

URBAN DESIGN REVIEW PANEL REPORT

URBAN DESIGN REVIEW PANEL PRESENTATION
PRESENTED: APRIL 5, 2024, 9:15AM EST

DEVELOPERS/OWNERS: LE GROUPE MAURICE
ARCHITECTS: HOBIN ARCHITECTURE INC.

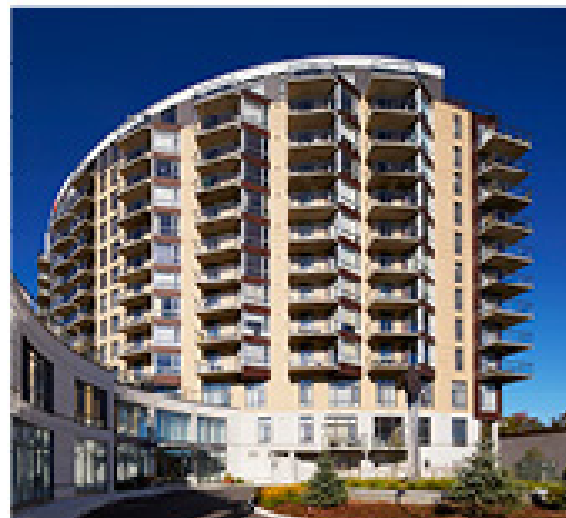
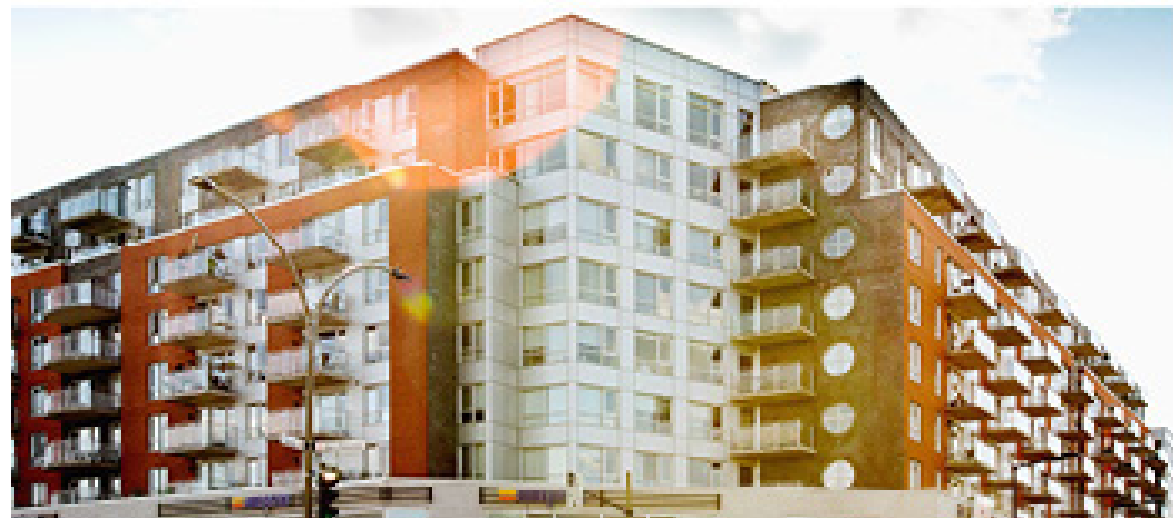
1174 Carp Road

URBAN DESIGN REVIEW PANEL PRESENTATION | APRIL 5TH, 2024



Portfolio of Projects

LE GROUPE MAURICE

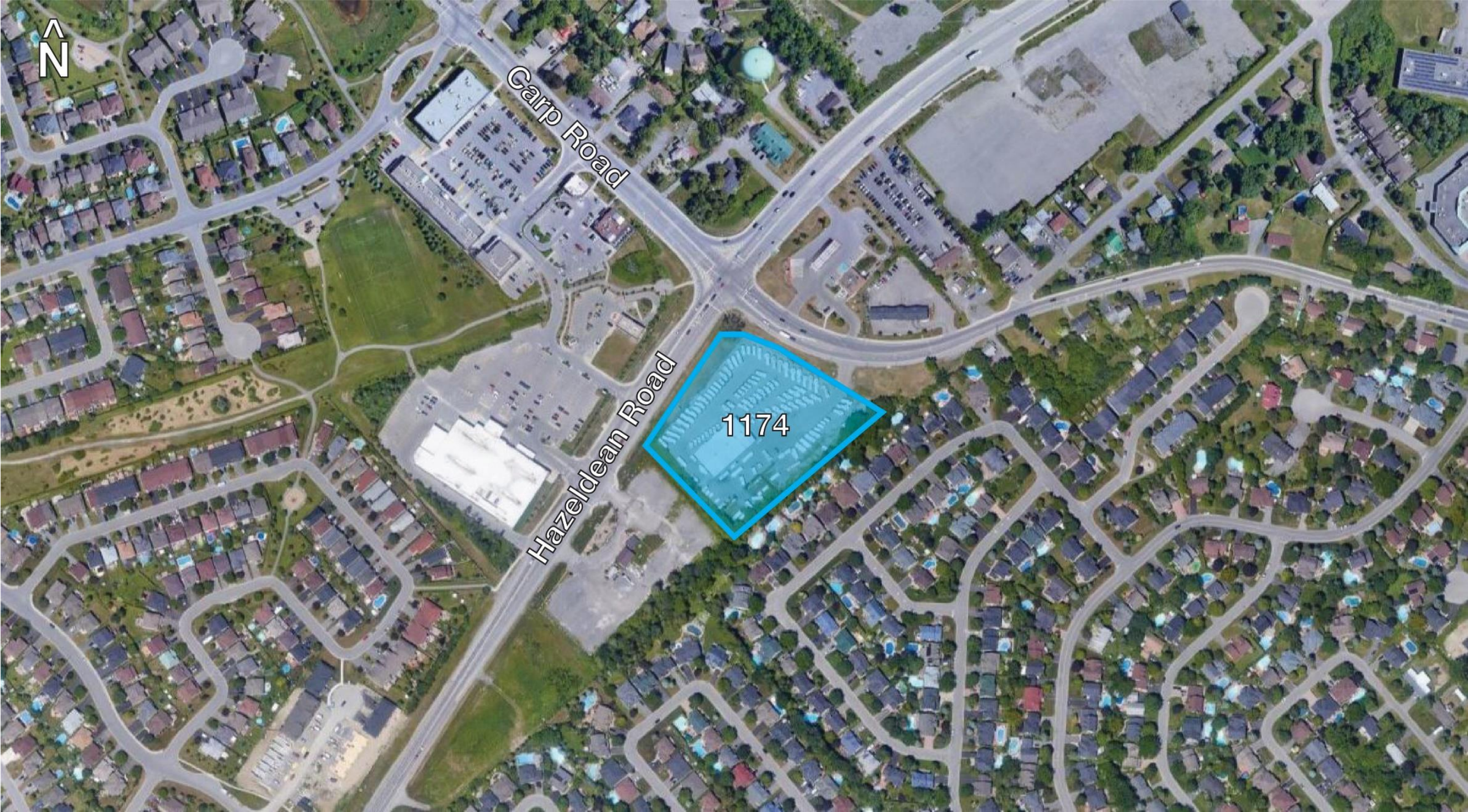


211 Centrum Blvd.

LE GROUPE MAURICE



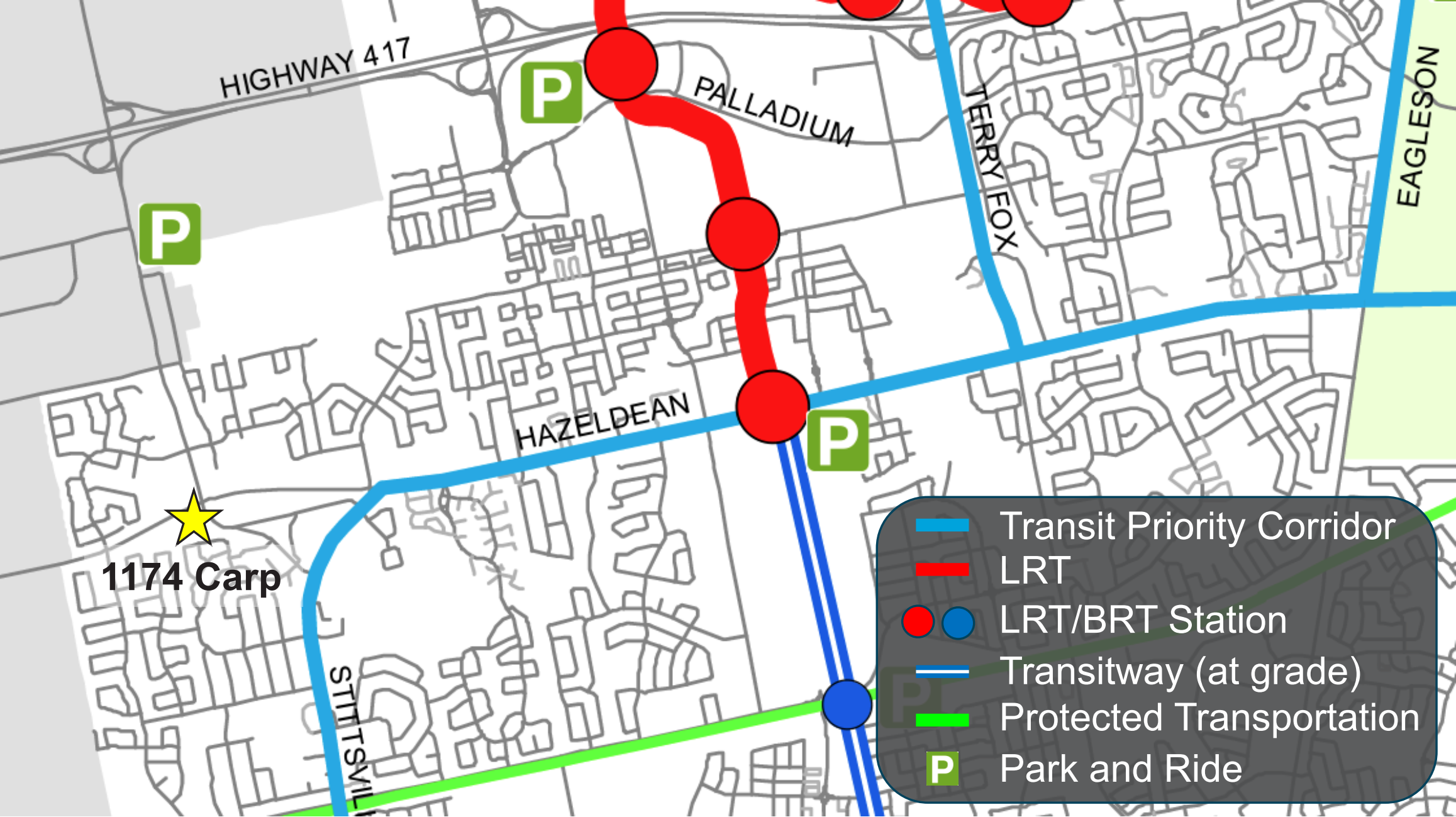
Subject Property



Site Photos

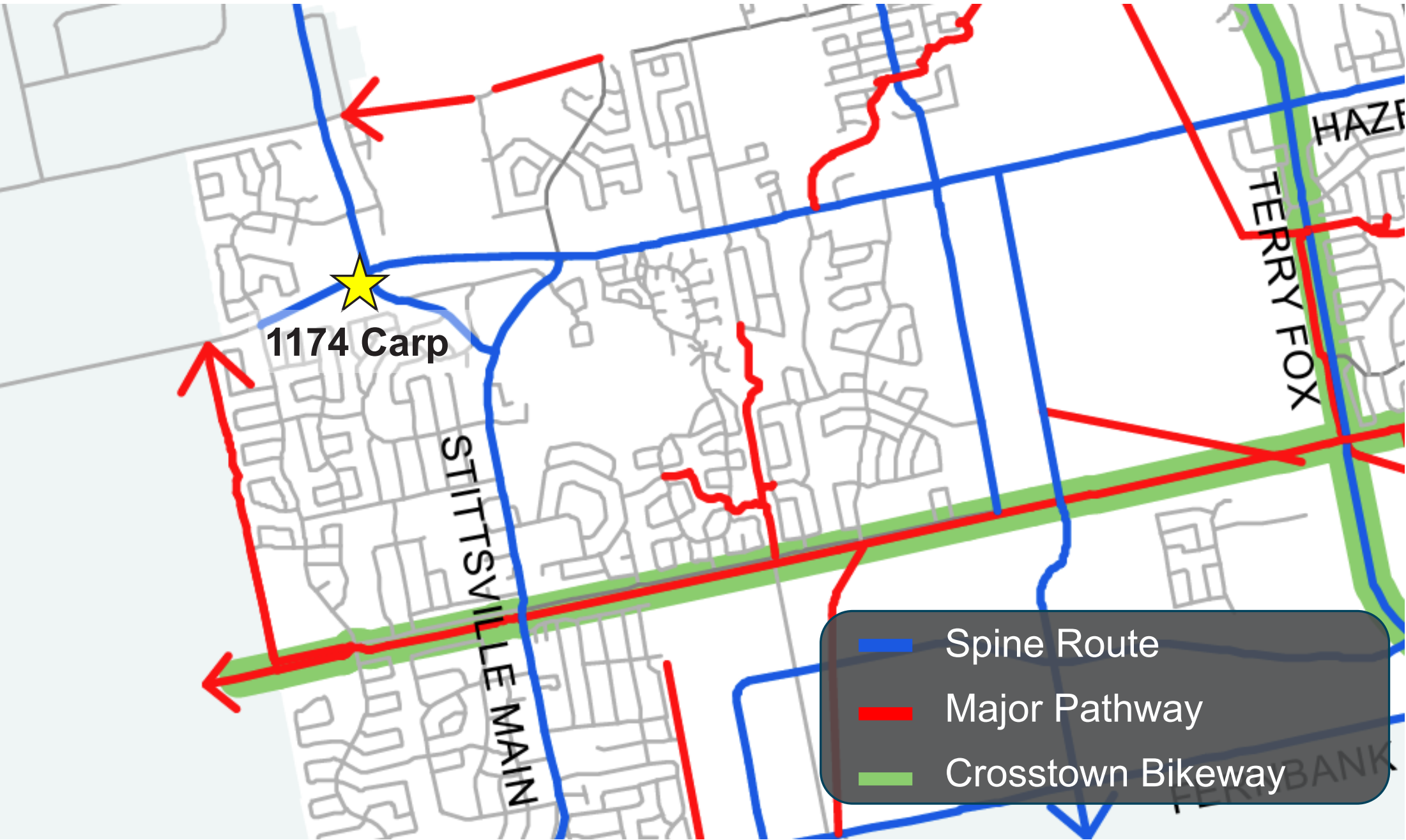


Site Analysis: Transit Network



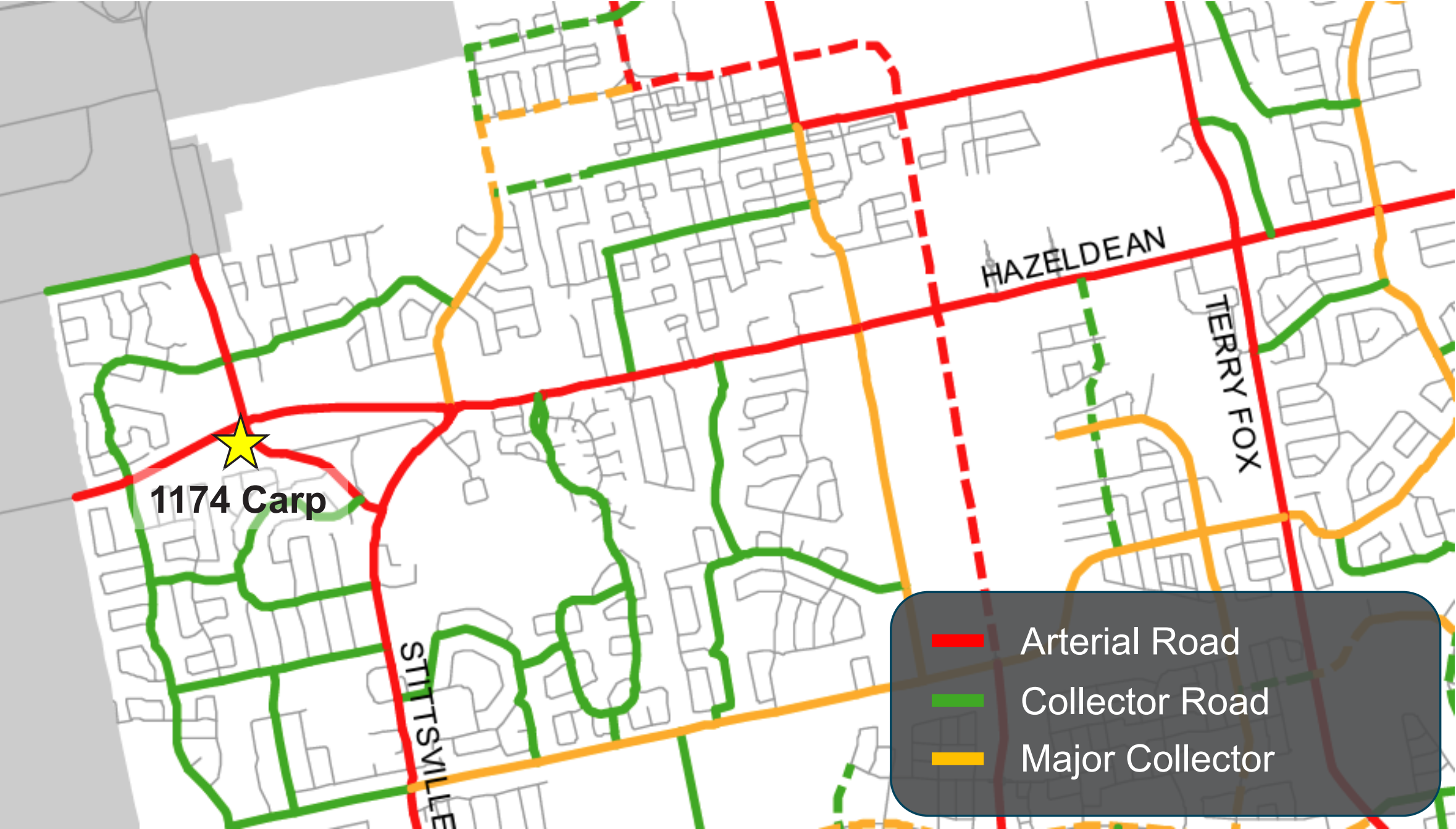
Official Plan
Schedule C2
Transit Network (Ultimate)

Site Analysis: Active Transportation



**Transportation Master Plan
Map 1
Cycling Network
(Primary Urban)**

Site Analysis: Road Network



Official Plan
Schedule C5
Urban Road Network

Development Applications: ZBLA & SPC

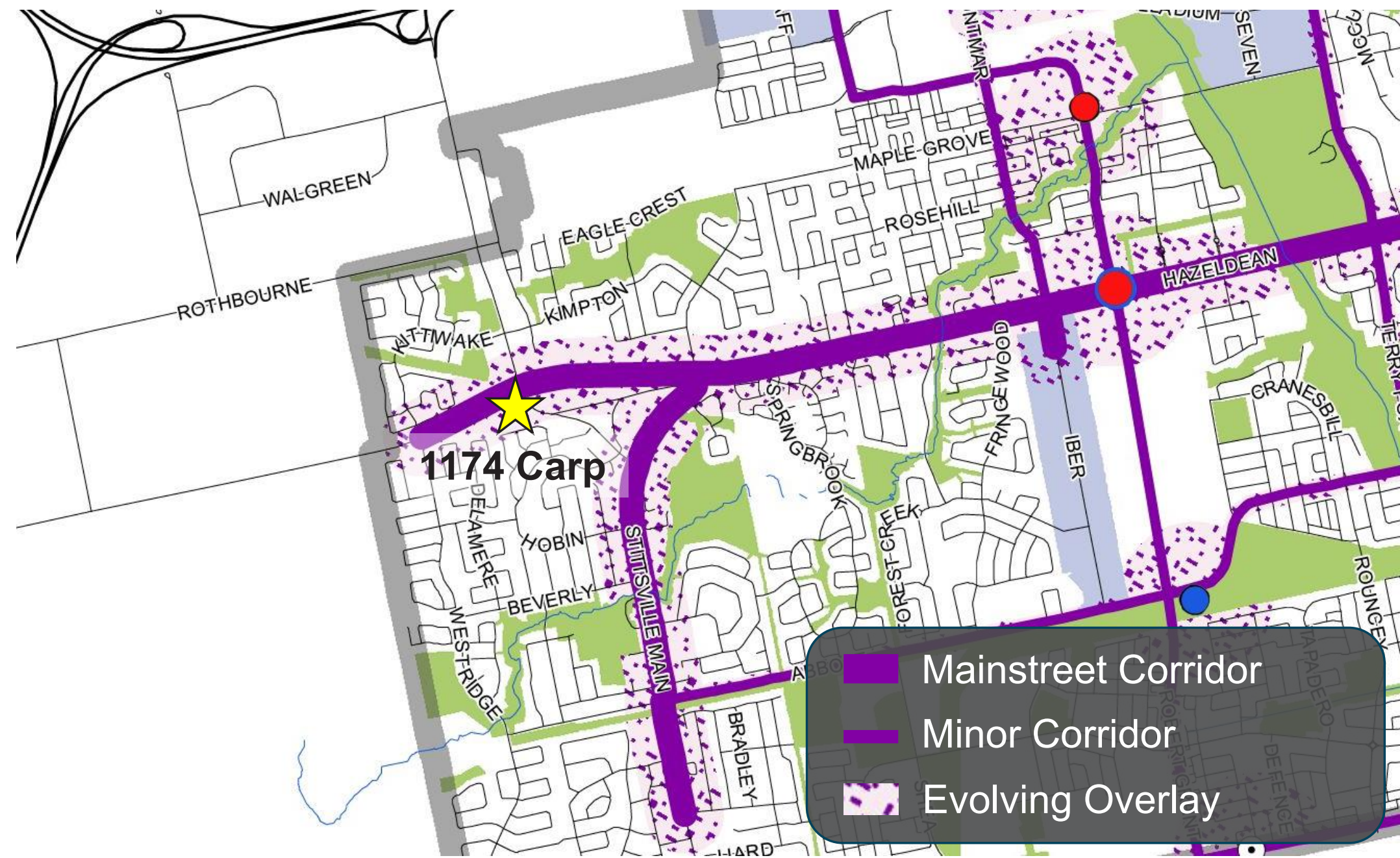


Zoning By-law Amendment
To permit a maximum building height of **40 metres**, whereas a maximum building height of 15 metres is permitted in the Arterial Mainstreet, Subzone 9 Zone (AM9).

A new site-specific exception [xxxx] is proposed, and may include other amendments following review

Site Plan Control
The development proposal is subject to Site Plan Control.

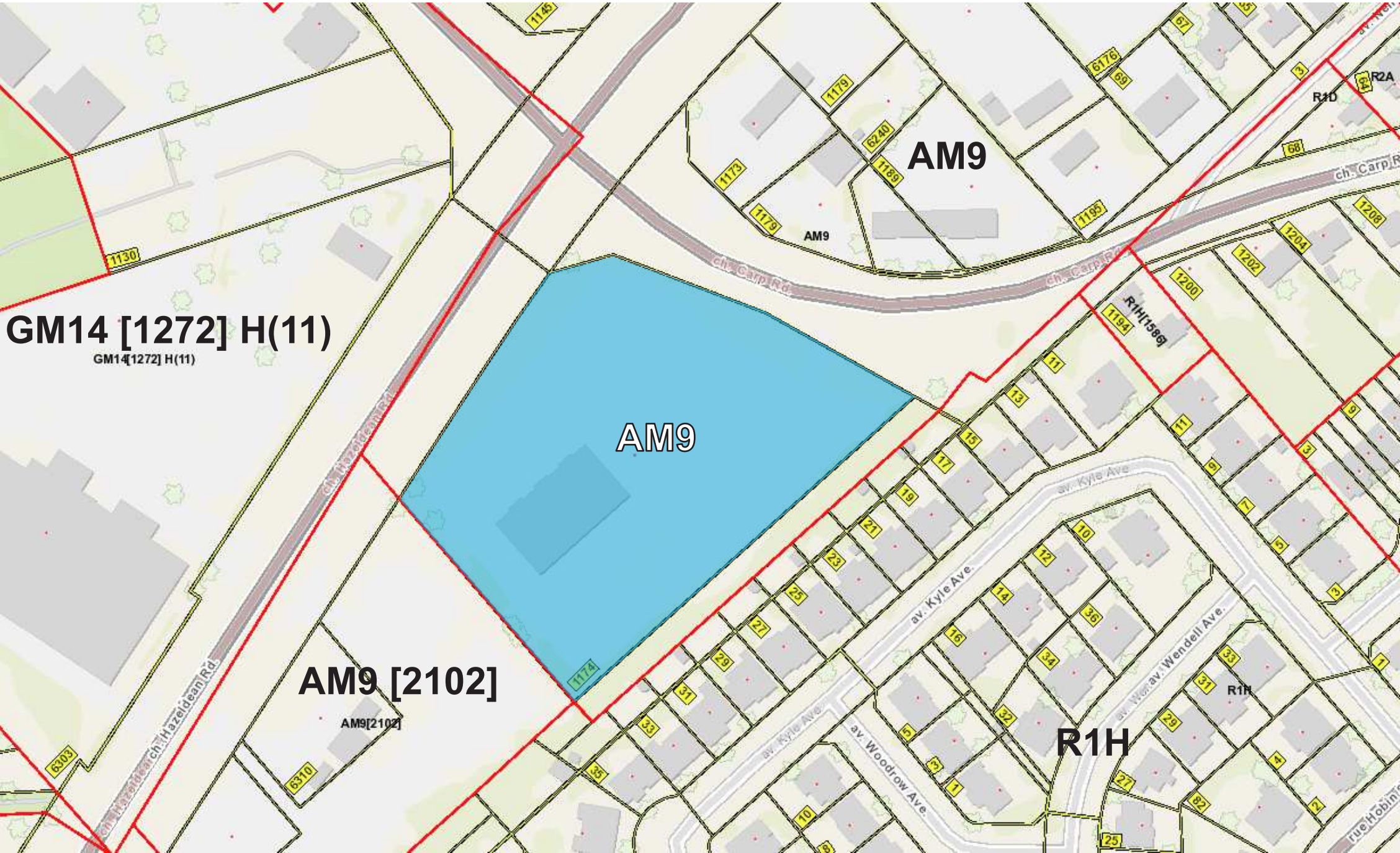
Policy Context: Official Plan Designation



Official Plan Schedule B5 West Suburban Transect

The subject site is located in the Suburban Transect and is designated Mainstreet Corridor. Corridors apply to bands of land along specified streets whose planned function combines a higher density of development, a greater degree of mixed uses, and a higher level of transit service than abutting Neighbourhoods.

Regulatory Context: Existing Zoning



Zoning
AM9
Arterial Mainstreet,
Subzone 9

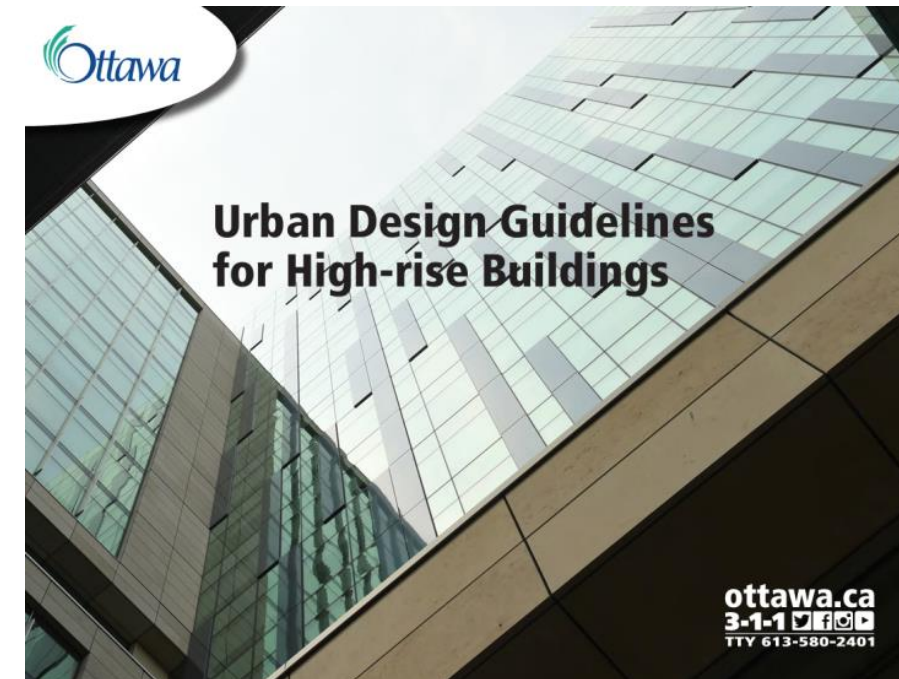
Permitted uses include the proposed use of **retirement home**.

Maximum **building height** is **15 metres**, and 11 metres within 20 metres of a residential zone.

Urban Design Guidelines

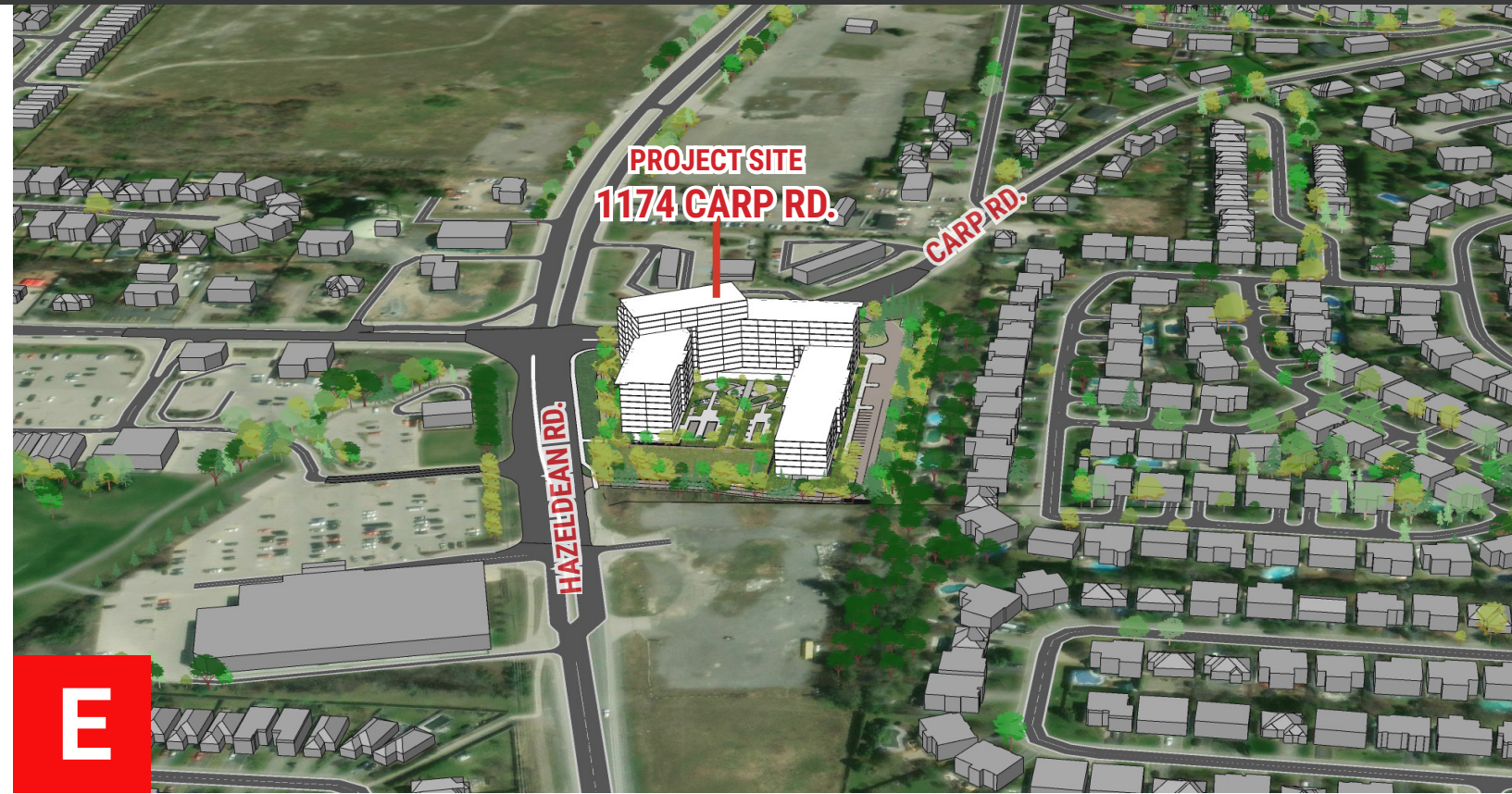


- / Building is located to provide a continuous street edge, while also allowing for pedestrian movement and landscaping opportunities (1-5)
- / Building height is proportionate to the right-of-way and emphasizes the corner and public realm (8-9, 13)
- / Transition to lower density neighborhood (14)
- / Accesses oriented to minimize vehicular/pedestrian interference, and surface parking at side/rear of building (20, 27, 28)



- / 45° angular plane and 30m setback provides built form transition and separation to residential subdivision (1.10, 1.13, 1.17b, 2.8)
- / Bar building (12/9/5) follows a base/middle/top approach where the middle is proportionate to the right-of-way, and the building is placed to frame the street and public open spaces (2.4, 2.6, 2.7, 2.8, 2.9)
- / Top steps back from middle to break up massing (2.11, 2.12)

CONTEXT MAP



CONTEXT MAP



SUSTAINABILITY STATEMENT



THE PROPOSED DEVELOPMENT aims to provide a economically, socially, and environmentally sustainable place for future residents to live.

In addition to the site's proximity to walkable surrounding local retail amenities and various bus stations encouraging sustainable methods of transit, the project team is exploring design and construction methods to conserve energy, reduce greenhouse gas emissions, and provide an accessible, safe and inviting environment for residents and surrounding community.

1 BUILDING FORM

2 BUILDING SETBACKS & SEPARATION

3 10% PARKLAND DEDICATION

4 LANDSCAPE INTERFACES

5 SITE ACCESS & LOADING

6 ENTRANCE EXPERIENCE

7 HAZELDEAN RD ANIMATION

8 PRIVATE COURTYARD

9 PUBLIC PARKLAND

10 EXTERIOR MATERIALS



2023 - Past Option 2

Building Heights:
9 floors + 8 floors + 3 floors.



2023 - Past Option 3

Building Heights:
12 floors + 9 floors + 6 floors.



2024 - Current Proposal

Building Heights:
12 floors + 9 floors + 5 floors.



2023 - Past Option 2

Building Heights:
9 floors + 8 floors + 3 floors.



2023 - Past Option 3

Building Heights:
12 floors + 9 floors + 6 floors.



2024 - Current Proposal

Building Heights:
12 floors + 9 floors + 5 floors.





9 FLOORS

5 FLOORS

12 FLOORS

9 FLOORS

9 FLOORS

25 FLOORS

6 FLOORS

6310 Hazeldean Rd.
Proposed Future
Development

CARP RD.

HAZELDEAN RD.

Bldg Heights - Hazeldean & Carp

Bar building designed with heights of 12 floors and 9 floors along Hazeldean and Carp Rd.



CARP RD.

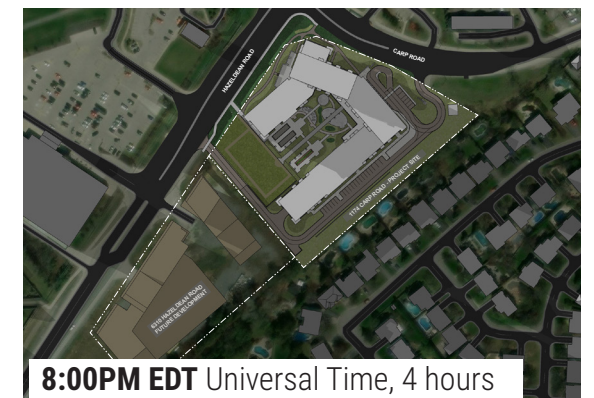
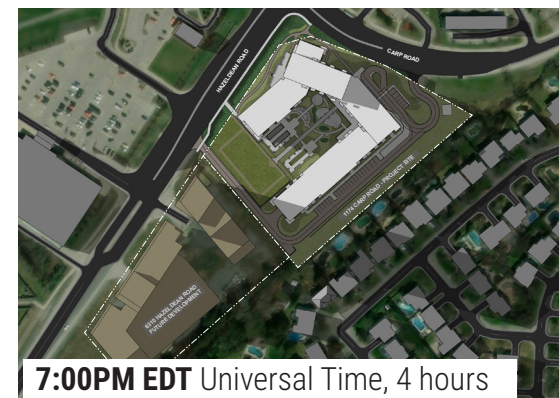
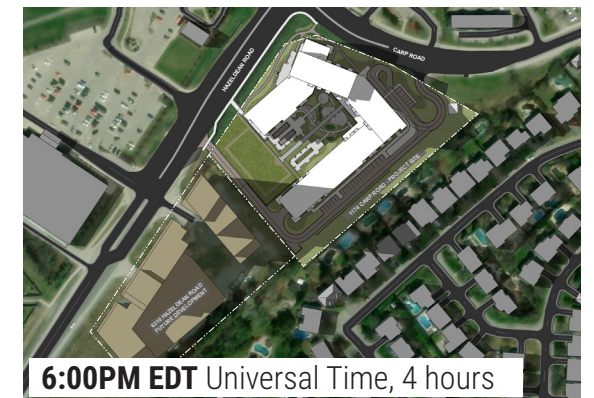
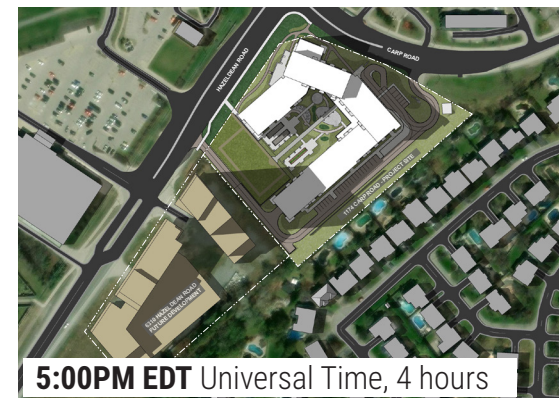
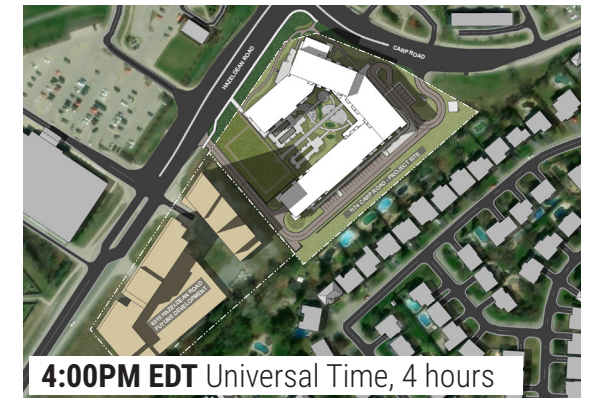
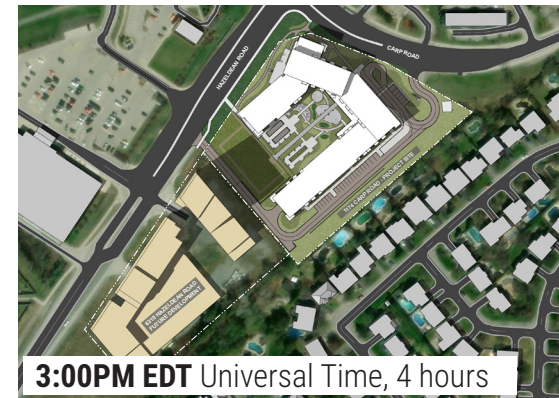
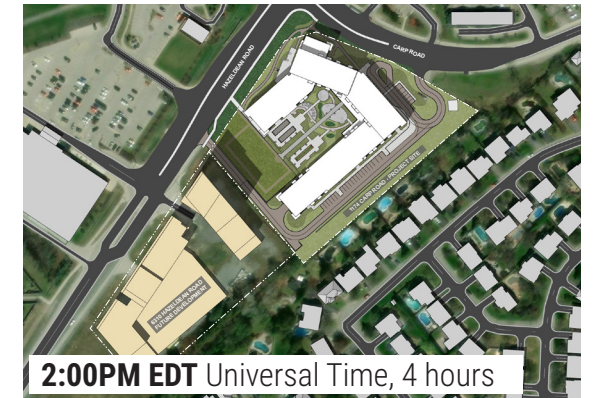
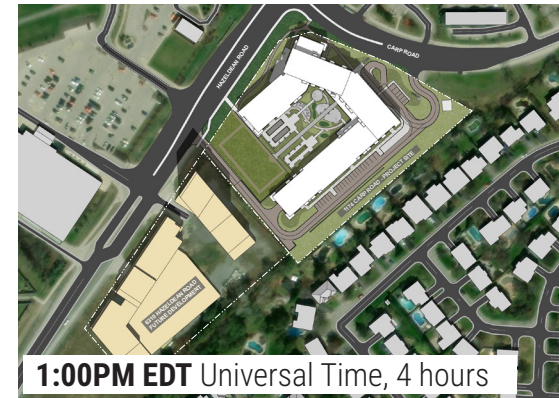
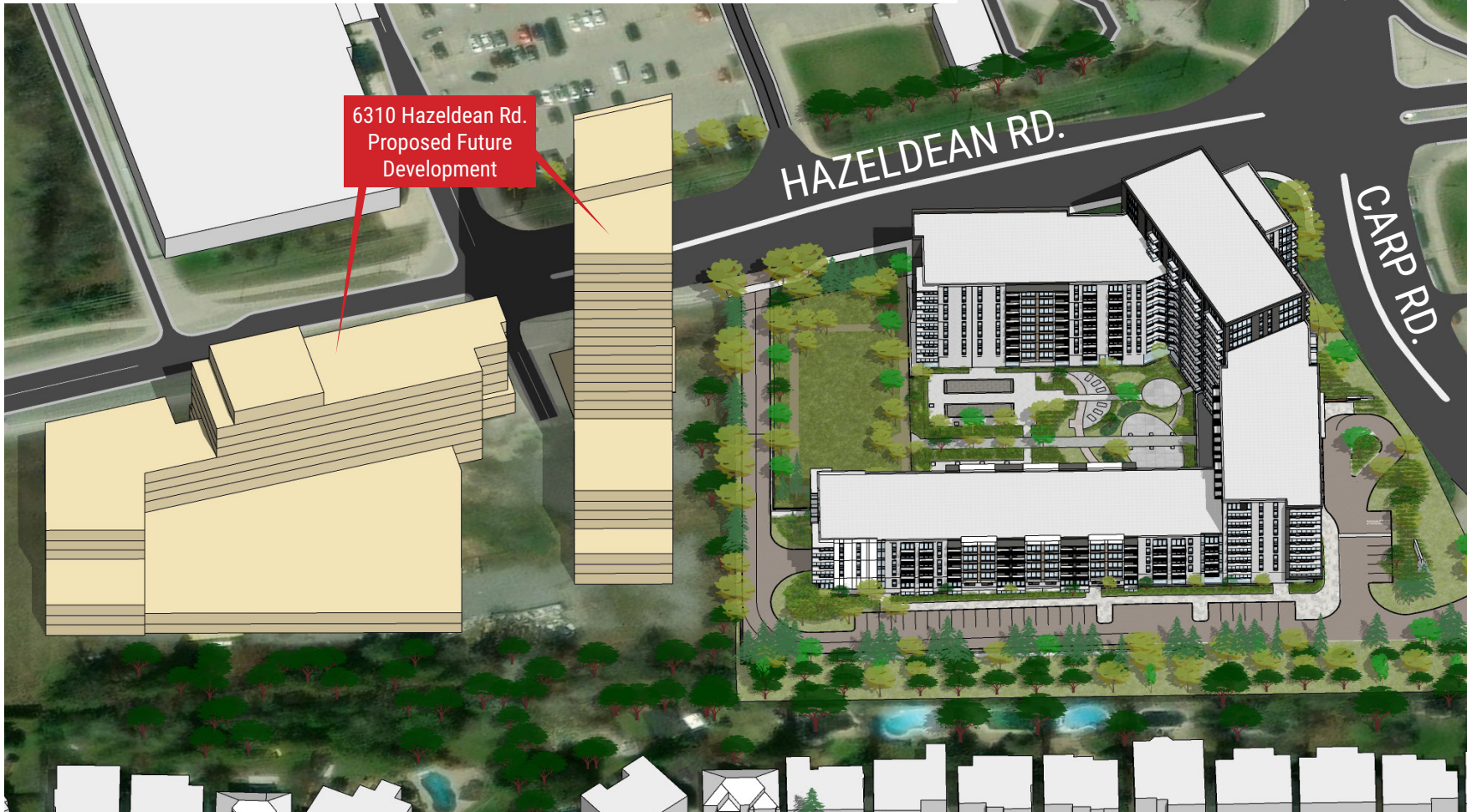
HAZELDEAN RD.

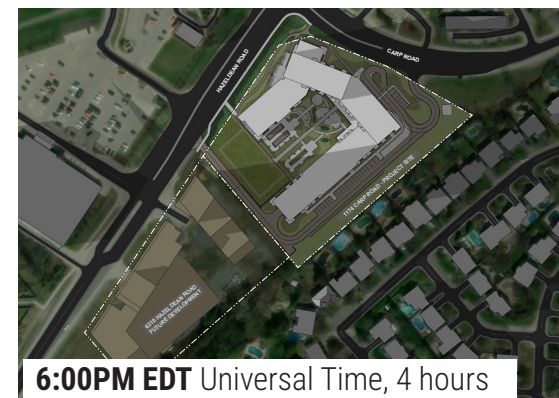
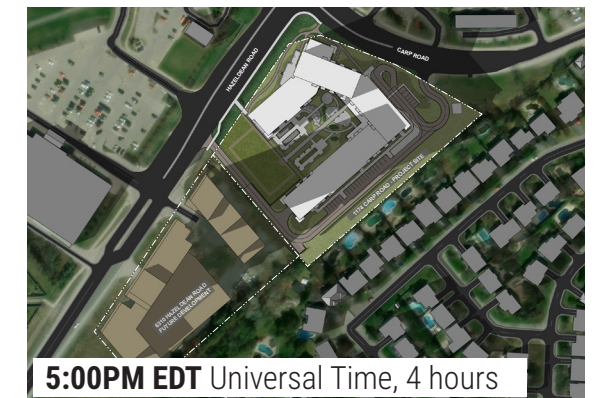
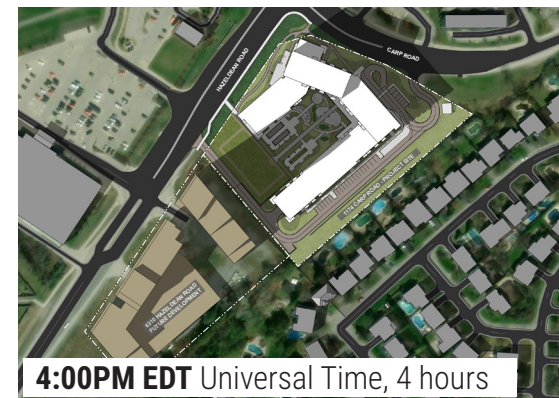
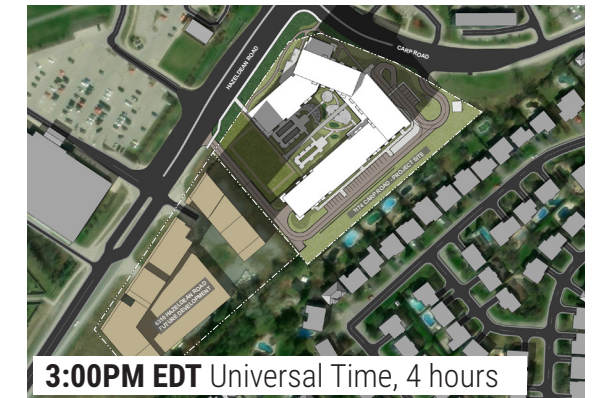
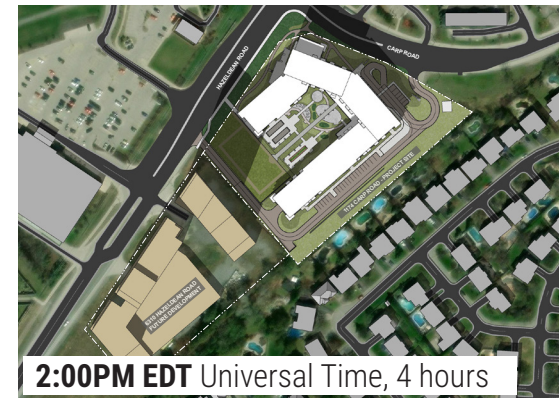
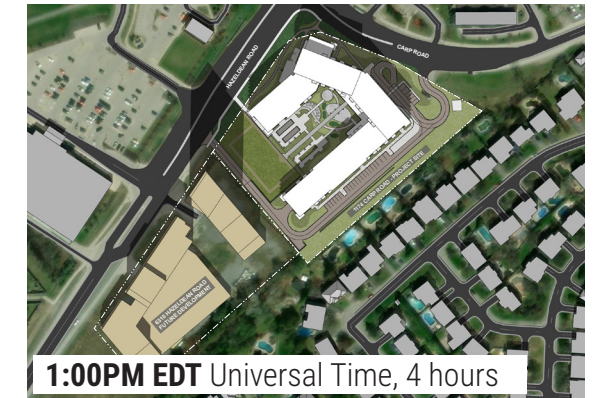
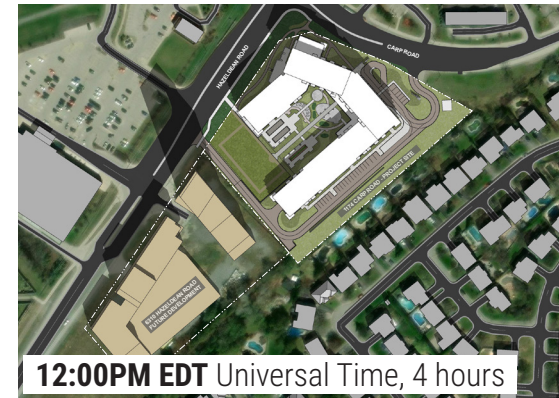
Bldg Heights - South View

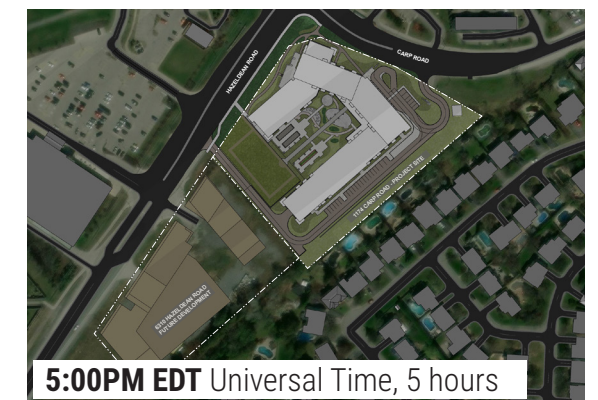
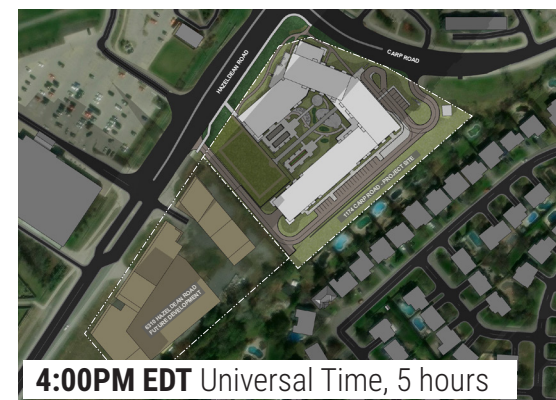
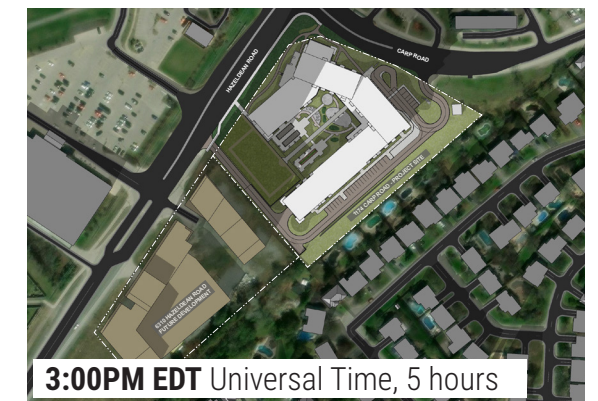
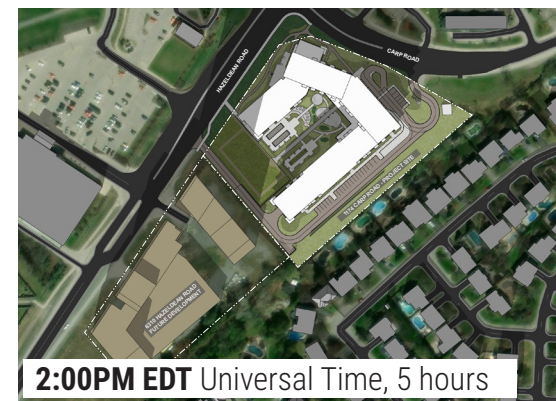
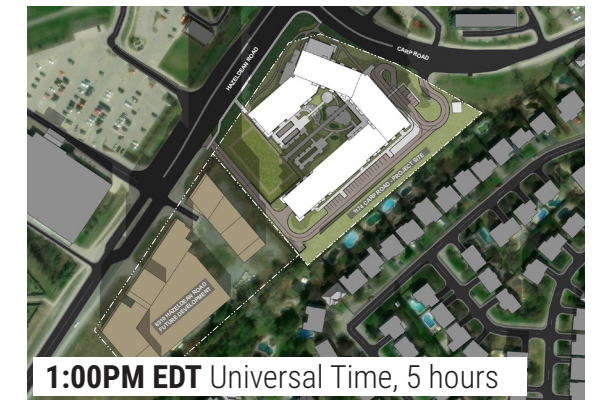
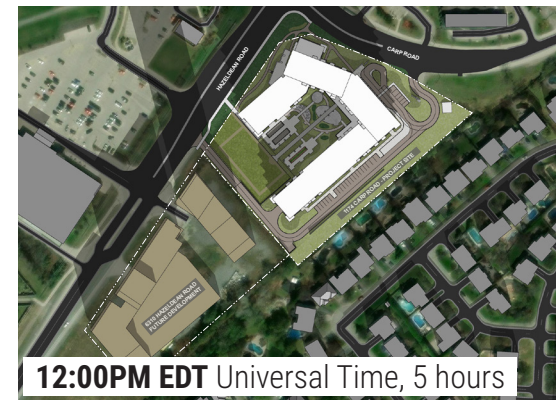
Building height transition from 12 floors stepping down to 5 floors towards the South property line next to low-rise residential neighbourhood.



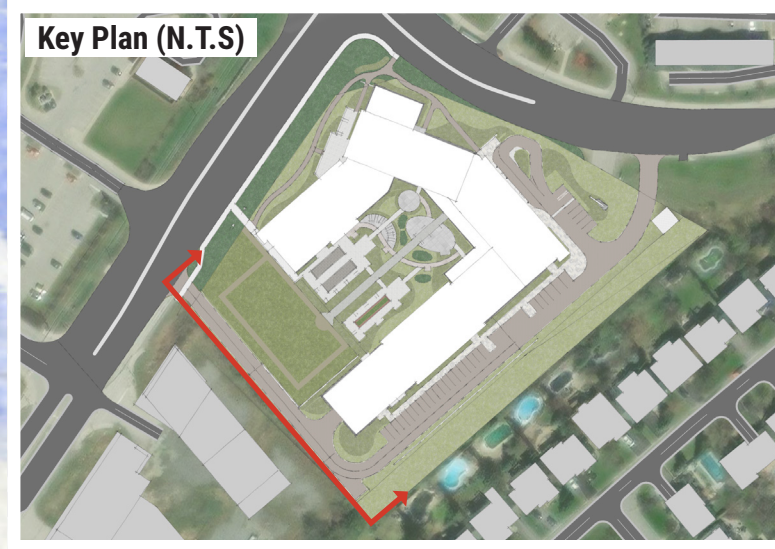
SUN SHADOW IMPACT ANALYSIS (JUN 21) of Proposed Future Development at **6310 Hazeldean Rd.**



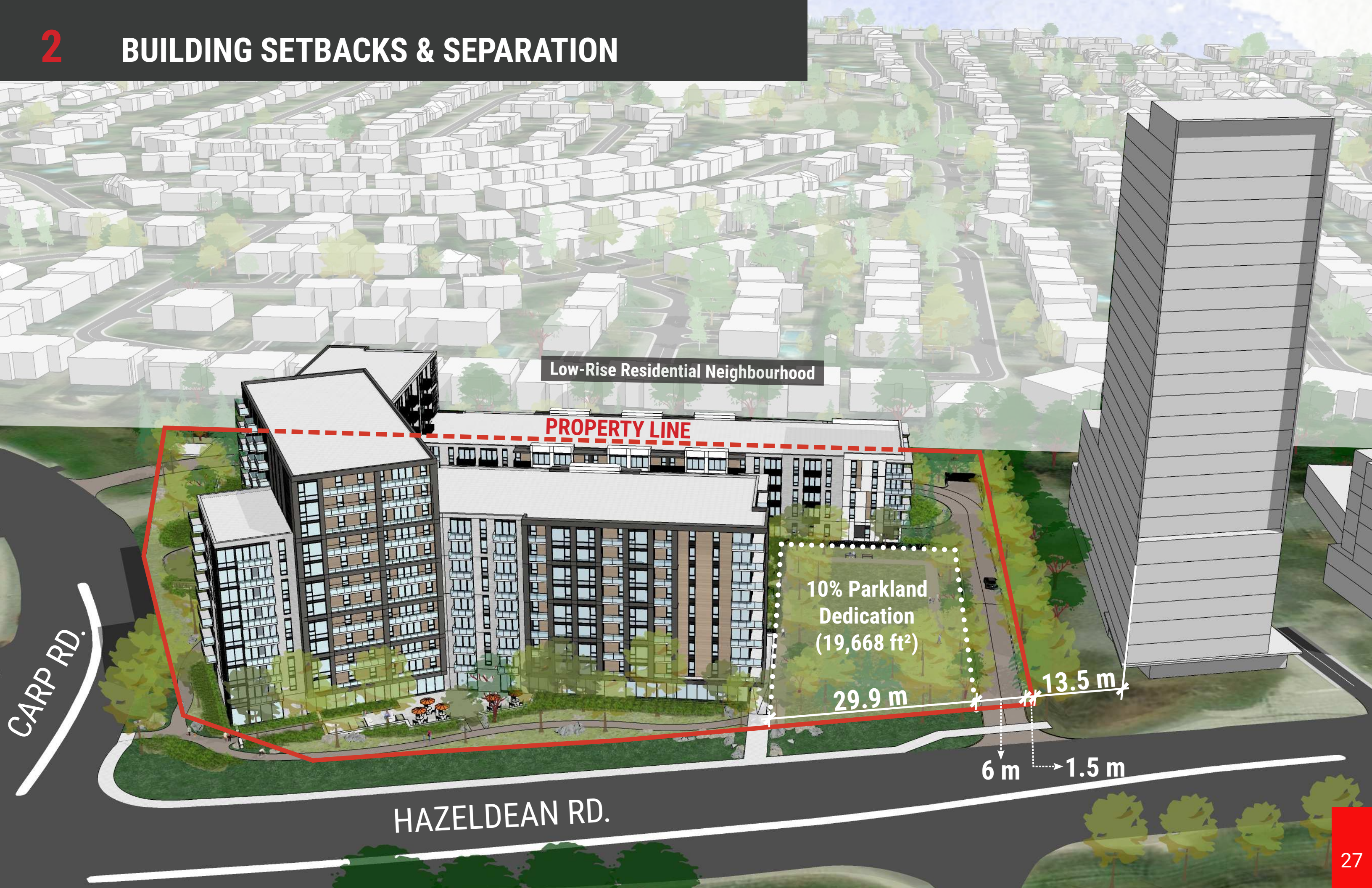




2 BUILDING SETBACKS & SEPARATION



2 BUILDING SETBACKS & SEPARATION



Low-Rise Residential Neighbourhood

PROPERTY LINE

10% Parkland
Dedication
(19,668 ft²)

29.9 m

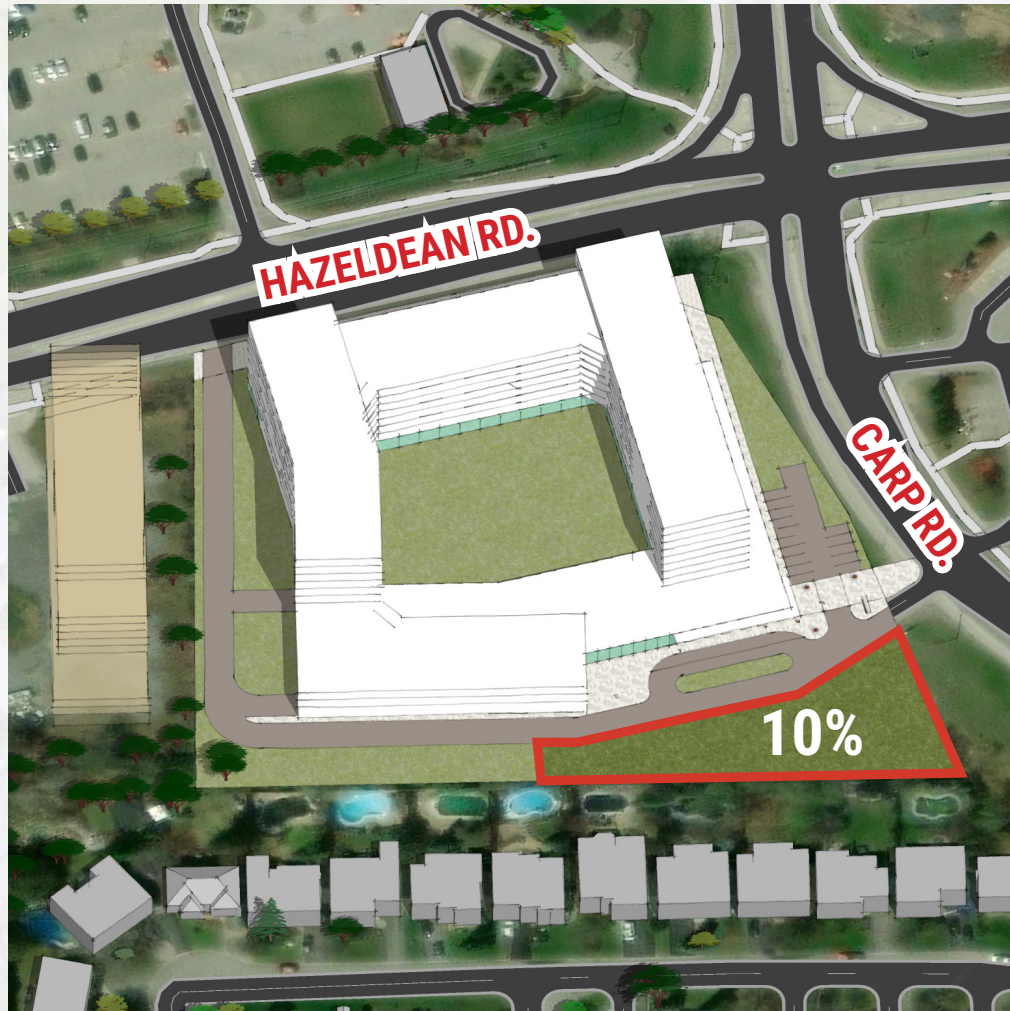
13.5 m

6 m

1.5 m

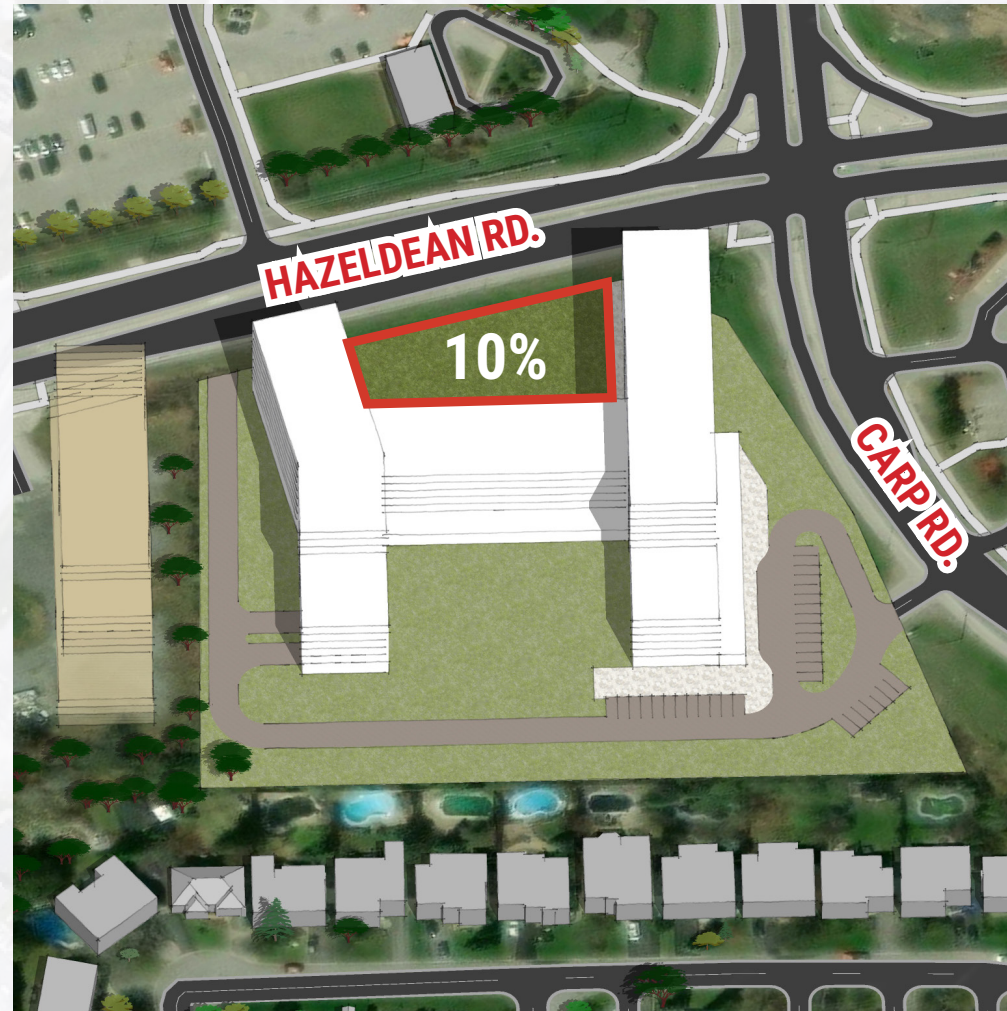
CARRP RD.

HAZELDEAN RD.



2023 - Past Option 2

10% Parkland located at the South-East corner of the property, fronting on to Carp Rd.



2023 - Past Option 3

10% Parkland located North of the property, fronting onto Hazeldean Rd.



2024 - Current Proposal

10% Parkland located at the North-West corner of the property, fronting onto Hazeldean Rd.

Main Street Frontage

10% parkland located at the North-West corner of the property, fronts on Hazeldean Road (main street).



**10% Parkland Dedication
(19,668 ft²)**

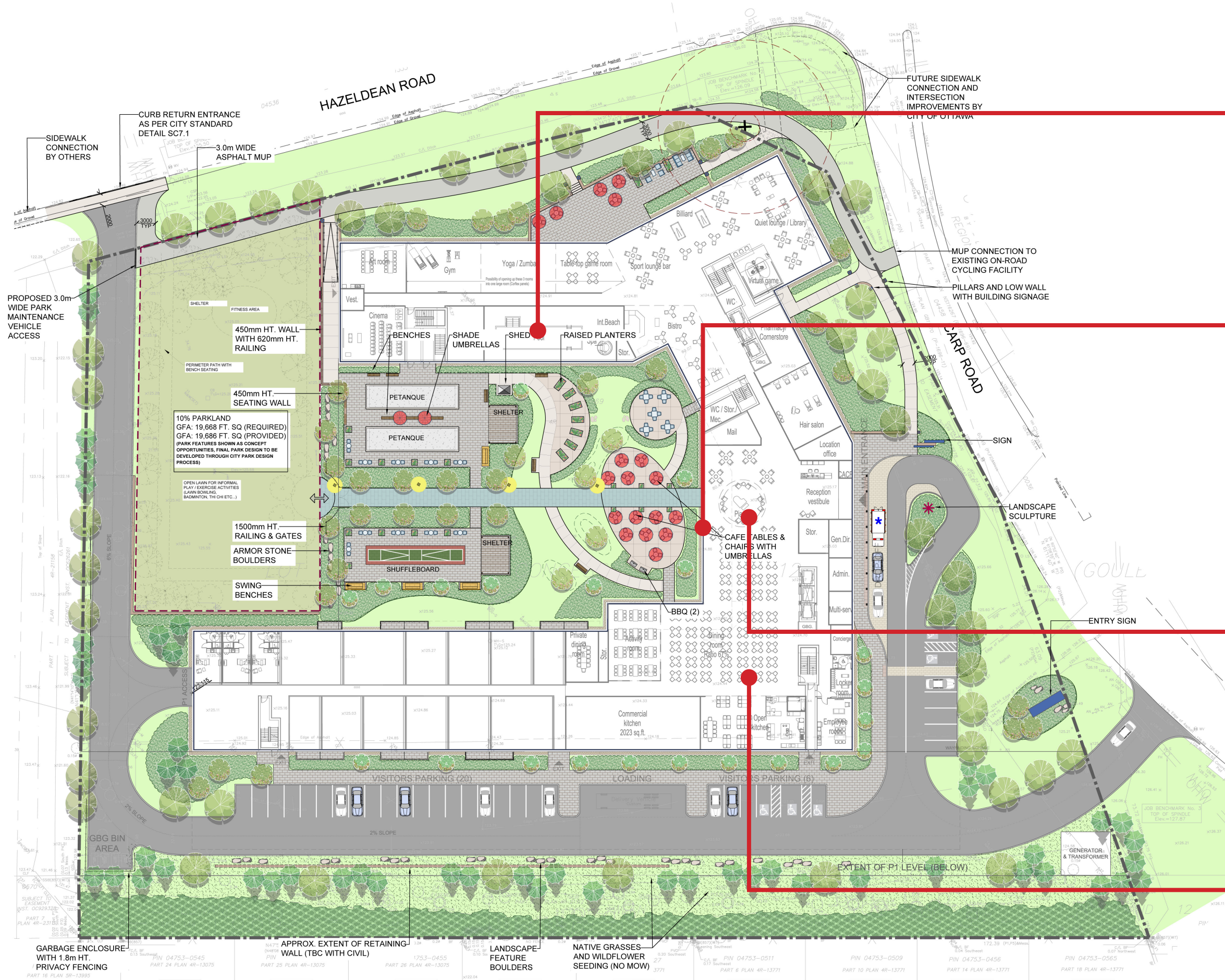
66.3 m

29.8 m

29.9 m

58.6 m

HAZELDEAN RD.





Concrete pathways with pre-cast concrete seating walls and planters.



Large format paving slabs for courtyard and terrace areas.



Stone terrace walls and pillars.



Outdoor lounge / terrace furniture.

Proposed landscape design provides a Park like setting around the perimeter of the site with tree lined pathways linking the buildings ground level amenity spaces with an outdoor bistro terrace fronting onto Hazeldean.

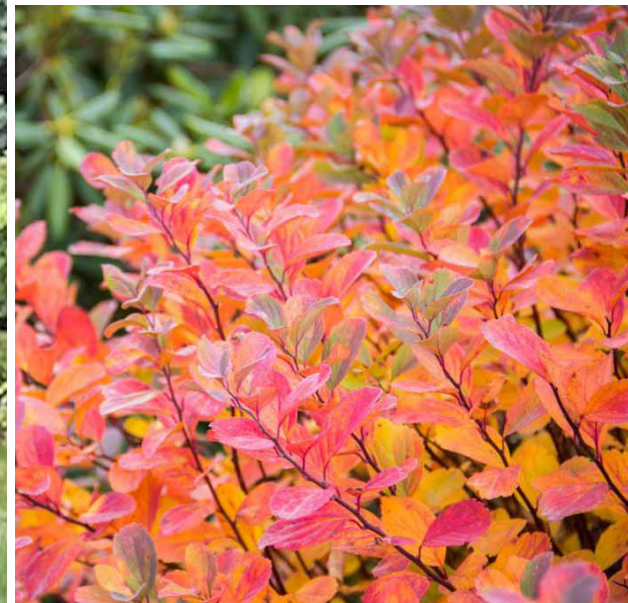
The internal courtyard space is slightly elevated above the adjacent City Park, providing both a visual and physical connection between the two spaces while maintaining some privacy and security for residents.



Large deciduous tree planting along Hazeldean and Carp.



Mixed coniferous tree planting to enhance landscape buffer to the South.



Four season planting design.



Landscape planting provides a park like setting for the proposed development with large, deciduous tree planting, mixed coniferous landscape buffer to the South and four-season planting design to enhance building setting and courtyard landscape.

4 LANDSCAPE INTERFACE

EXISTING TREE CANOPY COVER

Existing tree on the corner of Carp and Hazeldean:

The existing tree on the corner of Carp and Hazeldean is a **mature Poplar species** in good health (surveyed Aug 2023), with a DCH (diameter at breast height) of 140cm and a critical root zone extending 28m in diameter as indicated by the dashed line on both the TCR and landscape concept drawing.

Existing trees along the southern and western boundary:

Other existing trees on the site are located along the southern and western boundary of the site and are situated in tree groups comprising mature **poplar, elm, cedar** and **Manitoba maple** as well as a number of **shrub species, saplings** and **undergrowth**.



4 LANDSCAPE INTERFACE

PROPOSED TREE CANOPY COVER (40 YEAR)

Approximately **45 existing trees will be retained within the 10m landscape buffer** along the southern boundary and the woodlot will be enhanced with a mix of large deciduous and coniferous tree planting (approx. 40 trees).

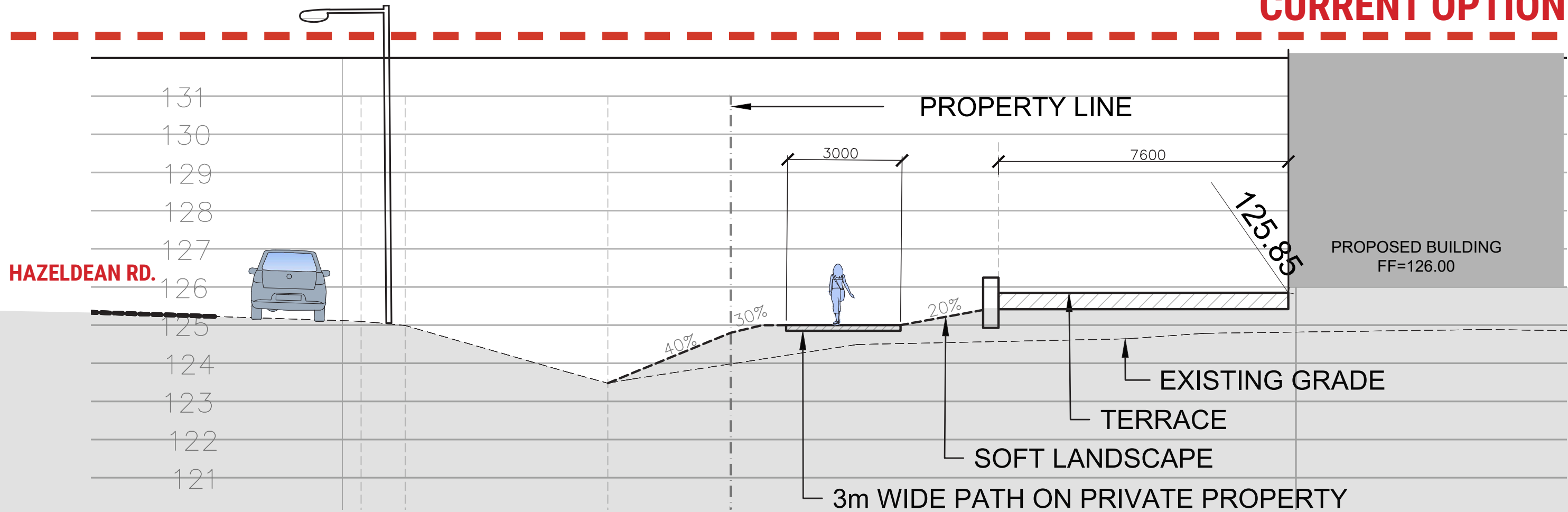
Approximately **30 large deciduous trees are proposed to be planted along the frontages of Carp and Hazeldean Rd.** These trees are not located above any below grade structures and will have a generous soil volume to promote mature, healthy growth.

An additional **17 trees are proposed along the western boundary of the site** and approx. **35-40 smaller, ornamental and columnar trees are proposed closer to the building** and within the courtyard space.

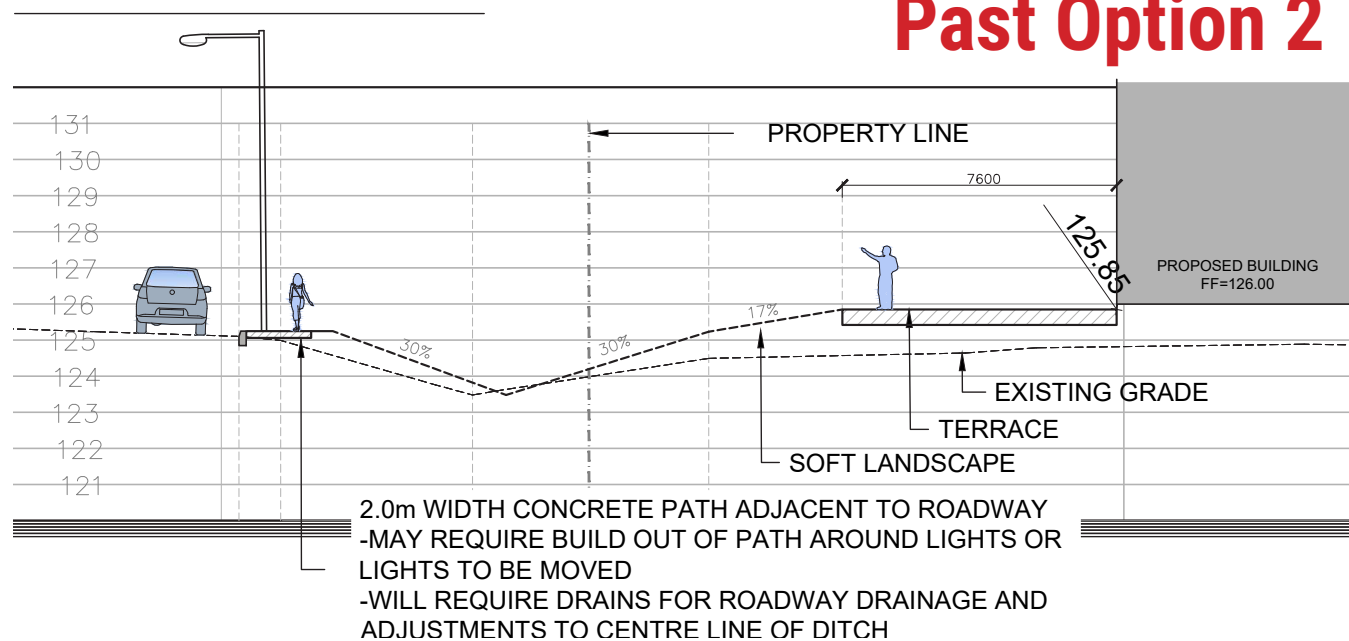
The projected **40-year tree canopy cover** is indicated by the **purple shading** on the adjacent drawing.



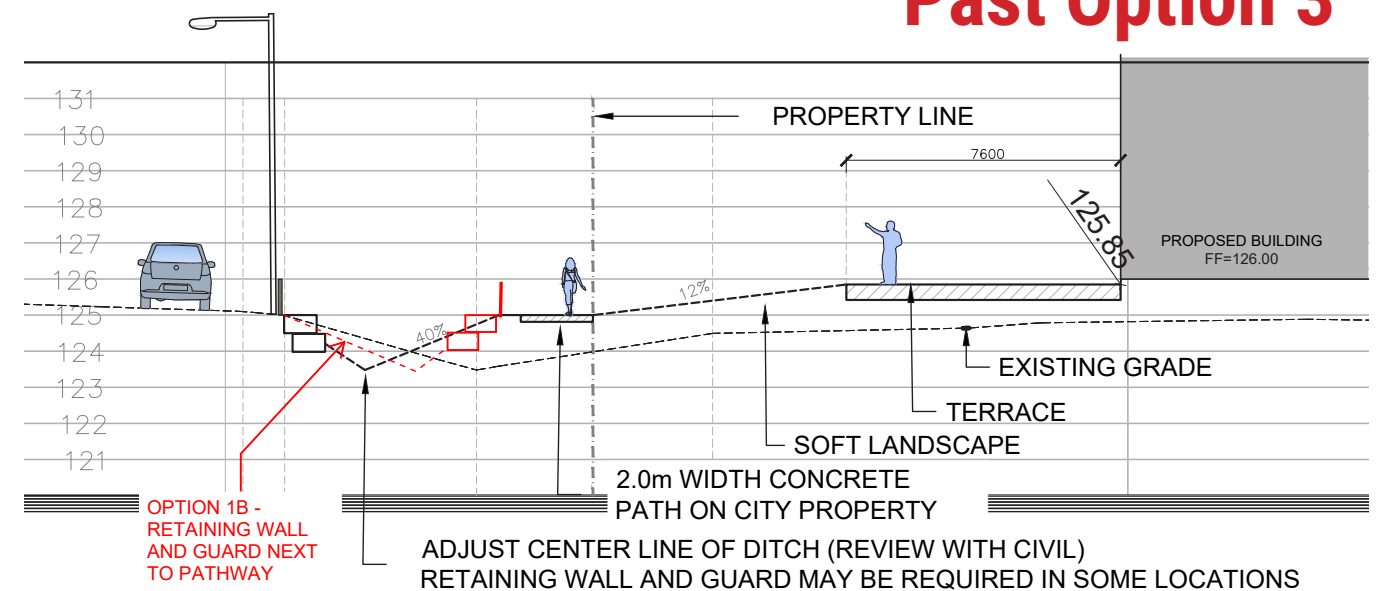
CURRENT OPTION



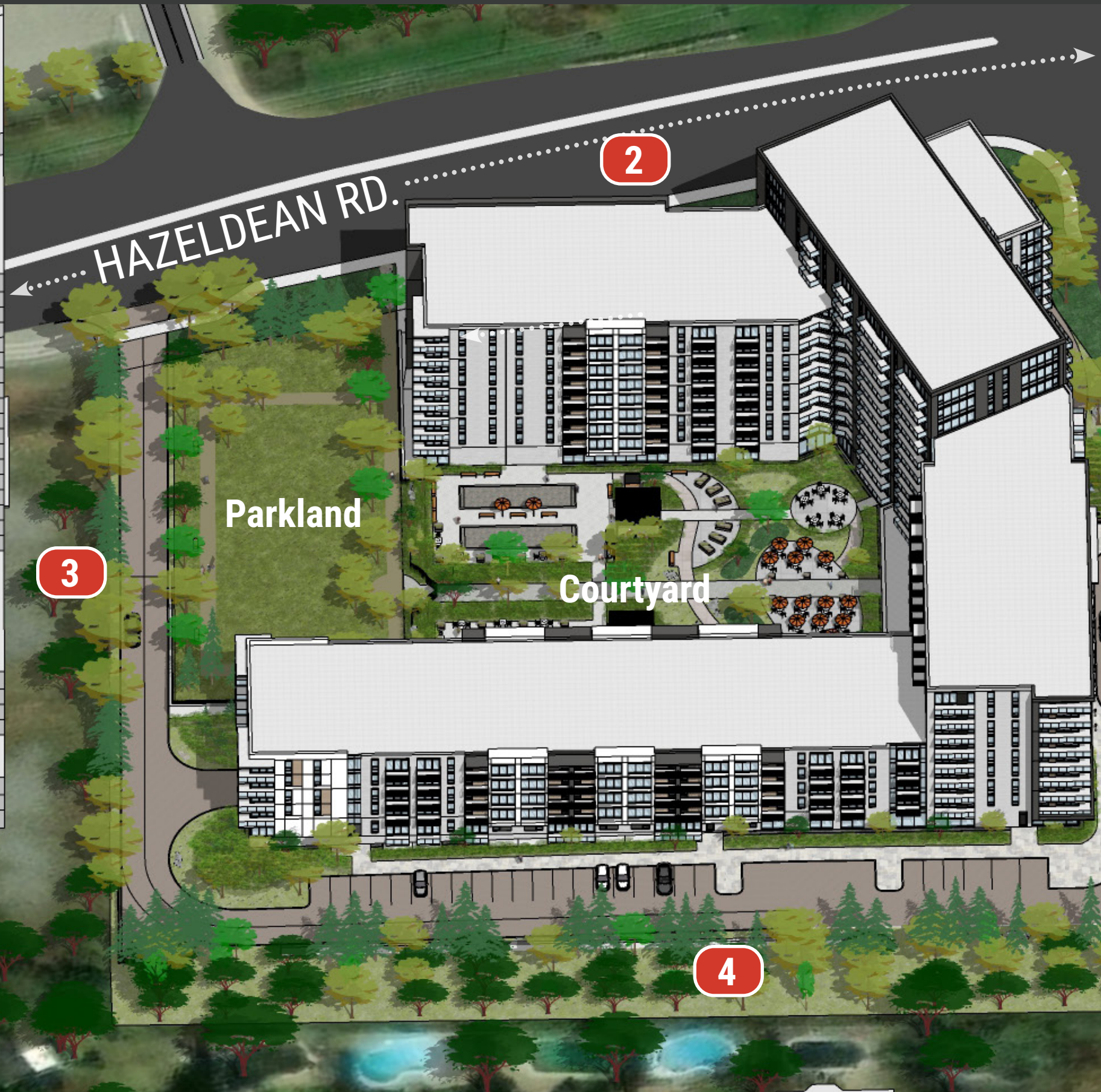
Past Option 2



Past Option 3



4 LANDSCAPE INTERFACE



Strategic Landscape Buffer

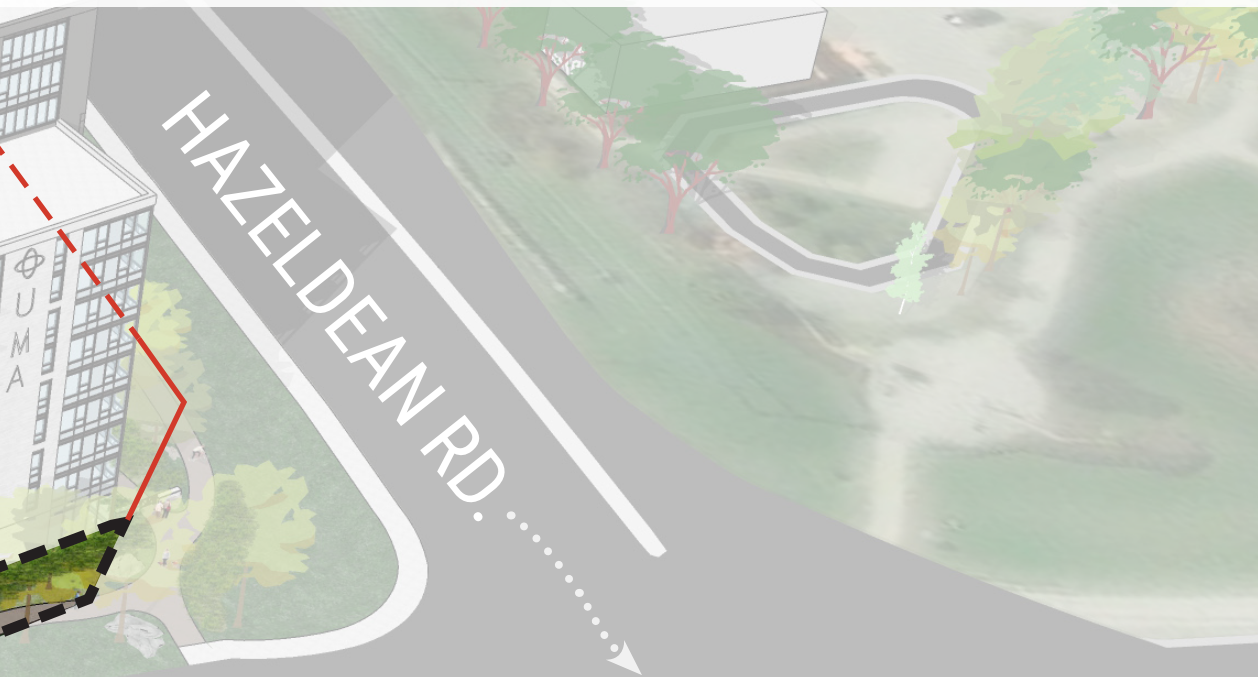
- (1) Carp Rd
- (2) Hazeldean Rd
- (3) West Lot
- (4) South Lot

4 LANDSCAPE INTERFACE



(1) Carp Rd.

This landscape interface includes the primary site access and organizes convenient drop-off for main entrance, visitor surface parking and access to below grade parking.



4 LANDSCAPE INTERFACE

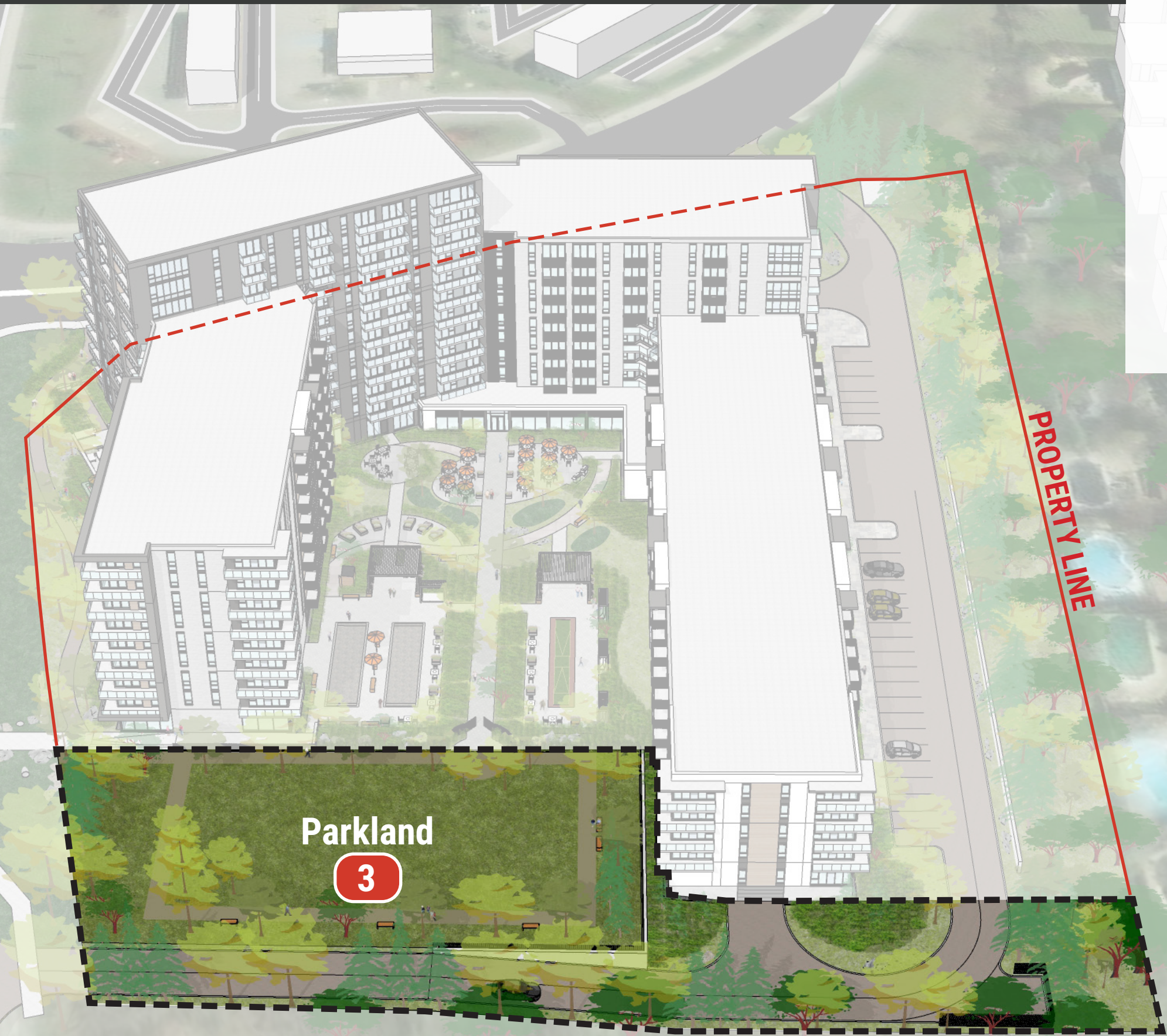


(2) Hazeldean Rd.

Public/private pathway is designed along the frontage of the property from East to West to provide safe and accessible passage. The pathway is integrated within the animated ground floor frontage and promotes interaction/overlap with the private outdoor amenity spaces.



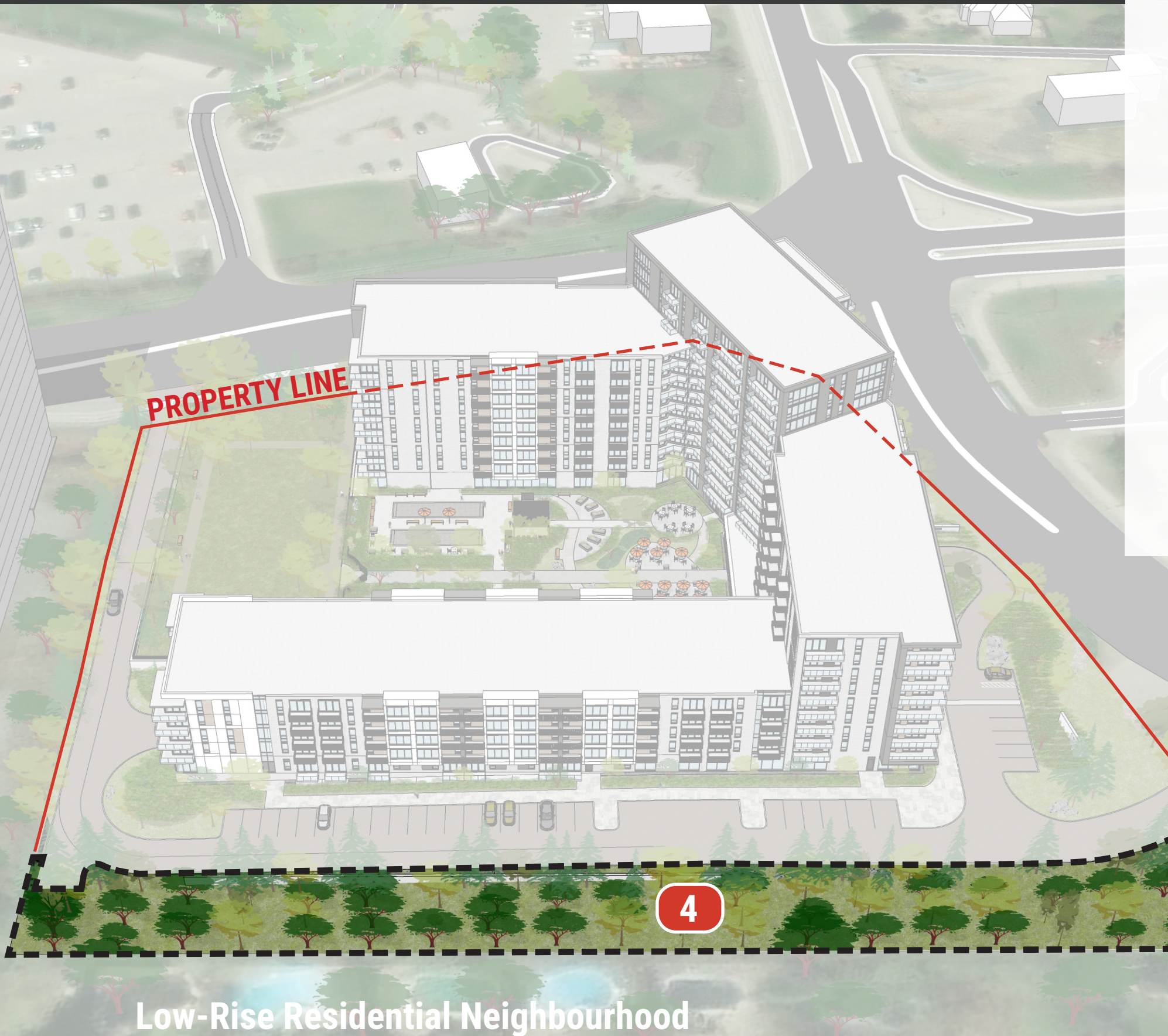
4 LANDSCAPE INTERFACE



(3) West Lot

Parkland is strategically located along the Western property line to front on Hazeldean and provide a landscape buffer between our project and the proposed future development at 6310 Hazeldean Rd.





(4) South Lot

Retention of existing trees within the 10m landscape buffer along the Southern property boundary and the woodlot will be enhanced with a mix of large deciduous and coniferous tree planting providing and generous landscape buffer between our project and neighbouring community to the South.



Site Access - Carp Rd.

Primary site access organizes convenient drop-off for main entrance, visitor surface parking and access to below grade parking.





Site Access - Hazeldean Rd.

Secondary driveway organizes service/loading functions and promotes optional site egress route for surface and underground parking.



Main Entrance - Carp Rd.

Main entrance is visually connected to Carp Rd to promote accessibility and convenient drop-off for residents.

Main Entrance

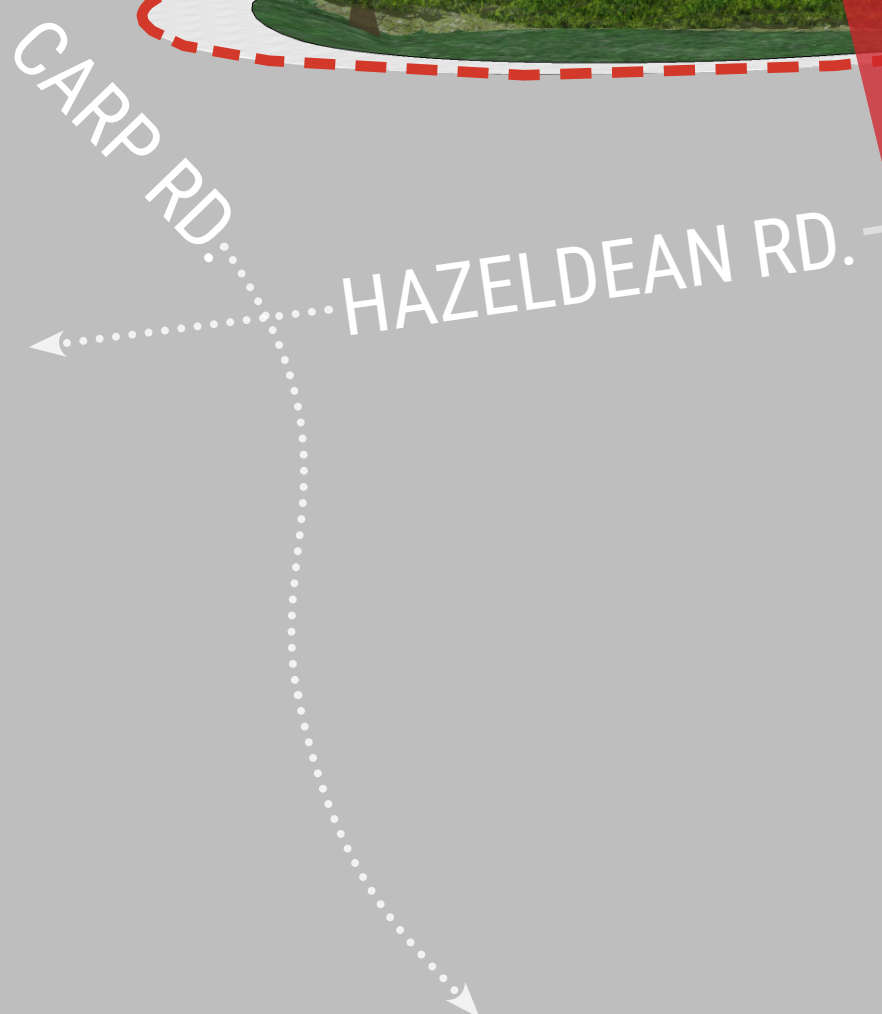
Drop-Off Loop

1174

7 HAZELDEAN RD ANIMATION

Ground Level Activation

This proposal provides an animated frontage along Hazeldean Rd with ground floor amenity visually connected to main street with continuous/full height glazing.





Private Outdoor Space

This proposal is designed around a open courtyard theme which organizes all private indoor/outdoor amenity programs, promoting health and wellness with dynamic activity spaces that interconnect with the public realm.



Public Outdoor Space

The parkland is designed adjacent to the outdoor courtyard to connect public and private realms with open outdoor spaces that promote generous tree canopies and soft landscaping for the site.

Private Courtyard

10% Parkland Dedication
(19,668 ft²)



PROPOSED EXTERIOR MATERIALS

The concept for the proposed exterior elevations are comprised of 2 contrasting materials and colours to articulate the main building mass into clusters of smaller interconnected building forms.

A complimentary siding material is proposed as an accent colour to highlight some of the recessed elements of the facade.

This warm accent texture in combination with strategic outdoor lighting will provide a welcoming focal point for the main entrance.



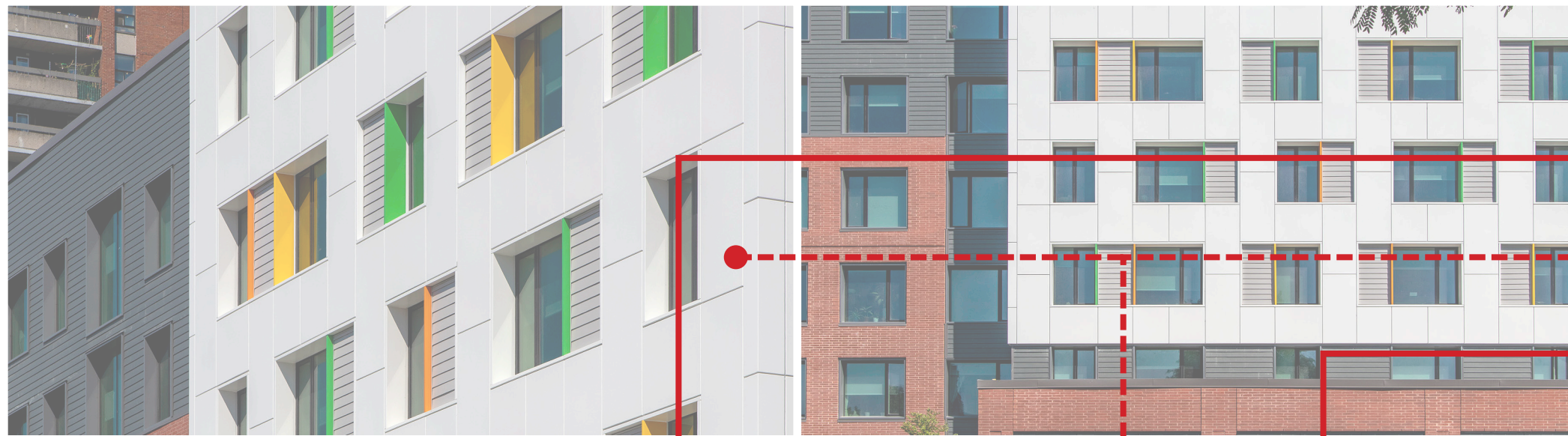
PROPOSED EXTERIOR MATERIALS

- 1 Brick Masonry
- 2 Architectural Aluminum Panel
- 3 Metal Siding
- 4 Aluminum Windows
- 5 Glass and Aluminum Guardrails

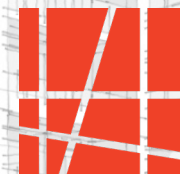


PROPOSED EXTERIOR MATERIALS

- 1 Brick Masonry
- 2 Architectural Aluminum Panel
- 3 Metal Siding
- 4 Aluminum Windows
- 5 Glass and Aluminum Guardrails



Thank You :)



HOB N
ARCHITECTURE



Key Plan

No.	Revision	Date
4	ISSUED FOR REVIEW	6 MAR 2024
3	ISSUED FOR REVIEW	26 FEB 2024
2	ISSUED FOR REVIEW	09 JAN 2024
1	ISSUED FOR REVIEW	03 JAN 2024

North:

Stamp:

CSW Landscape Architecture
 Urban Design
 Site Planning
 Recreation and Park Planning
 Project Management

319 McRae Avenue, Suite 502, Ottawa, Ontario, K1Z 0B9
 Tel: (613) 729-4536

- All measurements in millimeters unless specified otherwise. Do not scale drawing. All drawings to be read in conjunction with written specifications.
- Copyright reserved. This drawing is the exclusive property of CSW Landscape Architects Ltd. and shall not be used without the consent thereof.
- This Drawing may not be used for construction until signed by the landscape architect. It is the responsibility of the contractor to:
 - check and verify all dimensions on site;
 - report all errors and/or omissions to the landscape architect;
 - comply with all pertinent codes and by-laws;
 - check and verify locations of all underground services with all local utilities prior to any digging.

Project:
**GROUP MAURICE
 CARP ROAD**
 1174 CARP ROAD
 OTTAWA, ONTARIO

Drawing:
**LANDSCAPE PLAN
 CONCEPT DESIGN**

Scale: 1:300	Date: DEC 2023
Design By: SE	Drawn By: SE
Project Number: 2169-01	Sheet Number: L 1.0

Last Save: 2024-03-26 11:41:56 AM
 File Location: Z:\Projects\2169-01_1174_Carp_Road\Drawings\PRESENTATION\2169-01_1174_Carp_Road\Presentation11.dwg

1174 CARP RD

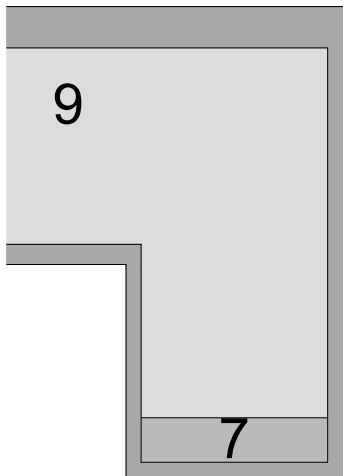
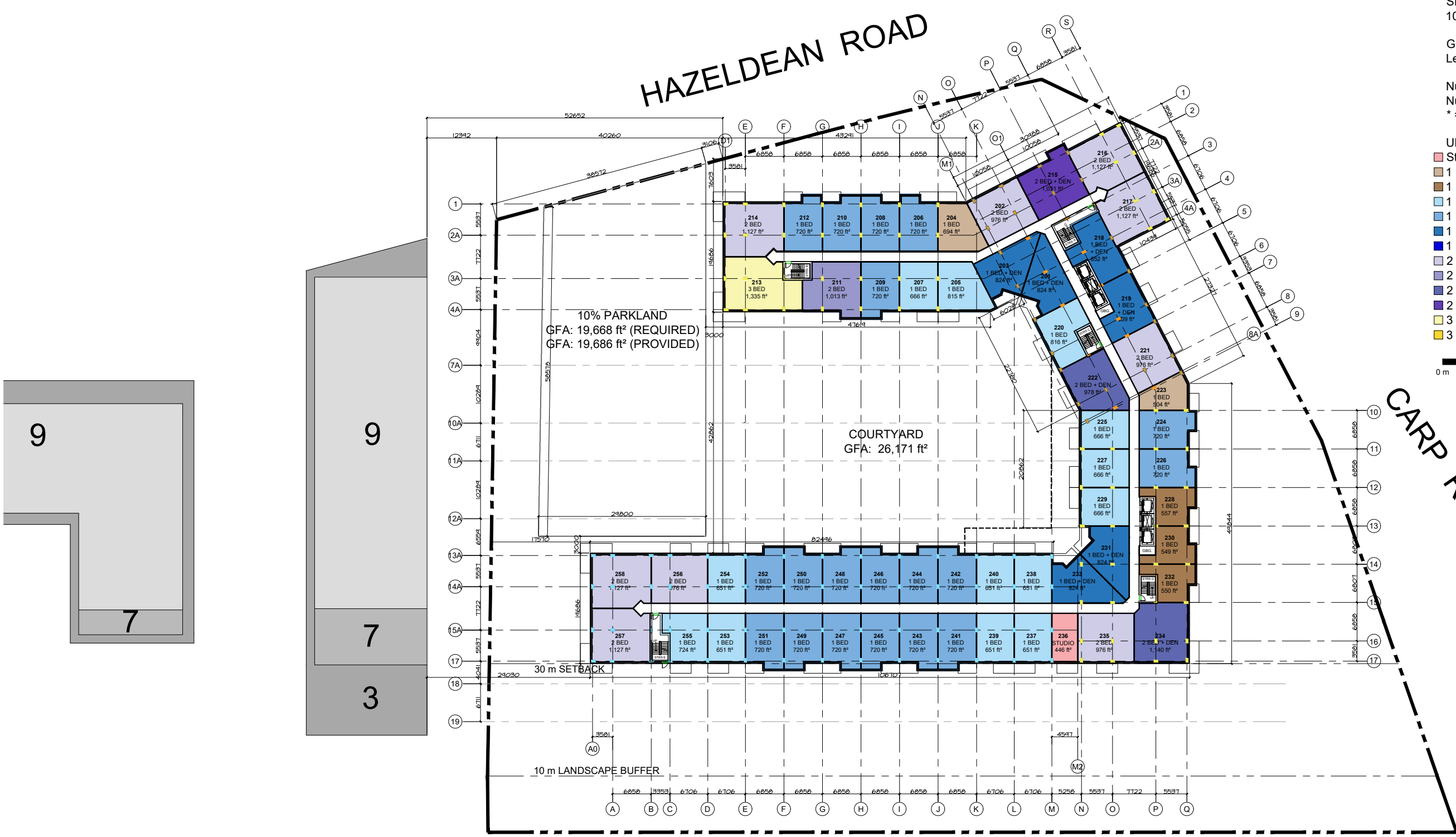
SITE AREA = 196,682 ft² (18,272m²)
10% PARKLAND = 19,668 ft²

GFA
Lev 2-5 51,534 (X4) = 206,136 ft²

Number of Units per floor = 58
Number of Units Lev 2-5 = 232
* = Bay Window Unit

UNIT TYPE BREAKDOWN PER FLOOR:

- Studio = 1
- 1 Bed (2½) = 2
- 1 Bed (2½*) = 3
- 1 Bed (3½) = 13
- 1 Bed (3½*) = 19
- 1 Bed (3½) + Den = 6
- 1 Bed (3½*) + Den = 0
- 2 Bed (4½) = 9
- 2 Bed (4½*) = 1
- 2 Bed (4½) + Den = 2
- 2 Bed (4½*) + Den = 1
- 3 Bed (5½) = 1
- 3 Bed (5½*) = 0



1174 CARP RD



LEVEL 2-5 PLAN

SCALE 1:750
JANUARY 12, 2024

1174 CARP RD

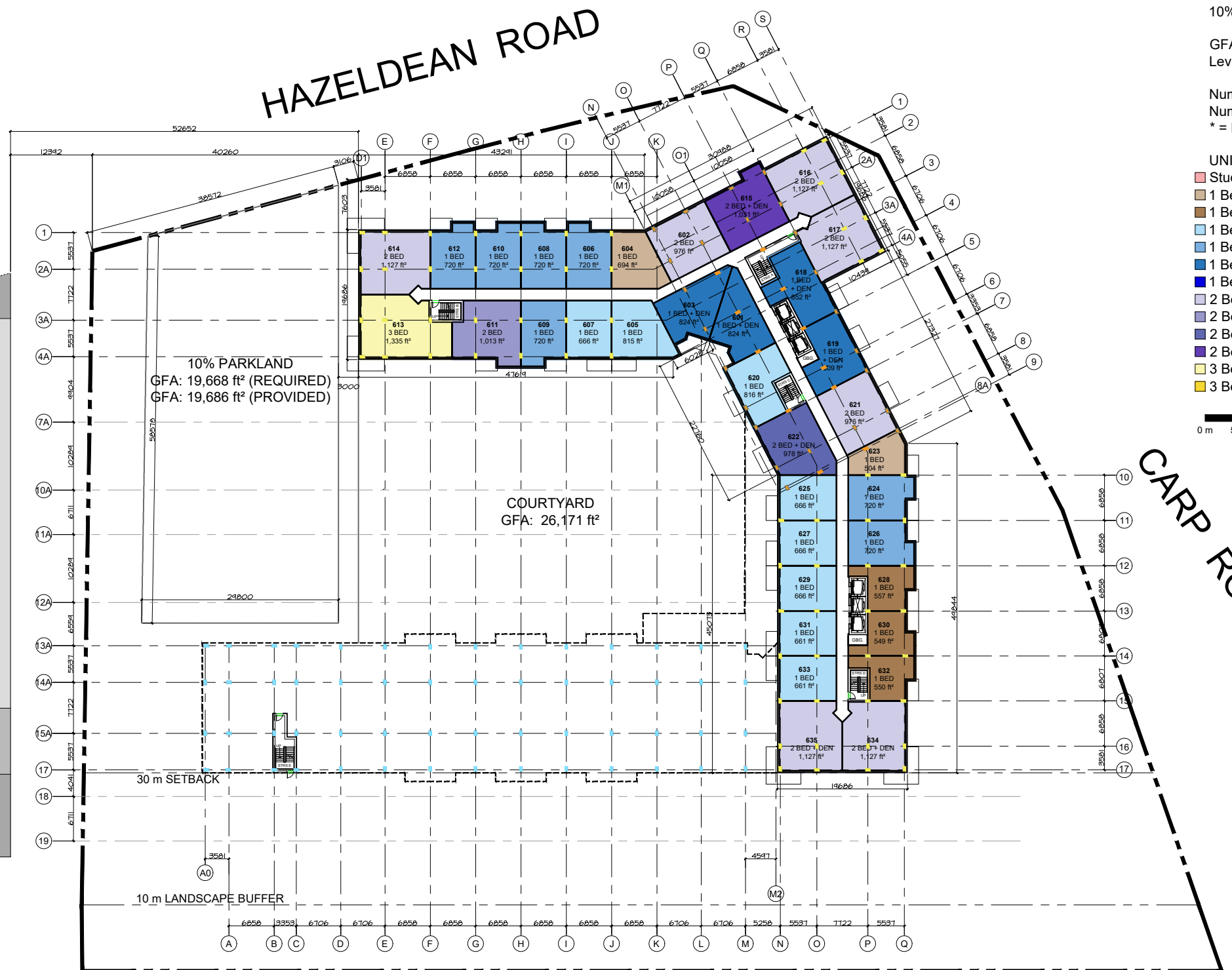
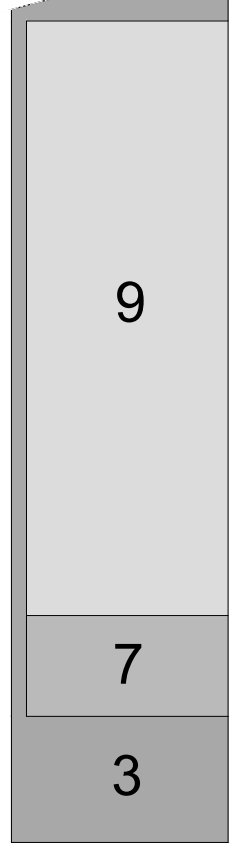
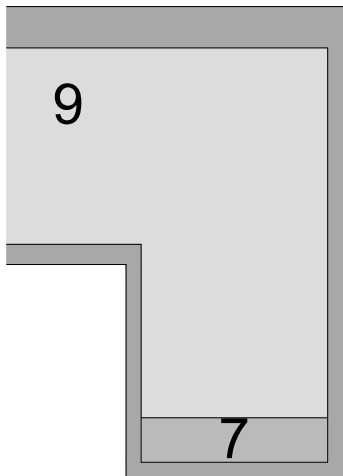
SITE AREA = 196,682 ft² (18,272m²)
10% PARKLAND = 19,668 ft²

GFA
Lev 6-9 32,587 (X4) = 130,348 ft²

Number of Units per floor: = 35
Number of Units Lev 6-9: = 140
* = Bay Window Unit

UNIT TYPE BREAKDOWN PER FLOOR:

Studio	= 0
1 Bed (2½)	= 2
1 Bed (2½*)	= 3
1 Bed (3½)	= 8
1 Bed (3½*)	= 7
1 Bed (3½) + Den	= 4
1 Bed (3½*) + Den	= 0
2 Bed (4½)	= 7
2 Bed (4½*)	= 1
2 Bed (4½) + Den	= 1
2 Bed (4½*) + Den	= 1
3 Bed (5½)	= 1
3 Bed (5½*)	= 0



1174 CARP RD

LEVEL 6-9 PLAN

SCALE 1:750
JANUARY 12, 2024



1174 CARP RD

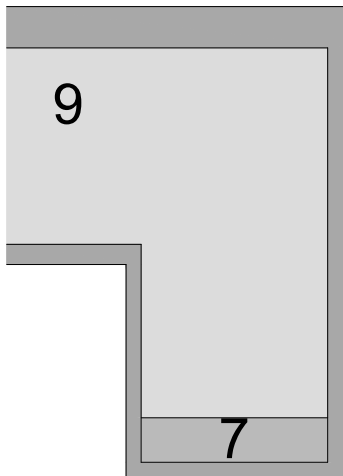
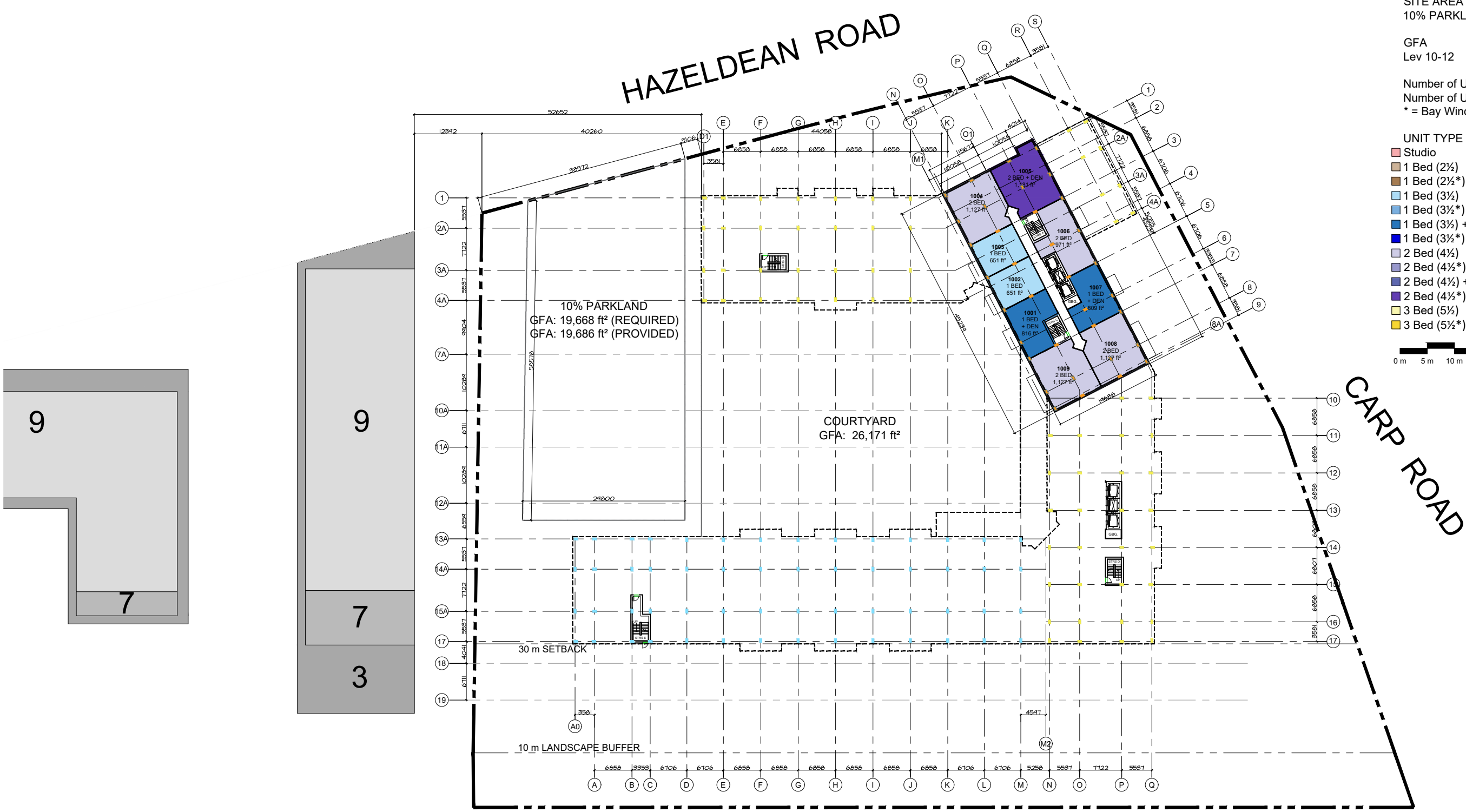
SITE AREA = 196,682 ft² (18,272m²)
10% PARKLAND = 19,668 ft²

GFA
Lev 10-12 9,640 (X3) = 28,920 ft²

Number of Units per floor: = 9
Number of Units Lev 10-12: = 27
* = Bay Window Unit

UNIT TYPE BREAKDOWN PER FLOOR:

Studio	= 0
1 Bed (2½)	= 0
1 Bed (2½*)	= 0
1 Bed (3½)	= 2
1 Bed (3½*)	= 0
1 Bed (3½) + Den	= 2
1 Bed (3½*) + Den	= 0
2 Bed (4½)	= 4
2 Bed (4½*)	= 0
2 Bed (4½) + Den	= 0
2 Bed (4½*) + Den	= 1
3 Bed (5½)	= 0
3 Bed (5½*)	= 0



1174 CARP RD



LEVEL 10-12 PLAN

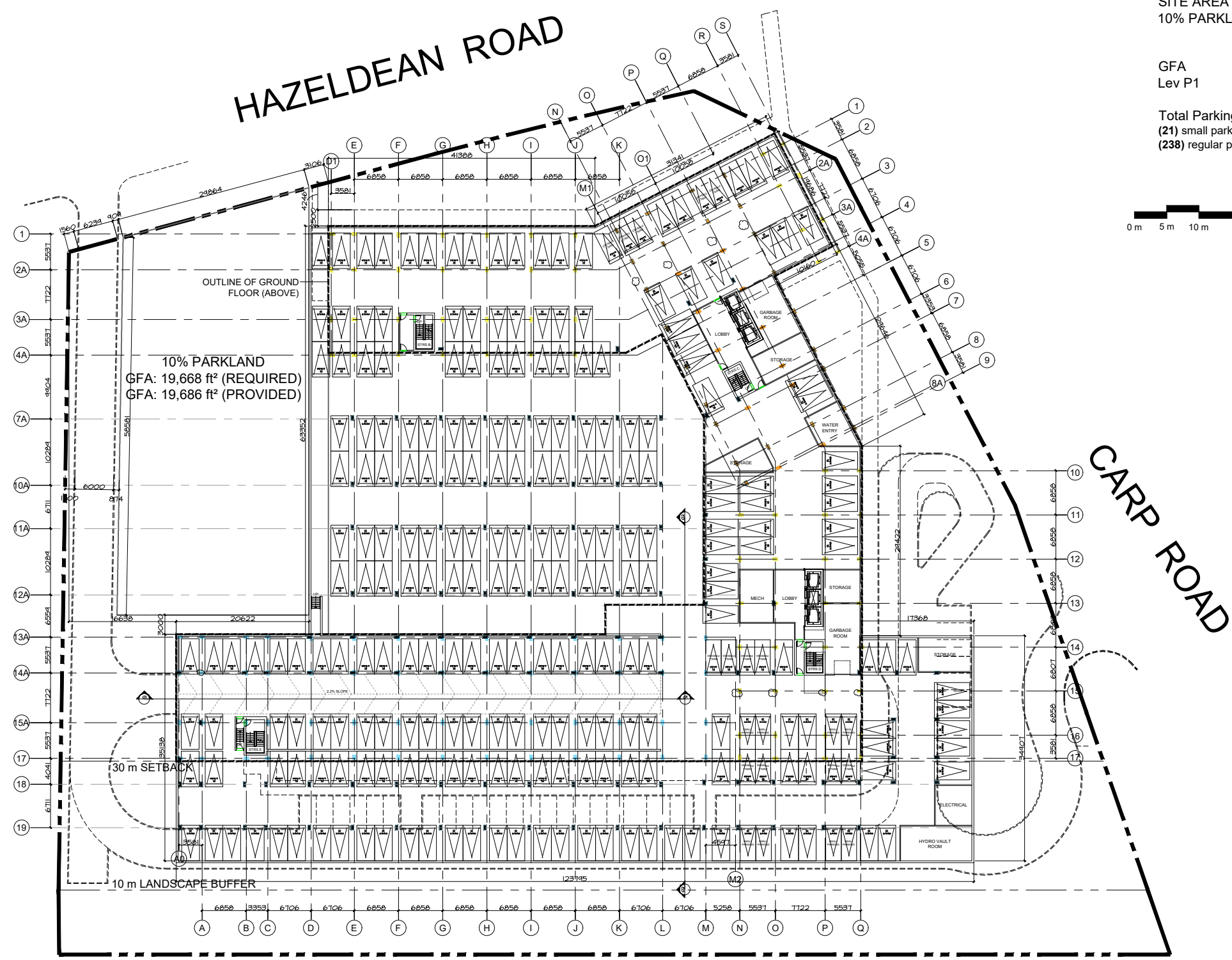
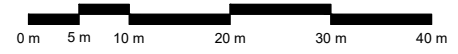
SCALE 1:750
JANUARY 12, 2024

1174 CARP RD

SITE AREA = 196,682 ft² (18,272m²)
10% PARKLAND = 19,668 ft²

GFA
Lev P1 105,853 (X1) = 105,853 ft²

Total Parking Spaces: = 259
(21) small parking 2.4 x 5.5
(238) regular parking 2.75 x 5.5

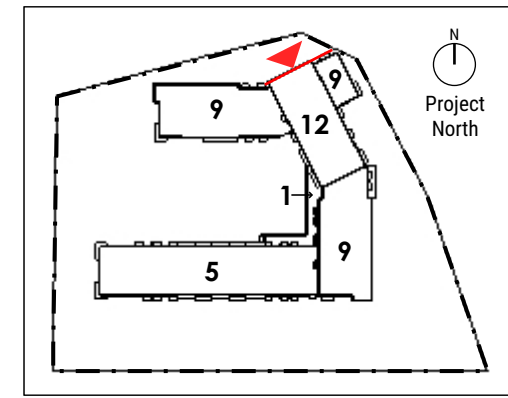


1174 CARP RD



PARKING LEVEL 1

SCALE 1:750
JANUARY 12, 2024



KEY PLAN - 1:3000



- ALP-1

 ALUMINUM PANEL 1
- ALP-2

 ALUMINUM PANEL 2
- BRM

 BRICK MASONRY
- MS-1

 METAL SIDING 1
- MS-2

 METAL SIDING 2
- MS-3

 METAL SIDING 3
- ALW

 ALUMINUM WINDOWS/
 SPANDREL GLASS
- ALG

 ALUMINUM GUARD RAIL
- GLG

 GLASS GUARD RAIL

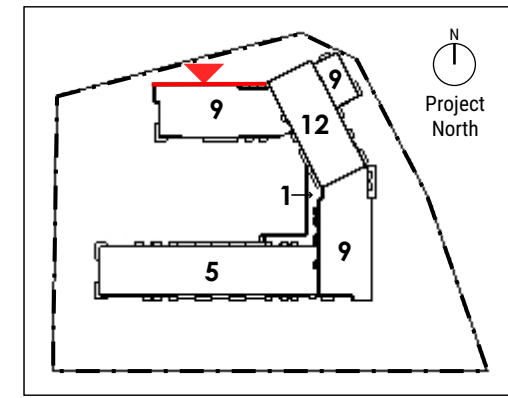
Hazeldean and Carp Road

1174 Carp Rd, Stittsville, ON

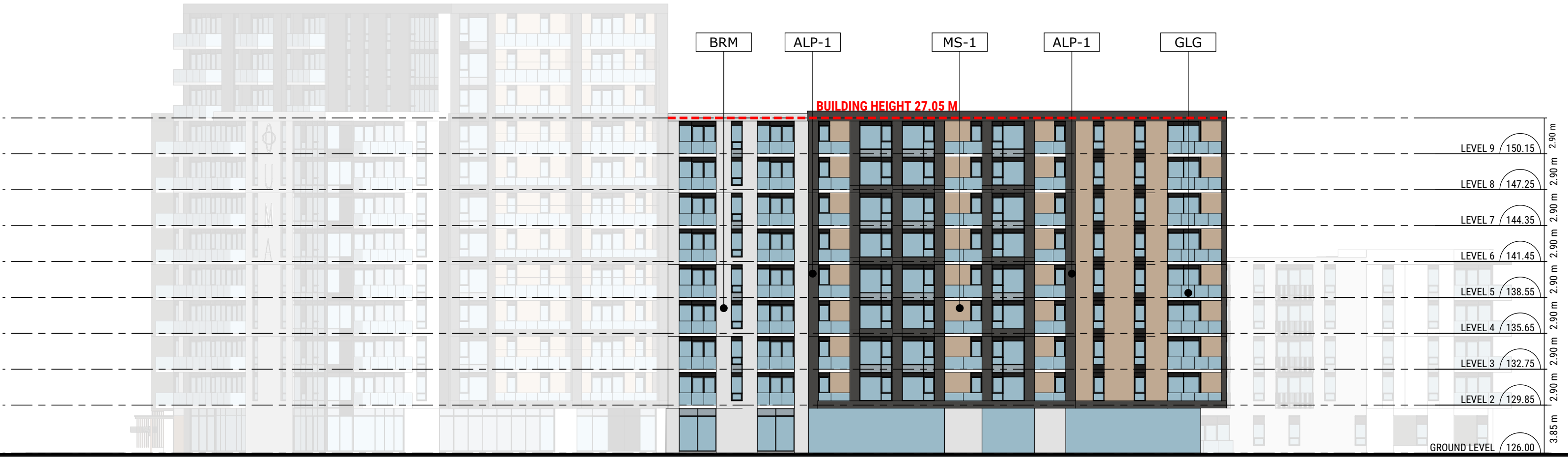
NORTH WEST ELEVATION

SCALE 1:300
MAR 2024





KEY PLAN - 1:3000



- ALP-1
ALUMINUM PANEL 1
- ALP-2
ALUMINUM PANEL 2
- BRM
BRICK MASONRY
- MS-1
METAL SIDING 1
- MS-2
METAL SIDING 2
- MS-3
METAL SIDING 3
- ALW
ALUMINUM WINDOWS/
SPANDREL GLASS
- ALG
ALUMINUM GUARD RAIL
- GLG
GLASS GUARD RAIL

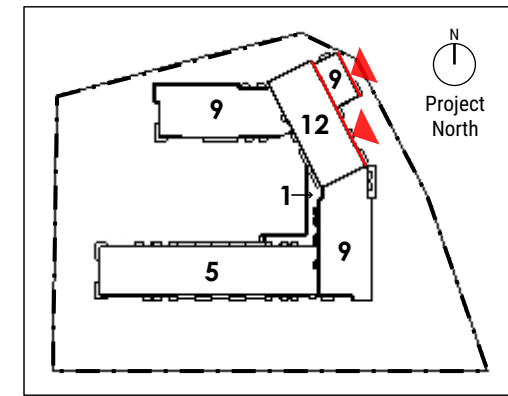


Hazeldean and Carp Road

1174 Carp Rd, Stittsville, ON

NORTH ELEVATION

SCALE 1:300
MAR 2024



- ALP-1
ALUMINUM PANEL 1
- ALP-2
ALUMINUM PANEL 2
- BRM
BRICK MASONRY
- MS-1
METAL SIDING 1
- MS-2
METAL SIDING 2
- MS-3
METAL SIDING 3
- ALW
ALUMINUM WINDOWS/
SPANDREL GLASS
- ALG
ALUMINUM GUARD RAIL
- GLG
GLASS GUARD RAIL

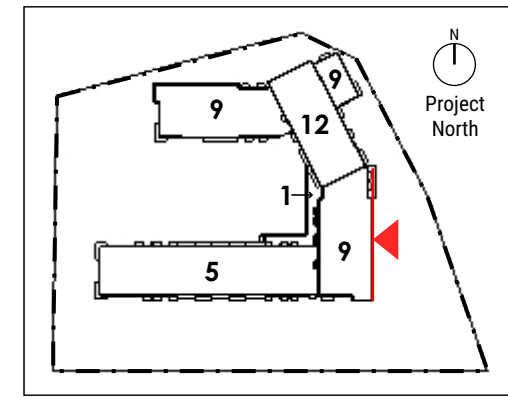


Hazeldean and Carp Road

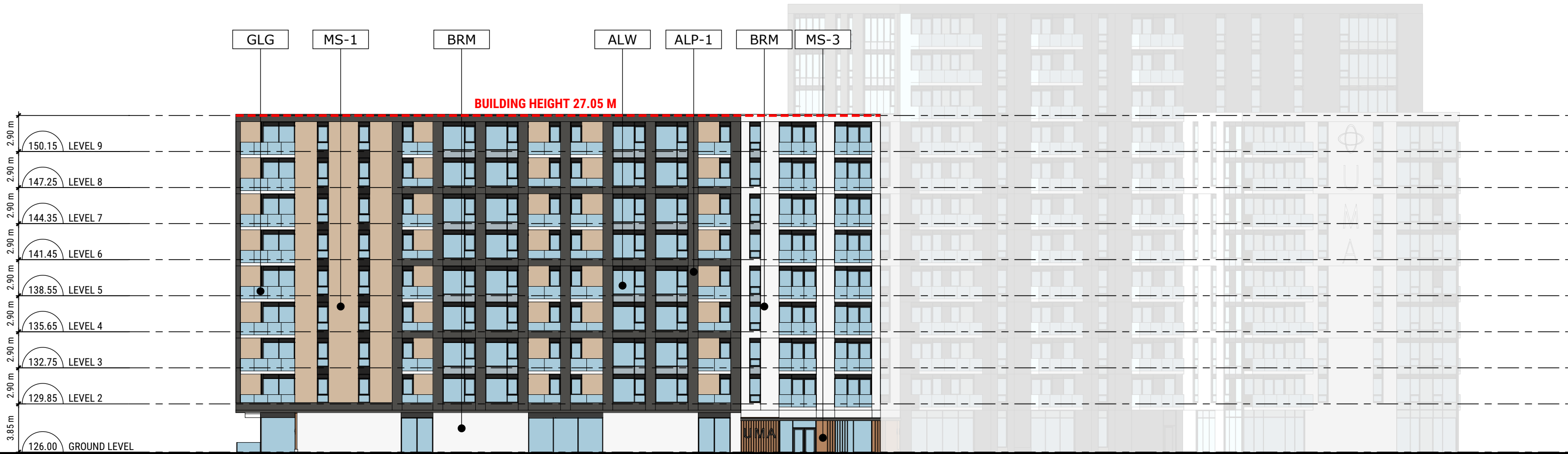
1174 Carp Rd, Stittsville, ON

NORTH EAST ELEVATION

SCALE 1:300
MAR 2024



KEY PLAN - 1:3000



- ALP-1
ALUMINUM PANEL 1
- ALP-2
ALUMINUM PANEL 2
- BRM
BRICK MASONRY
- MS-1
METAL SIDING 1
- MS-2
METAL SIDING 2
- MS-3
METAL SIDING 3
- ALW
ALUMINUM WINDOWS/
SPANDREL GLASS
- ALG
ALUMINUM GUARD RAIL
- GLG
GLASS GUARD RAIL

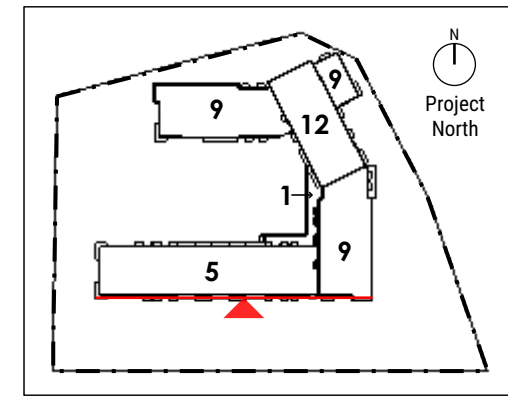


Hazeldean and Carp Road

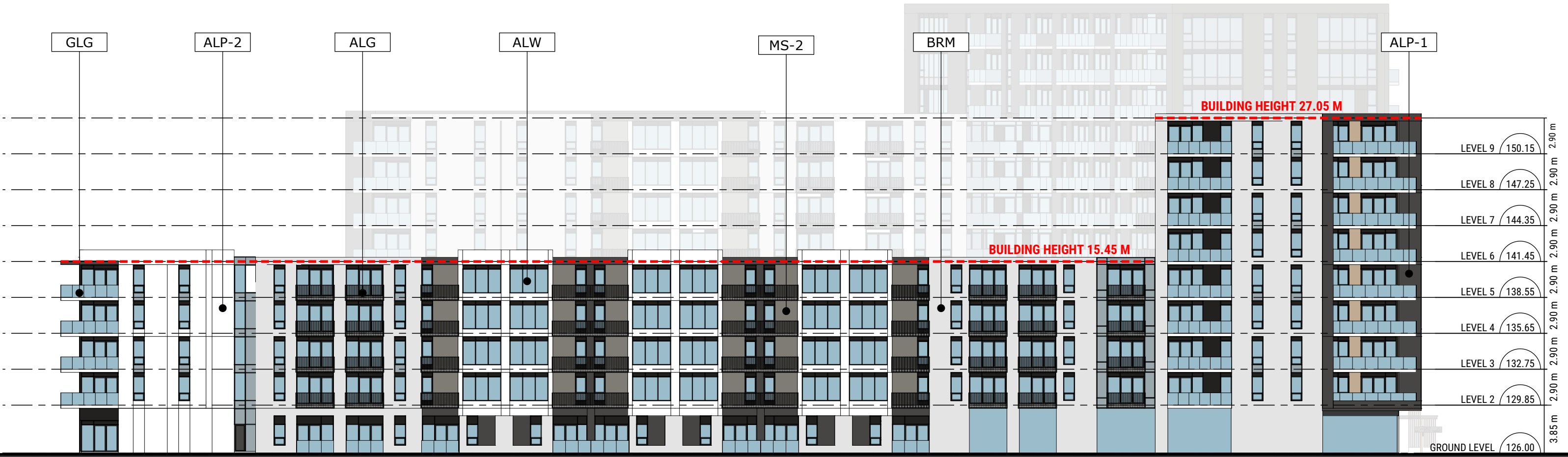
1174 Carp Rd, Stittsville, ON

EAST ELEVATION

SCALE 1:300
MAR 2024



KEY PLAN - 1:3000



- ALP-1

ALUMINUM PANEL 1
- ALP-2

ALUMINUM PANEL 2
- BRM

BRICK MASONRY
- MS-1

METAL SIDING 1
- MS-2

METAL SIDING 2
- MS-3

METAL SIDING 3
- ALW

ALUMINUM WINDOWS/
SPANDREL GLASS
- ALG

ALUMINUM GUARD RAIL
- GLG

GLASS GUARD RAIL

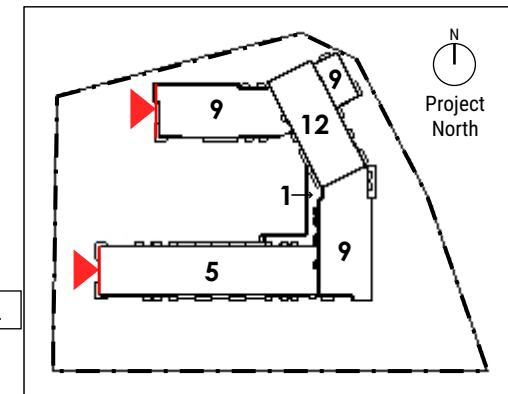
Hazeldean and Carp Road

1174 Carp Rd, Stittsville, ON

SOUTH ELEVATION

SCALE 1:300
MAR 2024





KEY PLAN - 1:3000

ALP-1 MS-1 BRM ALW GLG

GLG ALW MS-2 ALP-2 ALP-1

BUILDING HEIGHT 27.05 M

BUILDING HEIGHT 15.45 M

LEVEL 9	150.15	2.90 m
LEVEL 8	147.25	2.90 m
LEVEL 7	144.35	2.90 m
LEVEL 6	141.45	2.90 m
LEVEL 5	138.55	2.90 m
LEVEL 4	135.65	2.90 m
LEVEL 3	132.75	2.90 m
LEVEL 2	129.85	2.90 m
GROUND LEVEL	126.00	3.85 m

ALP-1

ALUMINUM PANEL 1

ALP-2

ALUMINUM PANEL 2

BRM

BRICK MASONRY

MS-1

METAL SIDING 1

MS-2

METAL SIDING 2

MS-3

METAL SIDING 3

ALW

ALUMINUM WINDOWS/
SPANDREL GLASS

ALG

ALUMINUM GUARD RAIL

GLG

GLASS GUARD RAIL

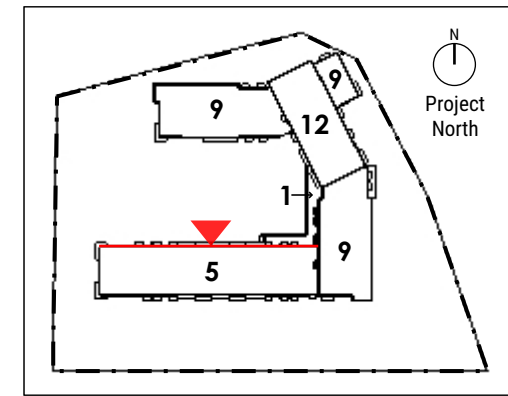


Hazeldean and Carp Road

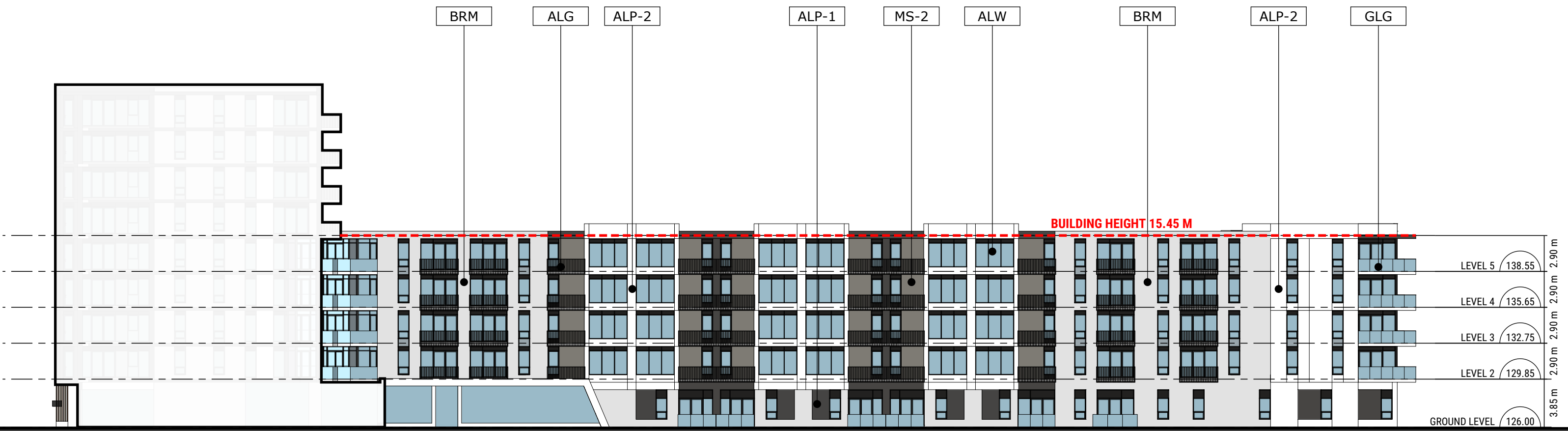
1174 Carp Rd, Stittsville, ON

WEST ELEVATION

SCALE 1:300
MAR 2024



KEY PLAN - 1:3000



- ALP-1

ALUMINUM PANEL 1
- ALP-2

ALUMINUM PANEL 2
- BRM

BRICK MASONRY
- MS-1

METAL SIDING 1
- MS-2

METAL SIDING 2
- MS-3

METAL SIDING 3
- ALW

ALUMINUM WINDOWS/
SPANDREL GLASS
- ALG

ALUMINUM GUARD RAIL
- GLG

GLASS GUARD RAIL

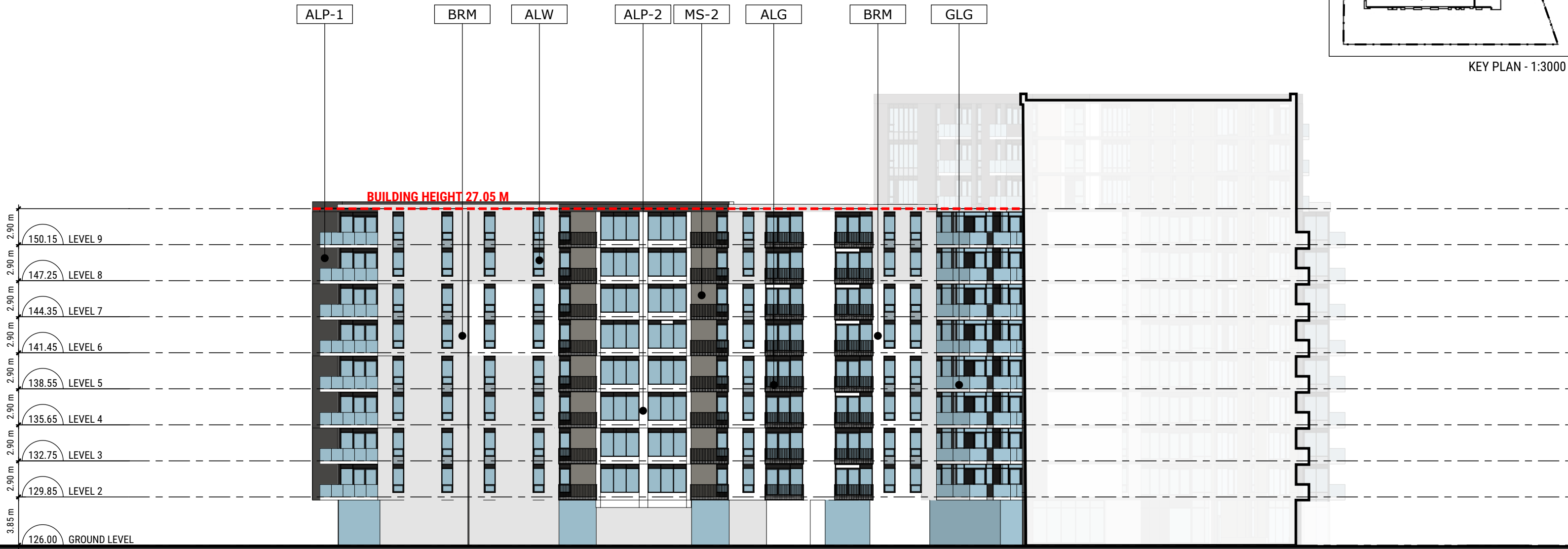
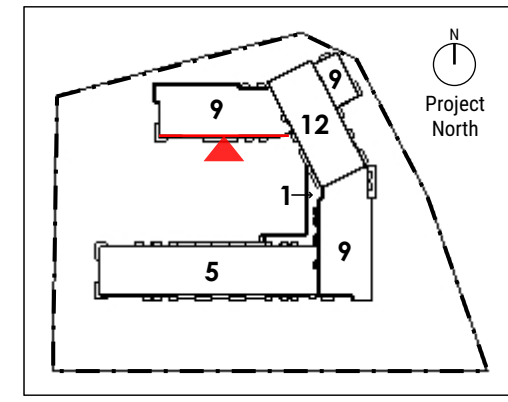
Hazeldean and Carp Road

1174 Carp Rd, Stittsville, ON

NORTH ELEVATION - COURTYARD

SCALE 1:300
MAR 2024





- ALP-1
ALUMINUM PANEL 1
- ALP-2
ALUMINUM PANEL 2
- BRM
BRICK MASONRY
- MS-1
METAL SIDING 1
- MS-2
METAL SIDING 2
- MS-3
METAL SIDING 3
- ALW
ALUMINUM WINDOWS/
SPANDREL GLASS
- ALG
ALUMINUM GUARD RAIL
- GLG
GLASS GUARD RAIL

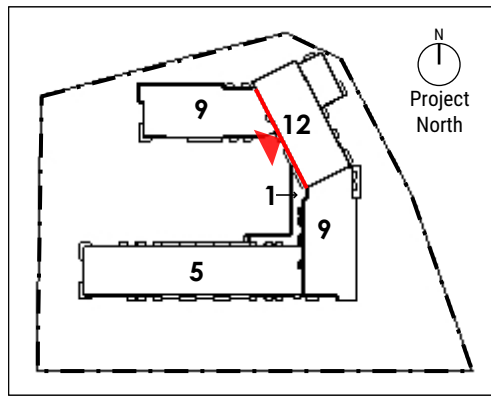


Hazeldean and Carp Road

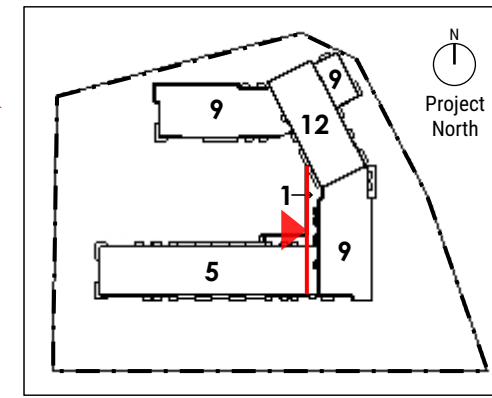
1174 Carp Rd, Stittsville, ON

SOUTH ELEVATION - COURTYARD

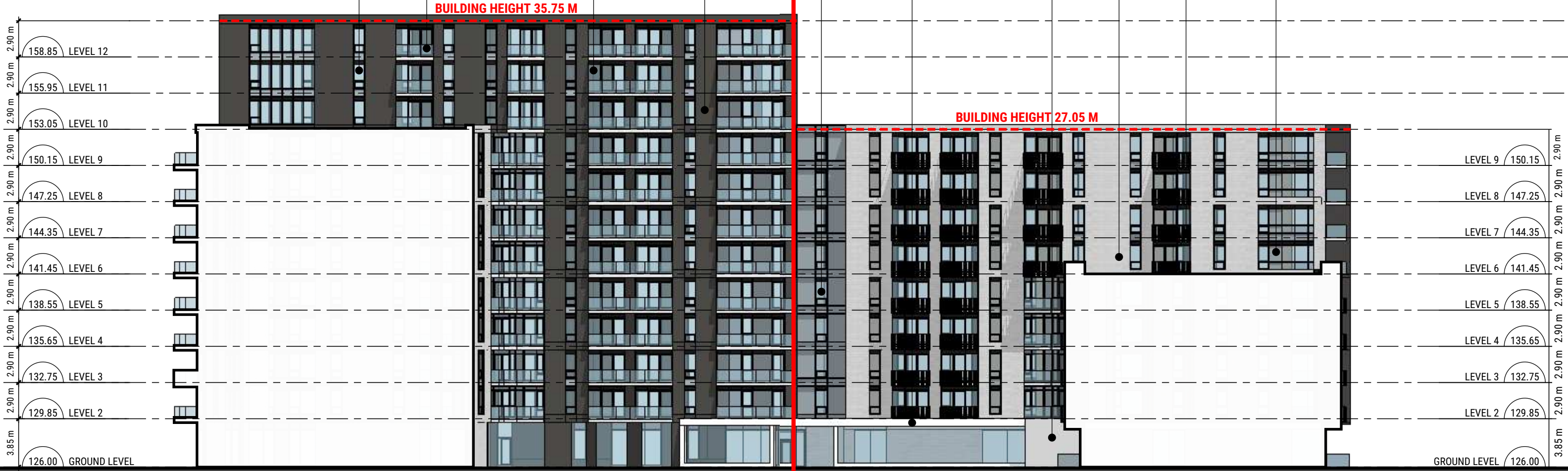
SCALE 1:300
MAR 2024



KEY PLAN - 1:3000



KEY PLAN - 1:3000



SOUTH WEST ELEVATION - COURTYARD

WEST ELEVATION - COURTYARD

- ALP-1**
ALUMINUM PANEL 1
- ALP-2**
ALUMINUM PANEL 2
- BRM**
BRICK MASONRY
- MS-1**
METAL SIDING 1
- MS-2**
METAL SIDING 2
- MS-3**
METAL SIDING 3
- ALW**
ALUMINUM WINDOWS/
SPANDREL GLASS
- ALG**
ALUMINUM GUARD RAIL
- GLG**
GLASS GUARD RAIL



Hazeldean and Carp Road
 1174 Carp Rd, Stittsville, ON

SOUTH WEST & WEST ELEVATION - COURTYARD

SCALE 1:300
 MAR 2024

Sun Shadow Analysis Written Summary

Shadow impacts:

Sensitive areas within the sun shadow analysis' study area include a arterial mainstreet (Hazeldean Road), parks, and plazas. This sun shadow study represents the park spaces as a green hatch, plazas a blue hatch, and Hazeldean Road as a blue dashed line (refer to sensitive areas legend).

The public spaces including parks, open spaces and plazas are not impacted by the criteria of any new net shadow that results in an average of 50% of any public space being cast in shadow for 5 or more hourly interval times during the September test date.

The arterial mainstreet of Hazeldean Road is not impacted by the criteria of a new net shadow in any one spot for more than 3 consecutive hourly test times of the sidewalk on the opposite side of the street, being cast in shadow during the September test date.

No new net shadow within the no impact zone of any residential private outdoor amenity space is being cast in shadow for more than two consecutive hourly test times during the June and September test date. The times where a net shadow would cast over the rear yard of the abutting low-rise residential building is June at 7:00PM (see page 16), June at 8:00PM (see page 17, where most residential buildings are already in shadow), and September at 6:00PM (see page 28). In summary, the proposed building projects less rear yard shadow compared to the as-of-right massing.

Latitude and Longitude of Site:

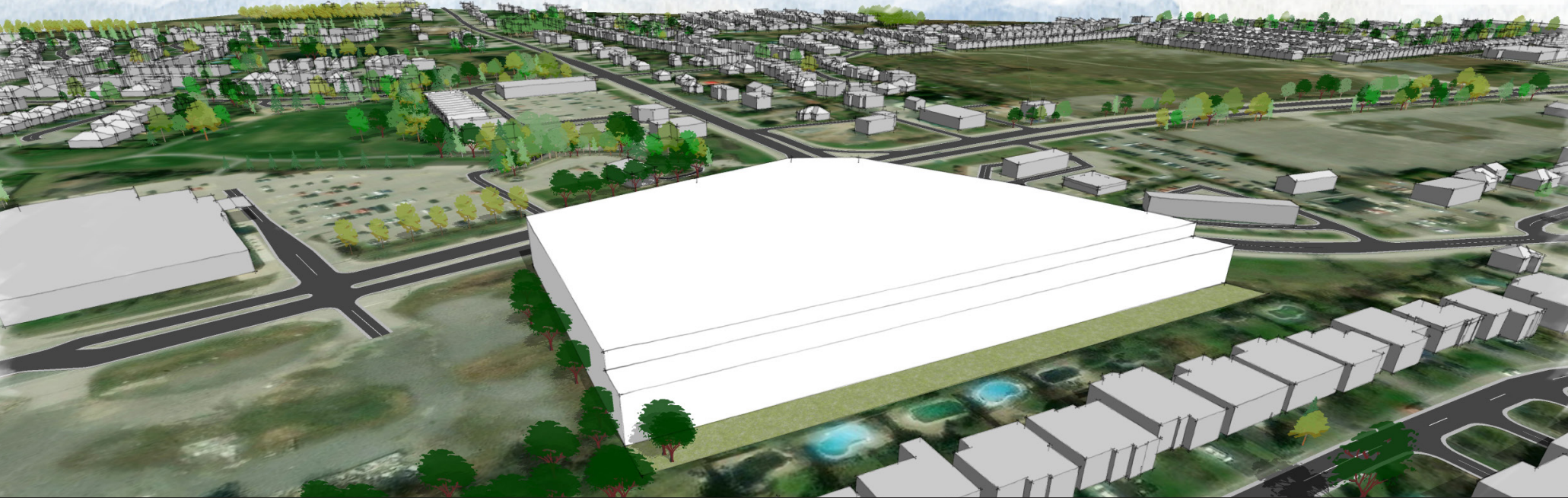
Lat: 45.266760
Lng: -75.938960



PROPOSED DEVELOPMENT



AS-OF-RIGHT



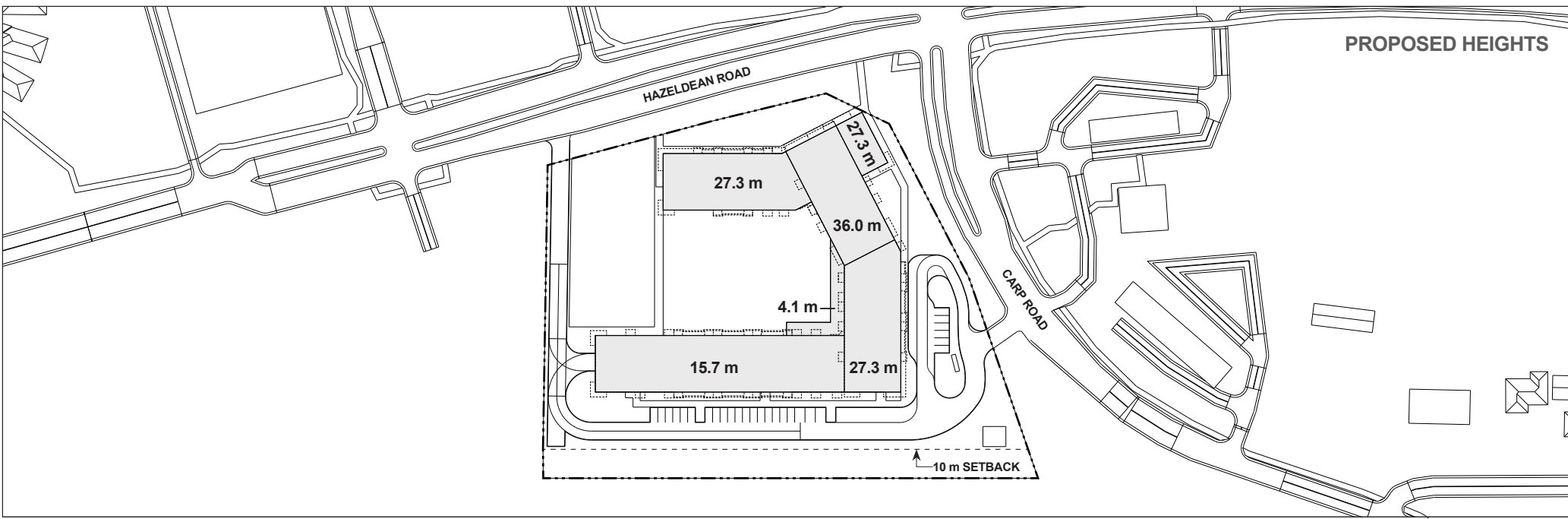
HAZELDEAN & CARP RD
1174 CARP RD, STITTSVILLE, ON
3D Massing Comparison - Looking North East

Company:
Prepared by:
Date:

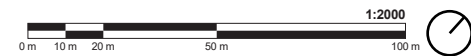
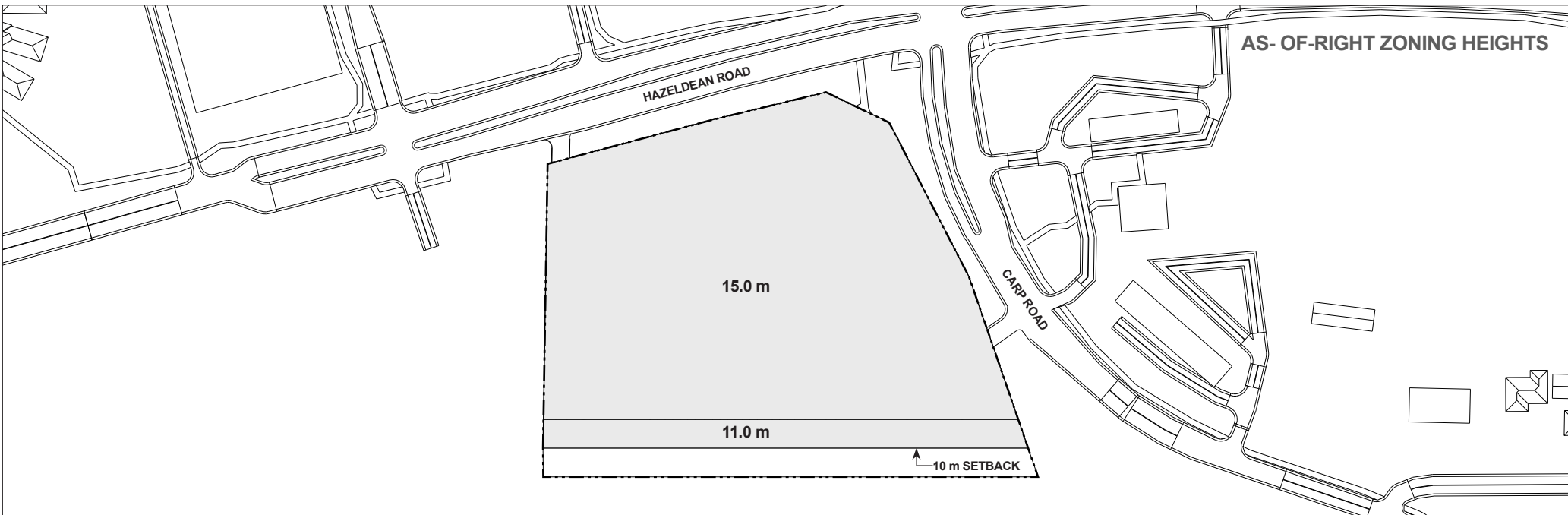
Hobin Architecture
Cristina Hoang
Dec 19, 2023

Application No.: UDRP Presentation
Application Type: _____

PROPOSED HEIGHTS



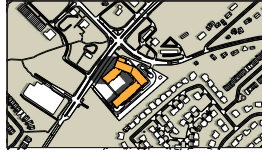
AS-OF-RIGHT ZONING HEIGHTS



JUNE 21



8:00 AM



9:00 AM



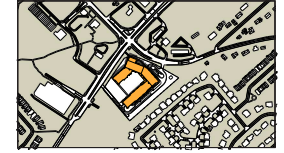
10:00 AM



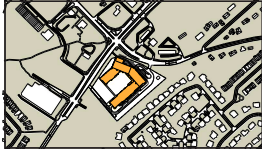
11:00 AM



12:00 PM



1:00 PM



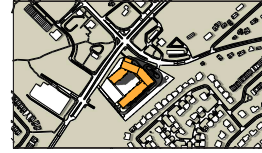
2:00 PM



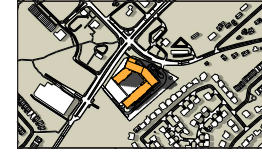
3:00 PM



4:00 PM



5:00 PM



6:00 PM



7:00 PM



8:00 PM

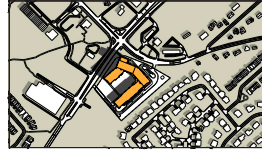
SEPTEMBER 21



8:00 AM



9:00 AM



10:00 AM



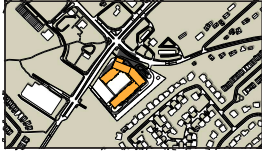
11:00 AM



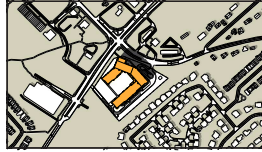
12:00 PM



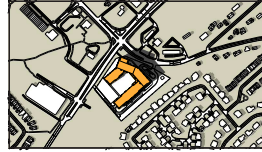
1:00 PM



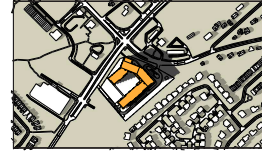
2:00 PM



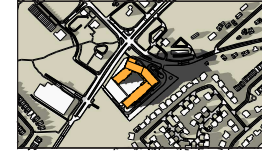
3:00 PM



4:00 PM



5:00 PM



6:00 PM

DECEMBER 21



9:00 AM



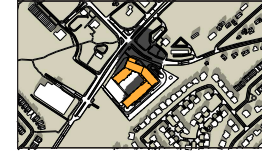
10:00 AM



11:00 AM



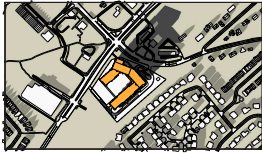
12:00 PM



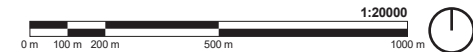
1:00 PM



2:00 PM



3:00 PM



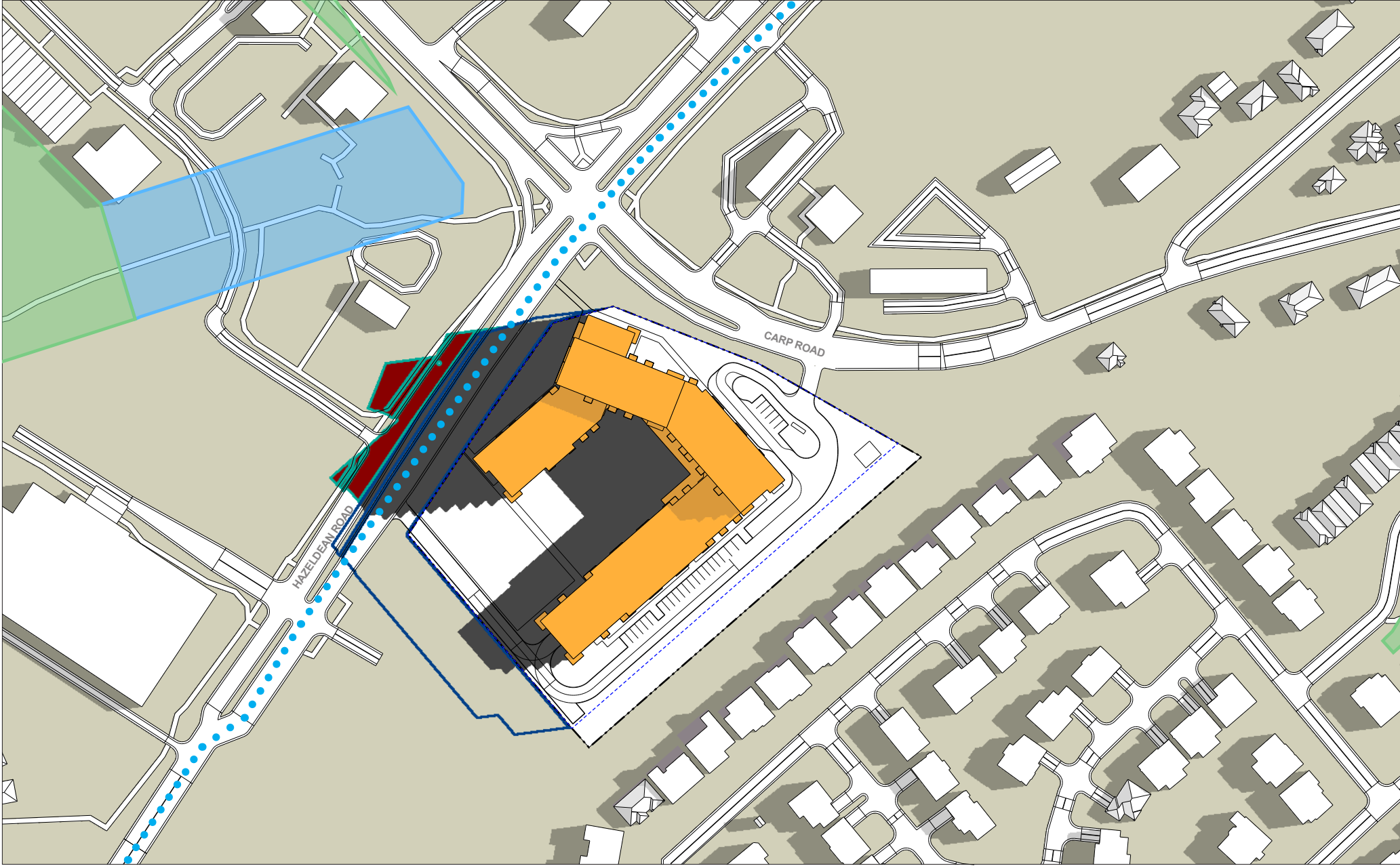
1:20000



HAZELDEAN & CARP RD
1174 CARP RD, STITTSVILLE, ON
Top-View Shadow Analysis - Summary

Company: Hobin Architecture
Prepared by: Cristina Hoang
Date: Dec 19, 2023

Application No.: UDRP Presentation
Application Type: _____
Scale: 1:20000



LEGEND:

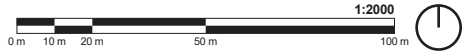
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow

- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right

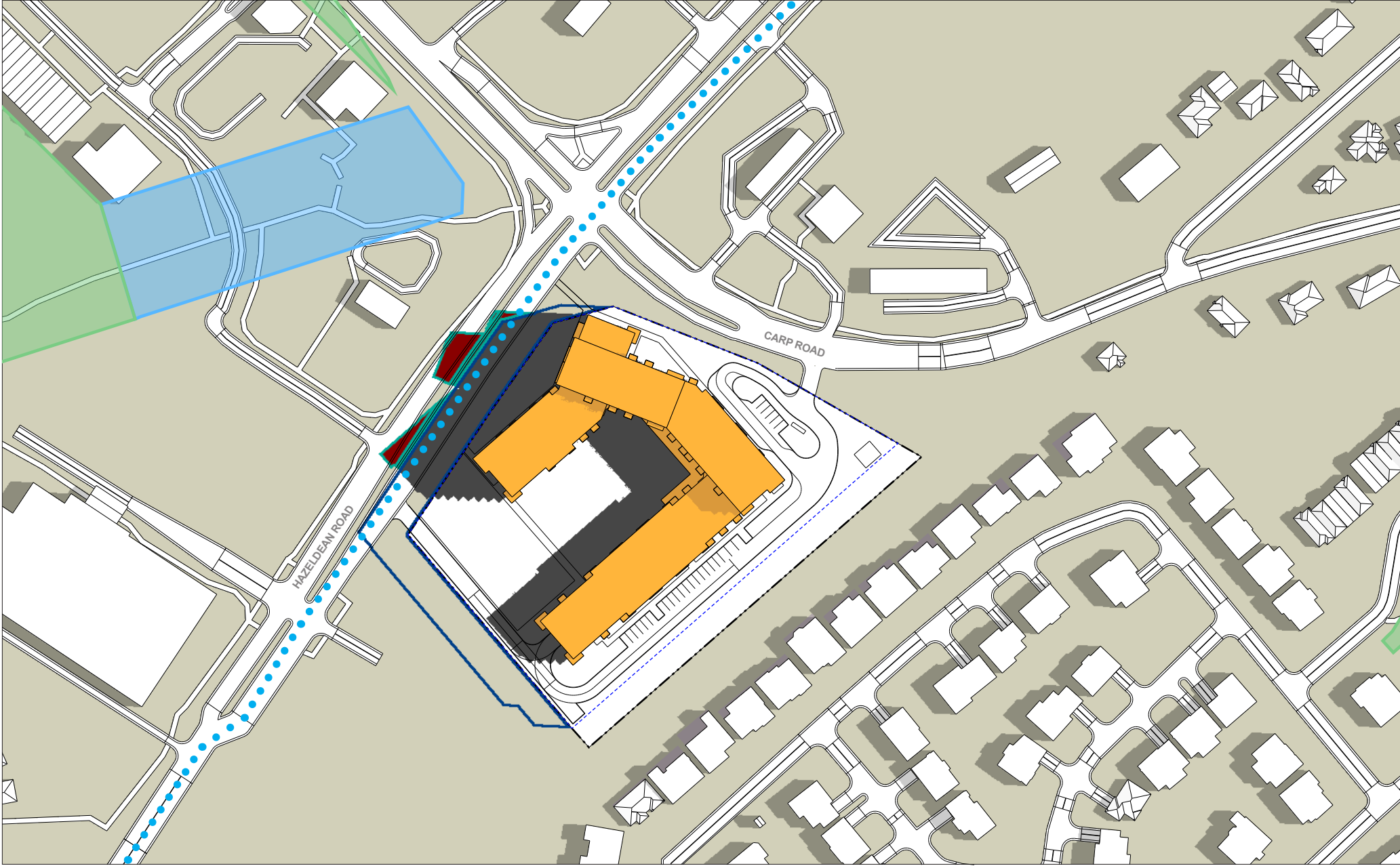


HAZELDEAN & CARP RD
 1174 CARP RD, STITTSVILLE, ON
 Top-View Shadow Analysis

Company: Hobin Architecture
Prepared by: Cristina Hoang
Date: Dec 19, 2023

Application No.: UDRP Presentation
Application Type: _____
Scale: 1:2000

Figure test time:
JUNE 21 8:00am
 Eastern Daylight Time (EDT) = Universal Time, 4 hours
 Page 5 of 35



LEGEND:

- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

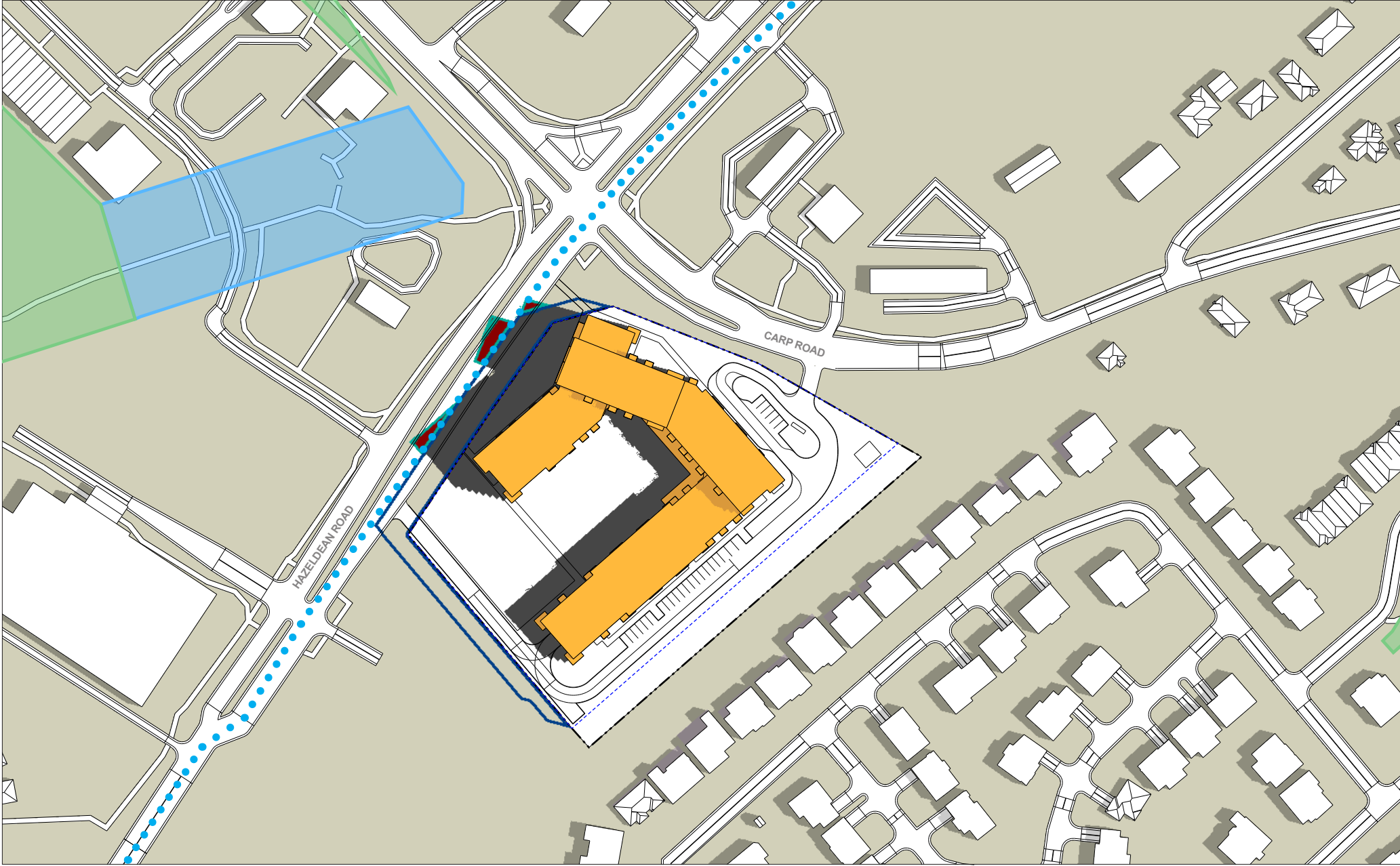
SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right

0 m 10 m 20 m 50 m 100 m

1:2000



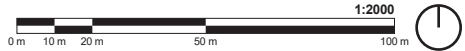
LEGEND:

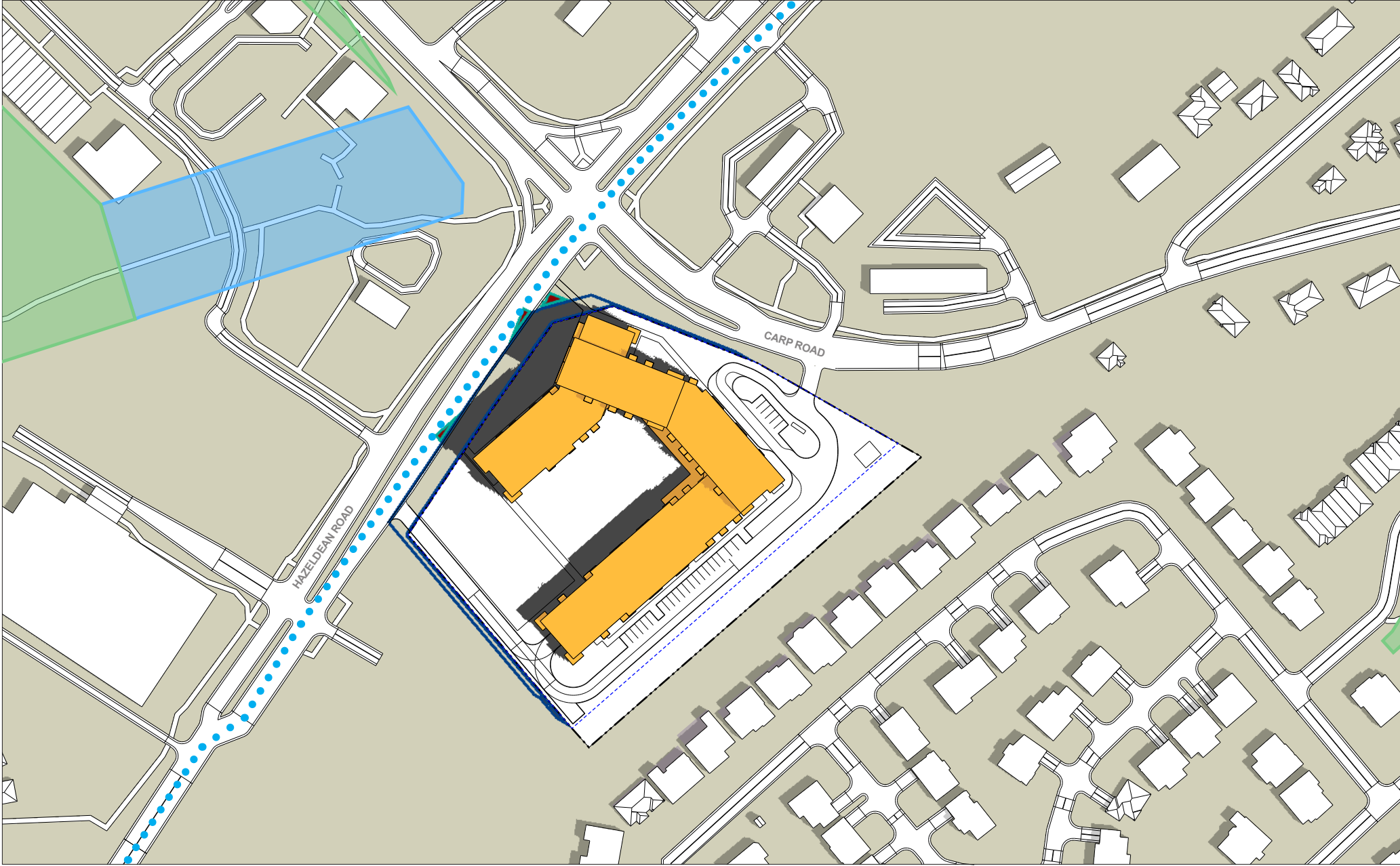
- New Shadow Outline
- AOR Footprint
- AOR Shadow Outline
- Property Line
- New Development
- Overlap of AOR & New Shadow
- New Net Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right





LEGEND:

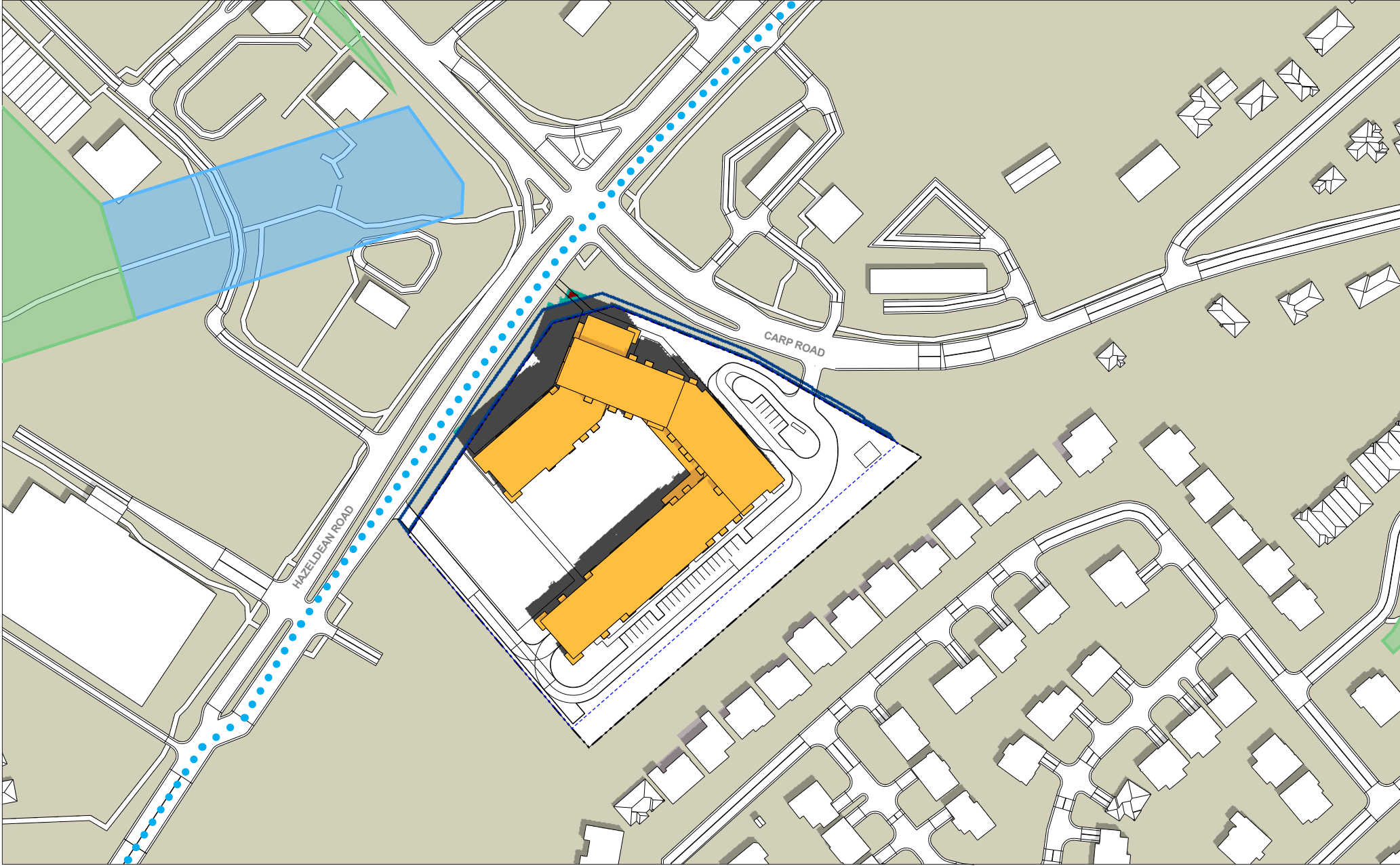
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line
- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

SENSITIVE AREAS:

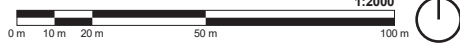
- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

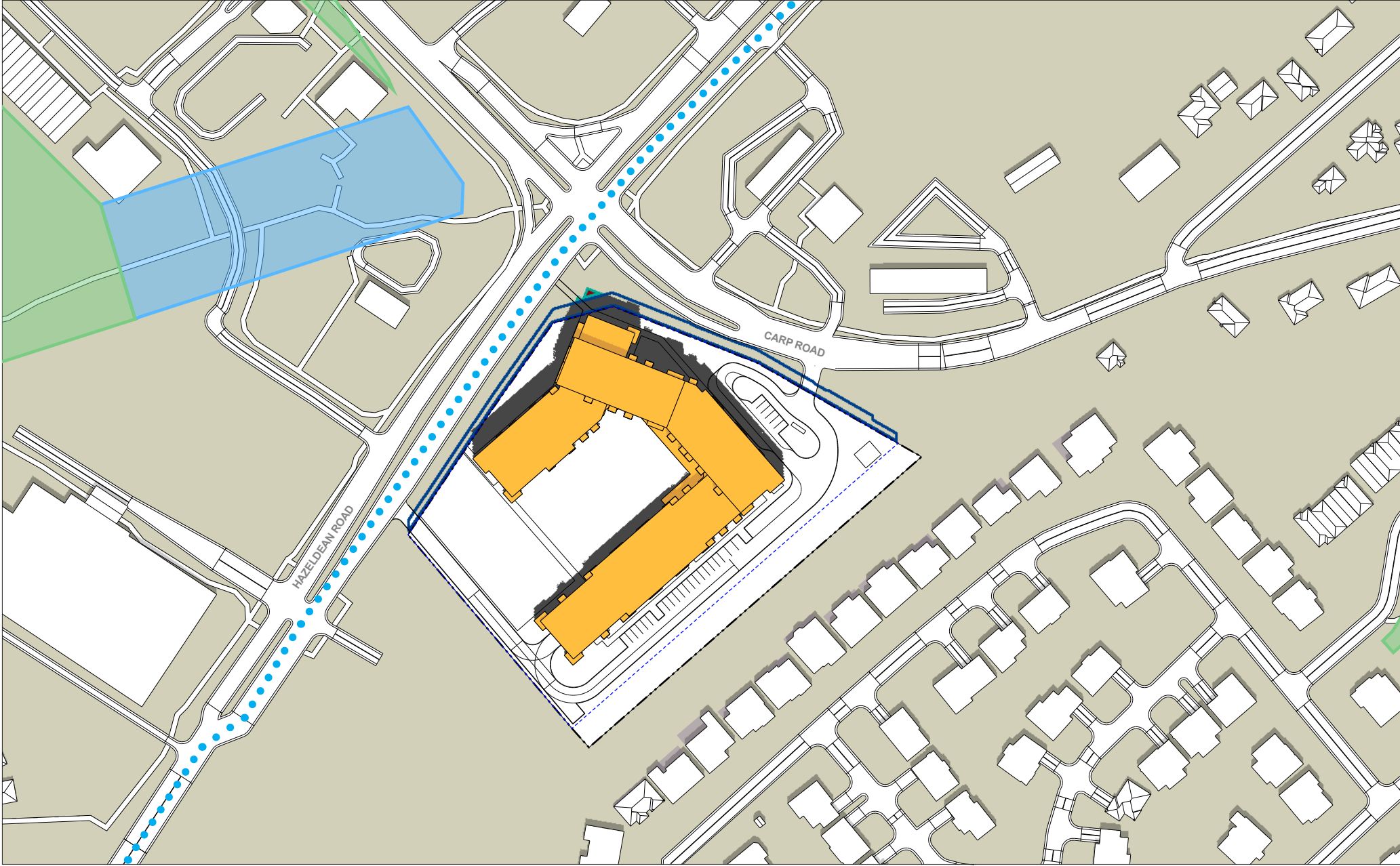
New = Proposed Development
AOR = As-Of-Right

0 m 10 m 20 m 50 m 100 m 1:2000

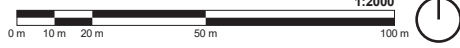


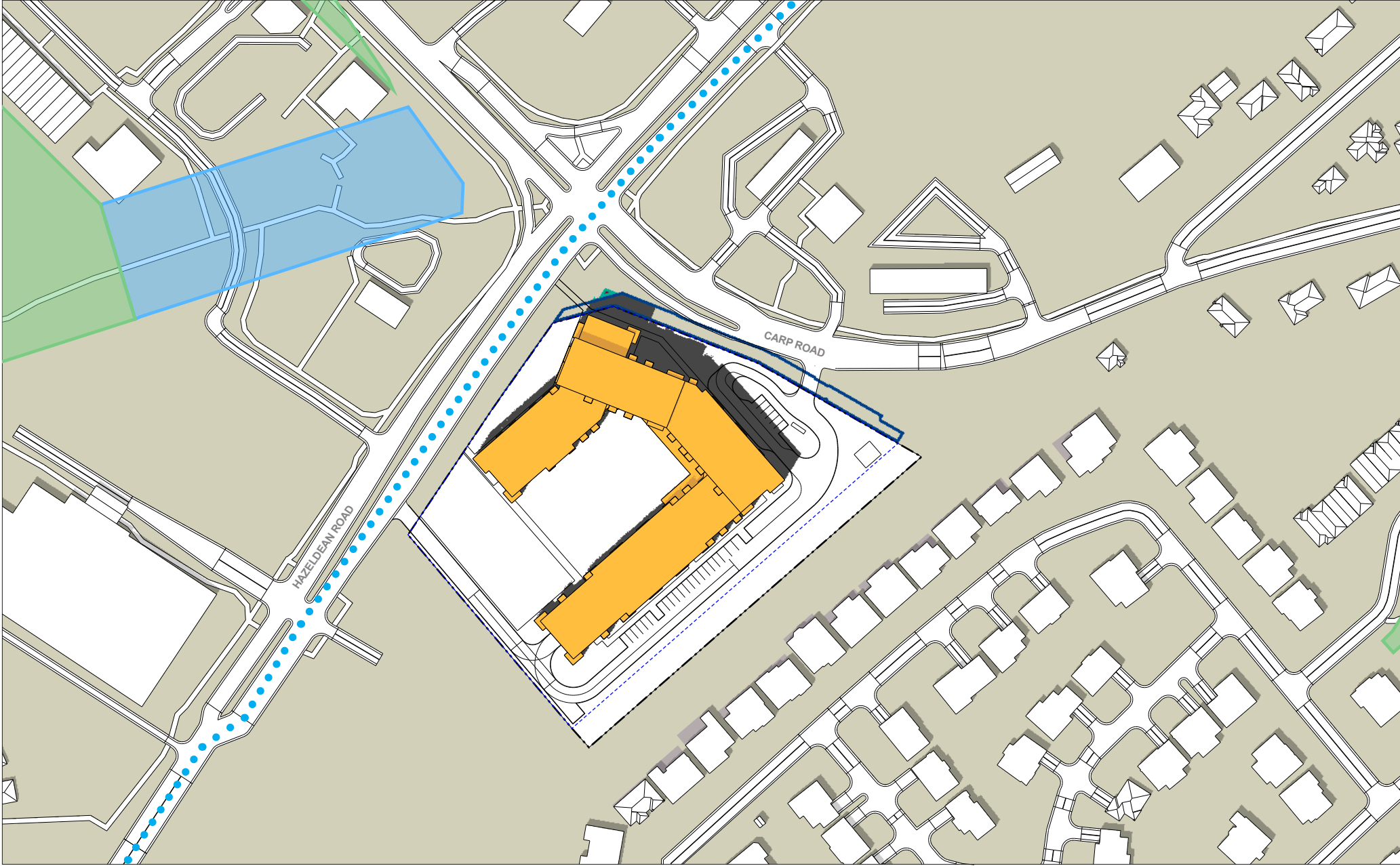
LEGEND:		SENSITIVE AREAS:		
New Shadow Outline	AOR Footprint	7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)	Plaza	New = Proposed Development AOR = As-Of-Right
AOR Shadow Outline	New Net Shadow	Property Line	Park Spaces	
New Development	Overlap of AOR & New Shadow		Traditional / Arterial Mainstreets	





LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right
<ul style="list-style-type: none"> New Shadow Outline AOR Shadow Outline New Development 	<ul style="list-style-type: none"> AOR Footprint New Net Shadow Overlap of AOR & New Shadow 	<ul style="list-style-type: none"> 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings) Property Line 	<ul style="list-style-type: none"> Plaza Park Spaces ••• Traditional / Arterial Mainstreets 	





LEGEND:

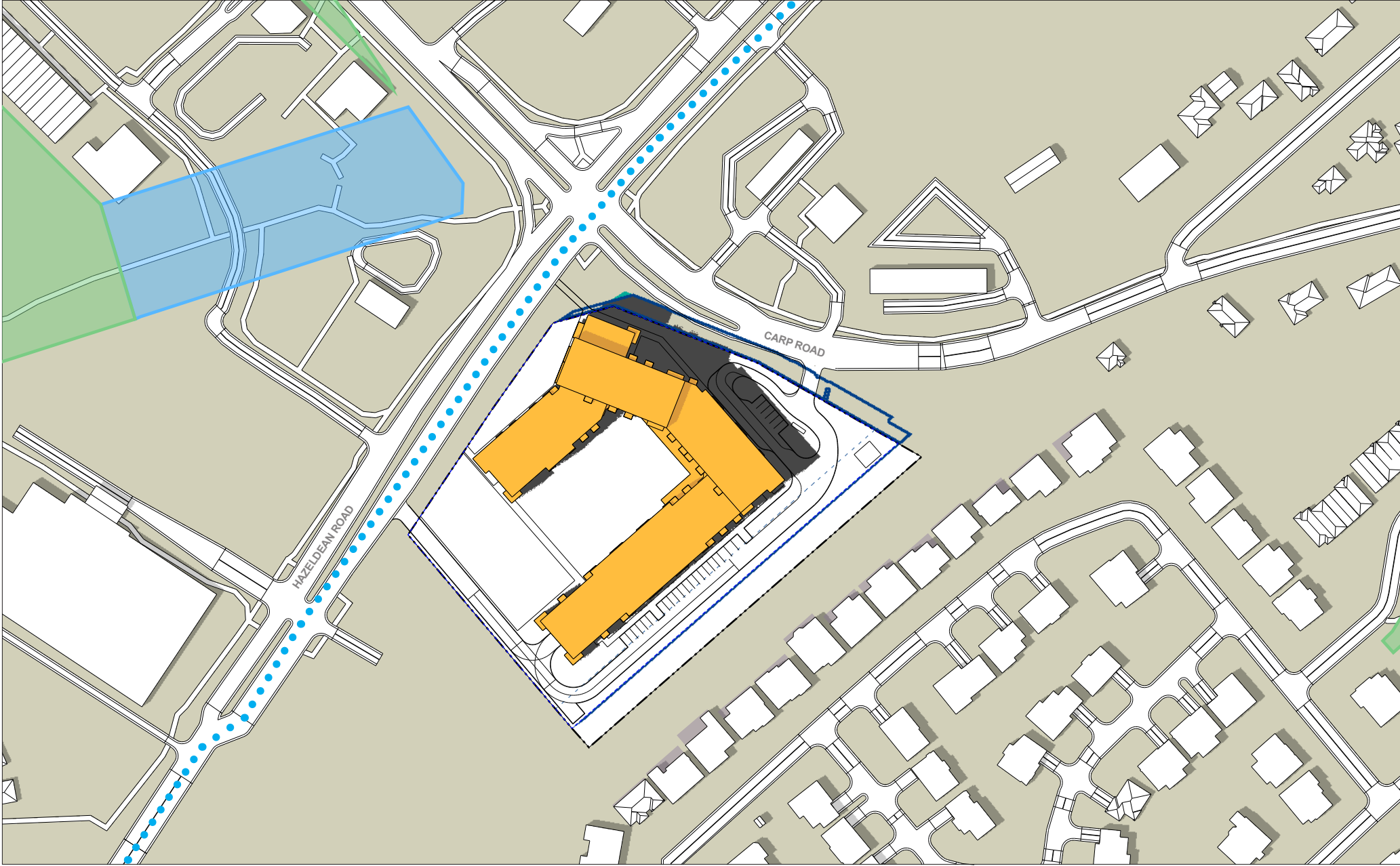
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

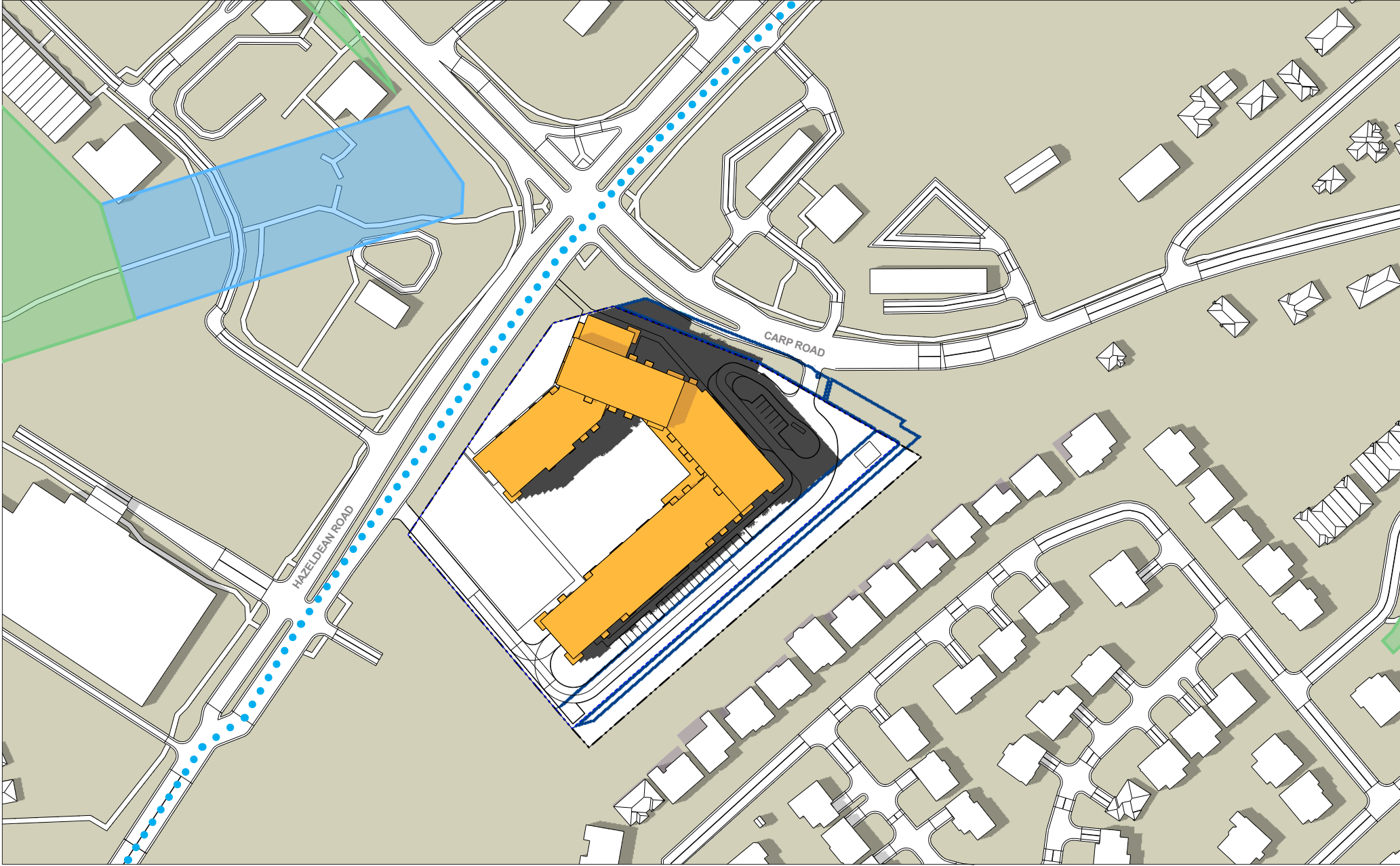
- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right

0 m 10 m 20 m 50 m 100 m 1:2000



LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right
<ul style="list-style-type: none"> New Shadow Outline AOR Shadow Outline New Development 	<ul style="list-style-type: none"> AOR Footprint New Net Shadow Overlap of AOR & New Shadow 	<ul style="list-style-type: none"> 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings) Property Line 	<ul style="list-style-type: none"> Plaza Park Spaces ••••• Traditional / Arterial Mainstreets 	



LEGEND:

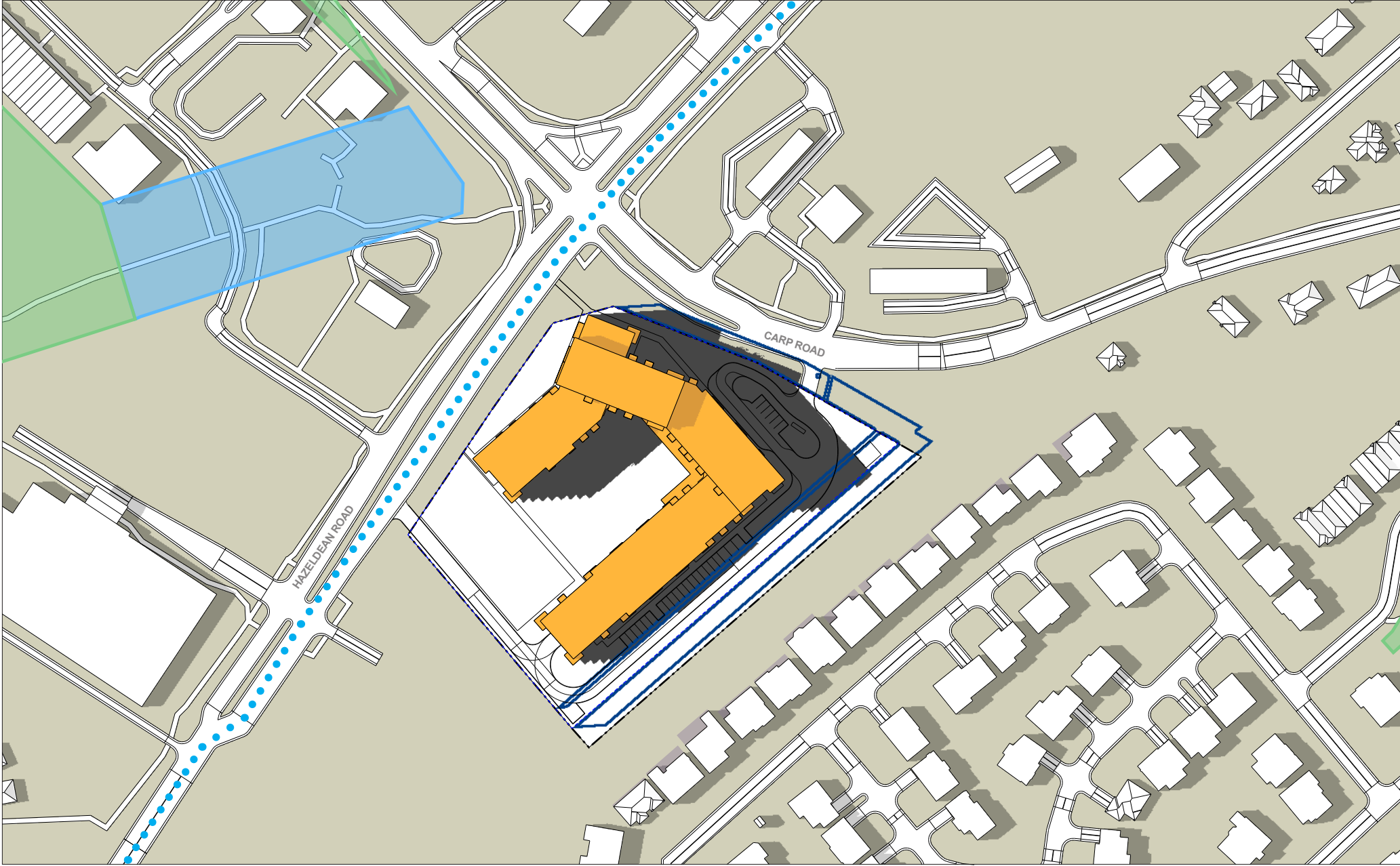
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right

0 m 10 m 20 m 50 m 100 m 1:2000



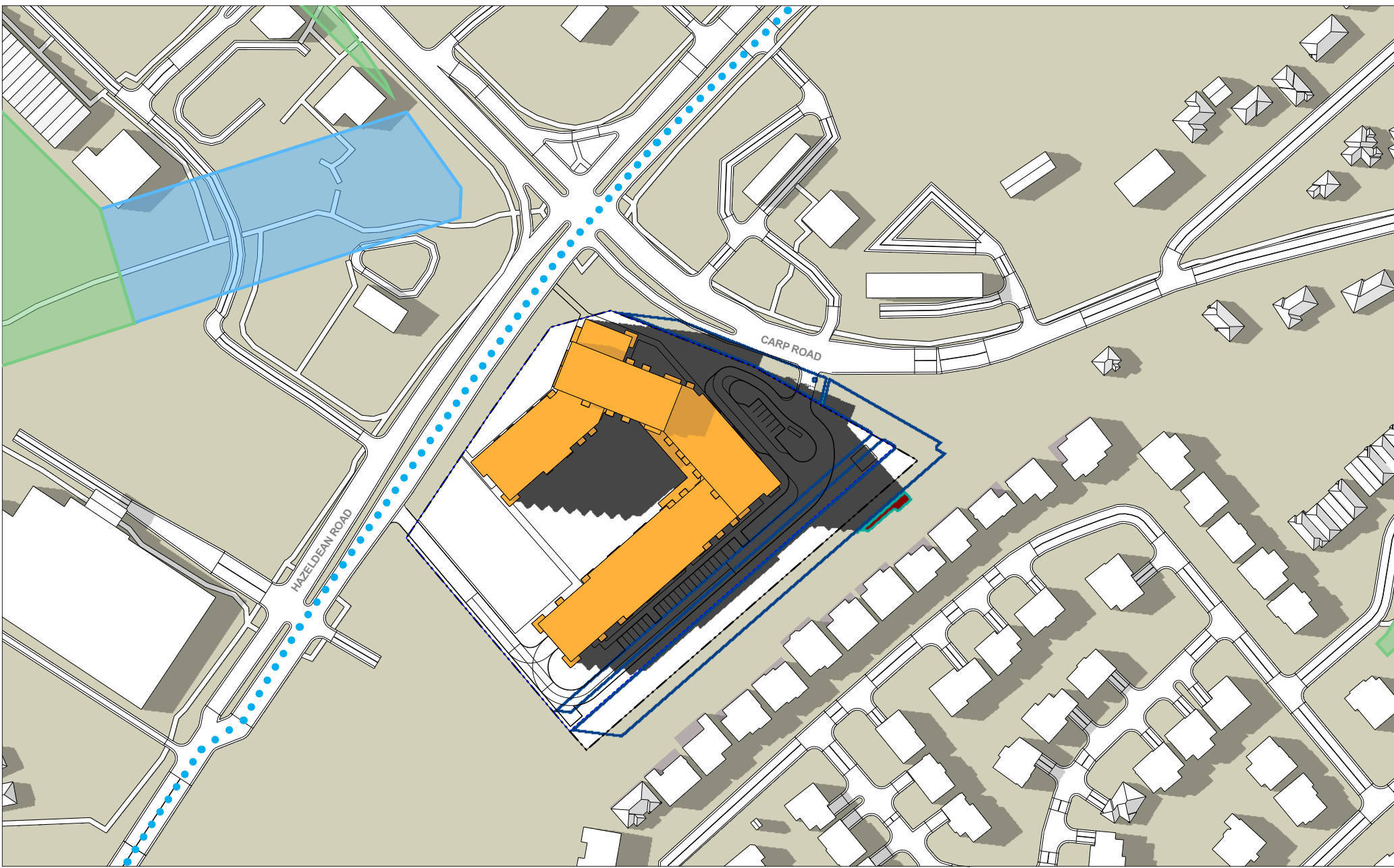
LEGEND:

- New Shadow Outline
- AOR Footprint
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Plaza
- AOR Shadow Outline
- New Net Shadow
- Property Line
- Park Spaces
- New Development
- Overlap of AOR & New Shadow
- Traditional / Arterial Mainstreets

SENSITIVE AREAS:

New = Proposed Development
AOR = As-Of-Right





LEGEND:

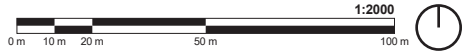
- New Shadow Outline
- AOR Footprint
- AOR Shadow Outline
- New Net Shadow
- New Development
- Overlap of AOR & New Shadow

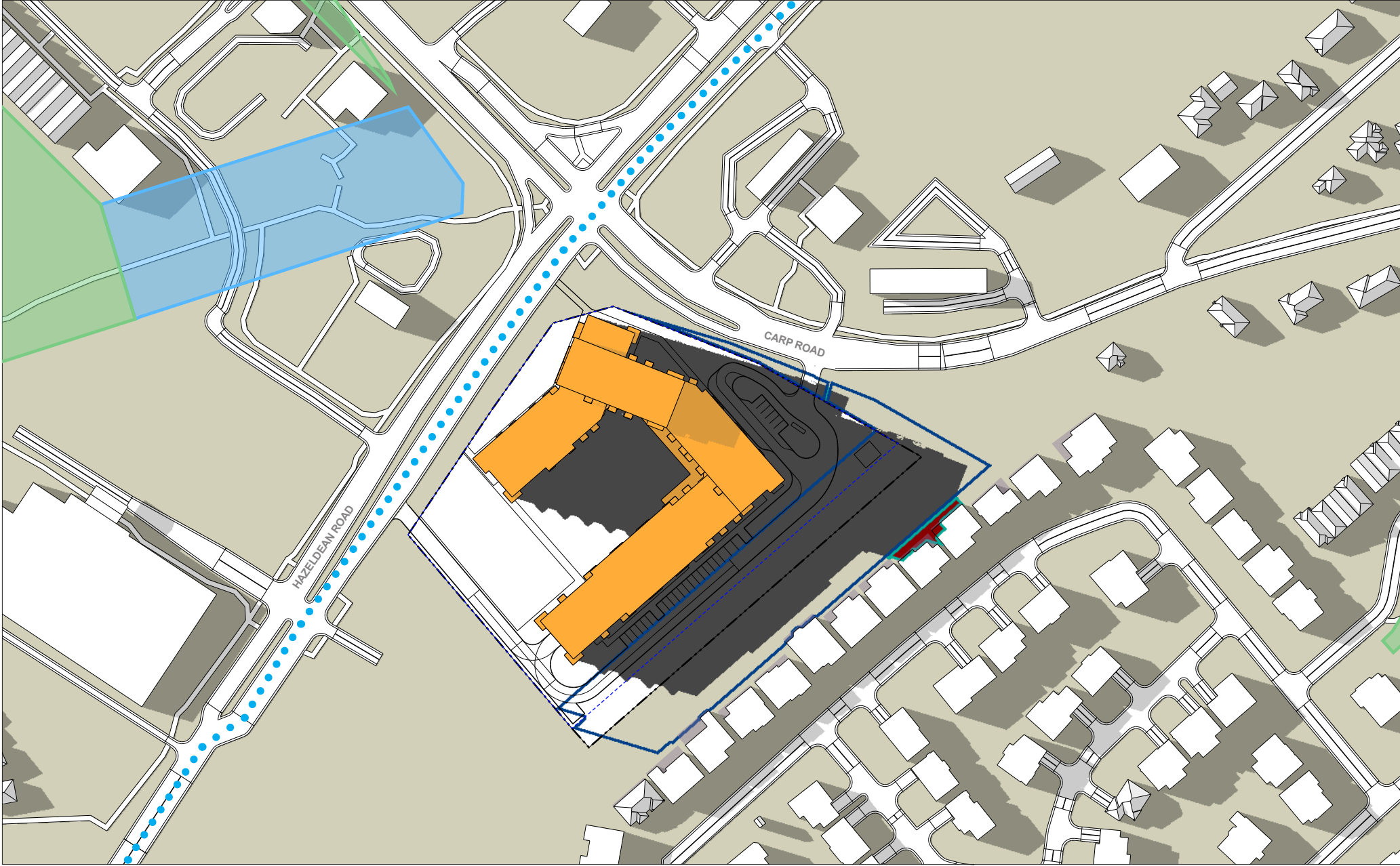
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right





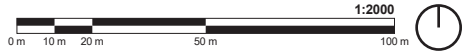
LEGEND:

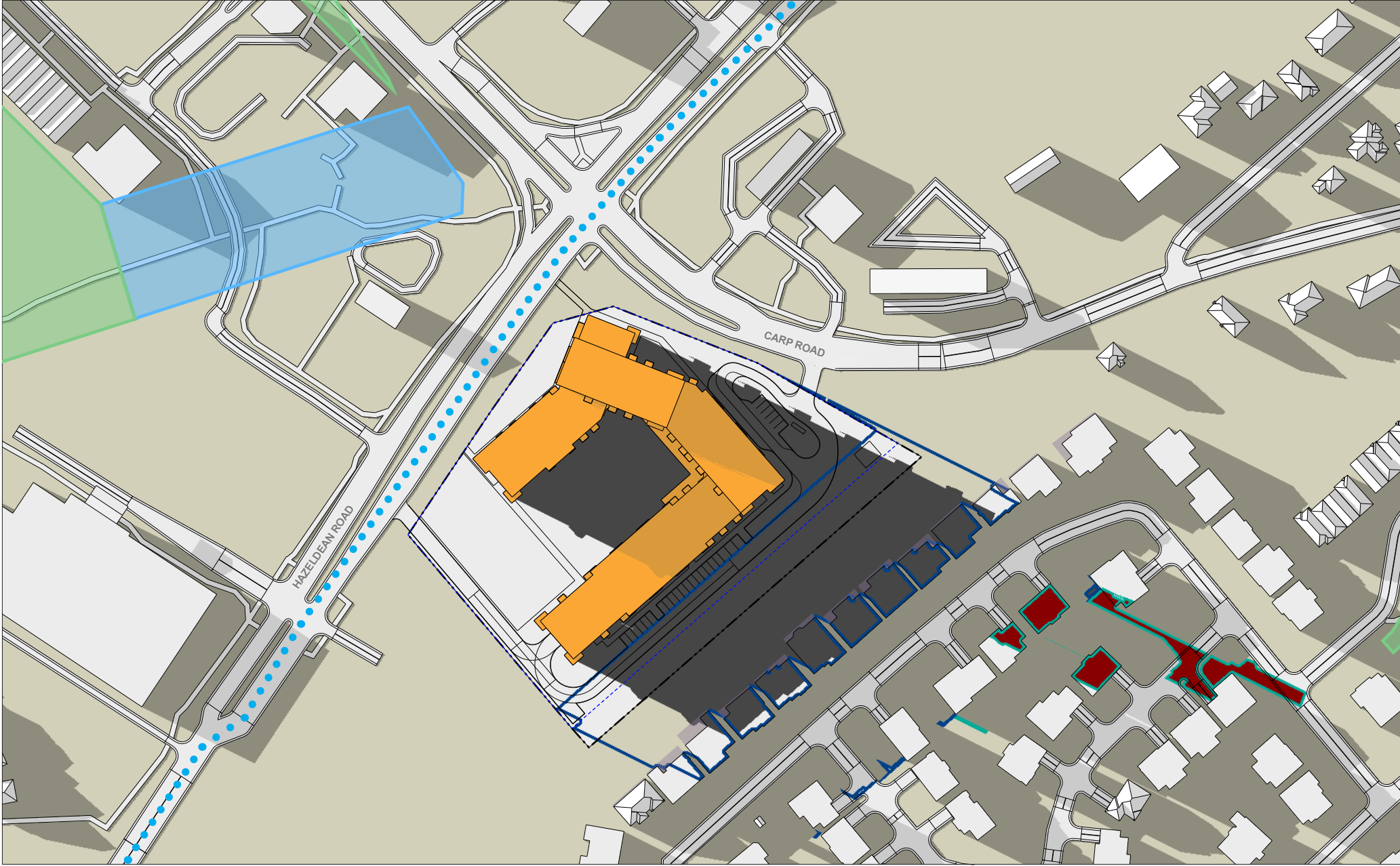
- New Shadow Outline
- AOR Footprint
- AOR Shadow Outline
- Property Line
- New Development
- Overlap of AOR & New Shadow
- New Net Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right





LEGEND:

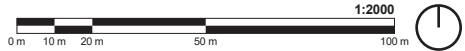
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow

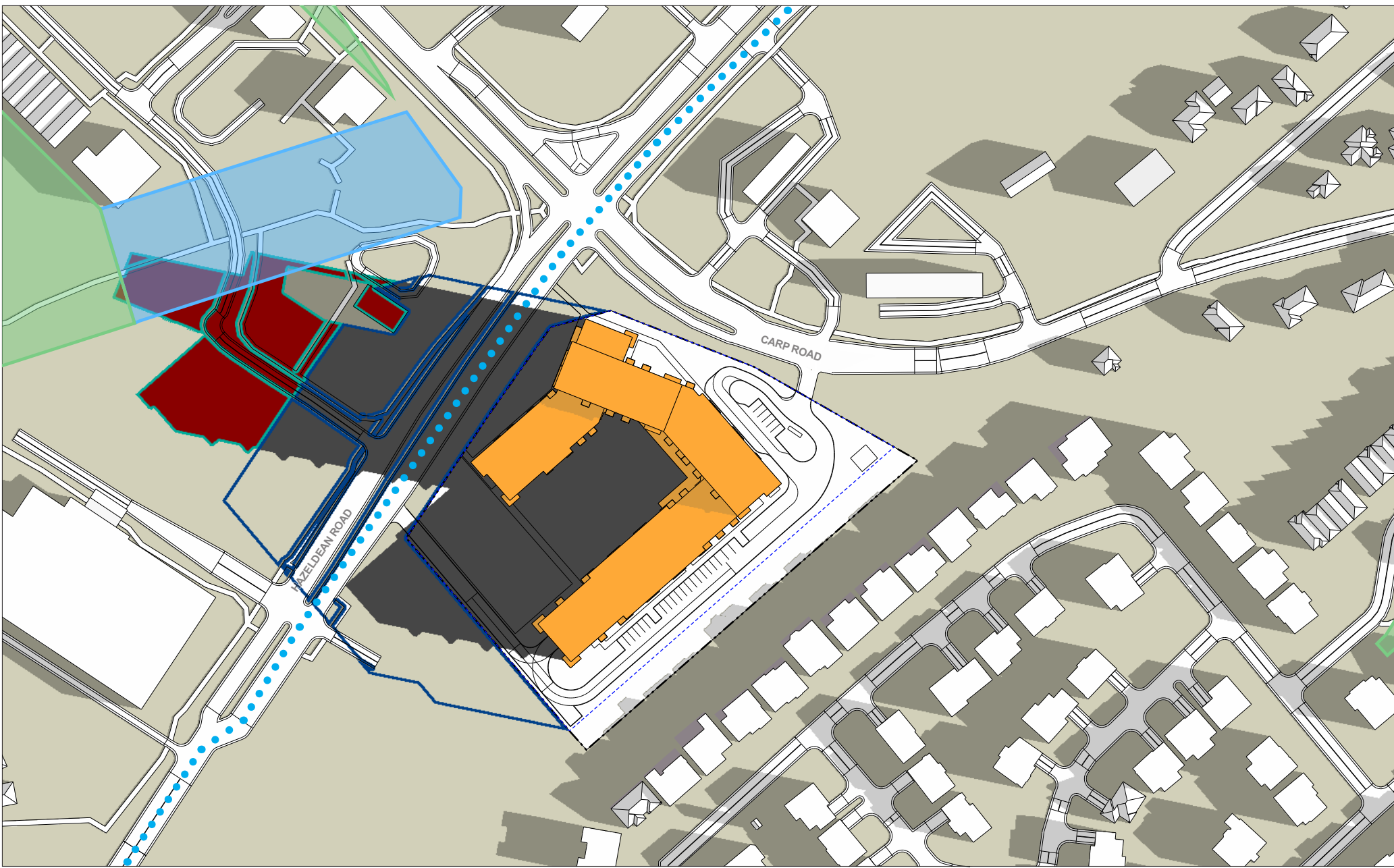
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right





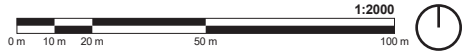
LEGEND:

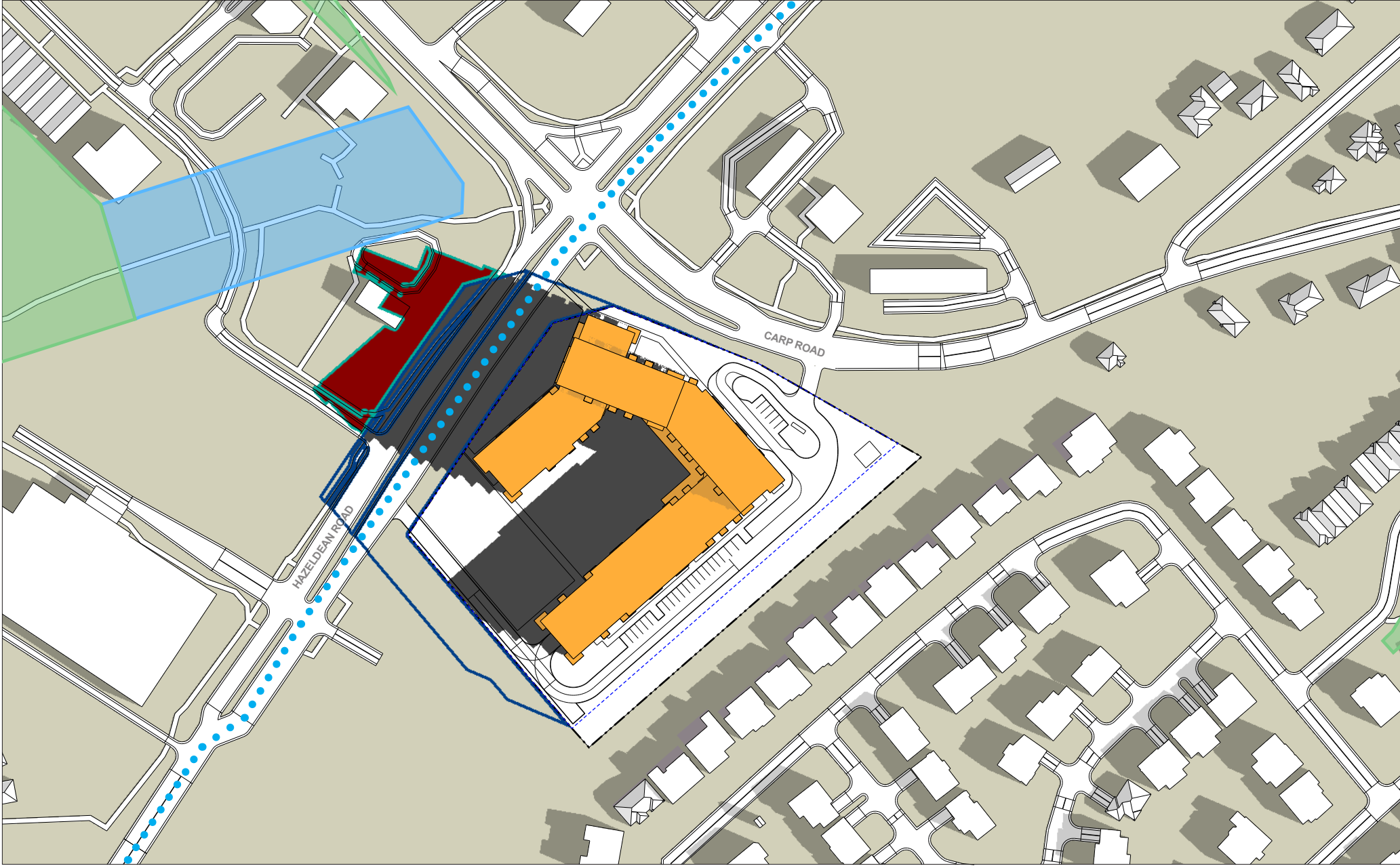
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right



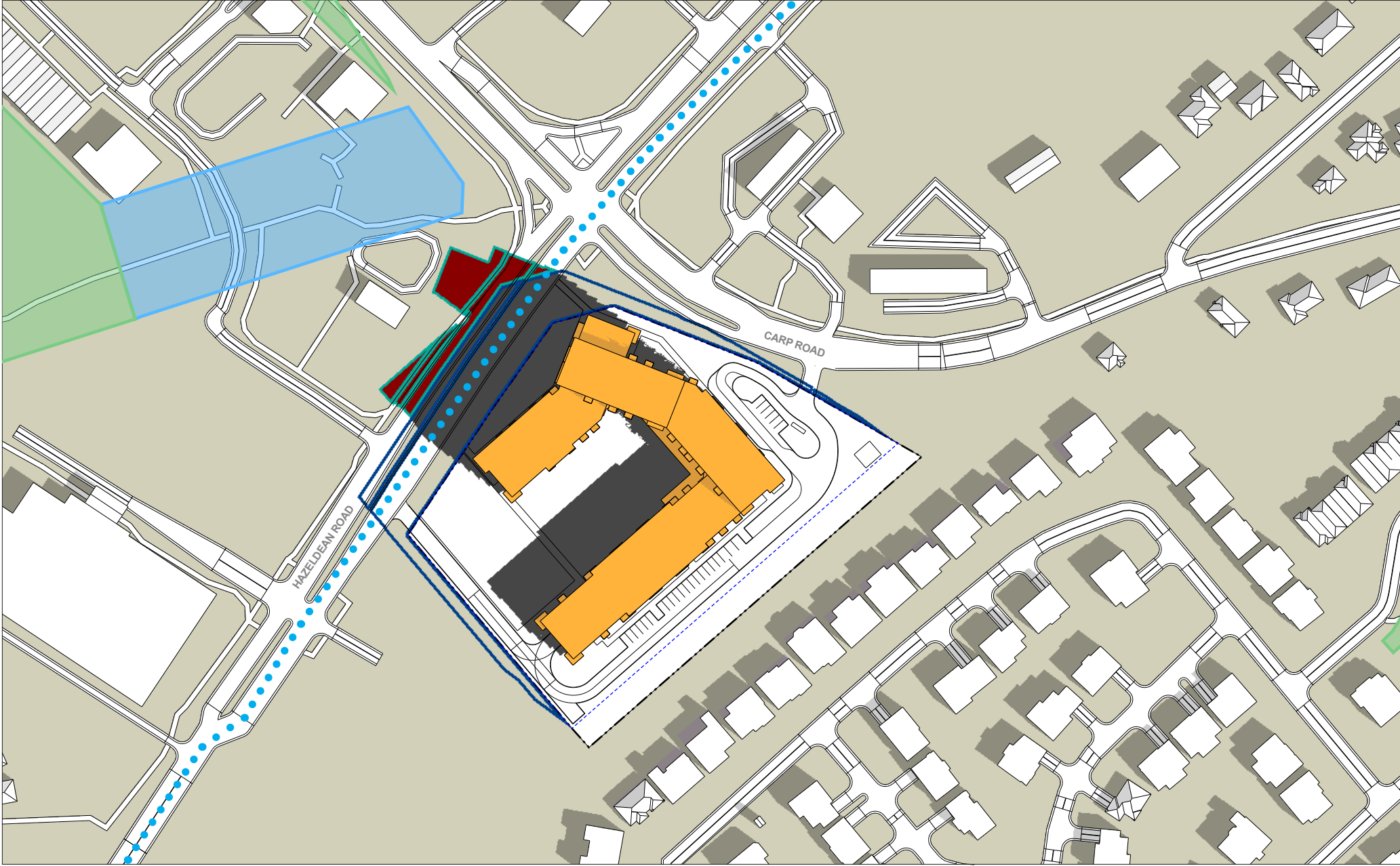







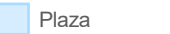







LEGEND:

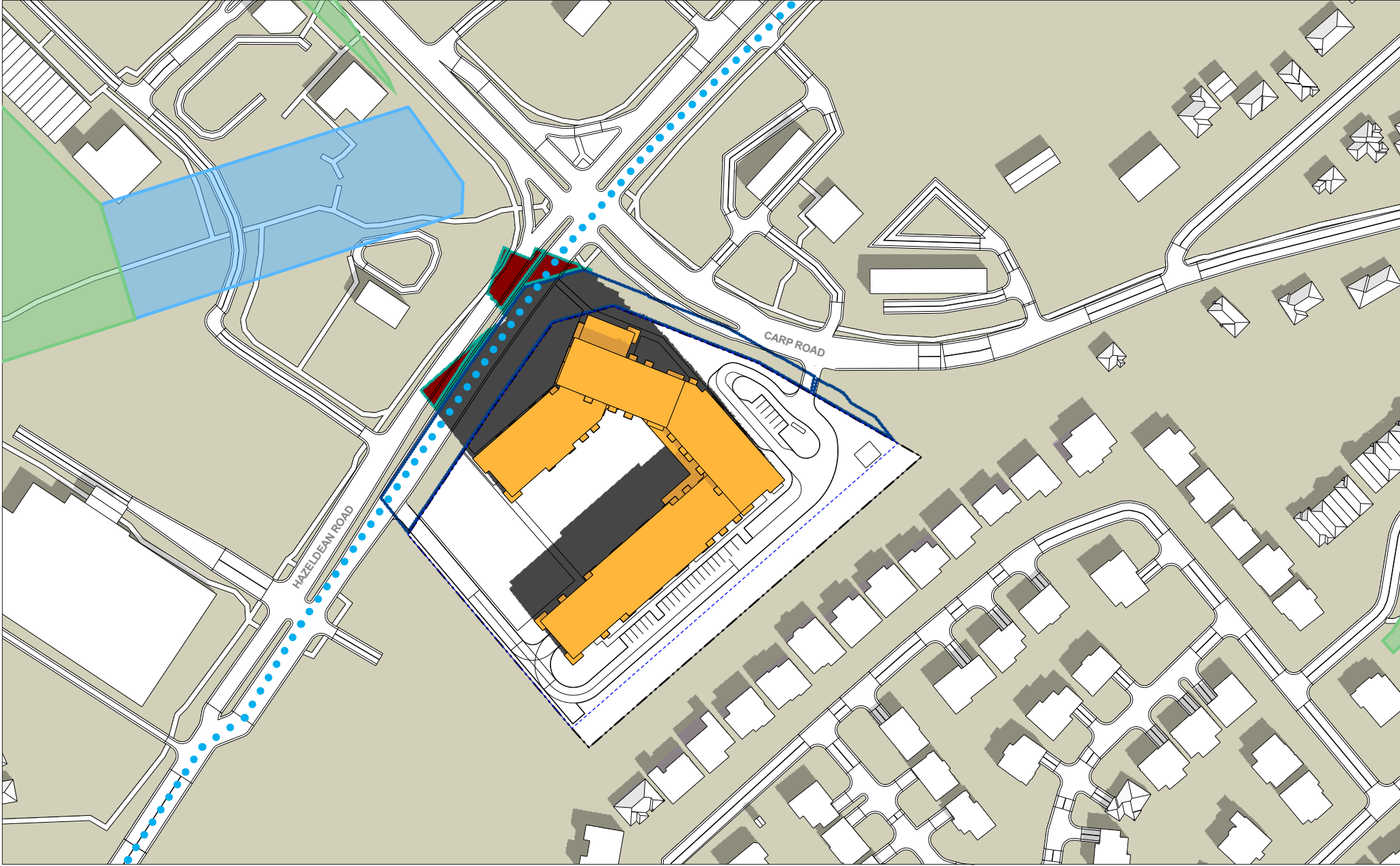
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line
- SENSITIVE AREAS:
Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right

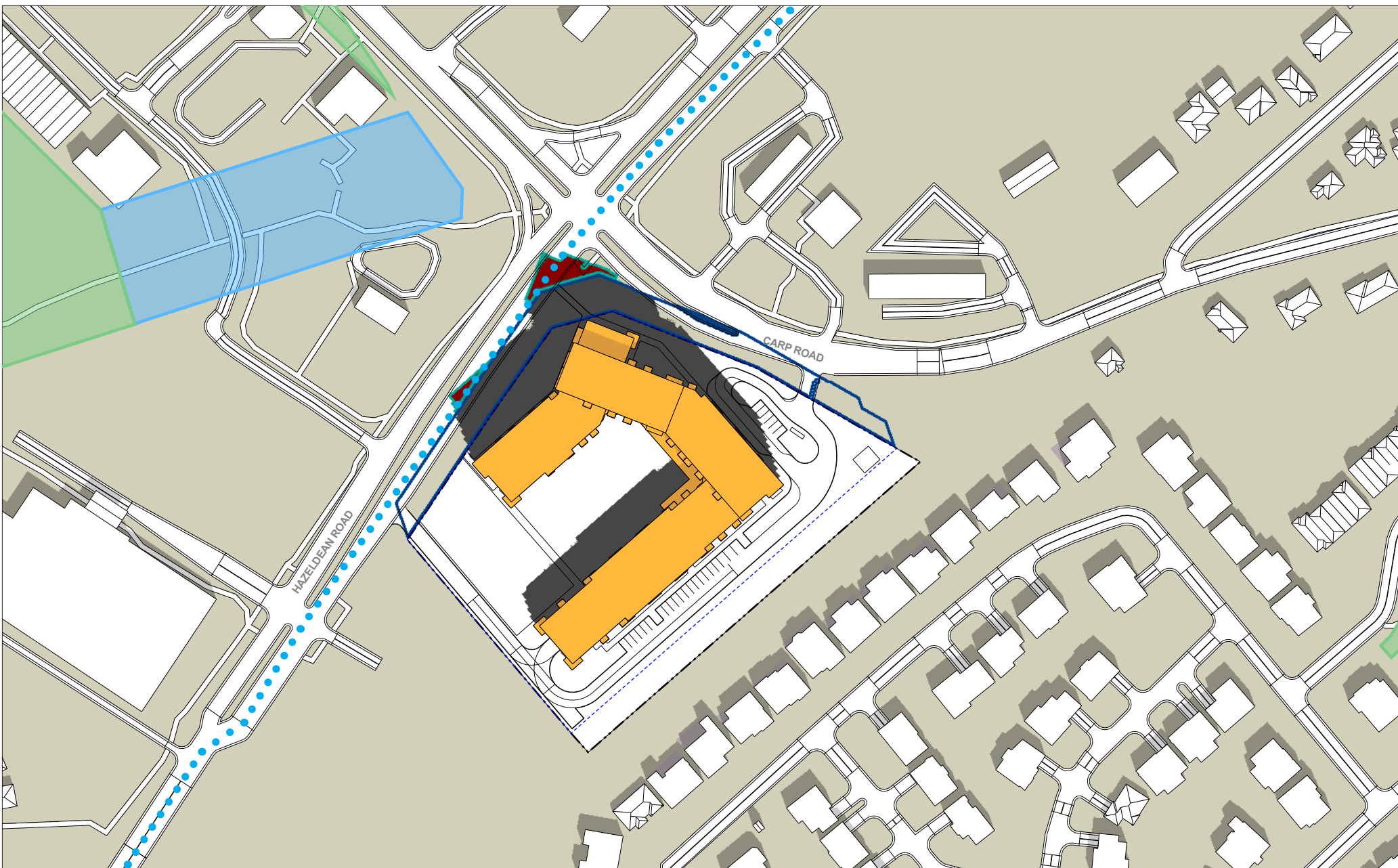




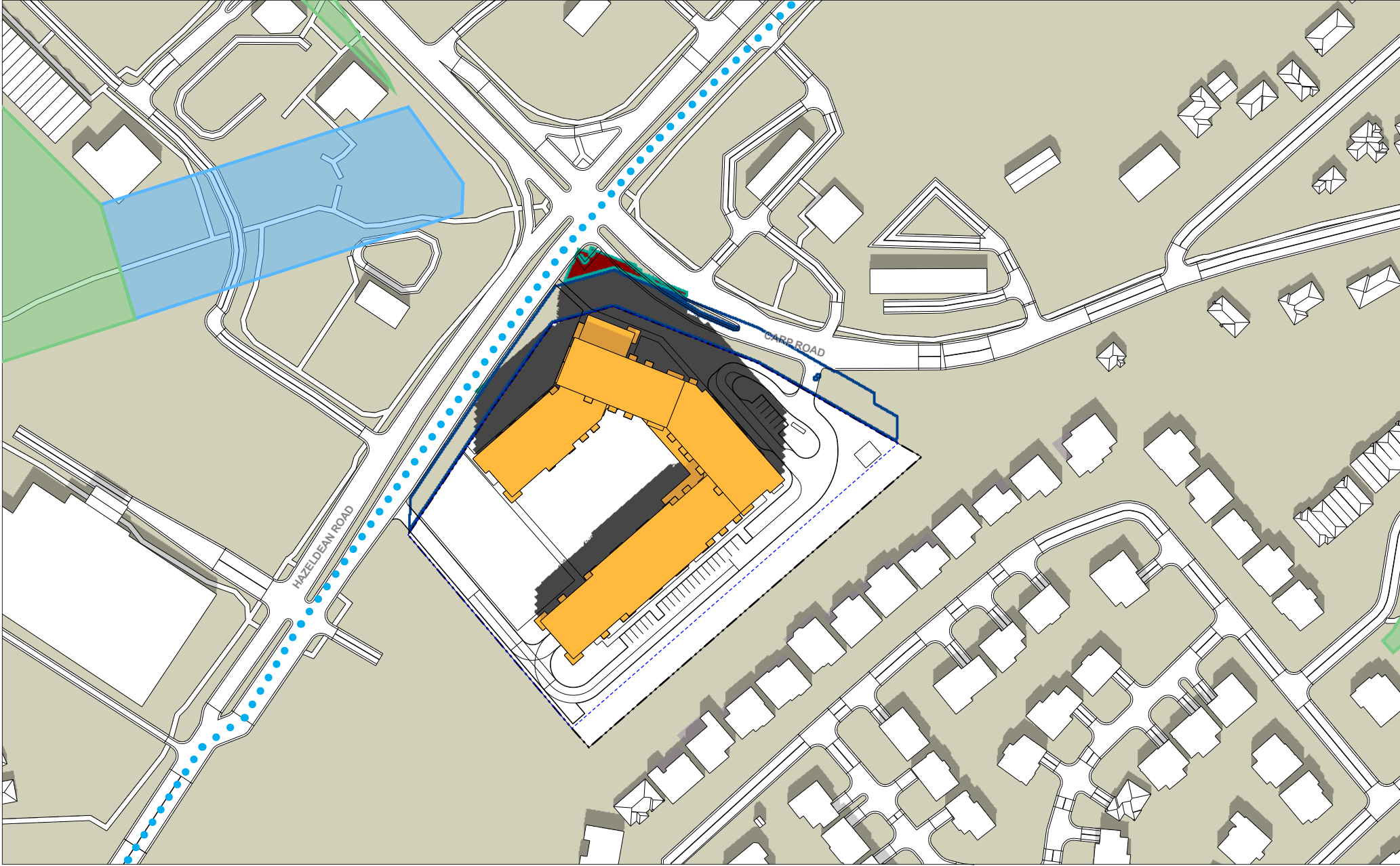
LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right  
 New Shadow Outline	 AOR Footprint	 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)	 Plaza	
 AOR Shadow Outline	 New Net Shadow	 Property Line	 Park Spaces	
 New Development	 Overlap of AOR & New Shadow		 Traditional / Arterial Mainstreets	
















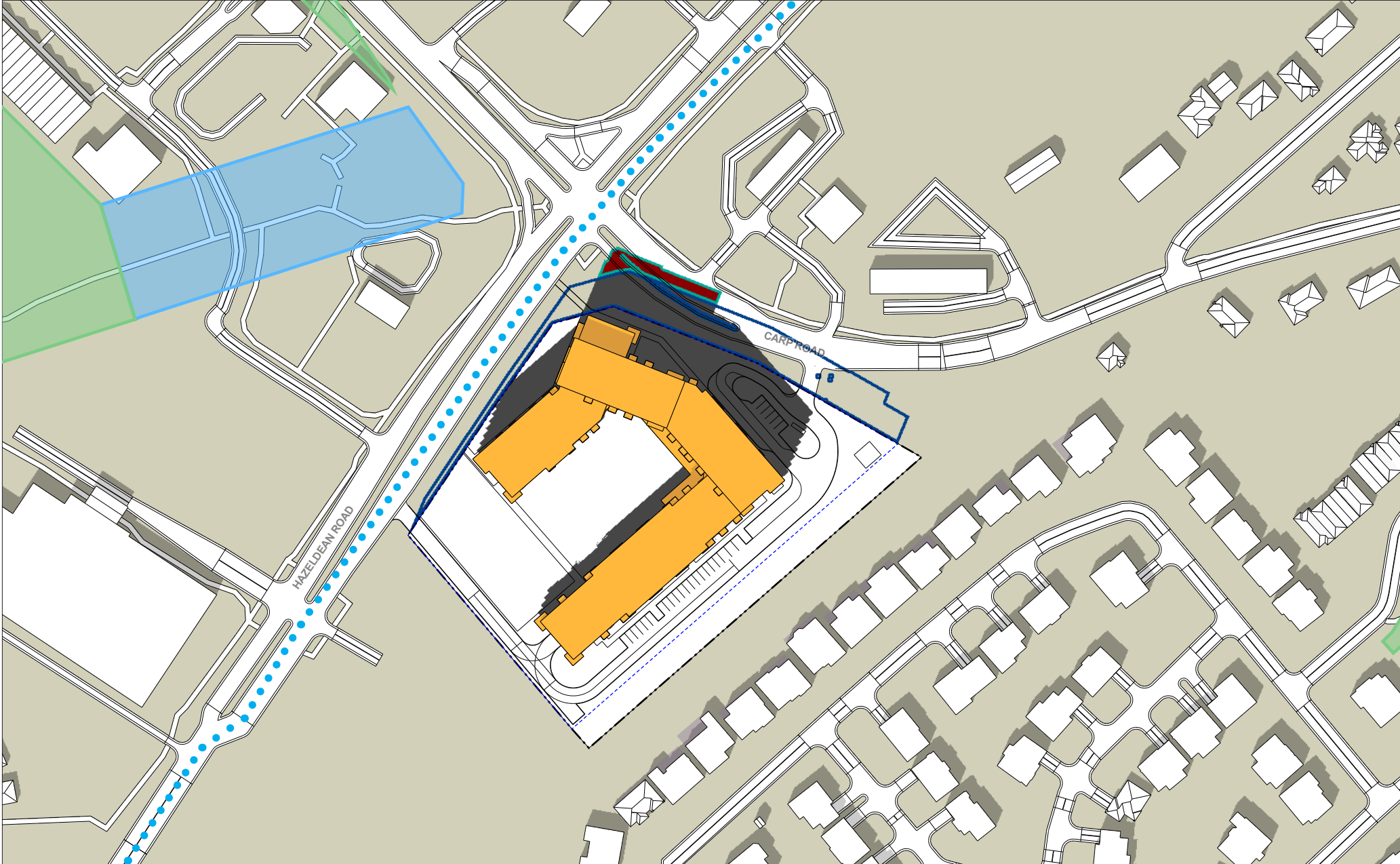
LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right
New Shadow Outline AOR Shadow Outline New Development	AOR Footprint New Net Shadow Overlap of AOR & New Shadow	7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings) Property Line	Plaza Park Spaces Traditional / Arterial Mainstreets	
















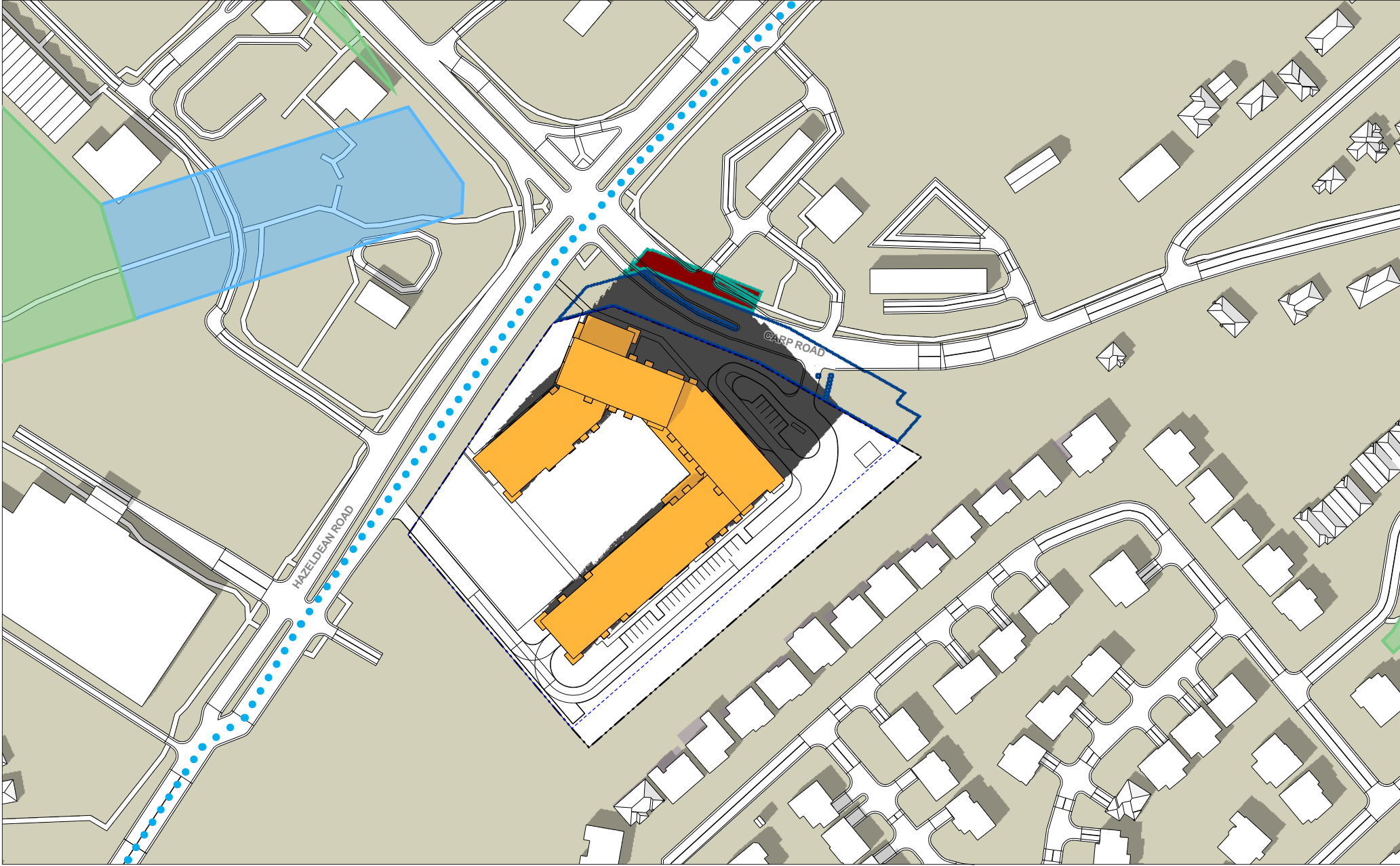
LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right 1:2000
<ul style="list-style-type: none"> New Shadow Outline AOR Shadow Outline New Development 	<ul style="list-style-type: none"> AOR Footprint New Net Shadow Overlap of AOR & New Shadow 	<ul style="list-style-type: none"> 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings) Property Line 	<ul style="list-style-type: none"> Plaza Park Spaces Traditional / Arterial Mainstreets 	



LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right  
 New Shadow Outline  AOR Shadow Outline  New Development	 AOR Footprint  New Net Shadow  Overlap of AOR & New Shadow	 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)  Property Line	 Plaza  Park Spaces  Traditional / Arterial Mainstreets	



LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right  
 New Shadow Outline  AOR Shadow Outline  New Development	 AOR Footprint  New Net Shadow  Overlap of AOR & New Shadow	 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)  Property Line	 Plaza  Park Spaces  Traditional / Arterial Mainstreets	



LEGEND:

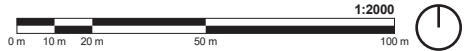
- New Shadow Outline
- AOR Footprint
- AOR Shadow Outline
- New Net Shadow
- New Development
- Overlap of AOR & New Shadow

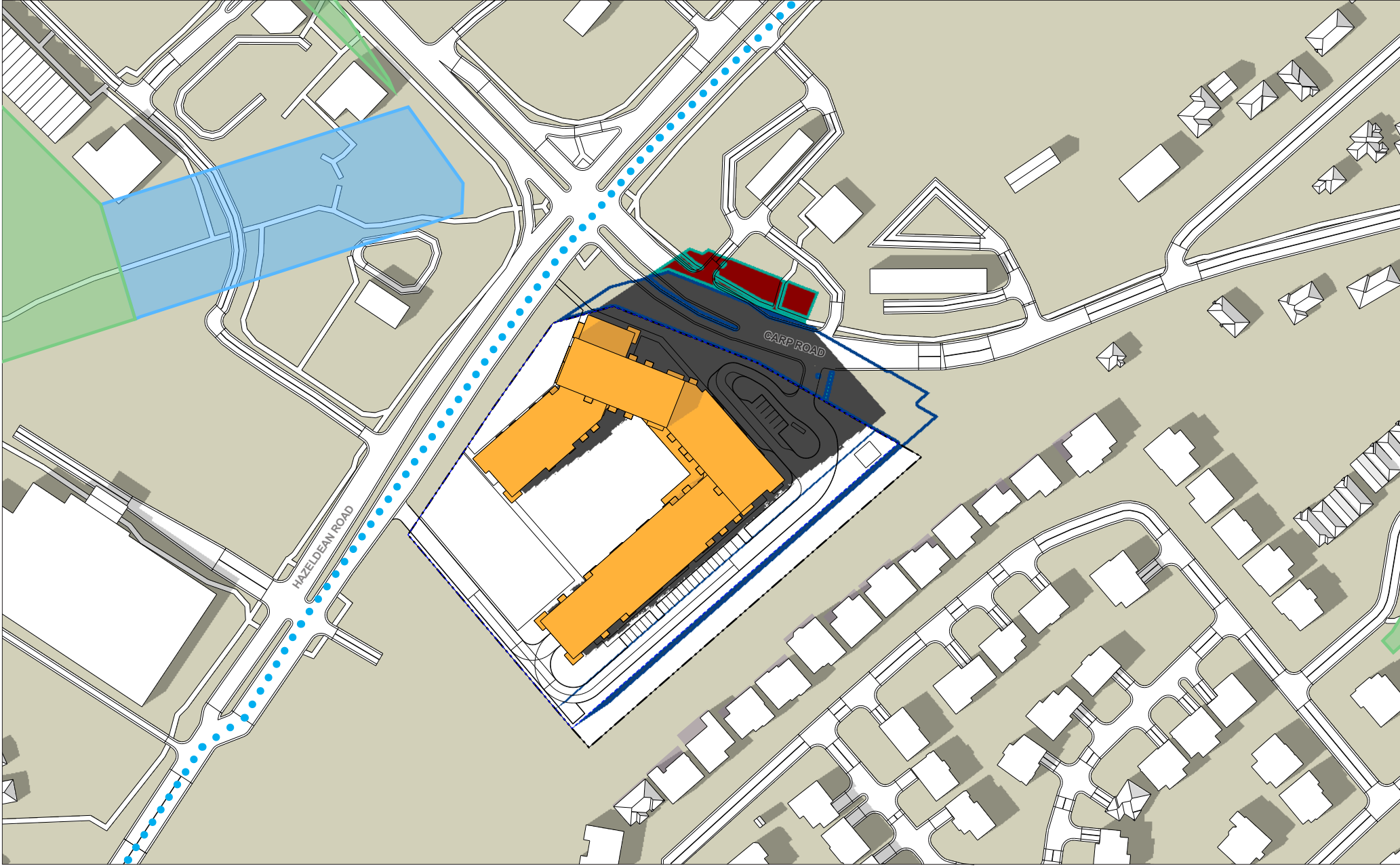
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

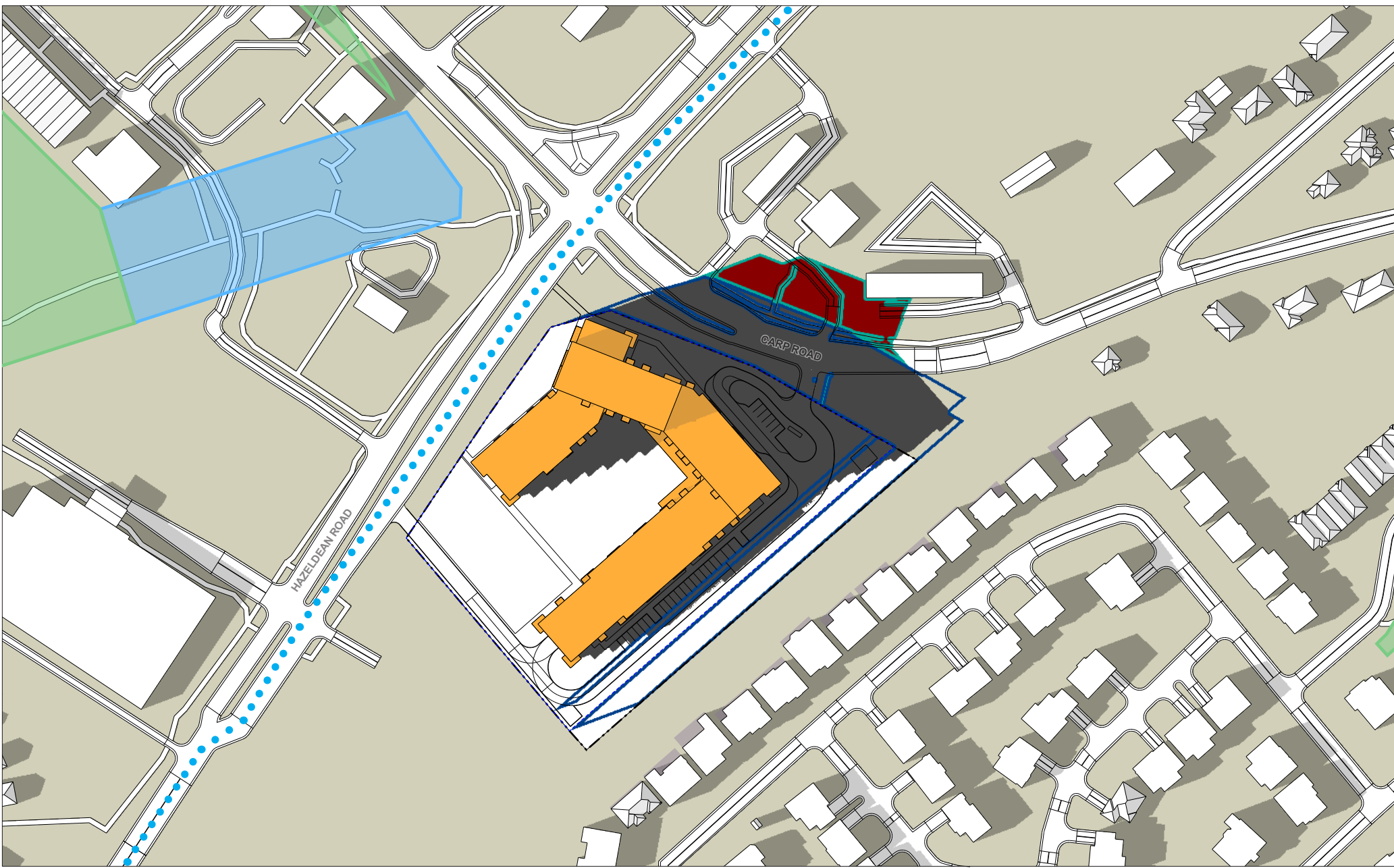
- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right





LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right 1:2000
<ul style="list-style-type: none"> New Shadow Outline AOR Shadow Outline New Development 	<ul style="list-style-type: none"> AOR Footprint New Net Shadow Overlap of AOR & New Shadow 	<ul style="list-style-type: none"> 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings) Property Line 	<ul style="list-style-type: none"> Plaza Park Spaces Traditional / Arterial Mainstreets 	



LEGEND:

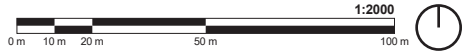
- New Shadow Outline
- AOR Footprint
- AOR Shadow Outline
- New Development
- New Net Shadow
- Overlap of AOR & New Shadow

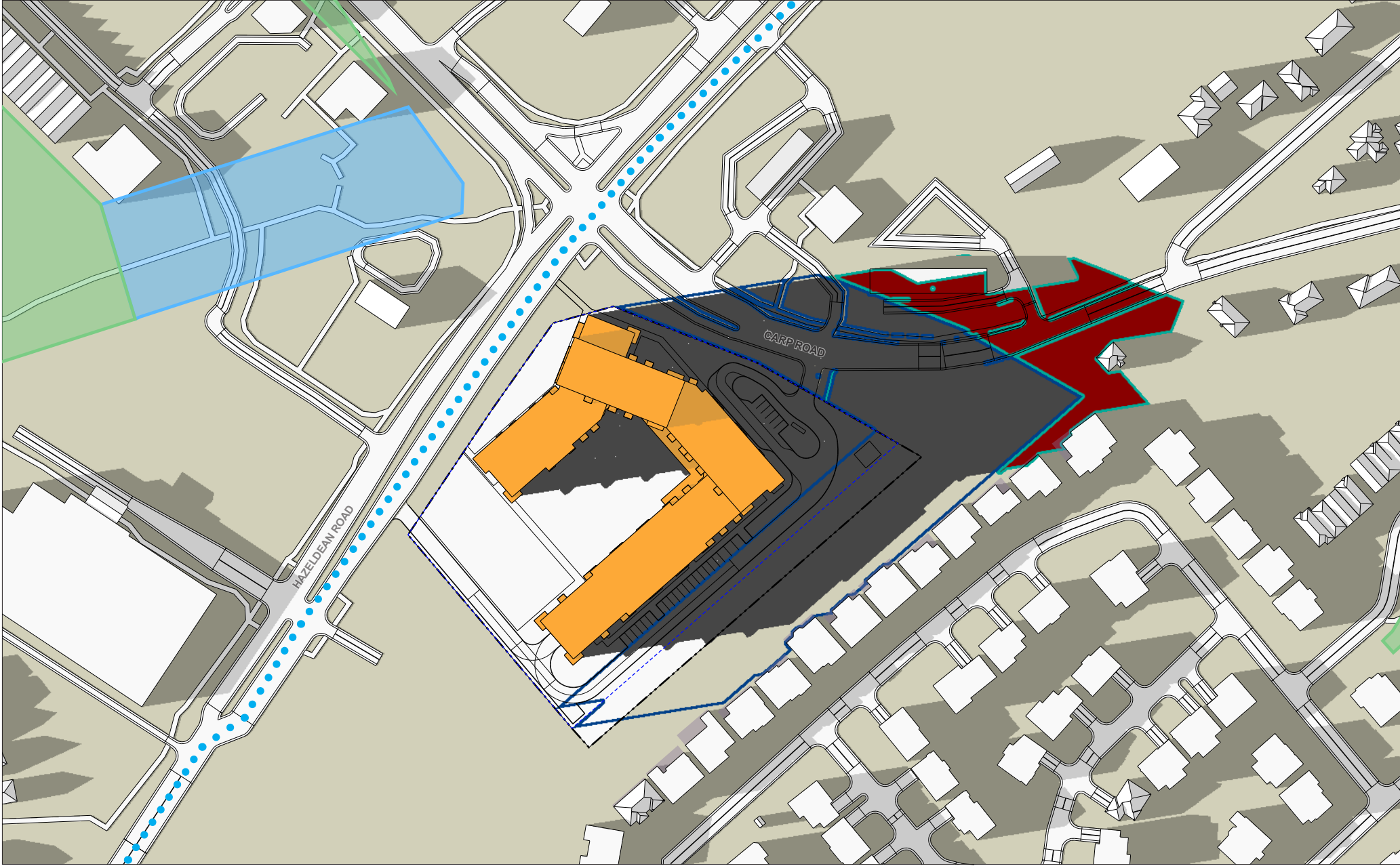
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

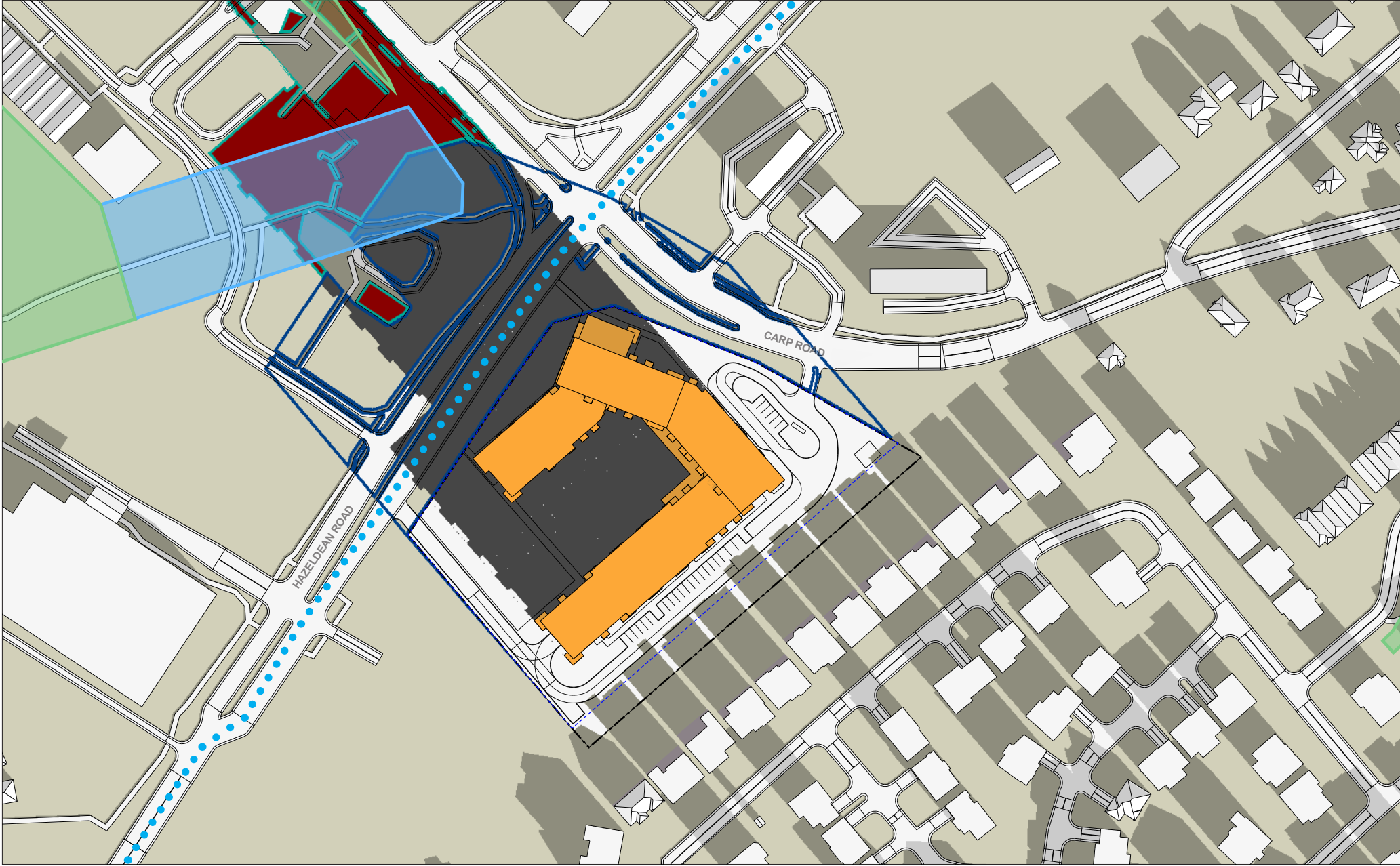
- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right

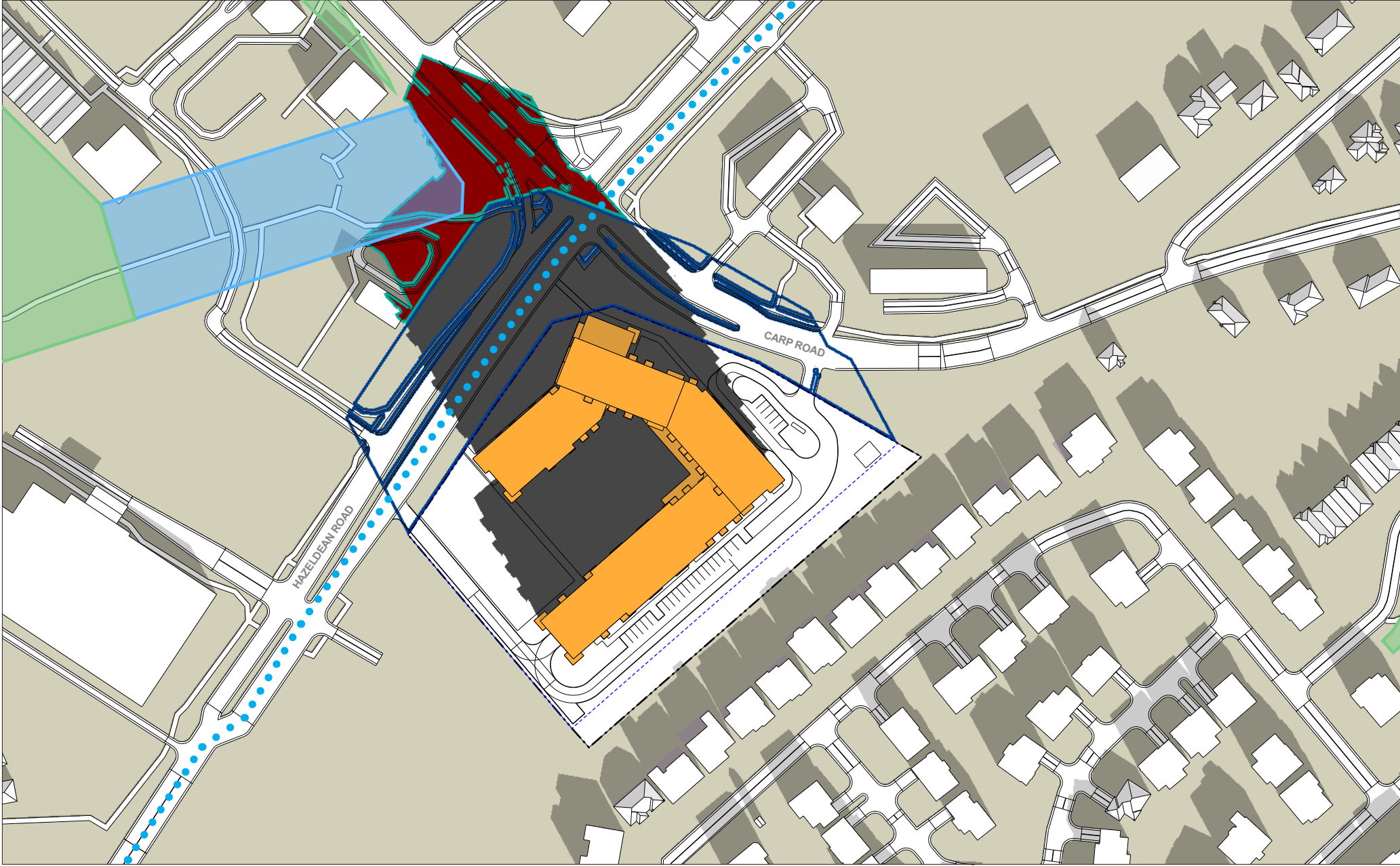




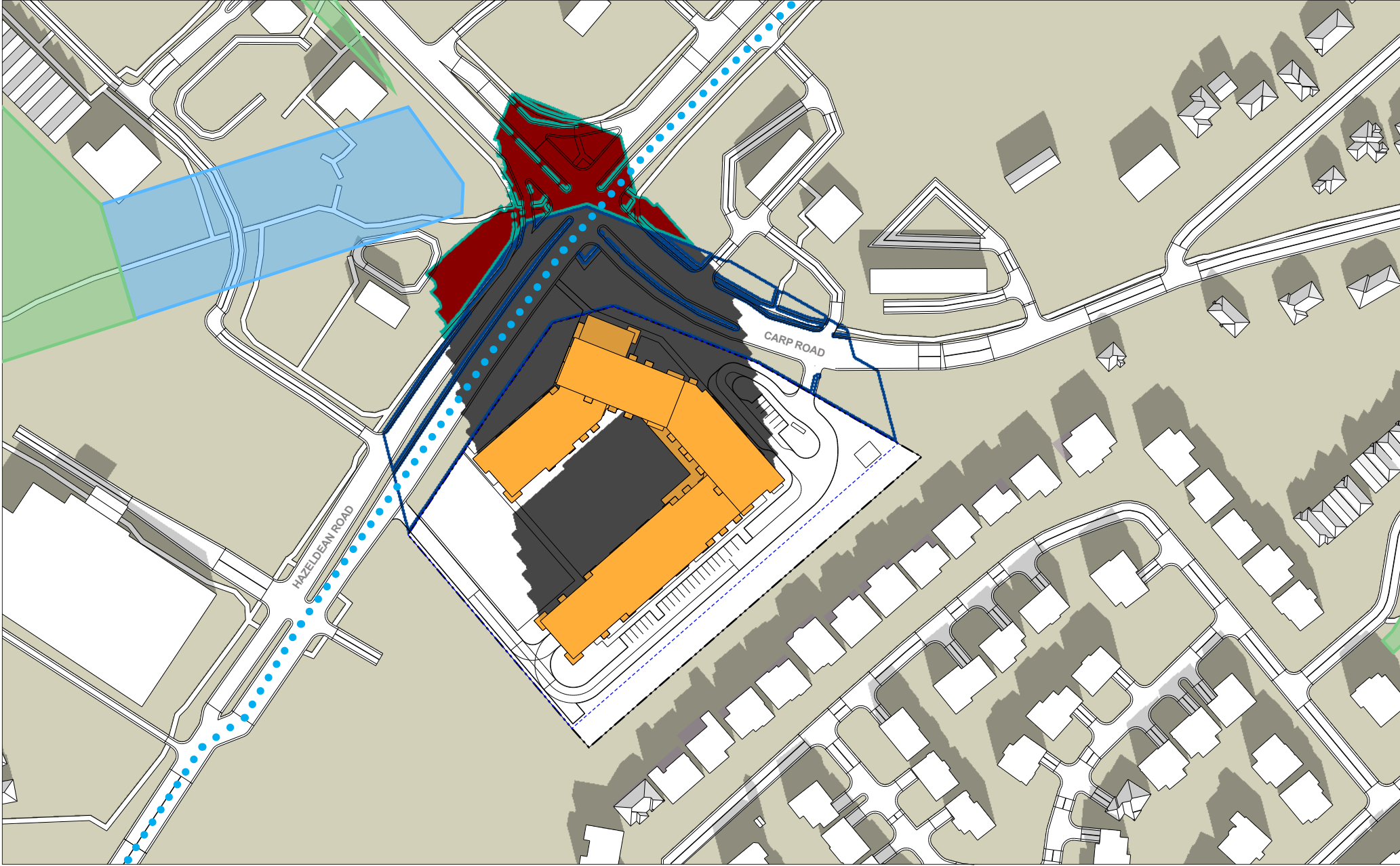
LEGEND:		SENSITIVE AREAS:		
New Shadow Outline	AOR Footprint	7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)	Plaza	New = Proposed Development AOR = As-Of-Right
AOR Shadow Outline	New Net Shadow	Property Line	Park Spaces	
New Development	Overlap of AOR & New Shadow		Traditional / Arterial Mainstreets	



LEGEND:		SENSITIVE AREAS:		
New Shadow Outline	AOR Footprint	7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)	Plaza	New = Proposed Development AOR = As-Of-Right
AOR Shadow Outline	New Net Shadow	Property Line	Park Spaces	
New Development	Overlap of AOR & New Shadow		Traditional / Arterial Mainstreets	



LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right
<ul style="list-style-type: none"> New Shadow Outline AOR Shadow Outline New Development 	<ul style="list-style-type: none"> AOR Footprint New Net Shadow Overlap of AOR & New Shadow 	<ul style="list-style-type: none"> 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings) Property Line 	<ul style="list-style-type: none"> Plaza Park Spaces Traditional / Arterial Mainstreets 	

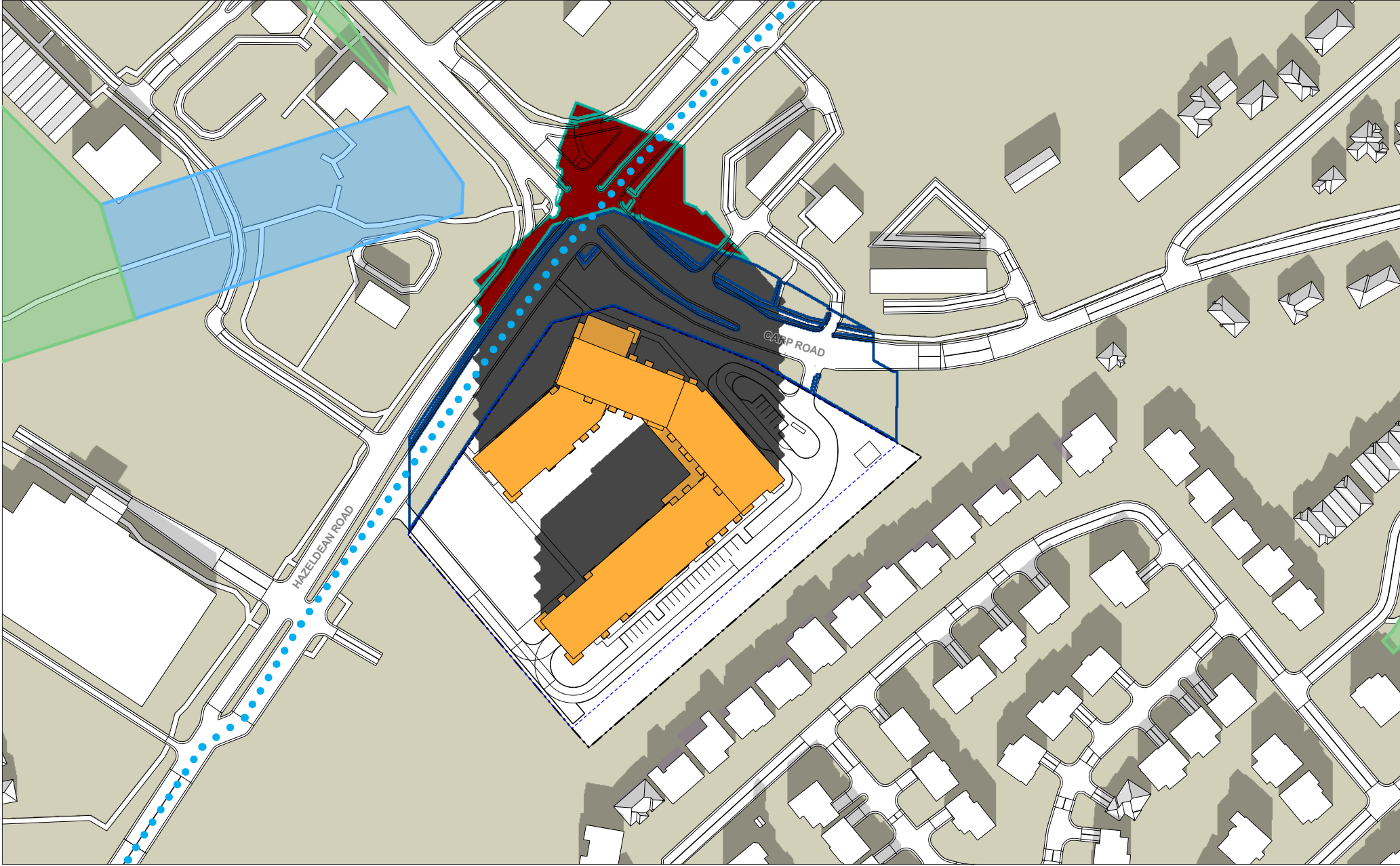







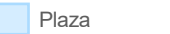







LEGEND:

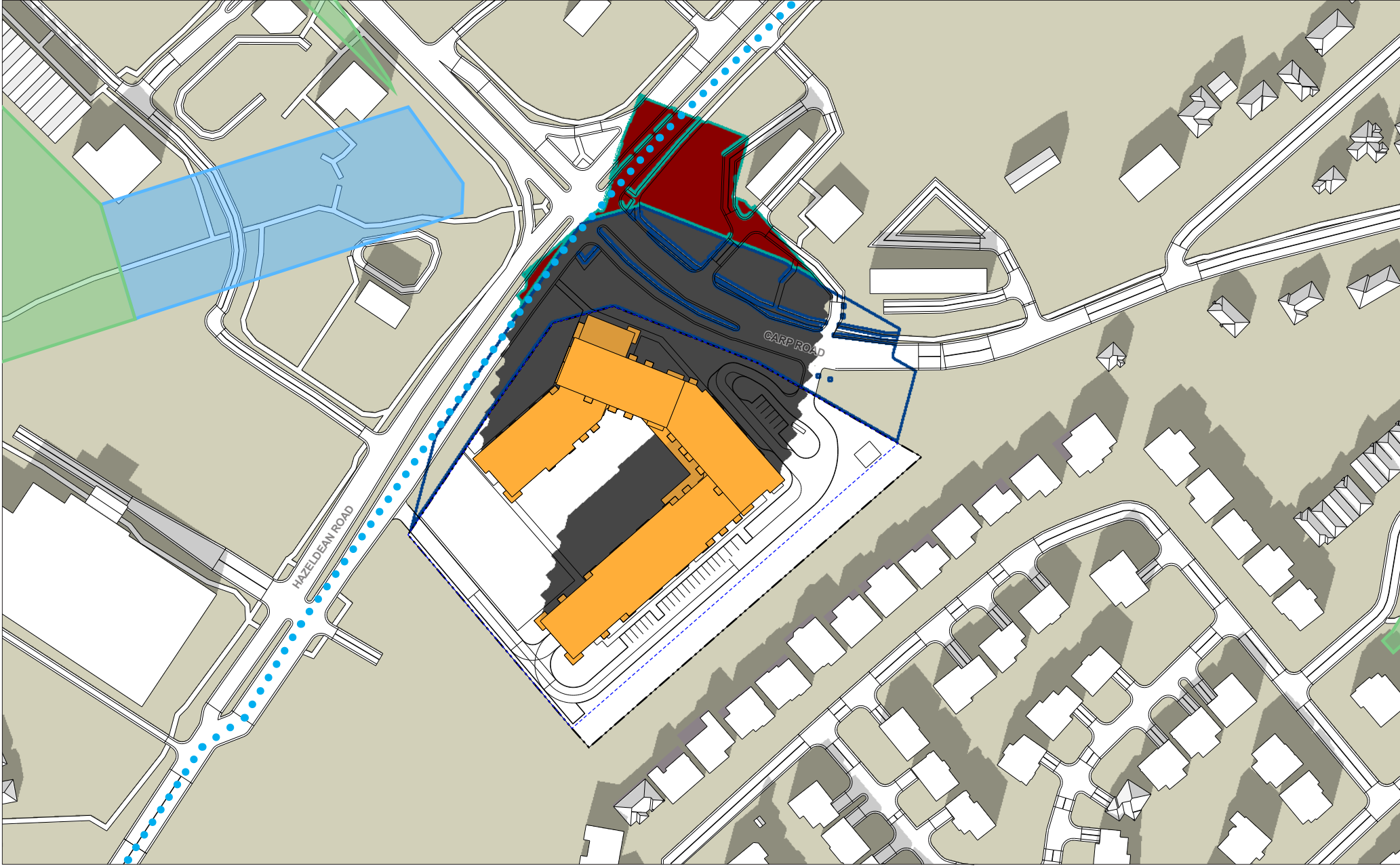
- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line
- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right

1:2000
0 m 10 m 20 m 50 m 100 m



LEGEND:		SENSITIVE AREAS:		New = Proposed Development AOR = As-Of-Right  
 New Shadow Outline	 AOR Footprint	 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)	 Plaza	
 AOR Shadow Outline	 New Net Shadow	 Property Line	 Park Spaces	
 New Development	 Overlap of AOR & New Shadow		 Traditional / Arterial Mainstreets	



LEGEND:

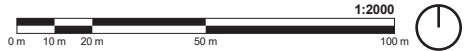
- New Shadow Outline
- AOR Footprint
- AOR Shadow Outline
- New Net Shadow
- New Development
- Overlap of AOR & New Shadow

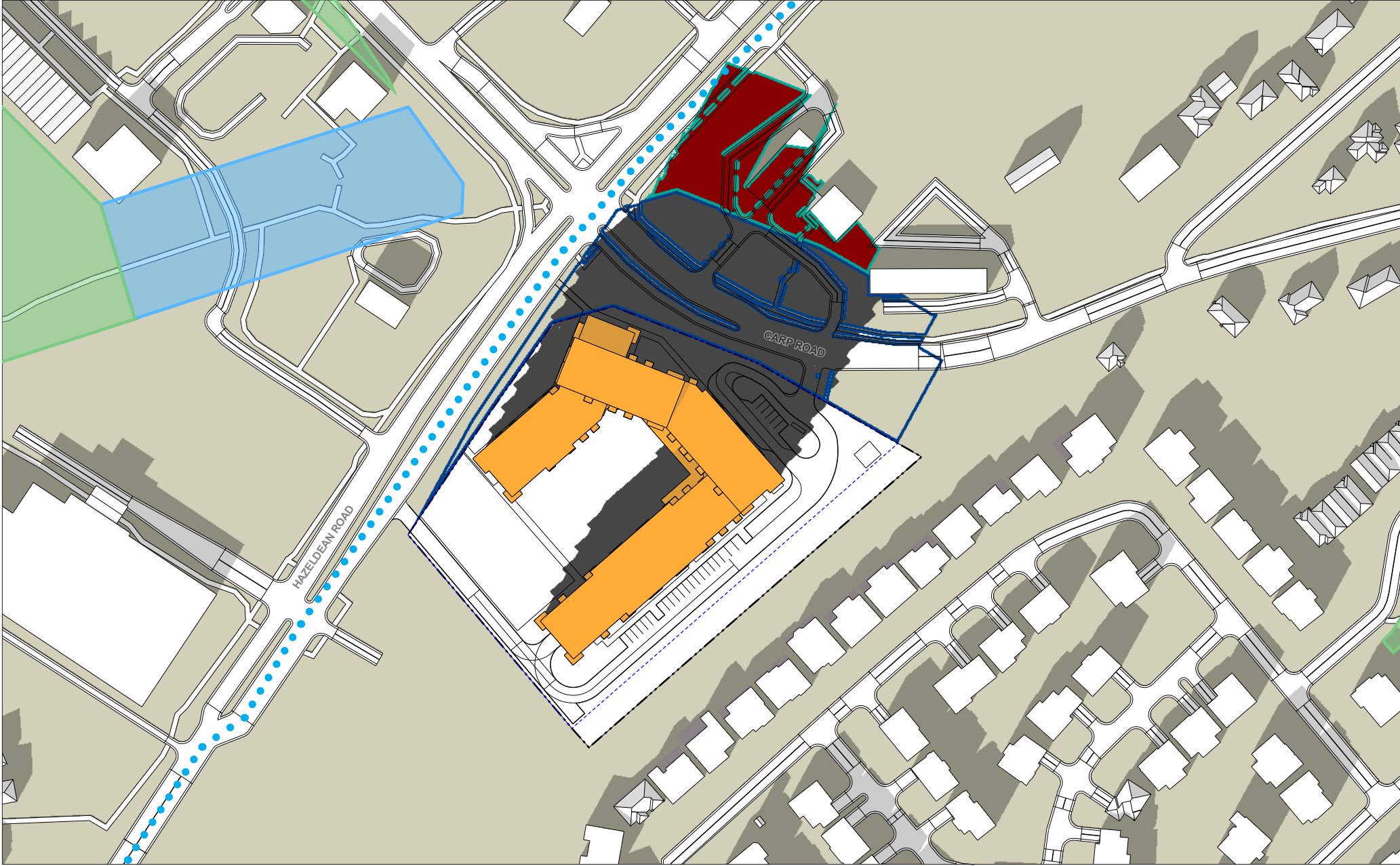
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right





LEGEND:

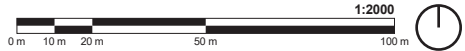
- New Shadow Outline
- AOR Footprint
- AOR Shadow Outline
- New Net Shadow
- New Development
- Overlap of AOR & New Shadow

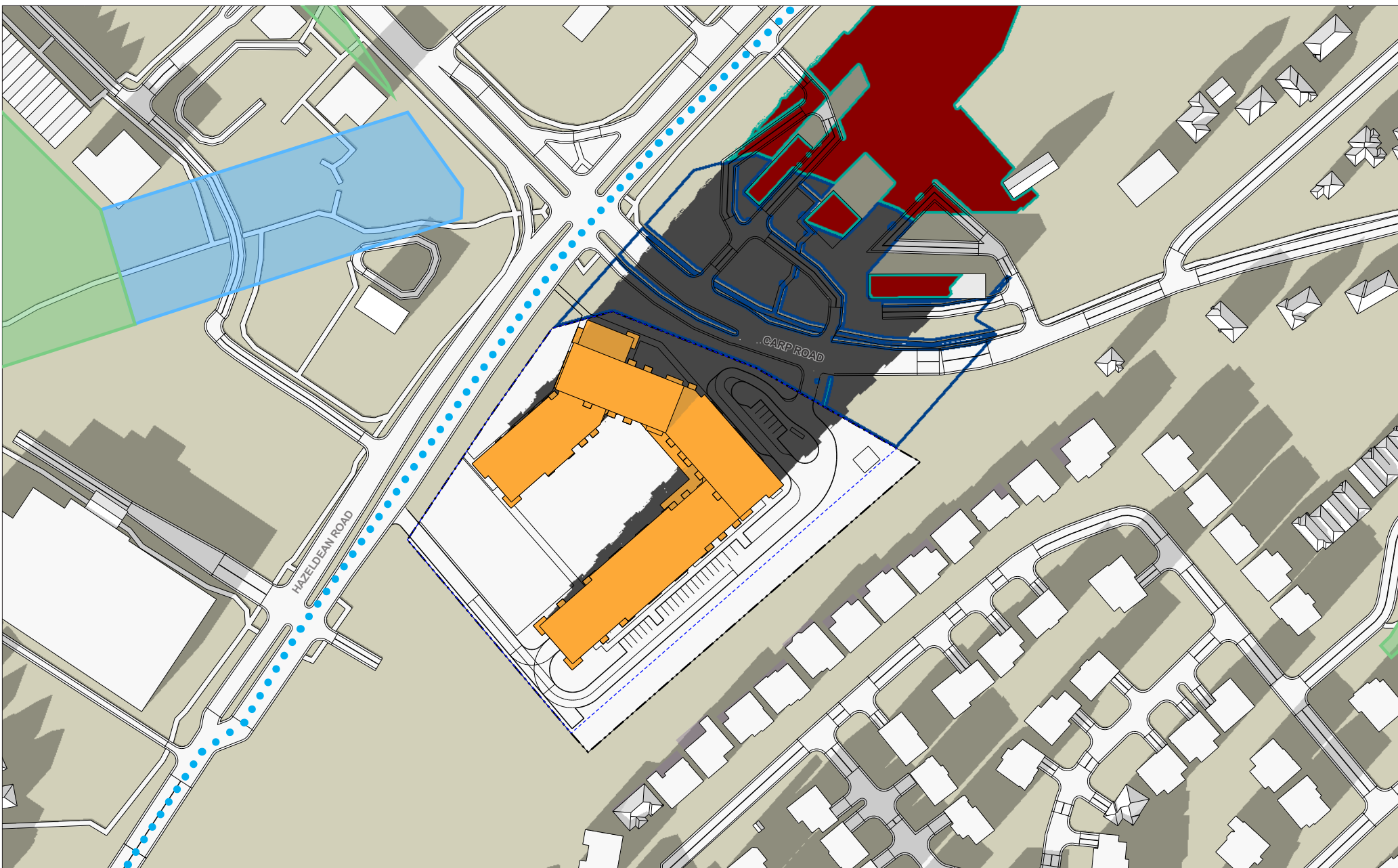
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line

SENSITIVE AREAS:

- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

New = Proposed Development
AOR = As-Of-Right





LEGEND:

- New Shadow Outline
- AOR Shadow Outline
- New Development
- AOR Footprint
- New Net Shadow
- Overlap of AOR & New Shadow
- 7.5m Rear Yard No Impact Buffer Zone (of abutting low-rise residential buildings)
- Property Line
- Plaza
- Park Spaces
- Traditional / Arterial Mainstreets

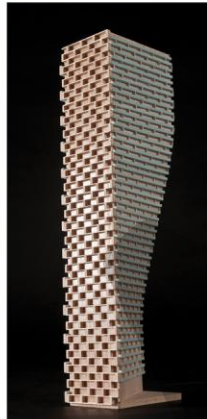
New = Proposed Development
AOR = As-Of-Right

1:2000
0 m 10 m 20 m 50 m 100 m

**PEDESTRIAN LEVEL
WIND STUDY**

1174 Carp Road
Ottawa, Ontario

Report: 23-299-PLW



March 1, 2024

PREPARED FOR

Le Groupe Maurice
2400 rue des Nations, bureau 137
Saint-Laurent, QC H4R 3G4

PREPARED BY

Omar Rioseco, B.Eng., Junior Wind Scientist
David Huitema, M.Eng., Wind Scientist
Justin Ferraro, P.Eng., Principal

EXECUTIVE SUMMARY

This report describes a pedestrian level wind (PLW) study undertaken to satisfy Site Plan Control application submission requirements for the proposed retirement residence development located at 1174 Carp Road in Ottawa, Ontario (hereinafter referred to as “subject site” or “proposed development”). Our mandate within this study is to investigate pedestrian wind conditions within and surrounding the subject site, and to identify areas where conditions may interfere with certain pedestrian activities so that mitigation measures may be considered, where required.

The study involves simulation of wind speeds for selected wind directions in a three-dimensional (3D) computer model using the computational fluid dynamics (CFD) technique, combined with meteorological data integration, to assess pedestrian wind comfort and safety within and surrounding the subject site according to City of Ottawa wind comfort and safety criteria. The results and recommendations derived from these considerations are detailed in the main body of the report (Section 5), illustrated in Figures 3A-7, and summarized as follows:

- 1) Most grade-level areas within and surrounding the subject site are predicted to experience conditions that are considered acceptable for the intended pedestrian uses throughout the year. Specifically, conditions over surrounding sidewalks, nearby transit stops, nearby existing surface parking lots, the proposed drive aisle, walkways, drop-off area, loading area, surface parking, and central courtyard, and in the vicinity of building access points, are considered acceptable. A single grade-level area of interest is predicted to experience windier conditions:
 - a. **Parkland West of Subject Site:** Wind conditions within the parkland are predicted to be suitable for mostly sitting during the typical use period (that is, May to October, inclusive), with regions suitable for standing to the north and west.
 - Depending on the programming of the parkland, the noted conditions may be considered acceptable. Specifically, if the noted windier areas will not accommodate designated seating or lounging activities, the noted conditions would be considered acceptable.



- If required by programming, comfort levels at designated seating areas to the northwest within the parkland may be improved by implementing landscaping elements that are targeted around sensitive areas such as tall wind screens and clusters of coniferous trees in dense arrangements, in combination with strategically placed seating with high-back benches or other local wind mitigation.
- 2) The foregoing statements and conclusions apply to common weather systems, during which no dangerous wind conditions, as defined in Section 4.4, are expected anywhere over the subject site. During extreme weather events (for example, thunderstorms, tornadoes, and downbursts), pedestrian safety is the main concern. However, these events are generally short-lived and infrequent and there is often sufficient warning for pedestrians to take appropriate cover.

TABLE OF CONTENTS

1. INTRODUCTION 1

2. TERMS OF REFERENCE 1

3. OBJECTIVES 2

4. METHODOLOGY 2

4.1 Computer-Based Context Modelling 3

4.2 Wind Speed Measurements 3

4.3 Historical Wind Speed and Direction Data 4

4.4 Pedestrian Wind Comfort and Safety Criteria – City of Ottawa 6

5. RESULTS AND DISCUSSION 8

5.1 Wind Comfort Conditions 9

5.2 Wind Safety 11

5.3 Applicability of Results 11

6. CONCLUSIONS AND RECOMMENDATIONS 12

FIGURES

APPENDICES

Appendix A – Simulation of the Atmospheric Boundary Layer

1. INTRODUCTION

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Le Groupe Maurice to undertake a pedestrian level wind (PLW) study to satisfy Site Plan Control application submission requirements for the proposed retirement residence located at 1174 Carp Road in Ottawa, Ontario (hereinafter referred to as “subject site” or “proposed development”). Our mandate within this study is to investigate wind conditions within and surrounding the subject site, and to identify areas where conditions may interfere with certain pedestrian activities so that mitigation measures may be considered, where required.

Our work is based on industry standard computer simulations using the computational fluid dynamics (CFD) technique and data analysis procedures, City of Ottawa wind comfort and safety criteria, architectural drawings prepared by Hobin Architecture in January 2024, surrounding street layouts and existing and approved future building massing information obtained from the City of Ottawa, as well as recent satellite imagery.

2. TERMS OF REFERENCE

The subject site is located at 1174 Carp Road in Ottawa, situated to the south at the intersection of Hazeldean Road and Carp Road, on a parcel of land bounded by Hazeldean Road to the northwest, Carp Road to the northeast, low-rise residential dwellings to the southeast, and an empty lot to the southwest. Throughout this report, Carp Road is referred to as project east. The proposed development comprises a 12-storey retirement residence.

Above an underground parking level, the ground floor comprises a near ‘C’-shaped planform with its long axis-oriented along Carp Road and includes various indoor amenities to the north, a retail space at the northeast corner, a main entrance, offices, and a drop-off area to the east, a dining room, commercial and open kitchens, a loading space, and shared building support spaces at the southeast corner, residential units to the southwest, and respite rooms and a respite area at the southwest corner. A courtyard is located central to the subject site within the ‘C’-shaped planform, and a parkland is located to the west. Surface parking is provided to the east and south. A drive aisle extending from Hazeldean Road to Carp Road along the south and west sides of the subject site provides access to the parking ramp near the southwest corner of the proposed development and to the noted drop-off area, loading space, and surface parking. Levels 2-12 are reserved for residential occupancy.



The building steps back from the inner west elevation at Level 2, from the west elevation of the south wing of the building at Level 6, and from the northeast, south, and west elevations at Level 10.

The near-field surroundings, defined as an area within 200-metres (m) of the subject site, include low-rise residential dwellings from the east clockwise to the south-southwest, an empty lot to the southwest, and low-rise commercial buildings with surface parking lots in the remaining directions. The far-field surroundings, defined as an area beyond the near-field but within a 2-kilometre (km) radius of the subject site, are characterized by suburban massing from the north-northeast clockwise to the south-southeast and from the west clockwise to the north-northeast, and by low-rise suburban massing followed by green spaces and fields in the remaining compass.

Site plans for the proposed and existing massing scenarios are illustrated in Figures 1A and 1B, while Figures 2A-2H illustrate the computational models used to conduct the study. The existing massing scenario includes the existing massing and any future developments approved by the City of Ottawa.

3. OBJECTIVES

The principal objectives of this study are to (i) determine pedestrian level wind conditions at key areas within and surrounding the development site; (ii) identify areas where wind conditions may interfere with the intended uses of outdoor spaces; and (iii) recommend suitable mitigation measures, where required.

4. METHODOLOGY

The approach followed to quantify pedestrian wind conditions over the site is based on CFD simulations of wind speeds across the subject site within a virtual environment, meteorological analysis of the Ottawa area wind climate, and synthesis of computational data with City of Ottawa wind comfort and safety criteria¹. The following sections describe the analysis procedures, including a discussion of the noted pedestrian wind criteria.

¹ City of Ottawa Terms of References: Wind Analysis
https://documents.ottawa.ca/sites/default/files/torwindanalysis_en.pdf

4.1 Computer-Based Context Modelling

A computer based PLW study was performed to determine the influence of the wind environment on pedestrian comfort over the proposed development site. Pedestrian comfort predictions, based on the mechanical effects of wind, were determined by combining measured wind speed data from CFD simulations with statistical weather data obtained from Ottawa Macdonald-Cartier International Airport. The general concept and approach to CFD modelling is to represent building and topographic details in the immediate vicinity of the subject site on the surrounding model, and to create suitable atmospheric wind profiles at the model boundary. The wind profiles are designed to have similar mean and turbulent wind properties consistent with actual site exposures.

An industry standard practice is to omit trees, vegetation, and other existing and planned landscape elements from the model due to the difficulty of providing accurate seasonal representation of vegetation. The omission of trees and other landscaping elements produces slightly stronger wind speeds.

4.2 Wind Speed Measurements

The PLW analysis was performed by simulating wind flows and gathering velocity data over a CFD model of the site for 12 wind directions. The CFD simulation model was centered on the proposed development, complete with surrounding massing within a radius of 500 m. The process was performed for two context massing scenarios, as noted in Section 2.

Mean and peak wind speed data obtained over the subject site for each wind direction were interpolated to 36 wind directions at 10° intervals, representing the full compass azimuth. Measured wind speeds approximately 1.5 m above local grade were referenced to the wind speed at gradient height to generate mean and peak velocity ratios, which were used to calculate full-scale values. Gradient height represents the theoretical depth of the boundary layer of the earth's atmosphere, above which the mean wind speed remains constant. Further details of the wind flow simulation technique are presented in Appendix A.

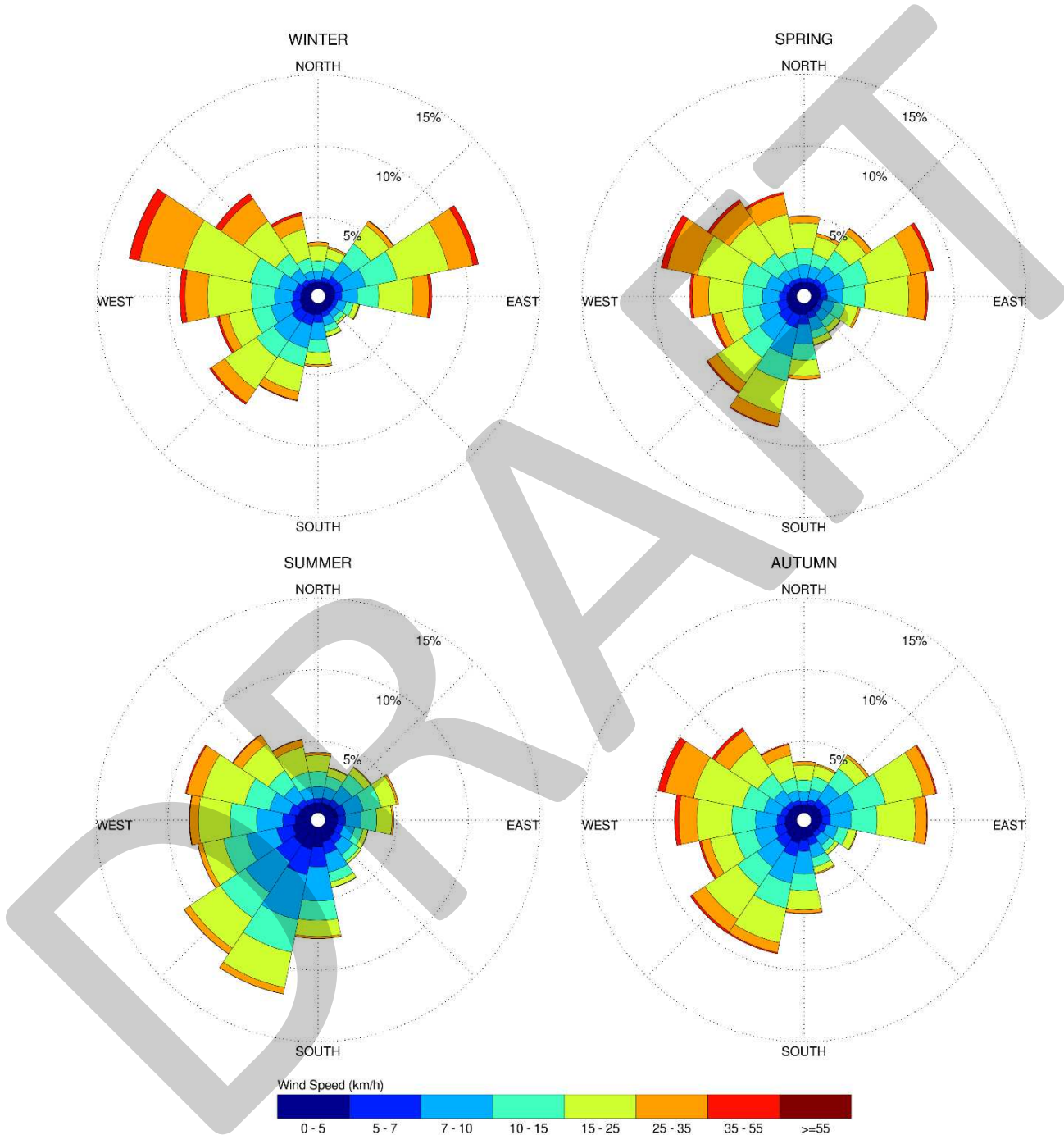


4.3 Historical Wind Speed and Direction Data

A statistical model for winds in Ottawa was developed from approximately 40 years of hourly meteorological wind data recorded at Ottawa Macdonald-Cartier International Airport and obtained from Environment and Climate Change Canada. Wind speed and direction data were analyzed for each month of the year to determine the statistically prominent wind directions and corresponding speeds, and to characterize similarities between monthly weather patterns.

The statistical model of the Ottawa area wind climate, which indicates the directional character of local winds on a seasonal basis, is illustrated on the following page. The plots illustrate seasonal distribution of measured wind speeds and directions in kilometers per hour (km/h). Probabilities of occurrence of different wind speeds are represented as stacked polar bars in sixteen azimuth divisions. The radial direction represents the percentage of time for various wind speed ranges per wind direction during the measurement period. The prominent wind speeds and directions can be identified by the longer length of the bars. For Ottawa, the most common winds occur for westerly wind directions, followed by those from the east, while the most common wind speeds are below 36 km/h. The directional prominence and relative magnitude of wind speed changes somewhat from season to season.

SEASONAL DISTRIBUTION OF WIND OTTAWA MACDONALD-CARTIER INTERNATIONAL AIRPORT



Notes:

1. Radial distances indicate percentage of time of wind events.
2. Wind speeds are mean hourly in km/h, measured at 10 m above the ground.

4.4 Pedestrian Wind Comfort and Safety Criteria – City of Ottawa

Pedestrian wind comfort and safety criteria are based on the mechanical effects of wind without consideration of other meteorological conditions (that is, temperature and relative humidity). The comfort criteria assume that pedestrians are appropriately dressed for a specified outdoor activity during any given season. Five pedestrian comfort classes based on 20% non-exceedance mean wind speed ranges are used to assess pedestrian comfort: (1) Sitting; (2) Standing; (3) Strolling; (4) Walking; and (5) Uncomfortable. The gust speeds, and equivalent mean speeds, are selected based on the Beaufort scale, which describes the effects of forces produced by varying wind speed levels on objects. Wind conditions suitable for sitting are represented by the colour blue, standing by green, strolling by yellow, and walking by orange; uncomfortable conditions are represented by the colour magenta. Specifically, the comfort classes, associated wind speed ranges, and limiting criteria are summarized as follows:

PEDESTRIAN WIND COMFORT CLASS DEFINITIONS

Wind Comfort Class	GEM Speed (km/h)	Description
SITTING	≤ 10	Mean wind speeds no greater than 10 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 16 km/h.
STANDING	≤ 14	Mean wind speeds no greater than 14 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 22 km/h.
STROLLING	≤ 17	Mean wind speeds no greater than 17 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 27 km/h.
WALKING	≤ 20	Mean wind speeds no greater than 20 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 32 km/h.
UNCOMFORTABLE	> 20	Uncomfortable conditions are characterized by predicted values that fall below the 80% target for walking. Brisk walking and exercise, such as jogging, would be acceptable for moderate excesses of this criterion.



Regarding wind safety, the pedestrian safety wind speed criterion is based on the approximate threshold that would cause a vulnerable member of the population to fall. A 0.1% exceedance gust wind speed of 90 km/h is classified as dangerous. From calculations of stability, it can be shown that gust wind speeds of 90 km/h would be the approximate threshold wind speed that would cause an average elderly person in good health to fall. Notably, pedestrians tend to be more sensitive to wind gusts than to steady winds for lower wind speed ranges. For strong winds approaching dangerous levels, this effect is less important because the mean wind can also create problems for pedestrians.

Experience and research on people's perception of mechanical wind effects has shown that if the wind speed levels are exceeded for more than 20% of the time, the activity level would be judged to be uncomfortable by most people. For instance, if a mean wind speed of 10 km/h (equivalent gust wind speed of approximately 16 km/h) were exceeded for more than 20% of the time most pedestrians would judge that location to be too windy for sitting. Similarly, if mean wind speed of 20 km/h (equivalent gust wind speed of approximately 32 km/h) at a location were exceeded for more than 20% of the time, walking or less vigorous activities would be considered uncomfortable. As these criteria are based on subjective reactions of a population to wind forces, their application is partly based on experience and judgment.

Once the pedestrian wind speed predictions have been established throughout the subject site, the assessment of pedestrian comfort involves determining the suitability of the predicted wind conditions for discrete regions within and surrounding the subject site. This step involves comparing the predicted comfort classes to the target comfort classes, which are dictated by the location type for each region (that is, a sidewalk, building entrance, amenity space, or other). An overview of common pedestrian location types and their typical windiest target comfort classes are summarized on the following page. Depending on the programming of a space, the desired comfort class may differ from this table.

TARGET PEDESTRIAN WIND COMFORT CLASSES FOR VARIOUS LOCATION TYPES

Location Types	Target Comfort Classes
Primary Building Entrance	Standing
Secondary Building Access Point	Walking
Public Sidewalk / Bicycle Path	Walking
Outdoor Amenity Space	Sitting / Standing
Café / Patio / Bench / Garden	Sitting / Standing
Transit Stop (Without Shelter)	Standing
Transit Stop (With Shelter)	Walking
Public Park / Plaza	Sitting / Standing
Garage / Service Entrance	Walking
Parking Lot	Walking
Vehicular Drop-Off Zone	Walking

5. RESULTS AND DISCUSSION

The following discussion of the predicted pedestrian wind conditions for the subject site is accompanied by Figures 3A-6B, illustrating wind conditions at grade level for the proposed and existing massing scenarios. Conditions are presented as continuous contours of wind comfort throughout the subject site and correspond to the comfort classes presented in Section 4.4.

Wind comfort conditions are also reported for the typical use period, which is defined as May to October, inclusive. Figure 7 illustrates comfort conditions at grade level, consistent with the comfort classes in Section 4.4. The details of these conditions are summarized in the following pages for each area of interest.

5.1 Wind Comfort Conditions

Sidewalks and Transit Stop along Hazeldean Road: Following the introduction of the proposed development, wind comfort conditions over the nearby public sidewalks along Hazeldean Road are predicted to be suitable for standing, or better, during the summer, becoming suitable for a mix of standing and strolling during the autumn, winter, and spring. Conditions in the vicinity of the nearby transit stop along Hazeldean Road, which is served by a typical shelter, are predicted to be suitable for standing during the spring, summer, and autumn, becoming suitable for strolling during the winter. The noted conditions are considered acceptable.

Wind conditions over the sidewalks along Hazeldean Road with the existing massing are predicted to be suitable for standing, or better, during the summer and autumn, becoming suitable for a mix of standing and strolling during the winter and spring. With the existing massing, conditions in the vicinity of the noted nearby transit stop along Hazeldean Road are predicted to be suitable for standing during the summer and autumn, becoming suitable for a mix of standing and strolling during the spring, and suitable for strolling during the winter. While the introduction of the proposed development produces slightly windier conditions over Hazeldean Road, wind comfort conditions with the proposed development are nevertheless considered acceptable.

Sidewalks along Carp Road: Following the introduction of the proposed development, conditions over the nearby public sidewalks along Carp Road are predicted to be suitable for a mix of sitting and standing during the summer, becoming suitable for standing, or better, during the autumn, with an isolated region suitable for strolling near the intersection of Hazeldean Road and Carp Road, and suitable for strolling, or better, during the winter and spring, with an isolated region suitable for walking near the noted intersection during the winter. The noted conditions are considered acceptable.

Wind conditions over the sidewalks along Carp Road with the existing massing are predicted to be suitable for a mix of sitting and standing during summer, becoming suitable for standing during the autumn, and suitable for a mix of standing and strolling during the winter and spring. While the introduction of the proposed development produces slightly windier conditions in comparison to existing conditions, wind comfort conditions with the proposed development are nevertheless considered acceptable.

Neighbouring Existing Surface Parking Lots: Following the introduction of the proposed development, conditions over the neighbouring existing surface parking lots located from the northwest clockwise to the east of the subject site are predicted to be suitable for standing, or better, during the summer and autumn, becoming suitable for strolling, or better, during the spring and winter. The noted conditions are considered acceptable.

With the existing massing, conditions over the noted neighbouring surface parking lots are predicted to be suitable for standing, or better, during the summer and autumn, with an isolated region suitable for strolling within the northwest surface parking lot during the autumn, becoming suitable for strolling, or better, during the winter and spring. Notably, the introduction of the proposed development is predicted to improve comfort levels over some of the noted areas in comparison to existing conditions, and wind conditions with the proposed development are nevertheless considered acceptable.

Courtyard and Parkland: During the typical use period, wind conditions within the courtyard situated central to the subject site are predicted to be suitable for sitting, as illustrated in Figure 7. The noted conditions are considered acceptable.

During the typical use period, wind conditions within the parkland situated to the west of the subject site are predicted to be suitable for mostly sitting, with regions suitable for standing to the north and west, as illustrated in Figure 7.

Depending on the programming of the parkland, the noted conditions may be considered acceptable. Specifically, if the noted windier areas suitable for standing will not accommodate designated seating or lounging activities, the noted conditions would be considered acceptable.

If required by programming, comfort levels at designated seating areas to the northwest within the parkland may be improved by implementing landscaping elements that are targeted around sensitive areas such as tall wind screens and clusters of coniferous trees in dense arrangements, in combination with strategically placed seating with high-back benches or other local wind mitigation.



Drive Aisle, Walkways, Drop-off Area, Loading Area, and Surface Parking Within Subject Site: Wind conditions over the drive aisle, surface parking, the loading area, and the proposed walkways within the subject site are predicted to be suitable for a mix of sitting and standing during the summer, becoming suitable for strolling, or better, throughout the remainder of the year. Conditions over the drop-off area to the east of the proposed development are predicted to be suitable for sitting throughout the year. The noted conditions are considered acceptable.

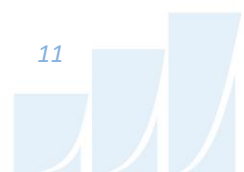
Building Access Points: Wind conditions in the vicinity of the building access points along the south elevation of the north wing are predicted to be suitable for sitting during the spring, summer, and autumn, becoming suitable for a mix of sitting and standing during the winter. Conditions in the vicinity of the remaining building access points serving the proposed development are predicted to be suitable for sitting throughout the year. The noted conditions are considered acceptable.

5.2 Wind Safety

Within the context of typical weather patterns, which exclude anomalous localized storm events such as tornadoes and downbursts, no pedestrian areas within or surrounding the subject site are expected to experience conditions that could be considered dangerous, as defined in Section 4.4.

5.3 Applicability of Results

Pedestrian wind comfort and safety have been quantified for the specific configuration of existing and foreseeable construction around the subject site. Future changes (that is, construction or demolition) of these surroundings may cause changes to the wind effects in two ways, namely: (i) changes beyond the immediate vicinity of the subject site would alter the wind profile approaching the subject site; and (ii) development in proximity to the subject site would cause changes to local flow patterns.



6. CONCLUSIONS AND RECOMMENDATIONS

A complete summary of the predicted wind conditions is provided in Section 5 and illustrated in Figures 3A-7. Based on computer simulations using the CFD technique, meteorological data analysis of the Ottawa wind climate, City of Ottawa wind comfort and safety criteria, and experience with numerous similar developments, the study concludes the following:

1) Most grade-level areas within and surrounding the subject site are predicted to experience conditions that are considered acceptable for the intended pedestrian uses throughout the year. Specifically, conditions over surrounding sidewalks, nearby transit stops, nearby existing surface parking lots, the proposed drive aisle, walkways, drop-off area, loading area, surface parking, and central courtyard, and in the vicinity of building access points, are considered acceptable. A single grade-level area of interest is predicted to experience windier conditions:

a. **Parkland West of Subject Site:** Wind conditions within the parkland are predicted to be suitable for mostly sitting during the typical use period (that is, May to October, inclusive), with regions suitable for standing to the north and west.

- Depending on the programming of the parkland, the noted conditions may be considered acceptable. Specifically, if the noted windier areas will not accommodate designated seating or lounging activities, the noted conditions would be considered acceptable.
- If required by programming, comfort levels at designated seating areas to the northwest within the parkland may be improved by implementing landscaping elements that are targeted around sensitive areas such as tall wind screens and clusters of coniferous trees in dense arrangements, in combination with strategically placed seating with high-back benches or other local wind mitigation.



- 2) The foregoing statements and conclusions apply to common weather systems, during which no dangerous wind conditions, as defined in Section 4.4, are expected anywhere over the subject site. During extreme weather events (for example, thunderstorms, tornadoes, and downbursts), pedestrian safety is the main concern. However, these events are generally short-lived and infrequent and there is often sufficient warning for pedestrians to take appropriate cover.

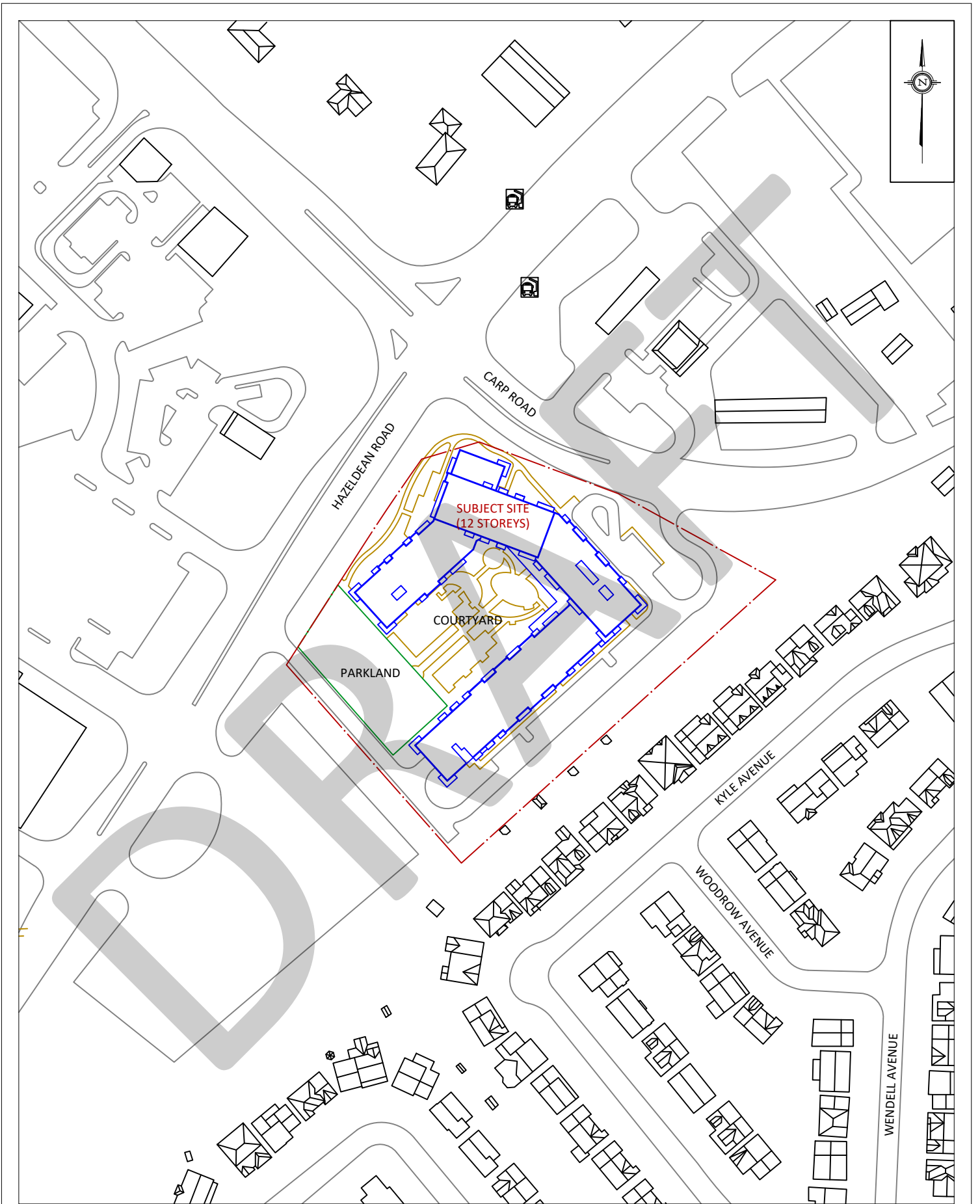
Sincerely,

Gradient Wind Engineering Inc.

David Huitema, M.Eng.
Wind Scientist

Justin Ferraro, P.Eng.
Principal

Omar Rioseco, B.Eng.
Junior Wind Scientist



GRADIENTWIND

ENGINEERS & SCIENTISTS

127 WALGREEN ROAD, OTTAWA, ON
613 836 0934 • GRADIENTWIND.COM

PROJECT

1174 CARP ROAD, OTTAWA
PEDESTRIAN LEVEL WIND STUDY

SCALE

1:2000

DRAWING NO.

23-299-PLW-1A

DATE

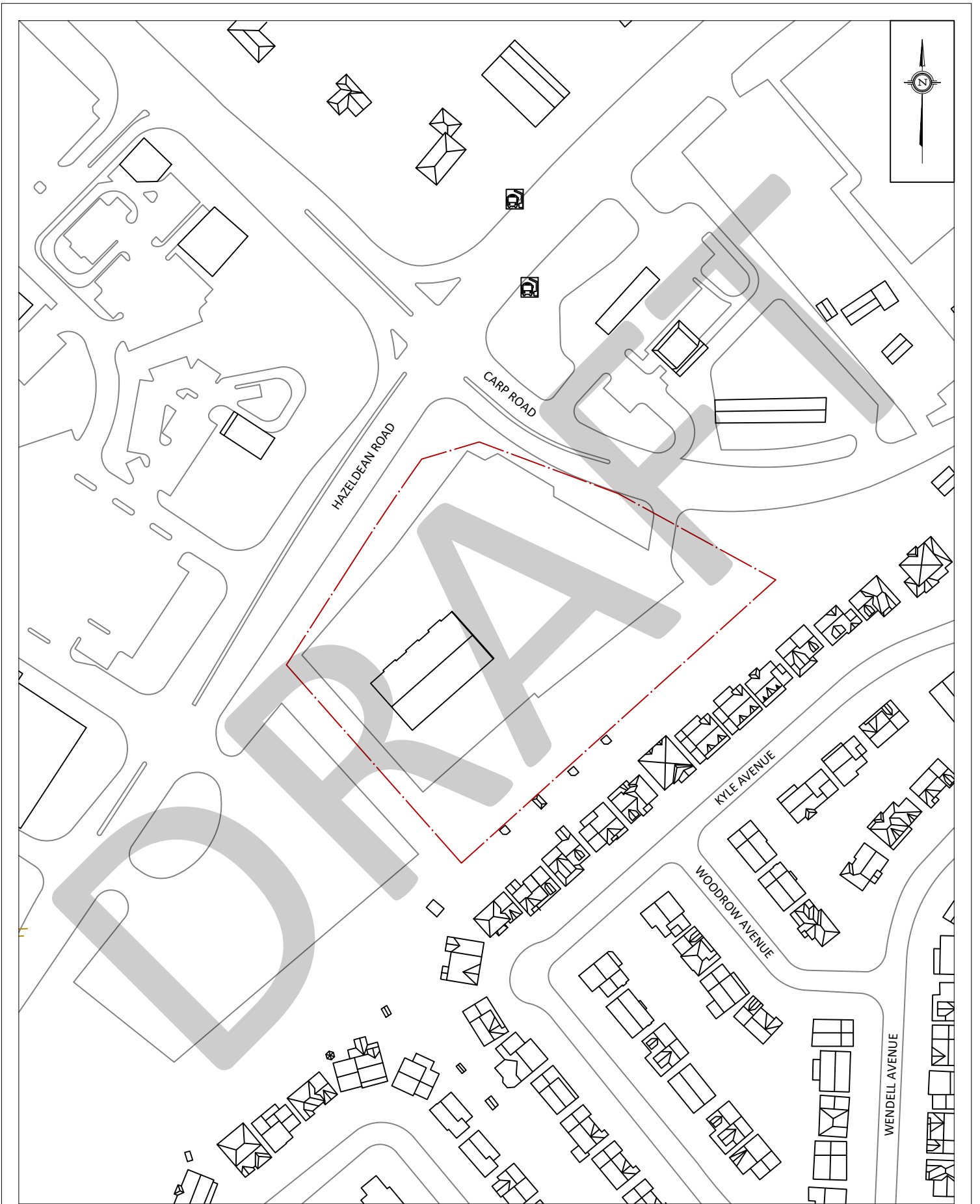
MARCH 1, 2024

DRAWN BY

S.K.

DESCRIPTION

FIGURE 1A:
PROPOSED SITE PLAN AND SURROUNDING CONTEXT



GRADIENTWIND

ENGINEERS & SCIENTISTS

127 WALGREEN ROAD, OTTAWA, ON
613 836 0934 • GRADIENTWIND.COM

PROJECT

1174 CARP ROAD, OTTAWA
PEDESTRIAN LEVEL WIND STUDY

SCALE

1:2000

DRAWING NO.

23-299-PLW-1B

DATE

MARCH 1, 2024

DRAWN BY

S.K.

DESCRIPTION

FIGURE 1B:
EXISTING SITE PLAN AND SURROUNDING CONTEXT

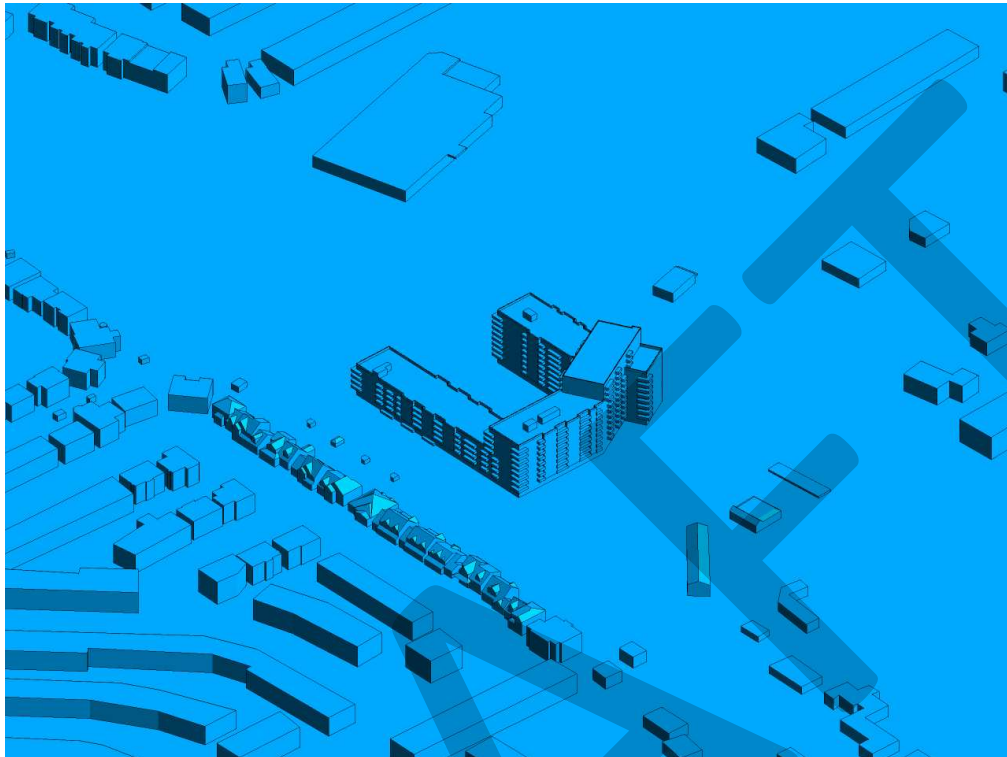


FIGURE 2A: COMPUTATIONAL MODEL, PROPOSED MASSING, EAST PERSPECTIVE

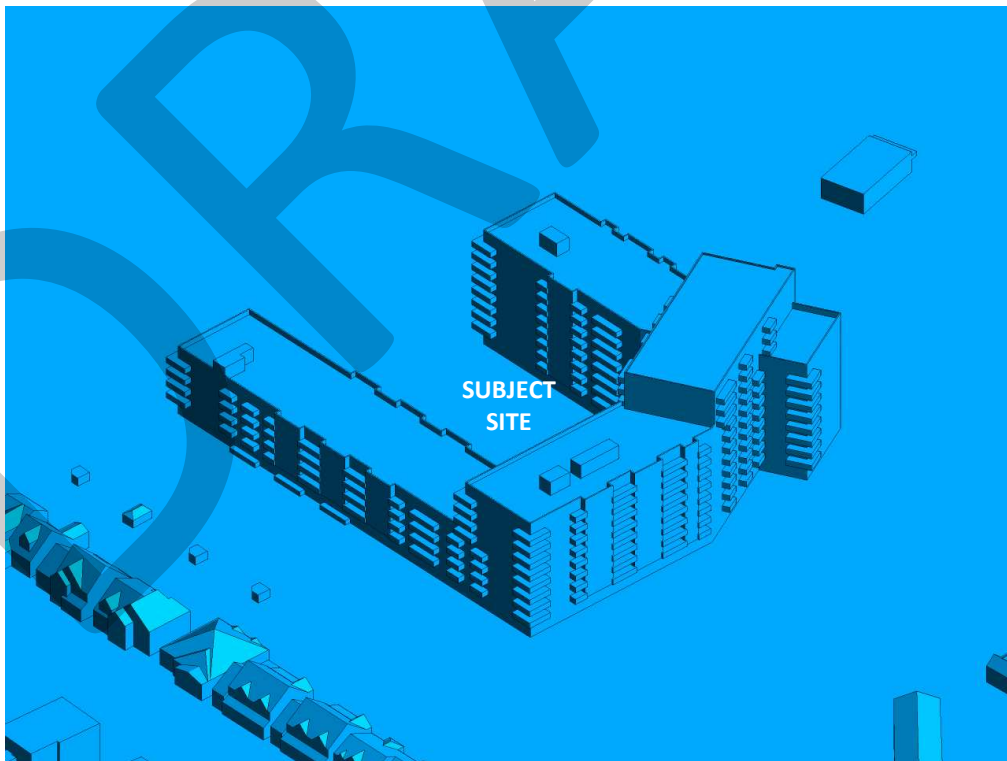


FIGURE 2B: CLOSE UP OF FIGURE 2A



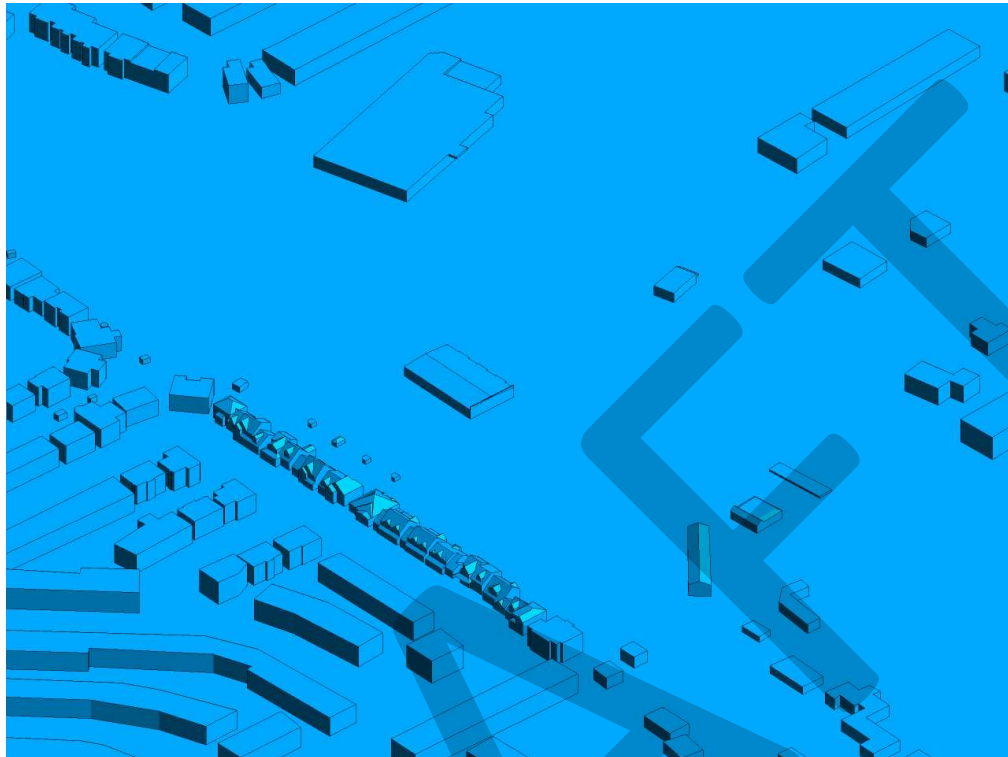


FIGURE 2C: COMPUTATIONAL MODEL, EXISTING MASSING, EAST PERSPECTIVE

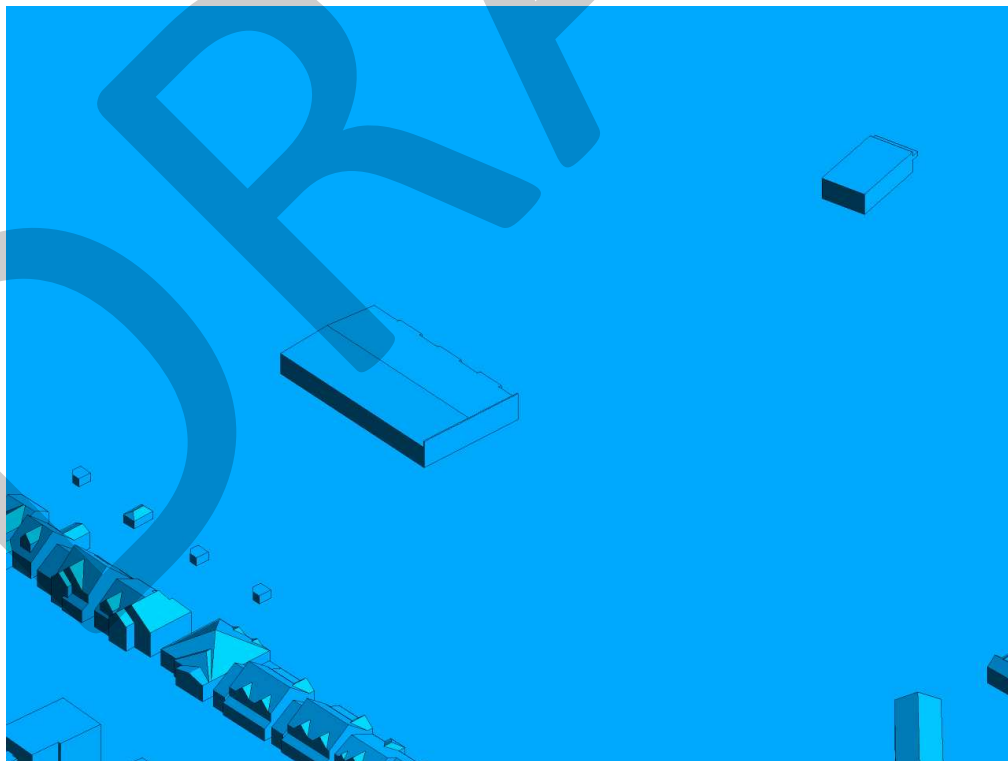


FIGURE 2D: CLOSE UP OF FIGURE 2C



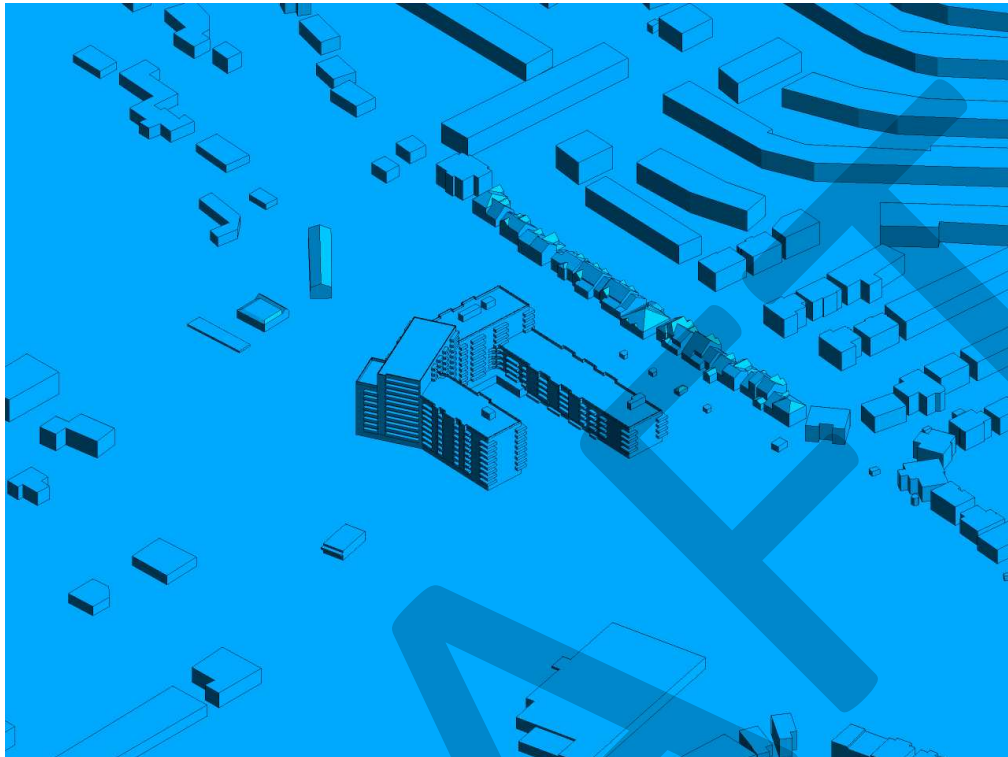


FIGURE 2E: COMPUTATIONAL MODEL, PROPOSED MASSING, WEST PERSPECTIVE

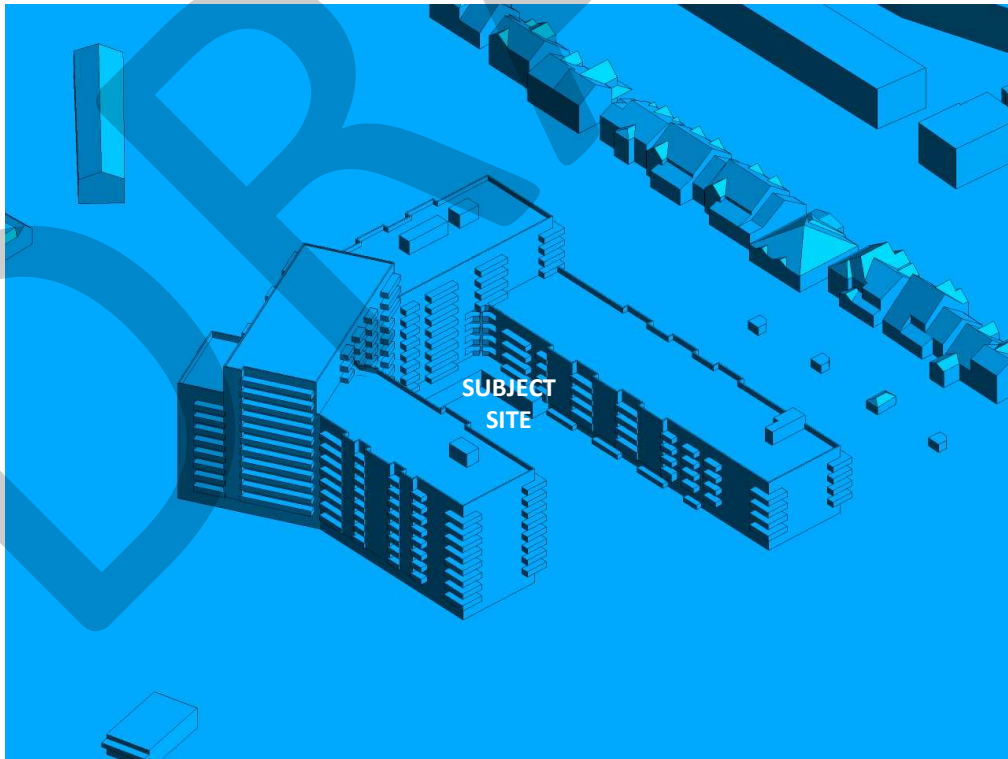


FIGURE 2F: CLOSE UP OF FIGURE 2E



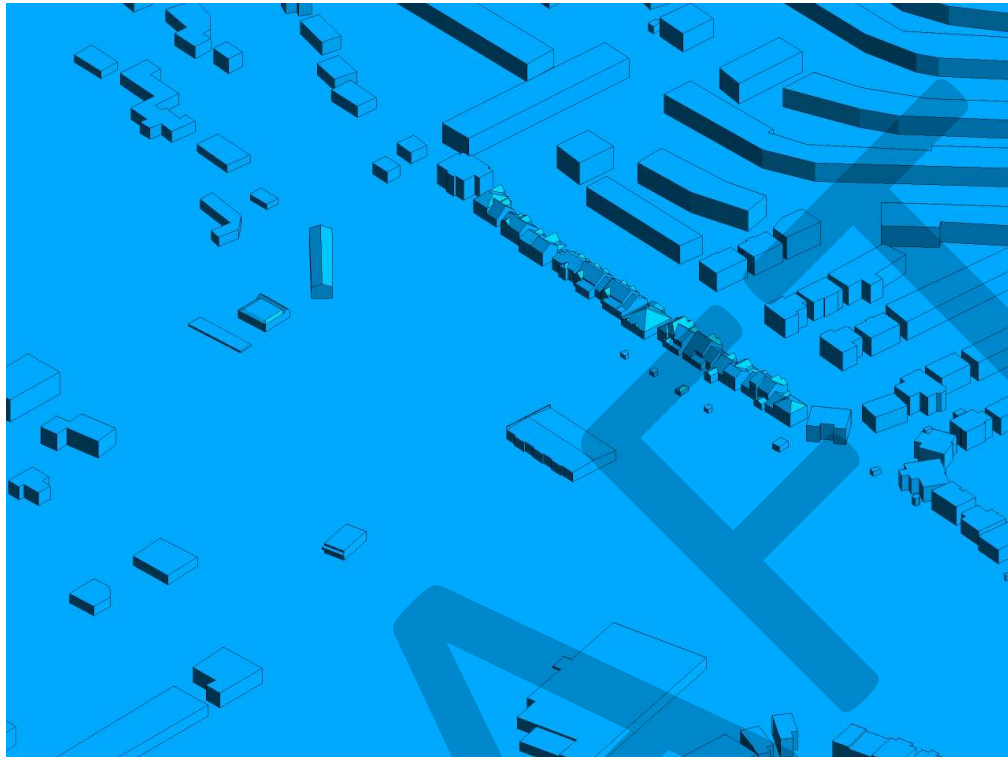


FIGURE 2G: COMPUTATIONAL MODEL, EXISTING MASSING, WEST PERSPECTIVE

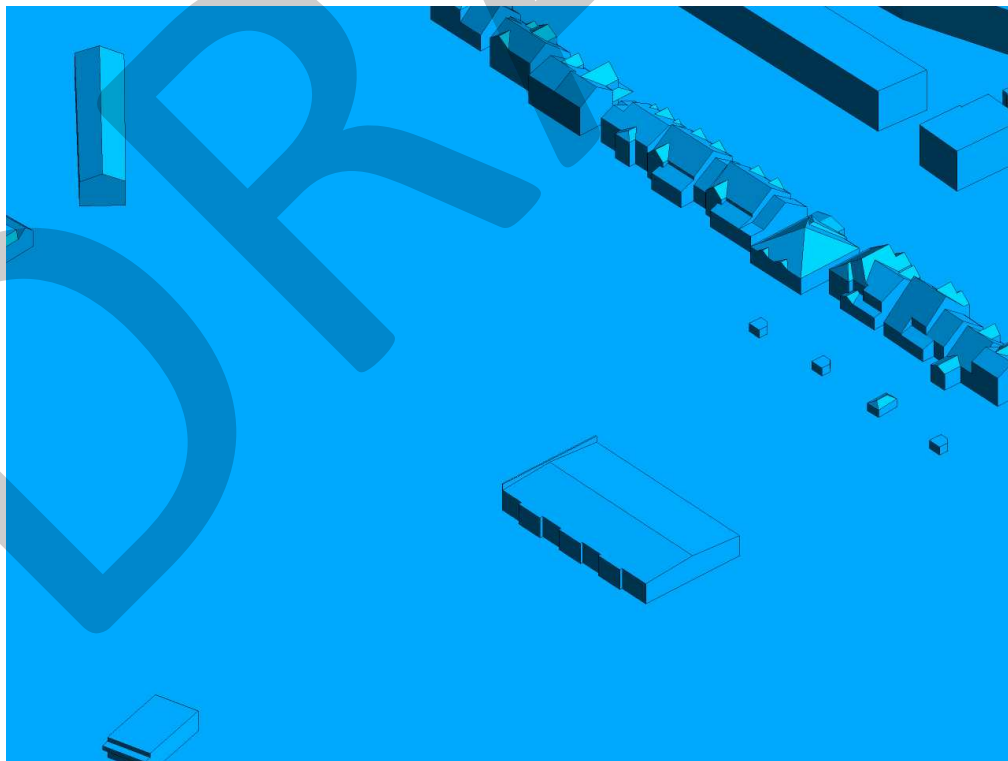


FIGURE 2H: CLOSE UP OF FIGURE 2G



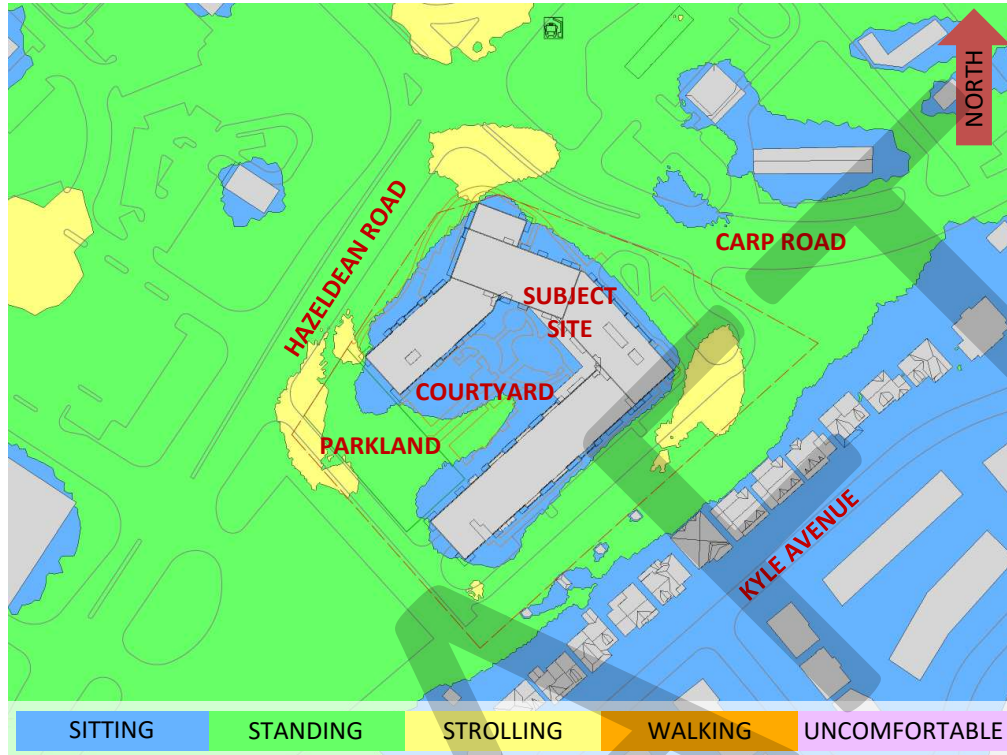


FIGURE 3A: SPRING – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

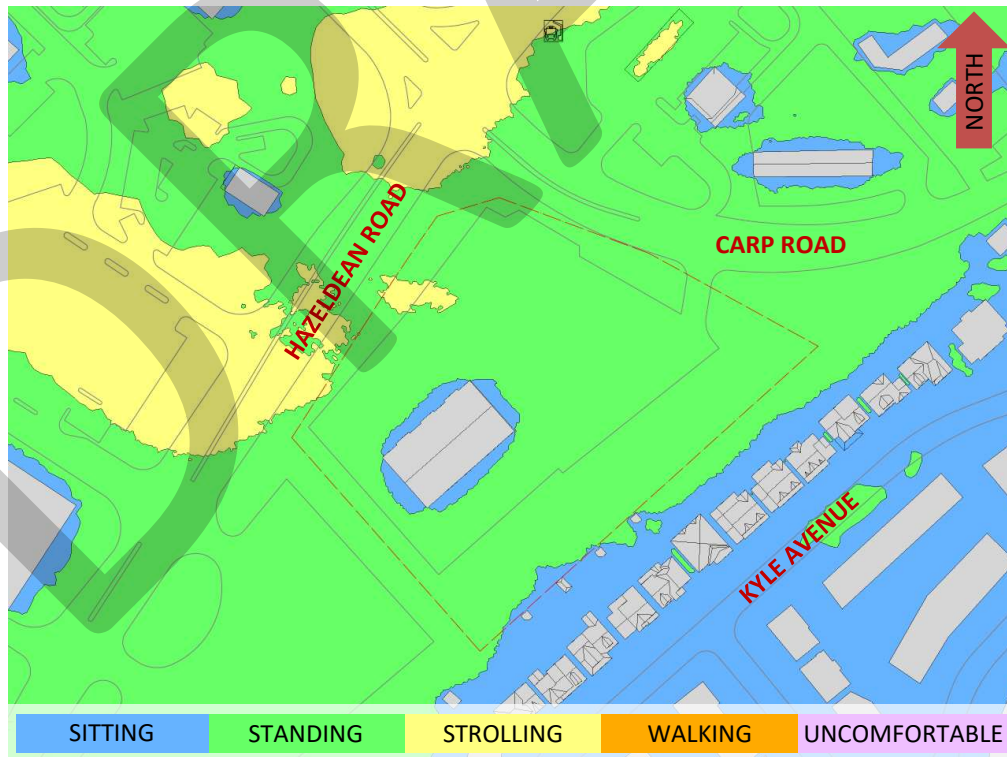


FIGURE 3B: SPRING – WIND COMFORT, GRADE LEVEL – EXISTING MASSING



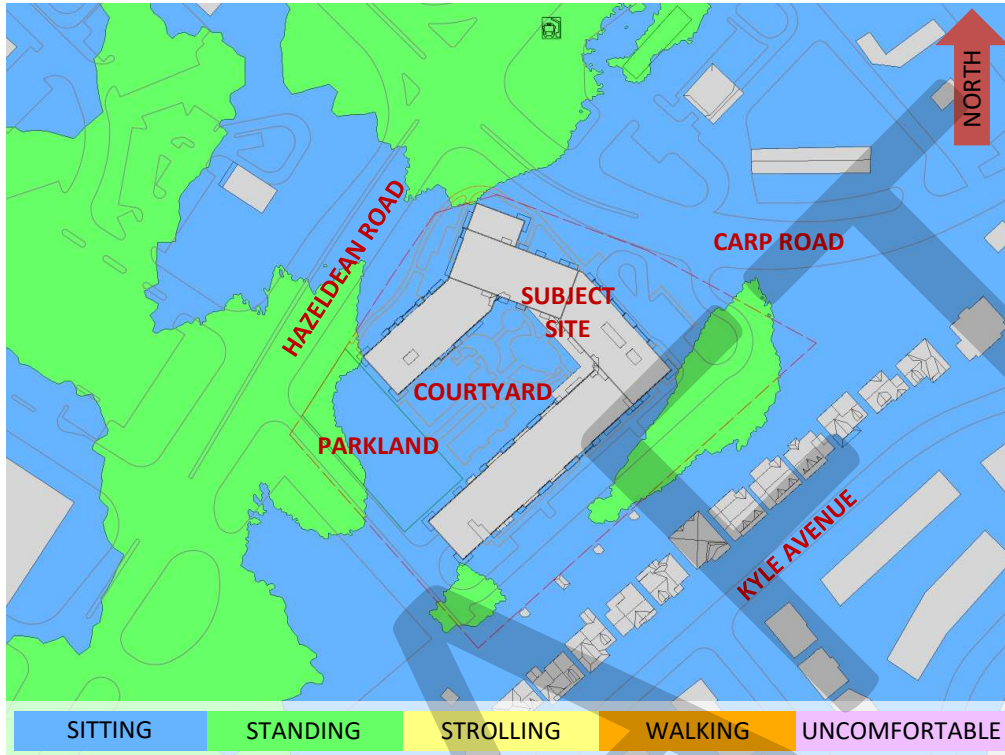


FIGURE 4A: SUMMER – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

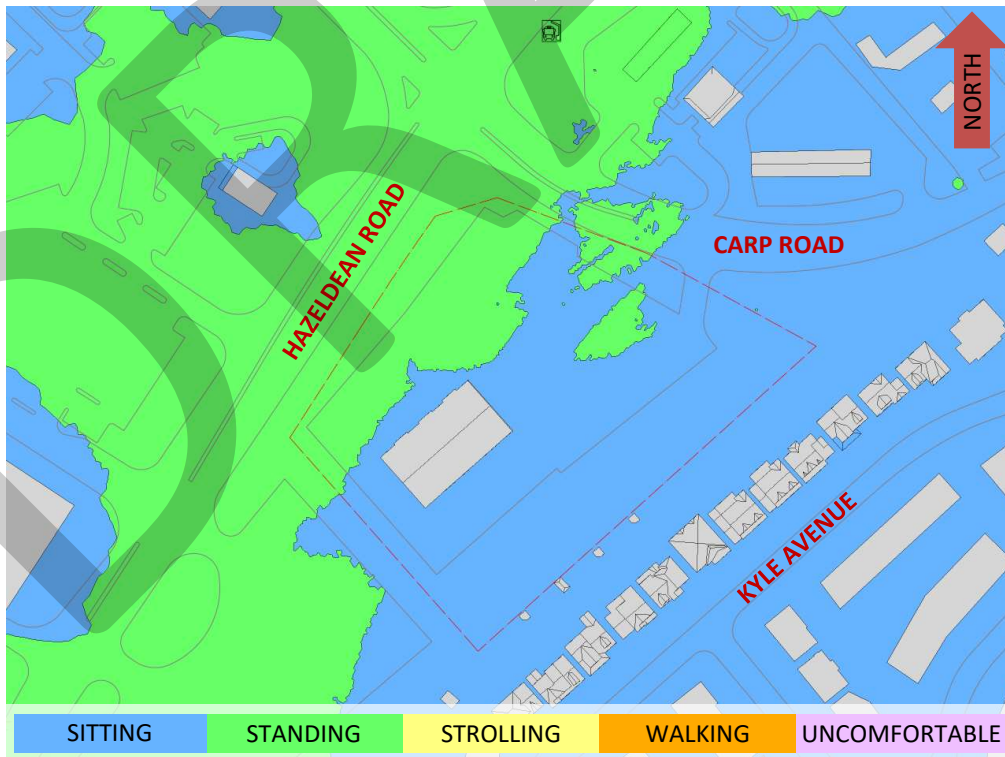


FIGURE 4B: SUMMER – WIND COMFORT, GRADE LEVEL – EXISTING MASSING



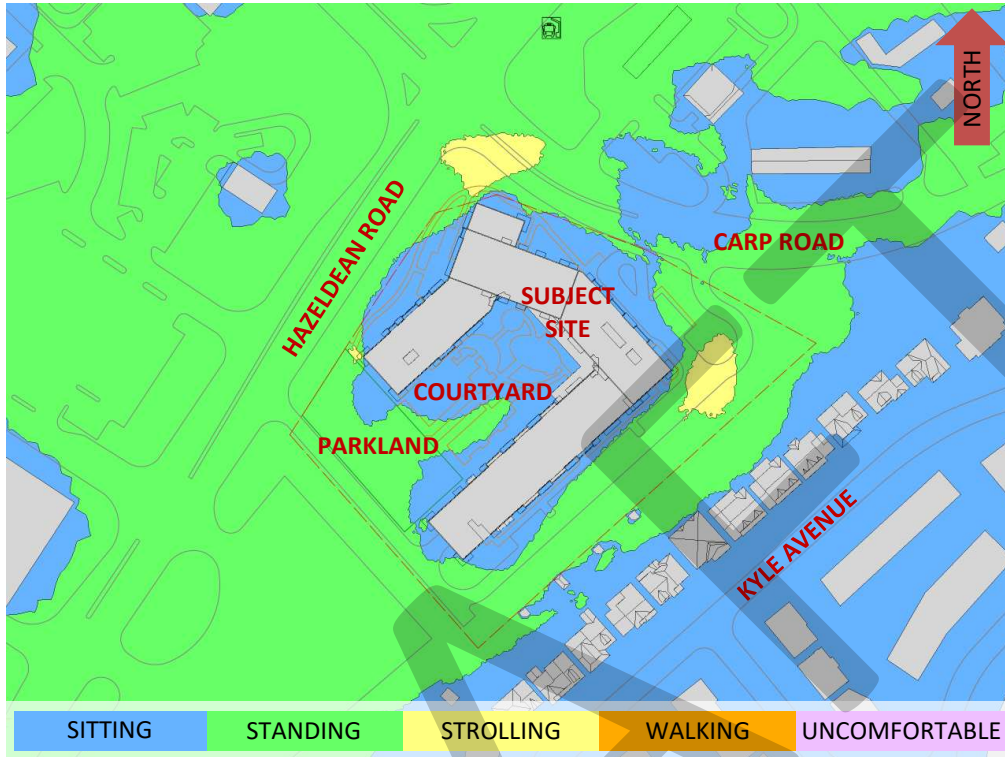


FIGURE 5A: AUTUMN – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

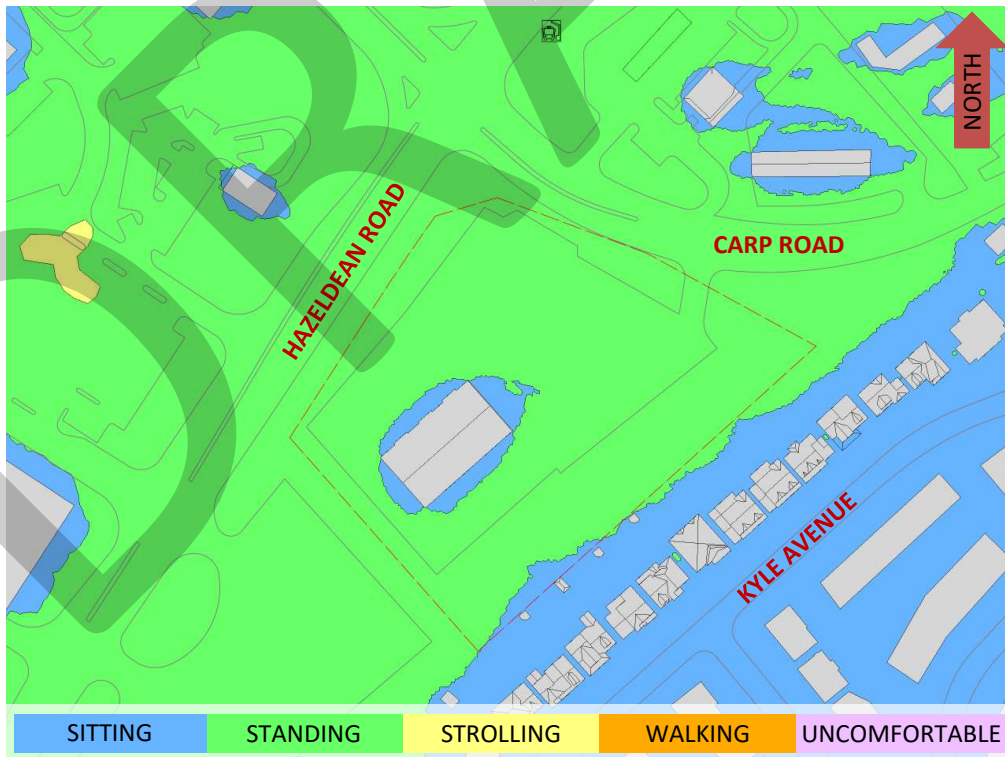


FIGURE 5B: AUTUMN – WIND COMFORT, GRADE LEVEL – EXISTING MASSING



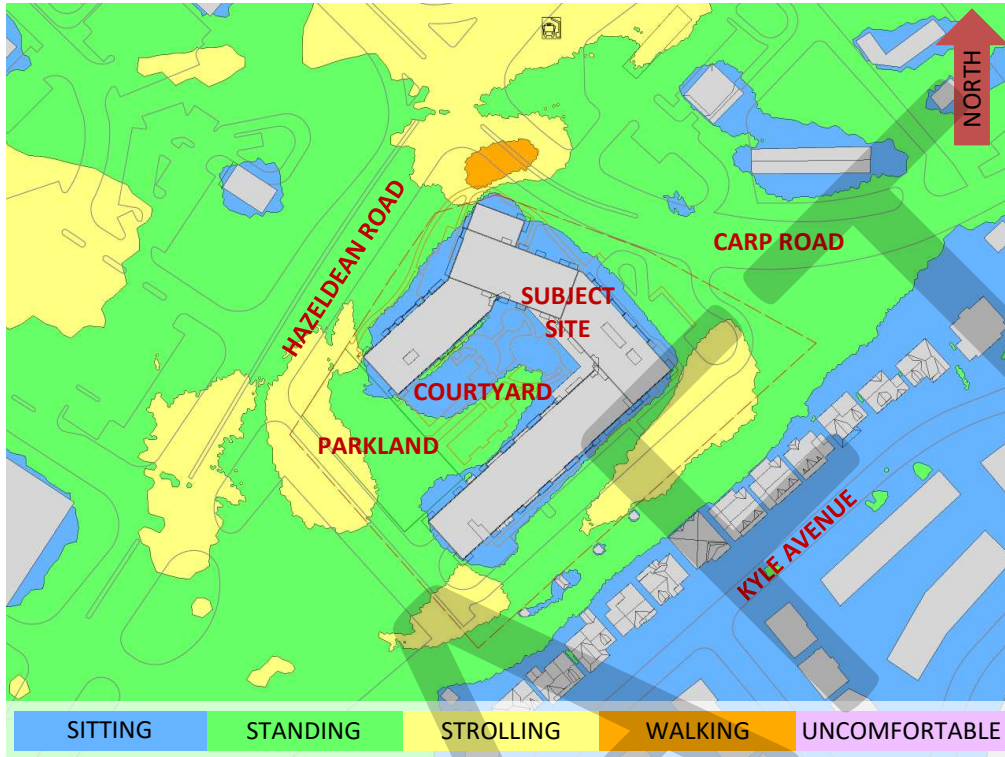


FIGURE 6A: WINTER – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING

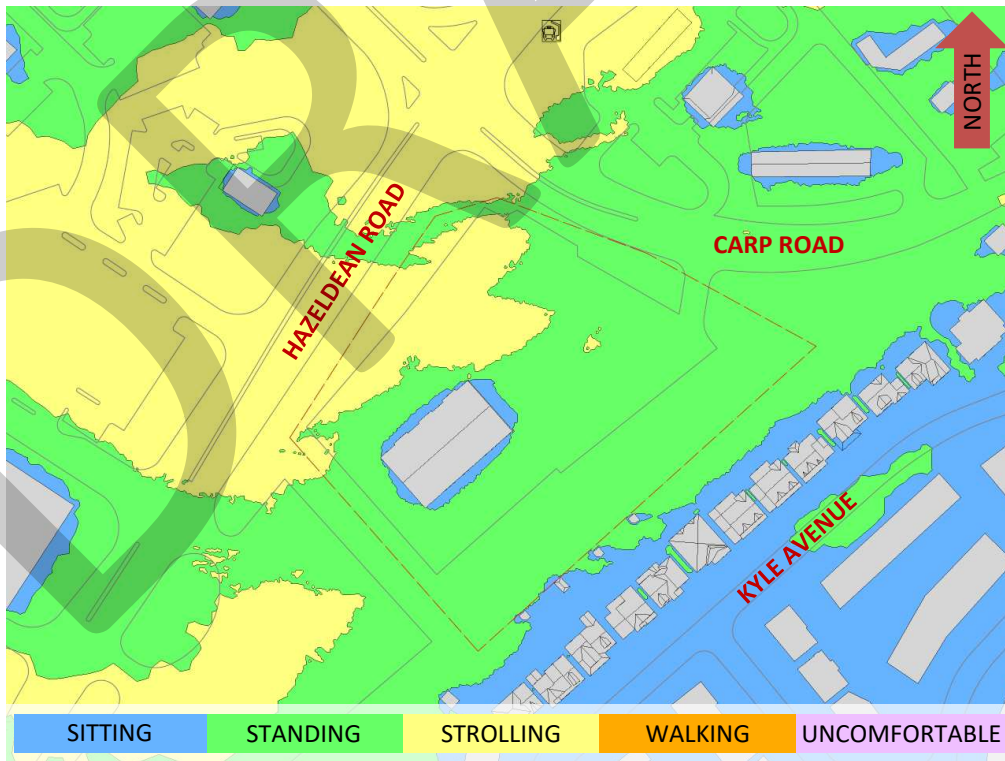


FIGURE 6B: WINTER – WIND COMFORT, GRADE LEVEL – EXISTING MASSING



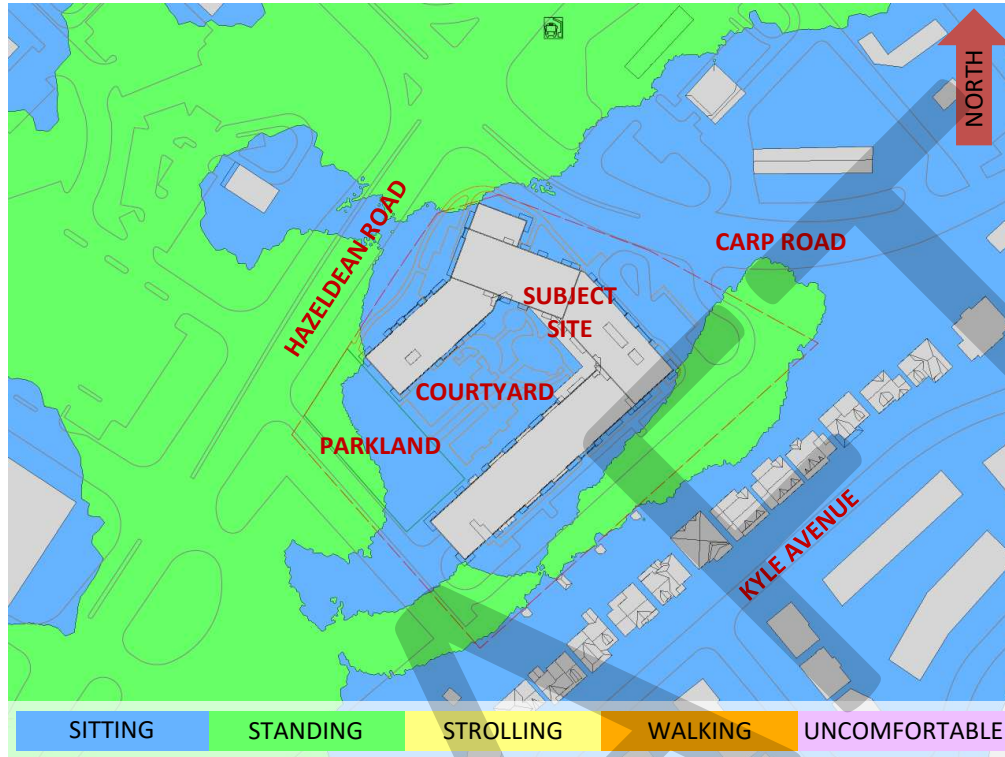


FIGURE 7: TYPICAL USE PERIOD – WIND COMFORT, GRADE LEVEL – PROPOSED MASSING



GRADIENTWIND

ENGINEERS & SCIENTISTS



DRAFT

APPENDIX A

SIMULATION OF THE ATMOSPHERIC BOUNDARY LAYER

SIMULATION OF THE ATMOSPHERIC BOUNDARY LAYER

The atmospheric boundary layer (ABL) is defined by the velocity and turbulence profiles according to industry standard practices. The mean wind profile can be represented, to a good approximation, by a power law relation, Equation (1), giving height above ground versus wind speed (1), (2).

$$U = U_g \left(\frac{Z}{Z_g} \right)^\alpha \quad \text{Equation (1)}$$

where, U = mean wind speed, U_g = gradient wind speed, Z = height above ground, Z_g = depth of the boundary layer (gradient height), and α is the power law exponent.

For the model, U_g is set to 6.5 metres per second, which approximately corresponds to the 60% mean wind speed for Ottawa based on historical climate data and statistical analyses. When the results are normalized by this velocity, they are relatively insensitive to the selection of gradient wind speed.

Z_g is set to 540 m. The selection of gradient height is relatively unimportant, so long as it exceeds the building heights surrounding the subject site. The value has been selected to correspond to our physical wind tunnel reference value.

α is determined based on the upstream exposure of the far-field surroundings (that is, the area that it not captured within the simulation model).

Table 1 presents the values of α used in this study, while Table 2 presents several reference values of α . When the upstream exposure of the far-field surroundings is a mixture of multiple types of terrain, the α values are a weighted average with terrain that is closer to the subject site given greater weight.

TABLE 1: UPSTREAM EXPOSURE (ALPHA VALUE) VS TRUE WIND DIRECTION

Wind Direction (Degrees True)	Alpha Value (α)
0	0.20
49	0.22
74	0.22
103	0.23
167	0.20
197	0.19
217	0.19
237	0.19
262	0.19
282	0.19
301	0.20
324	0.20

TABLE 2: DEFINITION OF UPSTREAM EXPOSURE (ALPHA VALUE)

Upstream Exposure Type	Alpha Value (α)
Open Water	0.14-0.15
Open Field	0.16-0.19
Light Suburban	0.21-0.24
Heavy Suburban	0.24-0.27
Light Urban	0.28-0.30
Heavy Urban	0.31-0.33

The turbulence model in the computational fluid dynamics (CFD) simulations is a two-equation shear-stress transport (SST) model, and thus the ABL turbulence profile requires that two parameters be defined at the inlet of the domain. The turbulence profile is defined following the recommendations of the Architectural Institute of Japan for flat terrain (3).

$$I(Z) = \begin{cases} 0.1 \left(\frac{Z}{Z_g} \right)^{-\alpha-0.05}, & Z > 10 \text{ m} \\ 0.1 \left(\frac{10}{Z_g} \right)^{-\alpha-0.05}, & Z \leq 10 \text{ m} \end{cases} \quad \text{Equation (2)}$$

$$L_t(Z) = \begin{cases} 100 \text{ m} \sqrt{\frac{Z}{30}}, & Z > 30 \text{ m} \\ 100 \text{ m}, & Z \leq 30 \text{ m} \end{cases} \quad \text{Equation (3)}$$

where, I = turbulence intensity, L_t = turbulence length scale, Z = height above ground, and α is the power law exponent used for the velocity profile in Equation (1).

Boundary conditions on all other domain boundaries are defined as follows: the ground is a no-slip surface; the side walls of the domain have a symmetry boundary condition; the top of the domain has a specified shear, which maintains a constant wind speed at gradient height; and the outlet has a static pressure boundary condition.

REFERENCES

- [1] P. Arya, "Chapter 10: Near-neutral Boundary Layers," in *Introduction to Micrometeorology*, San Diego, California, Academic Press, 2001.
- [2] S. A. Hsu, E. A. Meindl and D. B. Gilhousen, "Determining the Power-Law Wind Profile Exponent under Near-neutral Stability Conditions at Sea," vol. 33, no. 6, 1994.
- [3] Y. Tamura, H. Kawai, Y. Uematsu, K. Kondo and T. Okhuma, "Revision of AIJ Recommendations for Wind Loads on Buildings," in *The International Wind Engineering Symposium, IWES 2003*, Taiwan, 2003.

1174 Carp Road | Informal Pre-consultation | Zoning By-law Amendment & Site Plan Control Application | Groupe Maurice, Hobin Architecture, Fotenn Planning + Design



Key Recommendations

- The Panel supports the location of the park on the site.
- The Panel recommends the vehicular circulation, along with the surface parking, be reduced as much as possible, especially along the south edge.
- The Panel provided many suggestions regarding improvements to the articulation of the large building and recommends refining the legibility of the different building components by breaking up the overall building mass to read more as a collection of buildings, providing breathing room and greater access to natural light.

- The Panel recommends the building(s) parallel the streets more closely to provide a more parallel alignment with the right-of-way.
- The Panel recommends providing more generous transitions between each of the building segments, and eliminating the 9-storey portion of the building which projects toward the intersection.

Site Design & Public Realm

- The Panel agrees with the location of the parkland dedication, and recommends connecting the public park with a greater overall vision for a greenspace network in this area.
- The Panel recommends collaborating with the City on evolving the treatment and location of the pedestrian sidewalk along Hazeldean Road.
- The Panel has concerns with vehicular headlights penetrating into at-grade units and windows, or neighbours' backyards, despite there being some landscape buffer. Consider limiting or removing some of the parking spaces on the southern portion of the site to mitigate this issue.
- The Panel recommends providing a larger buffer at the south edge of building.
- The Panel supports the building heights, and have no concerns with the shadow study.
- The Panel has concerns that the public may use the site accesses and circulation as a cut-through to avoid the intersection, and recommends de-linking the loading area from the drop-off area to mitigate these concerns.
- The Panel has concerns that the servicing road on the western edge of the site makes the public park appear as a privatized space, and recommends significantly reducing the roadway network on the site to not be a continuous through-way from Hazeldean Road to Carp Road.
- The Panel has concerns with the minimal landscaping at the drop-off and recommends providing a more robust planting and landscaped main entrance point.
- The Panel recommends further exploring how the building integrates within its context. Consider leveraging the opportunity to collaborate with the City on optimizing pedestrian crossing at the intersection and providing safe access to transit.
- The Panel recommends providing a large entrance canopy that can protect drop-offs from the elements.

Sustainability

- The Panel suggests capitalizing on the opportunity to provide a stormwater bioswale or pond as a smartly designed feature to the site. Consider the potential of merging sustainable stormwater management with providing residential amenities.
- The Panel suggests exploring the opportunity for solar power or green roof elements, regardless of whether the roof is made accessible as an amenity or not.

Built Form & Architecture

- The Panel recommends improving the relationship of the building to the future streetscape and park. Consider aligning the building with the roadway along Hazeldean Road and providing commercial uses, particularly at the northwest corner next to the public park.
- The Panel is concerned about the 9-storey portion of the building on the northeast corner that is projecting out toward the street, and recommends eliminating that 9-storey portion and moving the larger 12-storey volume as close as possible to Carp Road.
- The Panel recommends aligning the building façades with the streets to parallel them more closely. Move the eastern façade closer to Carp Road. Reallocate the projecting 9-storey building mass away from northeast corner to be absorbed elsewhere in the building.
- The Panel has concerns with the long hallways, and recommends placing exit stairs at the ends of hallways with windows to provide some borrowed light and views to exterior. Alternatively, consider introducing pinch-points in the façades to provide some natural light in the hallways.
- The Panel appreciates the general idea of a light coloured “field” with floating darker boxes as the main architectural expression. However, the Panel cautions against the use of white metal panels alongside light-coloured masonry units, and suggests forgoing the white metal panels and pursuing two separate masonry units instead, as there are concerns with how the metal panels will age.
- The Panel encourages the proponents to explore adding more life and colour into the architectural expression of the façades.

- The Panel has concerns with the overall scale and mass of the building and strongly recommends breaking down the massing of the building into multiple buildings. Consider providing pinch-points to provide natural light into the hallways and help break the mass into a more digestible scale/volumes.
- The Panel has concerns with the main entrances being small and too discreet, and recommends providing larger main entrances that are more commensurate to the building(s).
- The Panel has concerns with the reveal proposed on the ground level and how it affects the building's relationship to the ground plane. Consider a reveal that is taller than the 3.85m provided and explore visually distinguishing the ground level from the rest of the façades more strongly.
- The Panel suggests the northwestern façade facing the park should be an entrance façade as it is an important view and should provide a presence on the park and from Hazeldean Road.
- The Panel recommends reducing the bulk of the building and introducing slight shifts in massing to provide breathing room and transitional moments into the project.
- The Panel recommends ensuring that the mechanical penthouse elements are integrated within the envelope of the building.

Response to UDRP Recommendations

1174 Carp Road

Response to UDRP Recommendations dated April 5, 2024

No.	Comment	Response
1.0	Key Recommendations	
1.1	The Panel supports the location of the park on the site	Noted.
1.2	The Panel recommends the vehicular circulation, along with the surface parking, be reduced as much as possible, especially along the south edge.	Noted.
1.3	The Panel provided many suggestions regarding improvements to the articulation of the large building and recommends refining the legibility of the different building components by breaking up the overall building mass to read more as a collection of buildings, providing breathing room and greater access to natural light.	The articulation of the building form has been refined and enhanced with the use of material, colour and textural elements to help articulate and breakdown the overall scale of the building to allow the overall form to appear as a collection of buildings connected together. The building form and location is designed with strategic stepped building height, building setbacks and configuration to allow for optimum natural light surrounding the property the internal courtyard.
1.4	The Panel recommends the building(s) parallel the streets more closely to provide a more parallel alignment with the right-of-way.	We believe that the current building footprint configuration and it's relationship to the irregular shaped property boundary in successful in that it offers opportunity to create a quality outdoor landscape interface between the building and the busy roadway. This landscape buffer will be integral to the comfort safety of the residents and public passersby
1.5	The Panel recommends providing more generous transitions between each of the building segments, and eliminating the 9-storey portion of the building which projects toward the intersection.	The 9-storey portion of the building projecting towards the intersection is part of the concept of the design to create scale and breakdown the large building mass at this intersection. In our opinion, this feature should be retained as is.
2.0	Site Design & Public Realm	
2.1	The Panel agrees with the location of the parkland dedication, and recommends connecting the public park with a greater overall vision for a greenspace network in this area.	Noted.
2.2	The Panel recommends collaborating with the City on evolving the treatment and location of the pedestrian sidewalk along Hazeldean Road.	After the UDRP submission was made, the City of Ottawa provided an update on the Carp Road EA and shared with the development teams new plans for the Carp/Hazeldean intersection. These plans are being integrated into the Phase 3 submission materials, reflective of the planned pedestrian sidewalks along Carp and Hazeldean.

2.3	The Panel has concerns with vehicular headlights penetrating into at-grade units and windows, or neighbours' backyards, despite there being some landscape buffer. Consider limiting or removing some of the parking spaces on the southern portion of the site to mitigate this issue.	We note that the driveway slopes from east to west and the grade difference is such that the ground floor elevation will be substantially higher (3-5ft) from the lower grade elevation and any impact from the vehicular headlights will be minimal. In addition, we are proposing a dense landscape planted buffer and architectural screen as additional buffer and screening from the headlights
2.4	The Panel recommends providing a larger buffer at the south edge of building	We believe that there 30m is a sufficient buffer between the building (5floors - 15m building height) and the south lot line including a 10m landscape buffer with existing trees to be retained and additional new trees proposed. The building setback is 2:1 relative to the building height (15m) and setback (30m).
2.5	The Panel supports the building heights, and have no concerns with the shadow study.	Noted.
2.6	The Panel has concerns that the public may use the site accesses and circulation as a cut-through to avoid the intersection, and recommends de-linking the loading area from the drop-off area to mitigate these concerns.	The loading area has been located along the rear yard and is disconnected from the drop off area. Please refer to the updated drawings. The drop off area has been revised to account for future road modifications along Carp rd.
2.7	The Panel has concerns that the servicing road on the western edge of the site makes the public park appear as a privatized space, and recommends significantly reducing the roadway network on the site to not be a continuous through-way from Hazeldean Road to Carp Road.	The City of Ottawa requested site access on both Carp and Hazeldean in our first pre-application meeting. The entrances are to be located as far away from the intersection as possible to minimize any potential conflicts, which is why the park is inside the driveway access.
2.8	The Panel has concerns with the minimal landscaping at the drop-off and recommends providing a more robust planting and landscaped main entrance point.	The entrance along Carp Road is constrained by a ROW dedication through the Carp Road EA process, and the entrance will be redesigned for the Phase 3 submission.
2.9	The Panel recommends further exploring how the building integrates within its context. Consider leveraging the opportunity to collaborate with the City on optimizing pedestrian crossing at the intersection and providing safe access to transit.	The Carp Road EA process includes a redesign of the intersection, which accounts for pedestrian connections to and from the site. This plan will be included in the Phase 3 submission.
2.10	The Panel recommends providing a large entrance canopy that can protect drop offs from the elements.	The idea of a large projecting entrance canopy is not supported by the client. Alternatively, we have redesigned the entrance canopy to provide a sheltered arrival next to the drop off area and the new design elements for the canopy have been integrated into the details of the facade of the residential floors above the entrance to create a distinct visual design feature that visually help to connect the entrance with the street.

3.0	Sustainability	
3.1	The Panel suggests capitalizing on the opportunity to provide a stormwater bioswale or pond as a smartly designed feature to the site. Consider the potential of merging sustainable stormwater management with providing residential amenities.	We agree that a sustainable SWM solution such as a bioswale or pond would be desirable, however, the site specific constraints (i.e., existing drainage swale along 3 sides of the site, 10m landscape buffer along south property line, landscape buffer along the west property line, the central courtyard being above the UG parking level and the City park block, do not provide us with sufficient space on-site to incorporate such a feature.
3.2	The Panel suggests exploring the opportunity for solar power or green roof elements, regardless of whether the roof is made accessible as an amenity or not.	Noted. Sustainability / Green initiatives such as green roofs amongst others will be considered during the next detailed design development phase. Solar power will be explored in the design development with Hydro-One (buying back energy or granting credit to return energy produced)
4.0	Built Form & Architecture	
4.1	The Panel recommends improving the relationship of the building to the future streetscape and park. Consider aligning the building with the roadway along Hazeldean Road and providing commercial uses, particularly at the northwest corner next to the public park.	We appreciate the comment to align the building with the roadway but prefer the current building outline for reasons explained above (refer to comment 1.4). Having said that, consideration to program the North West corner of the ground floor with active commercial use is of interest. Please refer to revised plans and elevations where the pharmacy and hair salon is being proposed to interface with Hazeldean and the Park.
4.2	The Panel is concerned about the 9-storey portion of the building on the northeast corner that is projecting out toward the street, and recommends eliminating that 9-storey portion and moving the larger 12-storey volume as close as possible to Carp Road.	The design team prefers the 9storey volume at the corner to create scale and breakdown the large building mass at this intersection. In our opinion, this feature should be retained as is.
4.3	The Panel recommends aligning the building façades with the streets to parallel them more closely. Move the eastern façade closer to Carp Road. Reallocate the projecting 9-storey building mass away from northeast corner to be absorbed elsewhere in the building.	We restfully disagree for reasons outlined in response 1.4 and 1.5 above. 1. Quality landscape buffer as a buffer along busy roadway 2. Breakdown of scale and massing is more successful with current design.
4.4	The Panel has concerns with the long hallways, and recommends placing exit stairs at the ends of hallways with windows to provide some borrowed light and views to exterior. Alternatively, consider introducing pinch-points in the façades to provide some natural light in the hallways.	The interior corridors will be articulated with ceiling designs, bulkheads and lighting fixtures, texture and colour to animate, articulate and breakdown the long hallways.

4.5	The Panel appreciates the general idea of a light coloured “field” with floating darker boxes as the main architectural expression. However, the Panel cautions against the use of white metal panels alongside light-coloured masonry units, and suggests forgoing the white metal panels and pursuing two separate masonry units instead, as there are concerns with how the metal panels will age.	The elevations are revised to with white metal panels next to dark masonry to better articulate and breakdown the building components. Please refer to the updated 3D renders
4.6	The Panel encourages the proponents to explore adding more life and colour into the architectural expression of the façades.	Please refer to the updated 3D renders.
4.7	The Panel has concerns with the overall scale and mass of the building and strongly recommends breaking down the massing of the building into multiple buildings. Consider providing pinch-points to provide natural light into the hallways and help break the mass into a more digestible scale/volumes.	Please refer to the updated 3D renders. Revised materials, textures and colours to break down the massing of the building into multiple building components
4.8	The Panel has concerns with the main entrances being small and too discreet, and recommends providing larger main entrances that are more commensurate to the building(s).	New design elements for the canopy have been integrated into the details of the facade of the residential floors above the entrance to create a distinct visual design feature that visually help to connect the entrance with the street and create a playful architectural privacy screen for residential units above.
4.9	The Panel has concerns with the reveal proposed on the ground level and how it affects the building’s relationship to the ground plane. Consider a reveal that is taller than the 3.85m provided and explore visually distinguishing the ground level from the rest of the façades more strongly.	The client has reviewed this option and increasing the ground floor height is cost prohibitive for this project.
4.10	The Panel suggests the northwestern façade facing the park should be an entrance façade as it is an important view and should provide a presence on the park and from Hazeldean Road.	North West corner of the ground floor has been re-designed with an active commercial use to animate the park and the NW corner. Please refer to revised plans and elevations where the pharmacy and hair salon is being proposed to interface with Hazeldean and the Park.
4.11	The Panel recommends reducing the bulk of the building and introducing slight shifts in massing to provide breathing room and transitional moments into the project.	Refer to the updated 3D renders. The building massing includes revised materials, textures and colours to break down the massing of the building into multiple building components

<p>4.12</p>	<p>The Panel recommends ensuring that the mechanical penthouse elements are integrated within the envelope of the building.</p>	<p>This will be considered in the next design development stages of the project. We note that any mechanical penthouse element will be minimal, aligned with the elevator cores and significantly setback from the perimeter of the building footprint to reduce visual impacts from below.</p>
--------------------	--	--