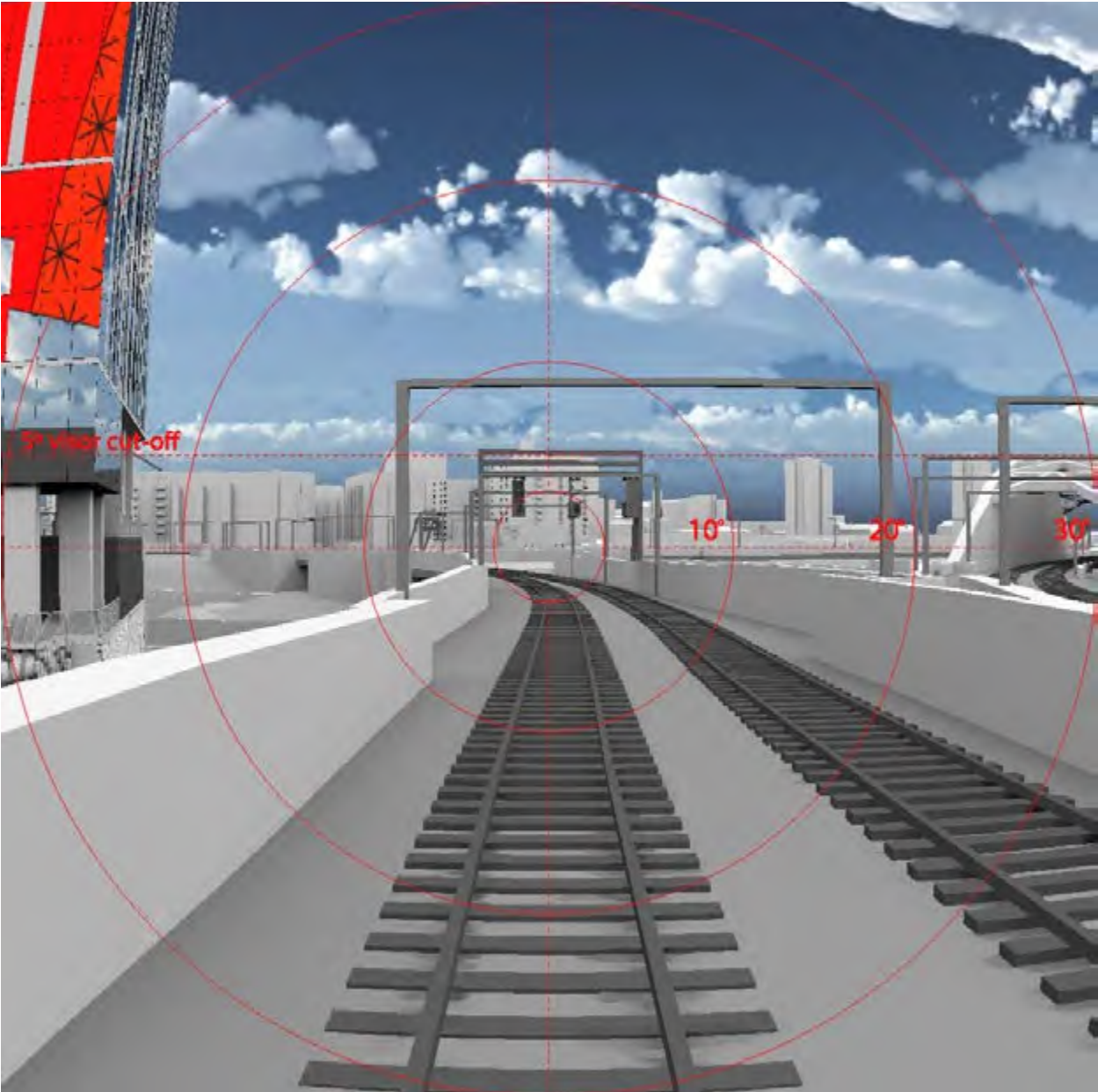


Fig. 740: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

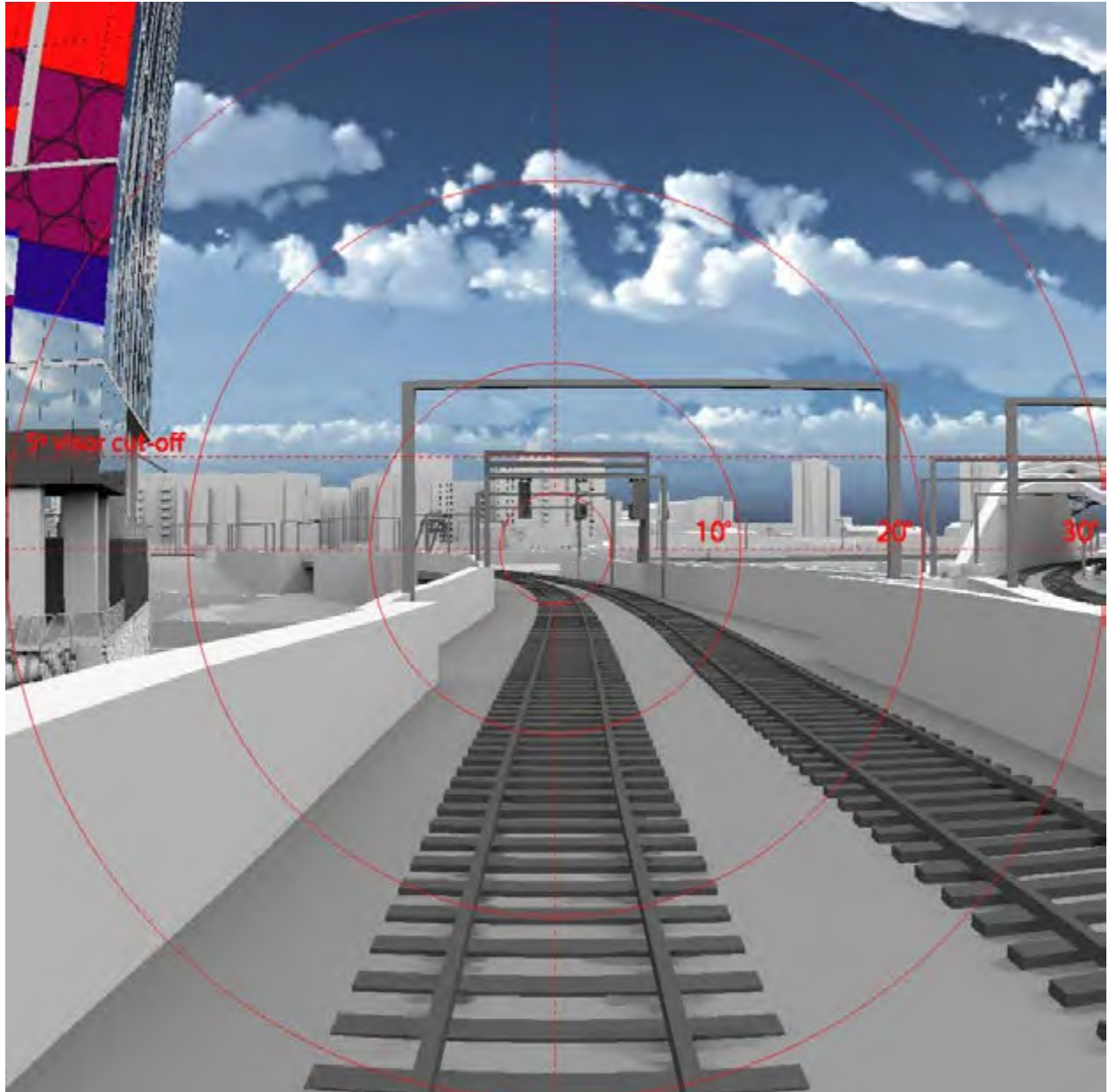


Fig. 741: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

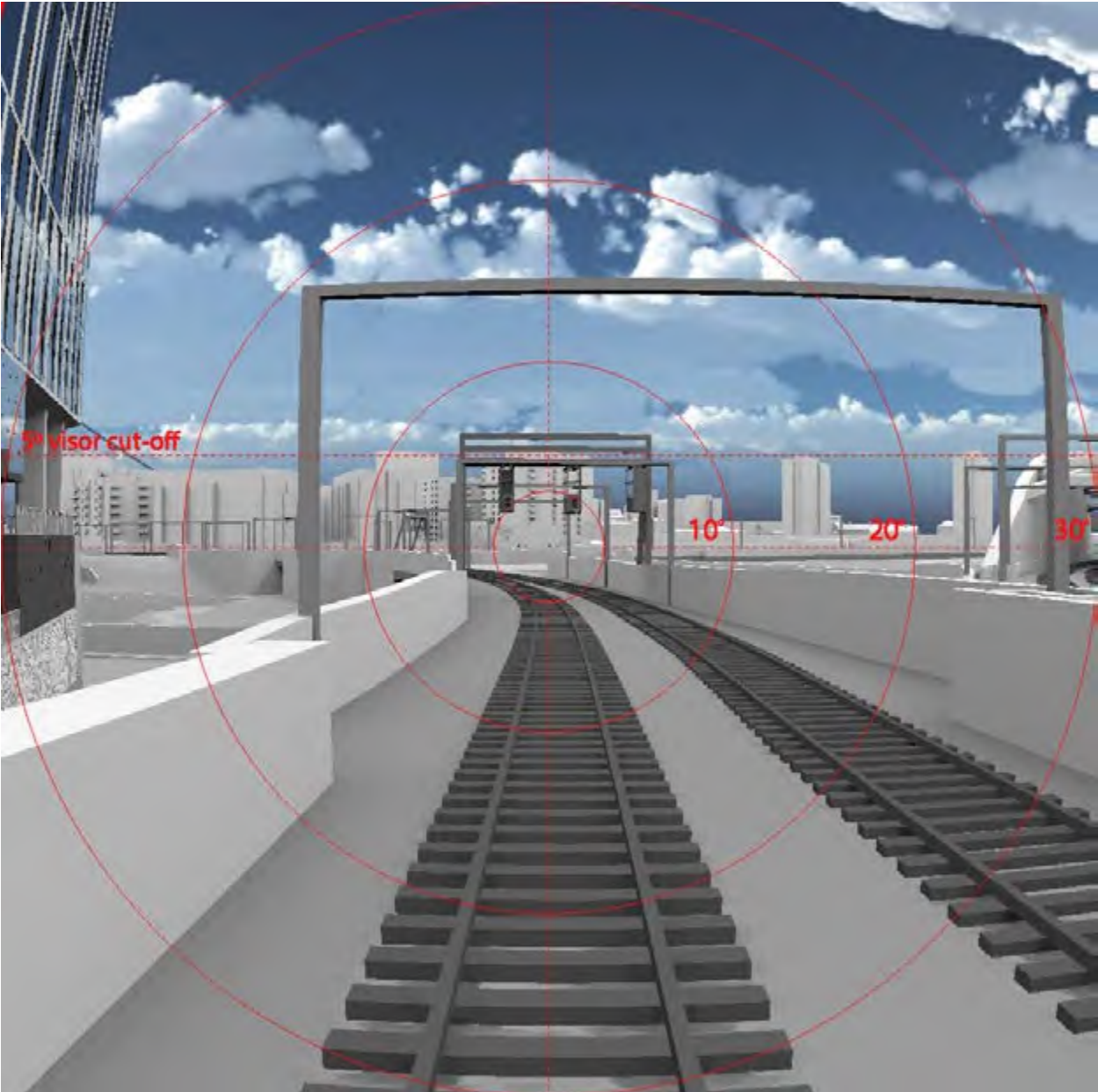


Fig. 742: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

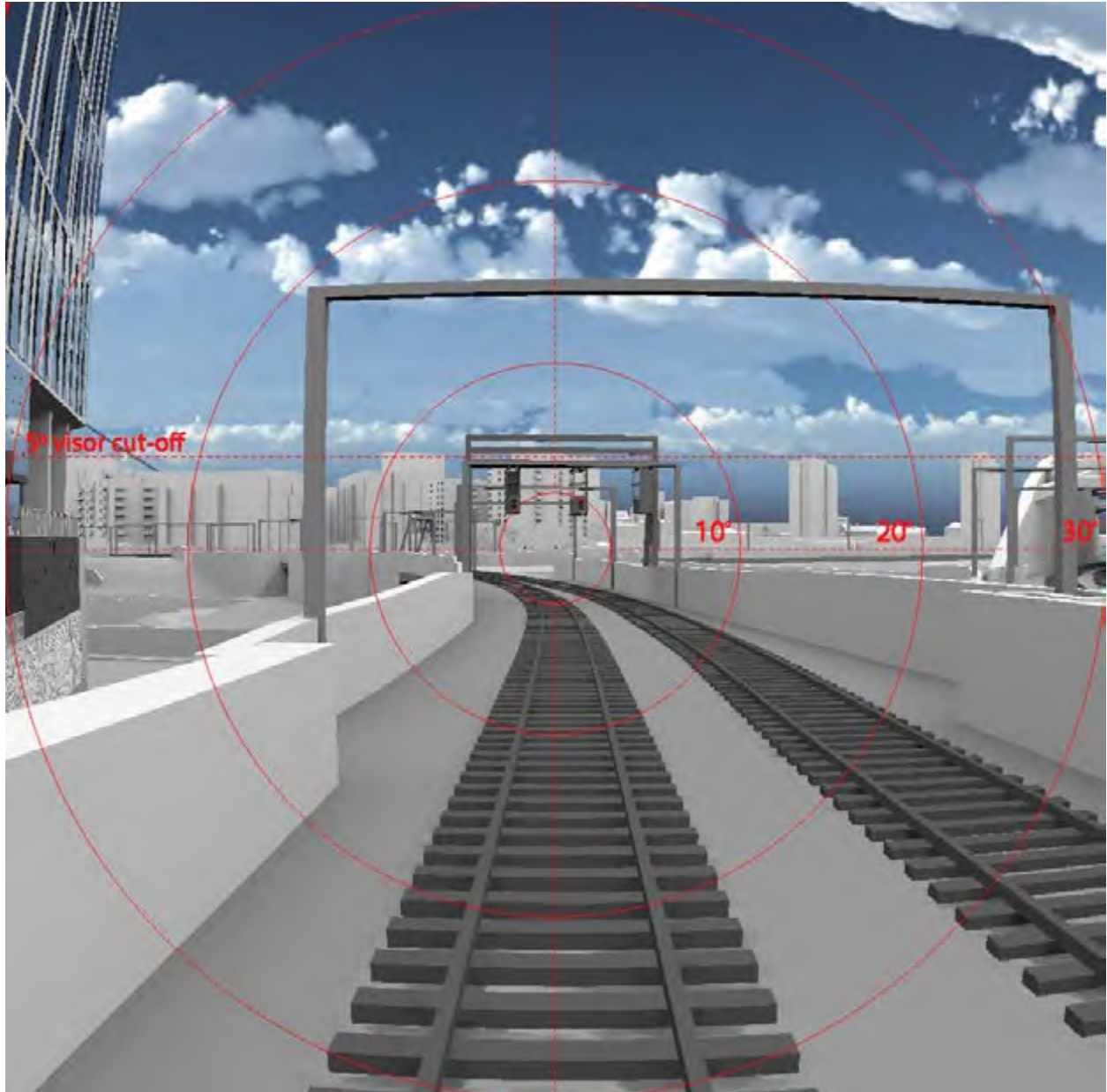


Fig. 743: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAIGHT - APPROX 50M FROM SIGNAL

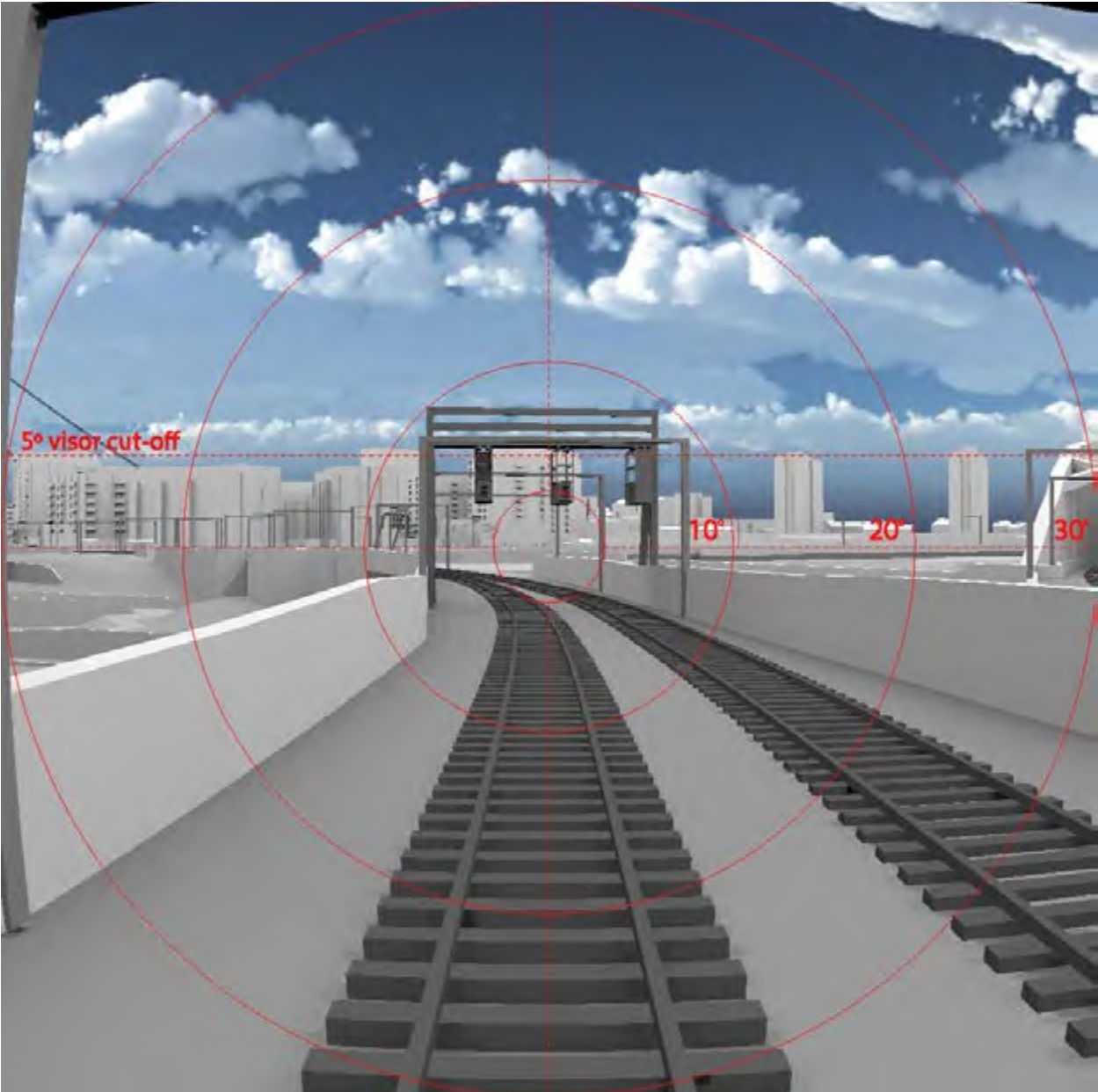


Fig. 744: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

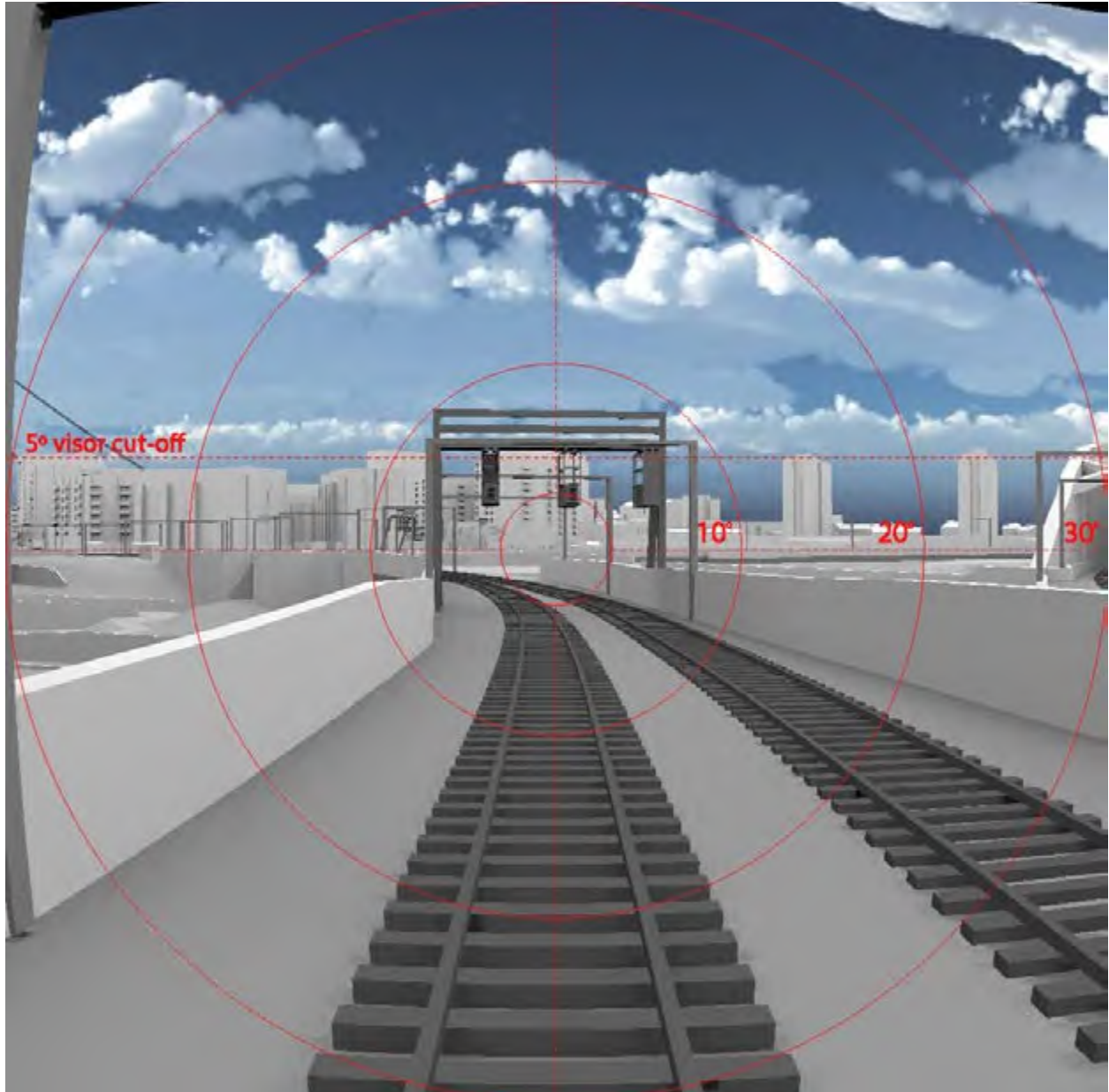


Fig. 745: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAIGHT

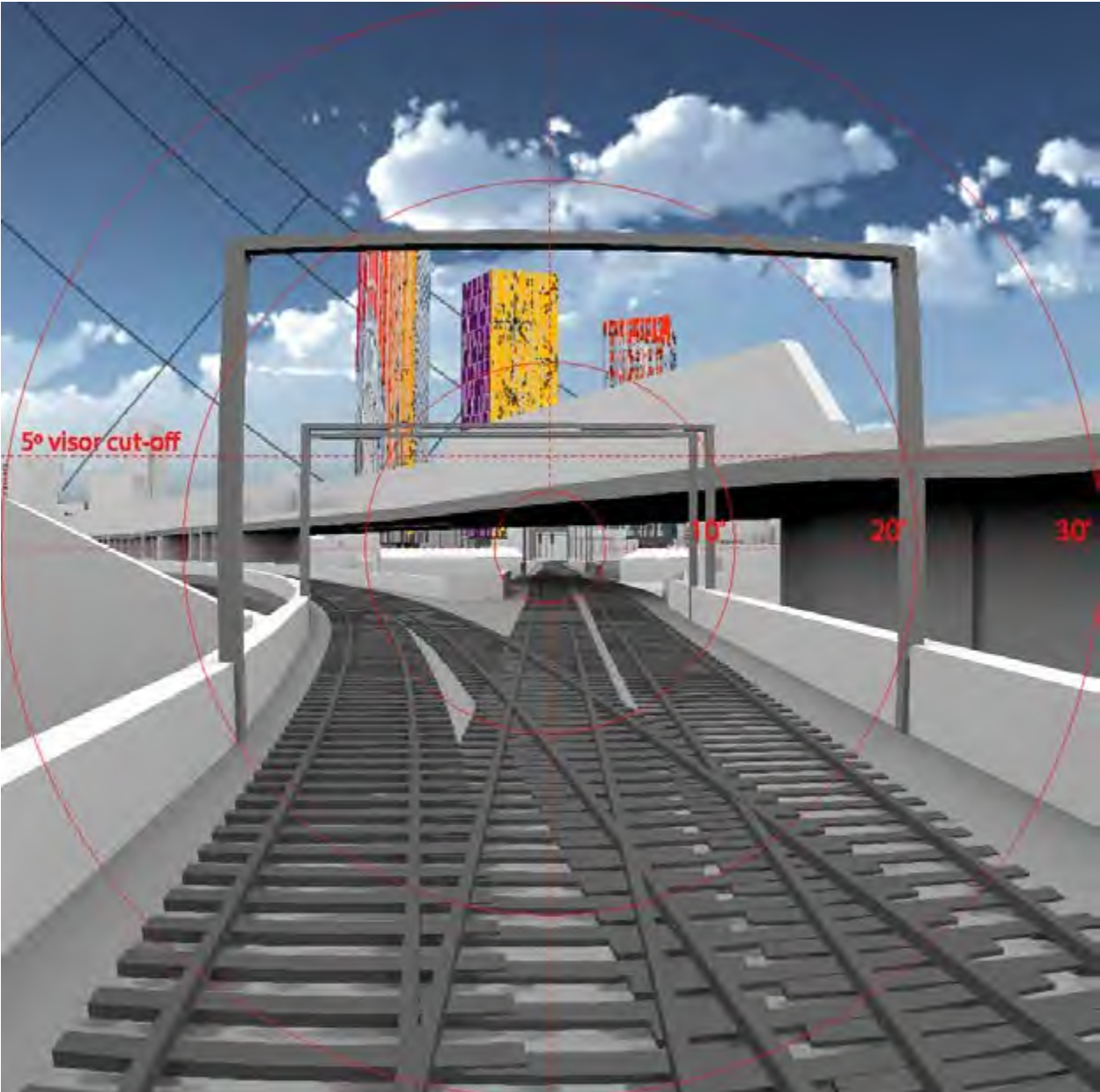


Fig. 746: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT**

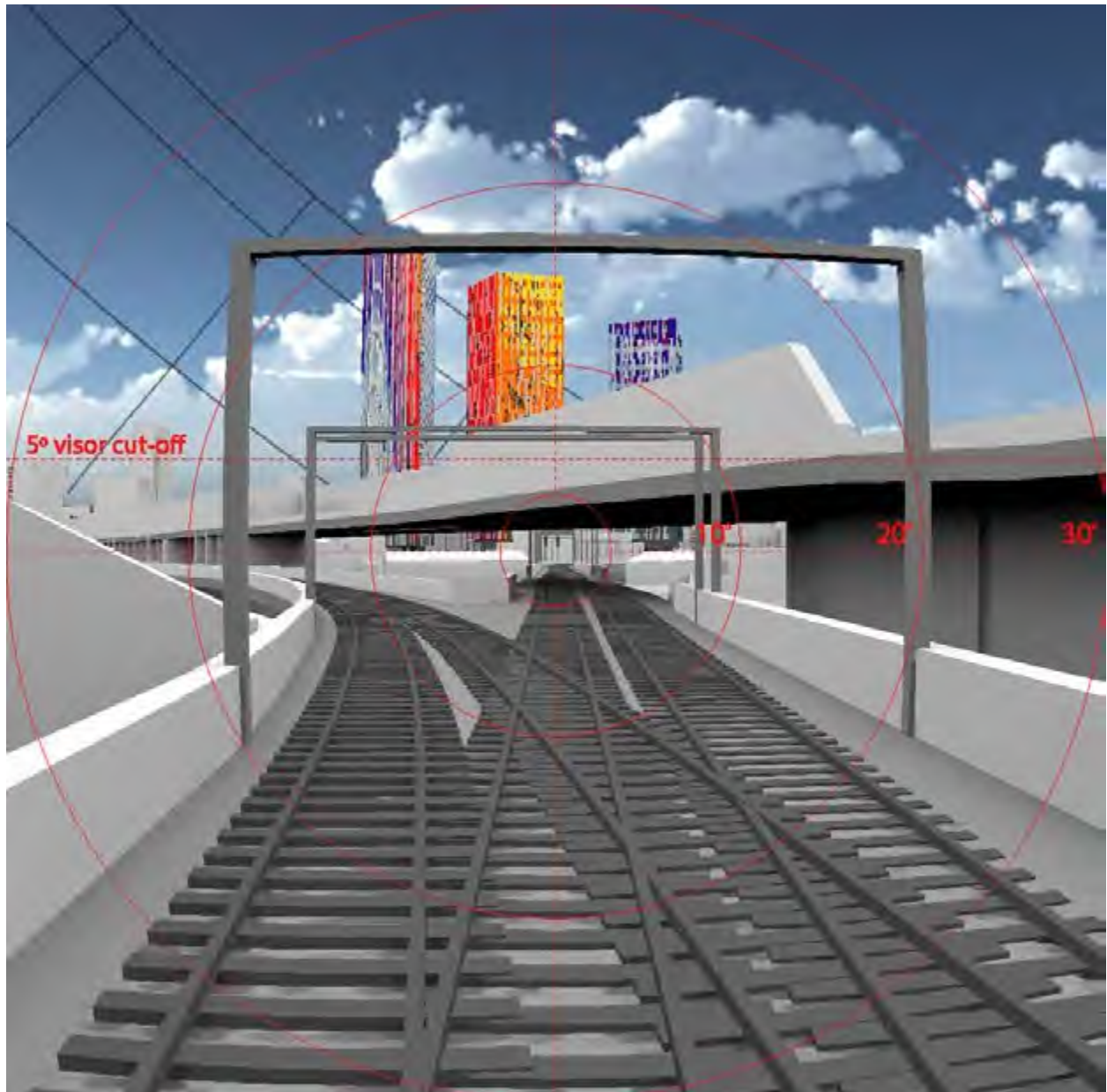


Fig. 747: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

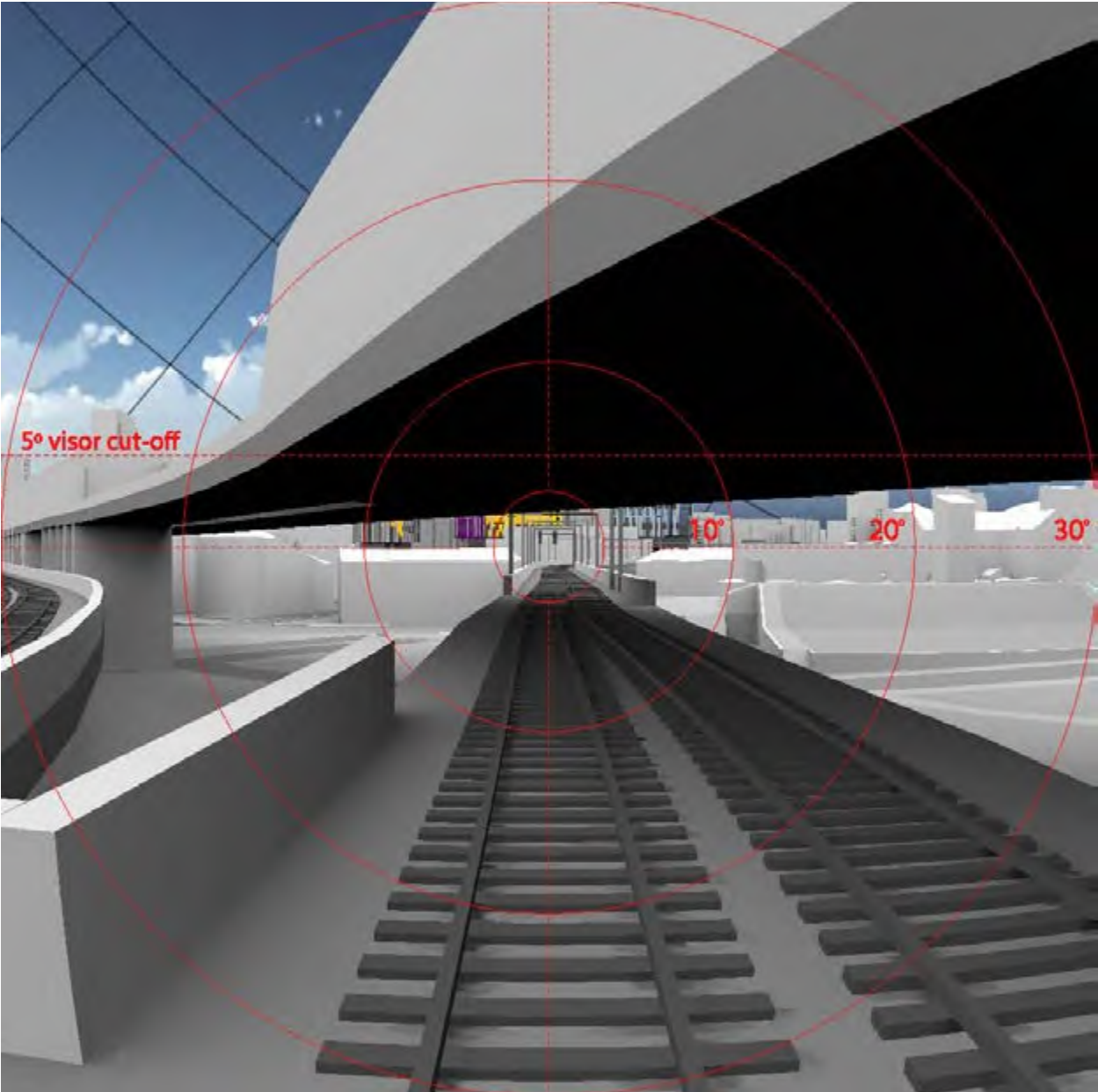


Fig. 748: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT**

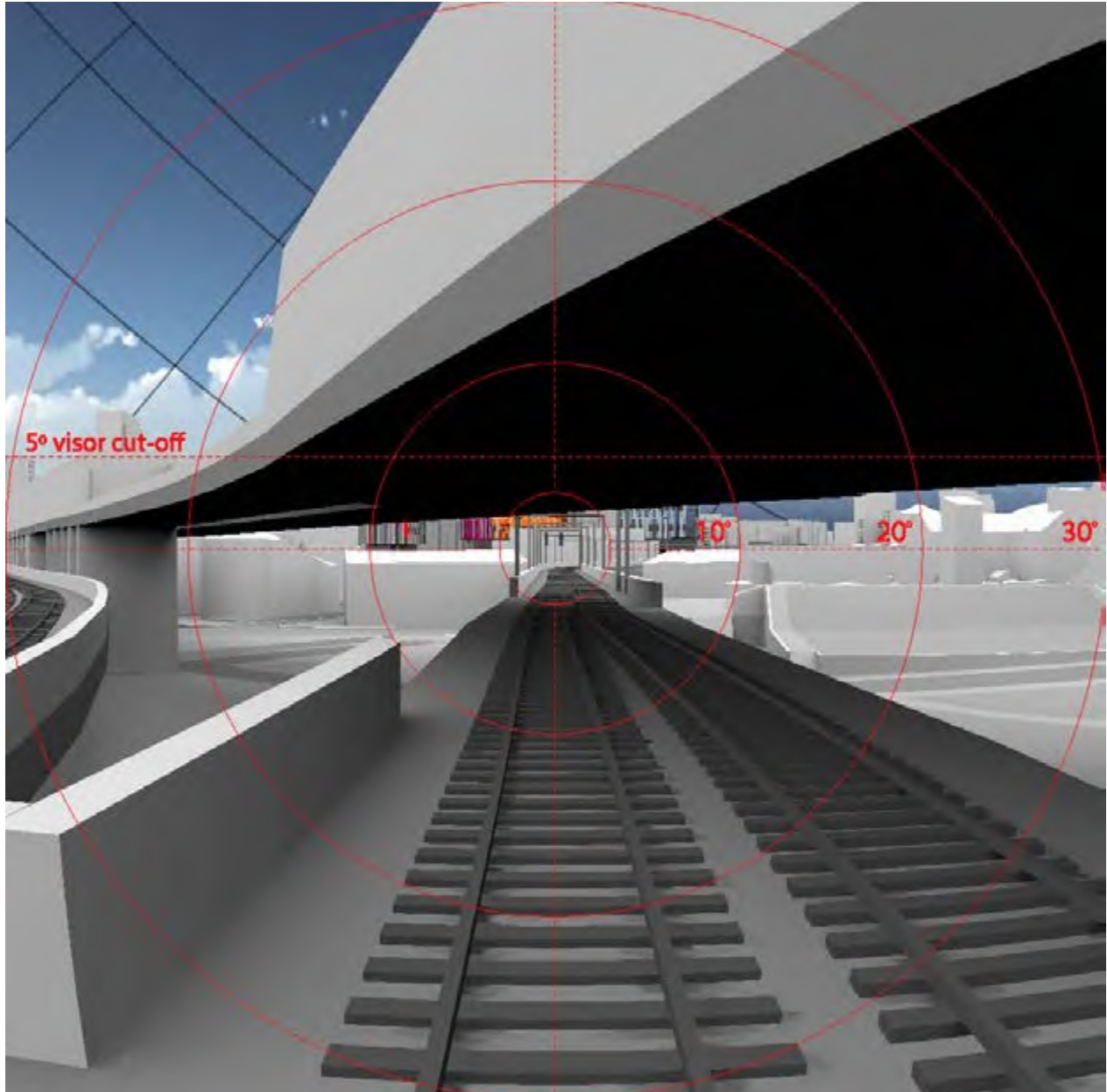


Fig. 749: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAIGHT

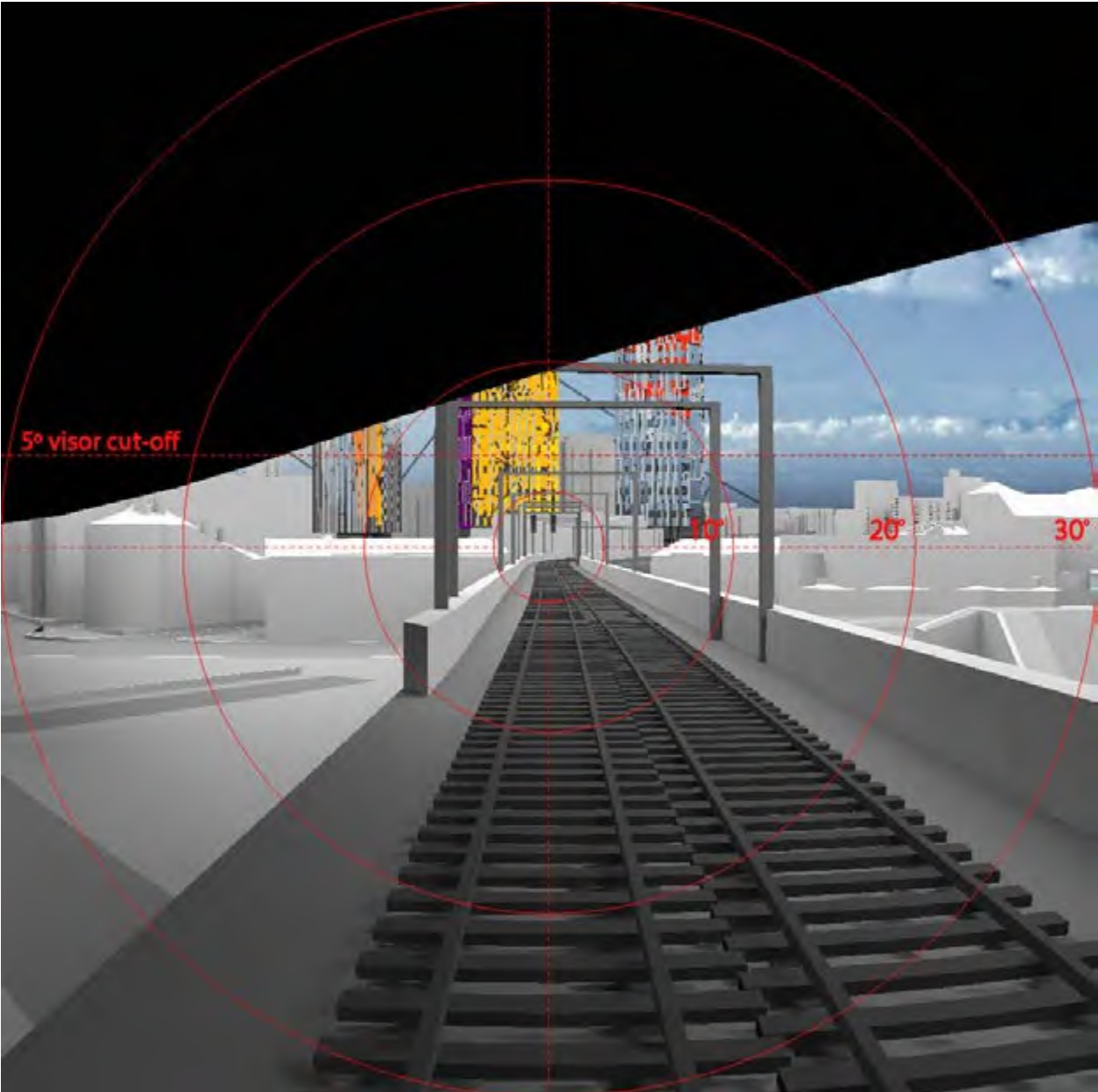


Fig. 750: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAGHT**

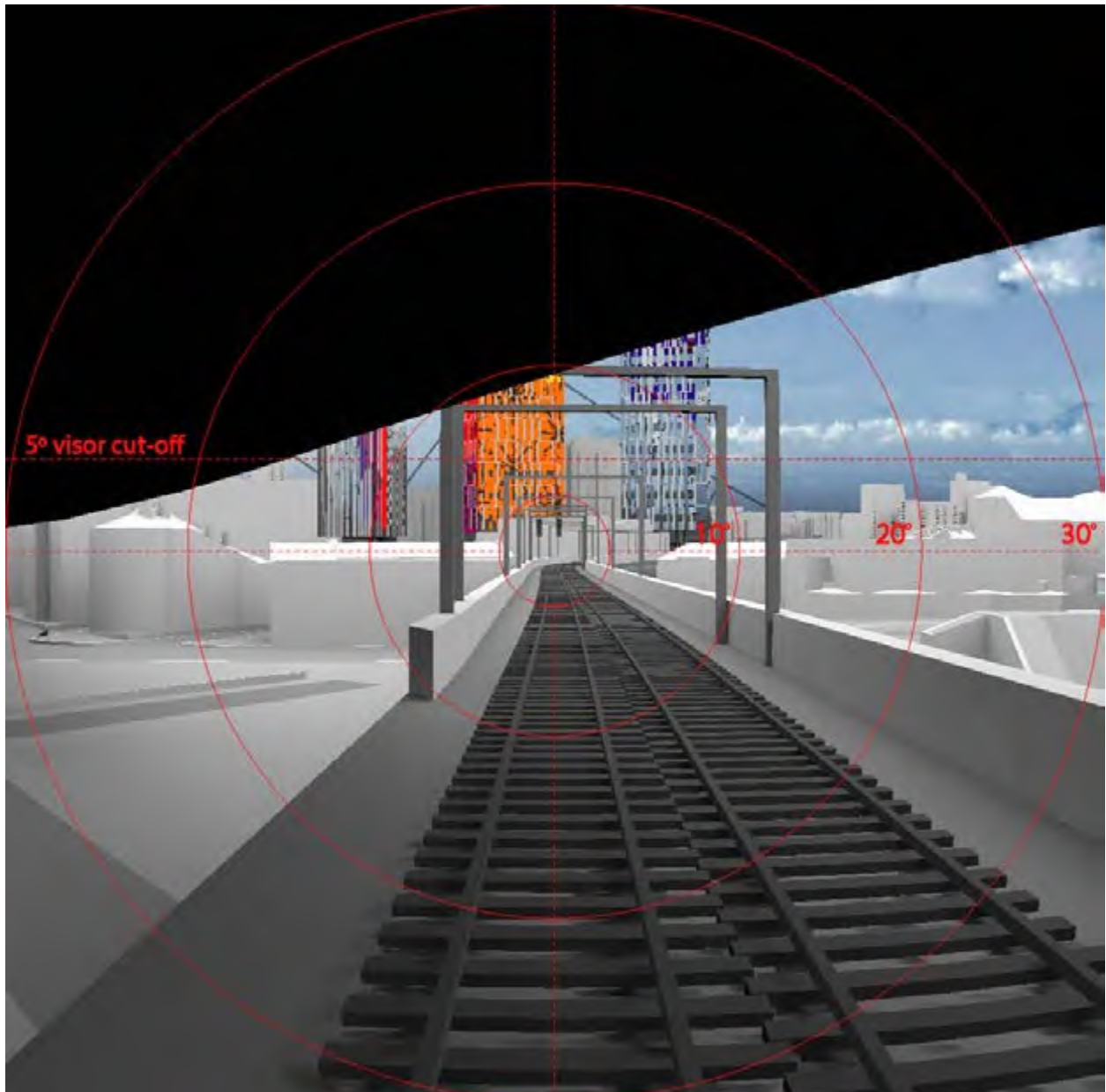


Fig. 751: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

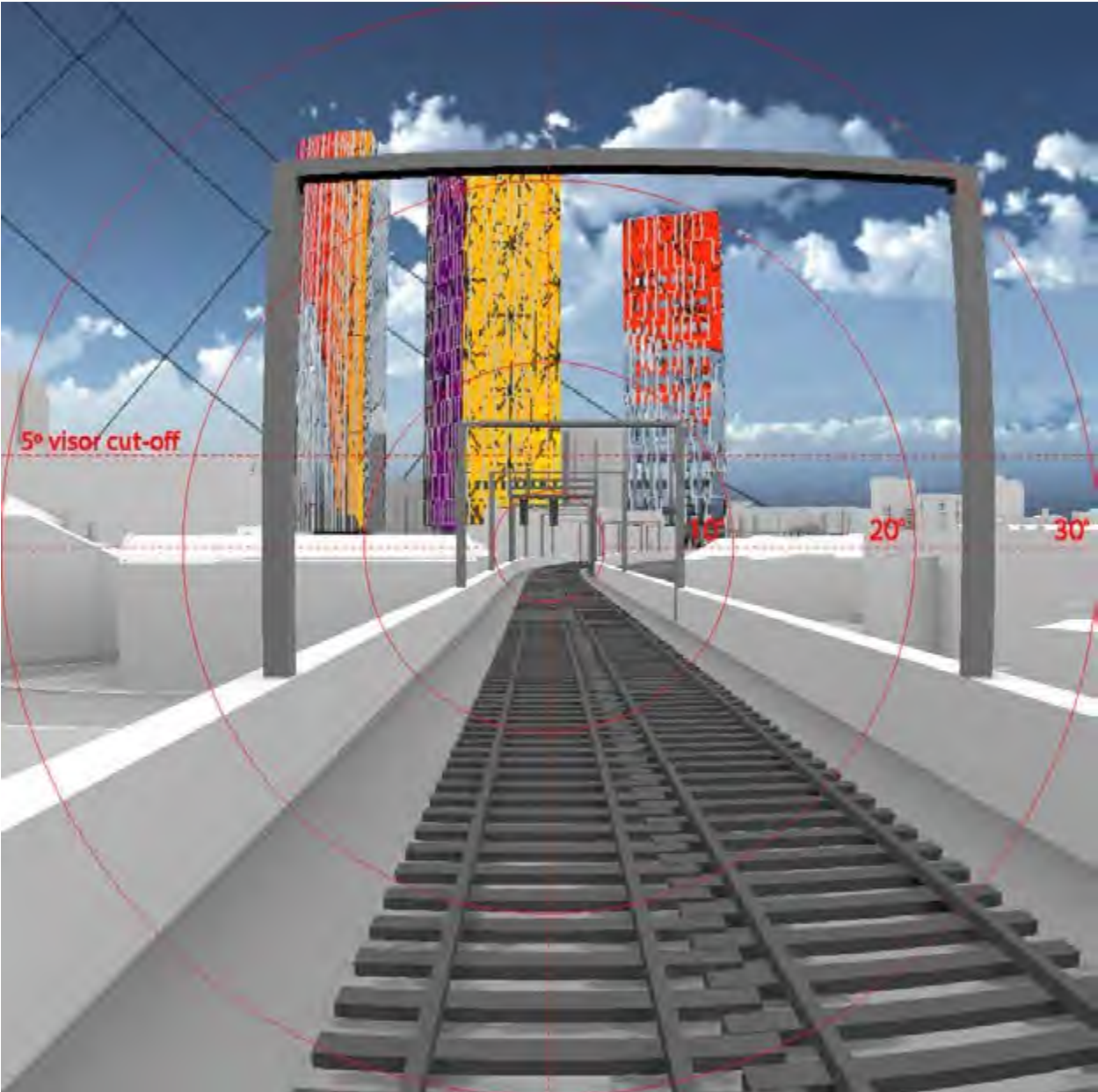


Fig. 752: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

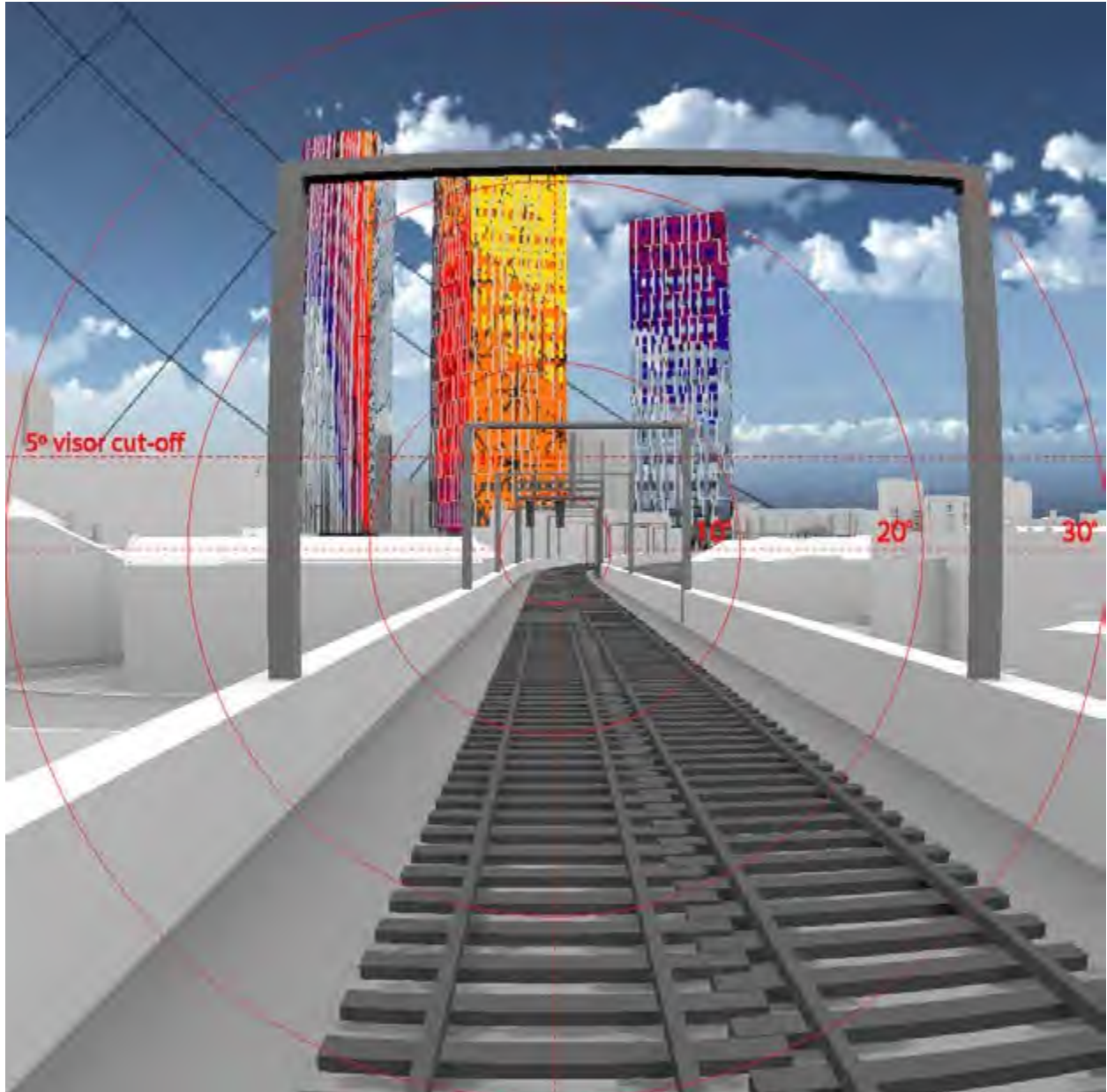


Fig. 753: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

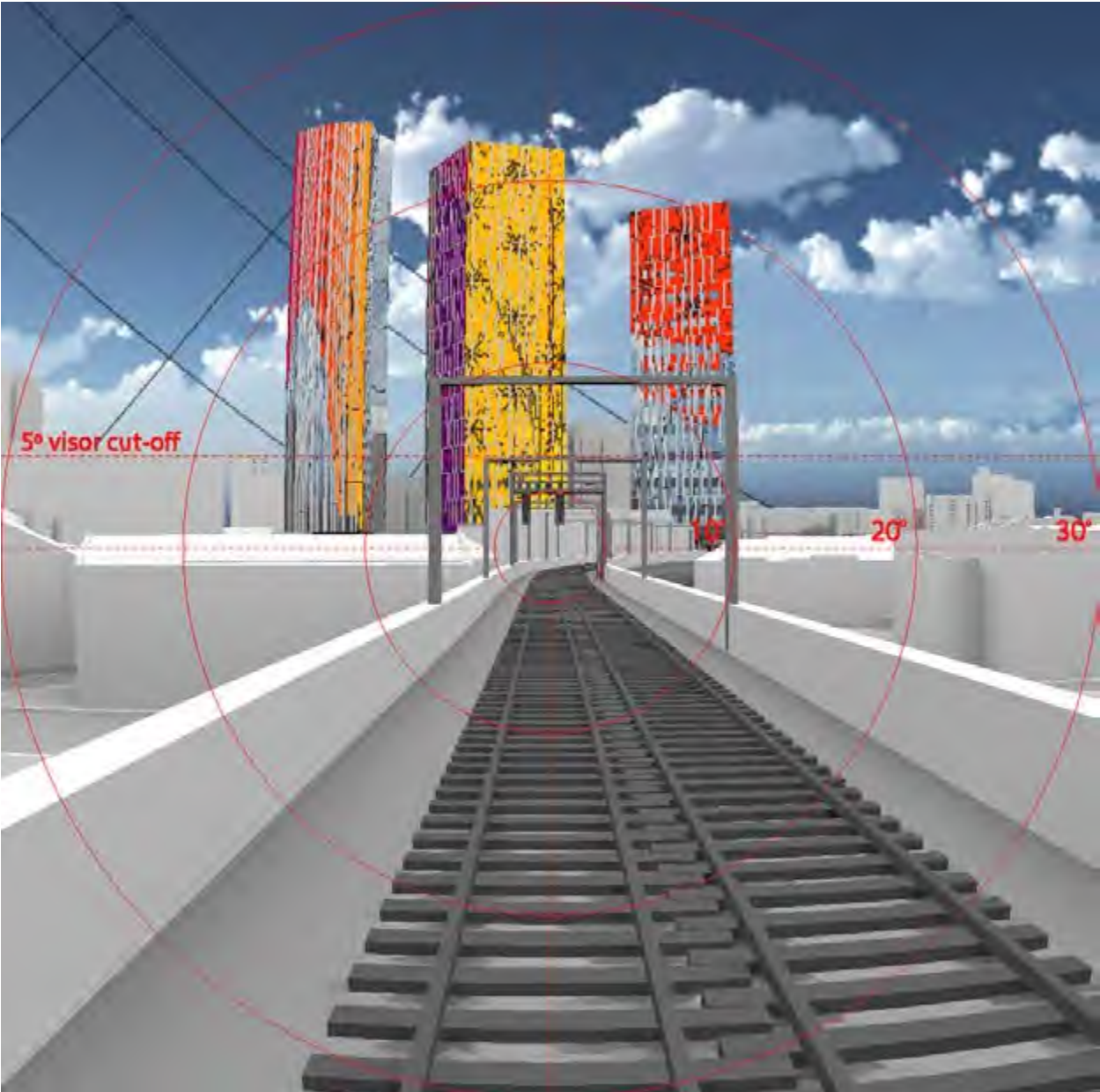


Fig. 754: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

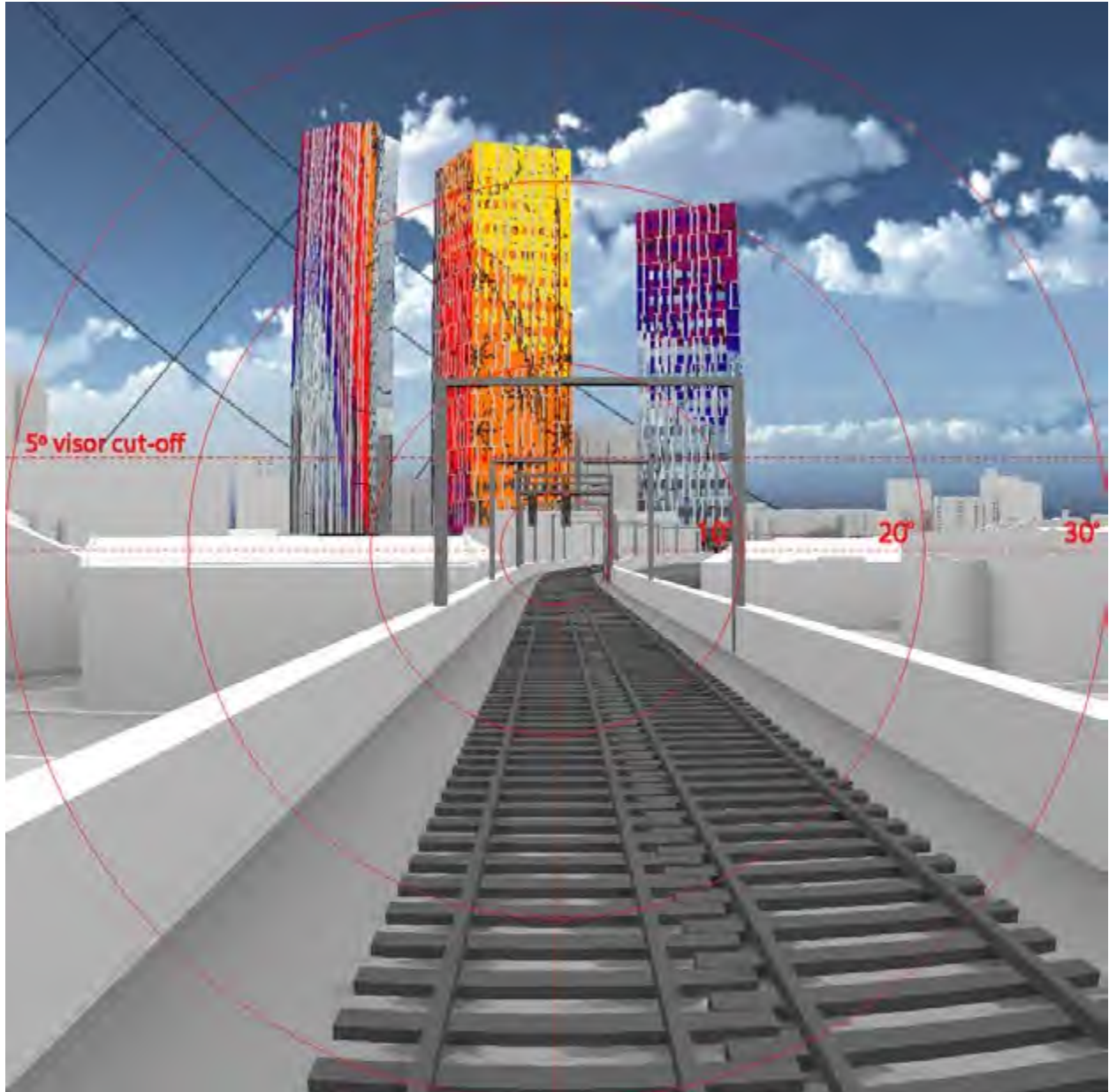


Fig. 755: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

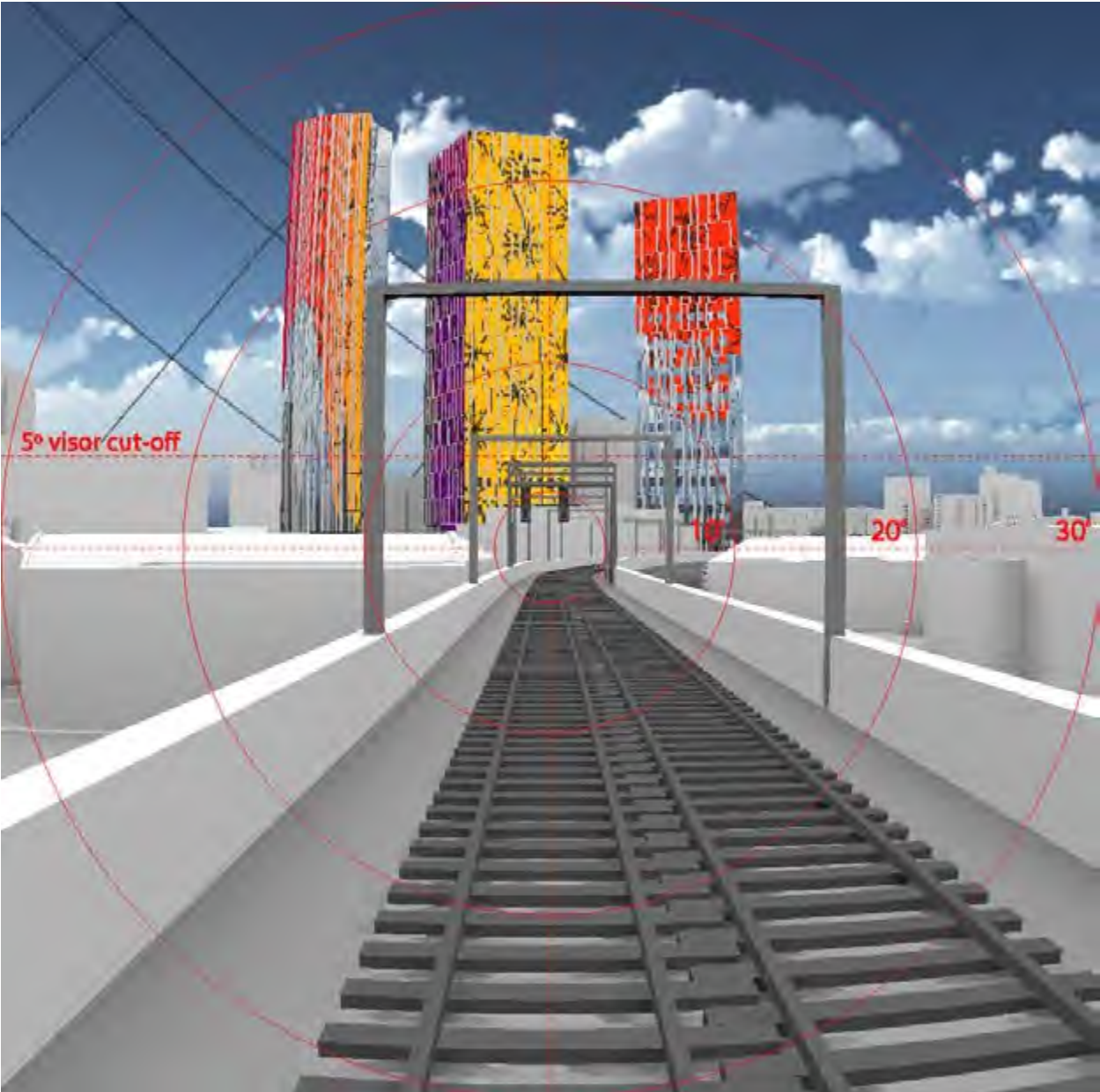


Fig. 756: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

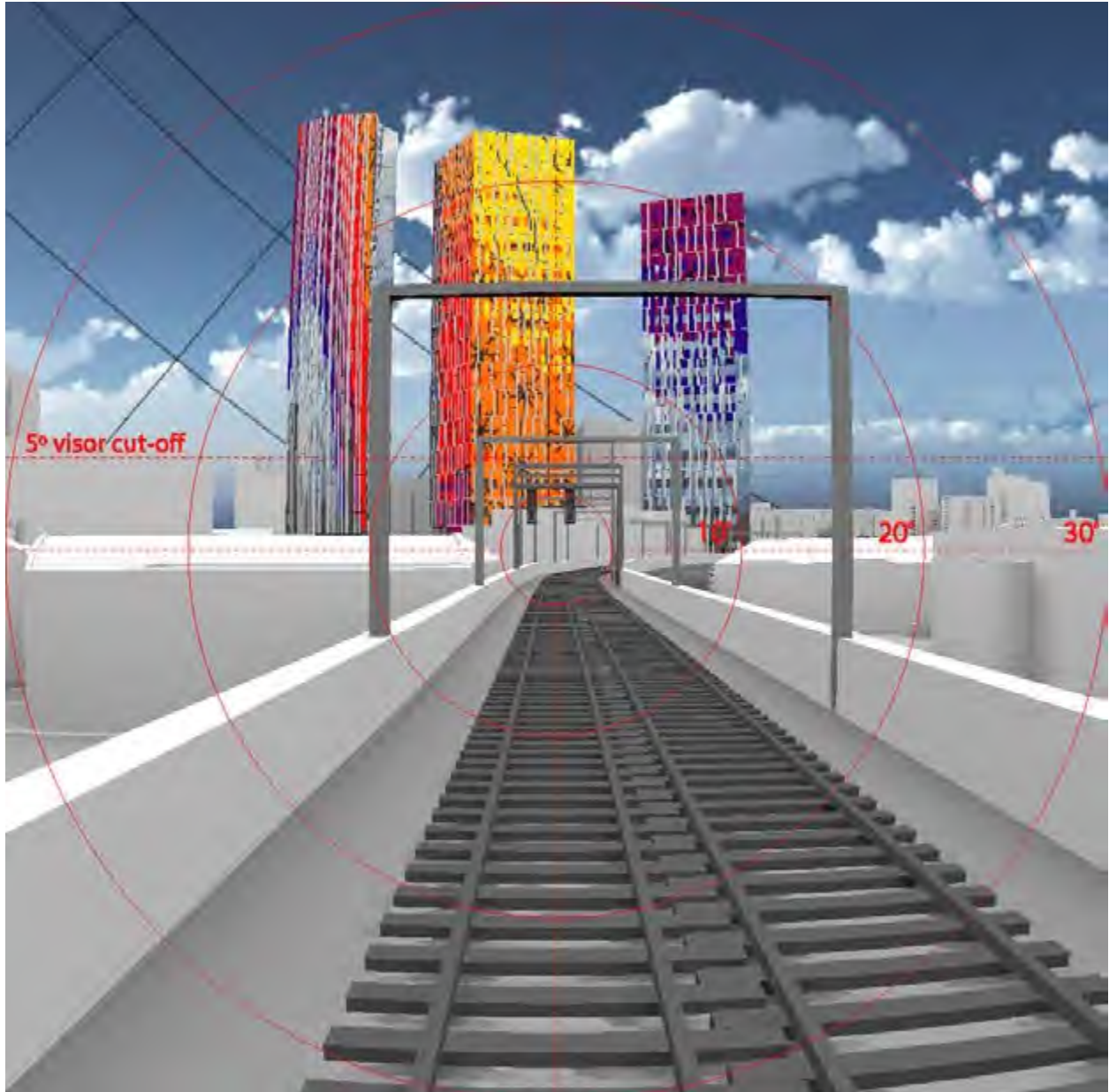


Fig. 757: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

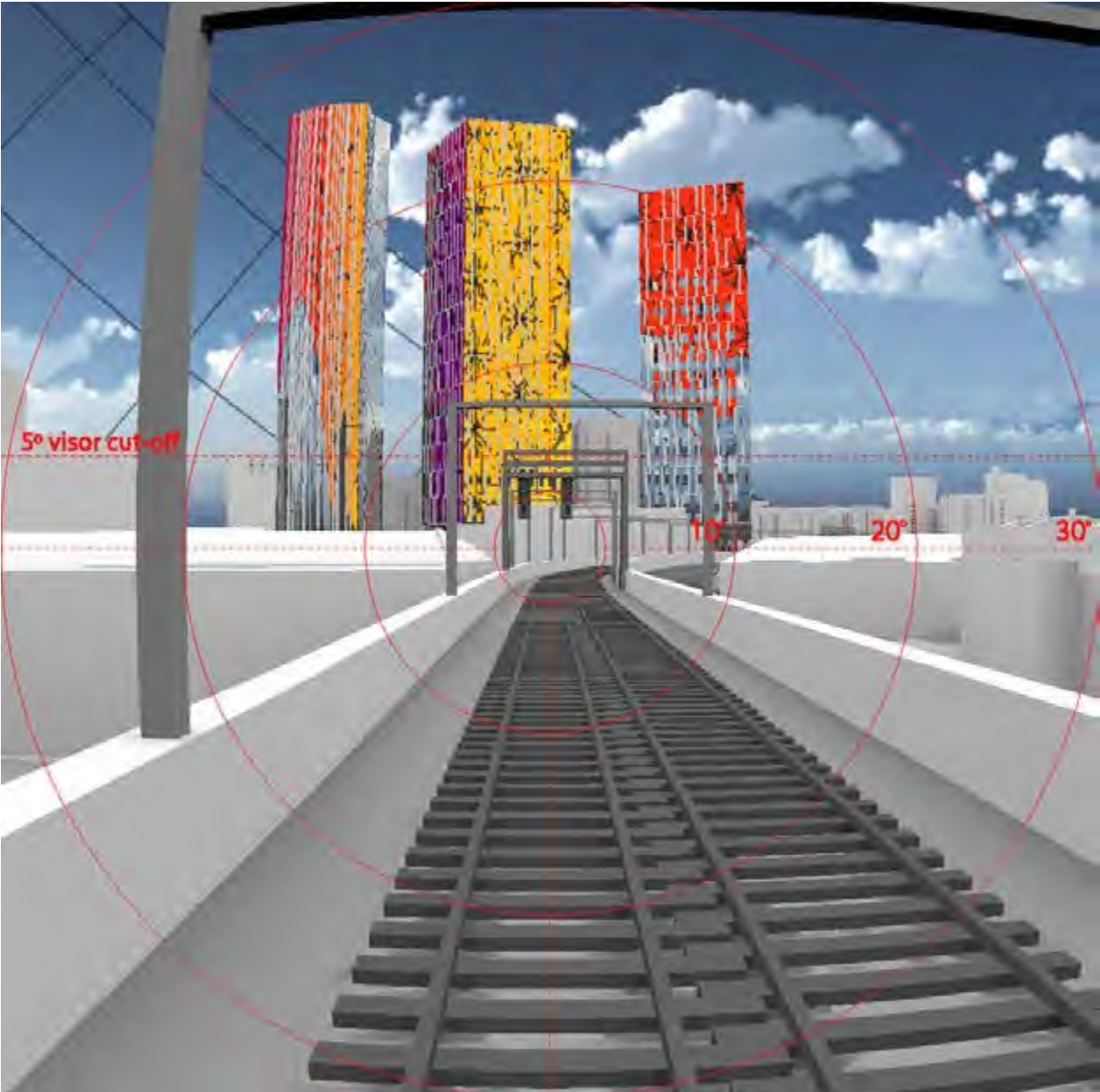


Fig. 758: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

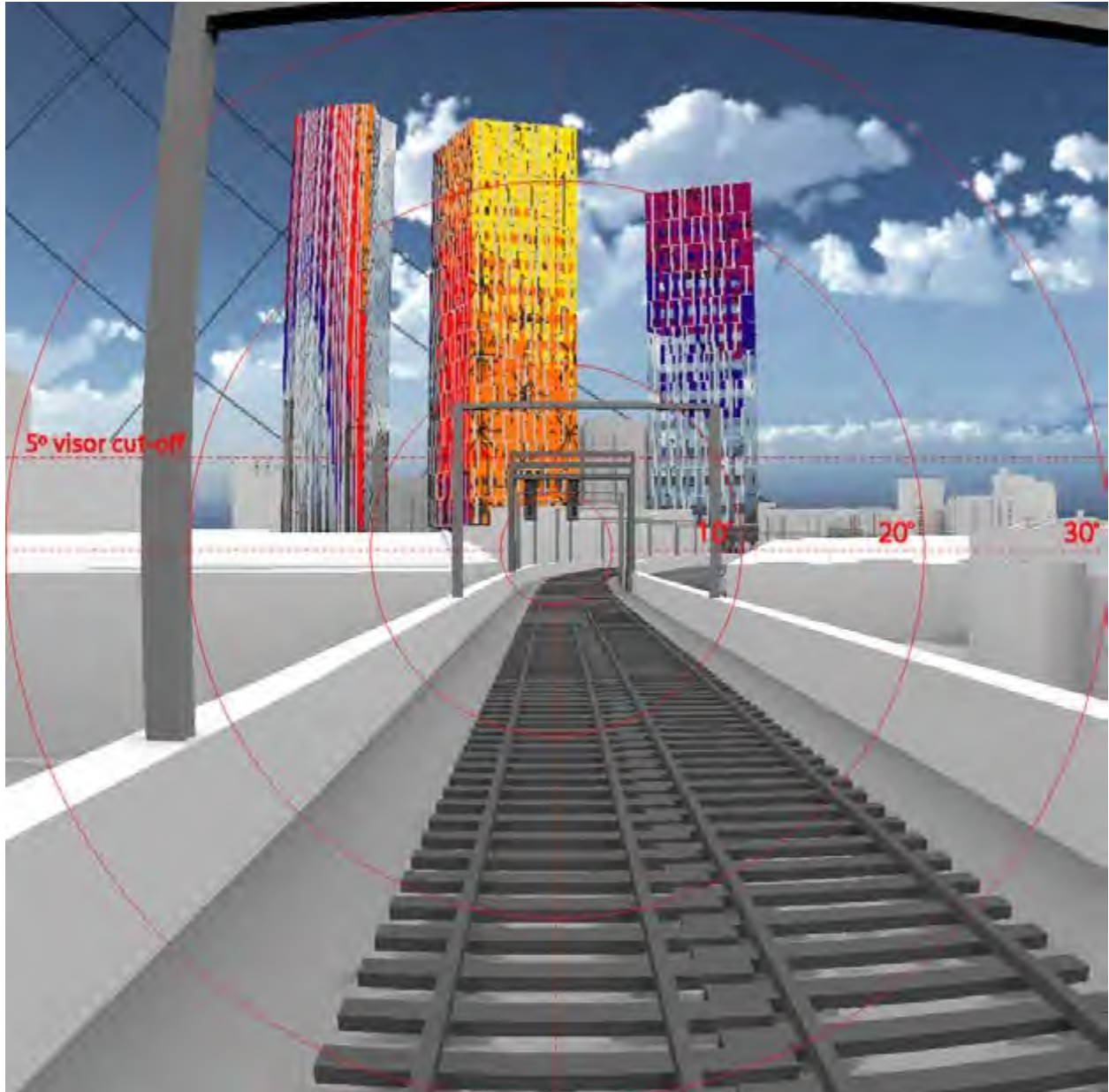


Fig. 759: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

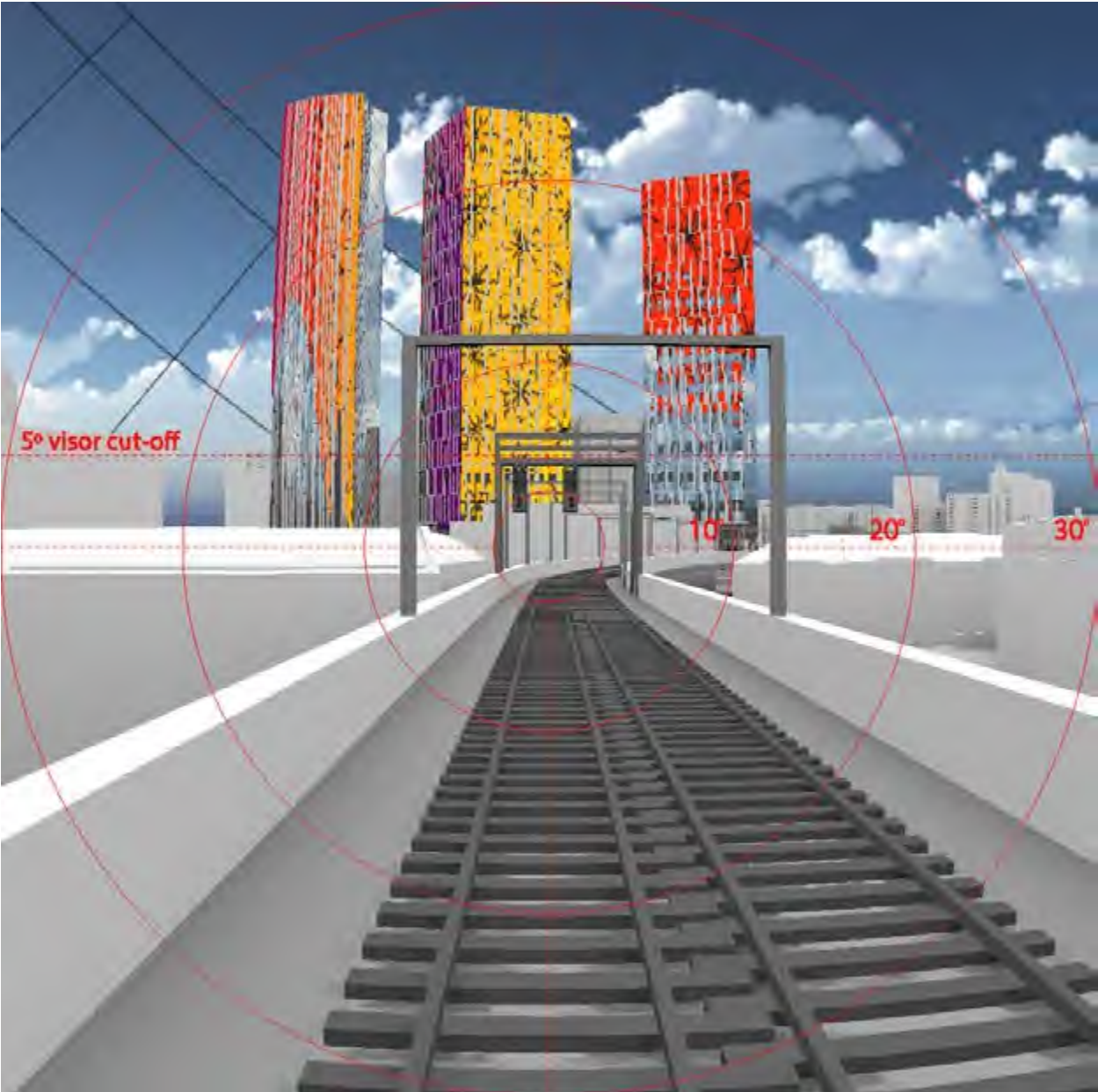


Fig. 760: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**



Fig. 761: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

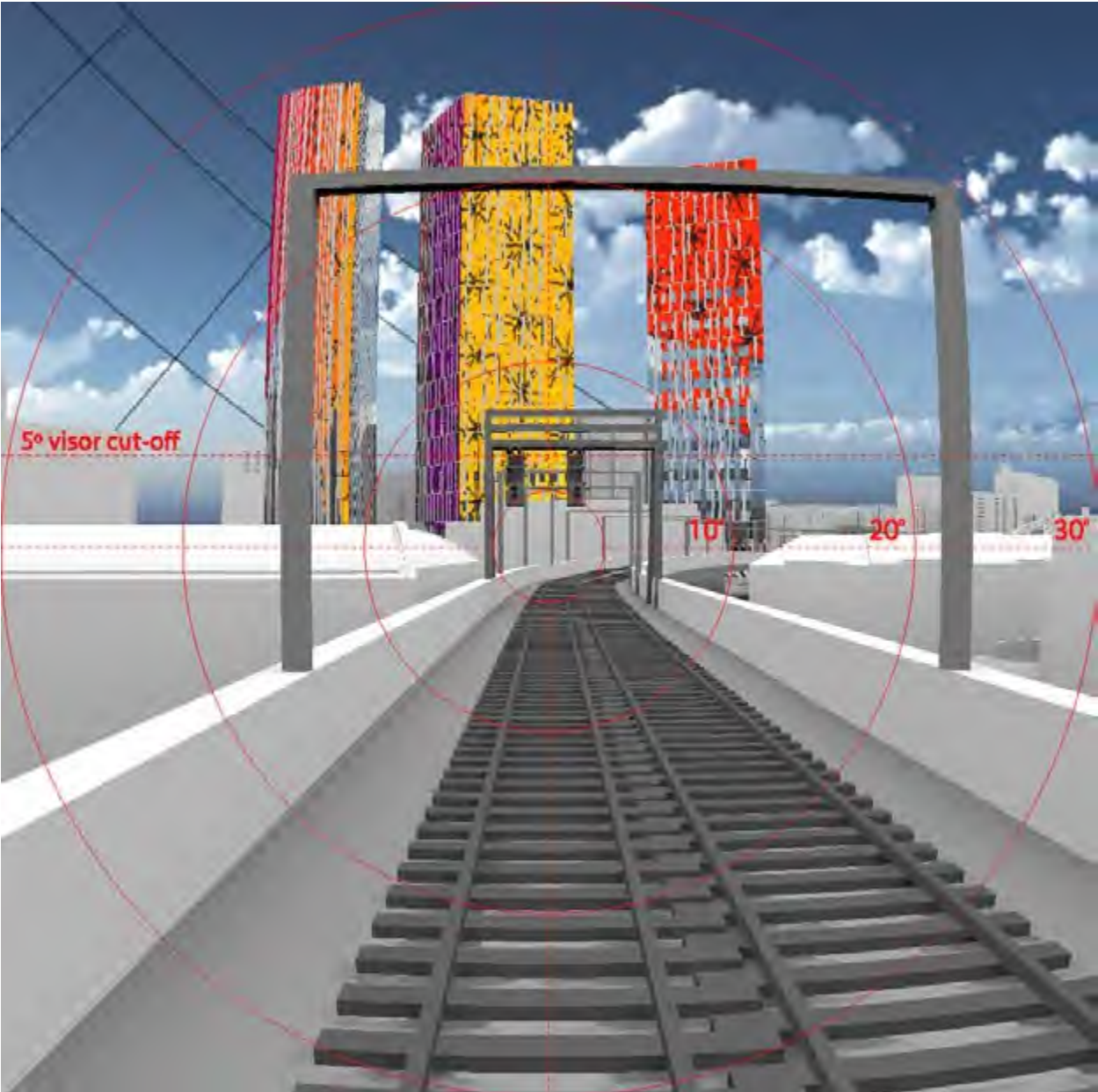


Fig. 762: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**



Fig. 763: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

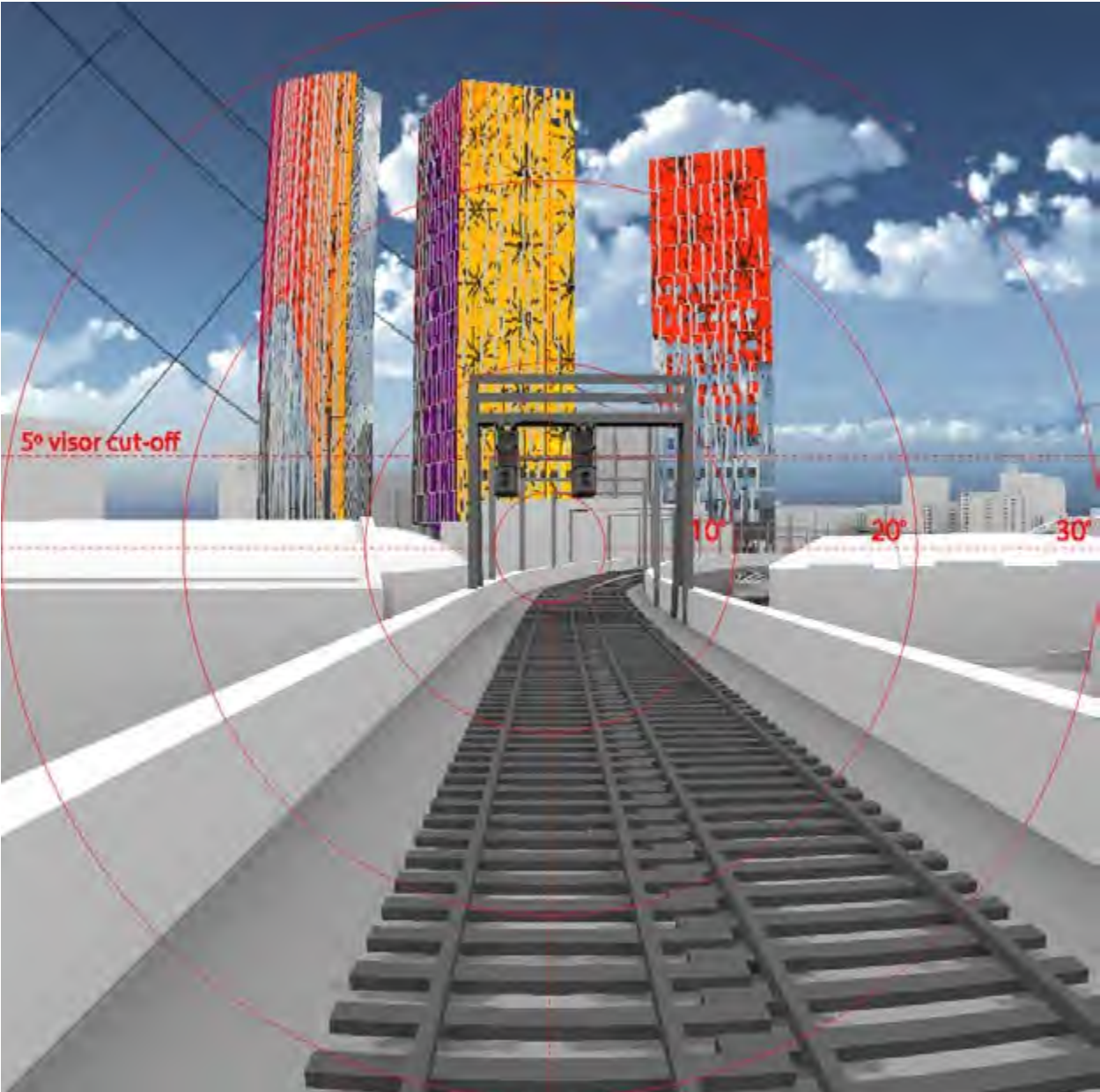


Fig. 764: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

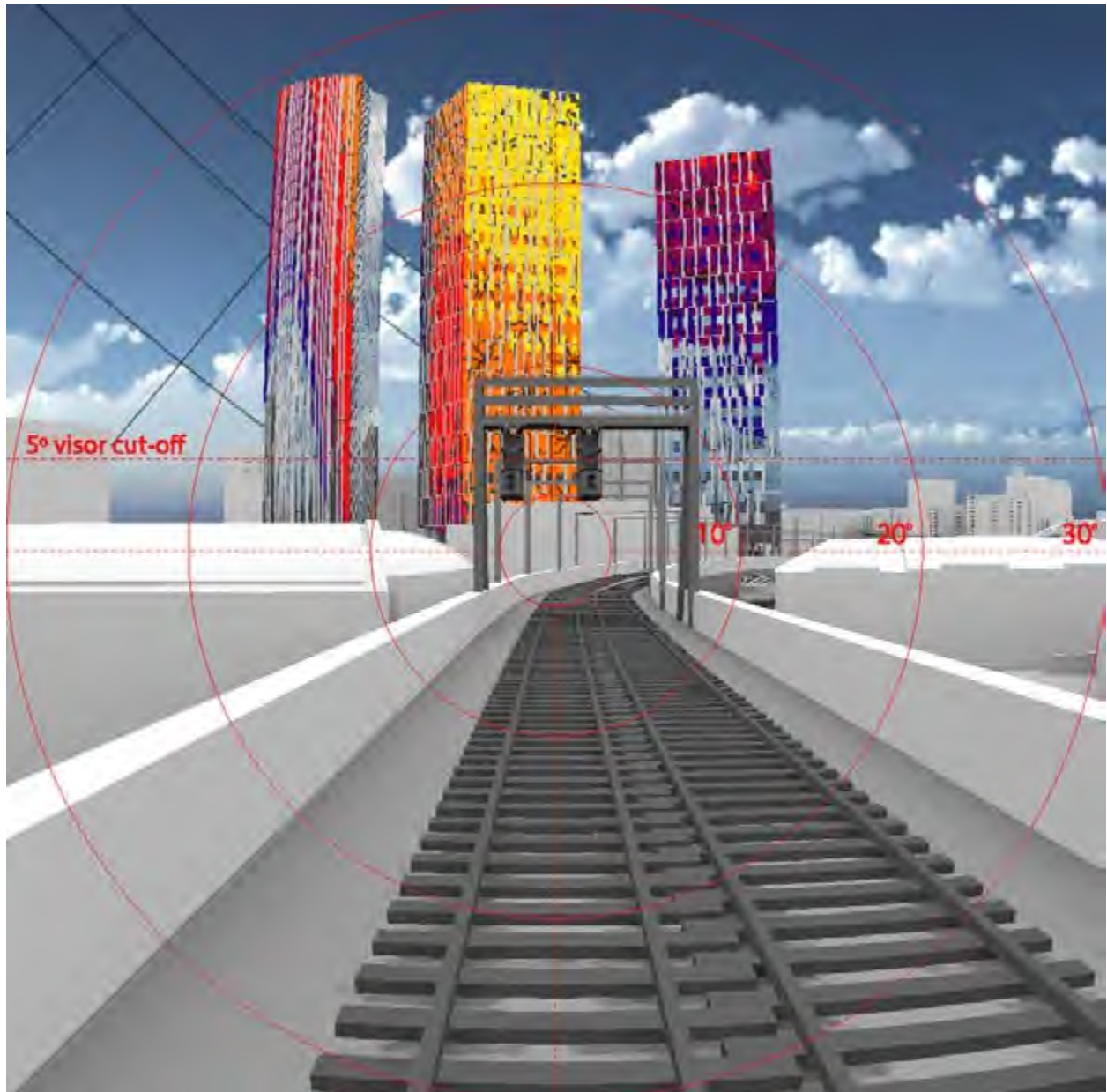


Fig. 765: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

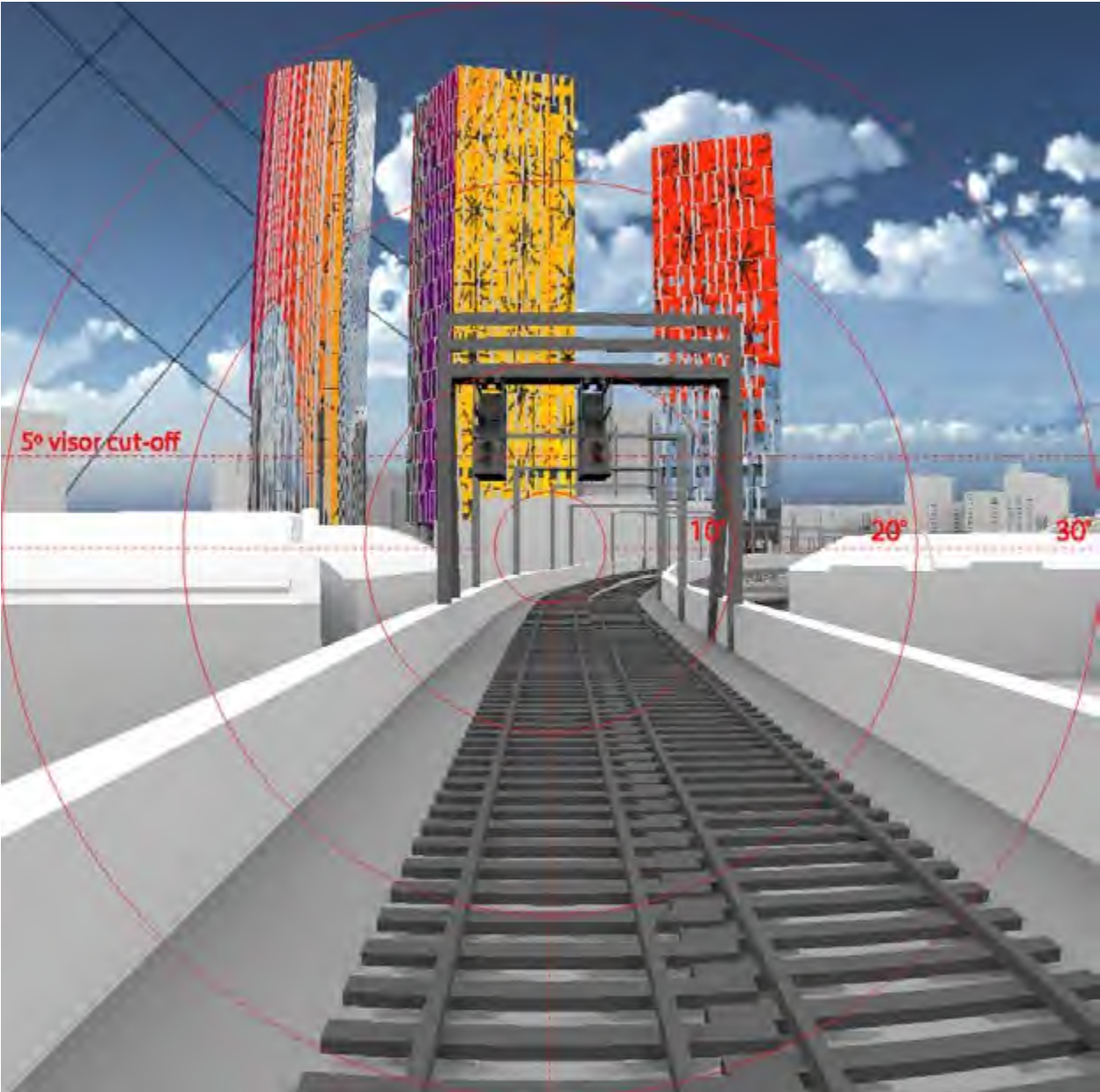


Fig. 766: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

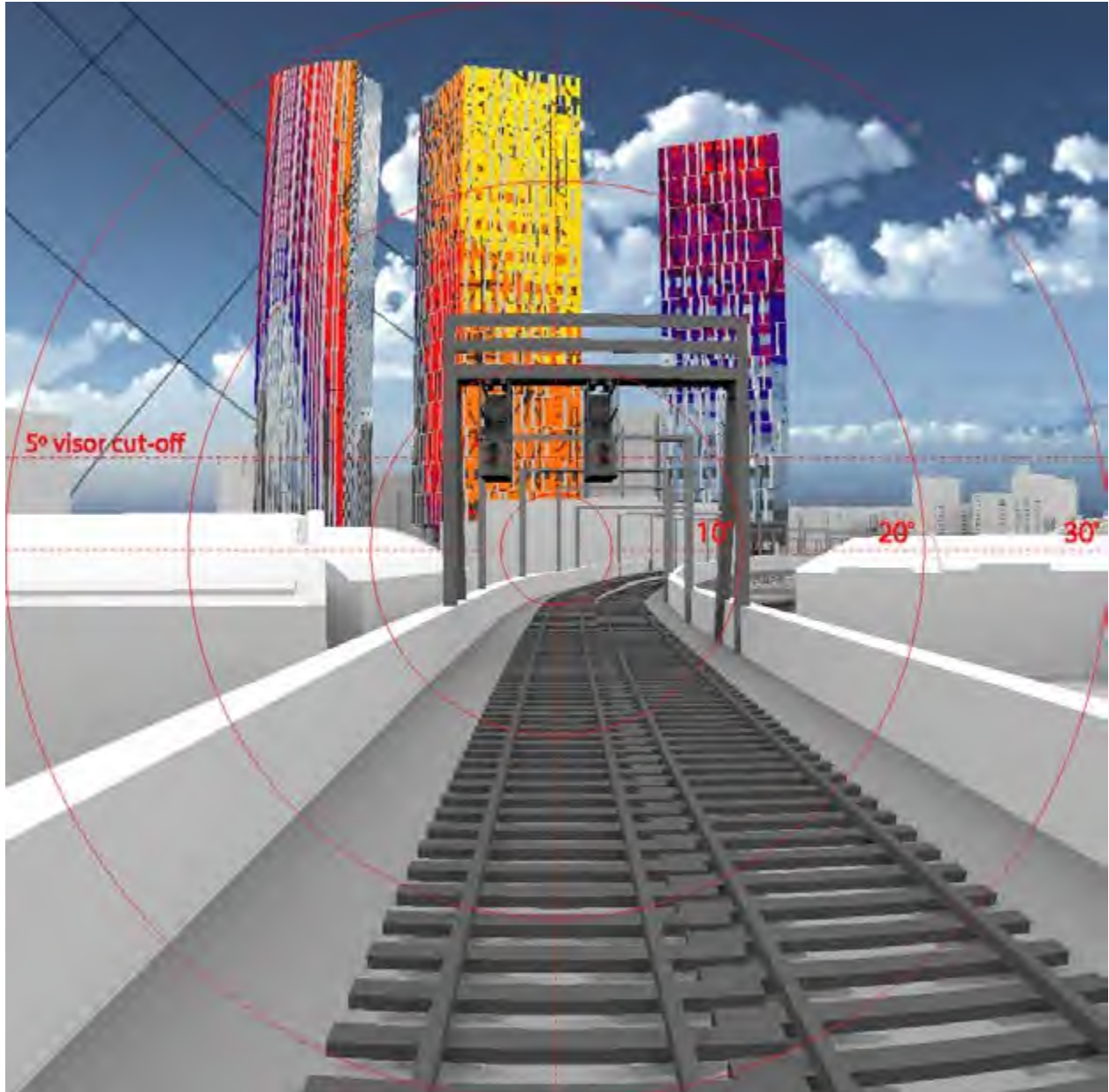


Fig. 767: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

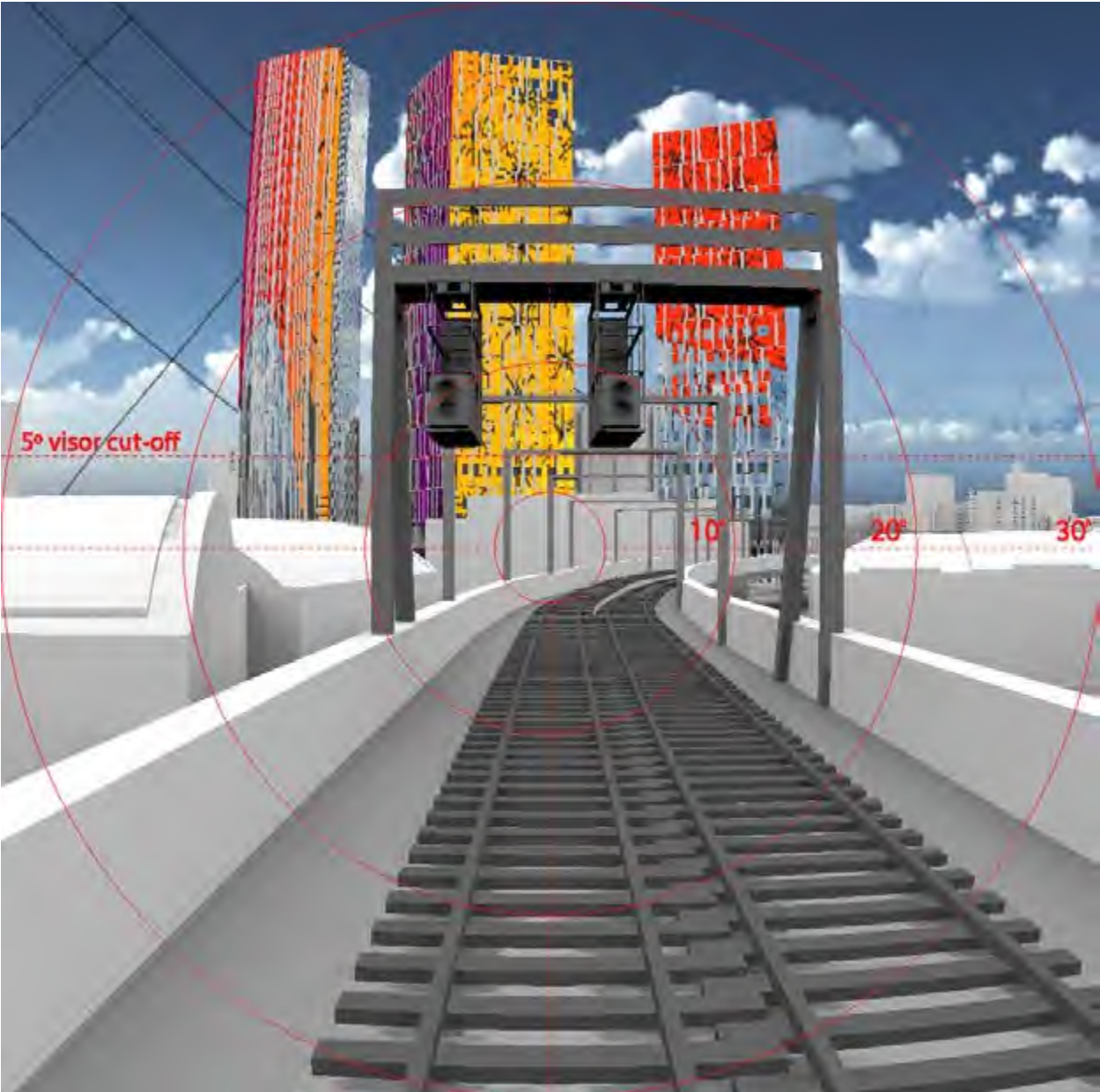


Fig. 768: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

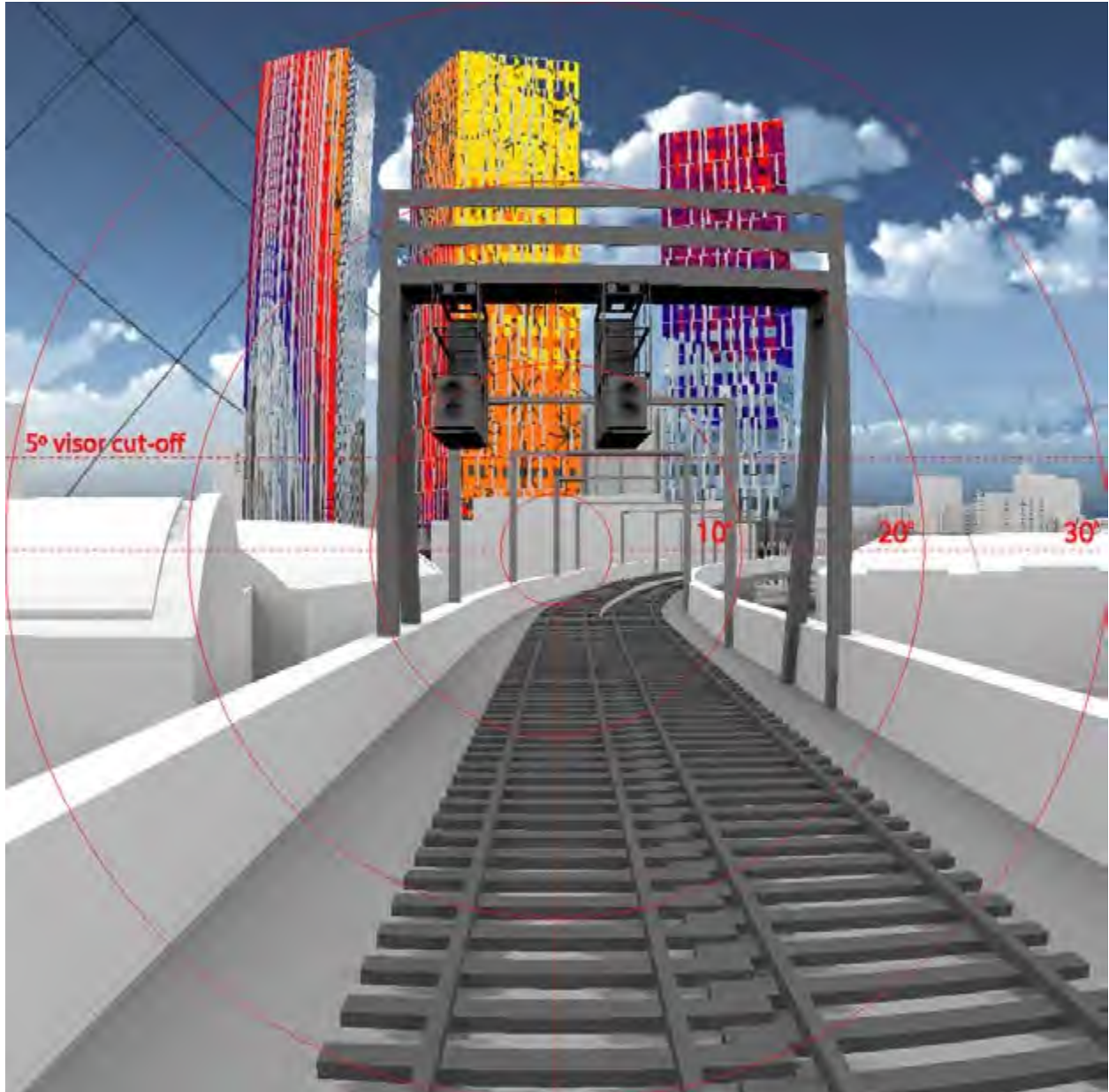


Fig. 769: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAGHT

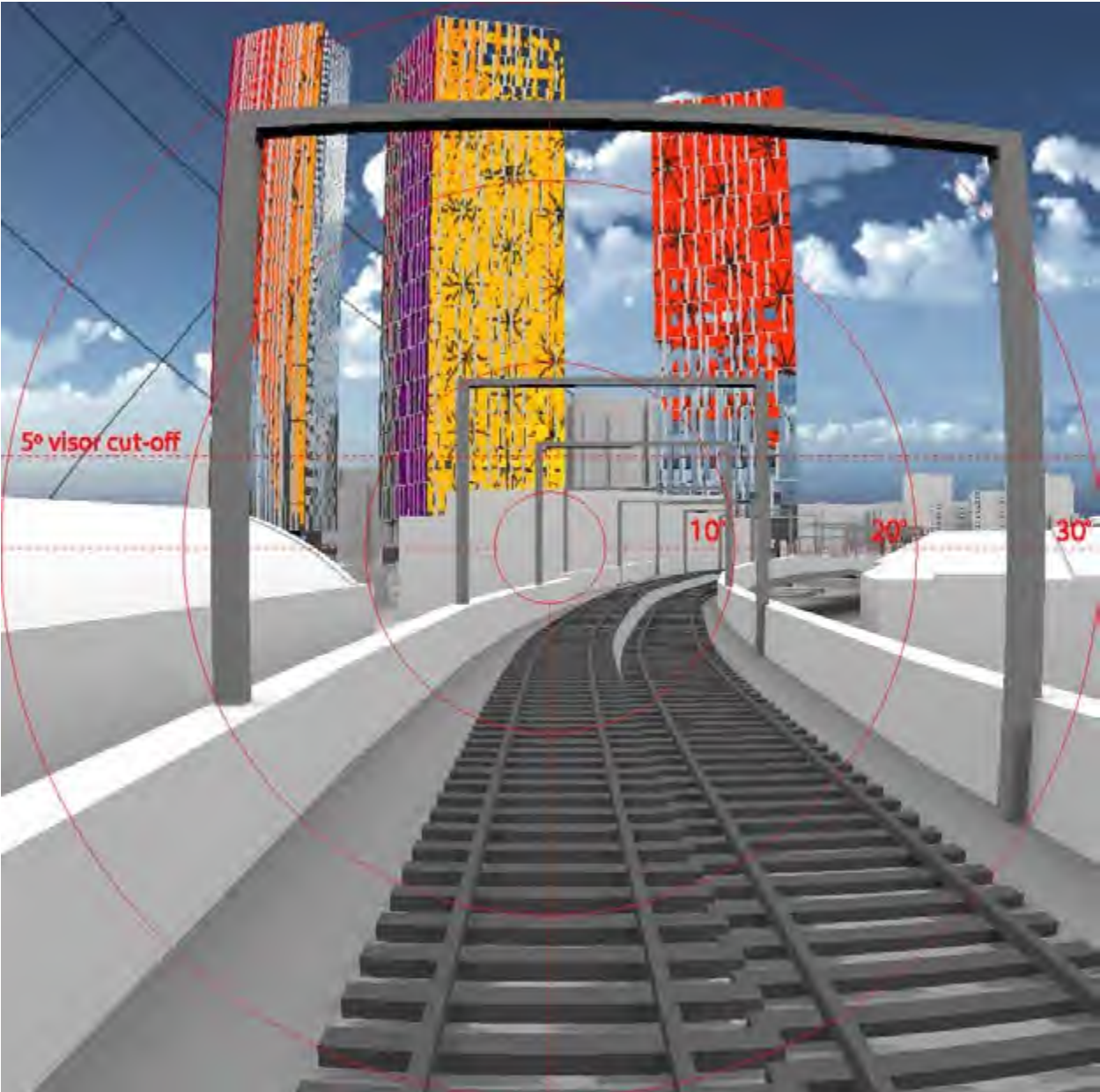


Fig. 770: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAGHT**

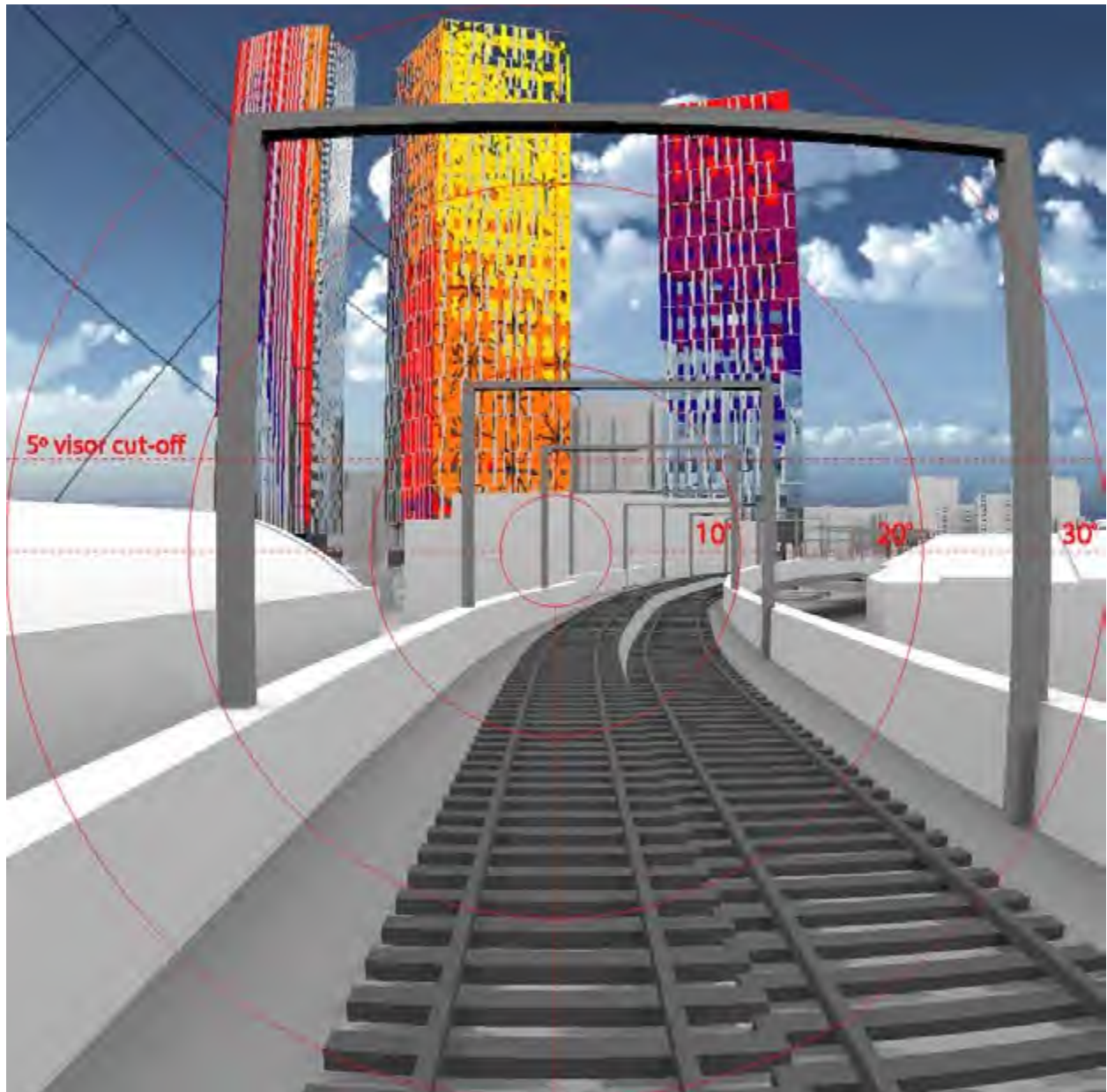


Fig. 771: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAGHT

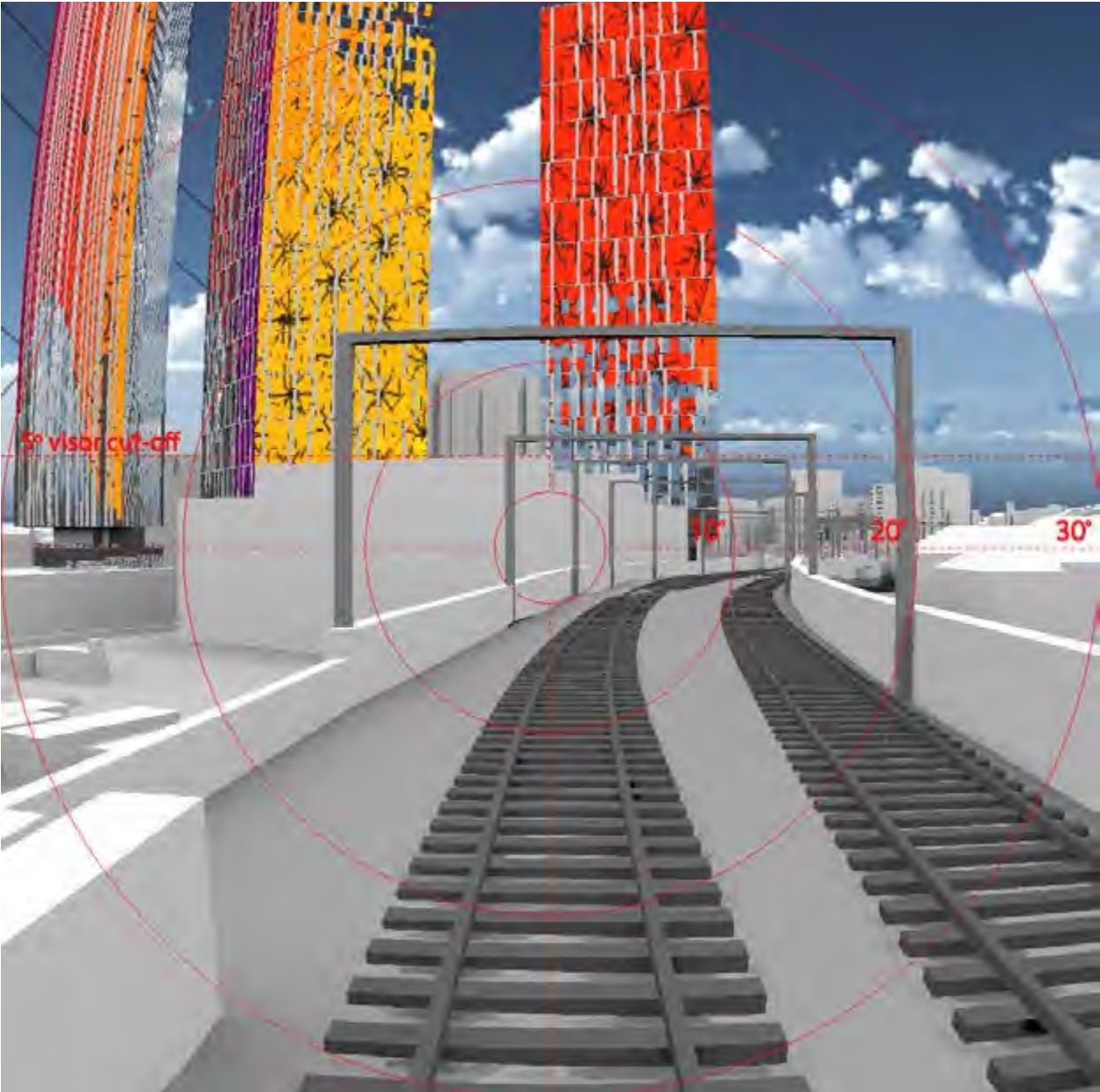


Fig. 772: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAGHT**

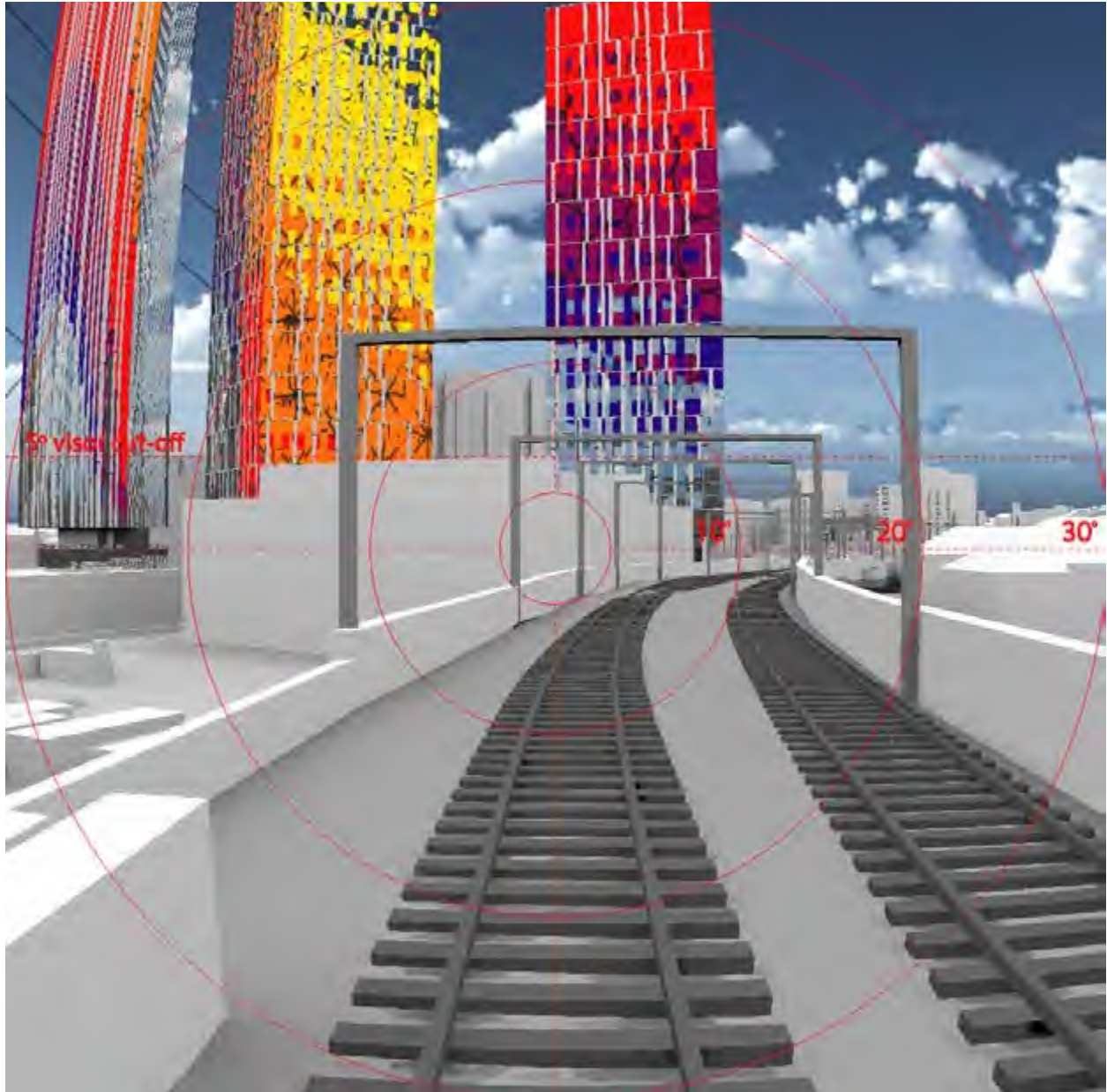


Fig. 773: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT

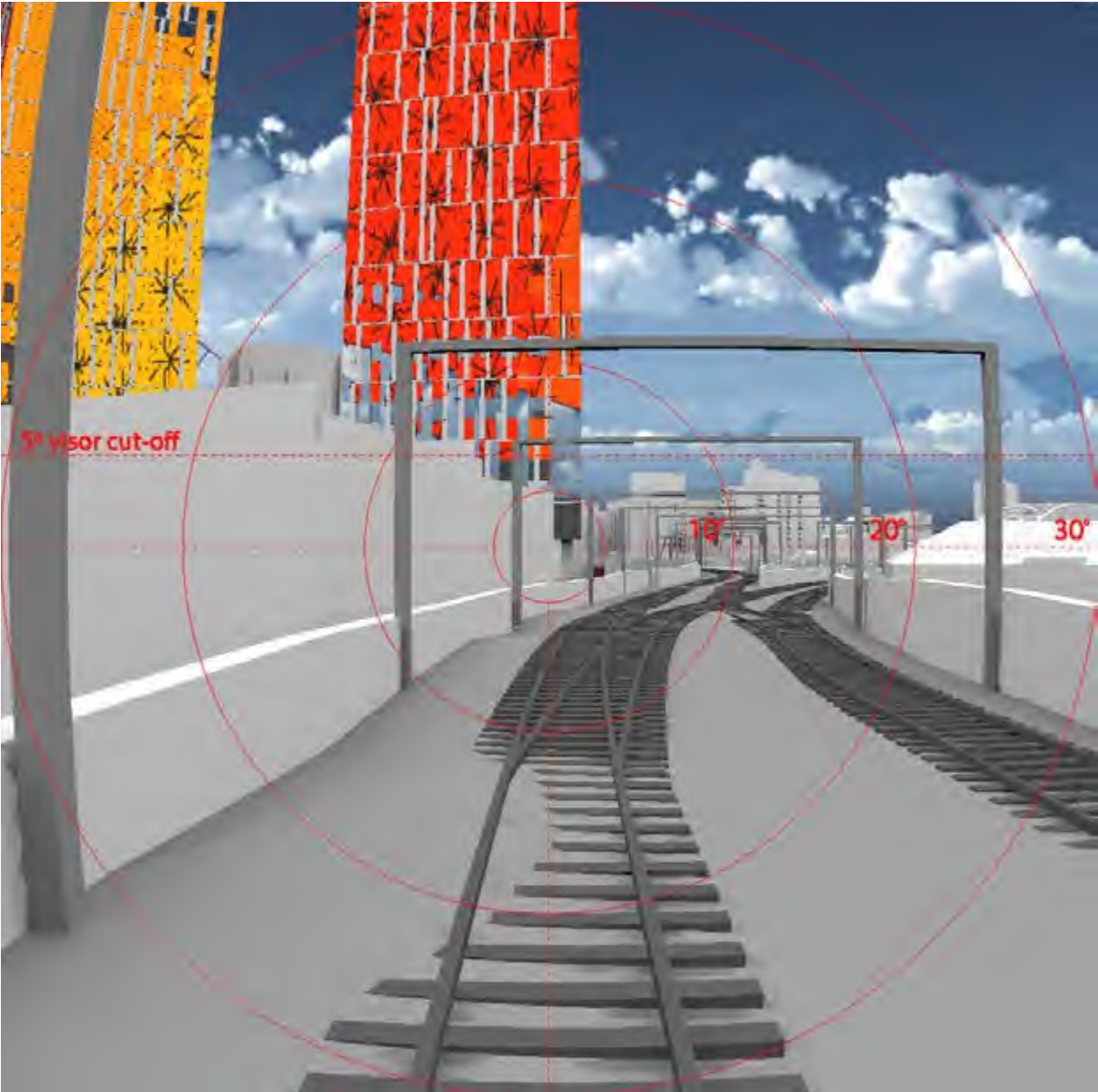


Fig. 774: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT**

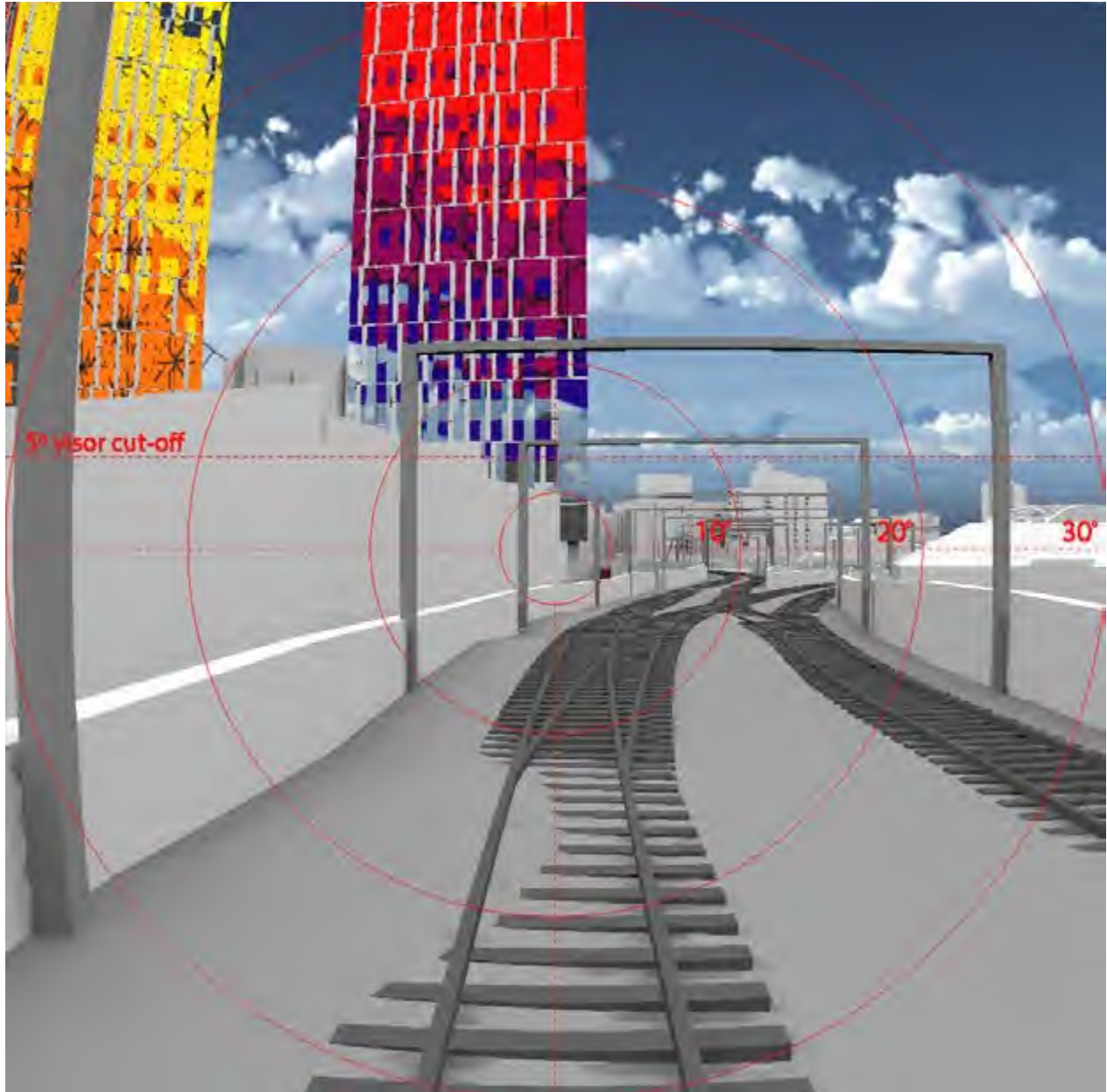


Fig. 775: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT

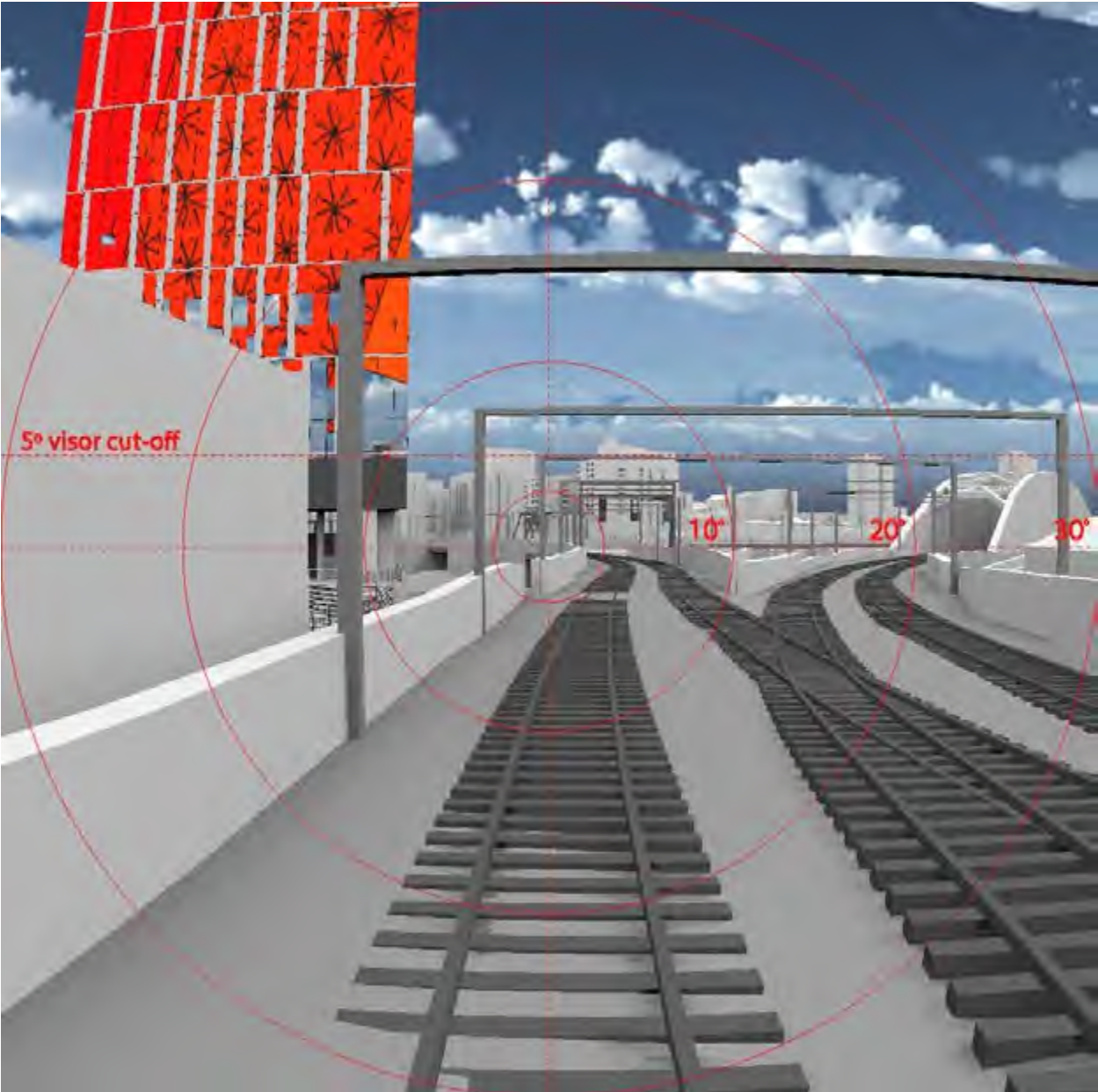


Fig. 776: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT**

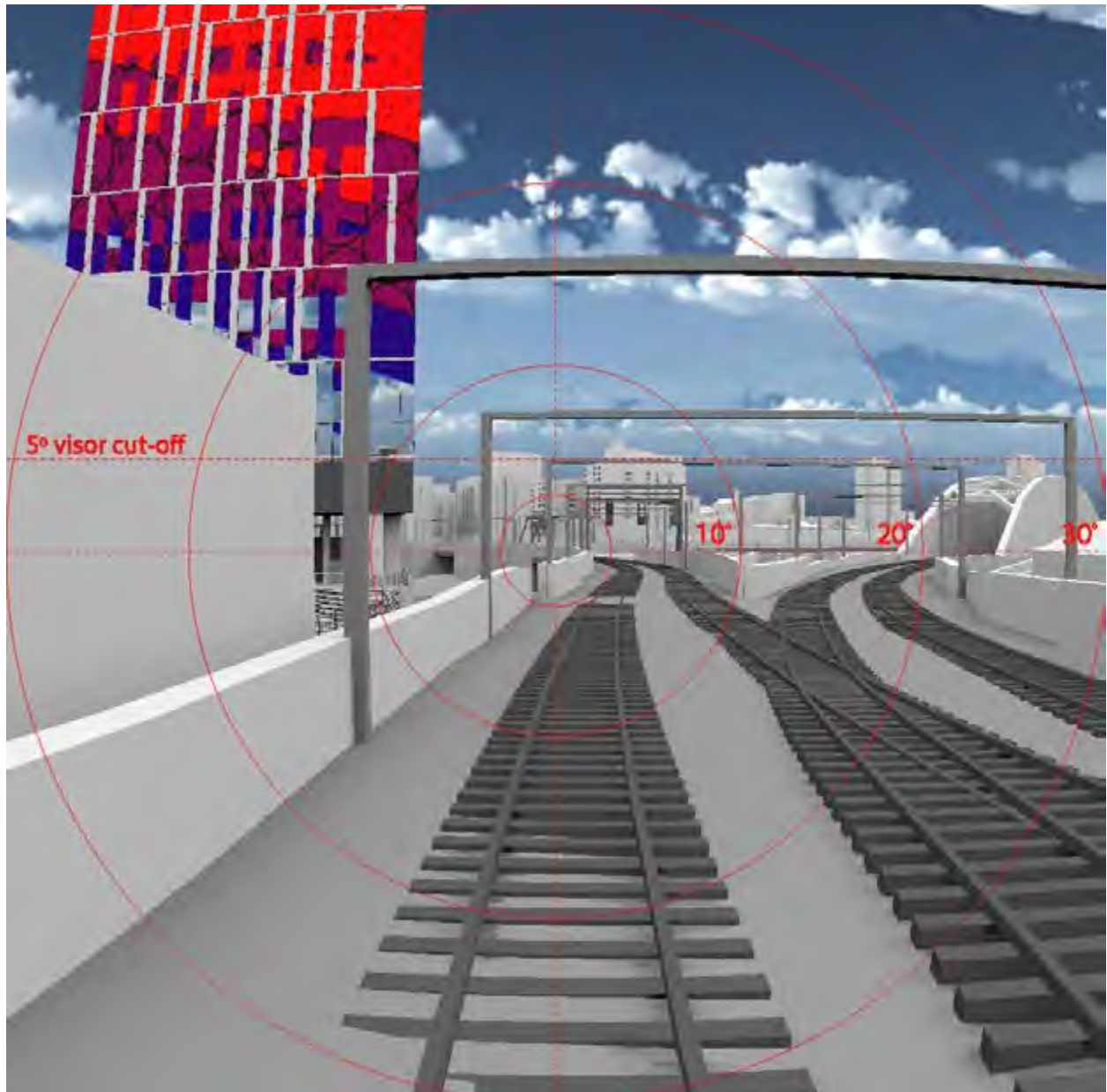


Fig. 777: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

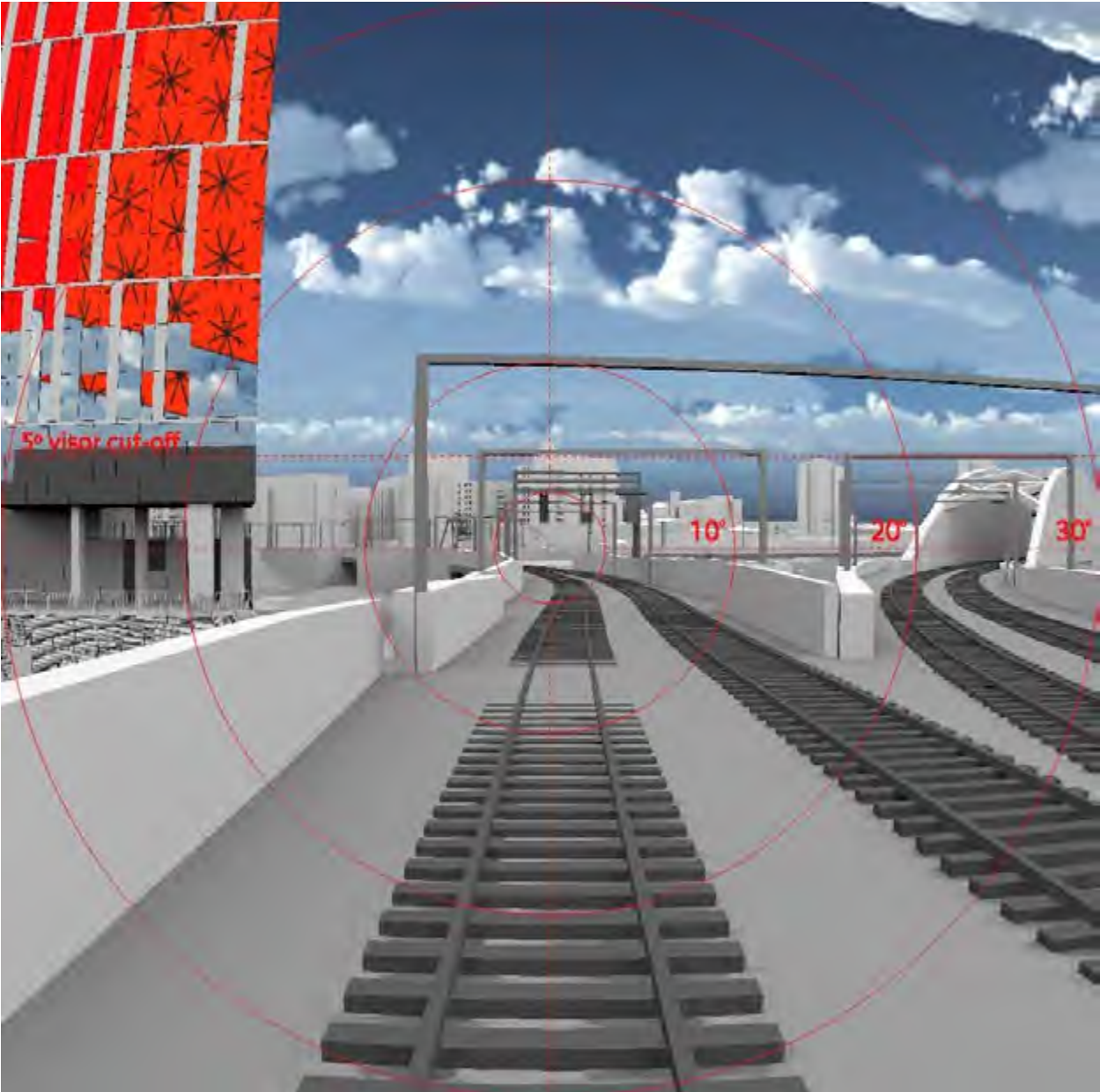


Fig. 778: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

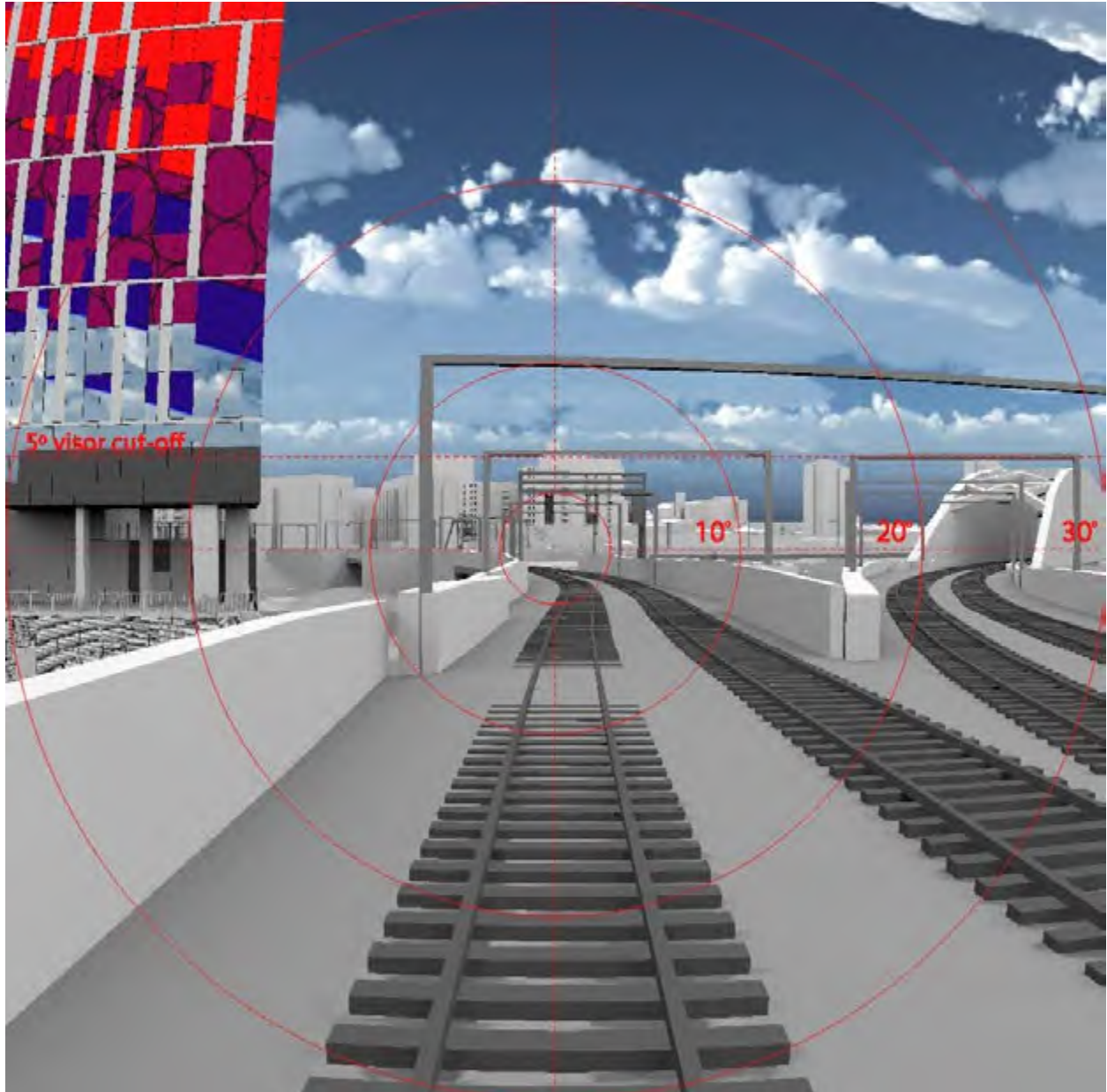


Fig. 779: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

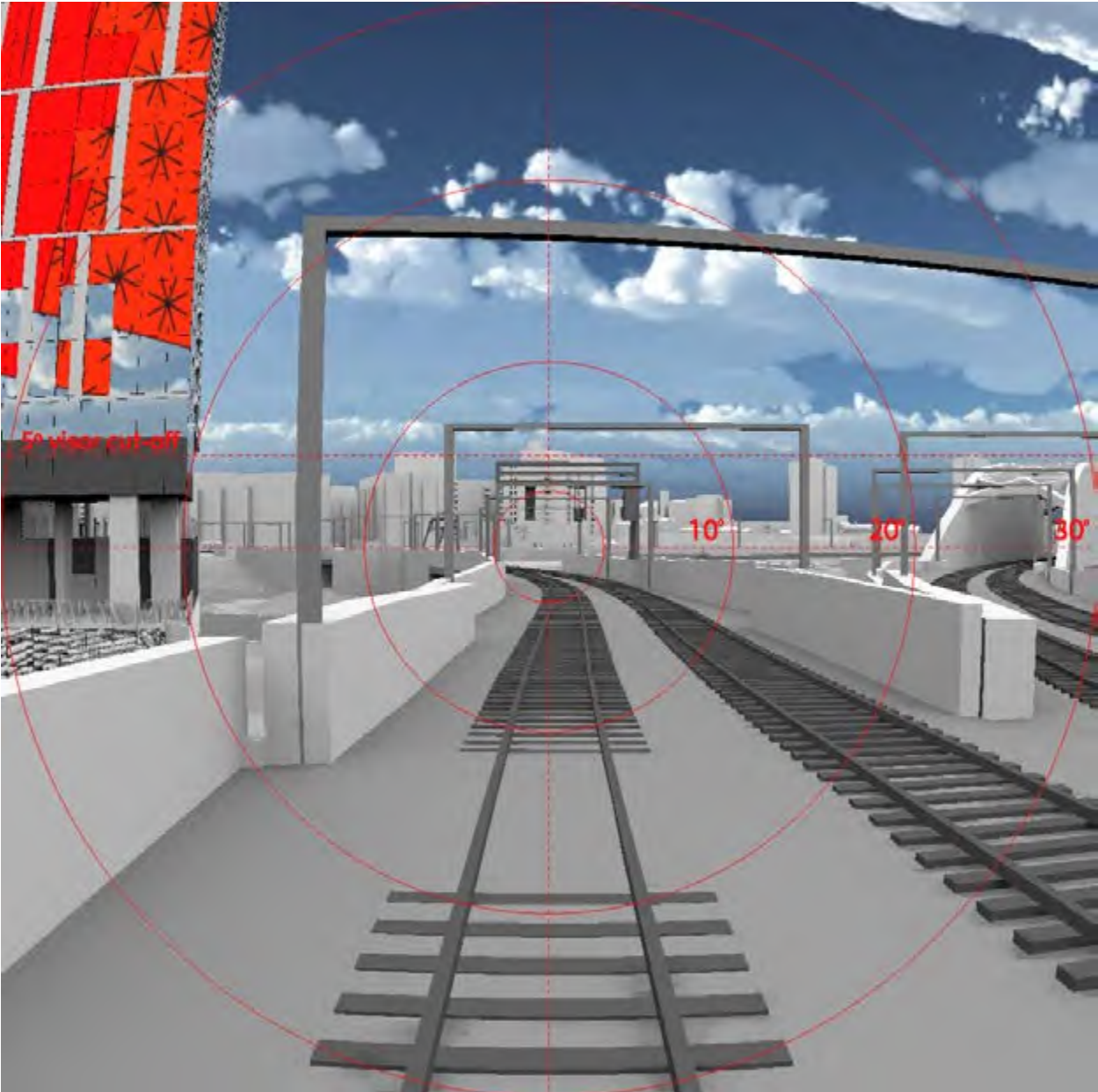


Fig. 780: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

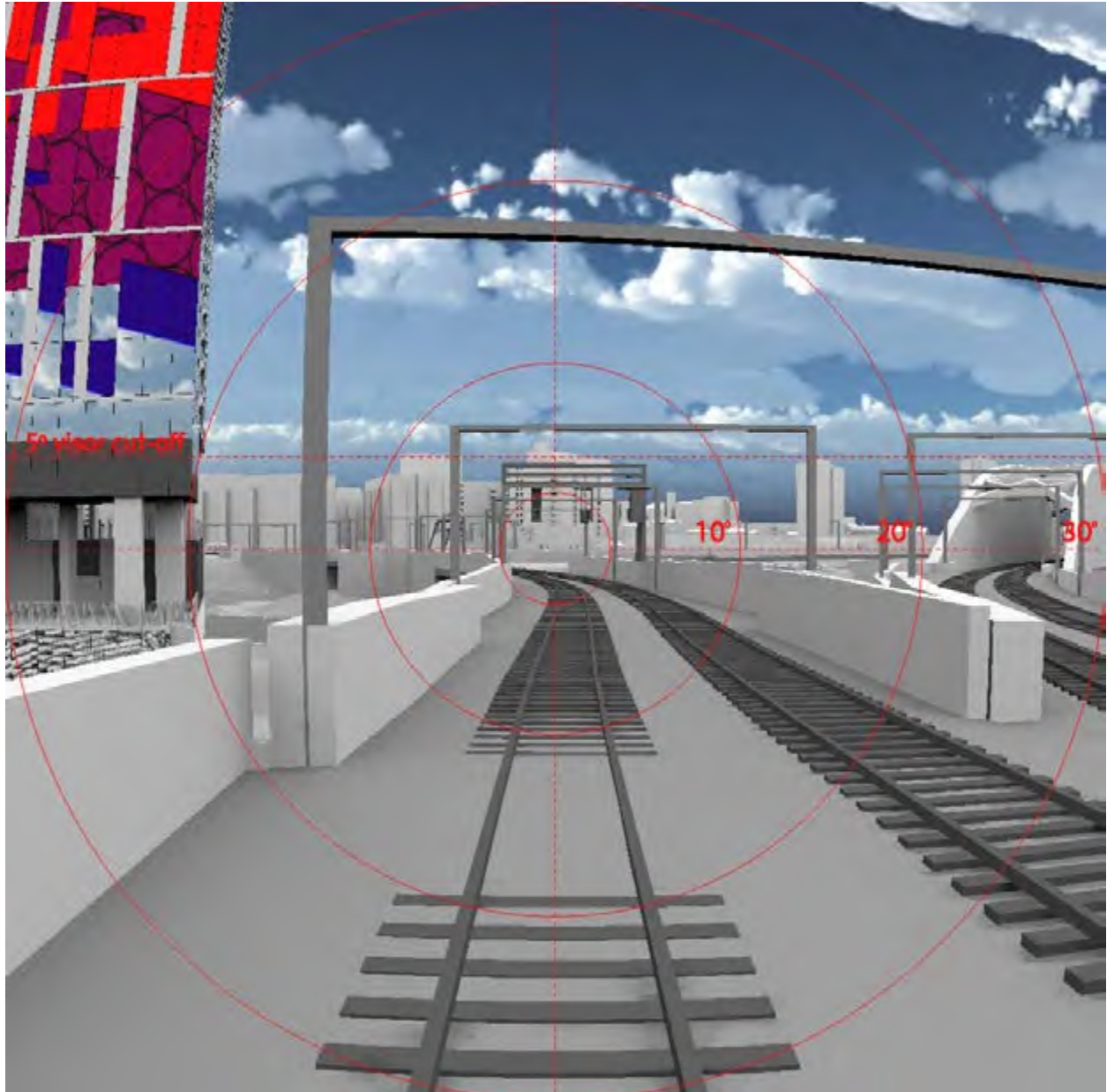


Fig. 781: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

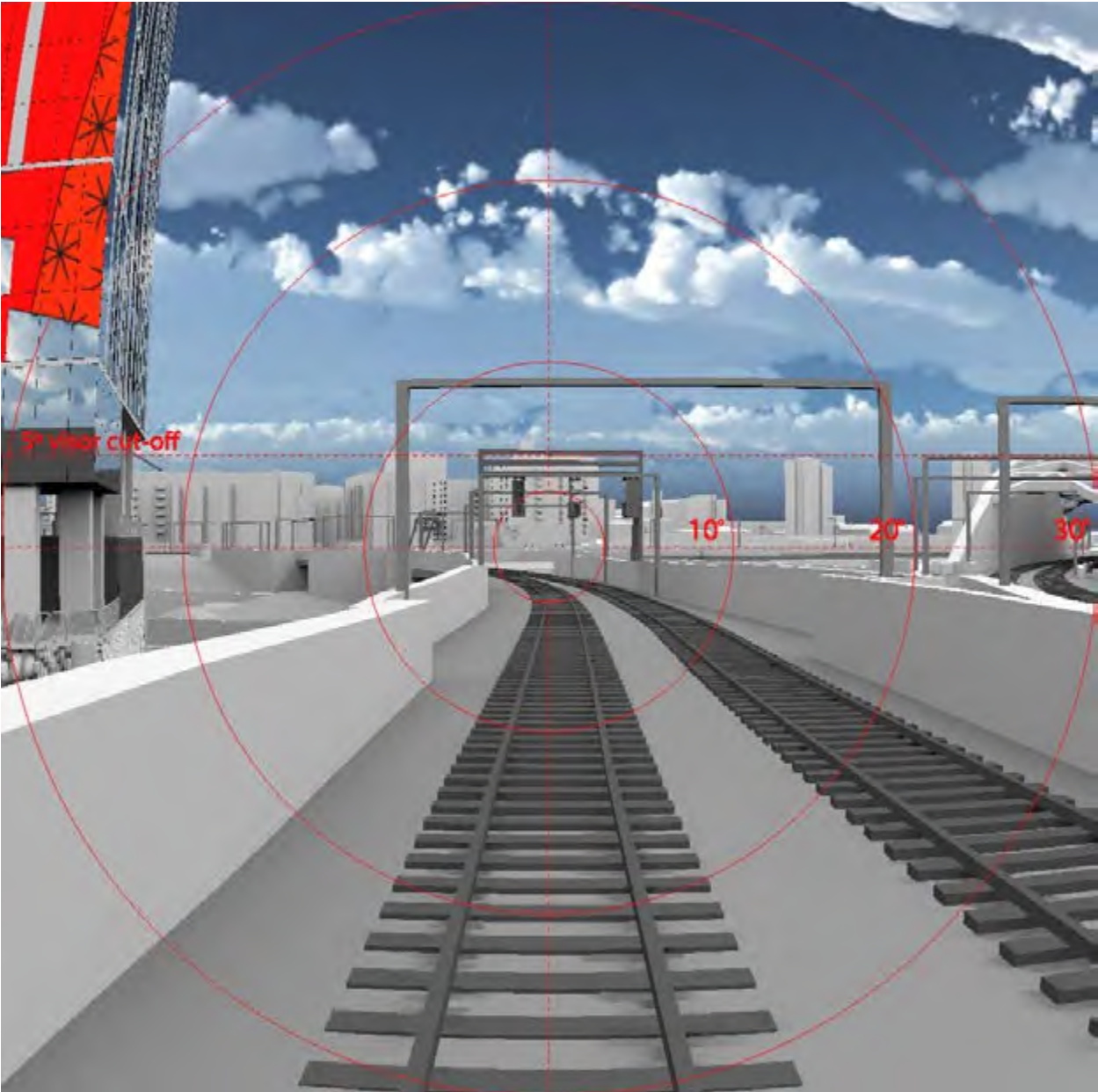


Fig. 782: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

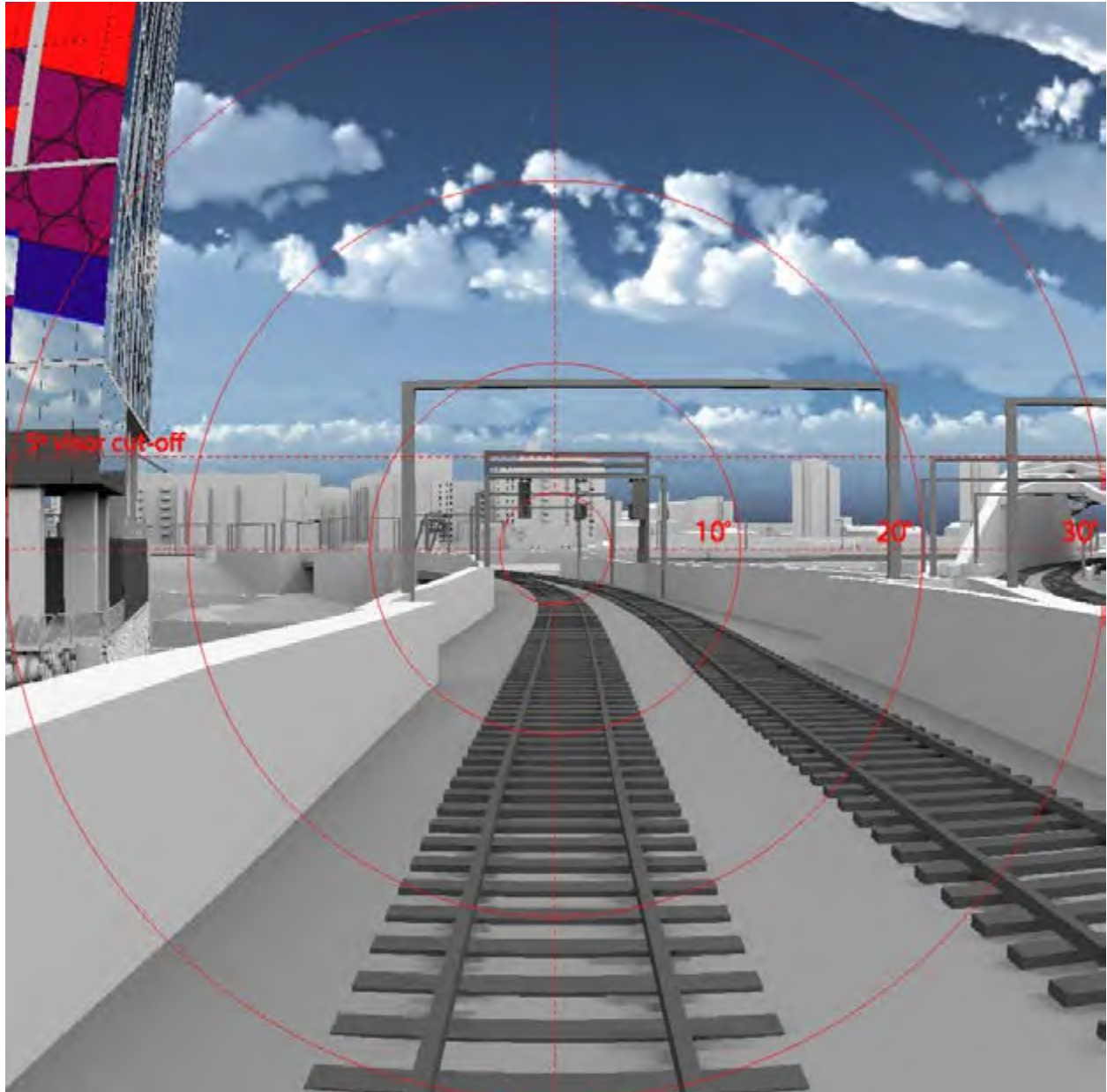


Fig. 783: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

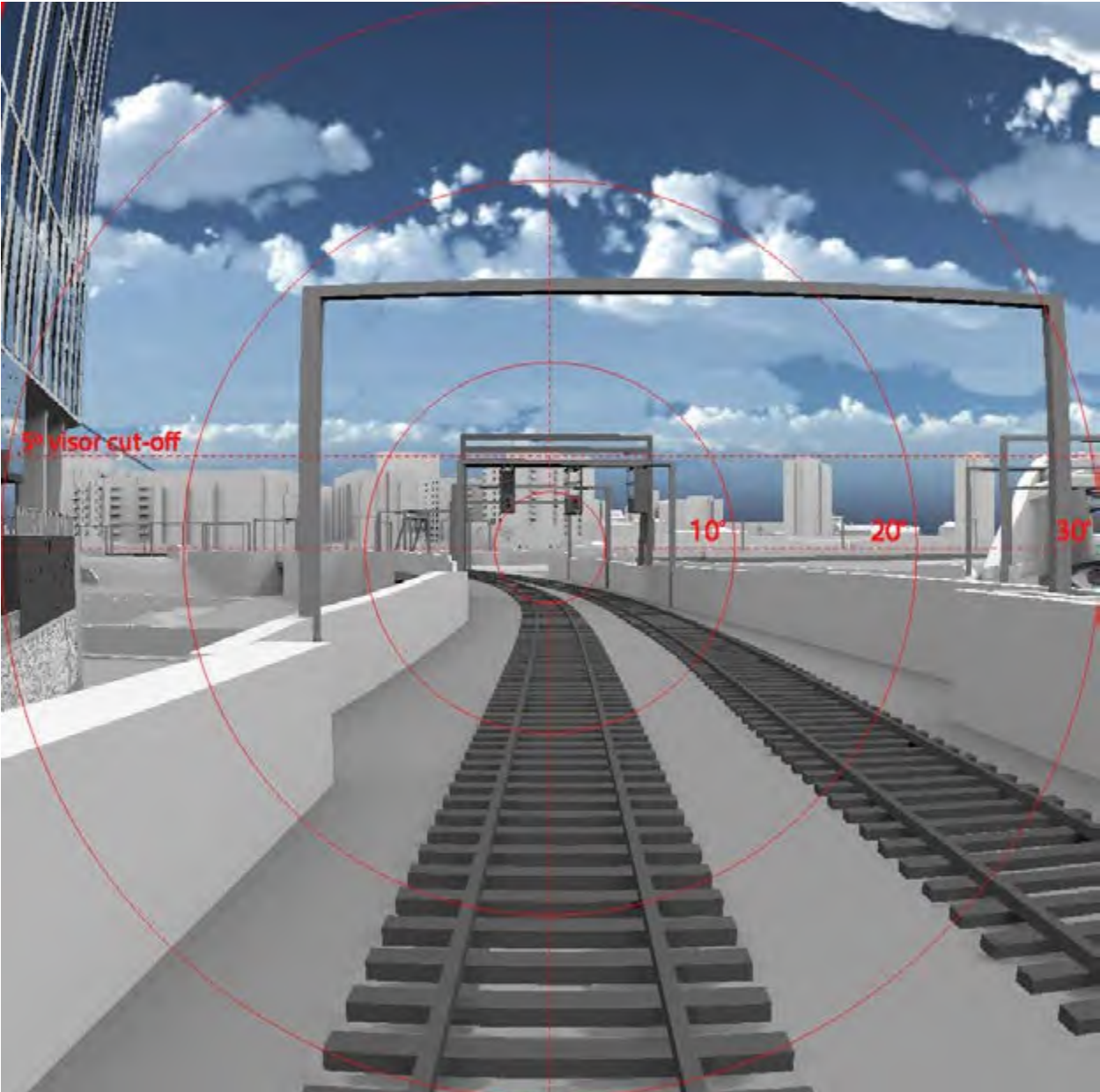


Fig. 784: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

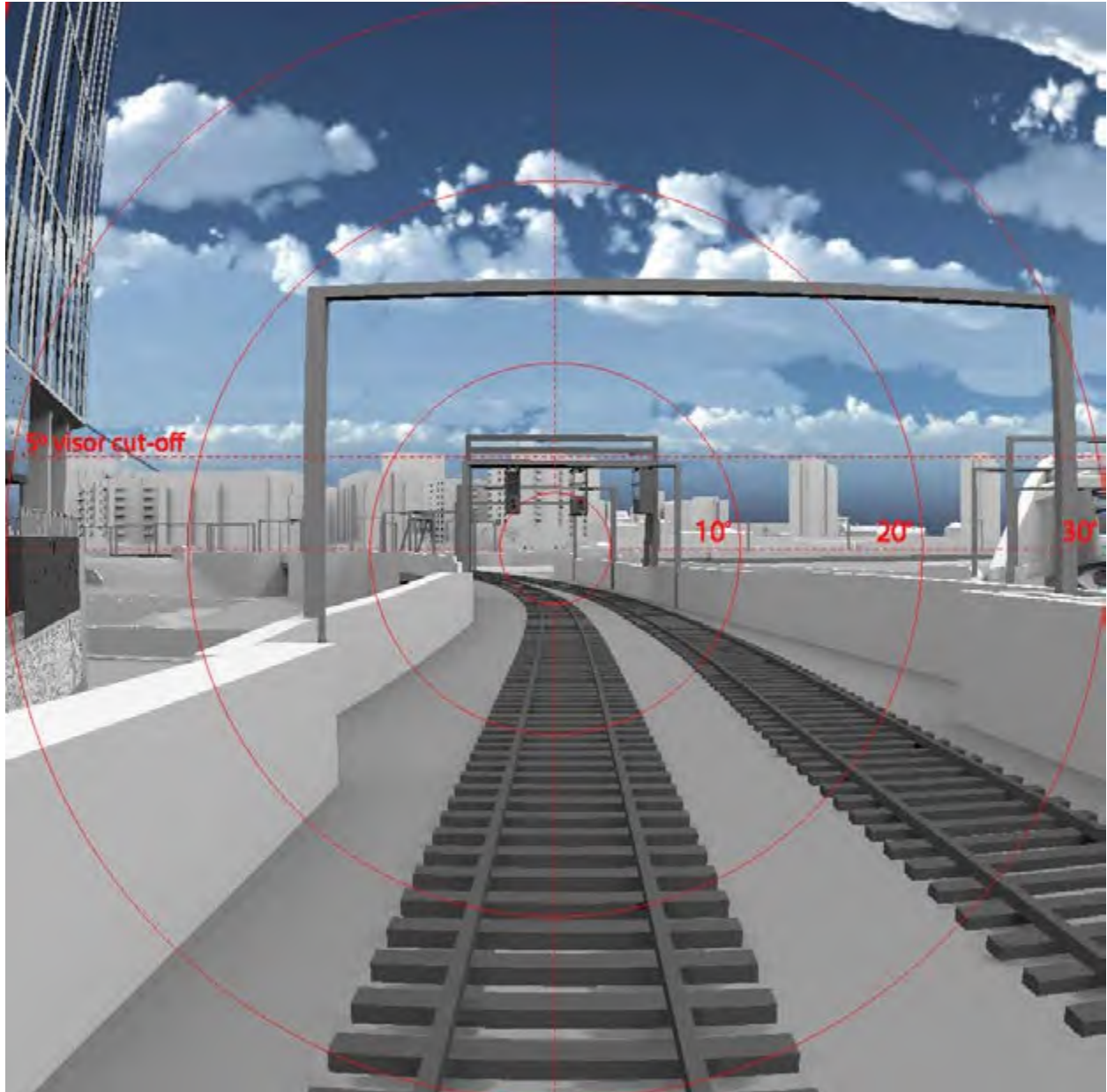


Fig. 785: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

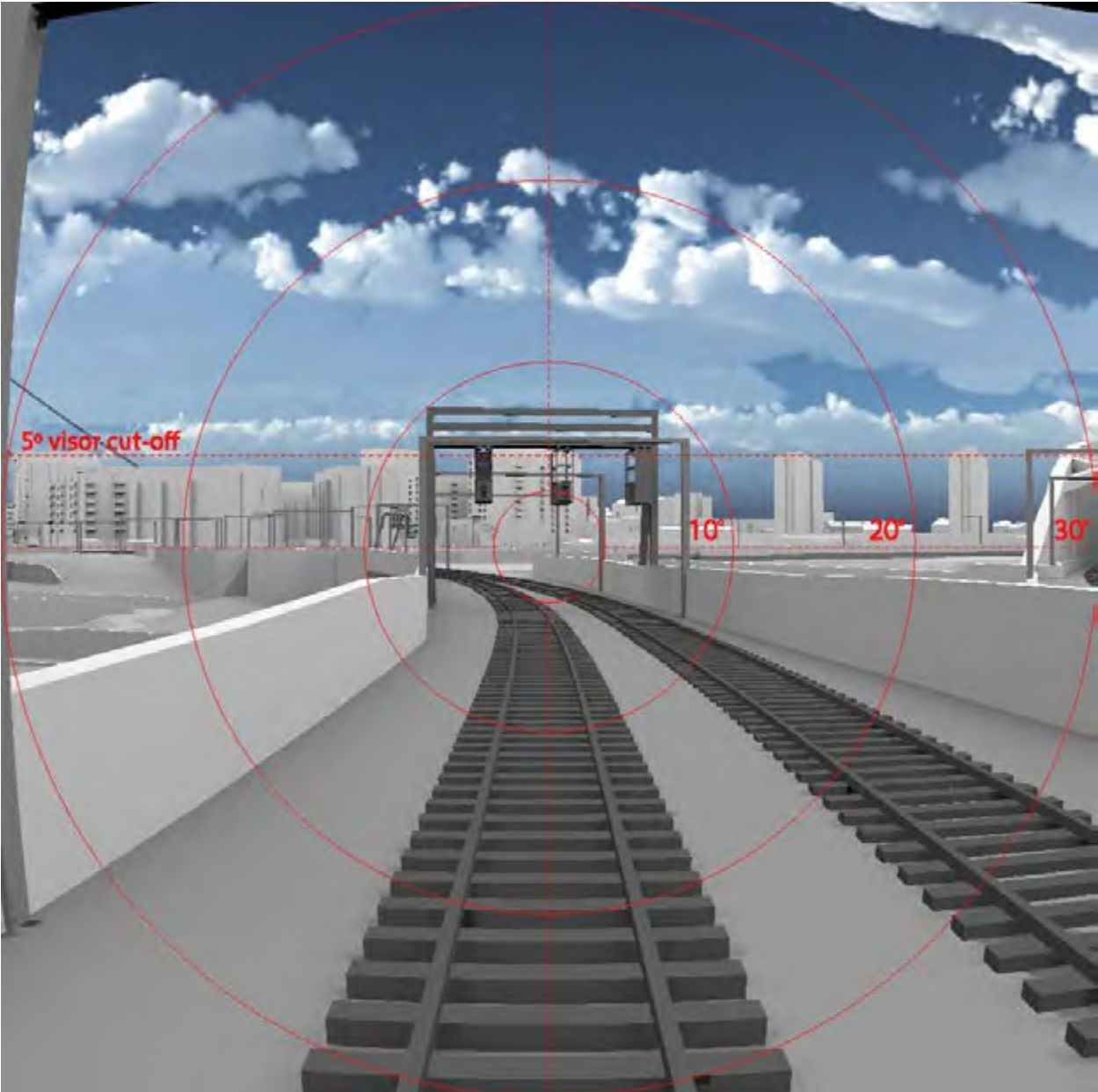


Fig. 786: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

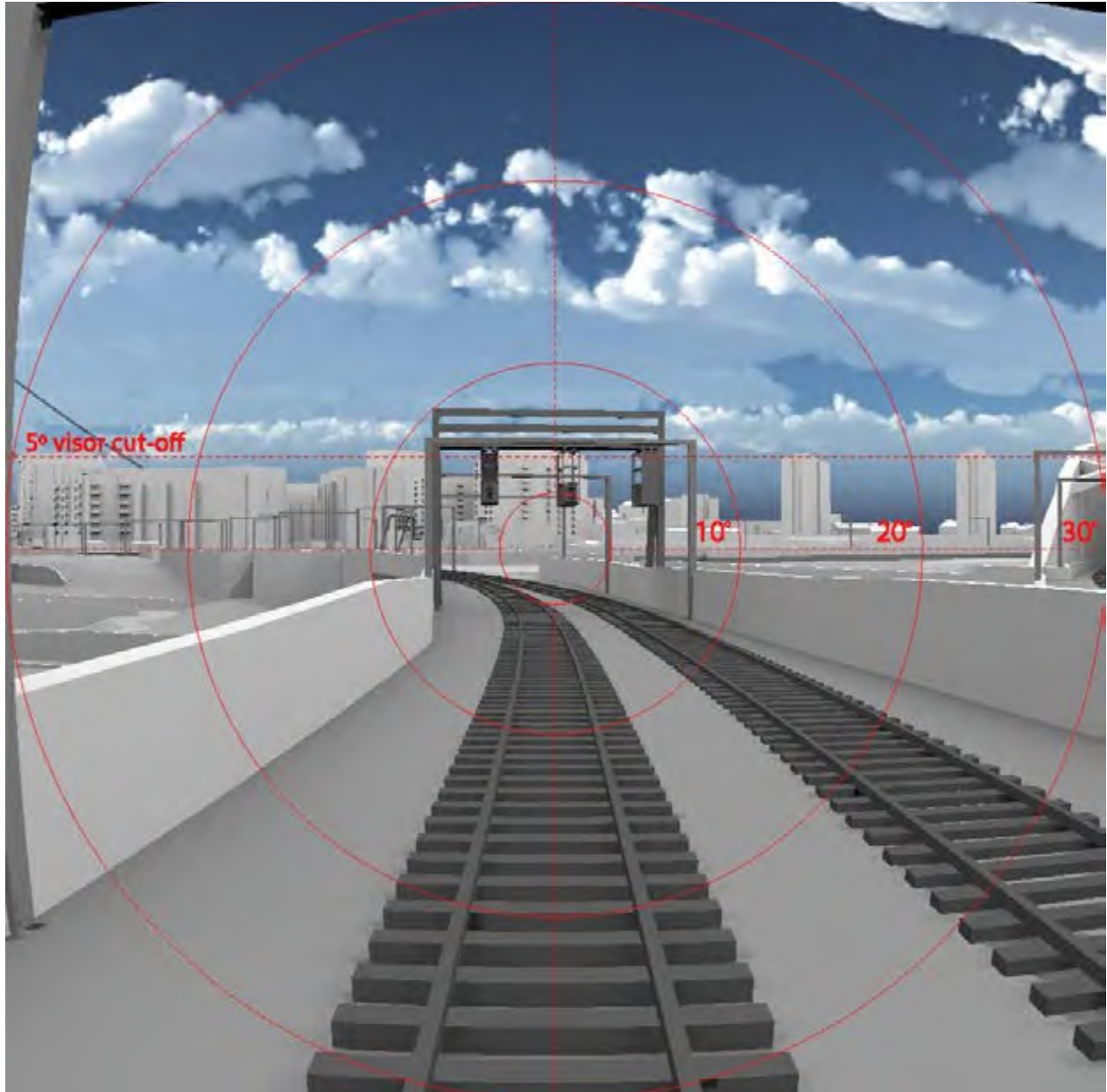


Fig. 787: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT



Fig. 788: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-10 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAIGHT**



Fig. 789: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAIGHT

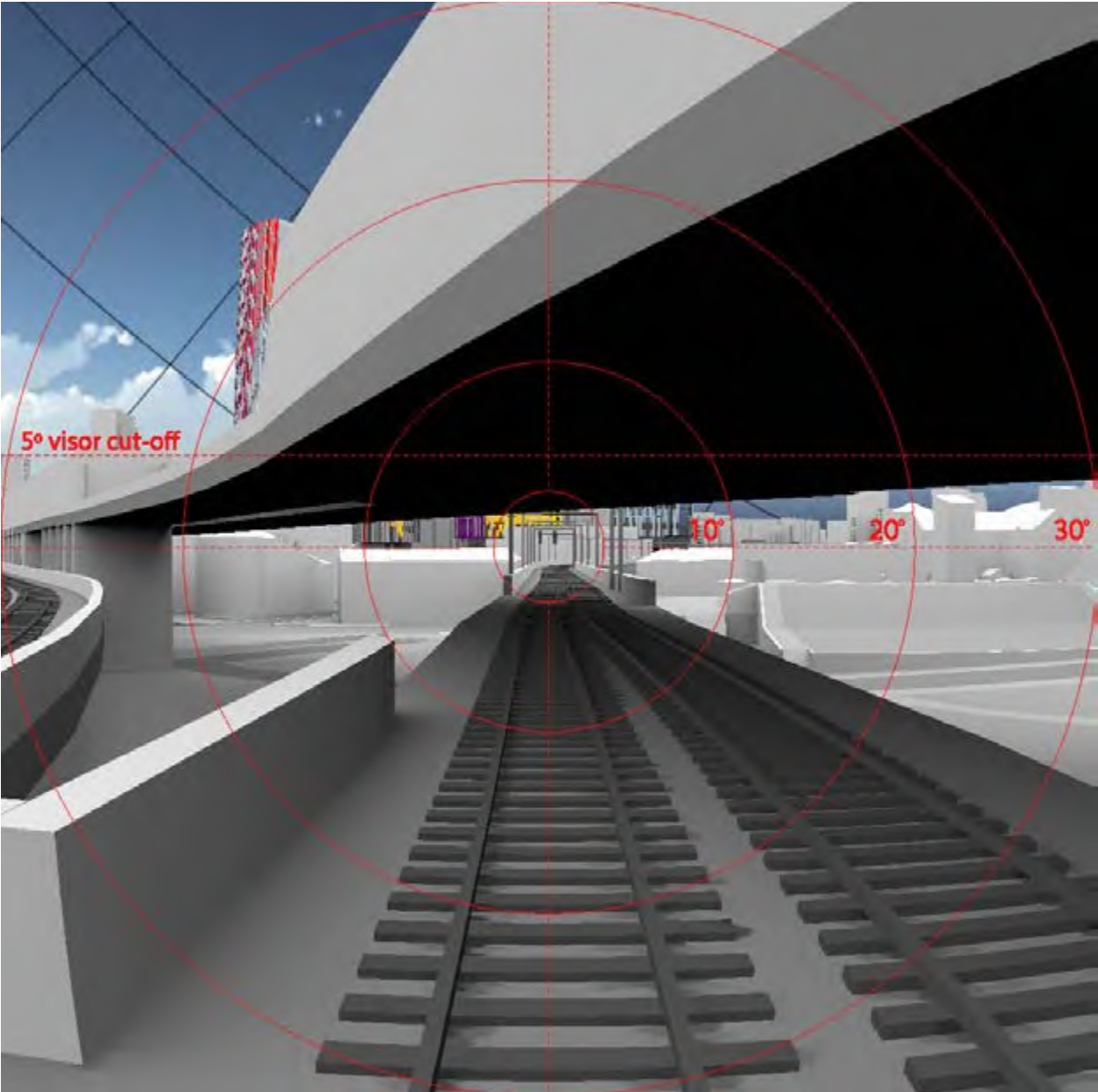


Fig. 790: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-60 - NORTHERN LINE NORTHBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT**

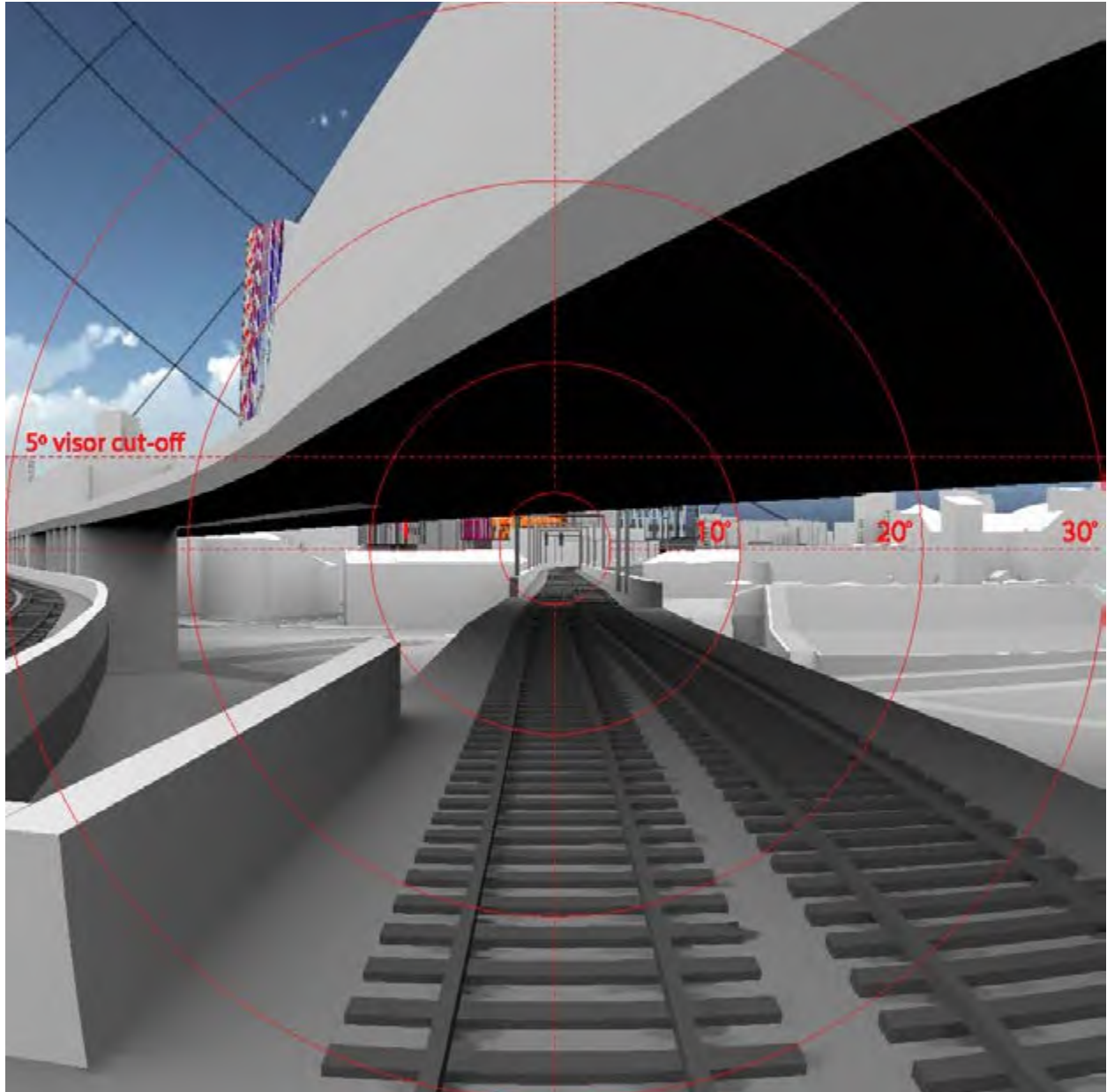


Fig. 791: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAIGHT

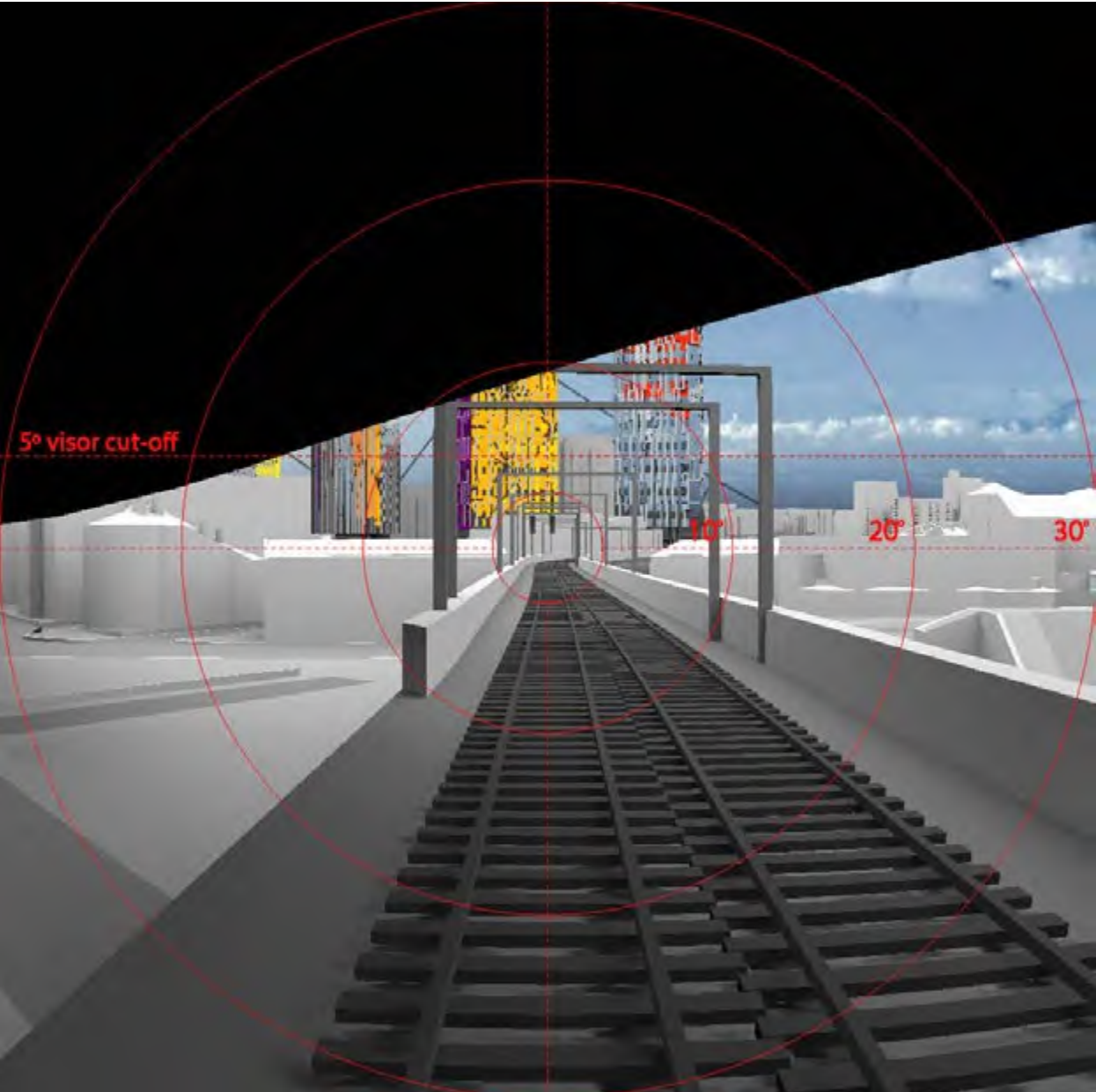
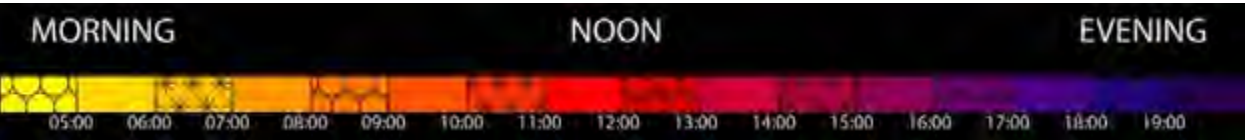


Fig. 792: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-110 - NORTHERN LINE NORTHBOUND - APPROX 400M FROM SITE
LOOKING STRAGHT**

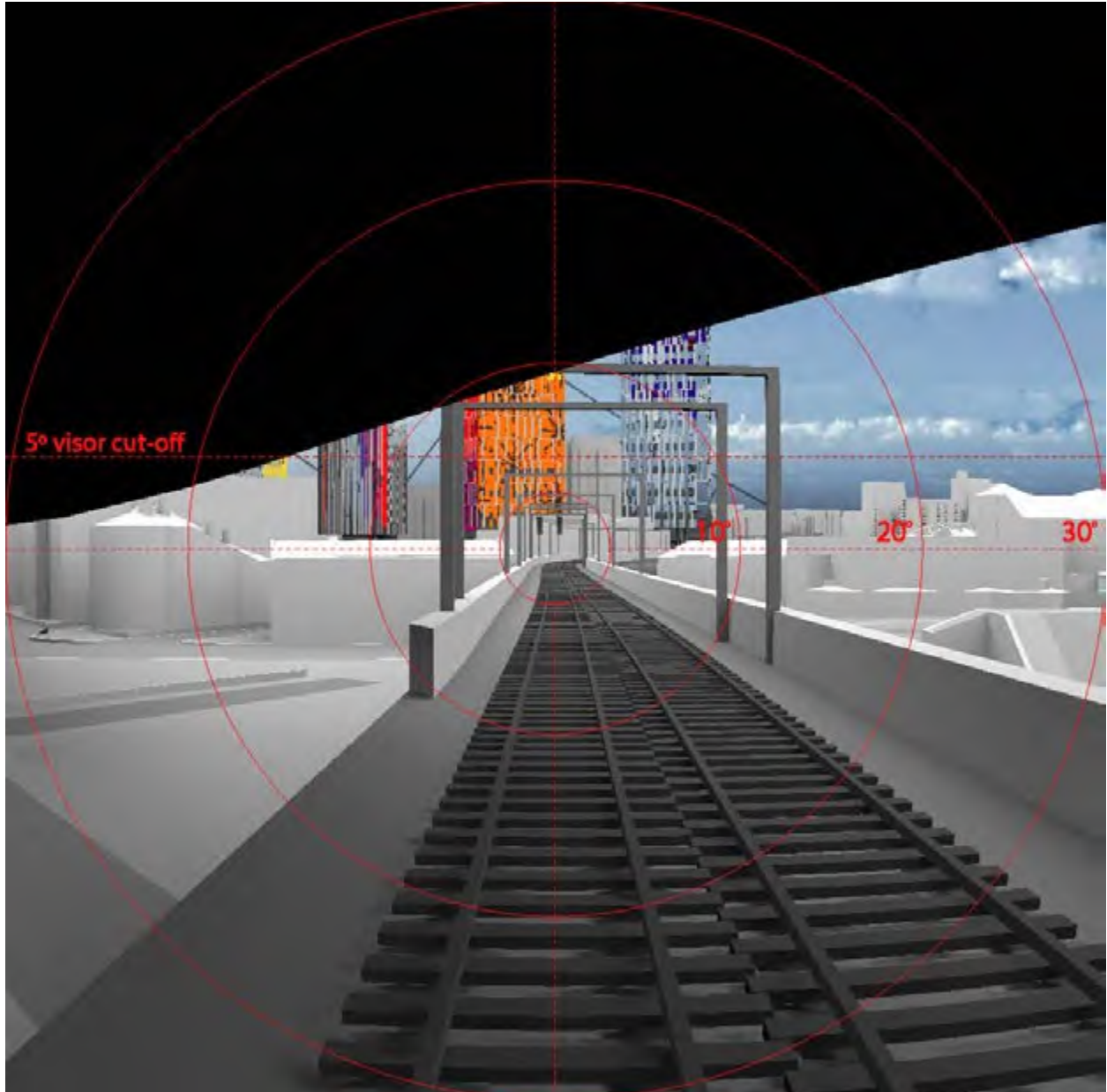


Fig. 793: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

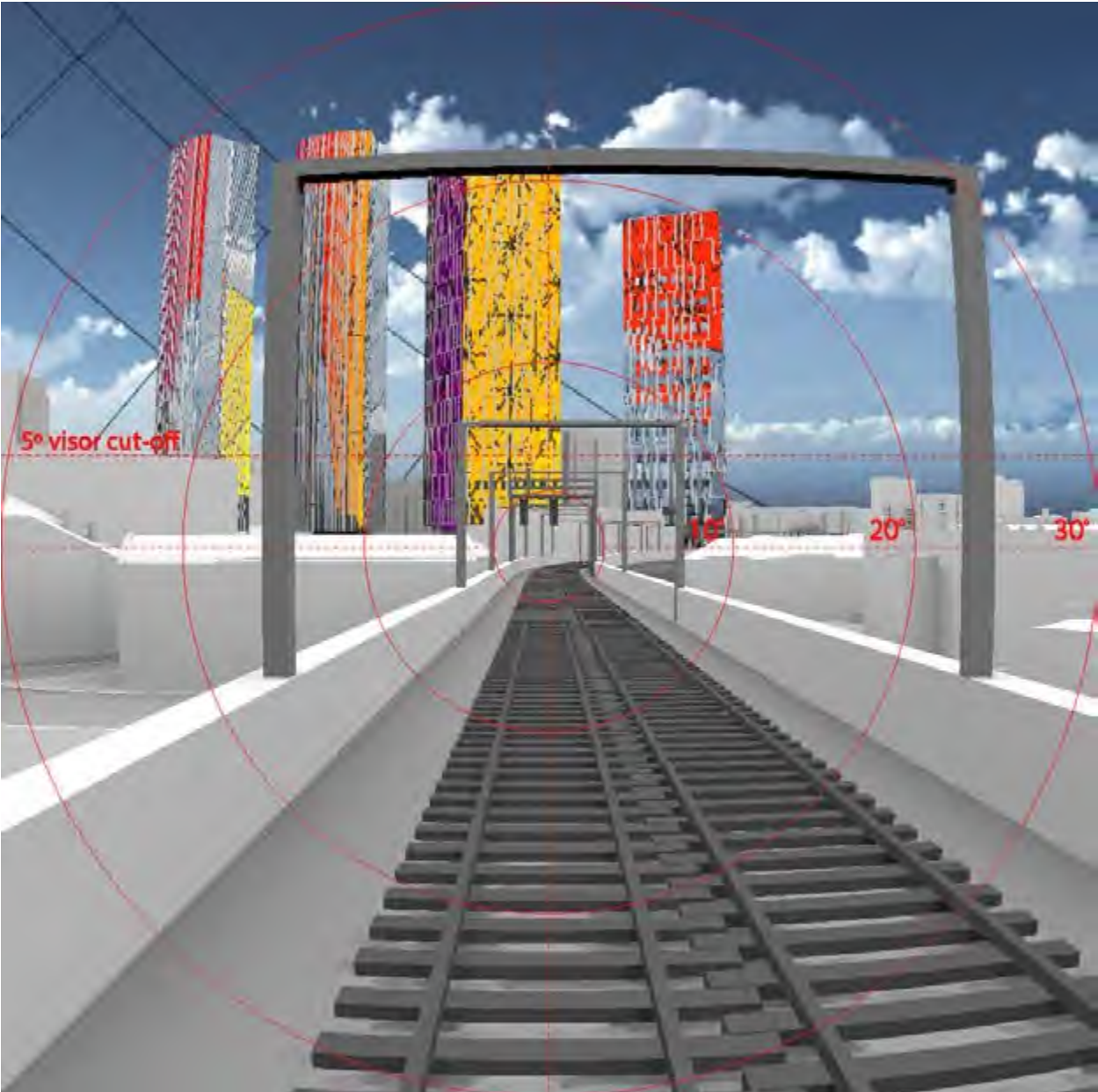


Fig. 794: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-160 - NORTHERN LINE NORTHBOUND - APPROX 350M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

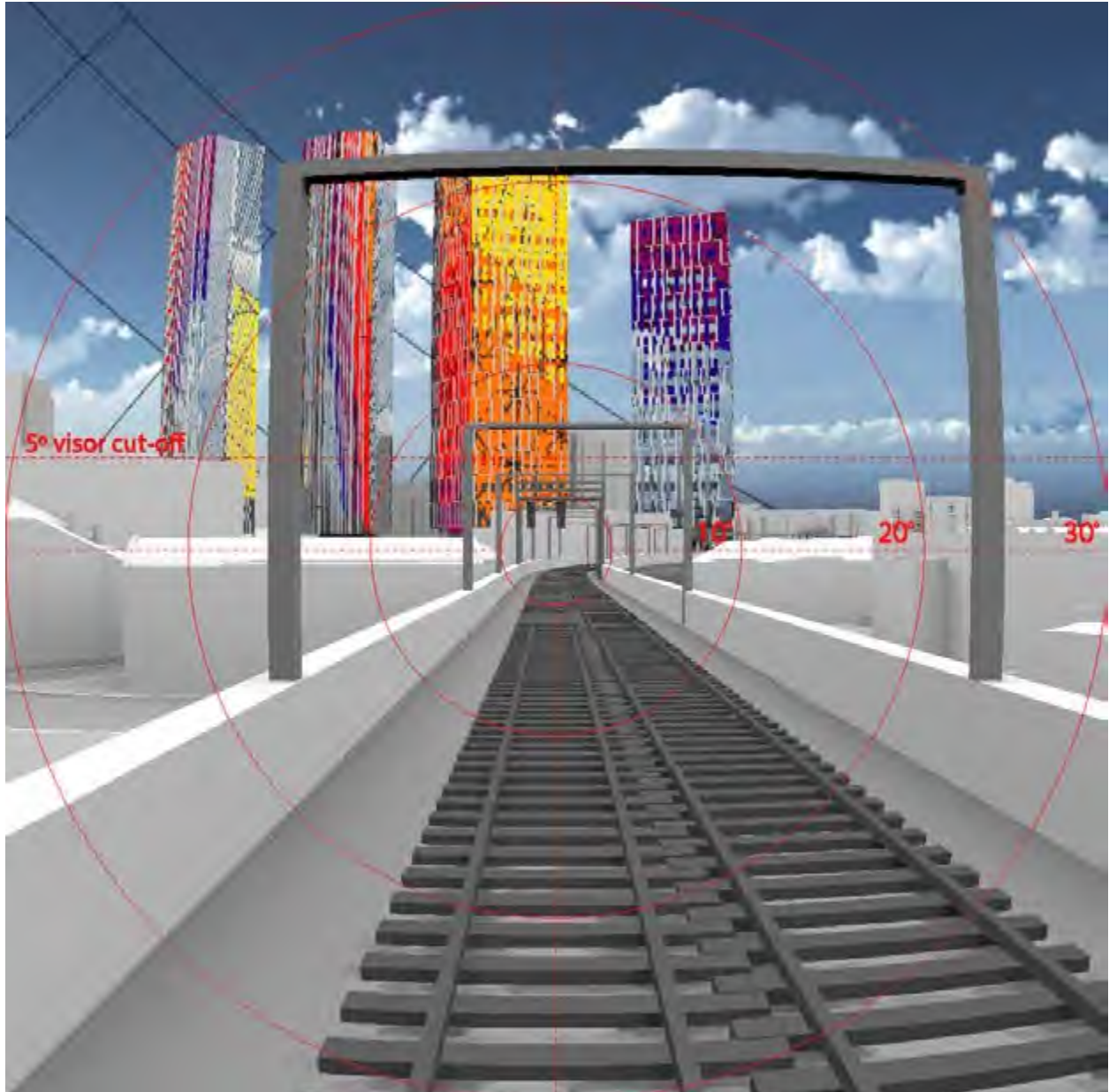


Fig. 795: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

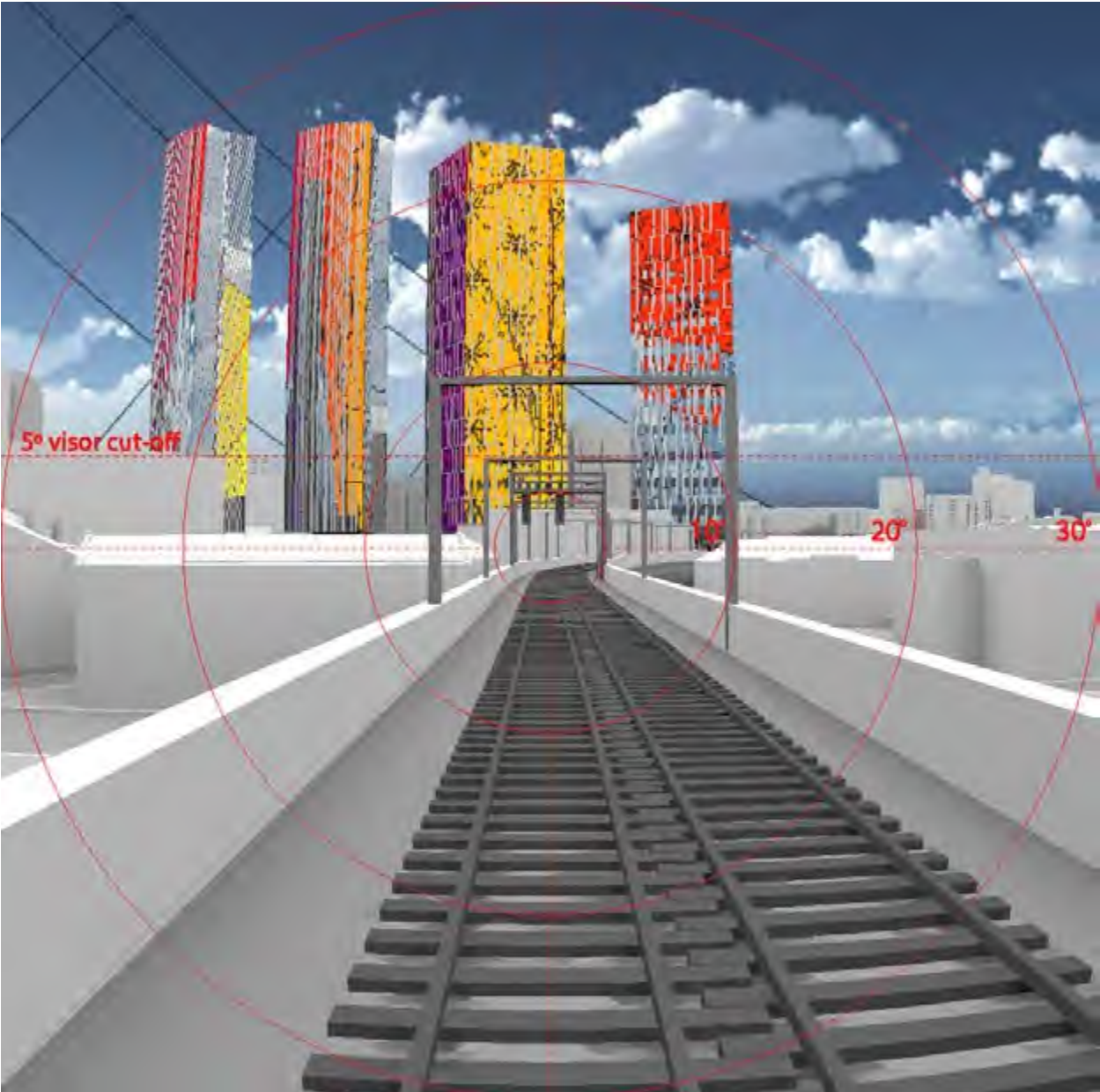


Fig. 796: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-170 - NORTHERN LINE NORTHBOUND - APPROX 340M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

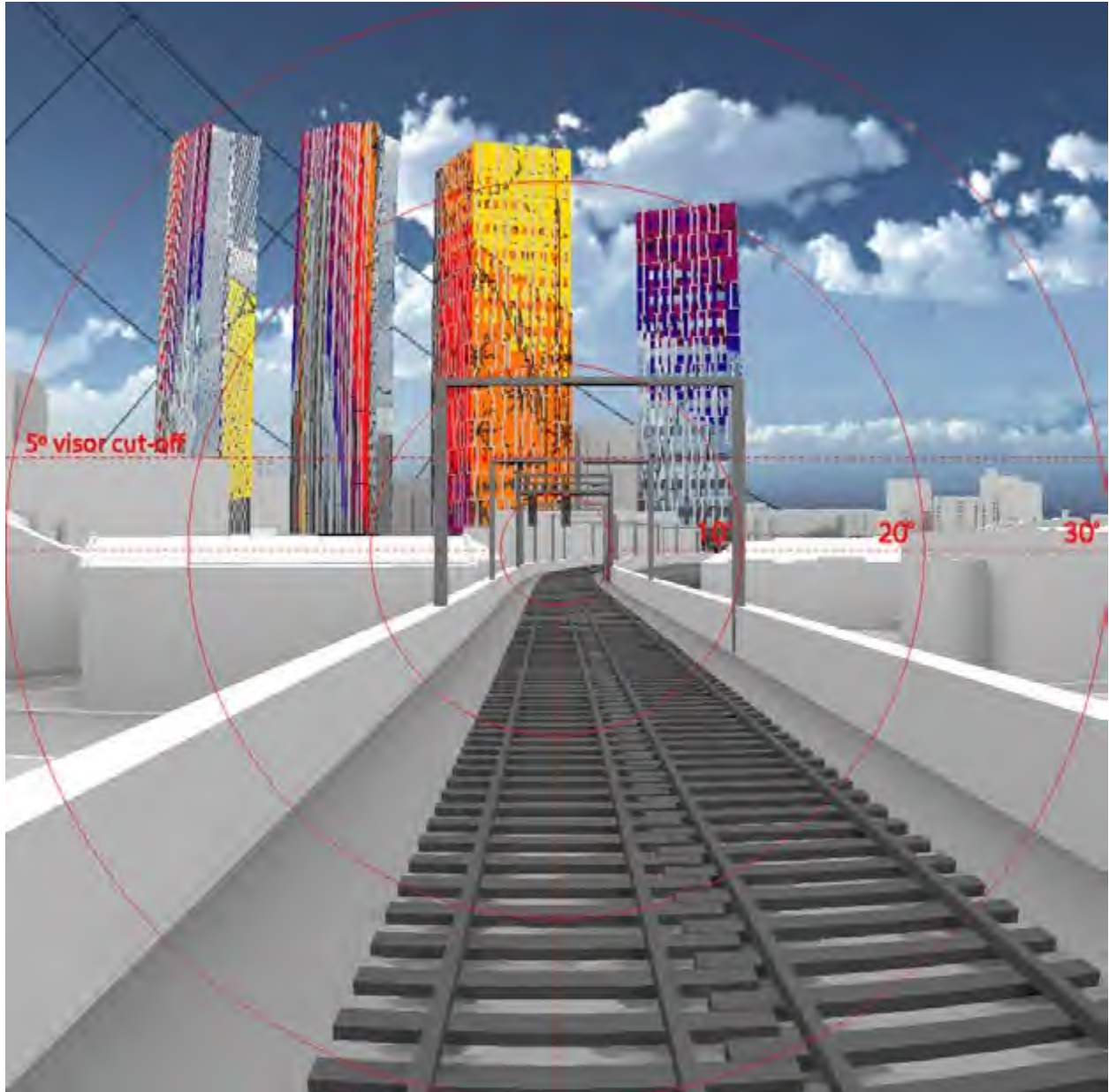


Fig. 797: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

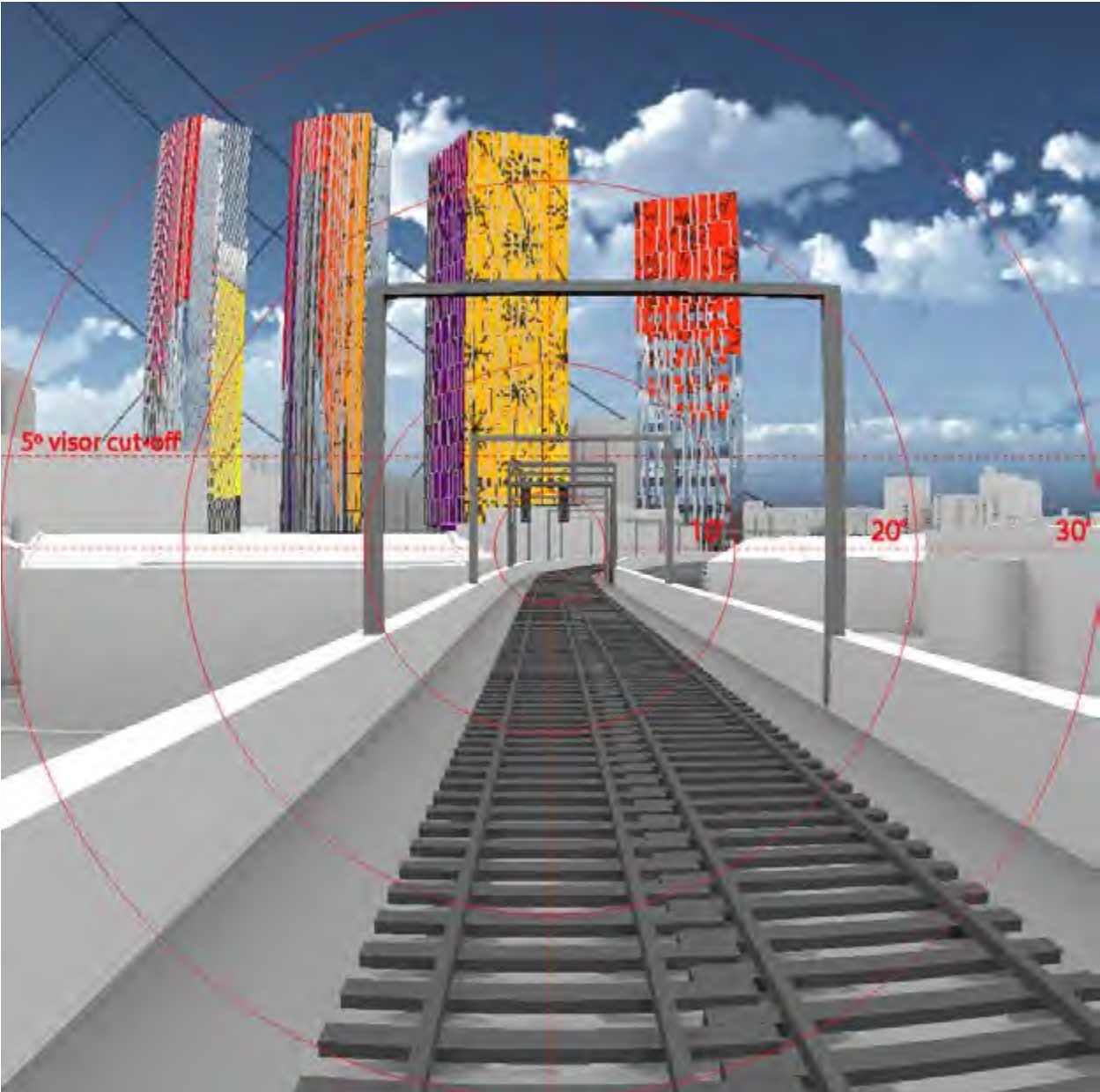


Fig. 798: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-180 - NORTHERN LINE NORTHBOUND - APPROX 330M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**



Fig. 799: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

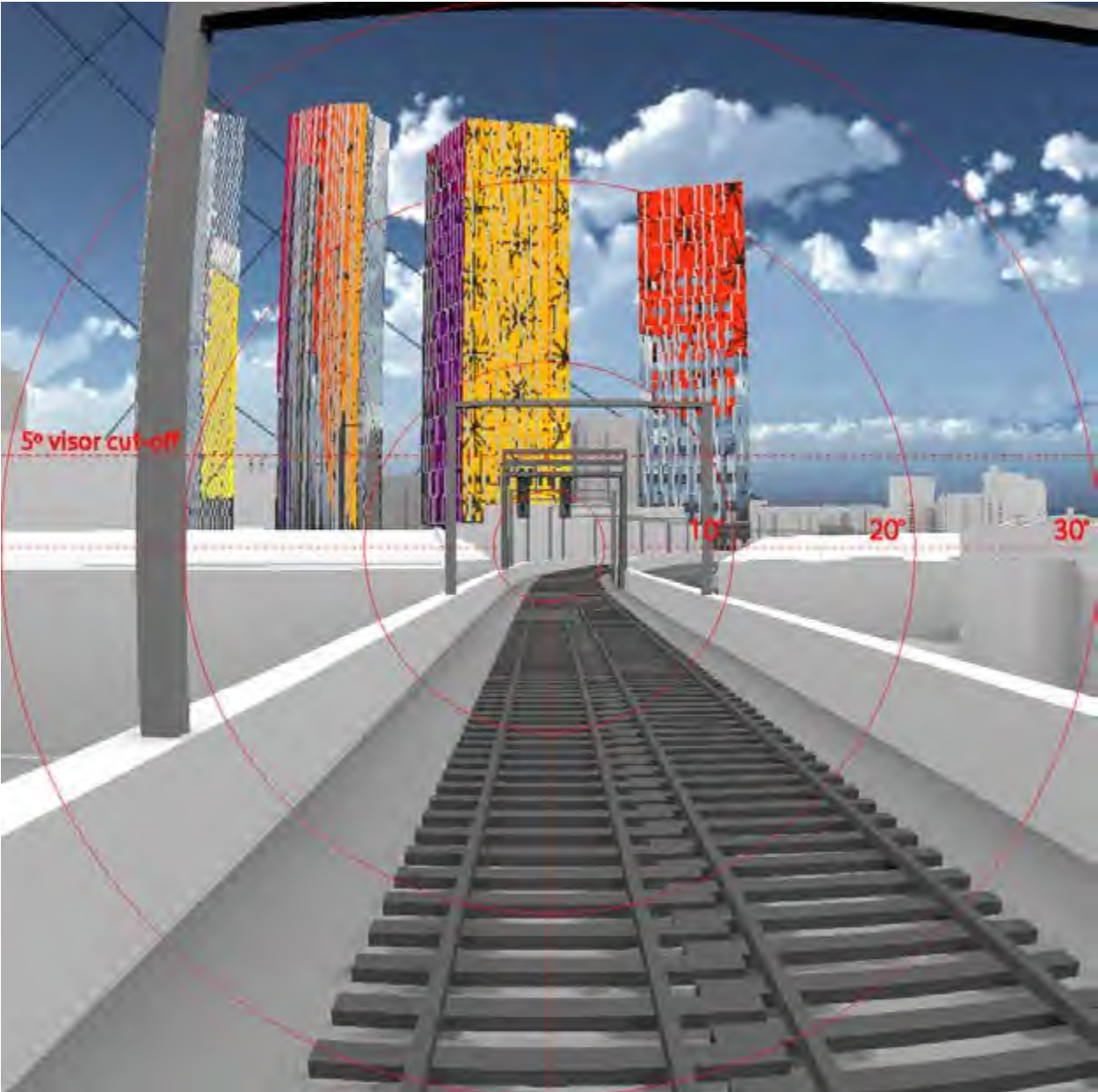


Fig. 800: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-190 - NORTHERN LINE NORTHBOUND - APPROX 320M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

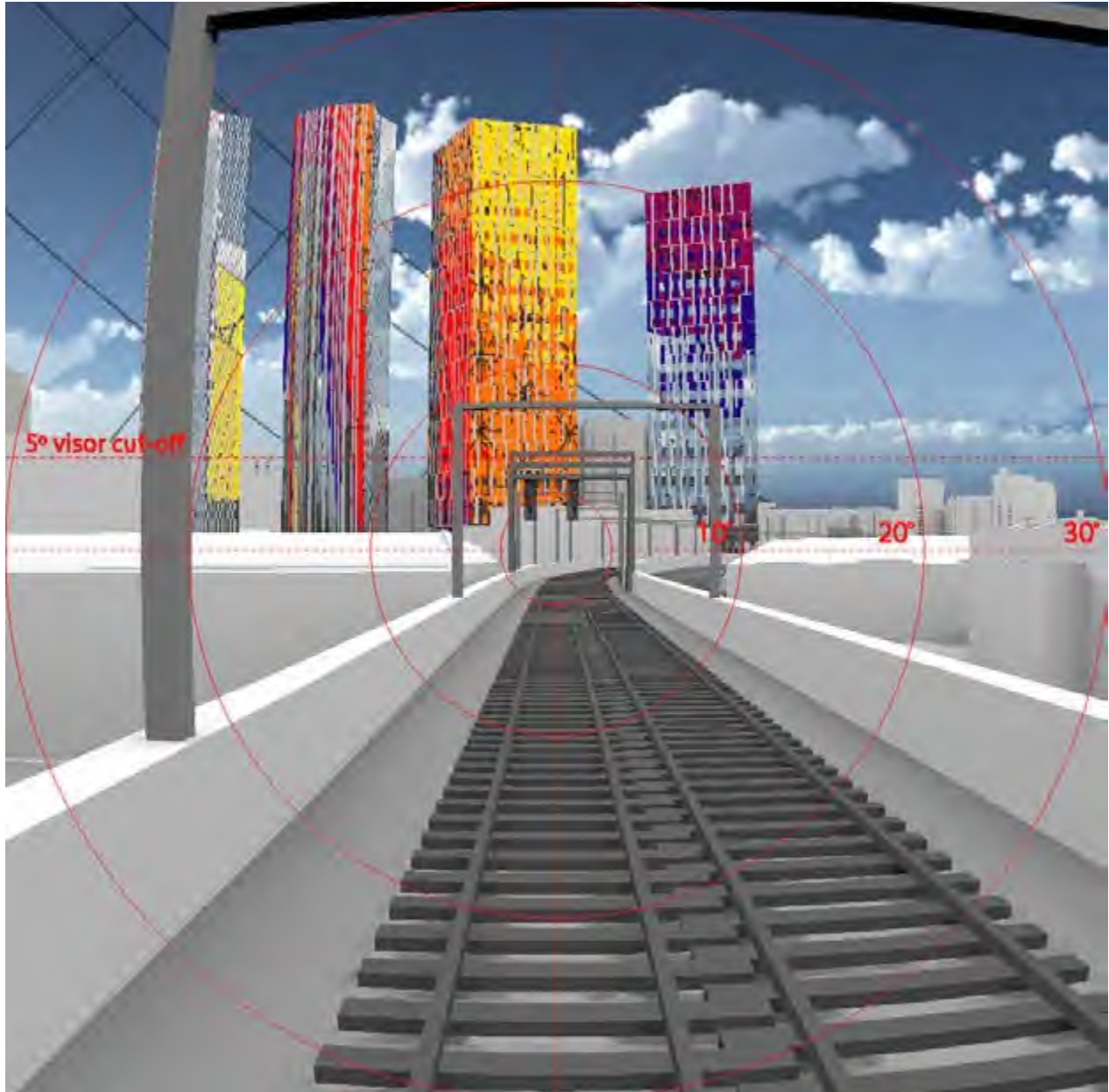


Fig. 801: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

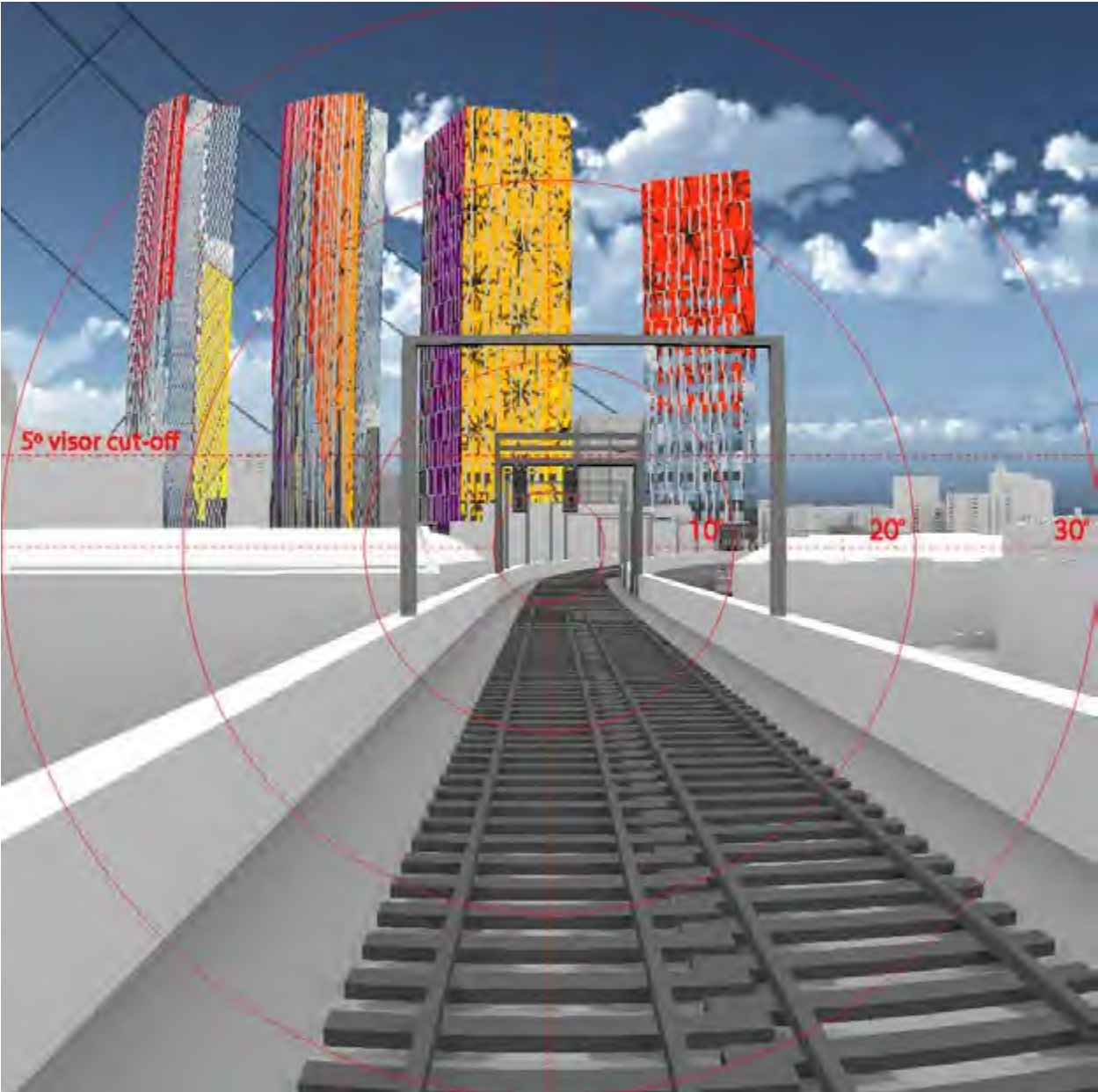


Fig. 802: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-200 - NORTHERN LINE NORTHBOUND - APPROX 310M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**



Fig. 803: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL

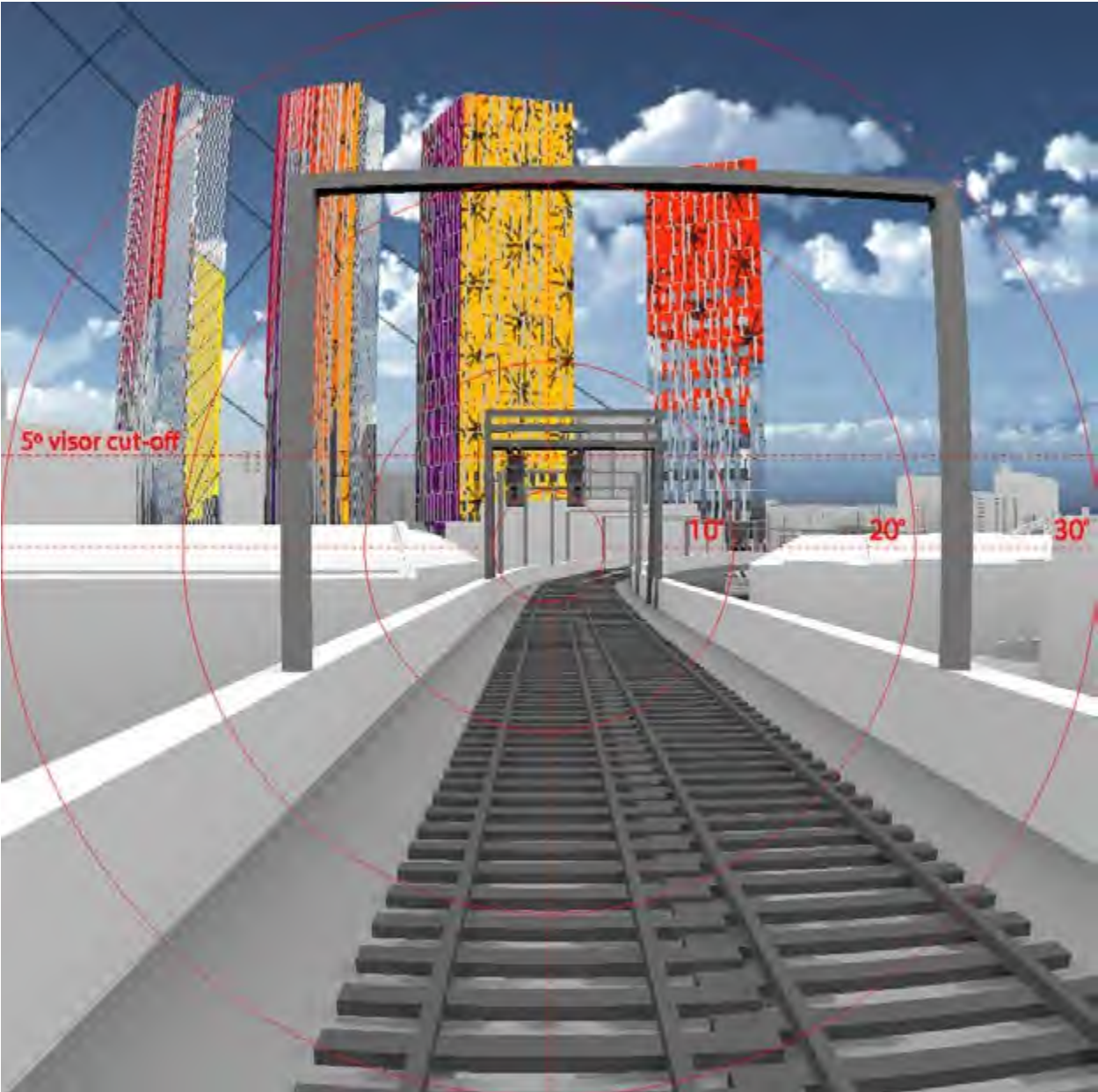


Fig. 804: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-210 - NORTHERN LINE NORTHBOUND - APPROX 300M FROM SITE
LOOKING STRAGHT - APPROX 40M FROM SIGNAL**

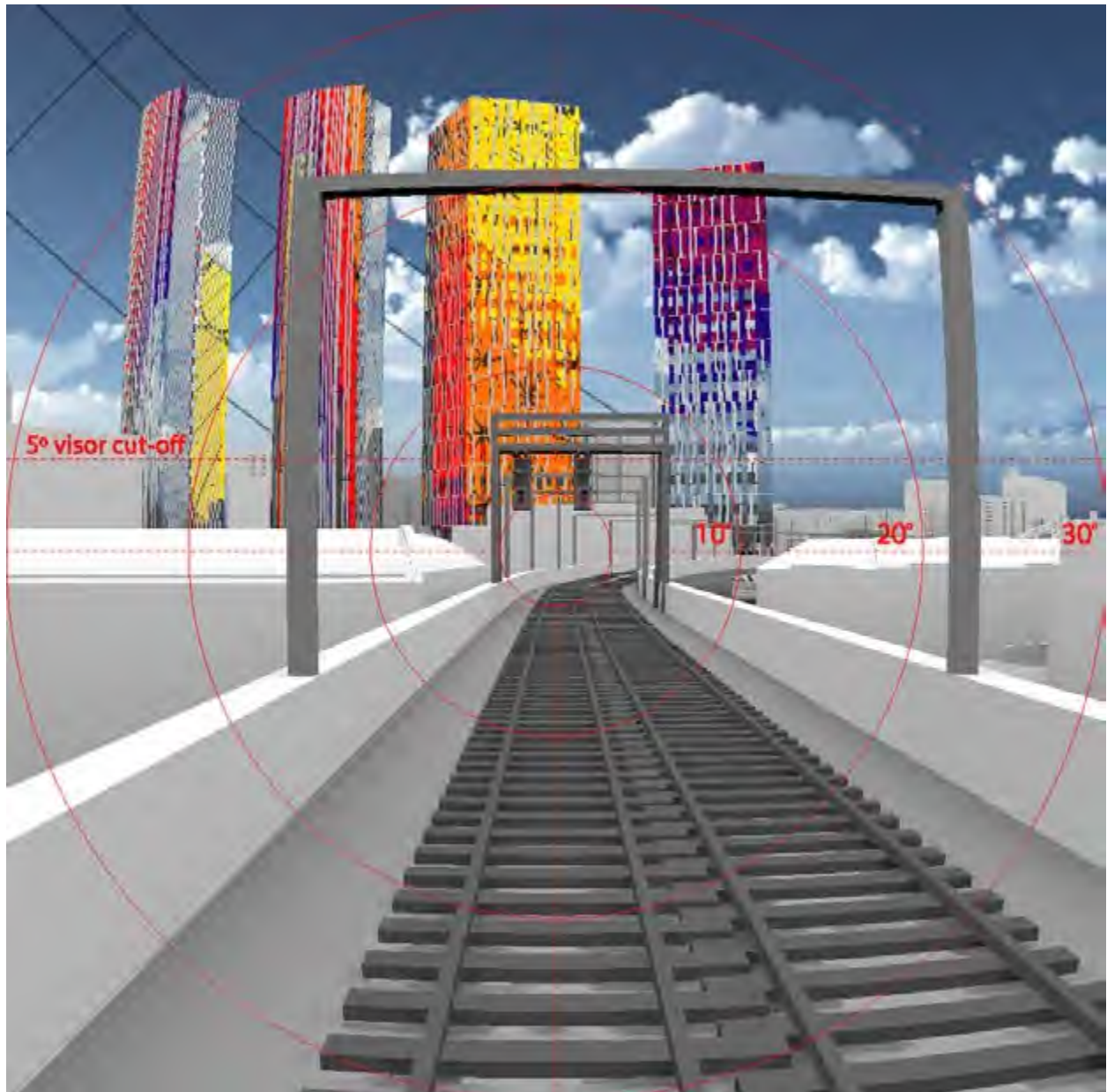


Fig. 805: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL

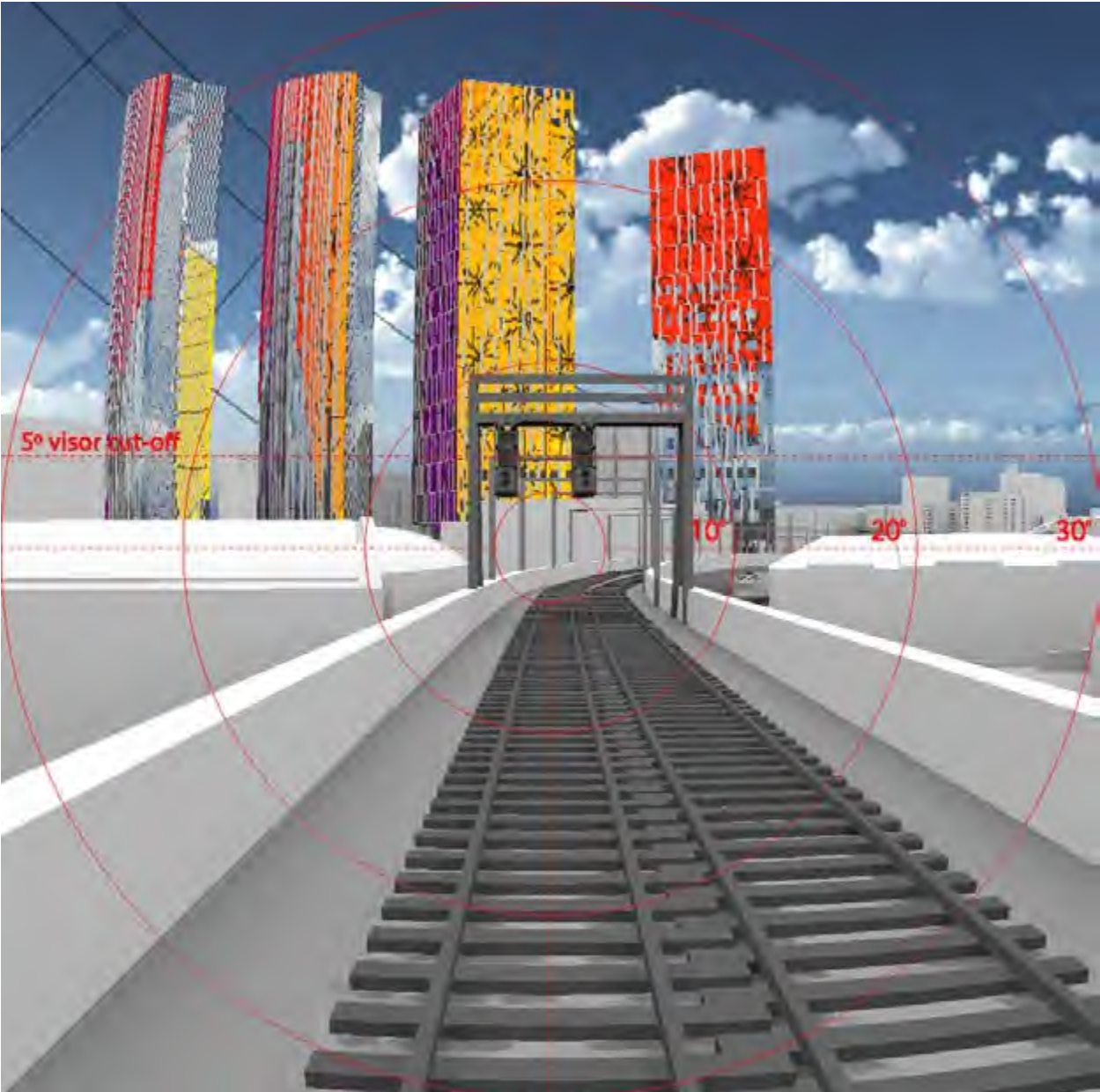


Fig. 806: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-220 - NORTHERN LINE NORTHBOUND - APPROX 290M FROM SITE
LOOKING STRAGHT - APPROX 30M FROM SIGNAL**

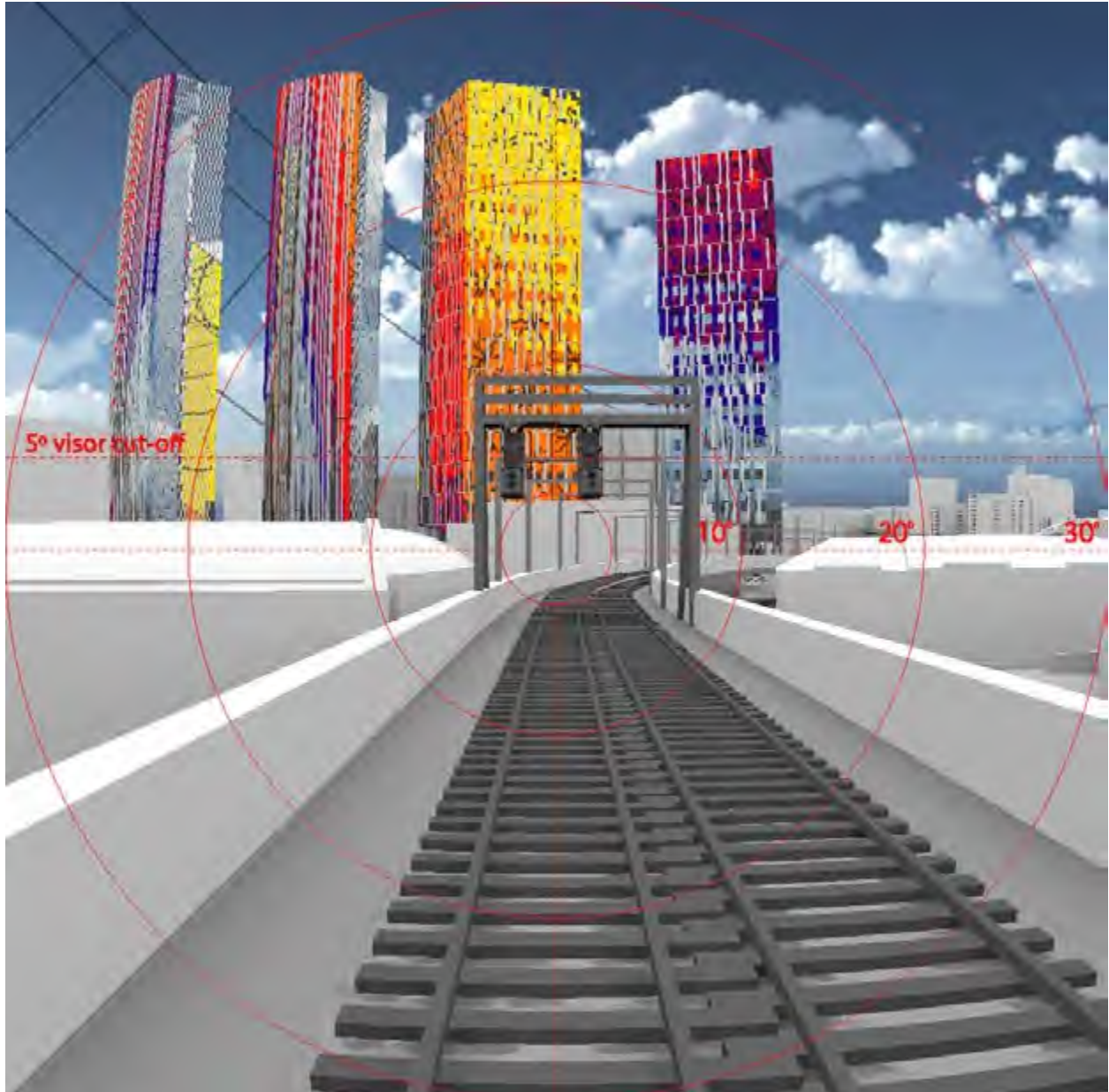


Fig. 807: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL

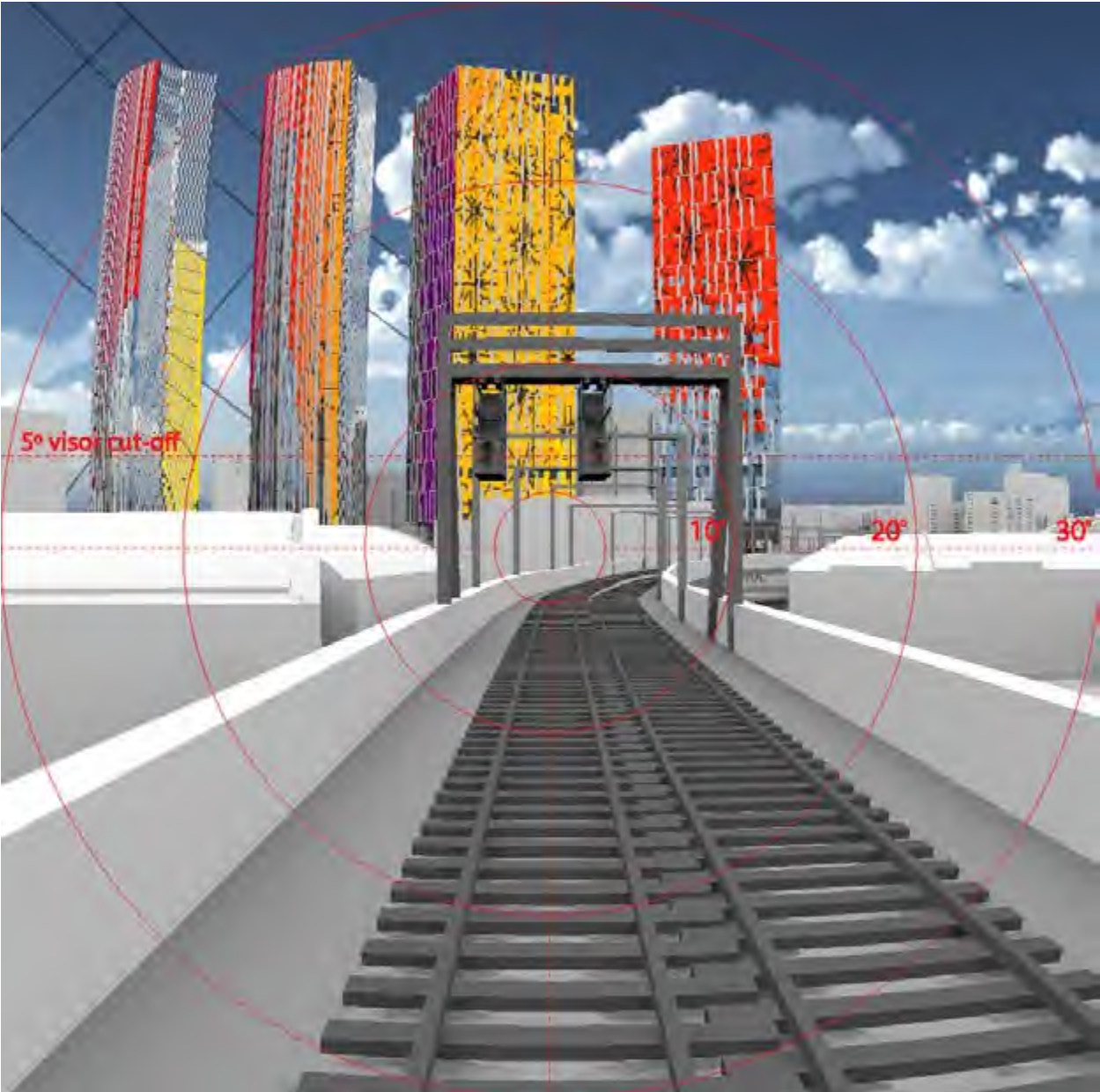


Fig. 808: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-230 - NORTHERN LINE NORTHBOUND - APPROX 280M FROM SITE
LOOKING STRAGHT - APPROX 20M FROM SIGNAL**

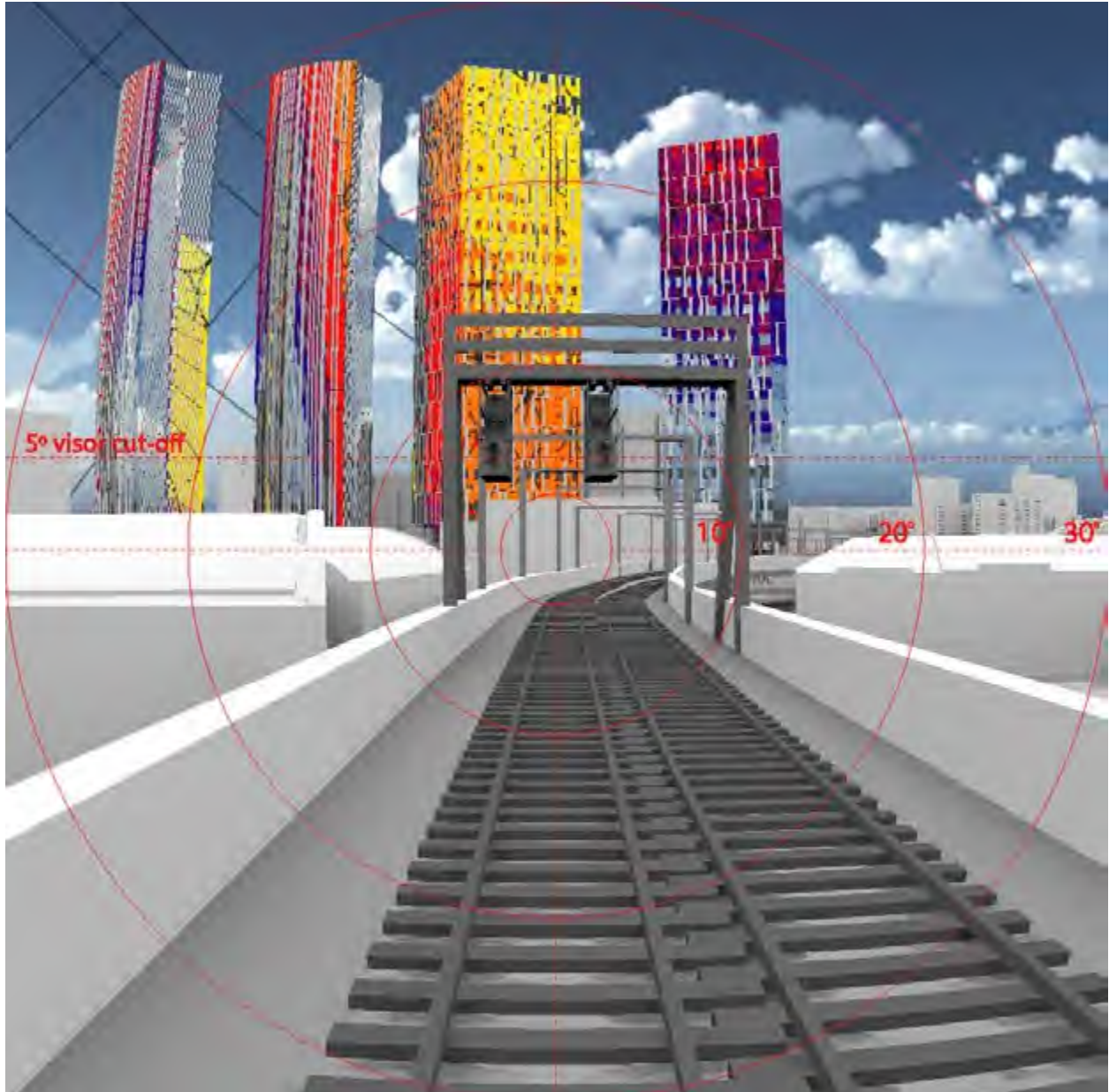


Fig. 809: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL

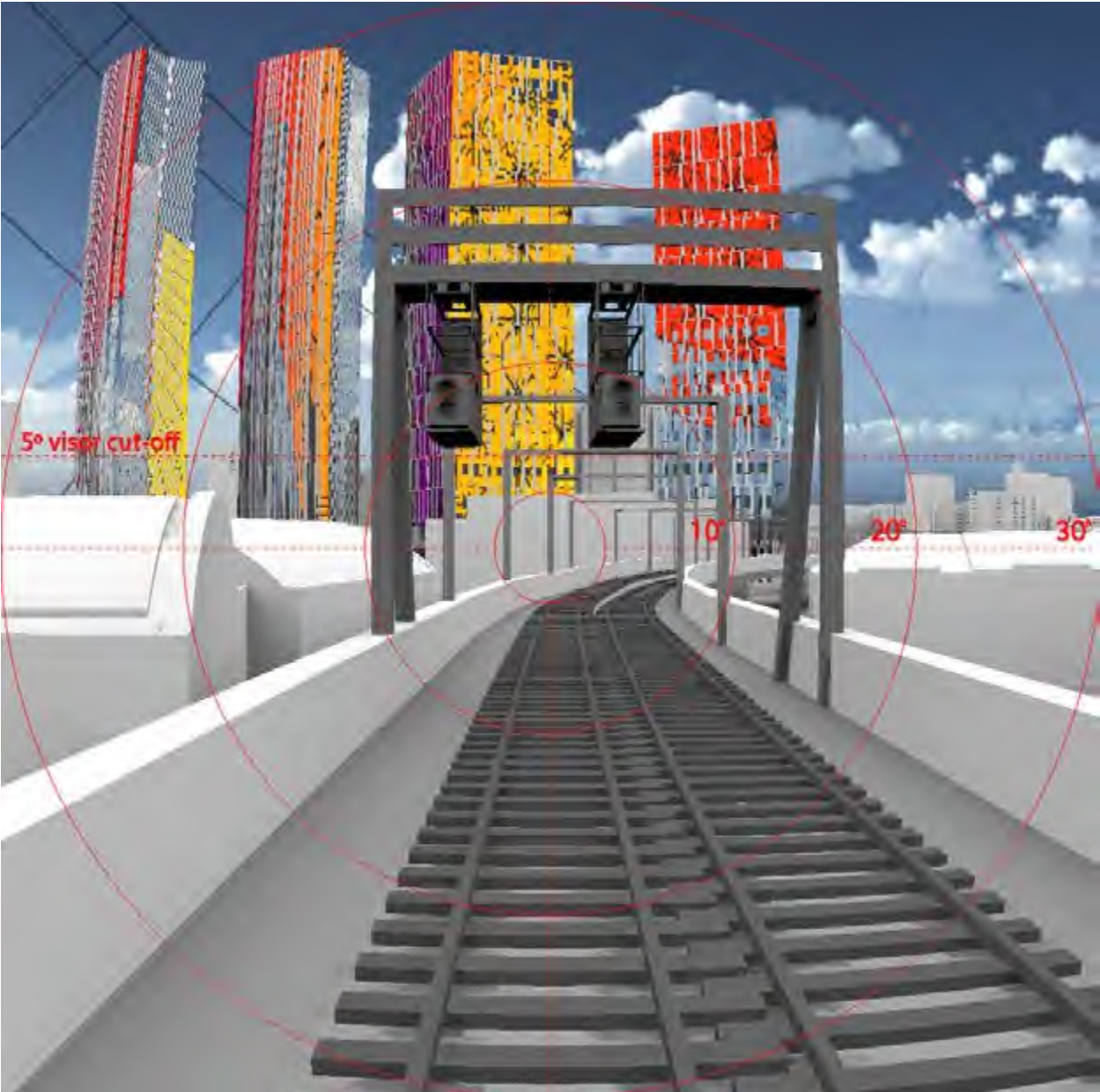


Fig. 810: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-240 - NORTHERN LINE NORTHBOUND - APPROX 270M FROM SITE
LOOKING STRAGHT - APPROX 10M FROM SIGNAL**

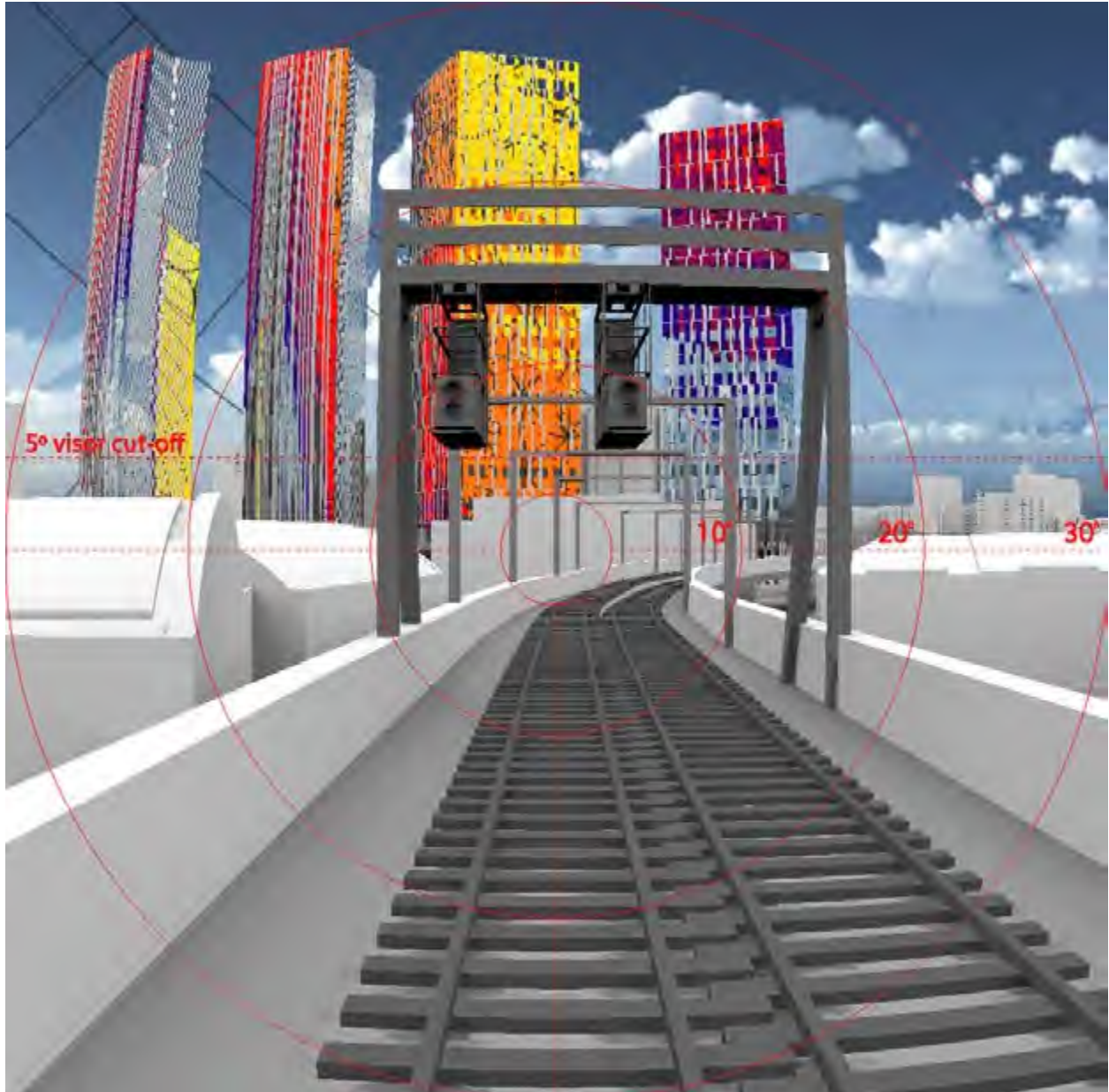


Fig. 811: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAGHT

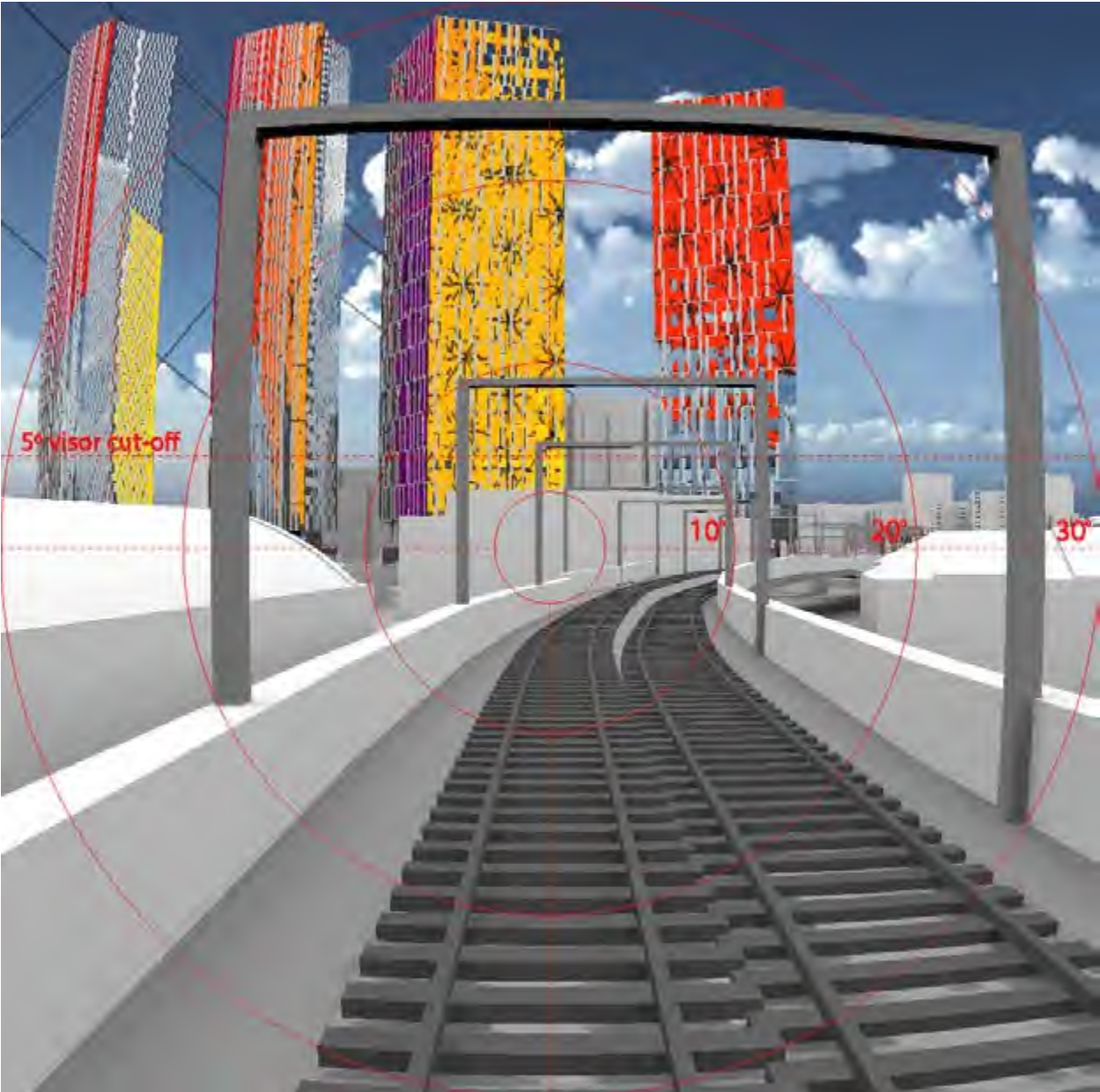


Fig. 812: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-260 - NORTHERN LINE NORTHBOUND - APPROX 250M FROM SITE
LOOKING STRAGHT**

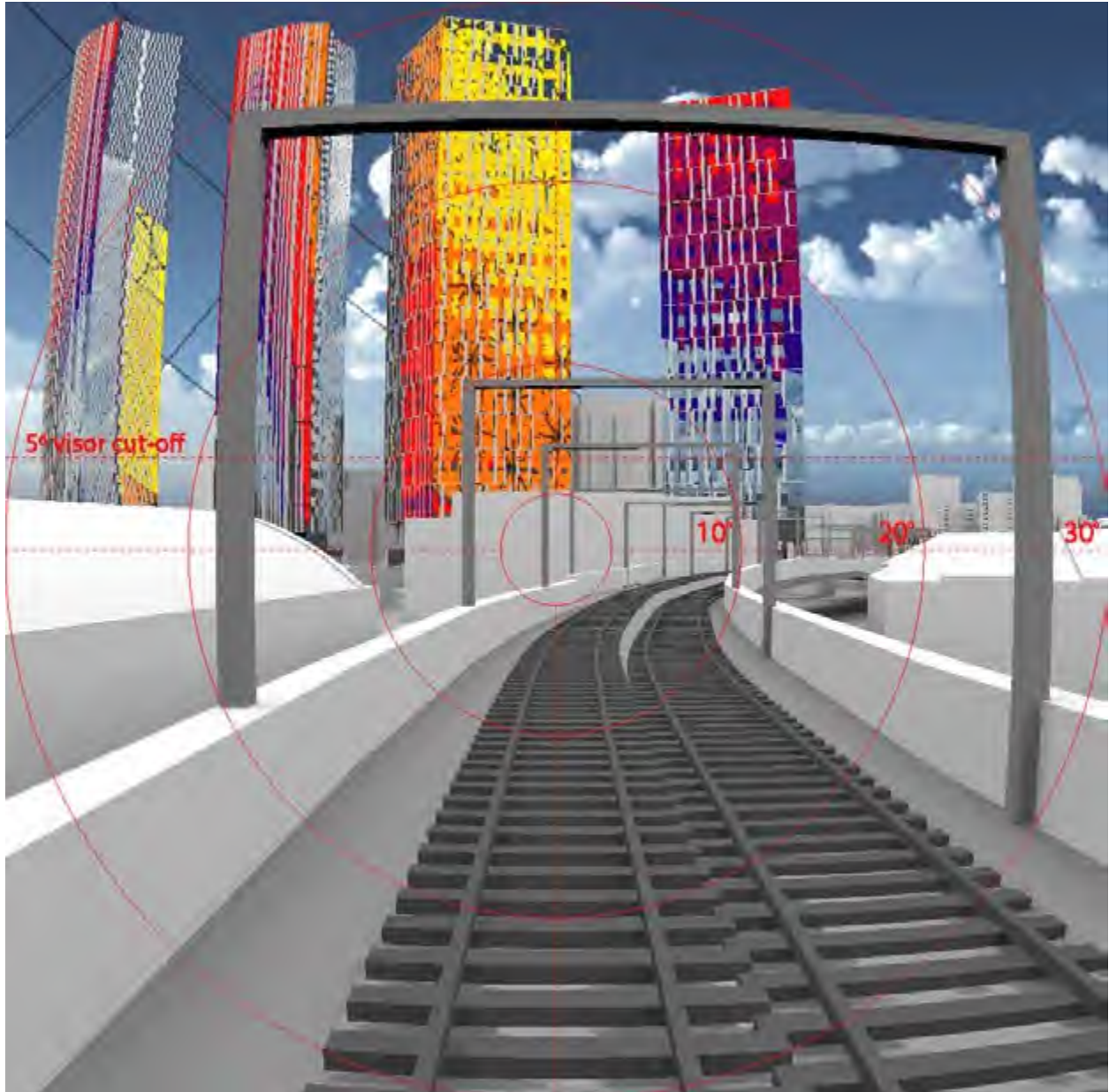


Fig. 813: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAIGHT

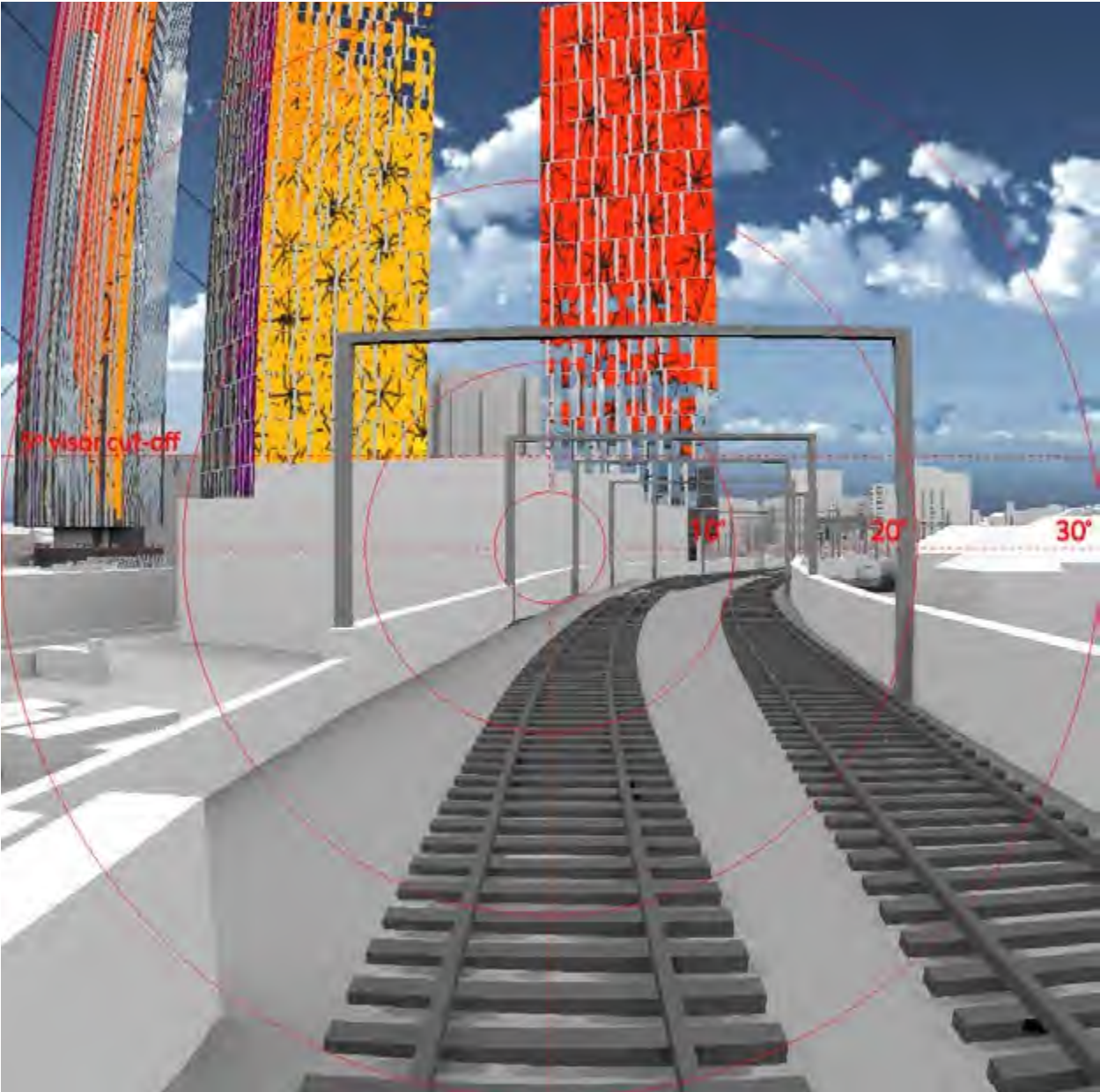


Fig. 814: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-310 - NORTHERN LINE NORTHBOUND - APPROX 200M FROM SITE
LOOKING STRAIGHT**

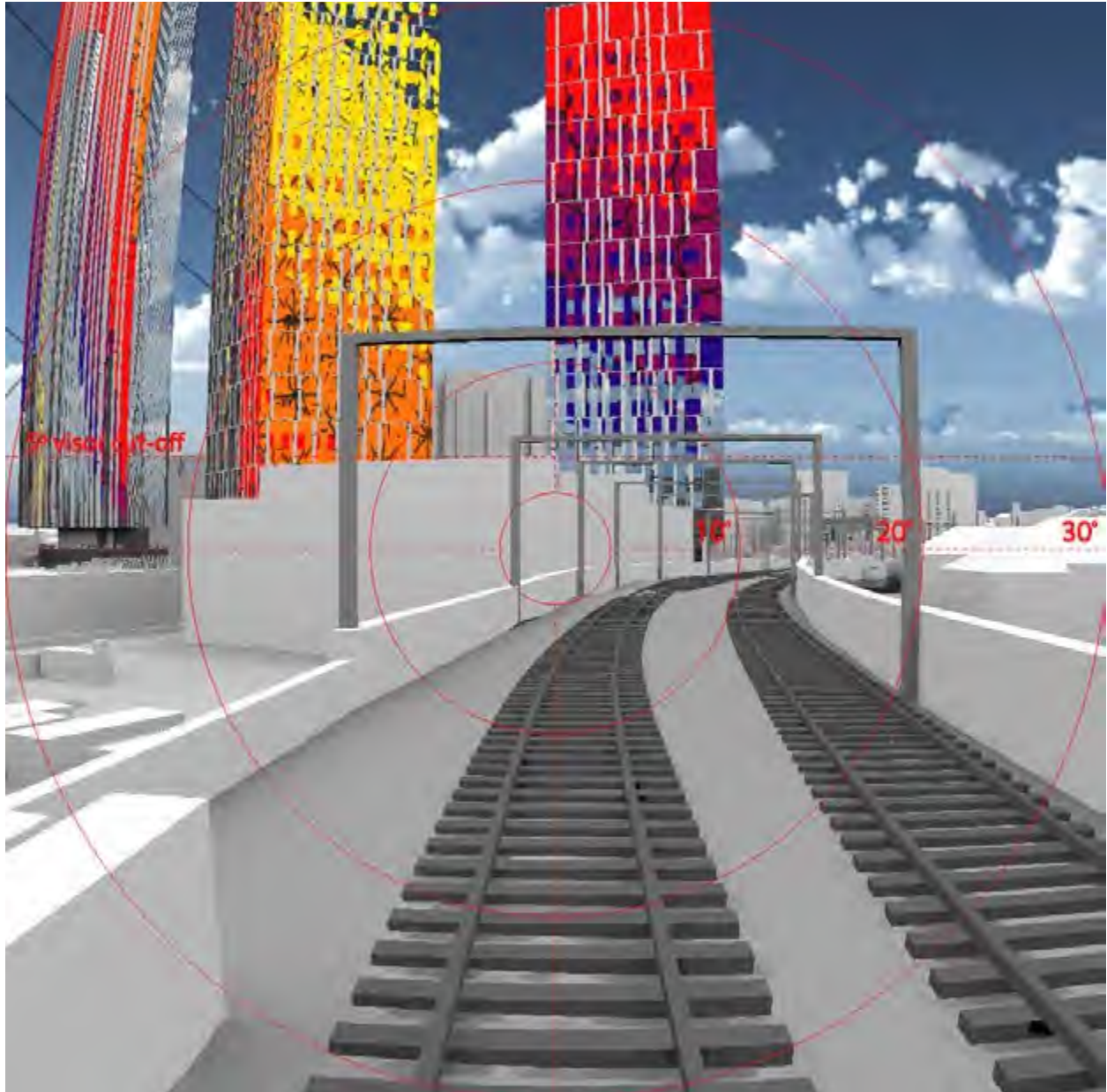


Fig. 815: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT

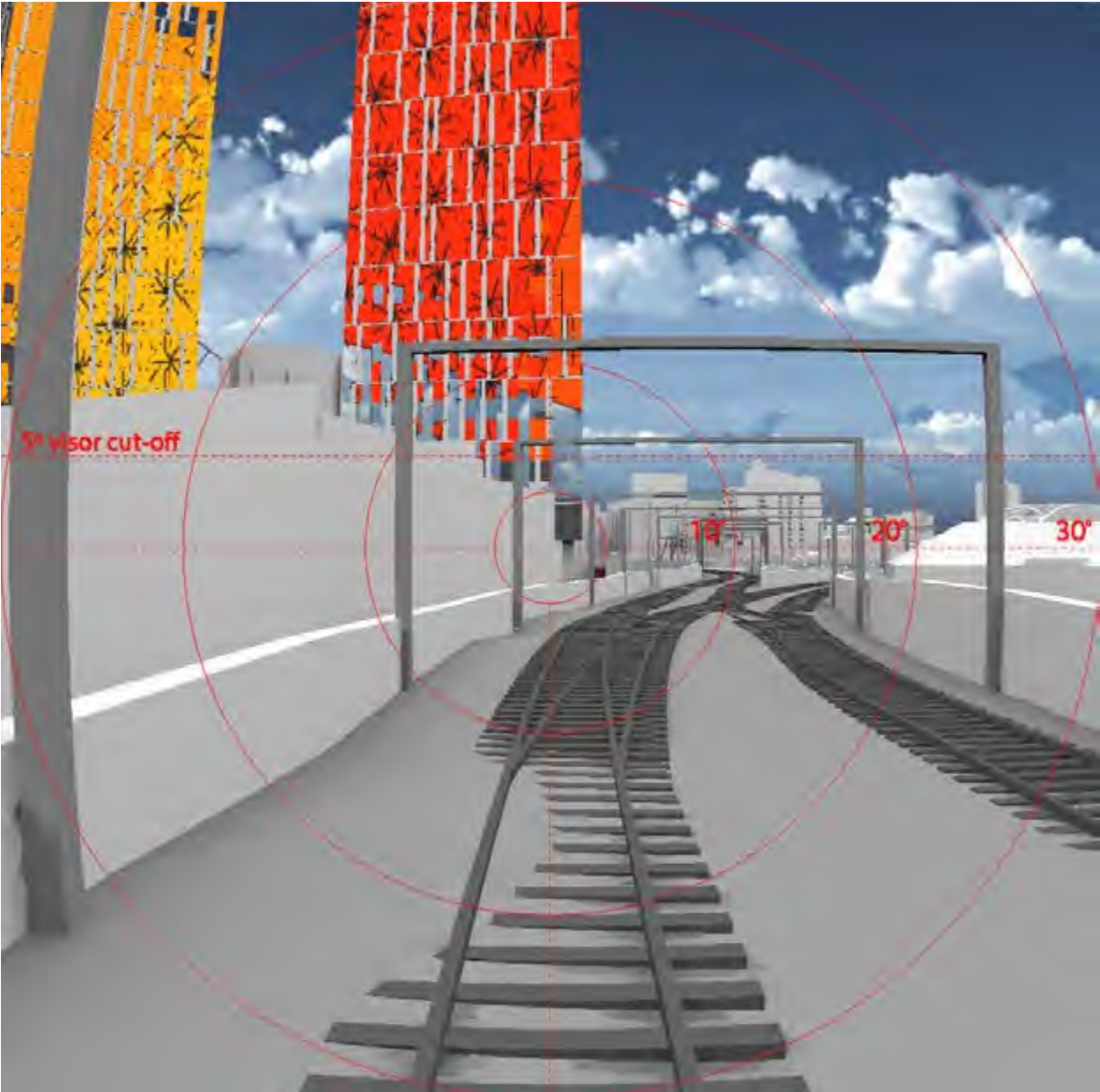


Fig. 816: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-360 - NORTHERN LINE NORTHBOUND - APPROX 150M FROM SITE
LOOKING STRAGHT**

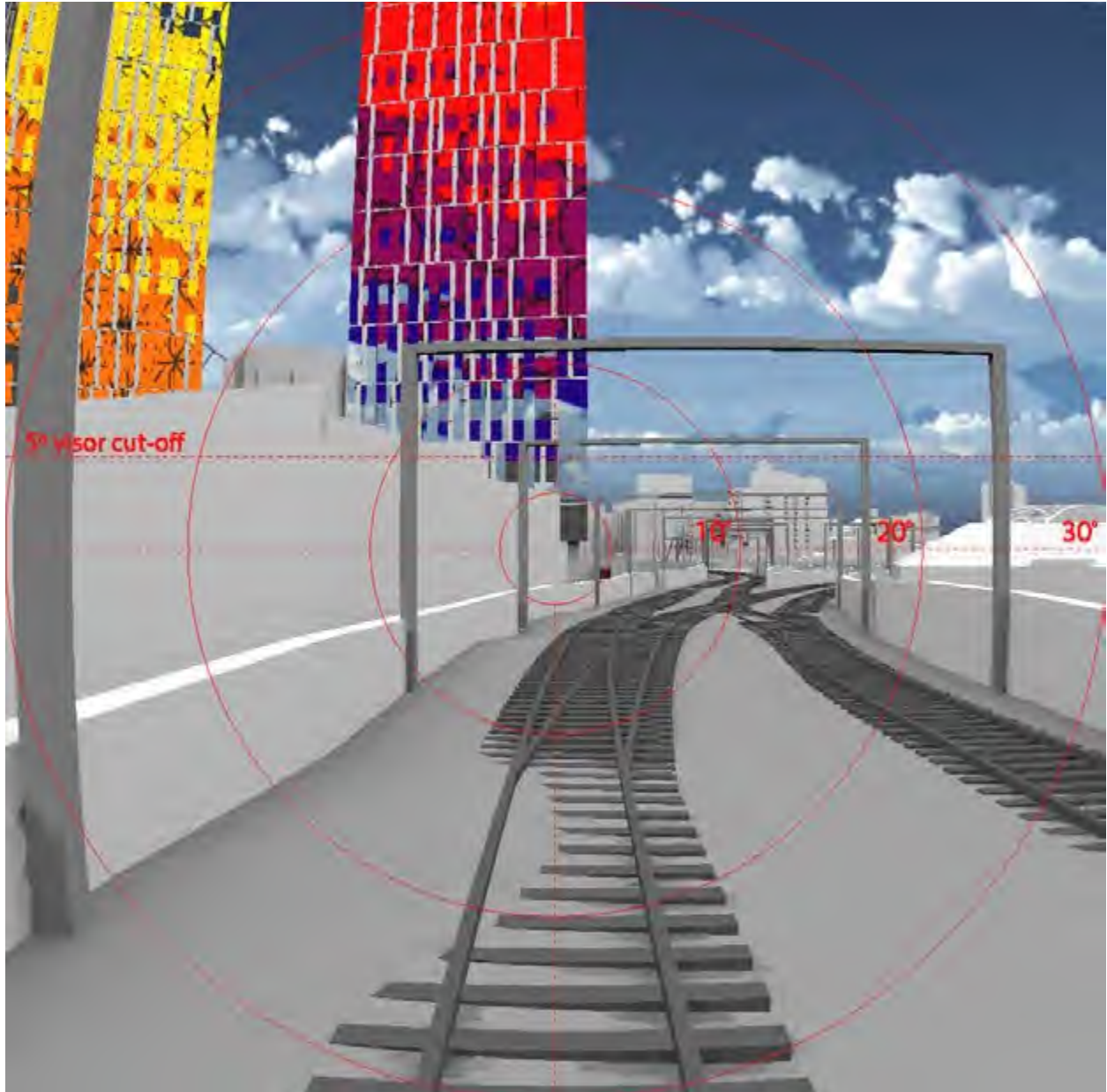


Fig. 817: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT

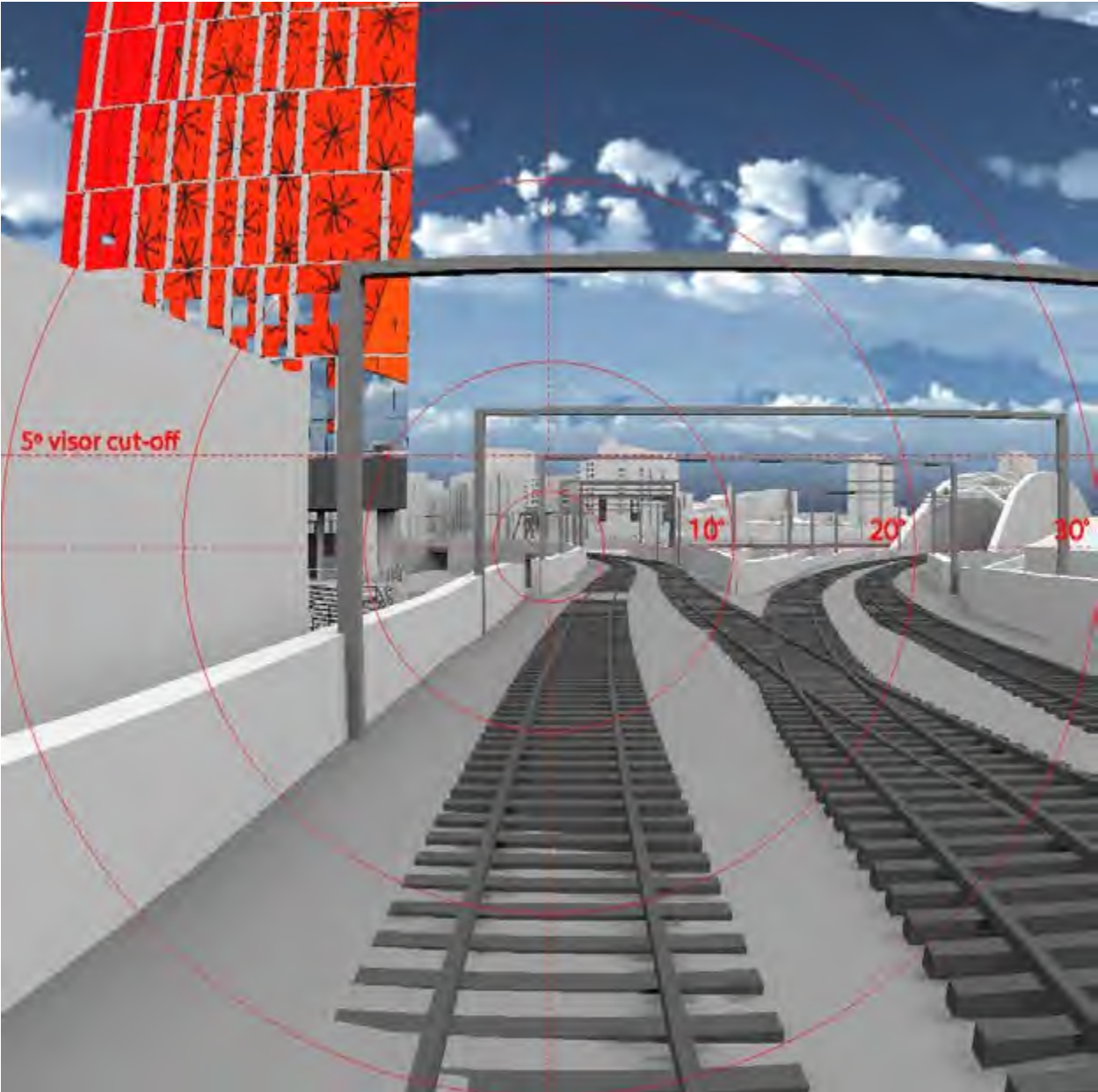


Fig. 818: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-410 - NORTHERN LINE NORTHBOUND - APPROX 100M FROM SITE
LOOKING STRAGHT**

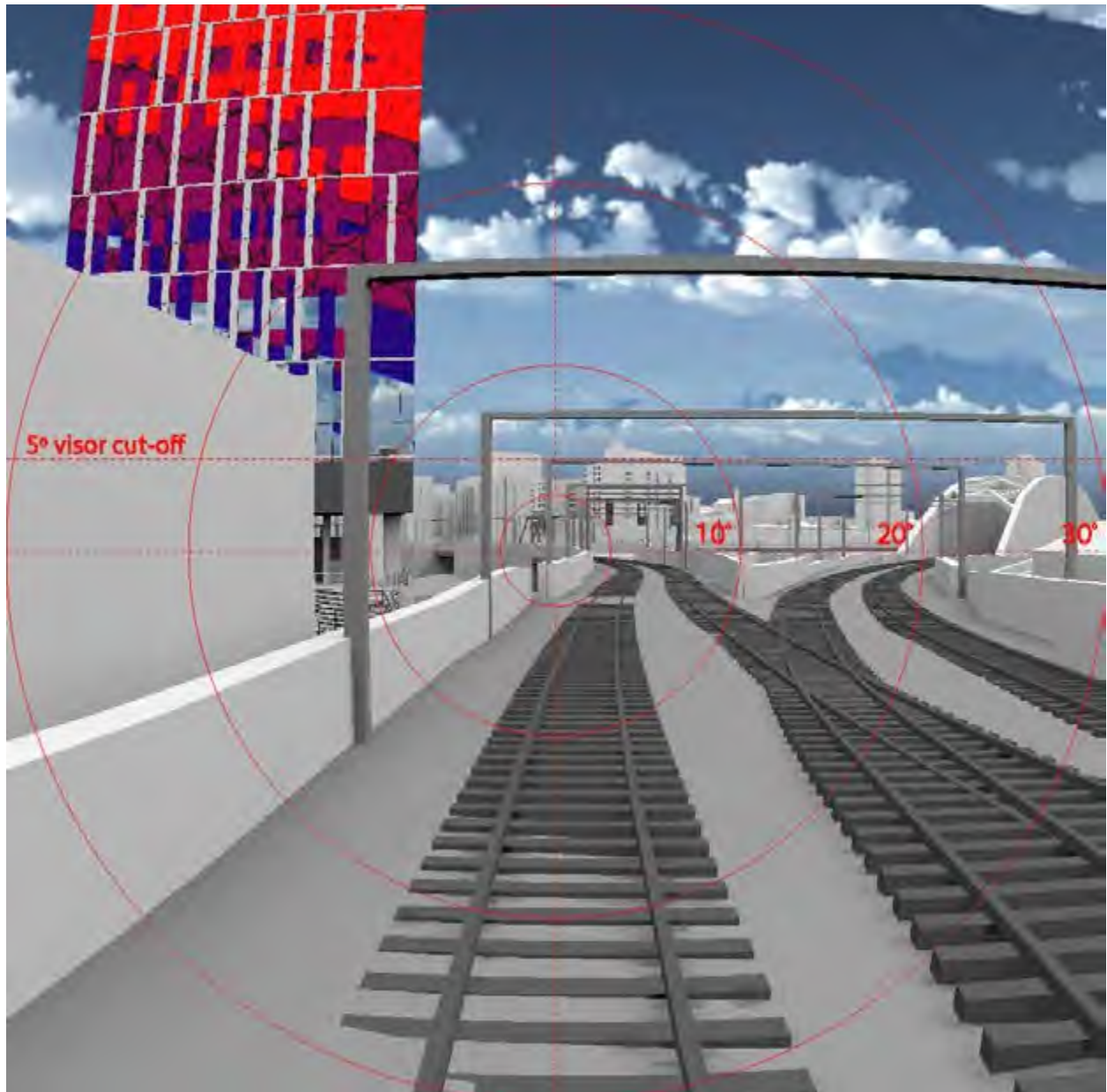


Fig. 819: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL

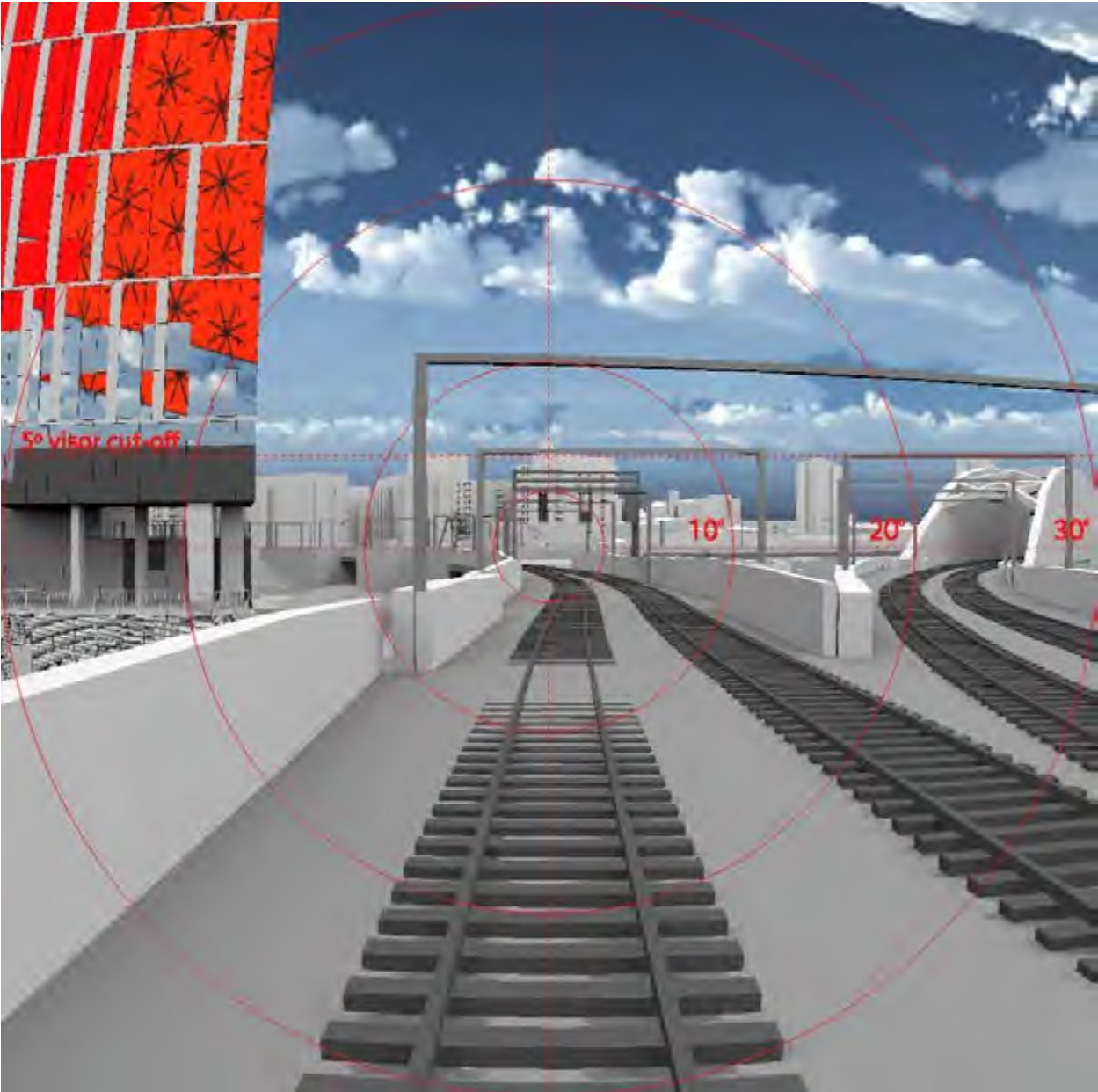


Fig. 820: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-440 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 90M FROM SIGNAL**

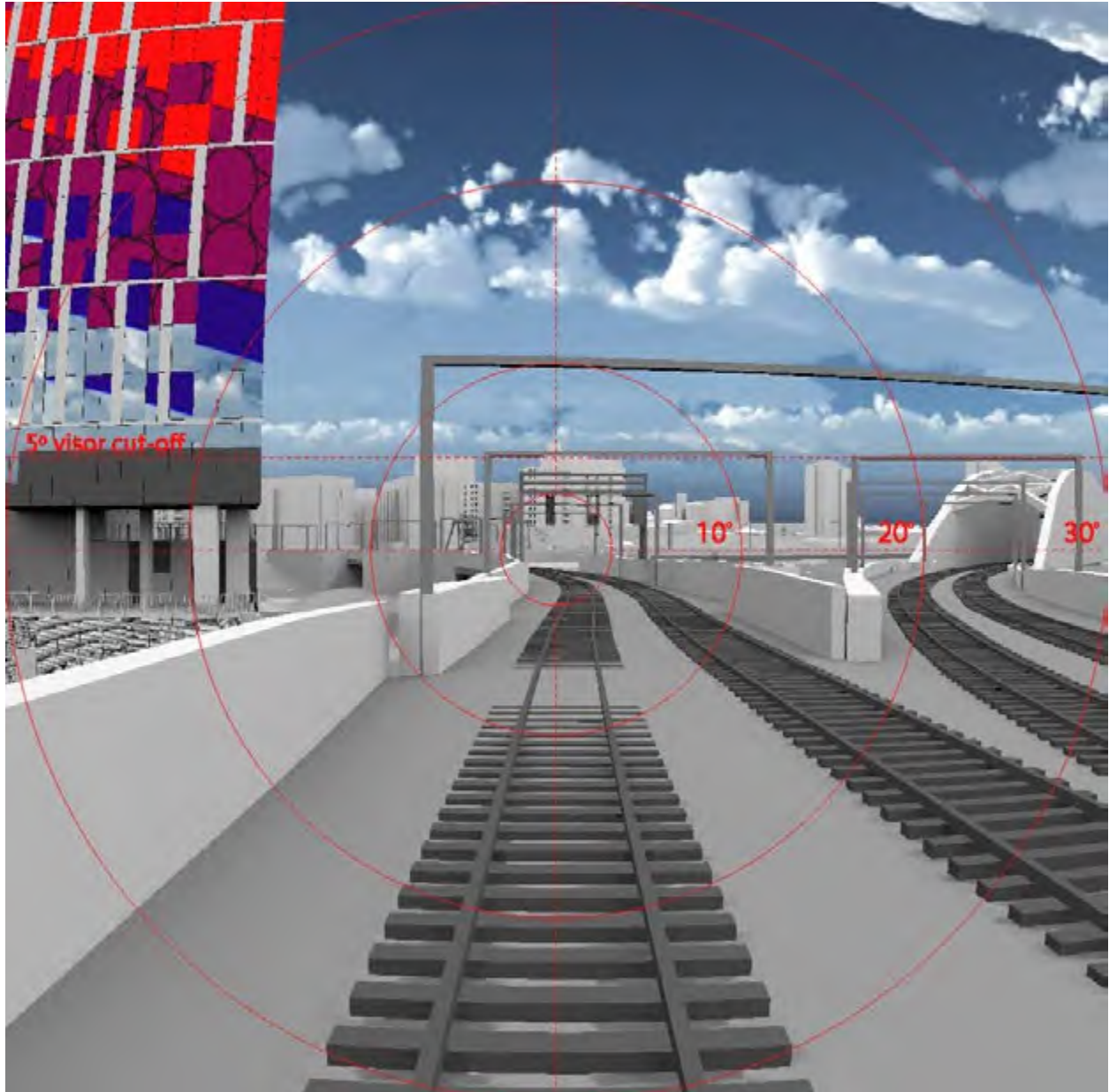


Fig. 821: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL

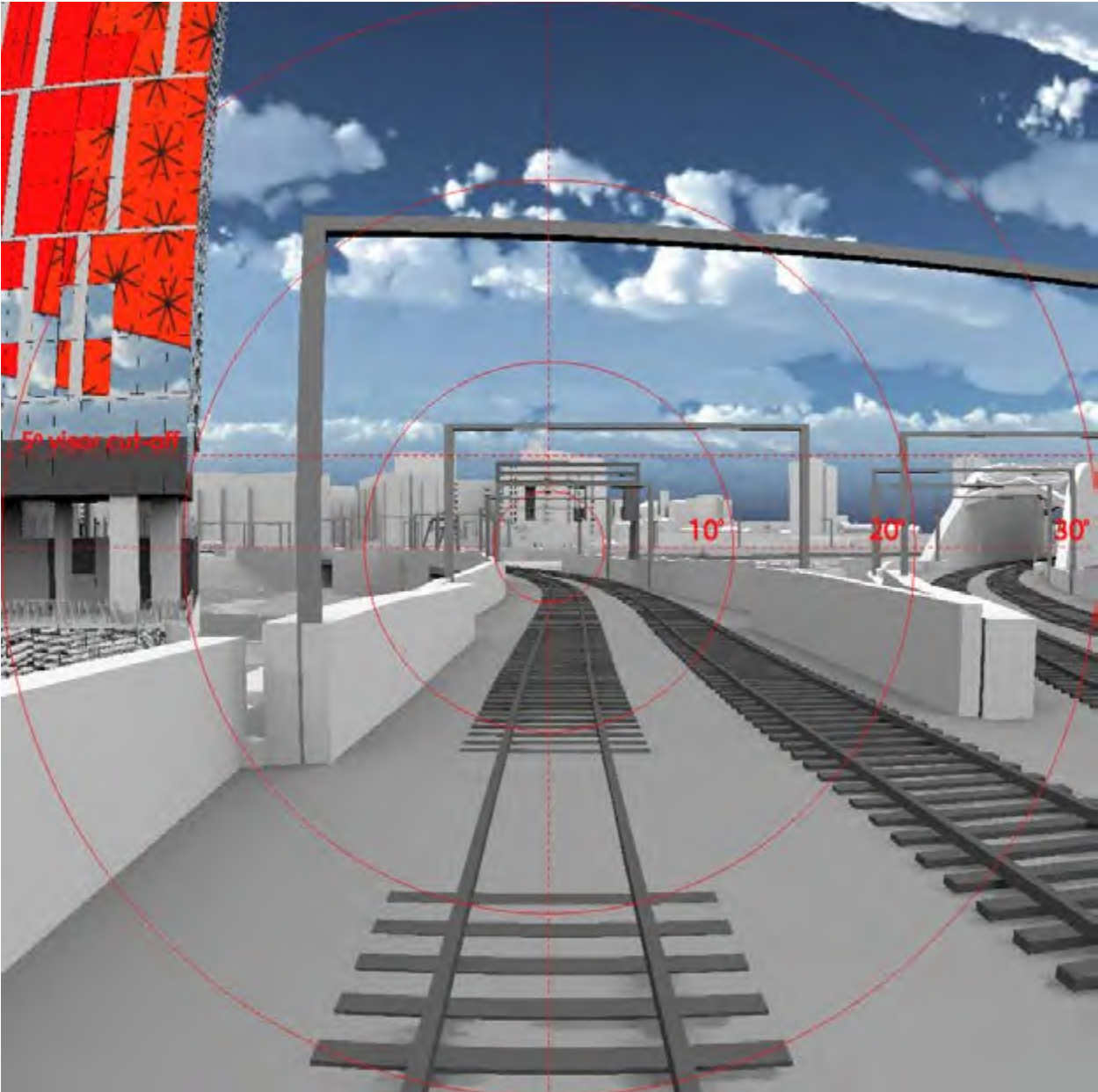


Fig. 822: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-450 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 80M FROM SIGNAL**

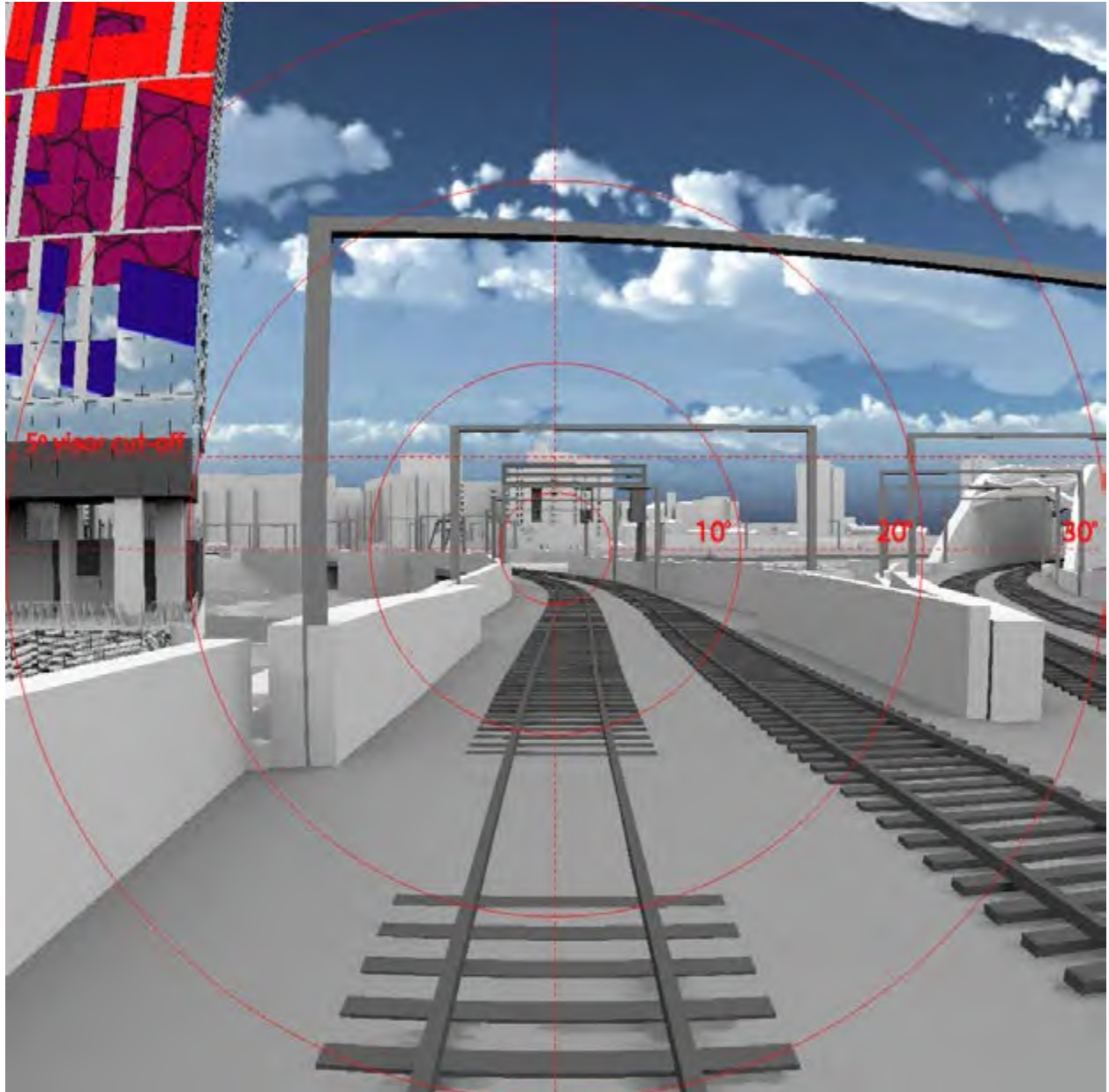


Fig. 823: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL

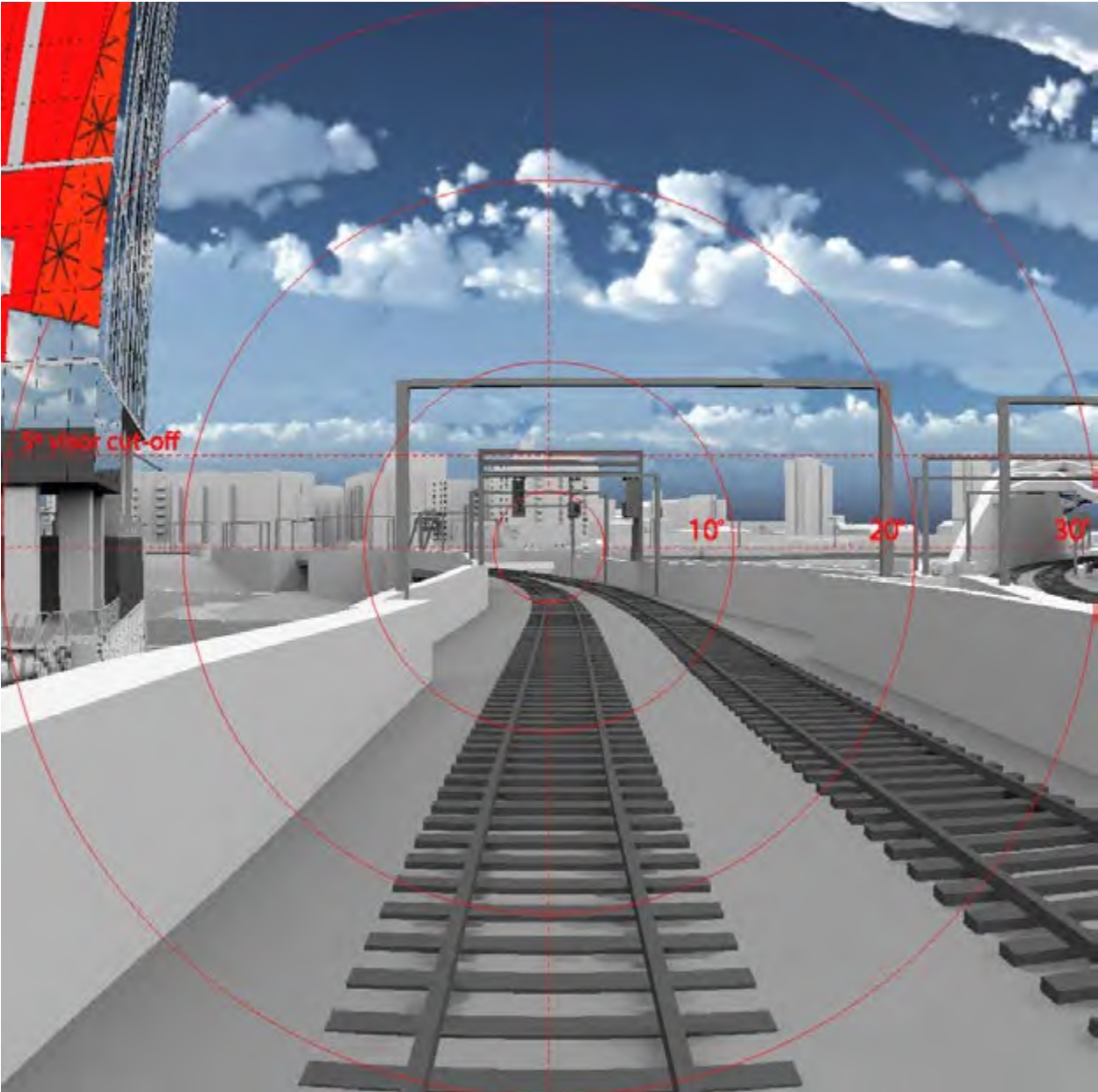


Fig. 824: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-460 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 70M FROM SIGNAL**

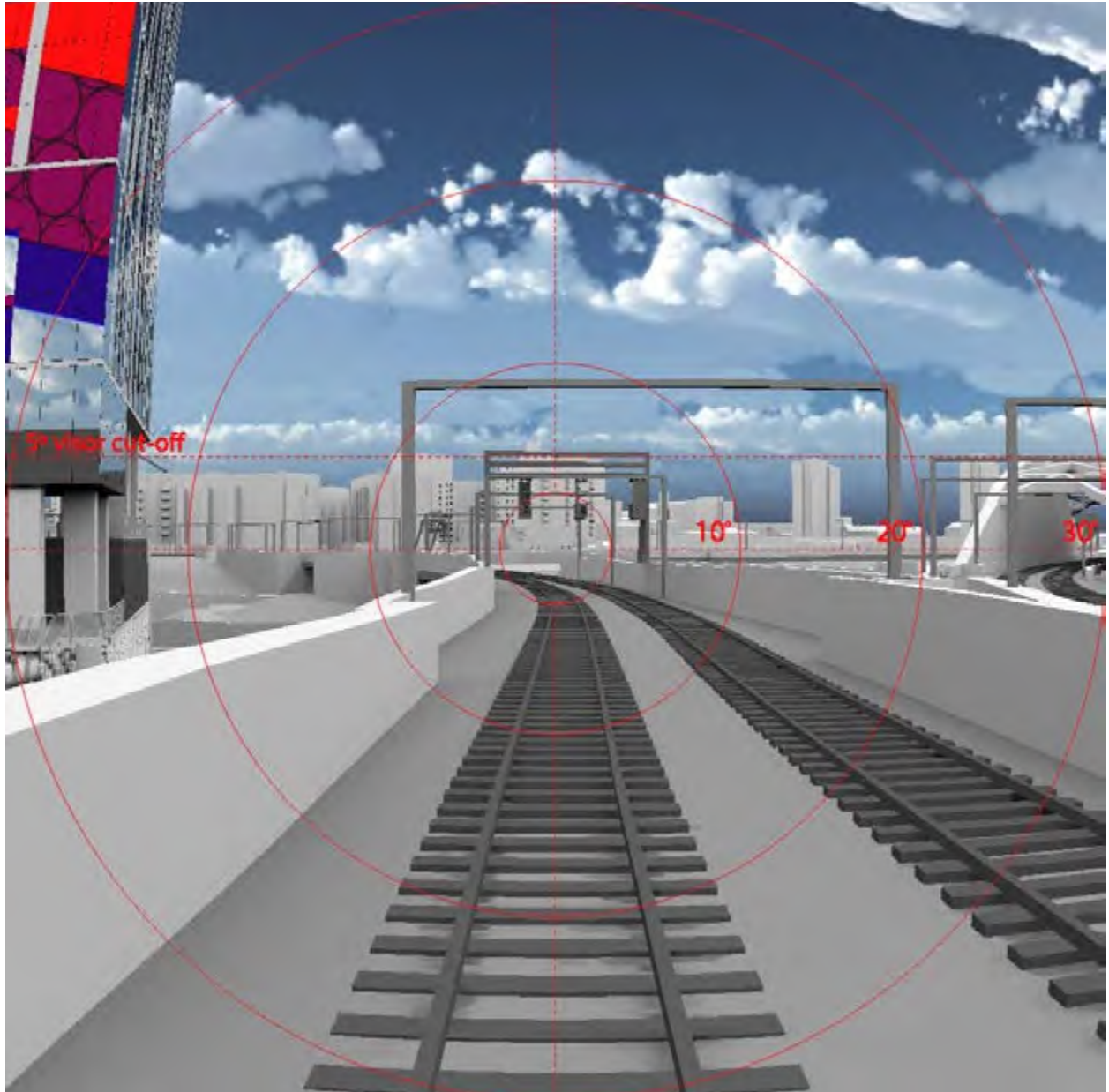


Fig. 825: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL

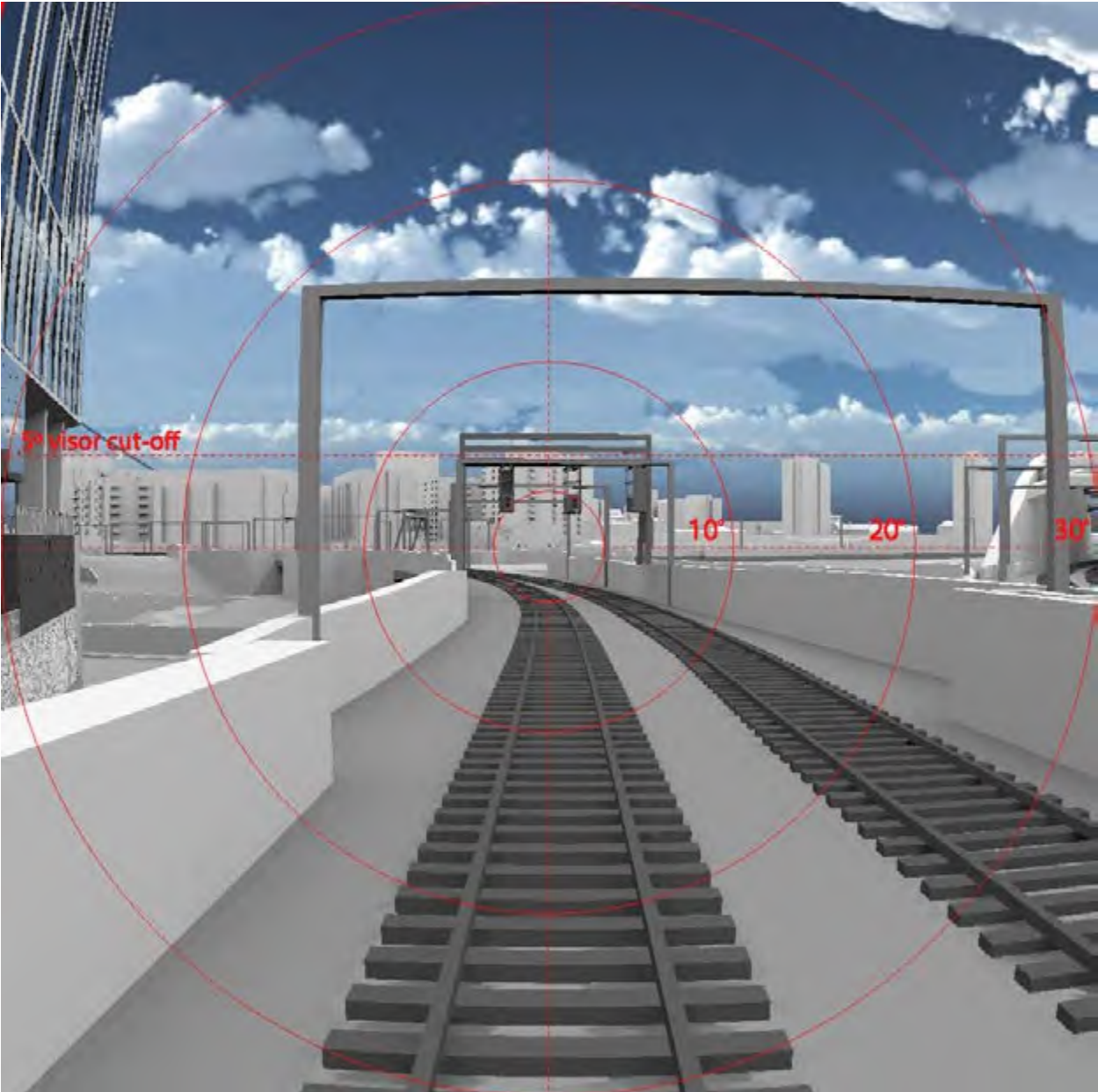


Fig. 826: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-470 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 60M FROM SIGNAL**

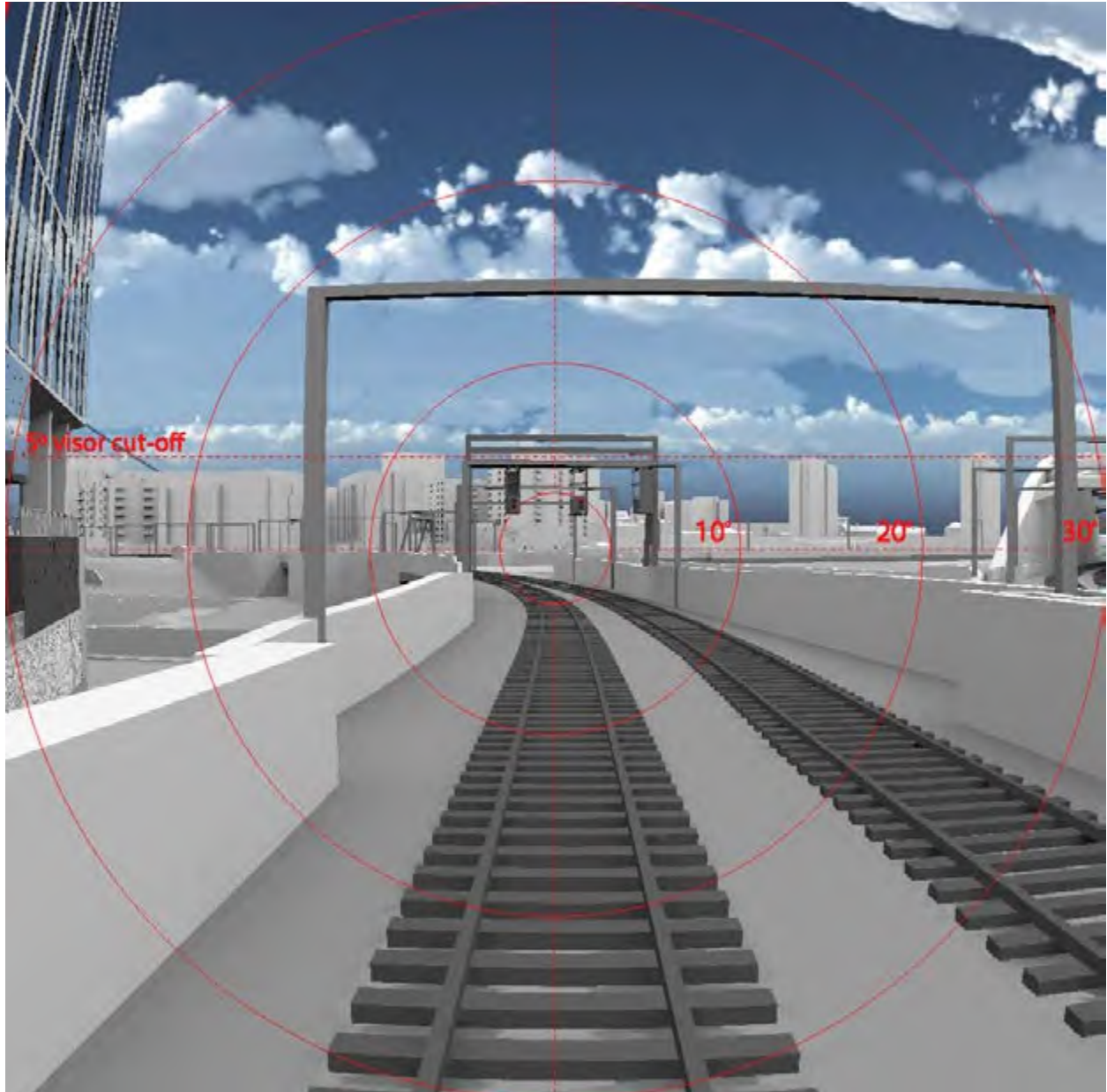


Fig. 827: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL

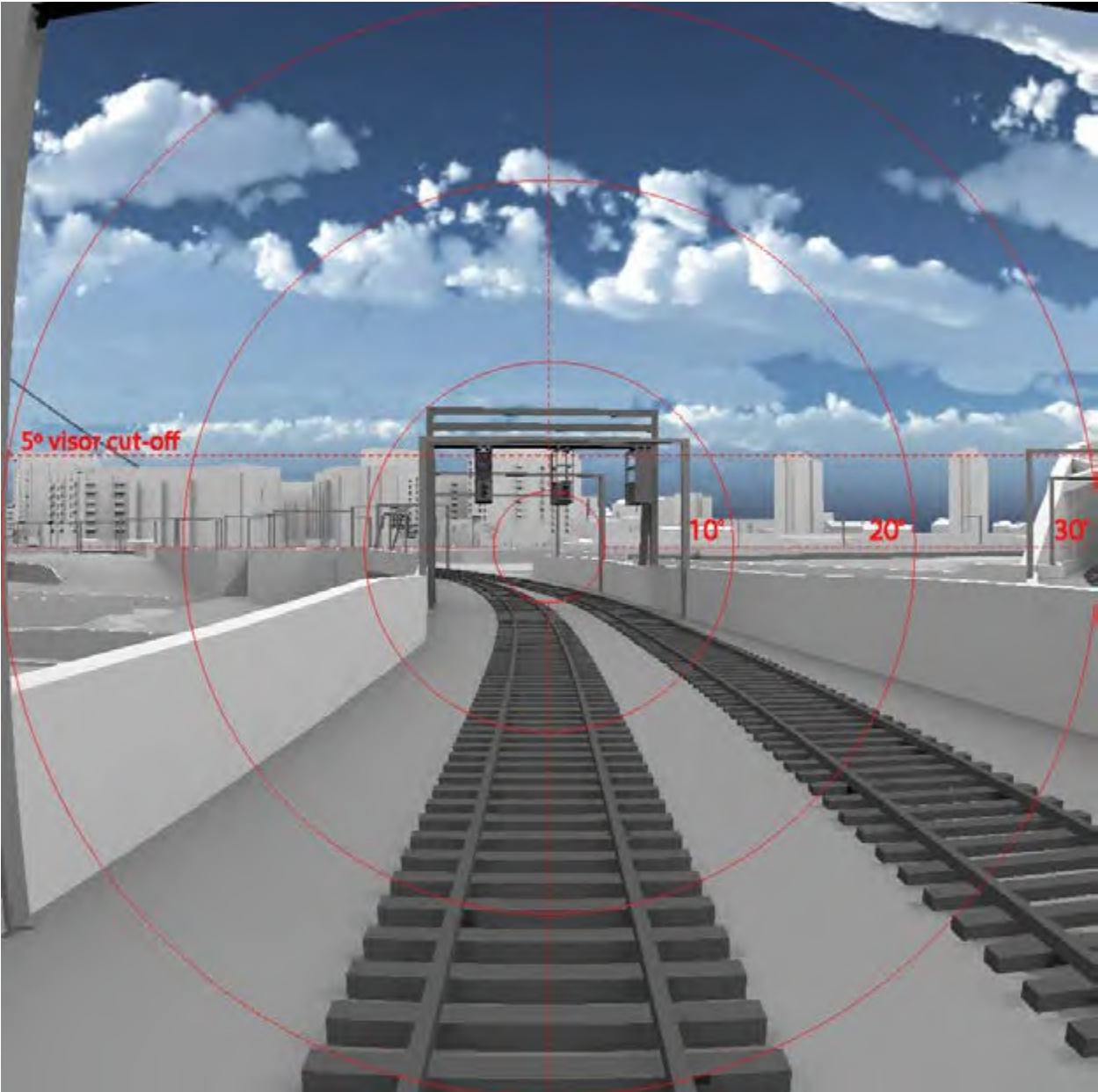


Fig. 828: Solar reflections



60° FIELD OF VIEW: SEASON

**VIEWPOINT N4-480 - NORTHERN LINE NORTHBOUND - APPROX 50M FROM SITE
LOOKING STRAGHT - APPROX 50M FROM SIGNAL**

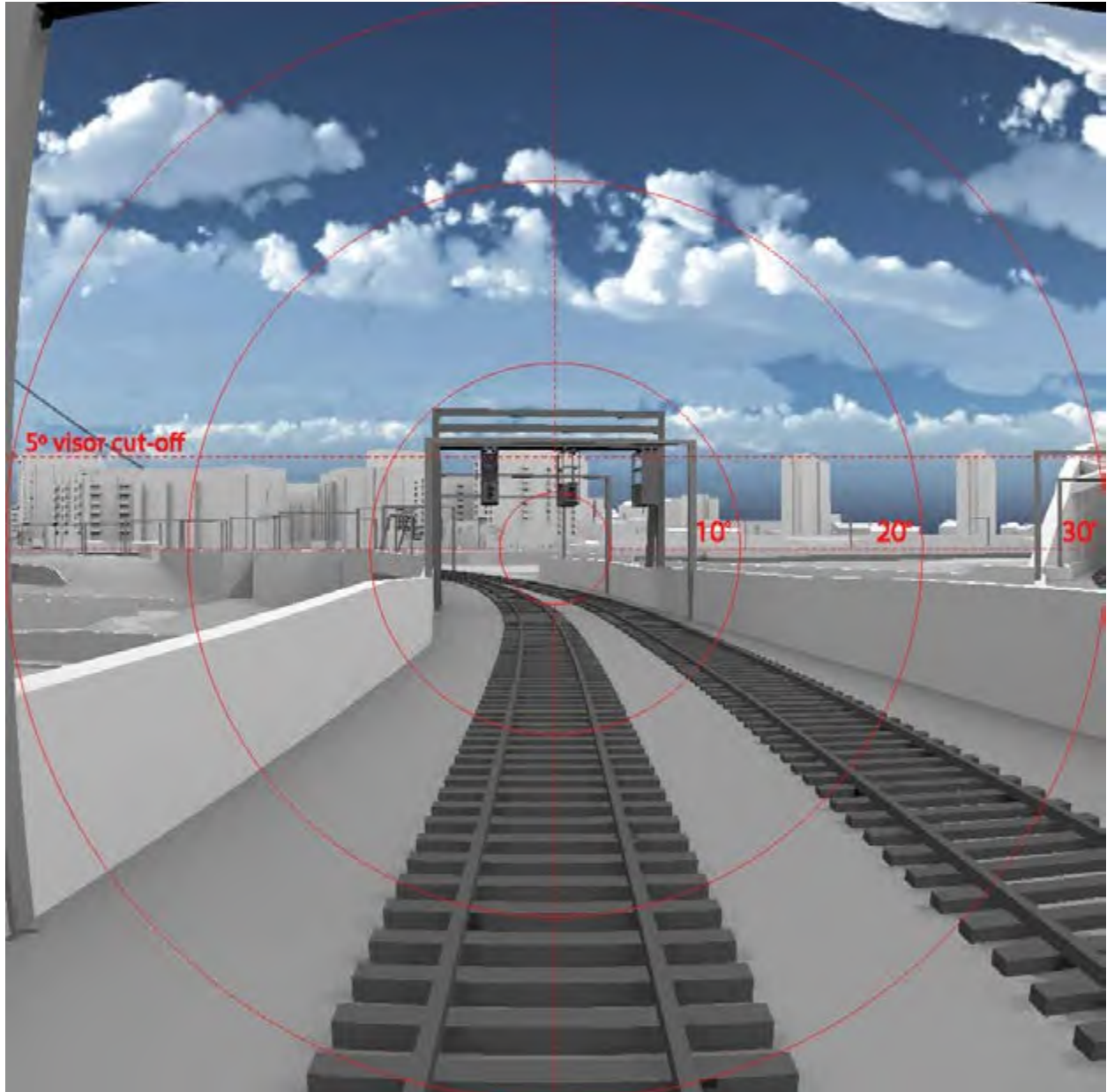


Fig. 829: Solar reflections



36 **SOLAR GLARE ASSESSMENT**
T1 - TRAM LINE EASTBOUND

T1 - Tram Line - Eastbound from Cornbrook to Deansgate-Castlefield



Fig. 830: Junction Location



Fig. 831: Viewpoints

Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

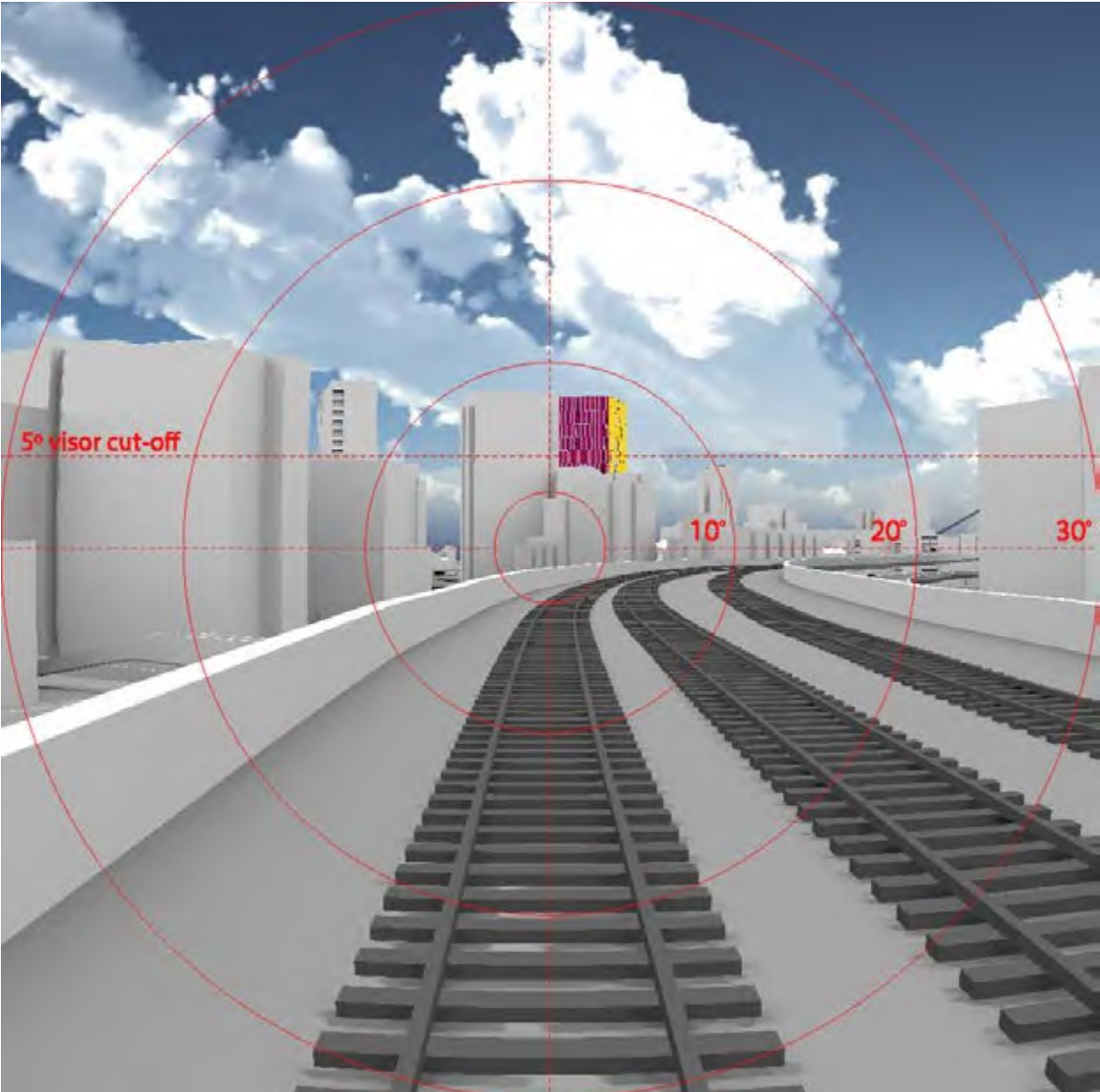


Fig. 832: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

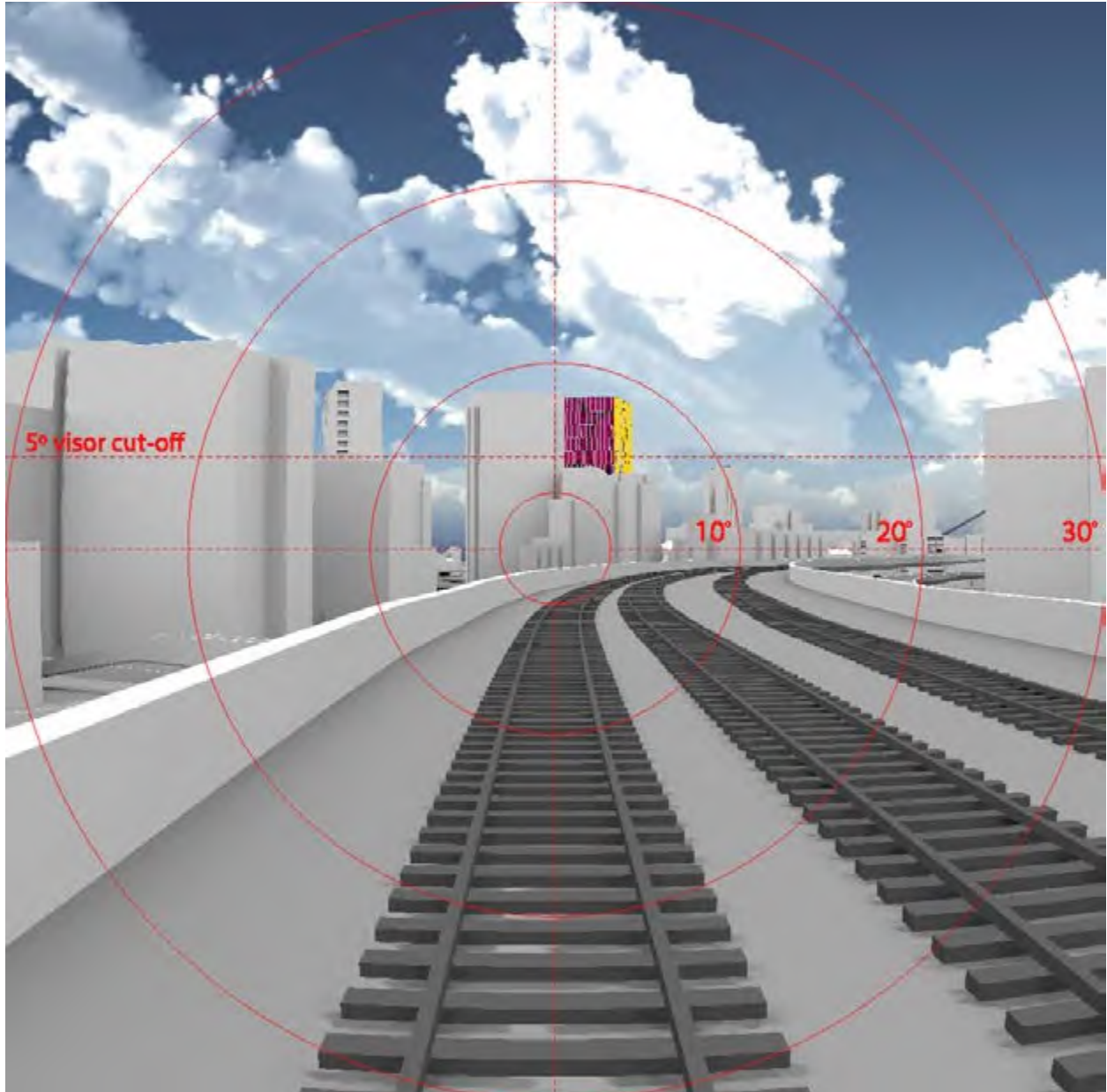


Fig. 833: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

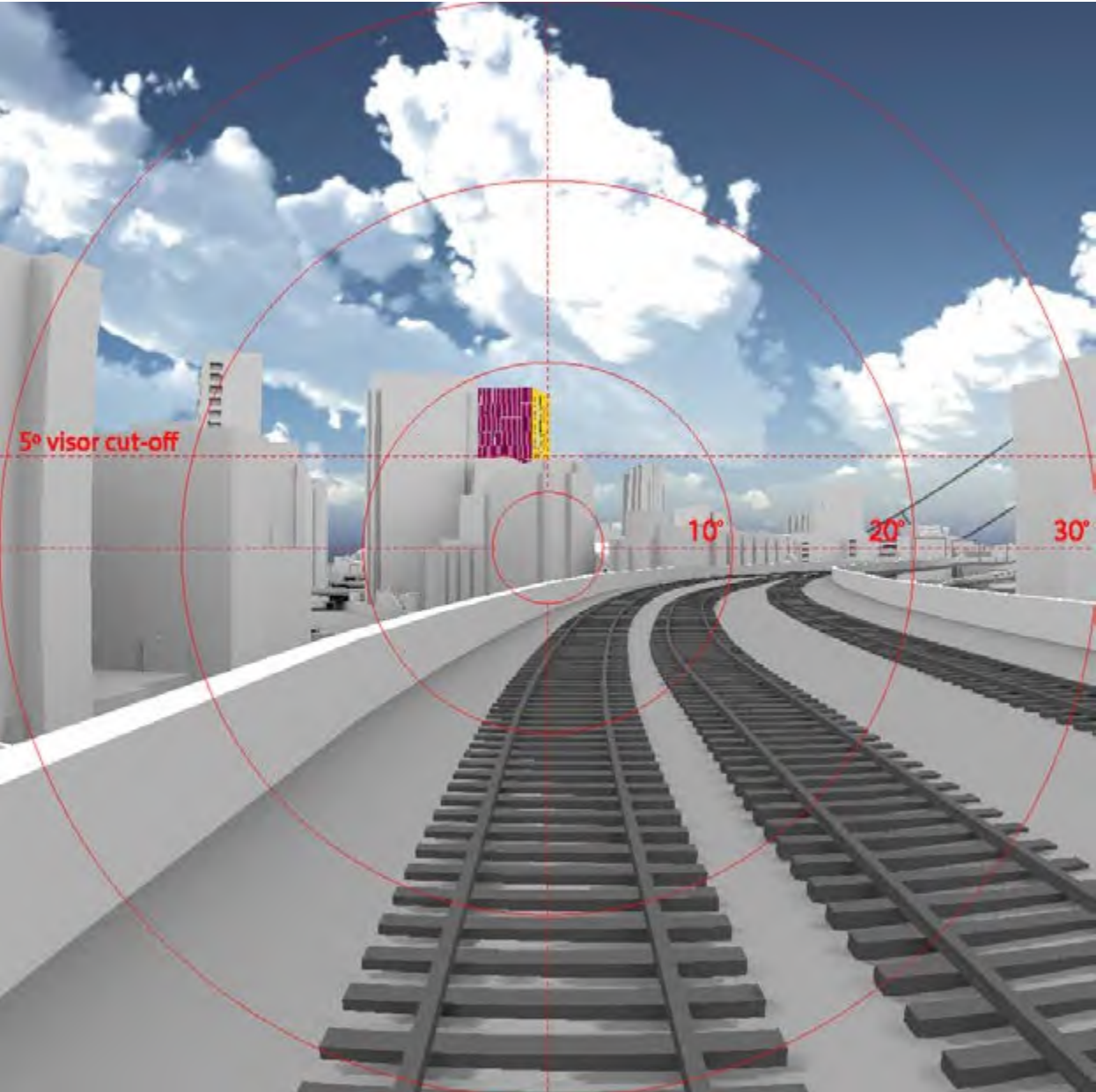
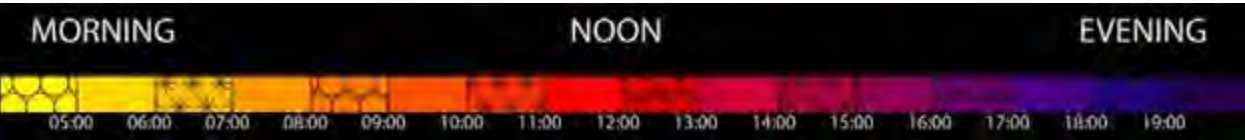


Fig. 834: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

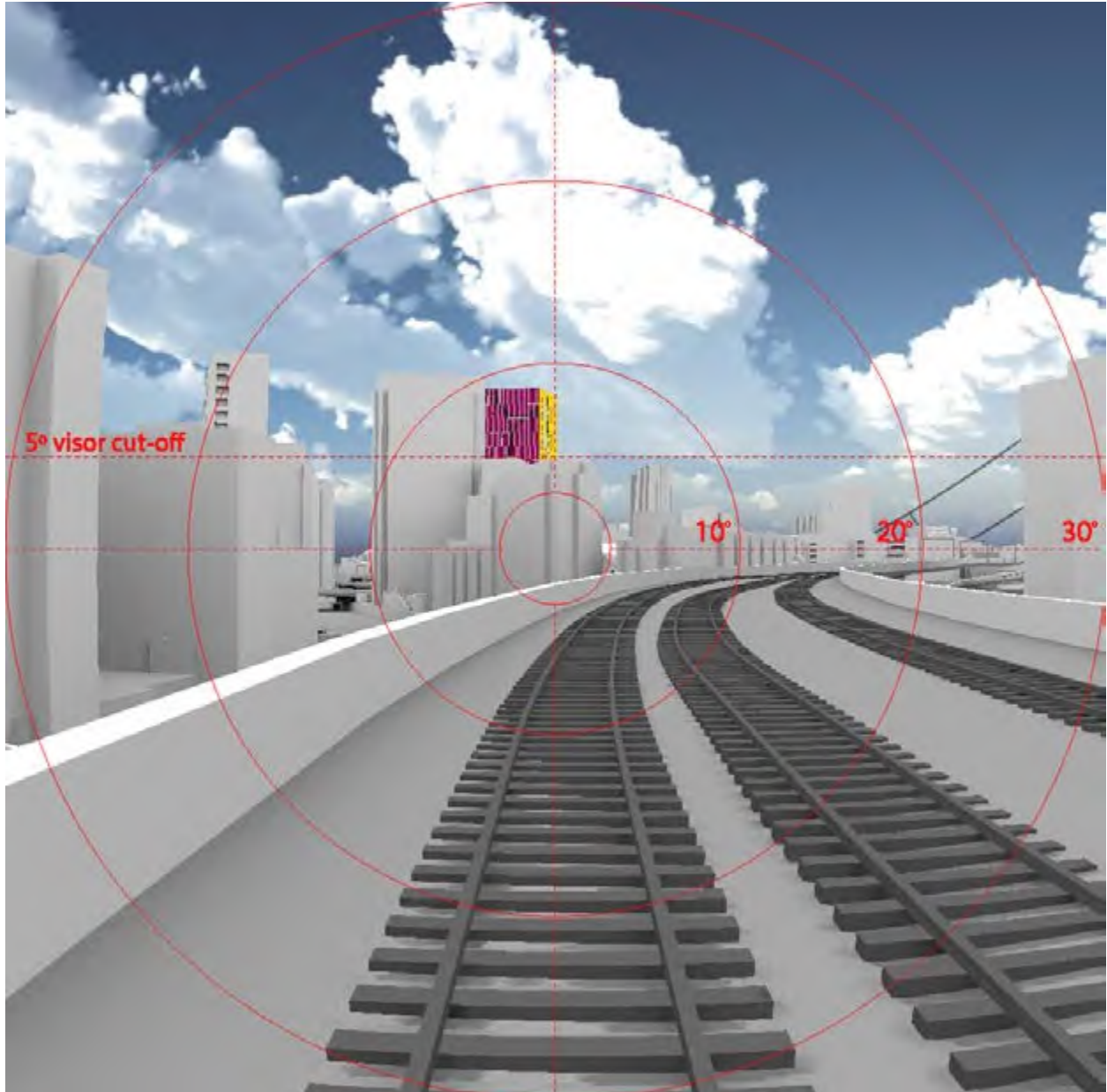


Fig. 835: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAGHT

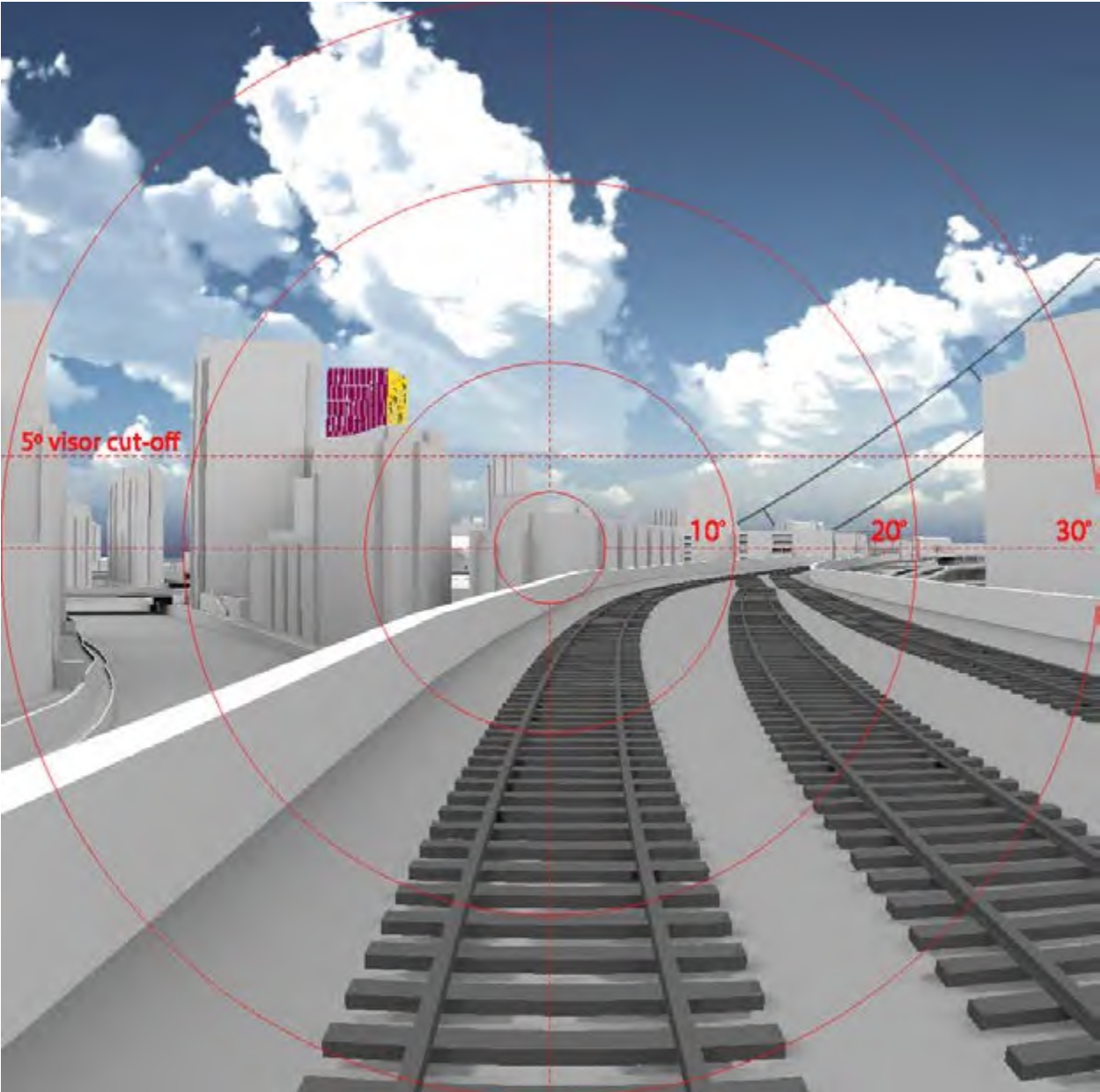


Fig. 836: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAGHT

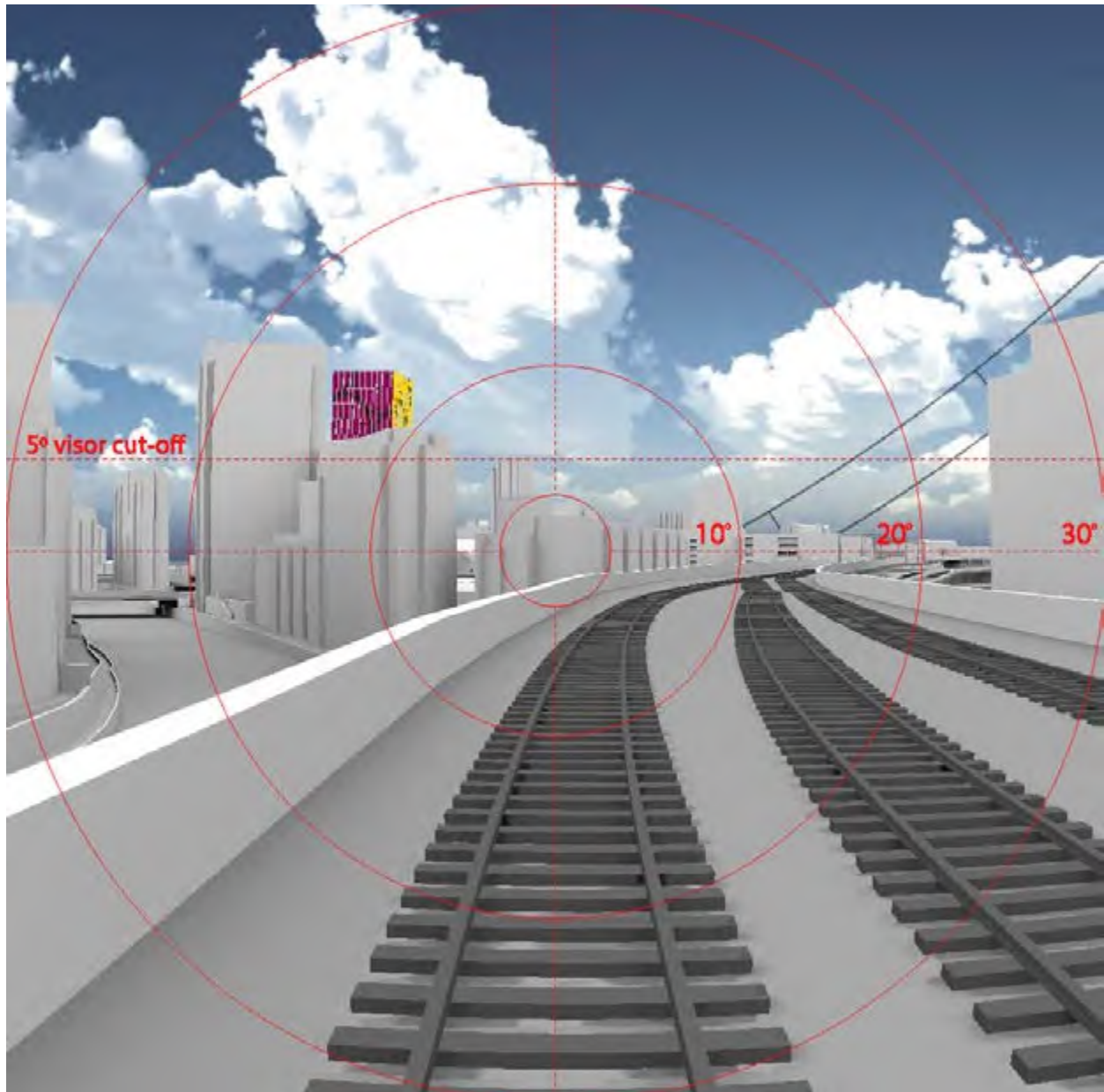


Fig. 837: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

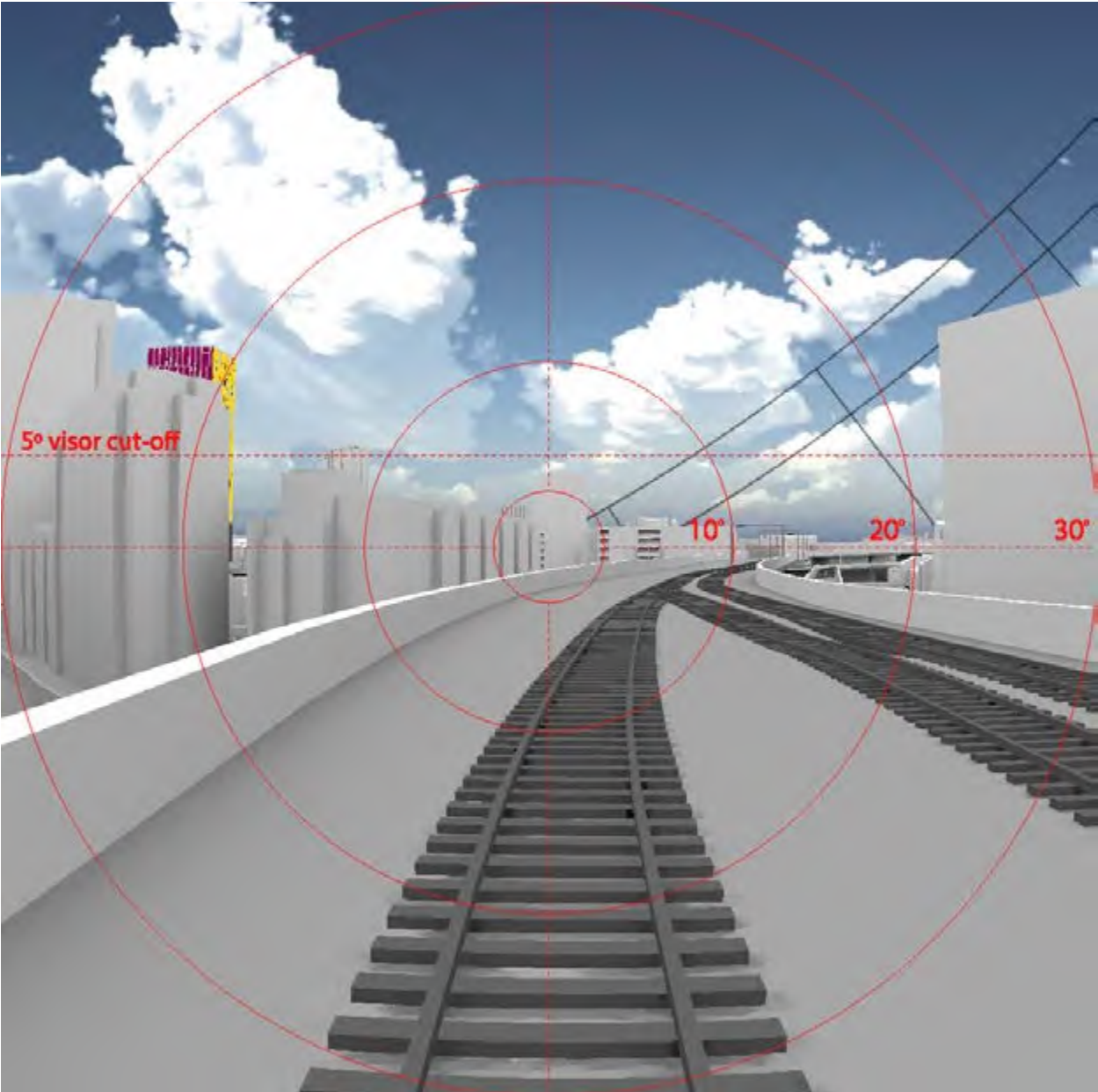


Fig. 838: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAGHT

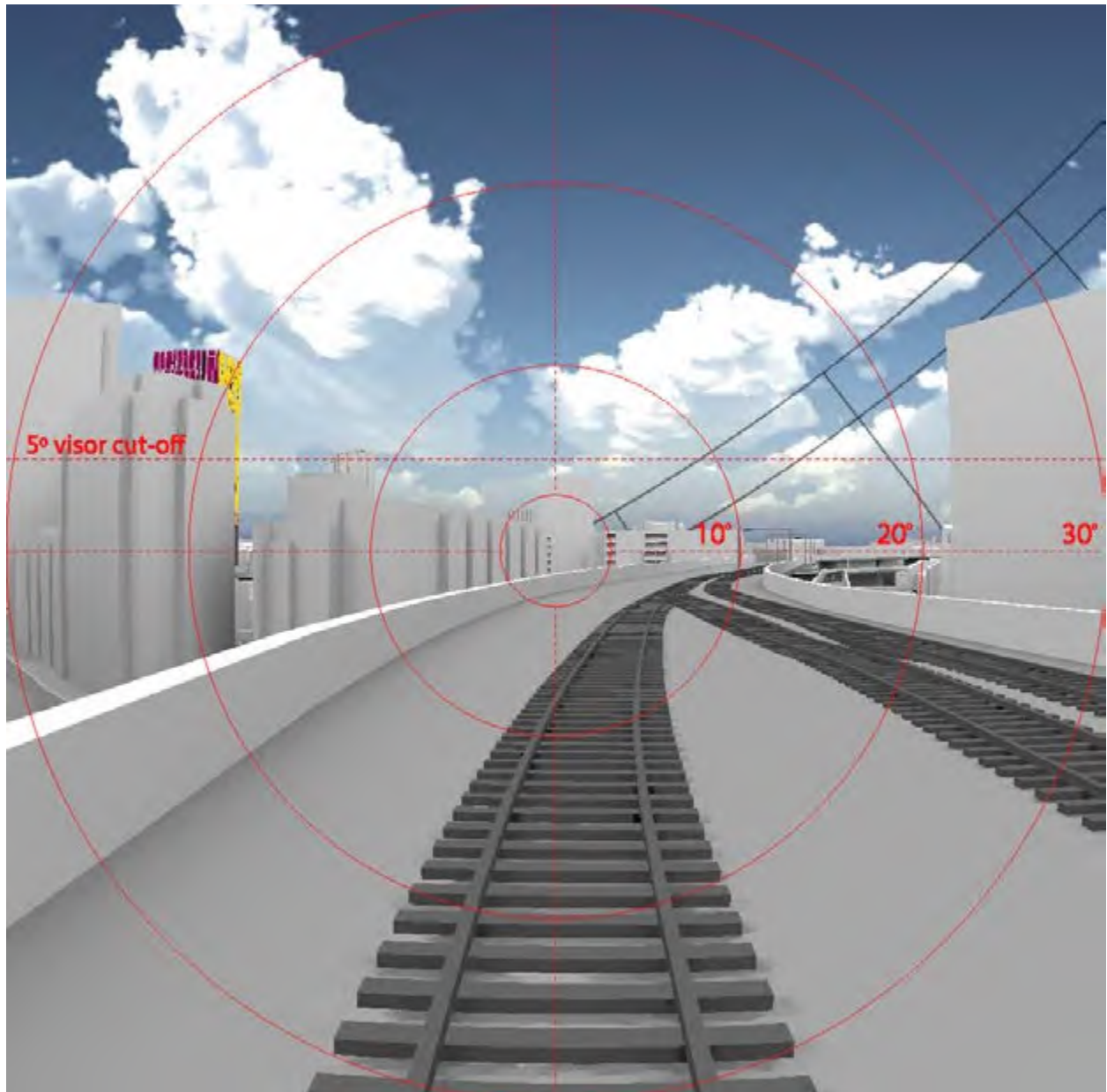


Fig. 839: Solar reflections



Scenario 3: Phase C1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

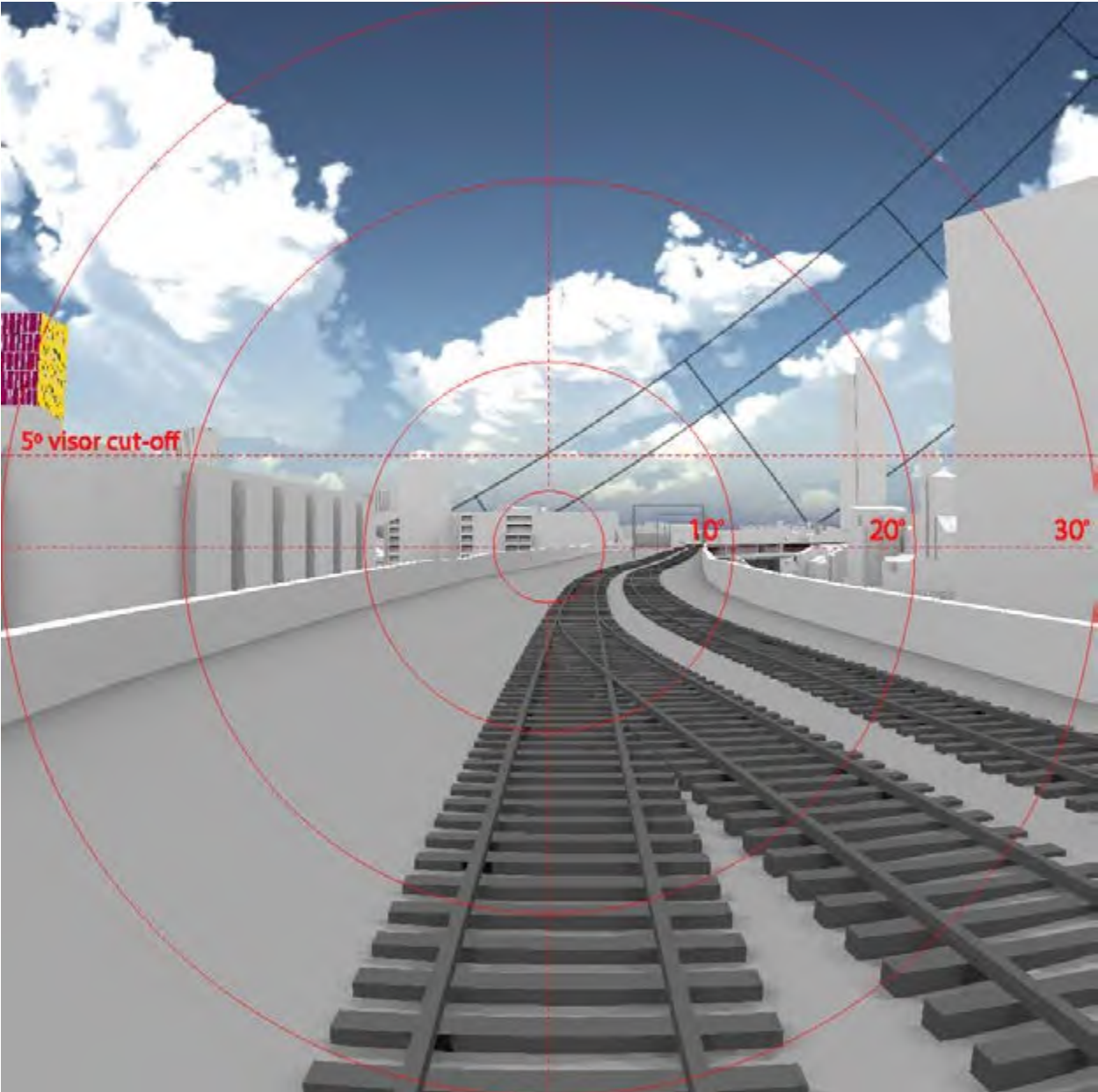


Fig. 840: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAGHT

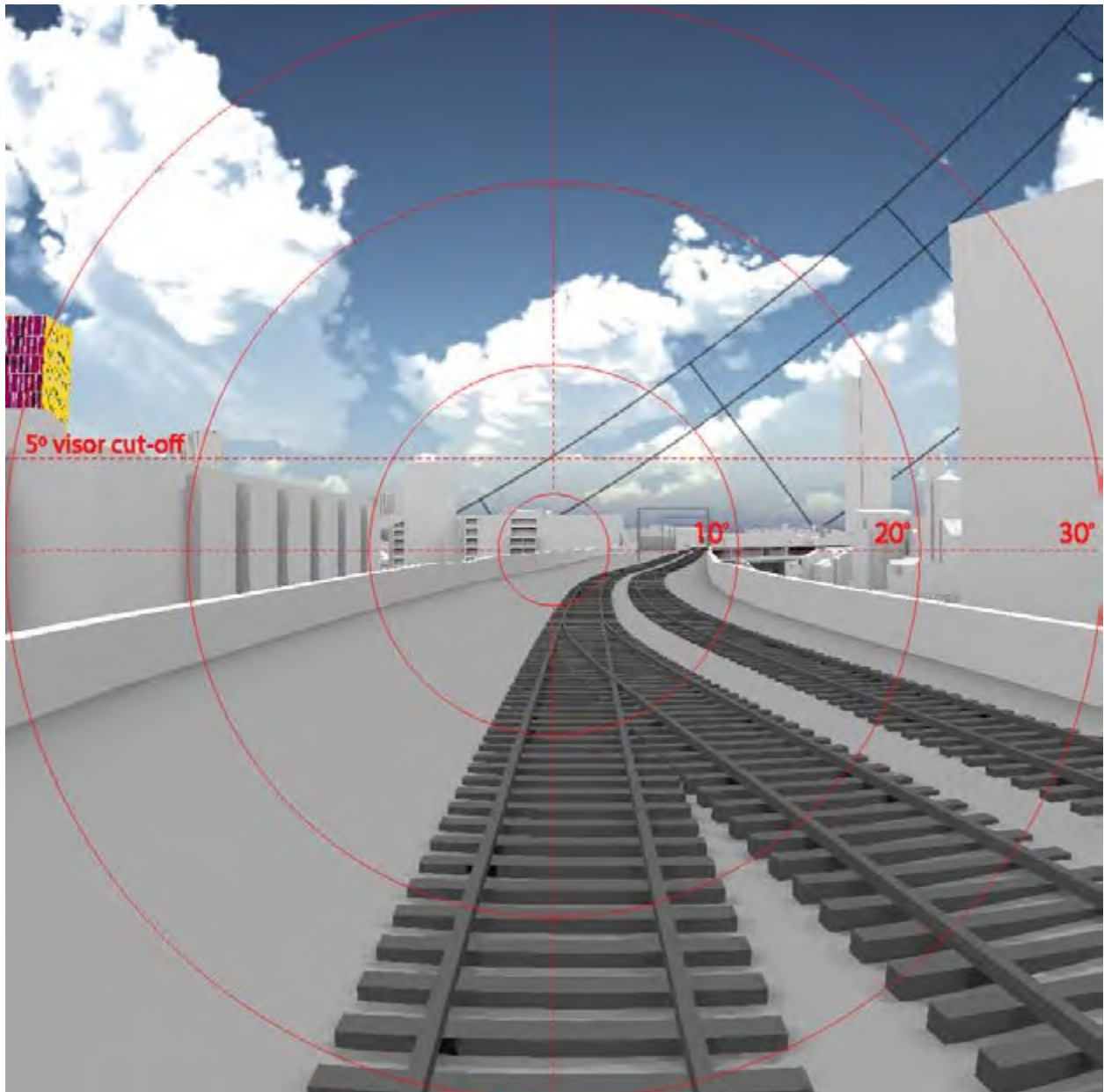


Fig. 841: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

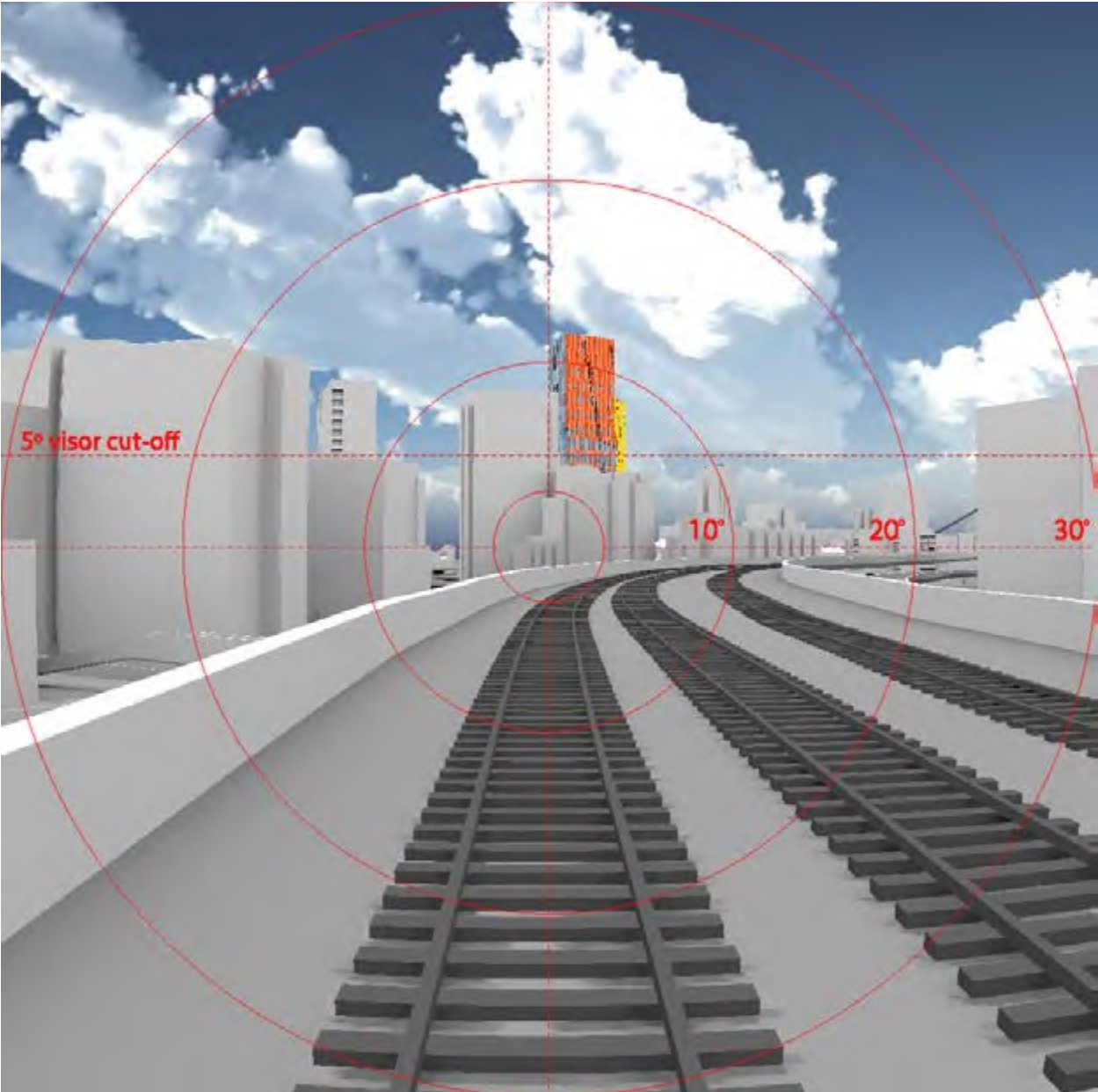


Fig. 842: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

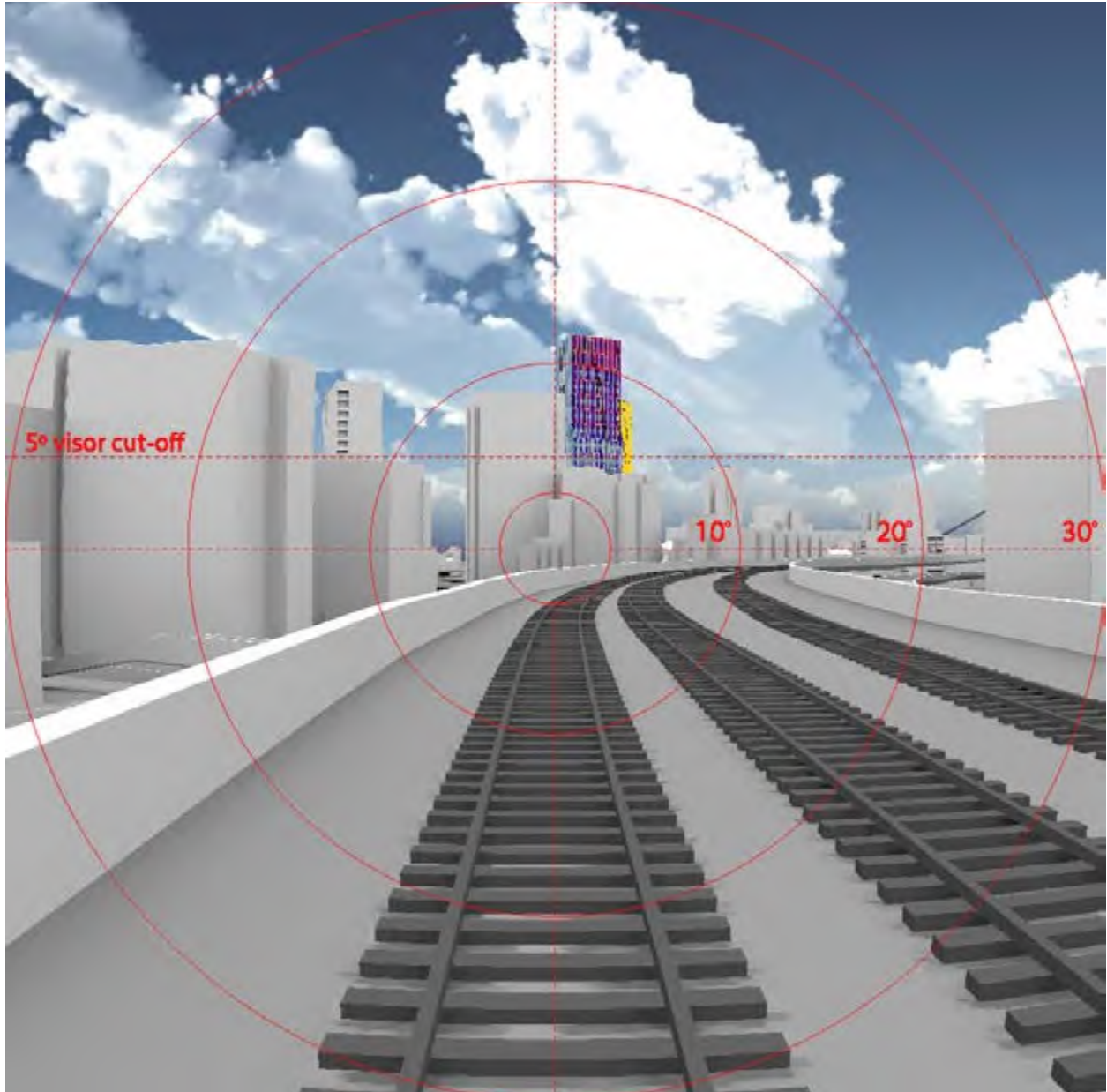


Fig. 843: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

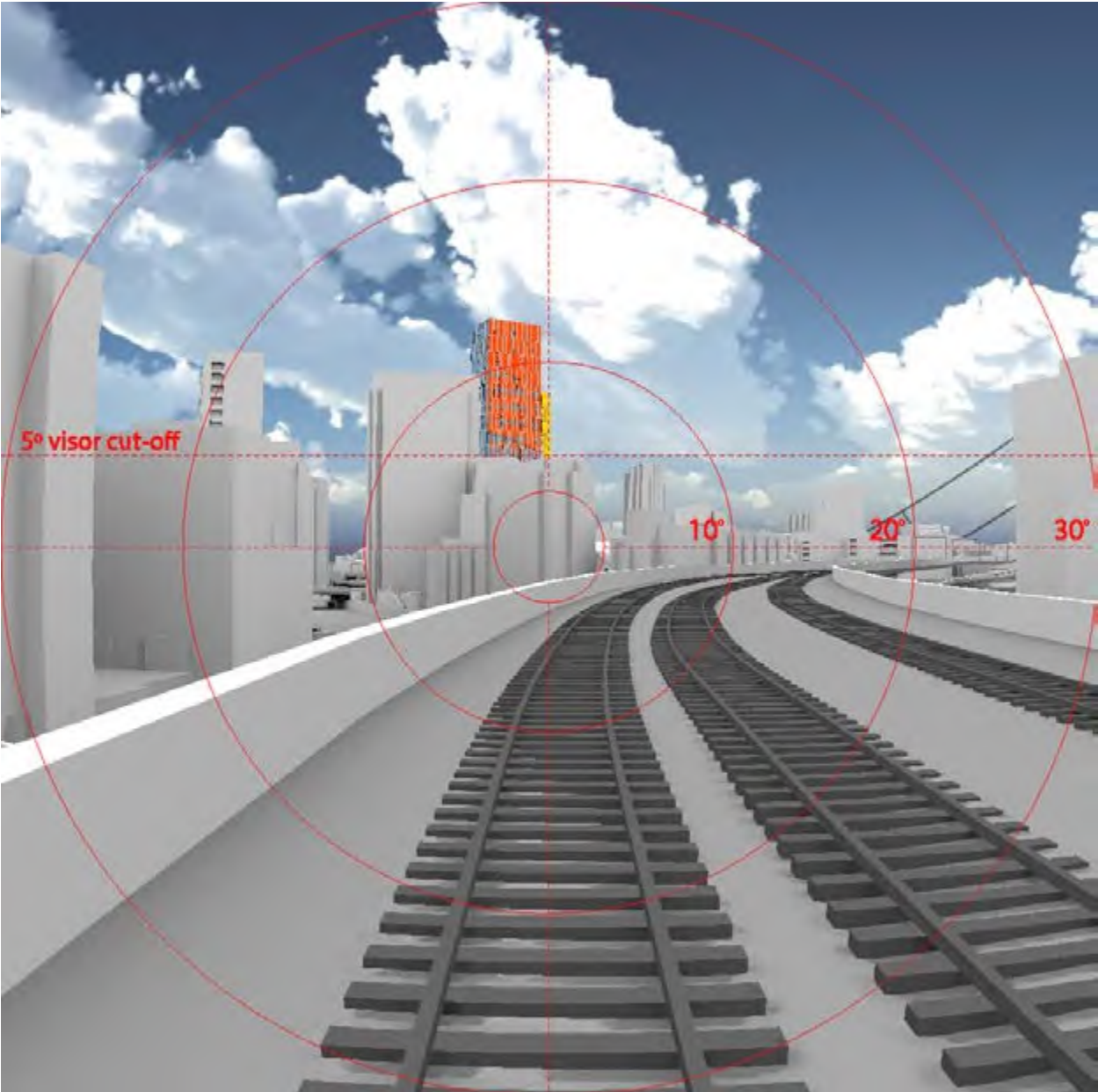


Fig. 844: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

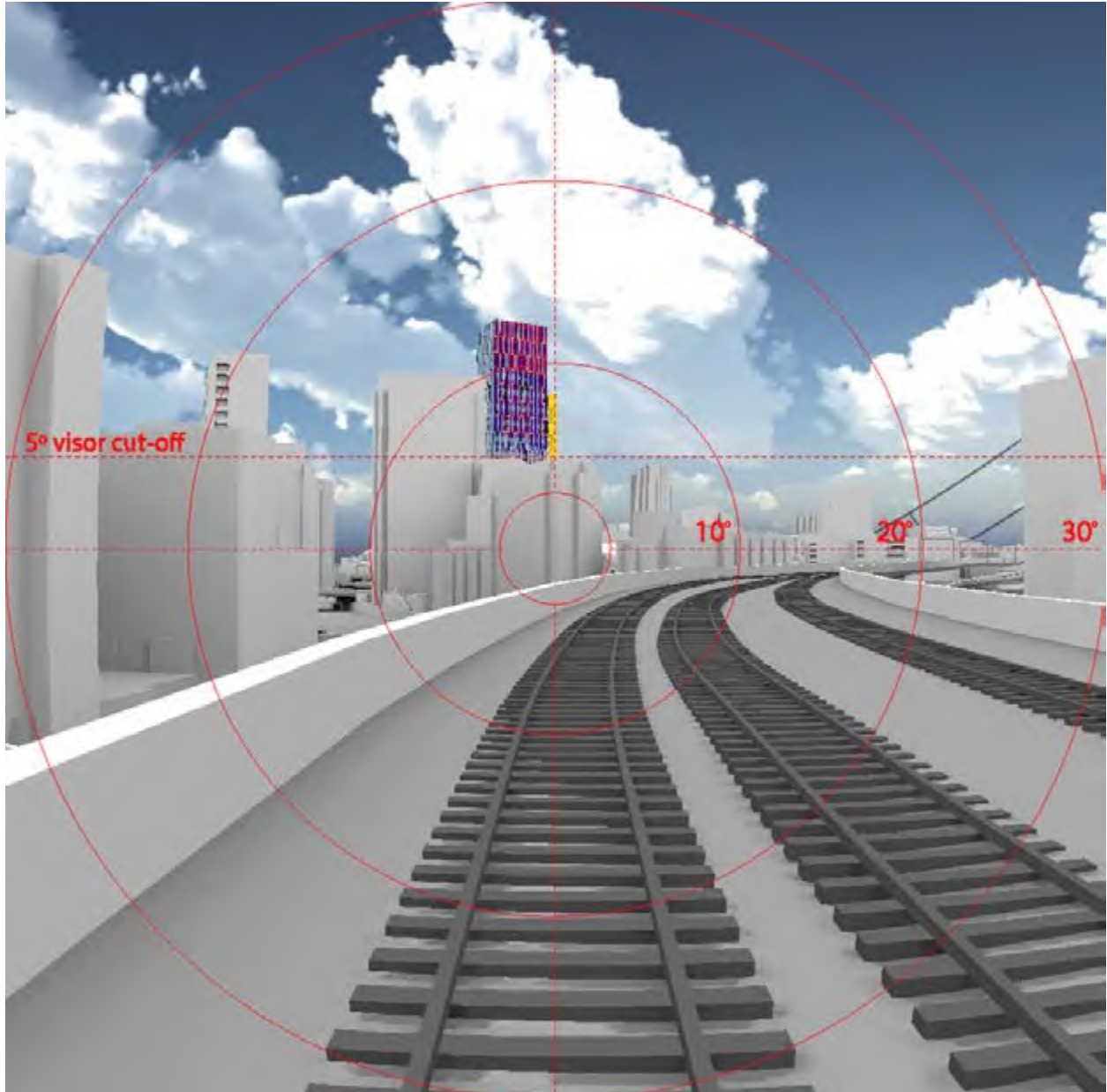


Fig. 845: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAGHT

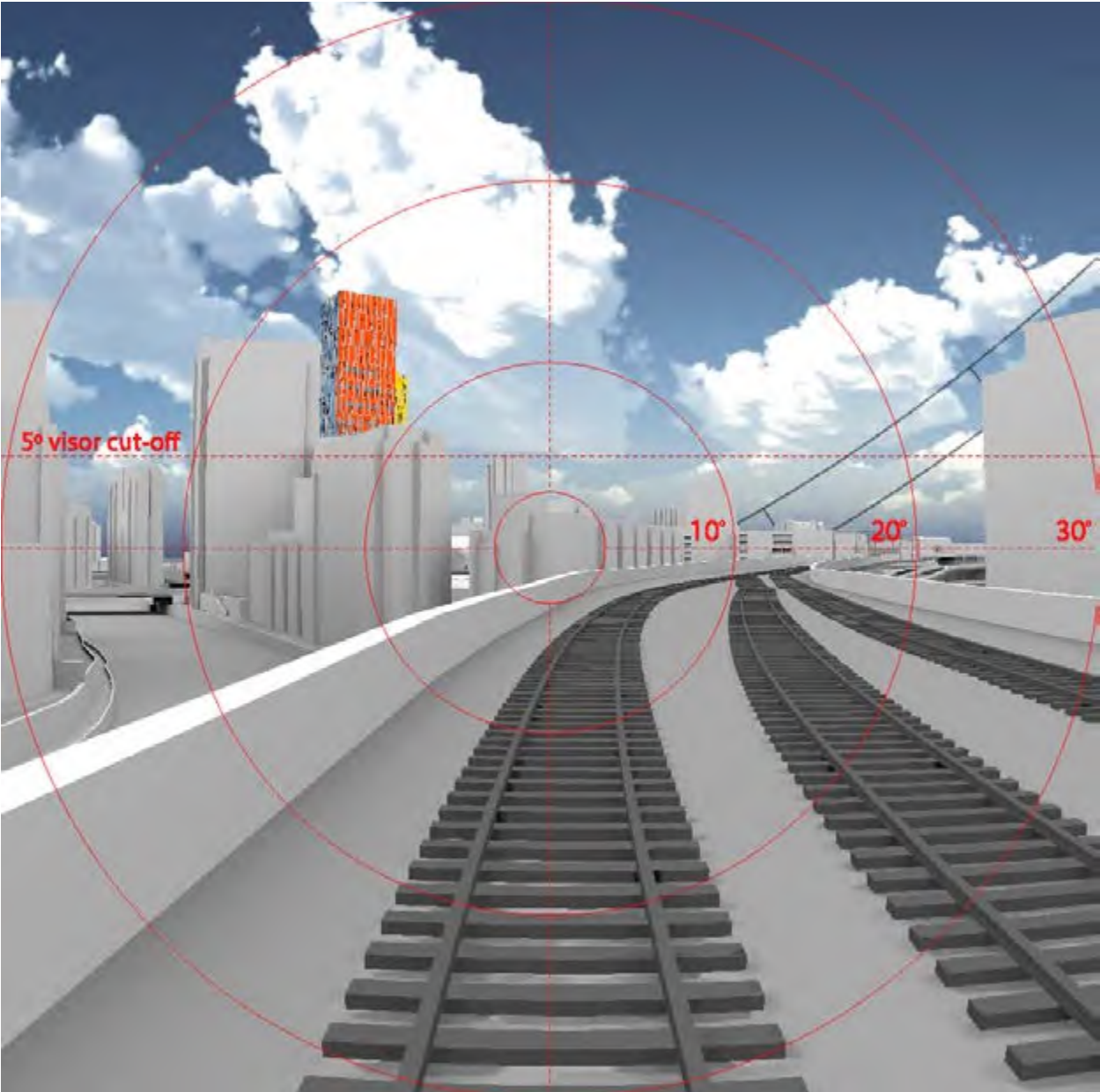


Fig. 846: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAGHT

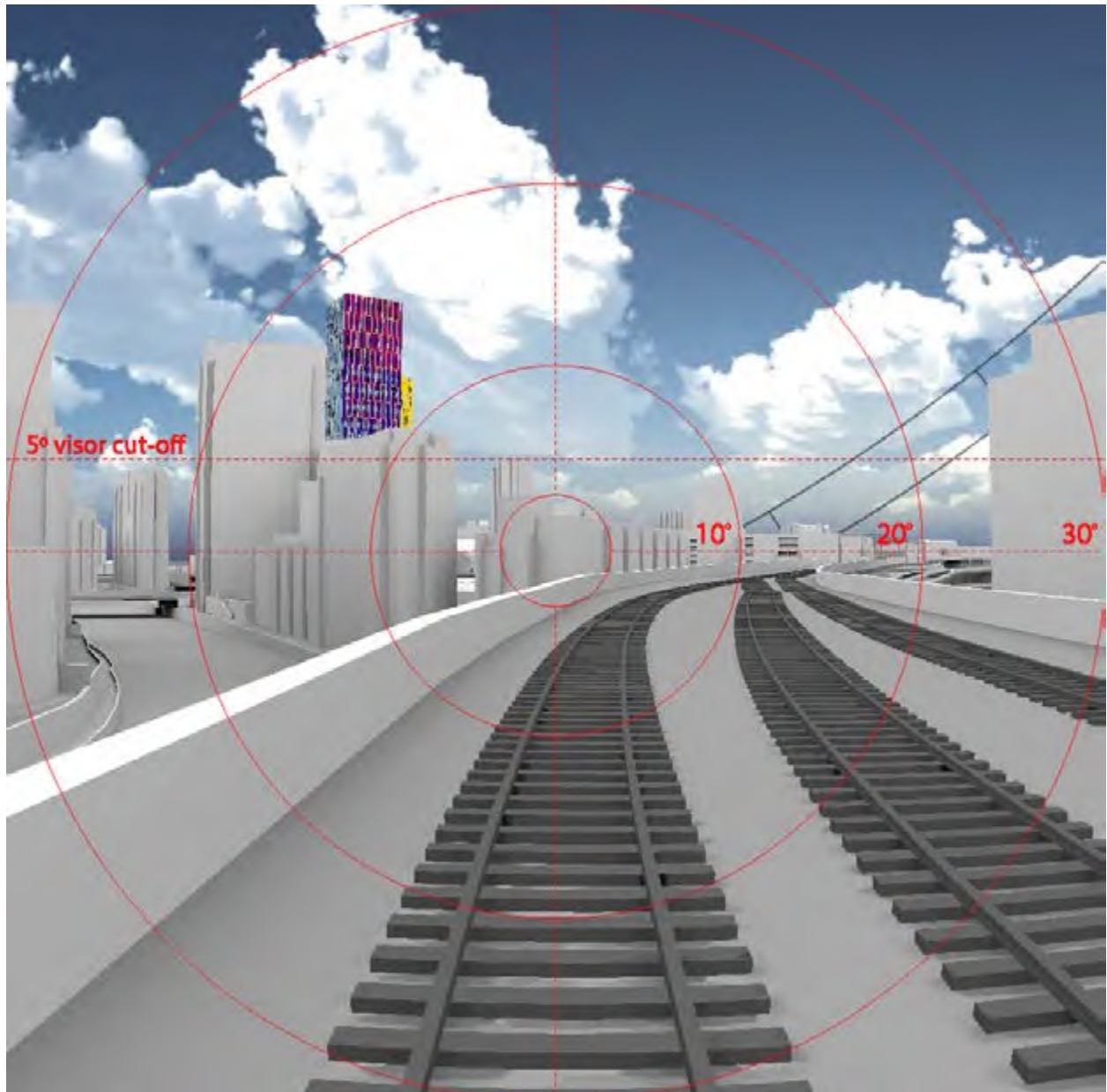


Fig. 847: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

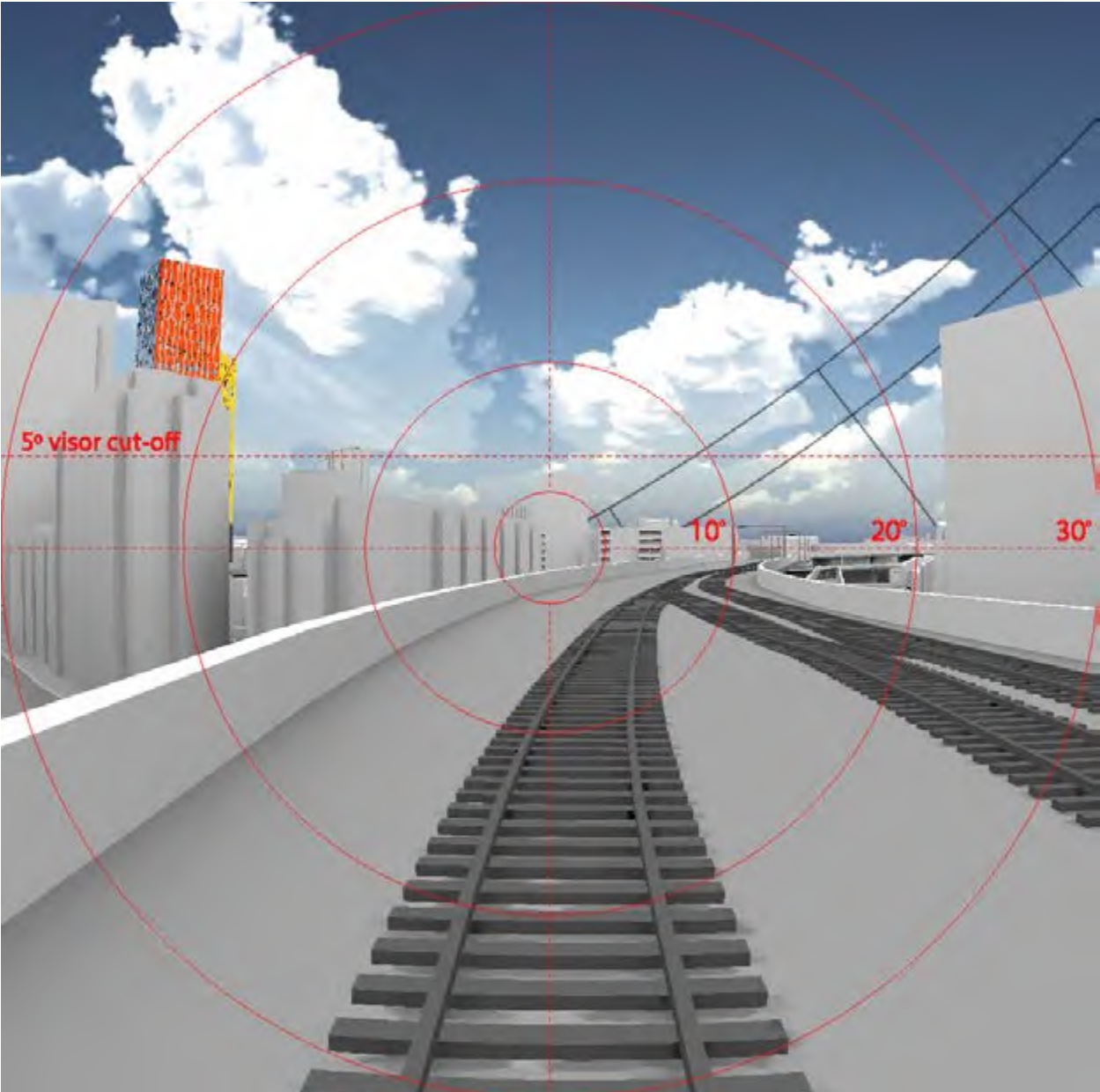


Fig. 848: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAGHT

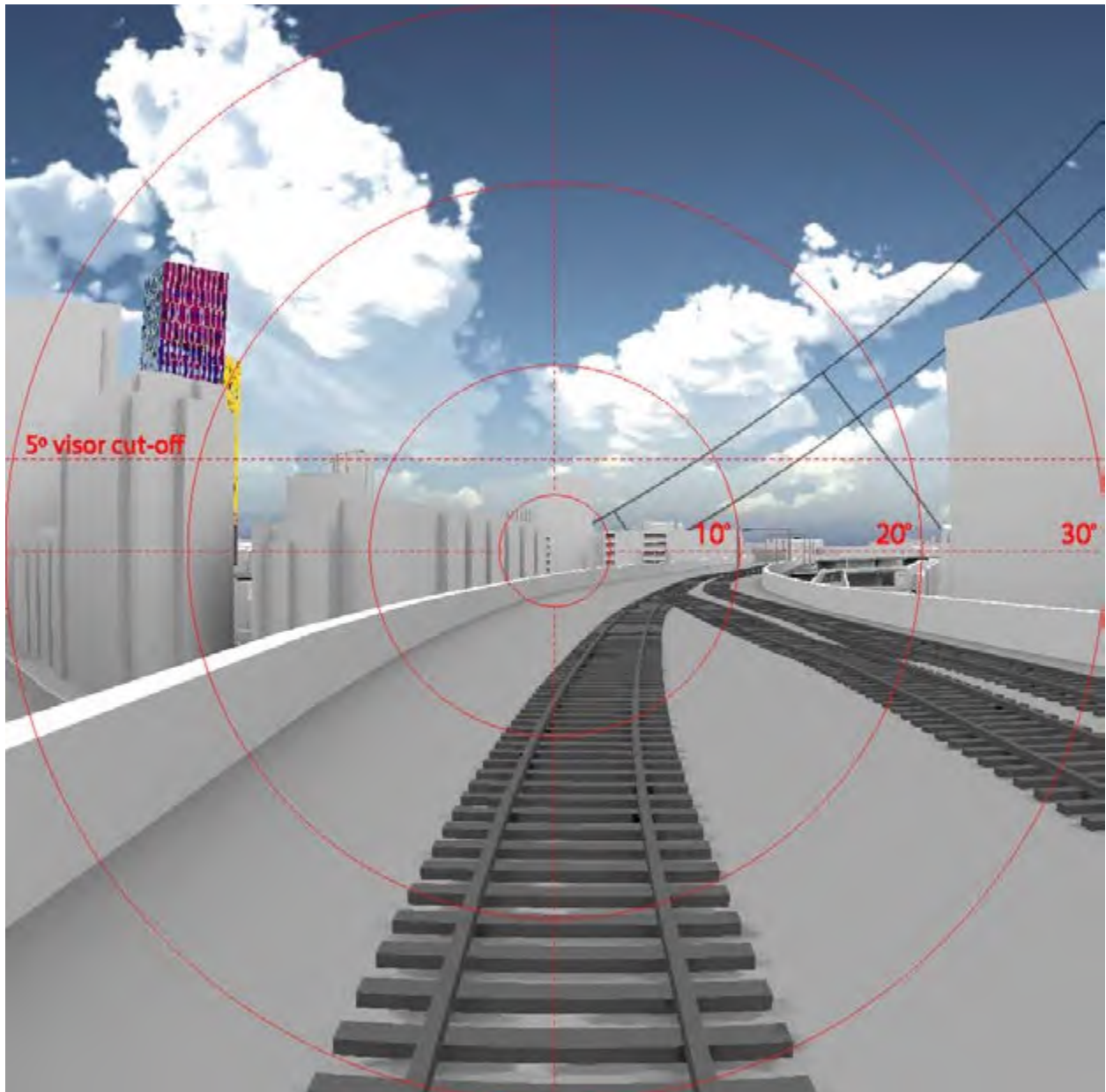


Fig. 849: Solar reflections



Scenario 4: Phase C1 & C2 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

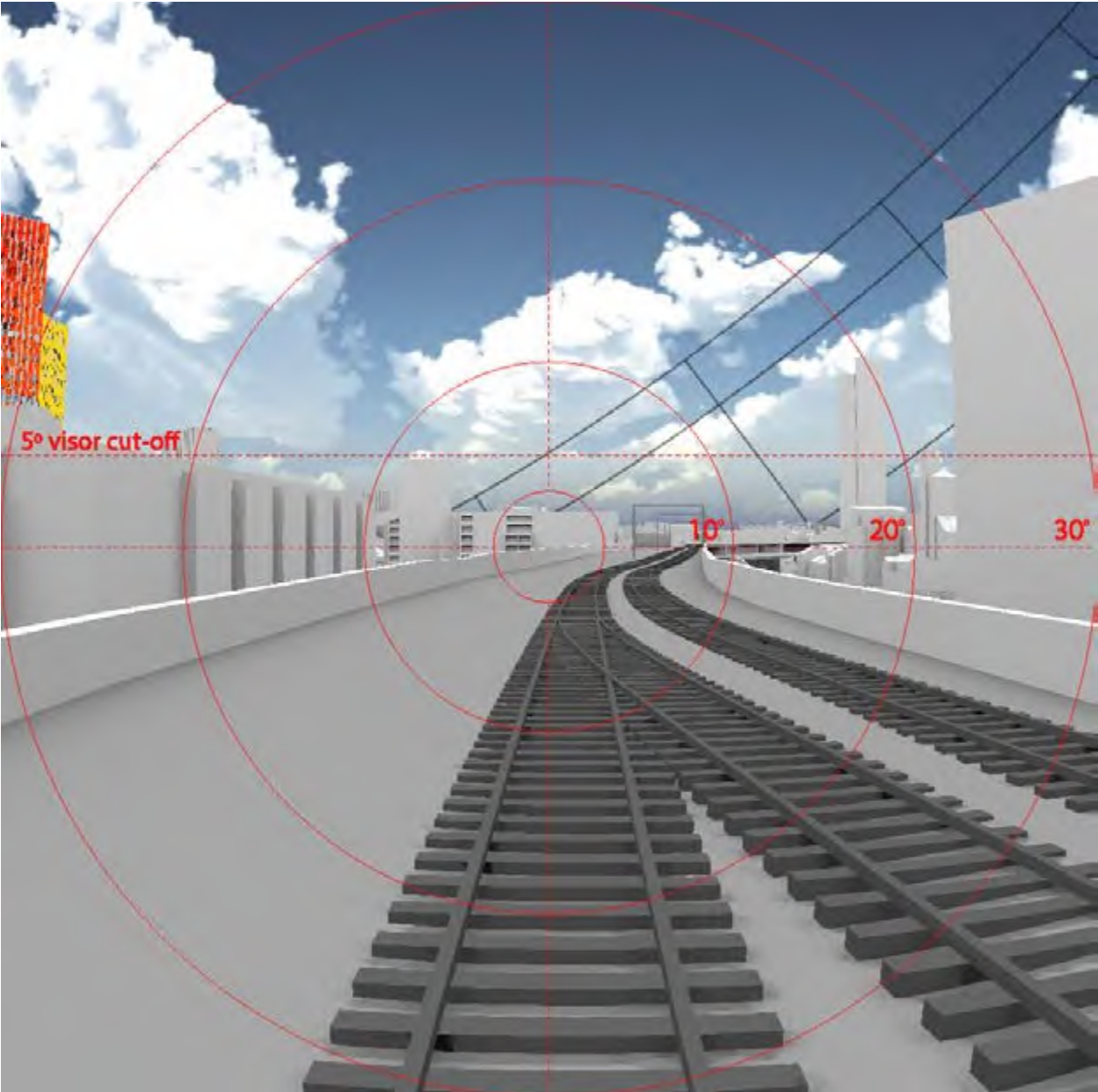


Fig. 850: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAGHT

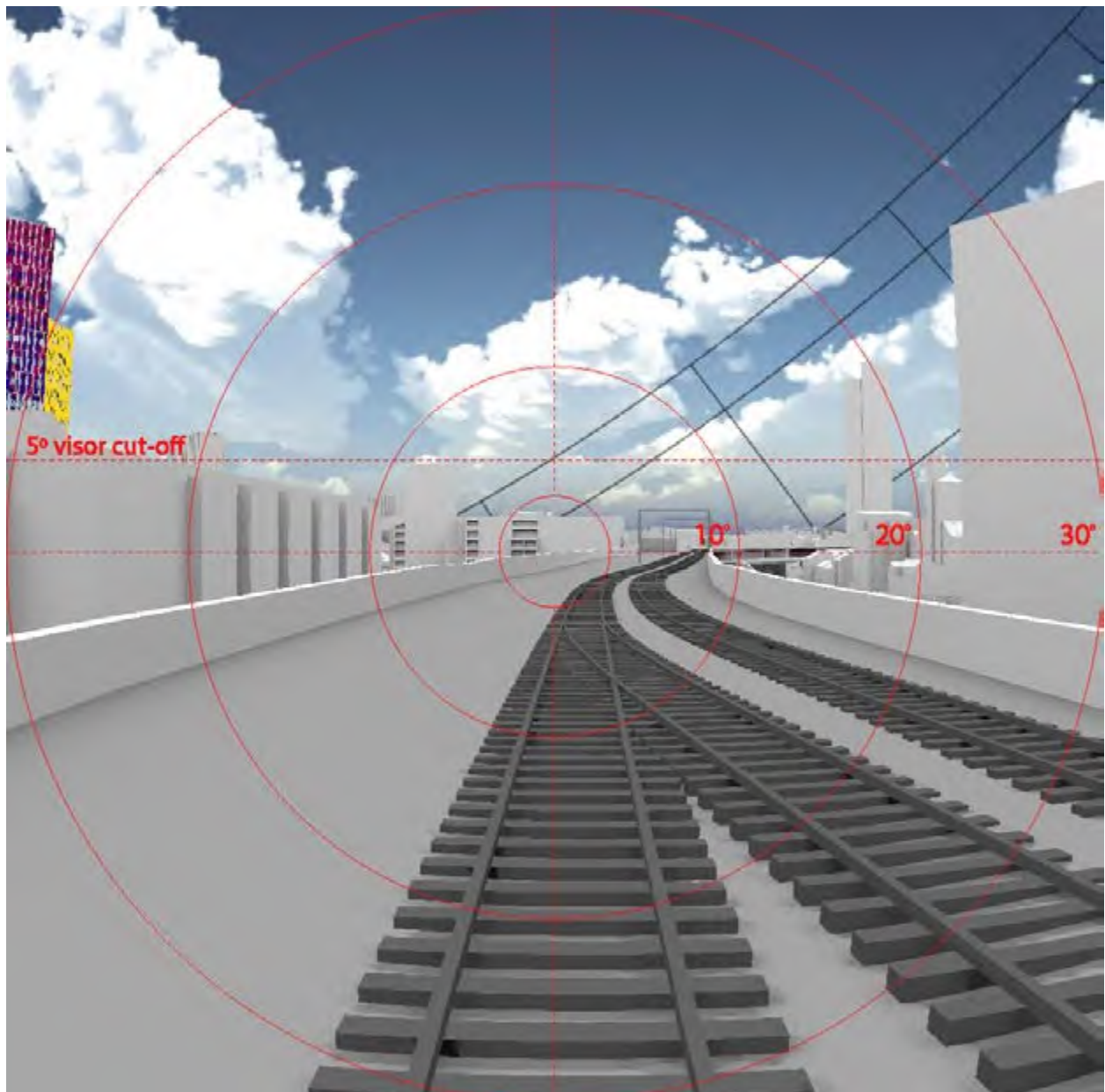


Fig. 851: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

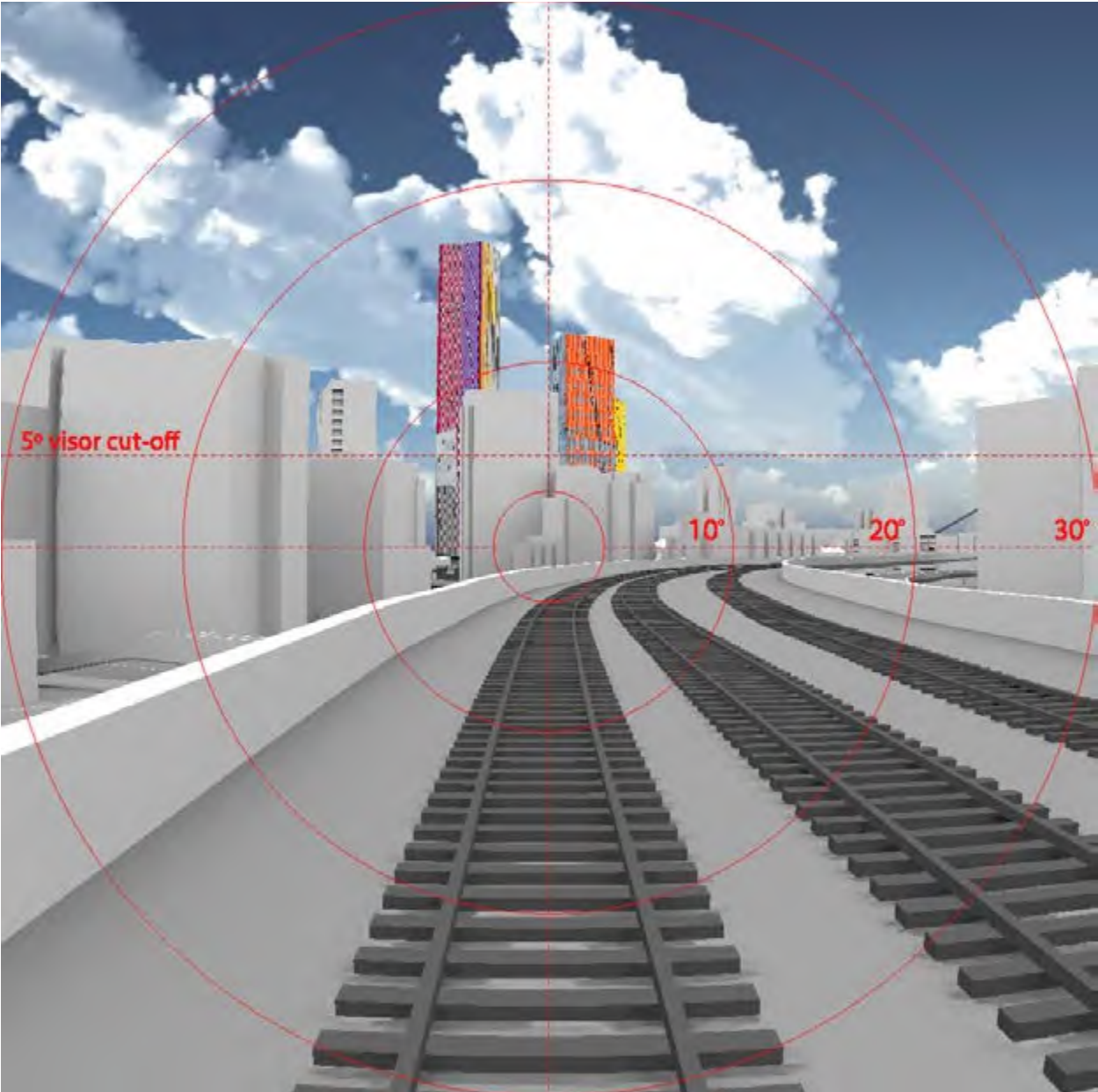


Fig. 852: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

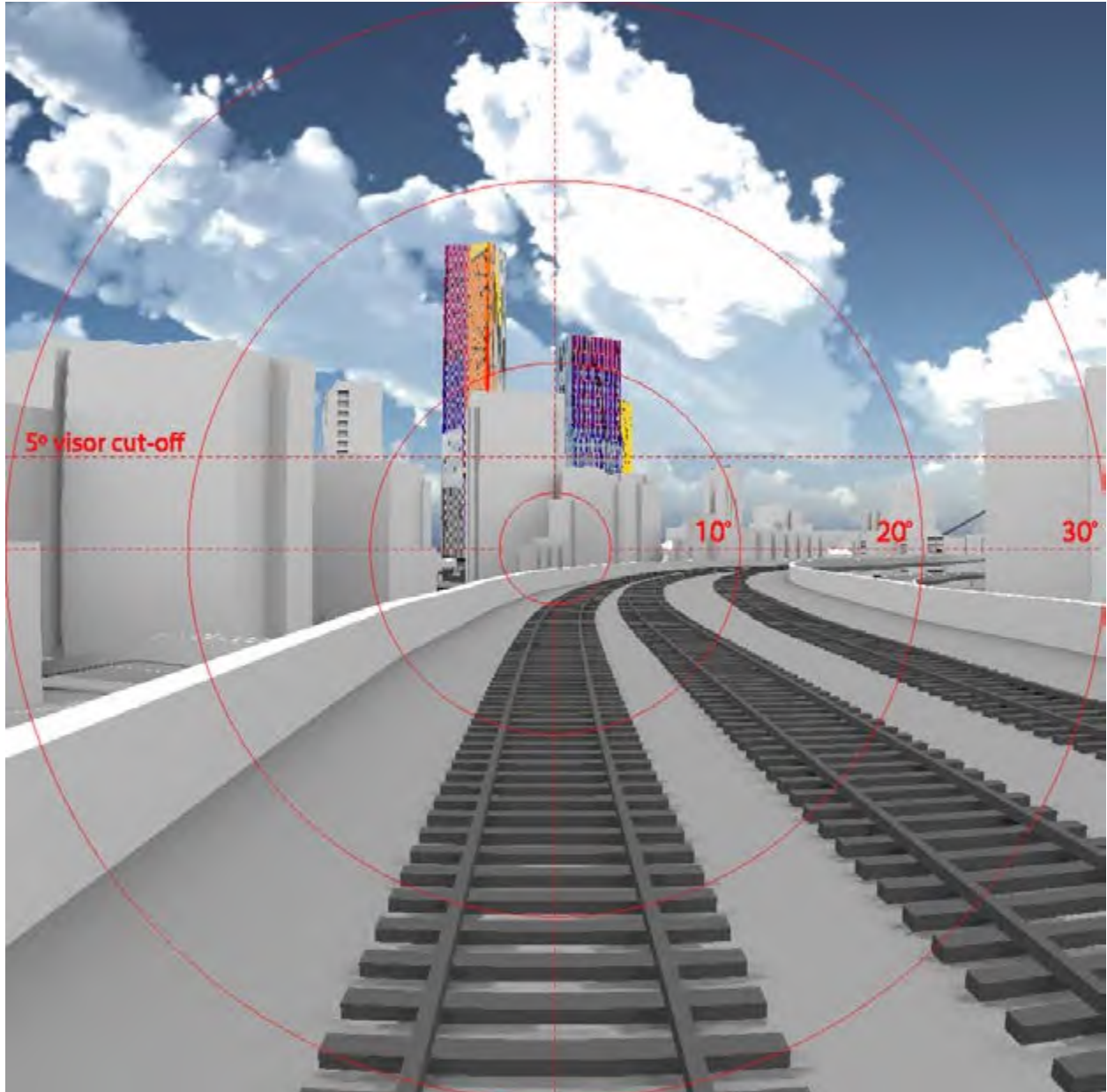


Fig. 853: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

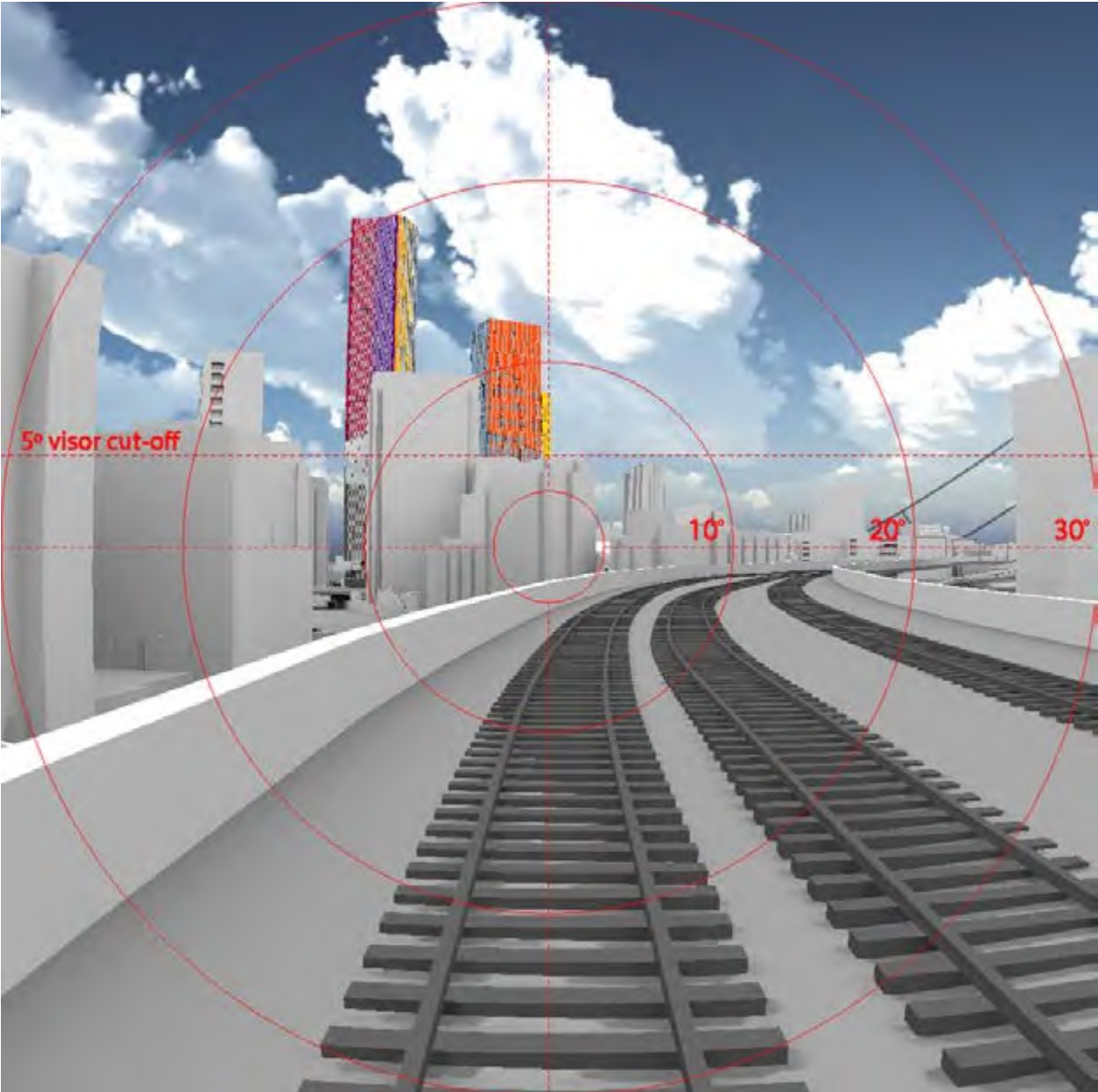


Fig. 854: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

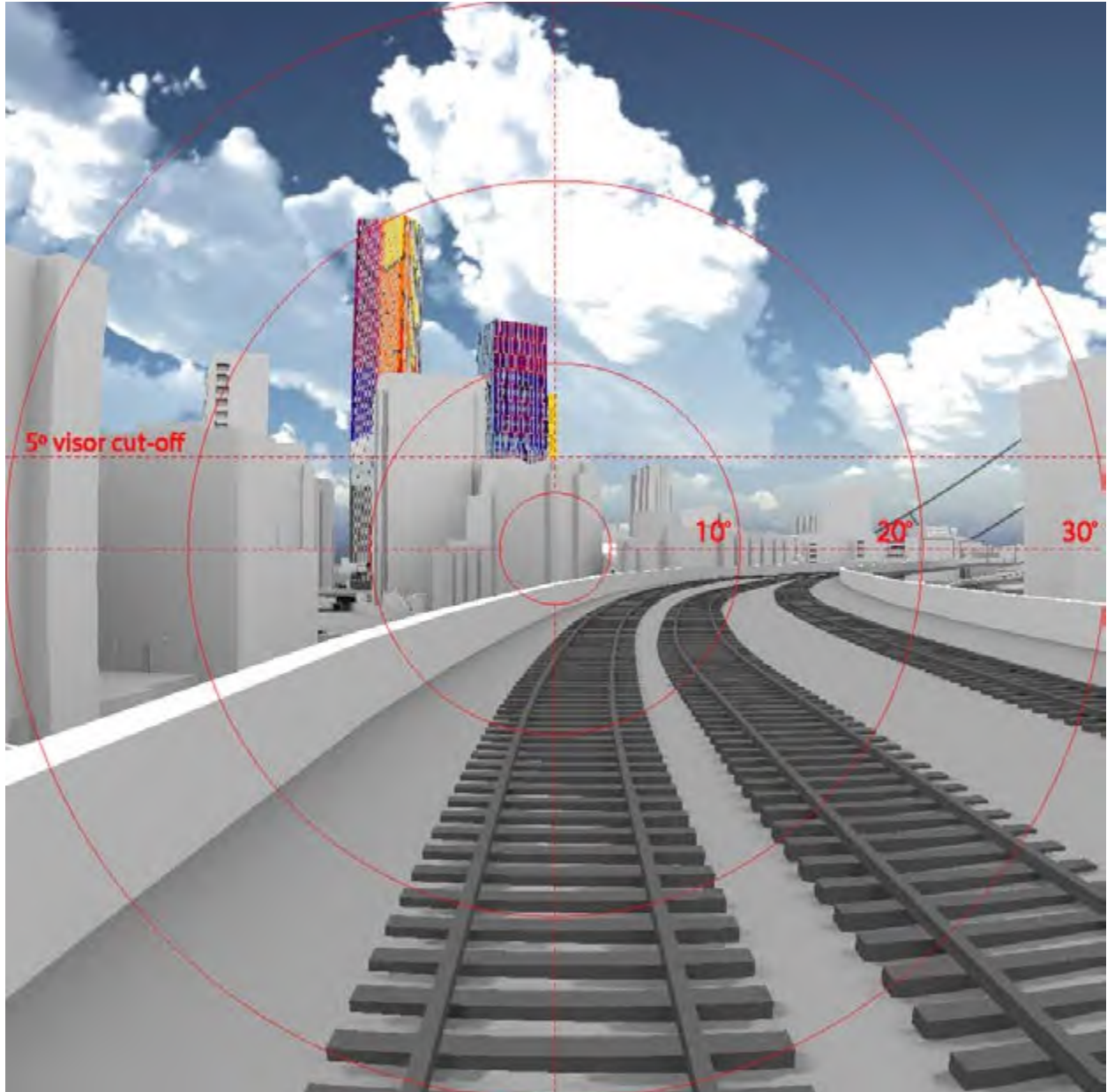


Fig. 855: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

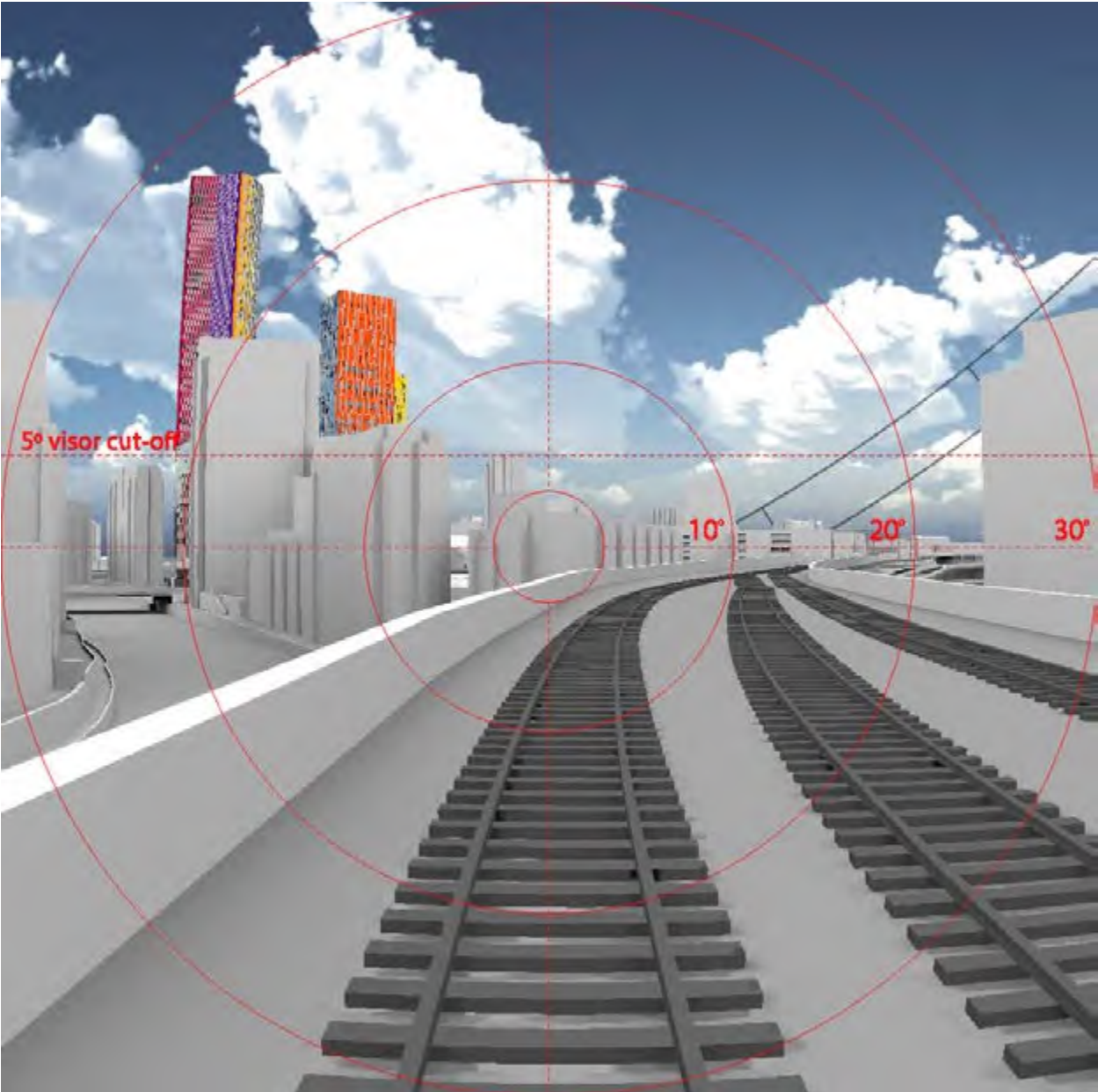


Fig. 856: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

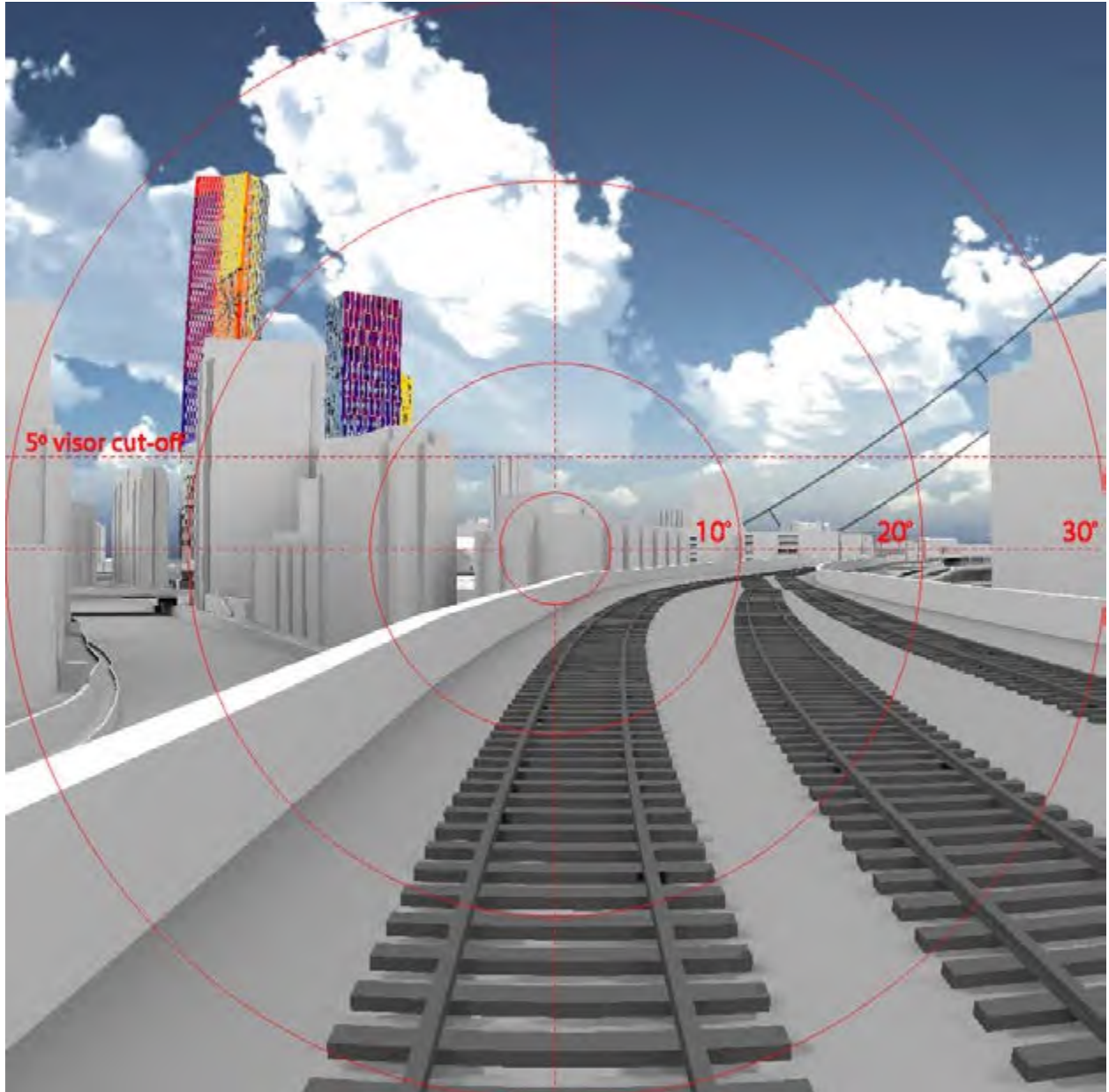


Fig. 857: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

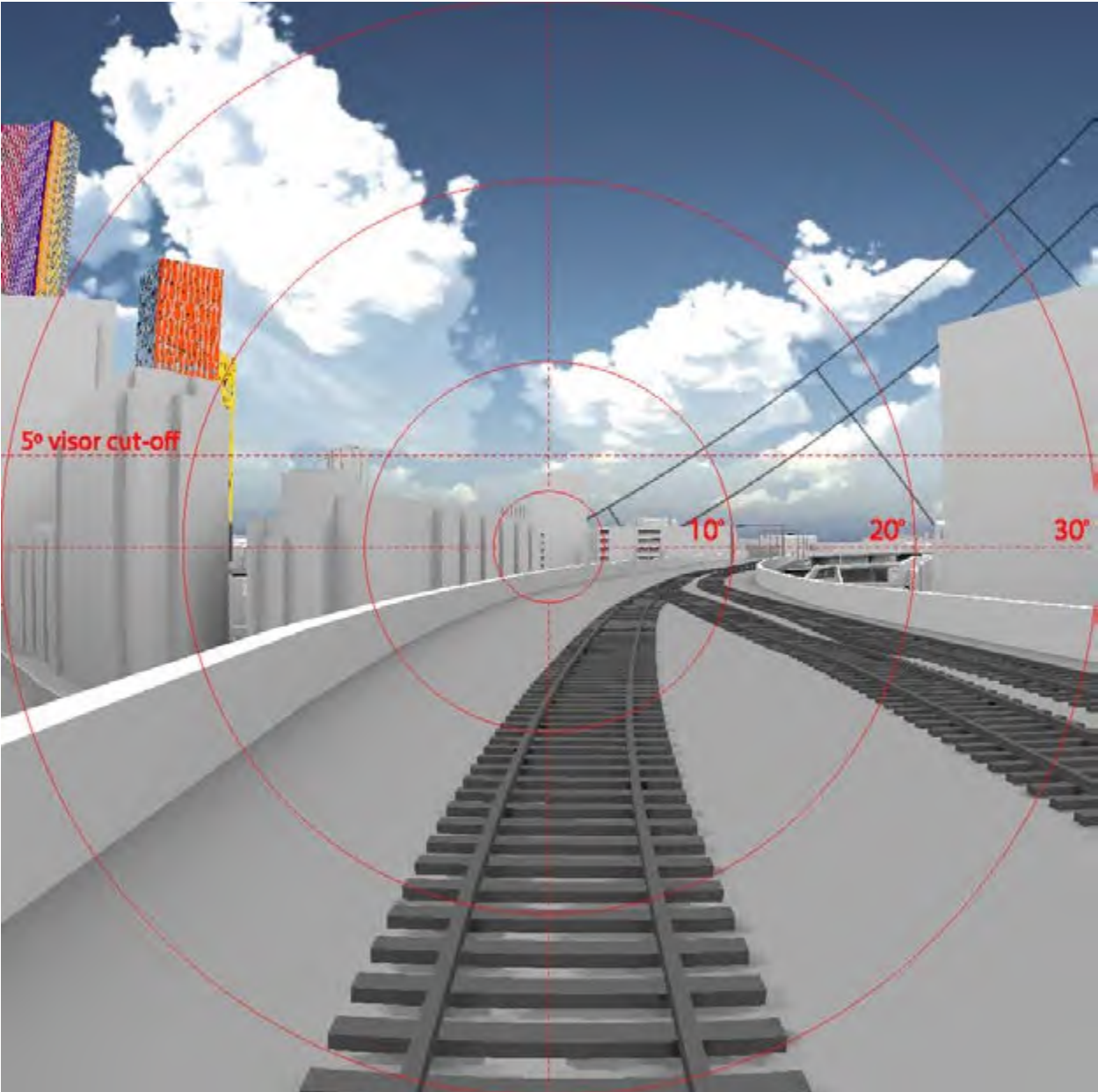


Fig. 858: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAGHT

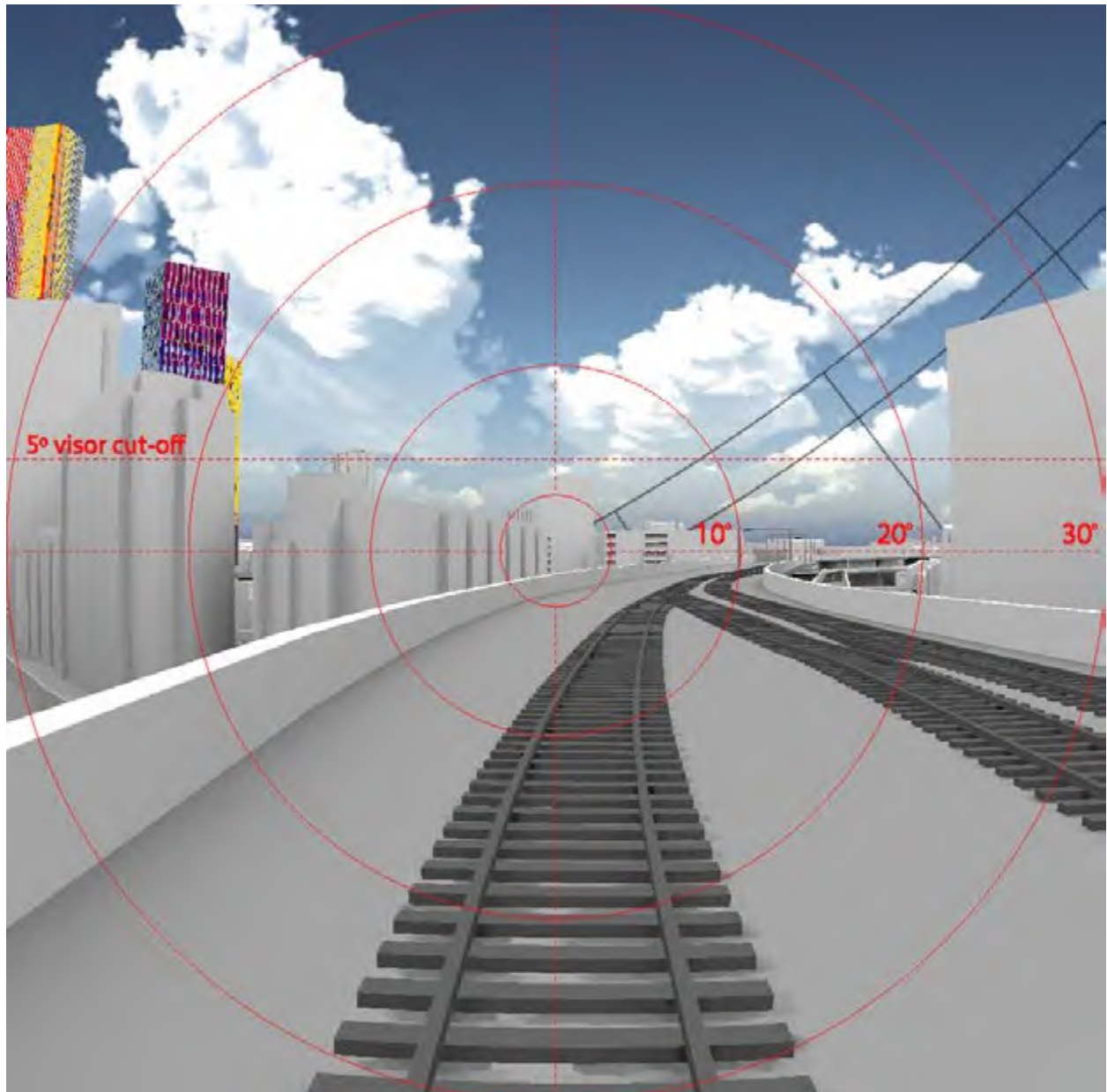


Fig. 859: Solar reflections



Scenario 5: Phase C1, C2 & D1 Complete

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

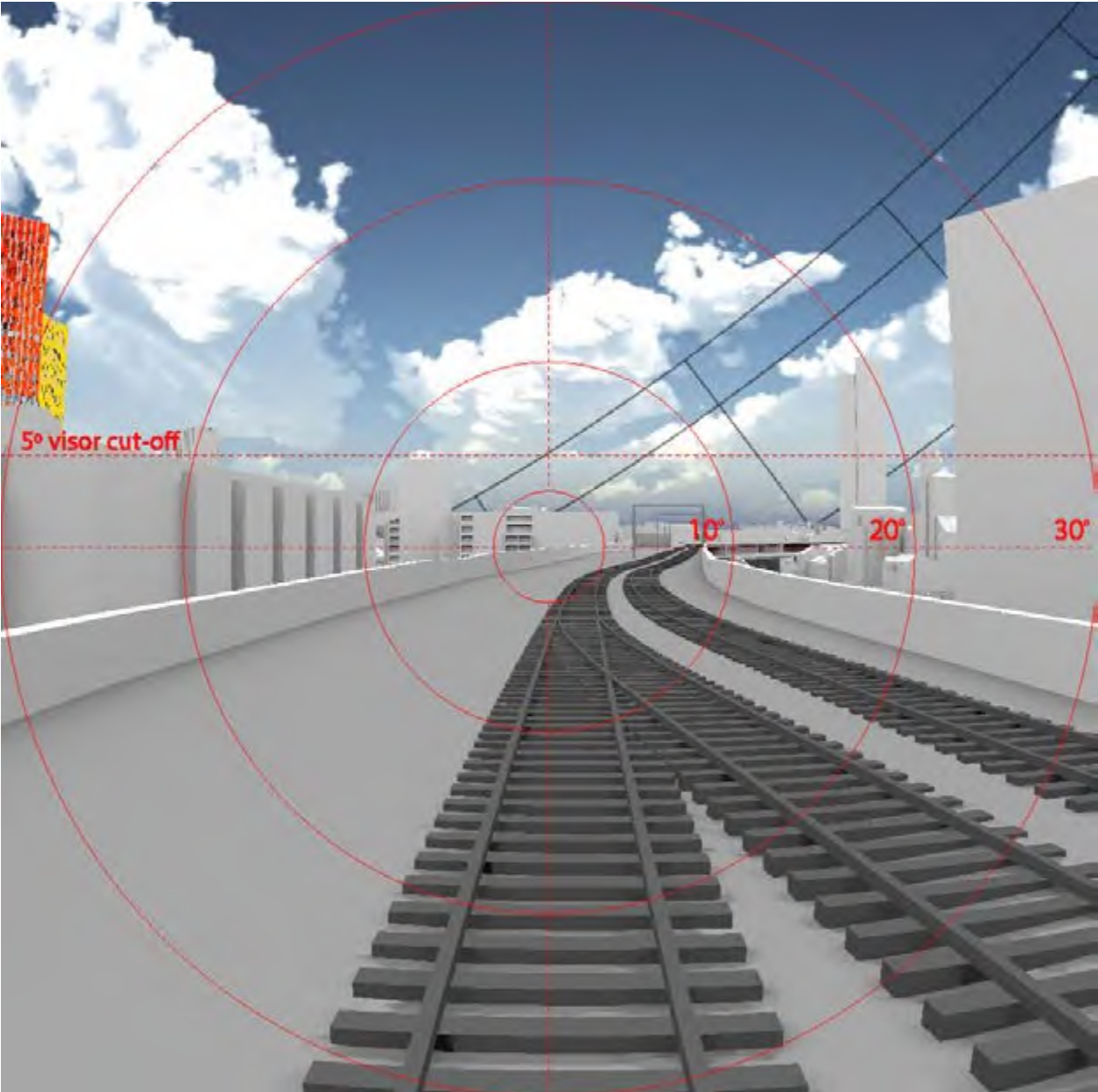


Fig. 860: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAGHT

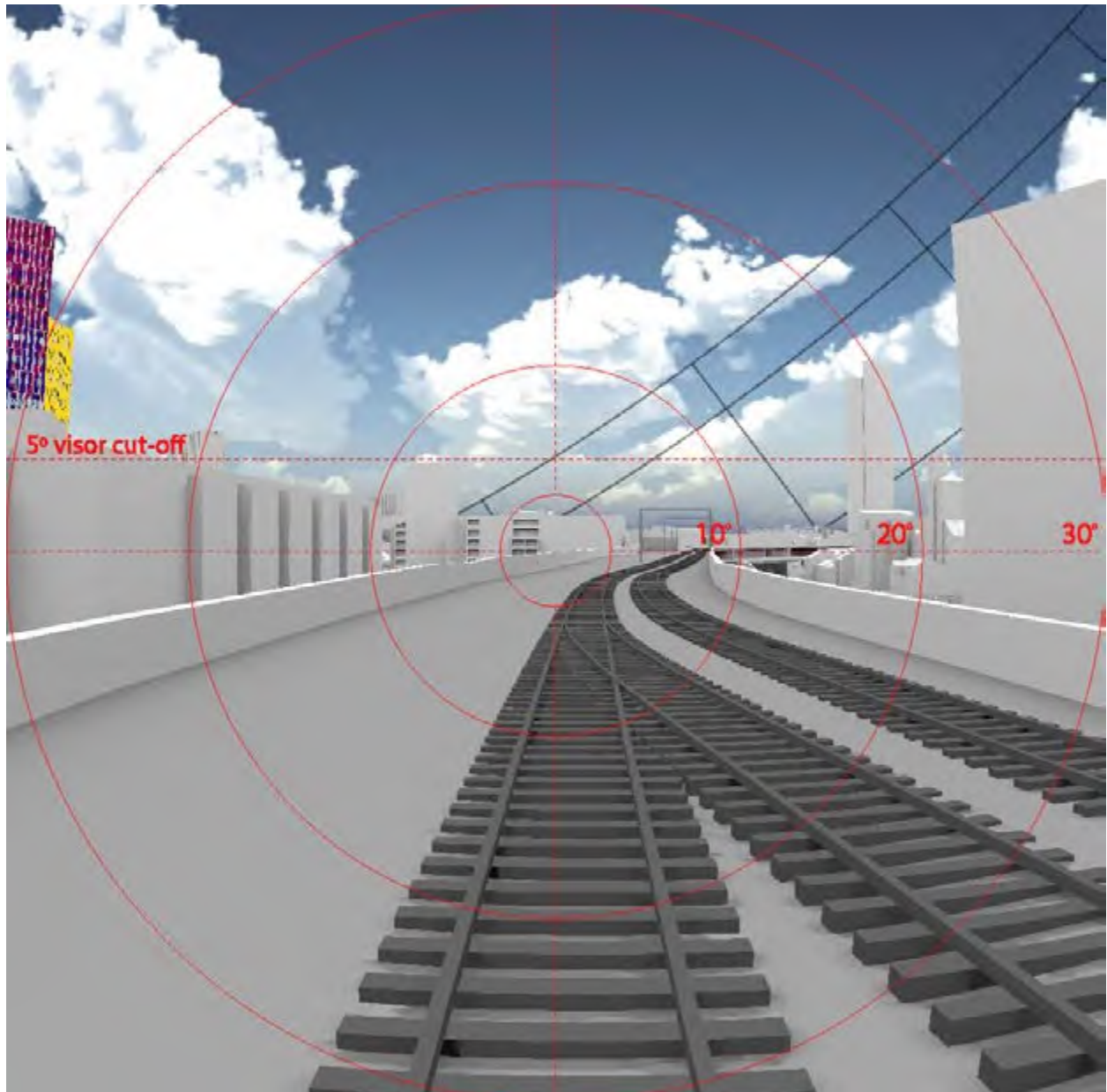


Fig. 861: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

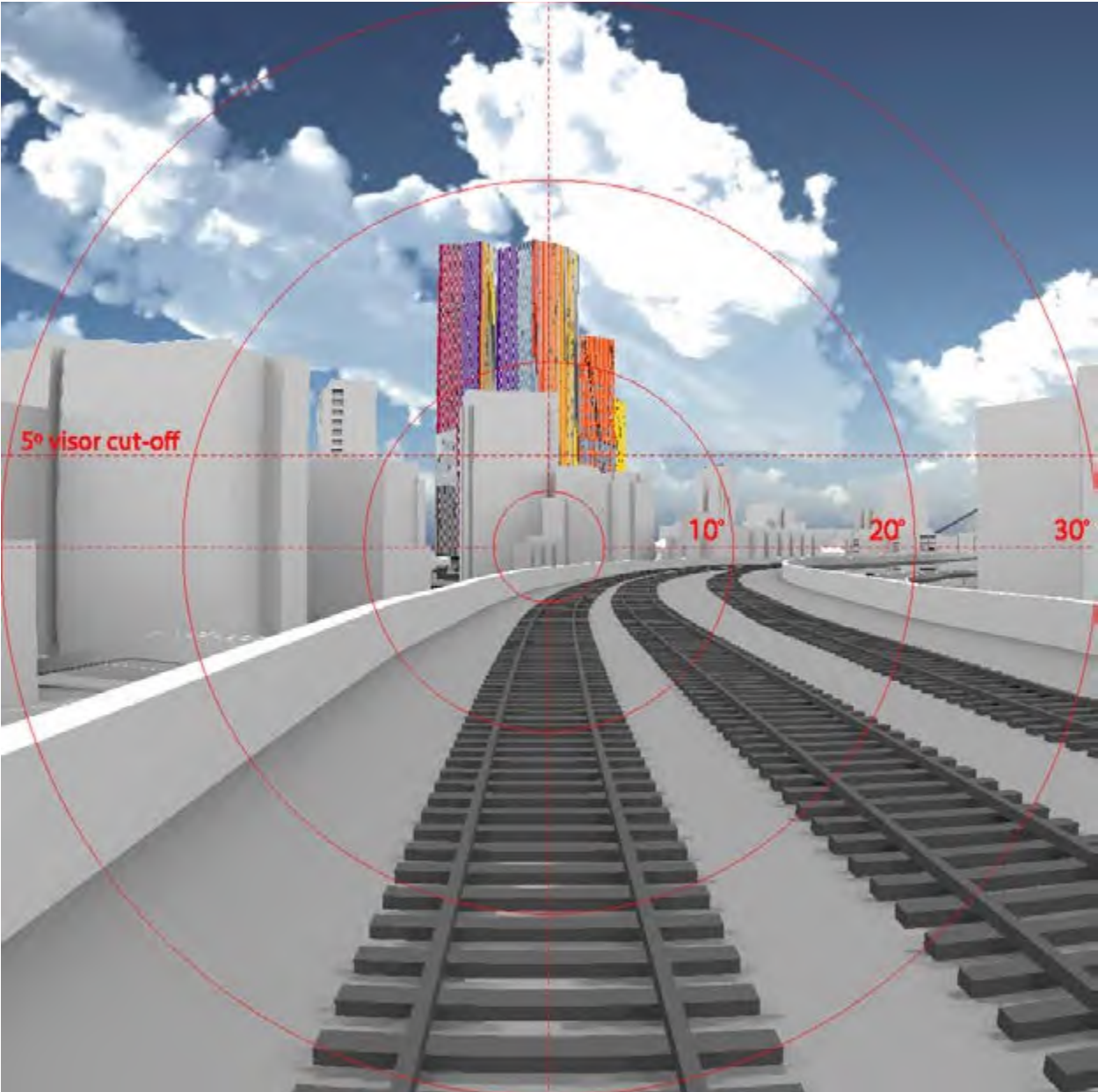


Fig. 862: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-10 - TRAM LINE EASTBOUND - APPROX 500M FROM SITE
LOOKING STRAGHT

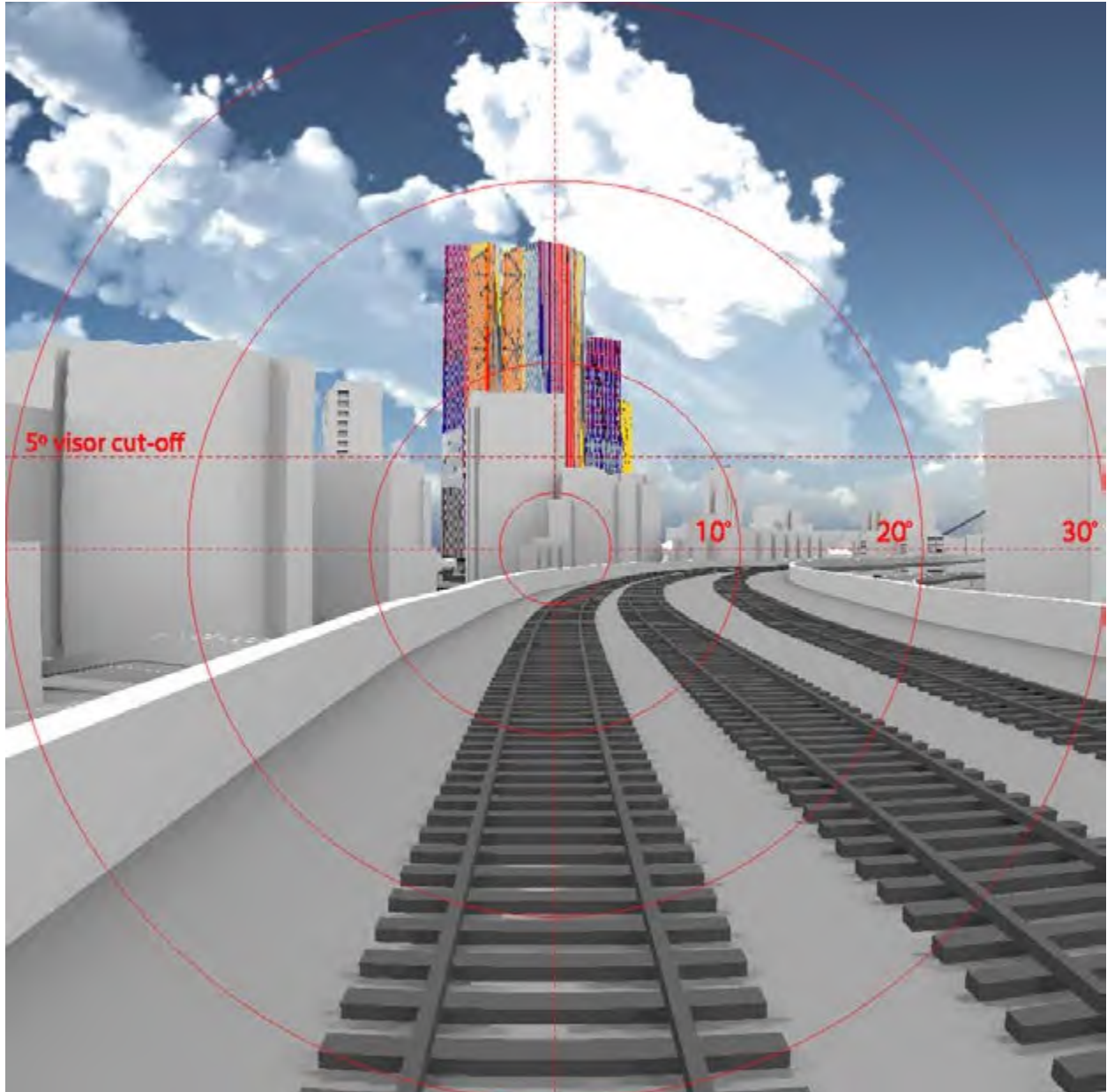


Fig. 863: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

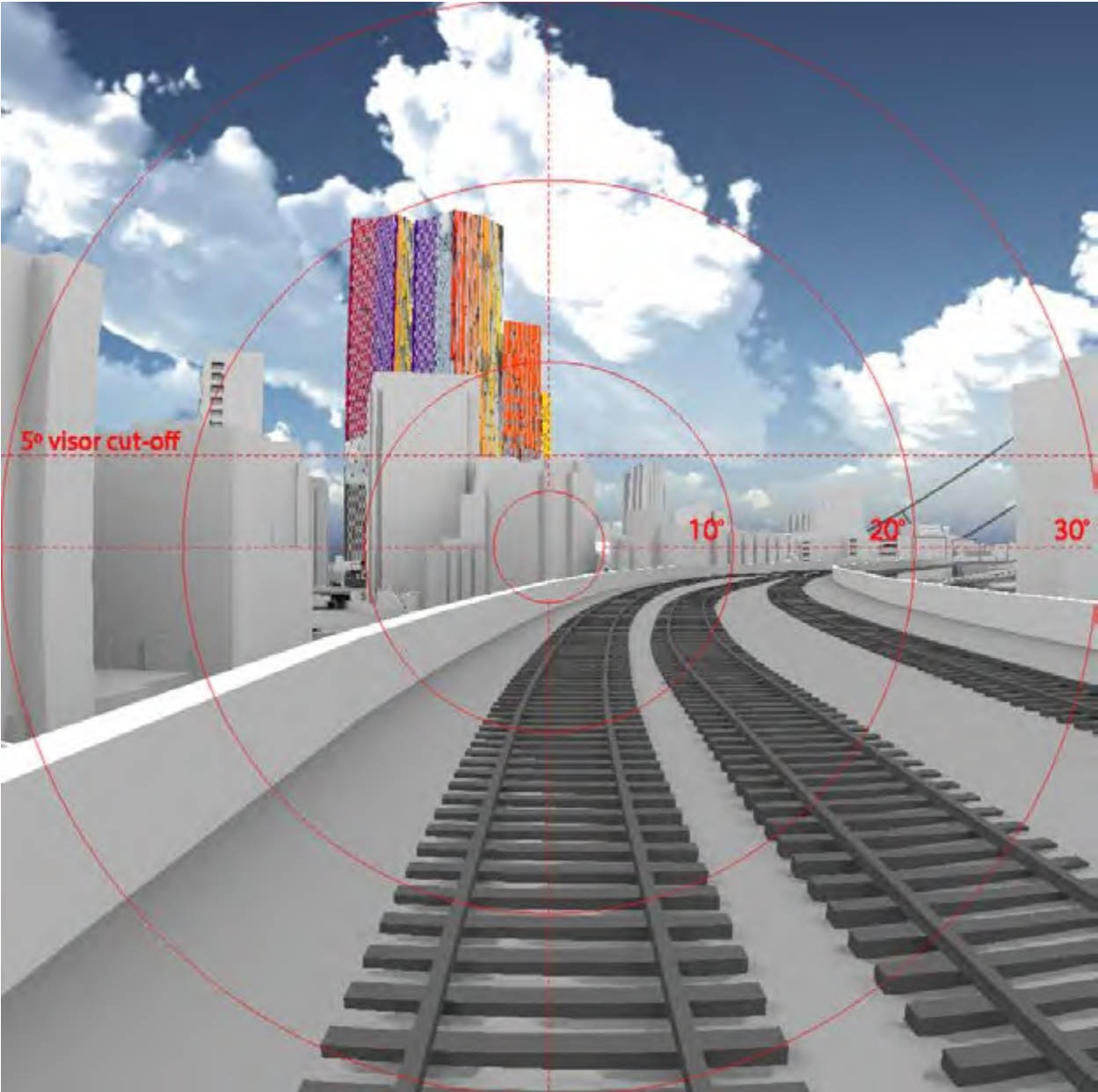


Fig. 864: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-60 - TRAM LINE EASTBOUND - APPROX 450M FROM SITE
LOOKING STRAGHT

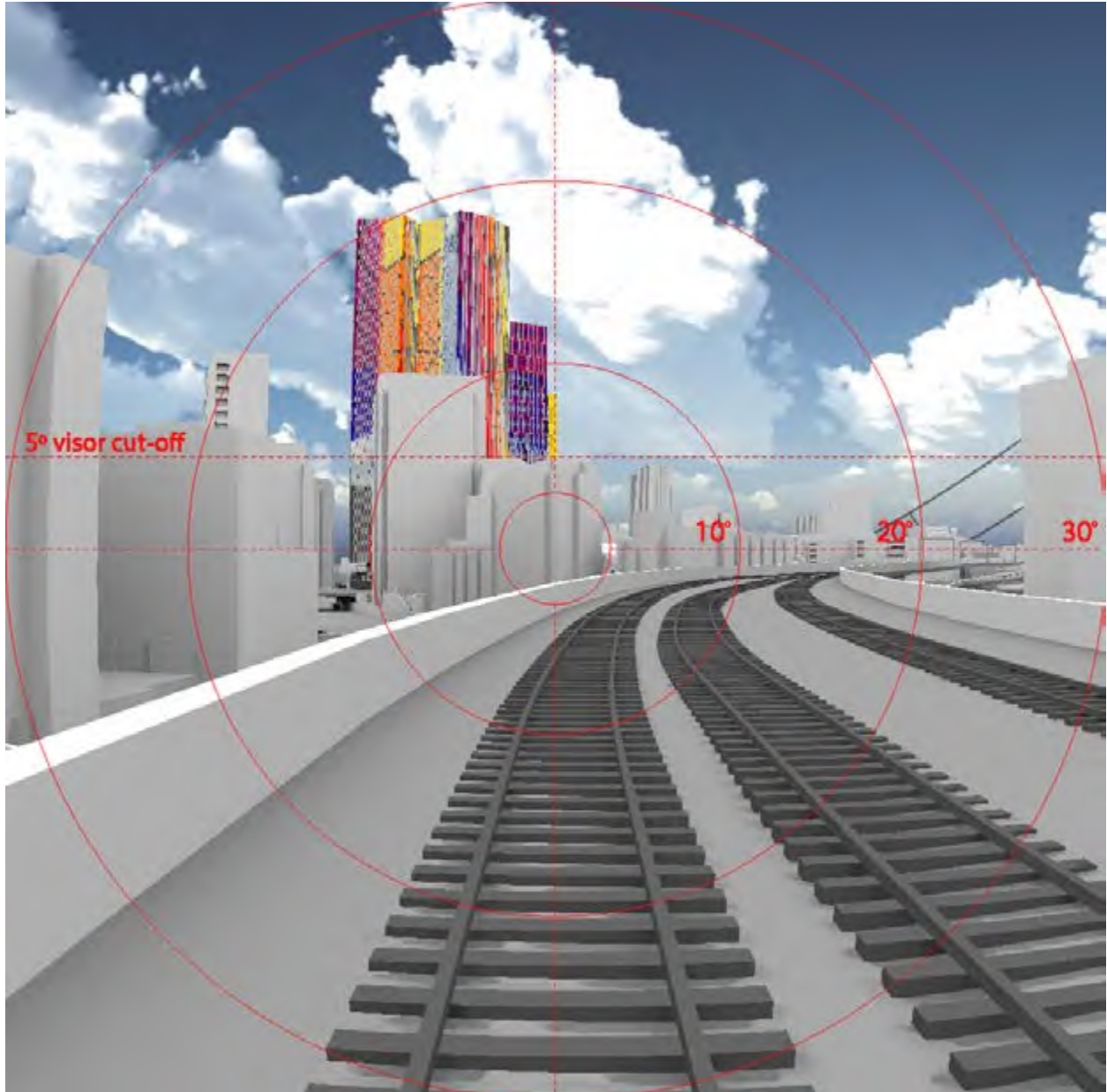


Fig. 865: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

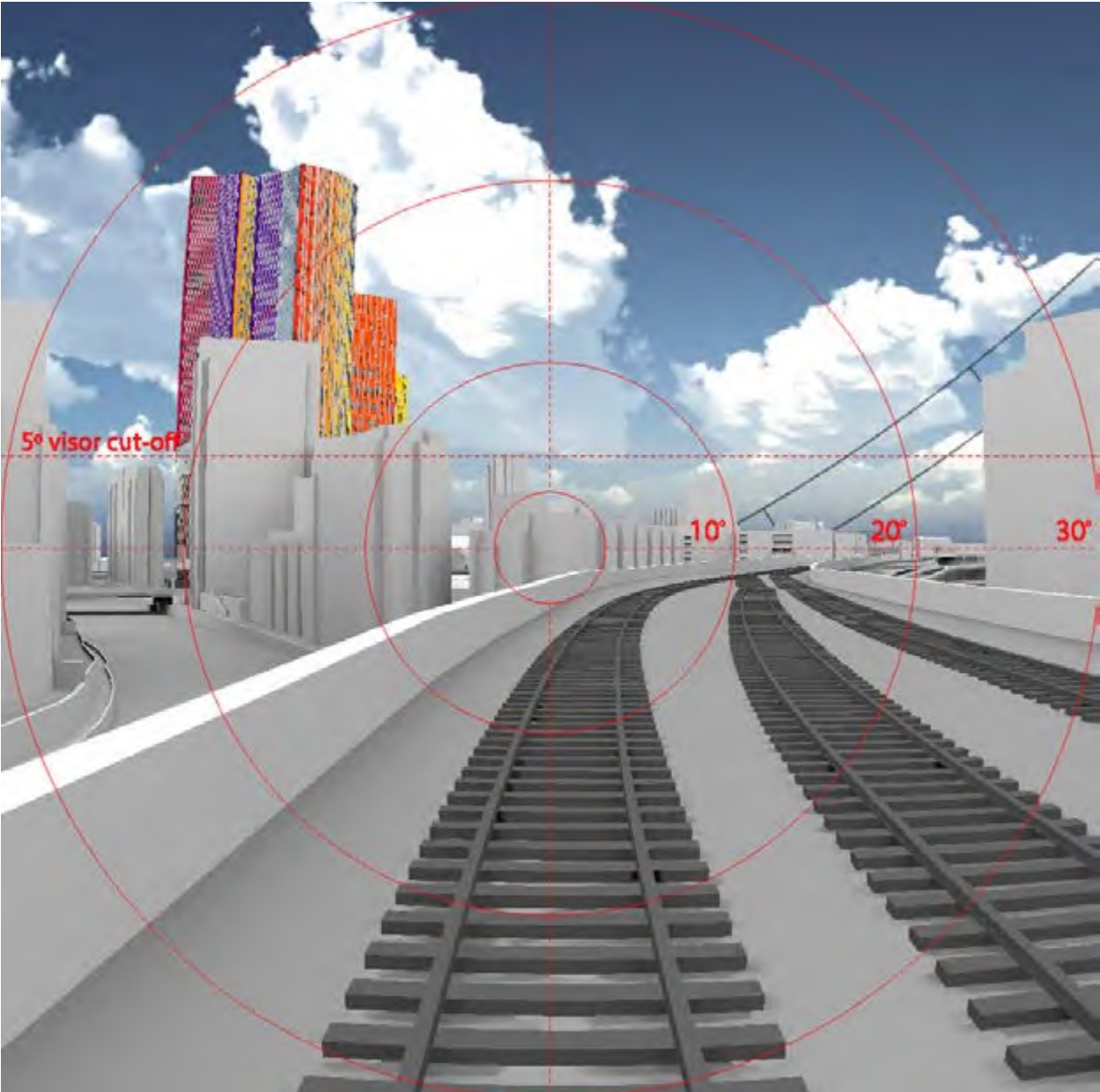


Fig. 866: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-110 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

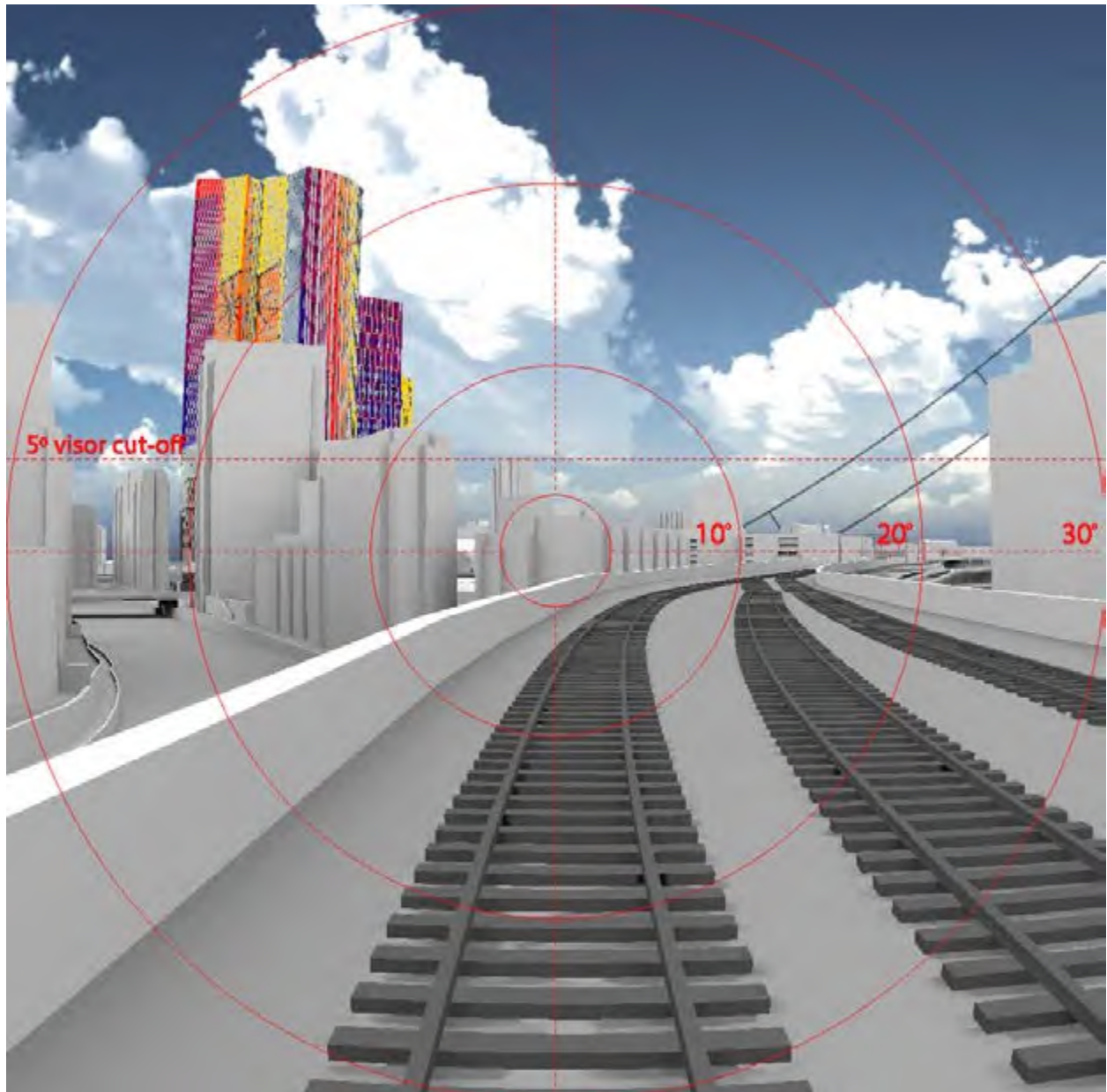


Fig. 867: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

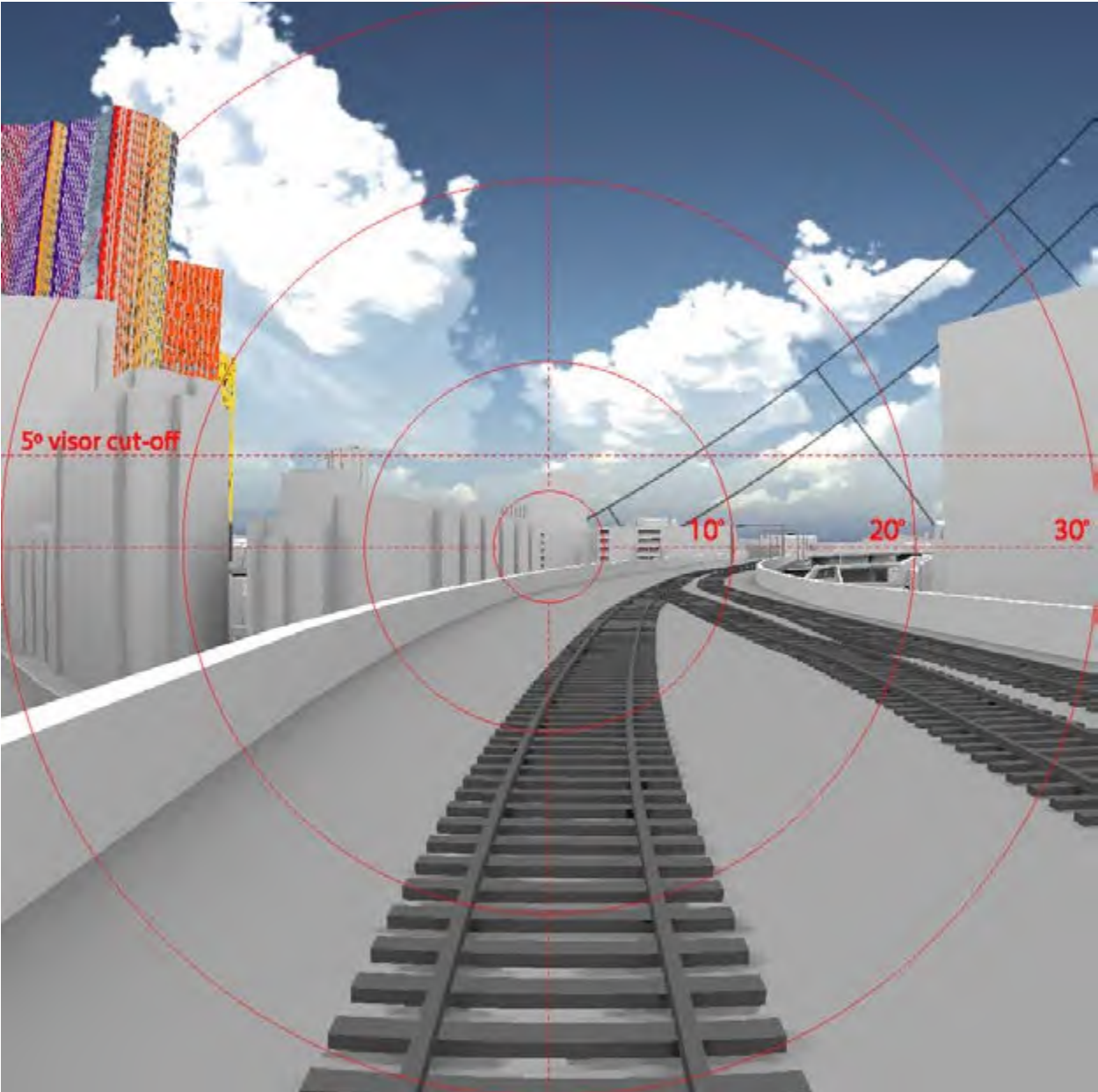


Fig. 868: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-160 - TRAM LINE EASTBOUND
LOOKING STRAGHT

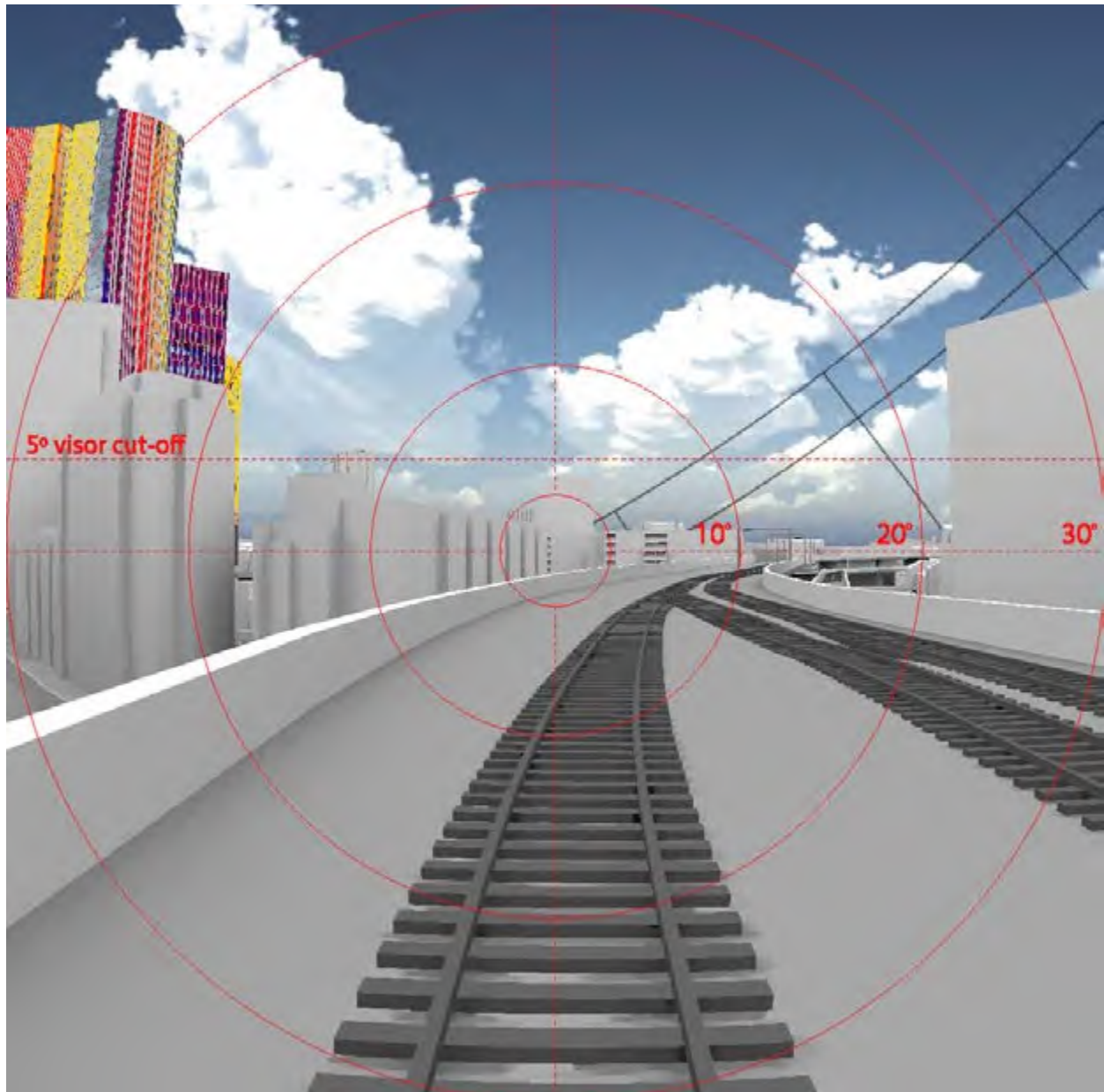


Fig. 869: Solar reflections



Scenario 6: Completed Development

60° FIELD OF VIEW: TIME OF DAY
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAIGHT

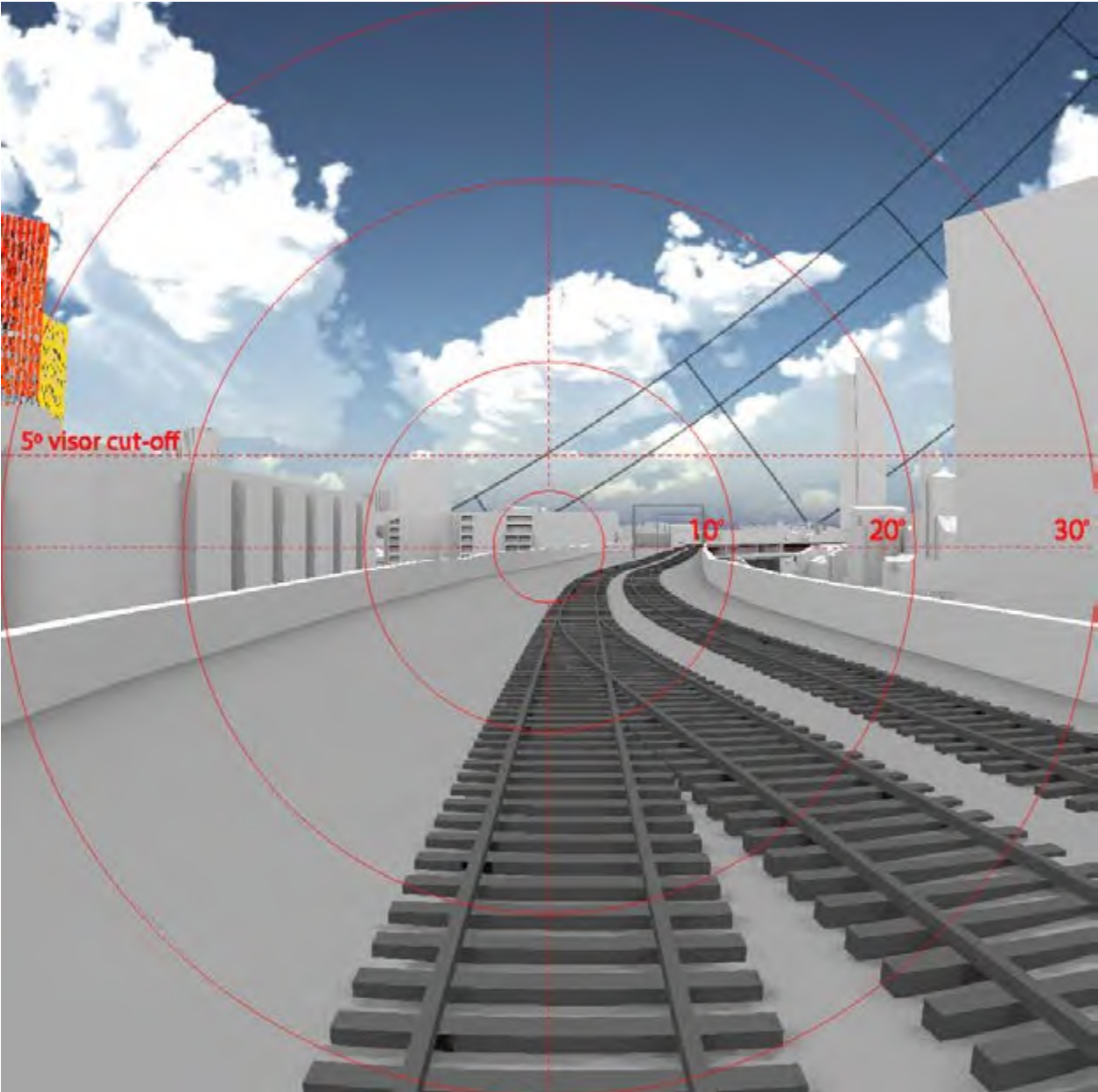


Fig. 870: Solar reflections



60° FIELD OF VIEW: SEASON
VIEWPOINT T1-210 - TRAM LINE EASTBOUND
LOOKING STRAGHT

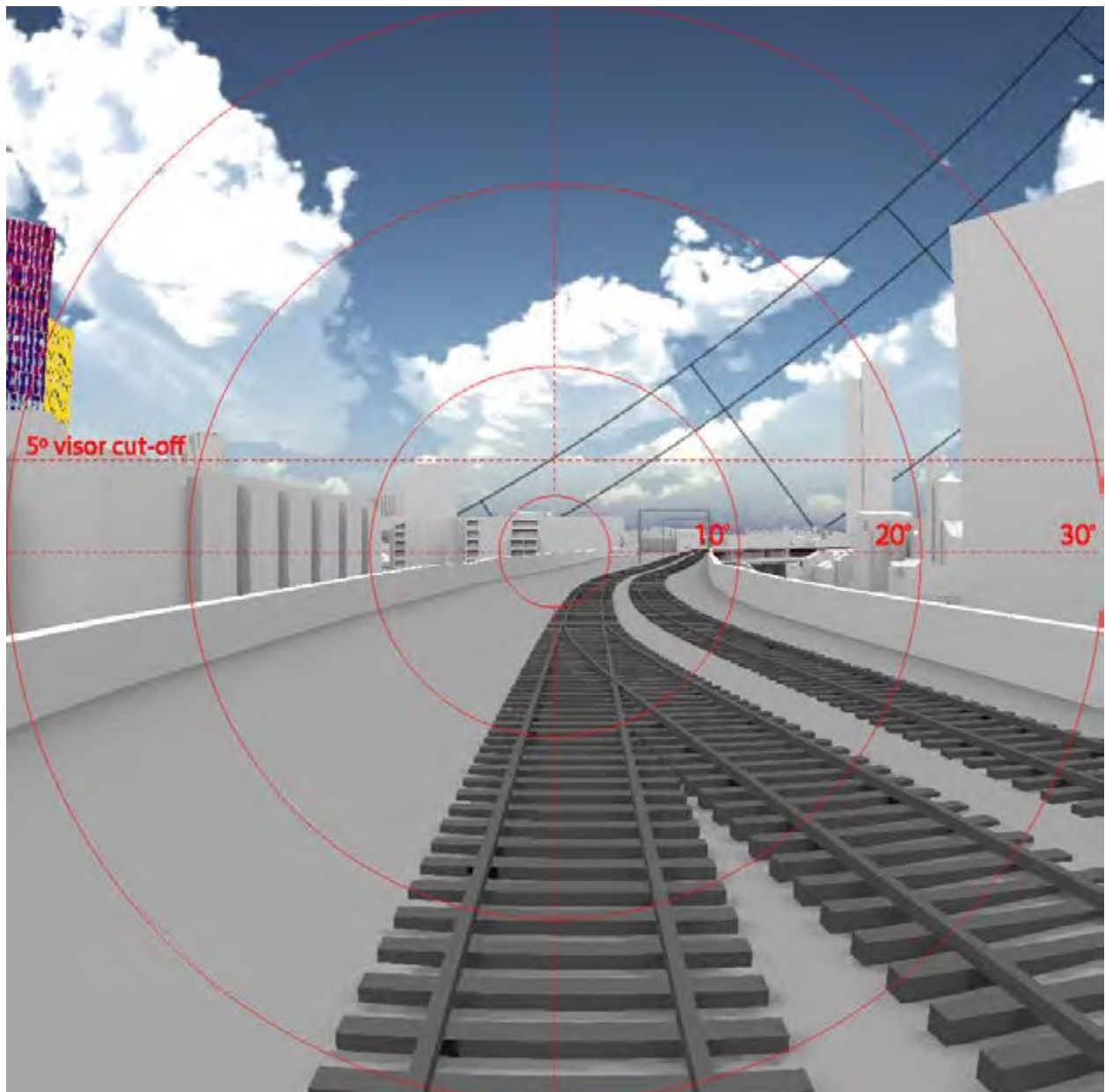


Fig. 871: Solar reflections





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