

Mattamy Homes

4159 Obsidian (HMBS Phase 7)

Urban Design Brief
May 2025

Table of Contents

| | |
|----------------------------------------------------|-----------|
| INTRODUCTION | 2 |
| SITE ANALYSIS | 3 |
| Surrounding Context and Urban Pattern | 4 |
| Site Perspective Views | 5 |
| Site Photos | 6 |
| Road Network | 7 |
| Transit and Active Transportation | 8 |
| Open Space and Ammenities | 9 |
| Planned Functions of the Surrounding Area | 10 |
| PROJECT DESCRIPTION AND DESIGN RESEARCH | 11 |
| Design Overview | 12 |
| Design Evolution | 13 |
| Architectural Rendering | 14 |
| Architectural Isometric Perspective | 15 |
| Architectural Elevations | 16 |
| Architectural Floor Plans and Sections | 17 |
| Massing Perspectives | 18 |
| Street Cross Section AA (New Greenbank Rd) | 19 |
| Street Cross Section BB (Obsidian St) | 20 |
| DESIGN DIRECTIVES | 21 |
| Response to City's Design Policies | 22 |
| Pre-Application Consultation Comments | 23 |

Introduction

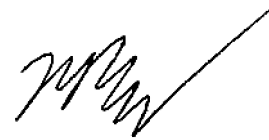
Fotenn Planning + Design (“Fotenn”) has been retained by Mattamy Homes (“Mattamy”) to prepare this Planning Rationale and Design Brief in support of Zoning By-law Amendment and Site Plan Control applications to facilitate the proposed development of the property municipally known as 4159 Obsidian Street (the “subject site”) in the City of Ottawa. The intent of the Zoning By-law Amendment application is to establish a low-rise Planned Unit Development on the subject site.

We trust that the contents of this Urban Design Brief are satisfactory.

Sincerely,



Nico Church, MCIP RPP
Senior Planner



Mark Ouseley
Planner



Tana Klein
Urban Designer

SITE ANALYSIS

02

Surrounding Context

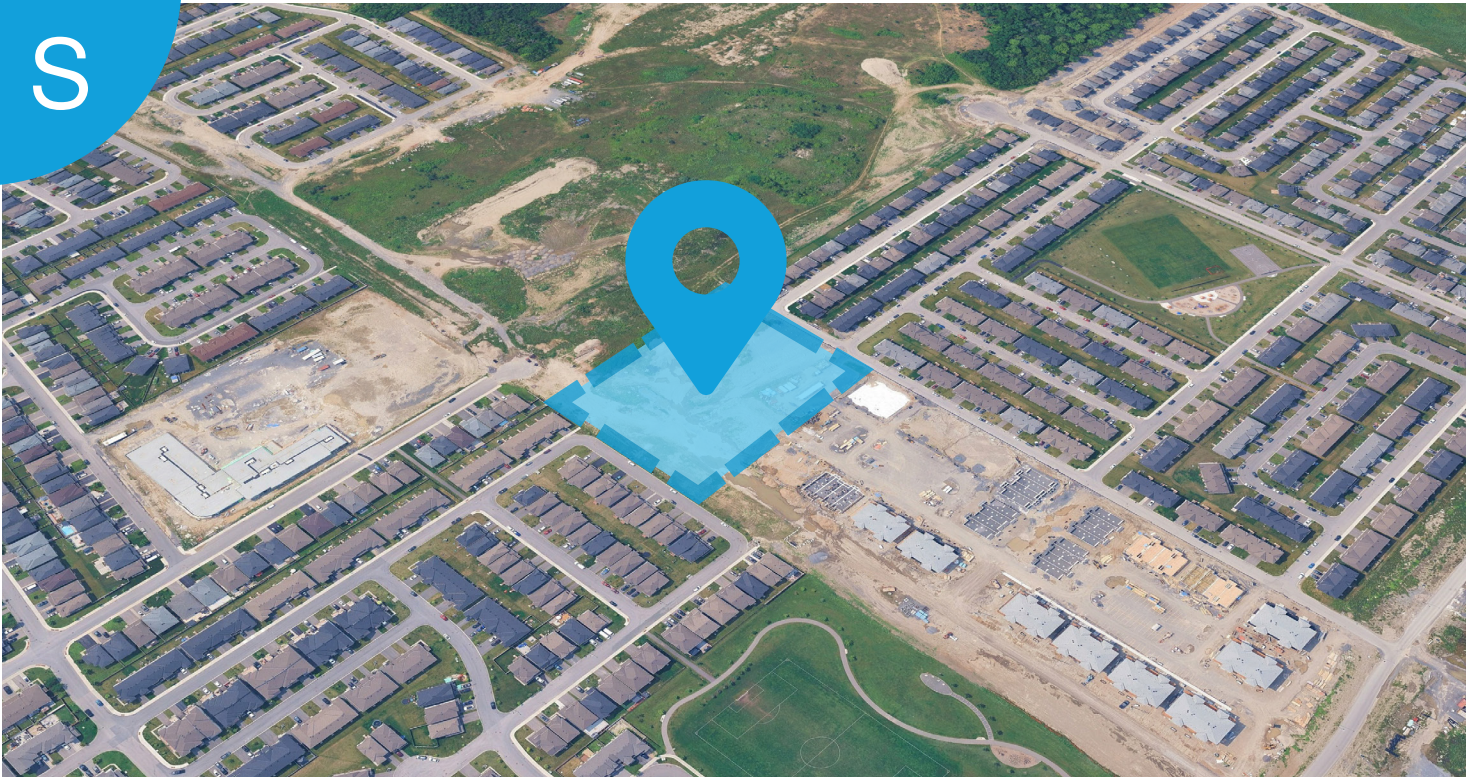
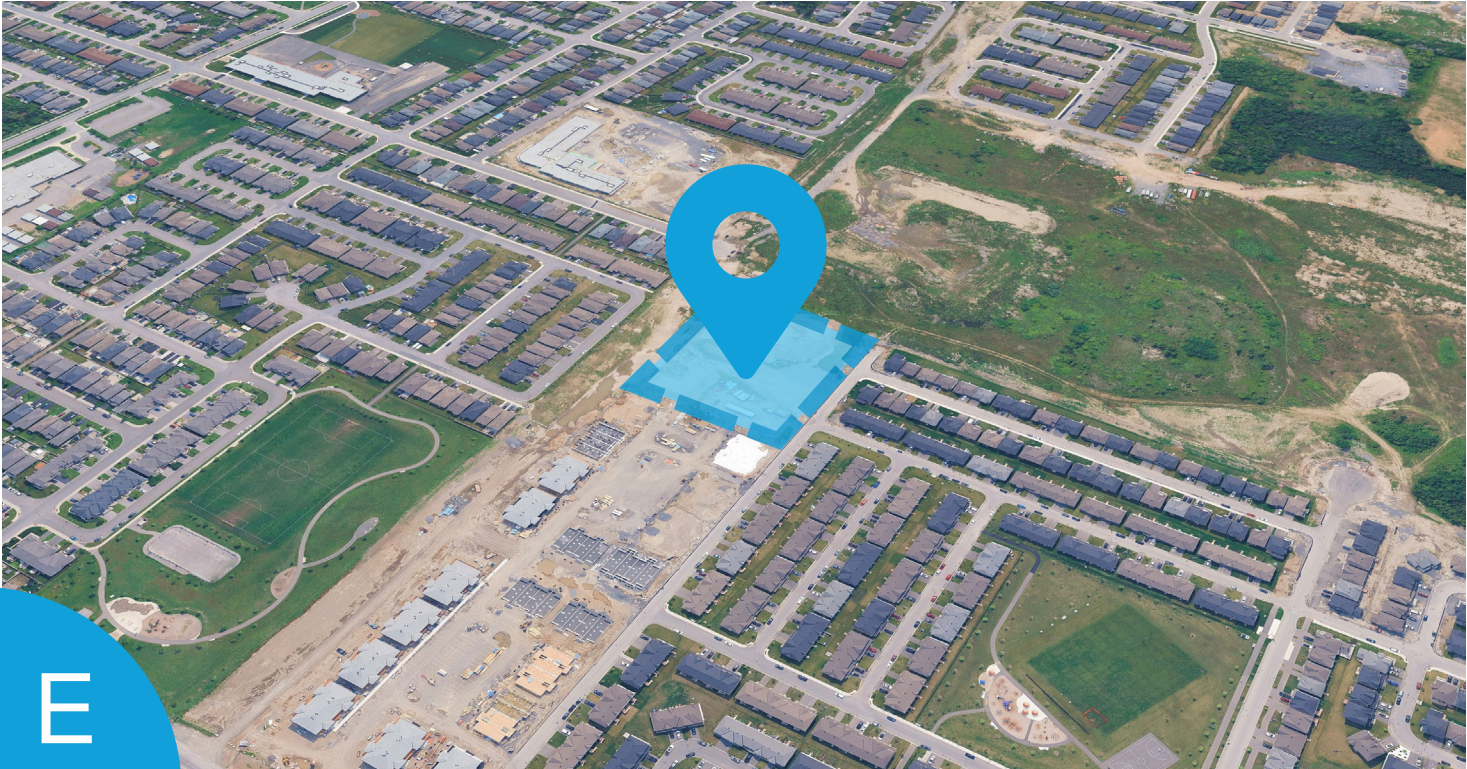


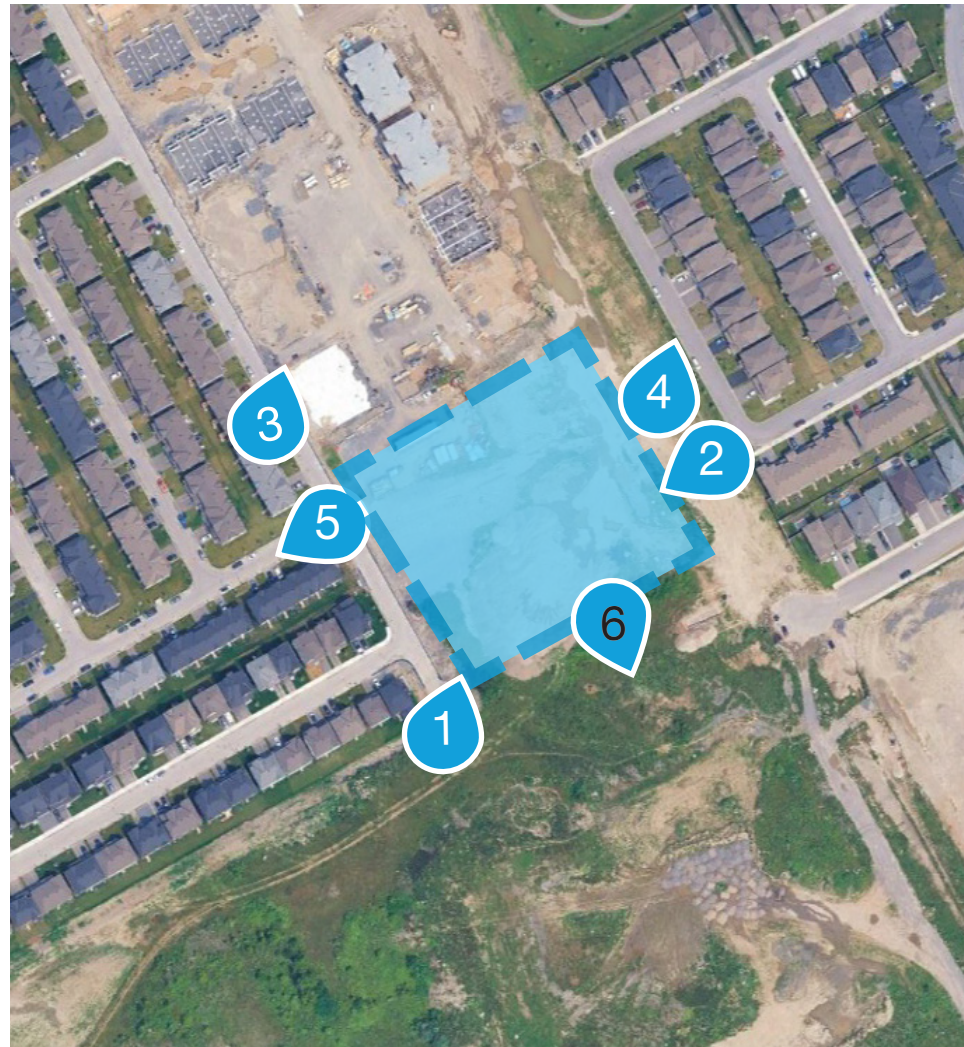
Surrounding Context - Urban Pattern

The urban pattern surrounding the site is primarily characterized by low-rise residential development, consisting of single-detached family homes and townhouses. The residential block pattern is interrupted by a generous amount of public parks and schools located in close proximity. Below is a breakdown of the immediate surrounding context:

- / North: Immediately north of the subject site is a three (3) storey, low-rise back-to-back stacked townhouse dwelling development by Mattamy. This development spans the distance between Dundonald Drive to the north and the subject site. These developments are characterized by townhouses arranged around the perimeter of the property with parking and drive aisles located internal to the property. Further north is Dundonald Drive which runs perpendicular to Obsidian Street. Abutting Dundonald Drive is Black Raven Park, just to the northeast of the subject site across the realigned Greenbank Road corridor.
- / East: Immediately abutting the subject site to the east is land allocated for the Greenbank Road Re-Alignment and Southwest Transitway Extension. Further east, Rye Grass Way runs parallel to the Greenbank Re-Alignment and abutting this street is a residential development featuring two (2)-storey single detached and townhouse dwellings. A future public elementary school is also located east of the subject site.
- / West: The subject site abuts Obsidian Street to the west. Epoch and Eminence Streets are perpendicular to Obsidian Street and feature two (2) storey detached and townhouse dwelling typologies. Further west is Elevation Park.
- / South: Immediately south of the subject site are vacant lands known municipally as 3882 Barnsdale Road. The lands are anticipated to accommodate a mix of uses, including a future westward of Kilbirnie Drive just under 30 metres to the south from the subject site, and a future Park and Ride further south (as envisioned by the Barrhaven South Urban Expansion Area Community Design Plan). Further south is a low-rise residential neighbourhood featuring low-rise detached and townhouse dwelling typologies. This neighbourhood is bounded by Barnsdale Road to the south, which is an arterial road.

Site Perspective Views





Subject Site

The subject site, municipally known as 4159 Obsidian Street, is located in Barrhaven South, in Ward 3 (Barrhaven West), and is bounded by a low-rise planned unit development consisting of back-to-back stacked townhouse dwellings to the north, Obsidian Street to the west, the Greenbank Re-Alignment corridor to the east and vacant land to the

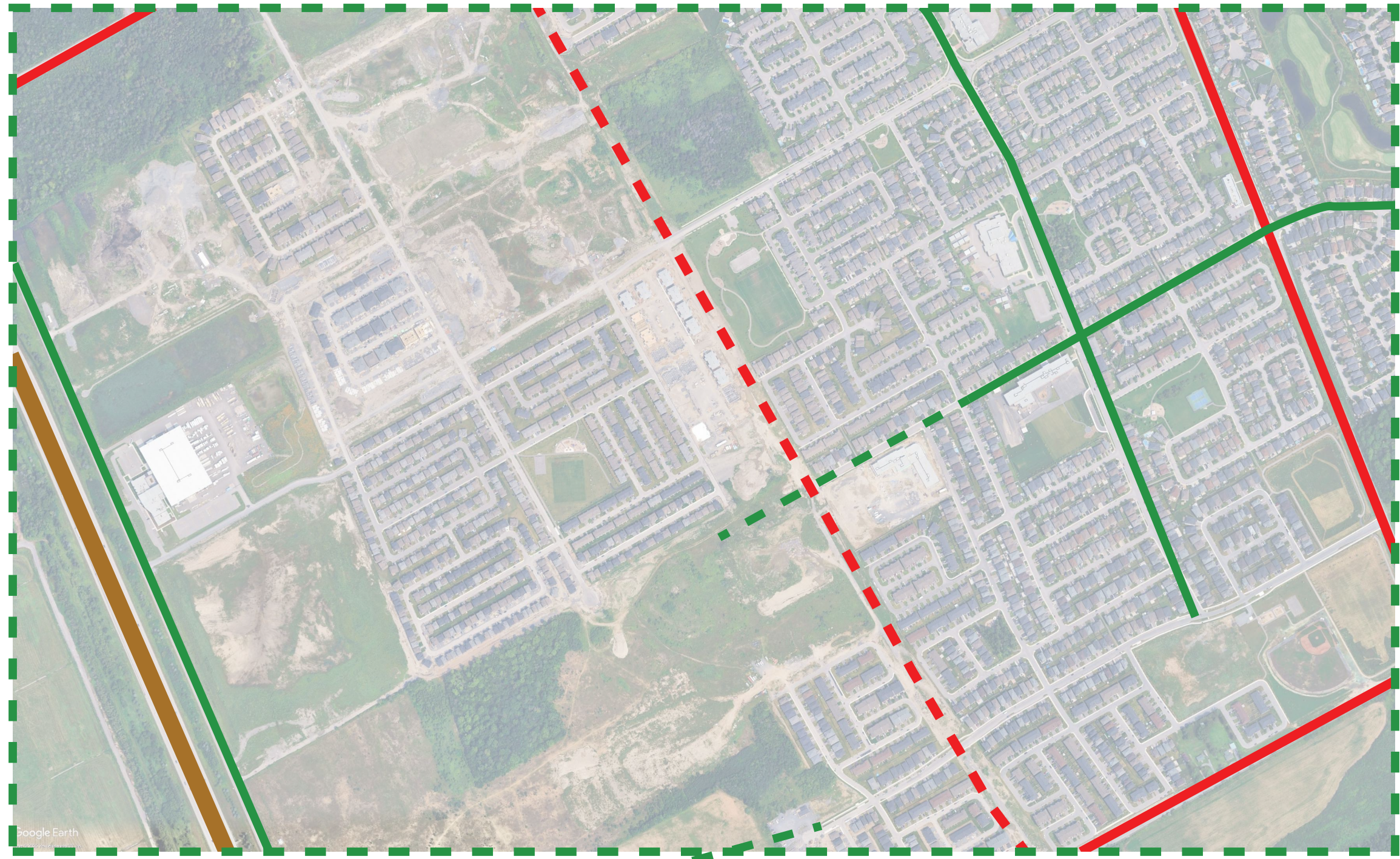
Road Network

Obsidian Street is identified as a Local Road which is intended to provide access to properties and neighborhoods rather than serving as a major route for through traffic. Local Roads are found within residential neighbourhoods and are designed for lower speeds and shorter trips. Local Roads connect homes and other destinations to collector or arterial roads, which handle higher volumes of traffic.

The subject site is also located north of a proposed collector road which is anticipated to extend Kilbirnie Drive. Collector roads are ones that serve neighbourhood travel to and from major collector or arterial roads and usually provides direct access to adjacent lands. The subject site is also served by existing nearby collector roads, such as Dundonald Drive to the north and River Mist Road to the east.

The subject site abuts the proposed Greenbank Road Re-Alignment to the east, a proposed arterial route. The closest existing arterial roads are Cambrian Road to the north of the subject site, Barnsdale Road to the south and Greenbank Road to the east. Arterial Roads function as major infrastructure corridors, accommodating both vehicles, municipal infrastructure, and public transit.

- Subject Site
- Arterial Road - Existing
- Collector Road - Future



Transit Network






As per Schedule C2 - Transit Network of the Official Plan, the subject site is located less than 100 metres from a future Bus Rapid Transit (BRT) Transitway Station and Park-and-ride located at the intersection of the Greenbank Road Re-Alignment with Kilbirnie Drive. There is a second Transitway Station planned within 400m north of the site, at the intersection of Dundonald Drive and the Greenbank Road Re-Alignment.

Active Transportation

Schedule C3 – Active Transportation Network – Urban Major Pathways shows that an active transportation route is located east of the subject site along the existing Greenbank Road. The Greenbank Road major pathway leads north to additional major pathways along the north and south side of the Jock River.

The new Greenbank Realignment will add bike lanes in both directions on the new road and connect to existing active transportation networks in the area.



-  Subject Site
-  Planned Future Transit Station (BRT)
-  Transitway - At Grade Crossings
-  Future Major Pathway
-  Pedestrian Connection through Kilbirnie Dr (sidewalks on both sides, and potentially suited for bike lane implementation)

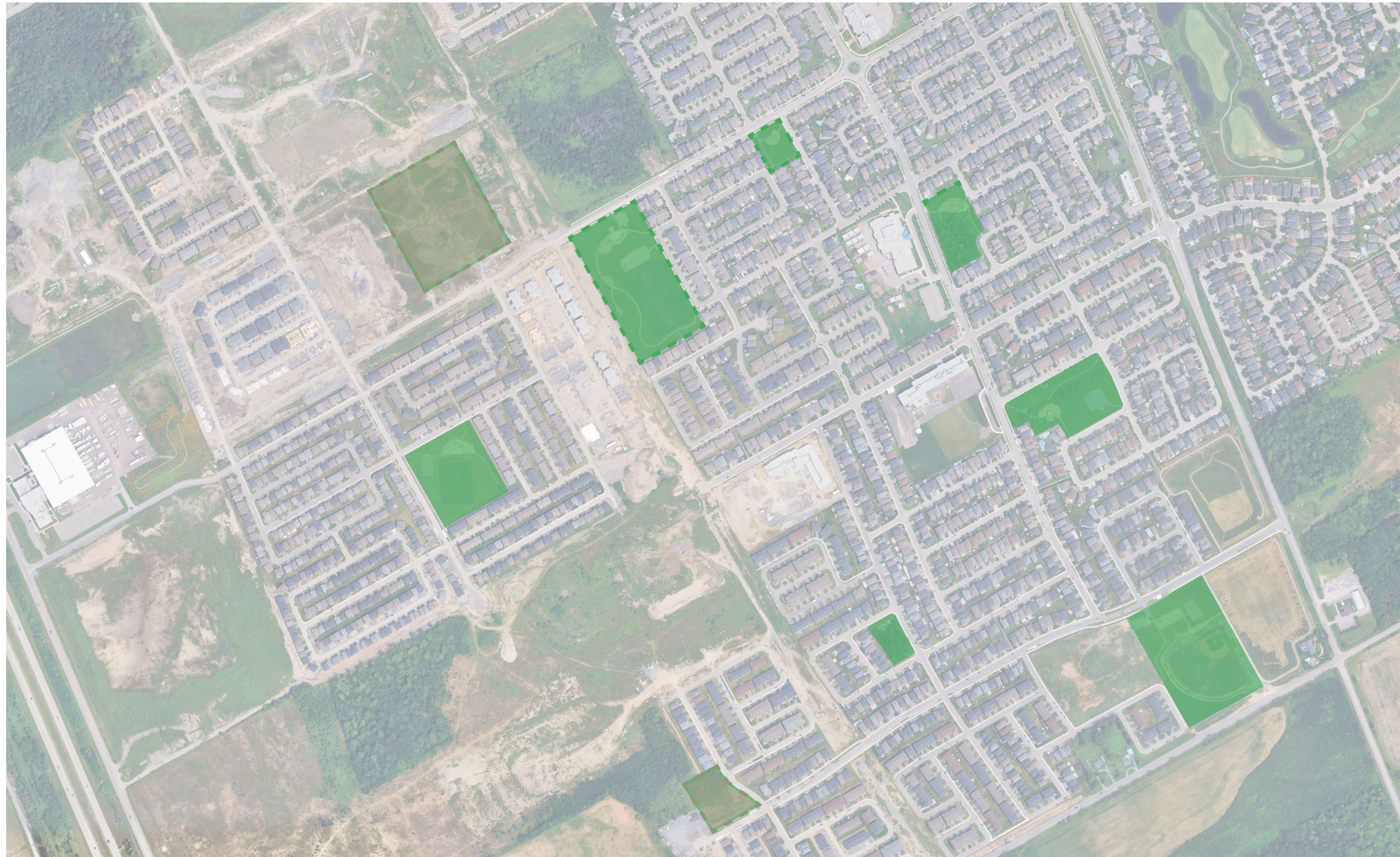
Transit Network and Active Transportation (Based on Ottawa Official Plan - Schedules C2 and C3)

Local Neighbourhood Amenities

The subject site is situated in a recent low-rise residential neighbourhood. The area is well contemplated by numerous parks and schools.

It is also adjacent to a planned Park & Ride/ BRT Station, easily connecting the site with other areas of interest in the city.

Barrhaven Town Centre, with plenty of retail options, is 4km away, an approximate 8min drive, or a 14min bicycle ride.



Local Amenities Map



Barrhaven Town Centre. Source: <https://www.nadg.com/property/barrhaven-town-centre>

Regional Map from Google Earth

Planned Functions of Surrounding Area



City of Ottawa Comprehensive Zoning By-law (2008-250) Zoning Map

The planned function of the surrounding area is guided by the Official Plan, the Barrhaven South Urban Expansion Area Community Design Plan and the City of Ottawa Comprehensive Zoning By-law (2008-250).

The Zoning By-law identifies the site with a maximum permitted building height of 14.5 metres. The maximum permitted height found in the Subject Site's immediate surroundings is 14.5 metres attained by the back-to-back townhouse dwelling typologies located to the north of the site. The remaining surroundings are characterized by R3YY zoning to the east and west which are occupied by townhouse and semi-detached dwellings that are two-storeys in height.

Development of the land to the immediate south of the lot has not been contemplated at this time. Lot depth indicate potential low-rise residential use. After the potential extension of Kilbirnie Drive, the next parcel to the south zoned as O1 will be developed into a park and ride for the BRT network which will take the form of surface parking.

PROJECT DESCRIPTION AND DESIGN RESEARCH

03

3.0 Development Overview

A total of 93 stacked back-to-back townhouse dwelling units are proposed, distributed across four blocks of 12 units, one block of 15 units, and one block of 30 units. The buildings are three storeys high, providing gentle density to the site with a height appropriate for the surrounding neighborhood.

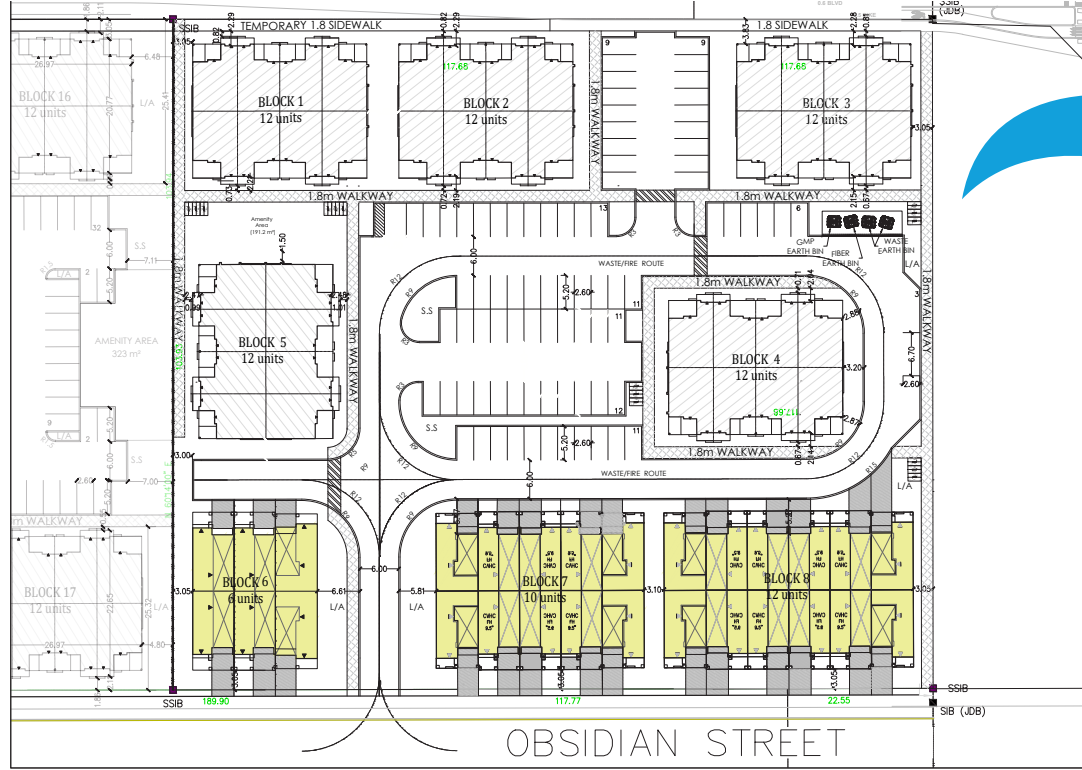
The innovative stacked back-to-back townhouse design allows for windows on all four façades, maximizing natural light and ventilation for all units. Balconies, privacy decks, and entrances are located on both the front and rear elevations. The proposed exterior materials include asphalt shingles, vinyl siding, and accent siding colors to enhance visual interest.

The façade design of the stacked townhouse blocks is driven by principles of visual clarity, sustainable material selection, and thoughtful articulation. Vinyl siding is utilized as the primary cladding material to create a clean, contemporary aesthetic while addressing practical and environmental considerations. Vinyl siding was selected for its affordability, durability, and low maintenance requirements, making it an ideal solution for long-term housing resilience. Furthermore, the material is recyclable and contributes to a reduced carbon footprint compared to more resource-intensive façade systems, supporting the project's sustainability goals.

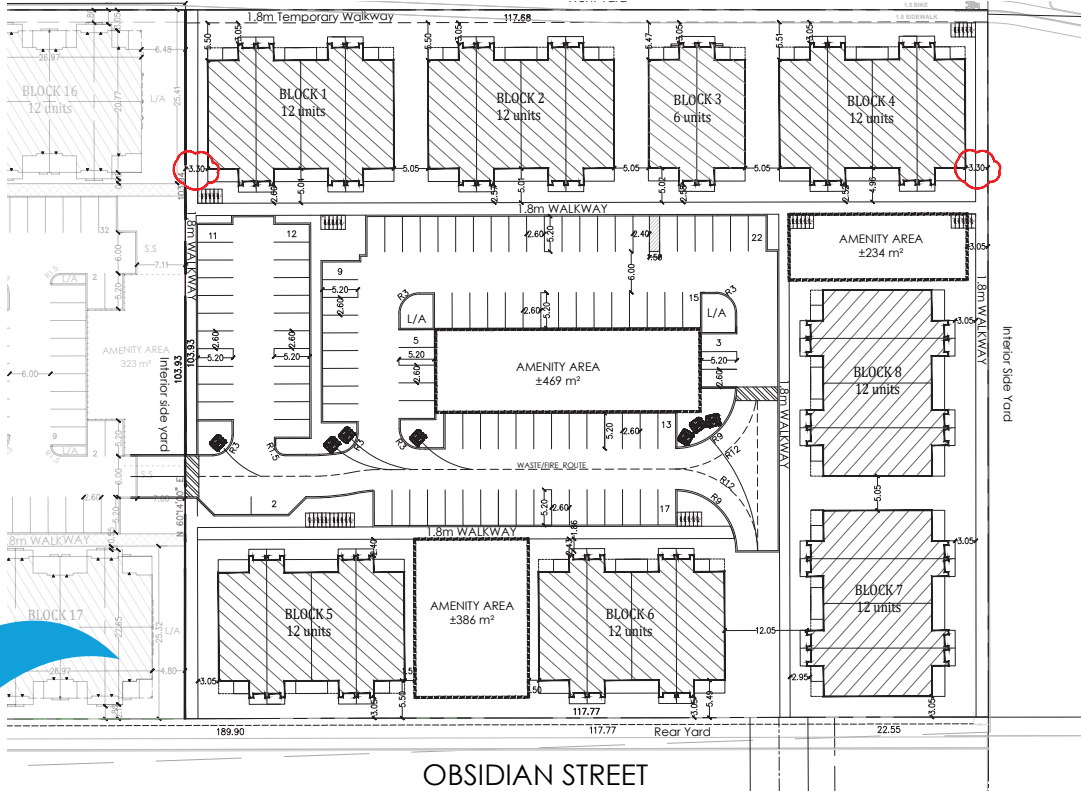
A two-tone palette—featuring a rich, dark base color contrasted with a lighter accent tone—breaks down the building mass and provides individual unit definition. These color transitions are applied strategically around recessed entrances and vertical projections, establishing a dynamic rhythm and reinforcing a strong architectural identity. Balconies and vertical elements further articulate the façade, introducing depth, shadow, and texture. These elements not only enhance the streetscape but also provide functional benefits such as private outdoor spaces and passive shading.

By combining sustainable materials with carefully considered articulation, the design achieves a cohesive, contemporary appearance that is environmentally responsible and contextually appropriate.

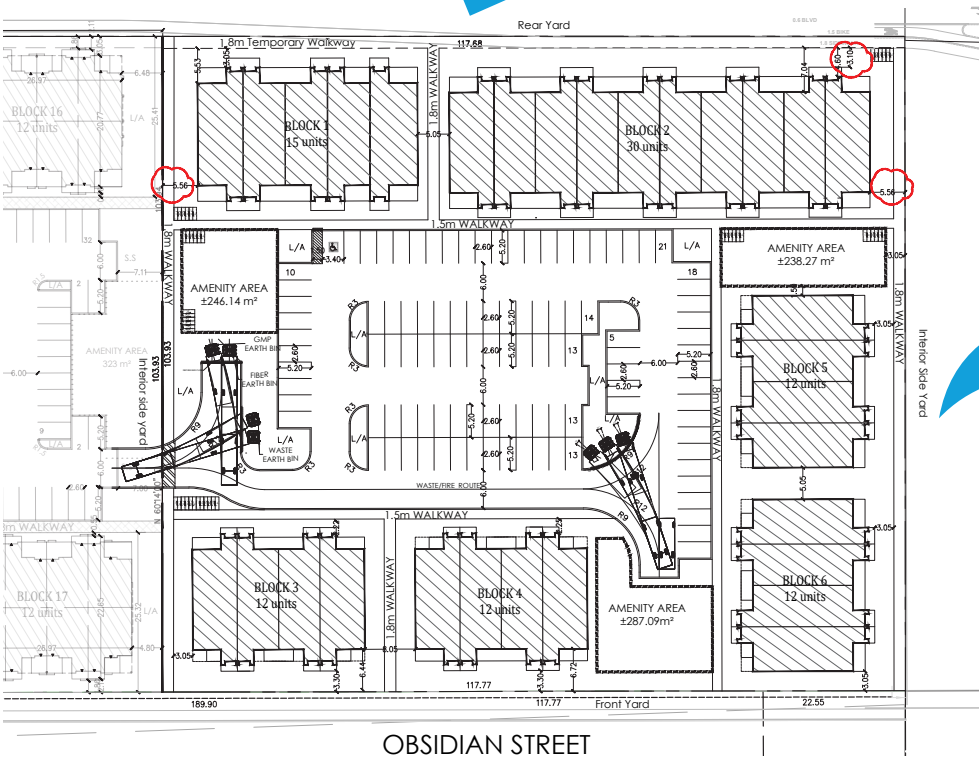
Design Evolution



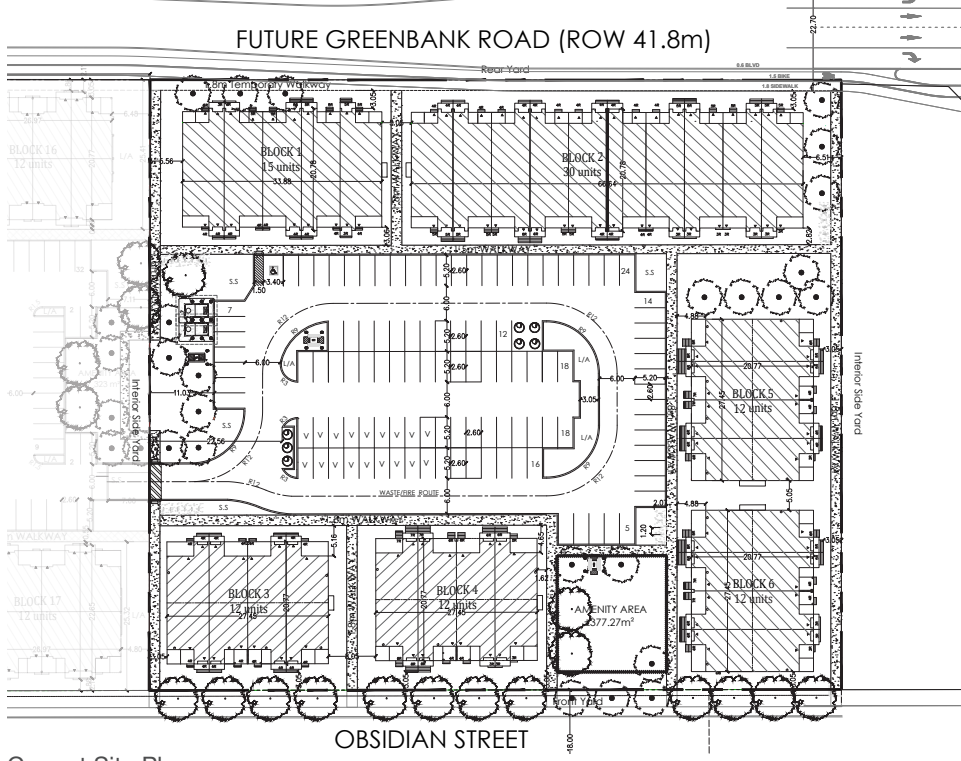
Site Plan presented on June 10, 2024



Site Plan presented on March 12, 2025



Site Plan presented on March 19, 2025



Current Site Plan

Architectural Rendering



The proposed exterior materials include asphalt shingles, vinyl siding, and accent siding colors to enhance visual interest.

Windows on all four façades, maximizing natural light and ventilation for all units.

Clean, contemporary aesthetic façade, addresses practical and environmental aspects.

Sustainable materials: Vinyl is recyclable contributing to a reduced carbon footprint

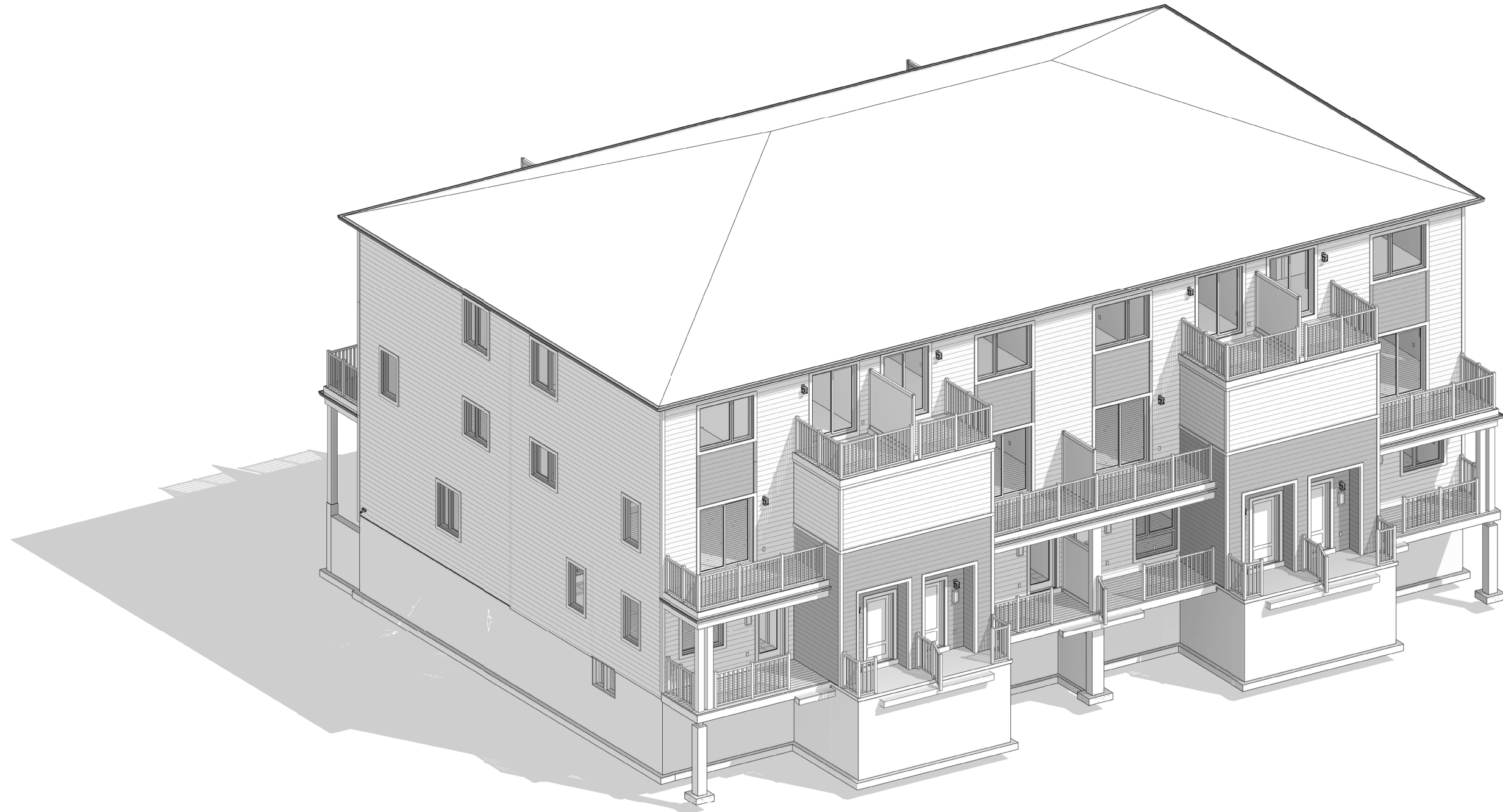
A two-tone palette—featuring a rich, dark base color contrasted with a lighter accent tone—breaks down the building mass and provides **individual unit definition**.

Balconies and vertical elements articulate the façade, introducing depth, shadow, and texture. These elements enhance the streetscape and also provide functional benefits such as private outdoor spaces and passive shading.

Balconies, privacy decks, and entrances are located on both the front and rear elevations.

Architectural Perspective of the proposed product. (Prepared by Deluxe Gallery.)

Architectural Perspective



Architectural Perspective of the proposed product. (Prepared by Bim Studio + Organica Studio.)

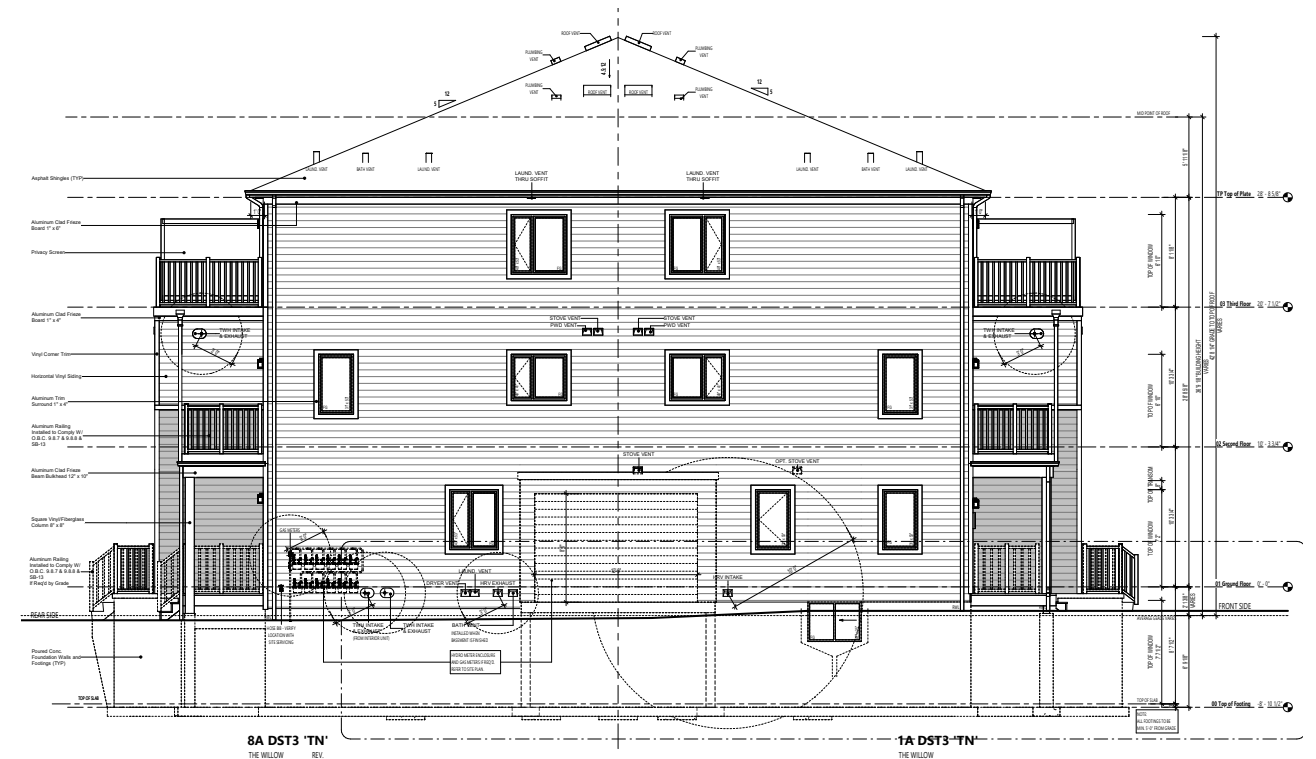
May 2025

4159 Obsidian St
Urban Design Brief

Architectural Elevations



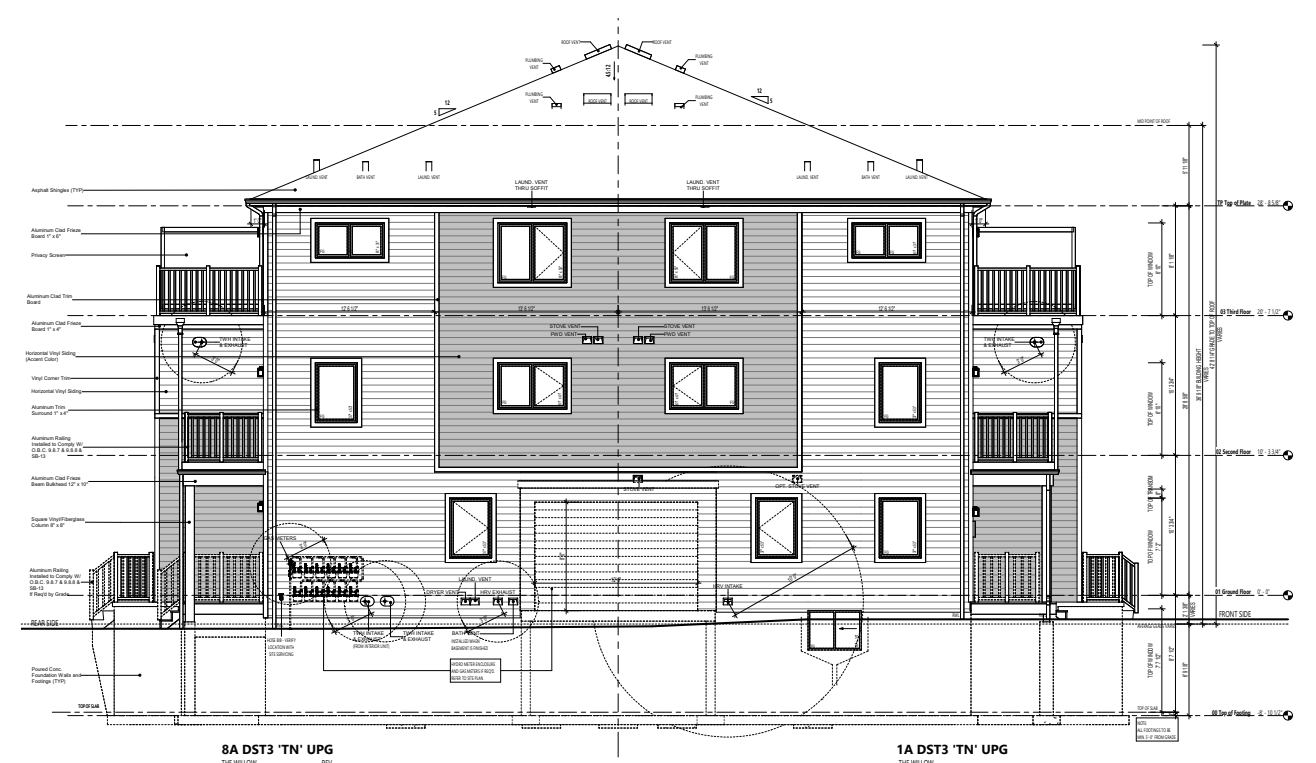
Front Elevation of a 12 unit back-to-back townhouse. (Prepared by Bim Studio + Organica Studio.)



Left Elevation of a 12 unit back-to-back townhouse. (Prepared by Bim Studio + Organica Studio.)

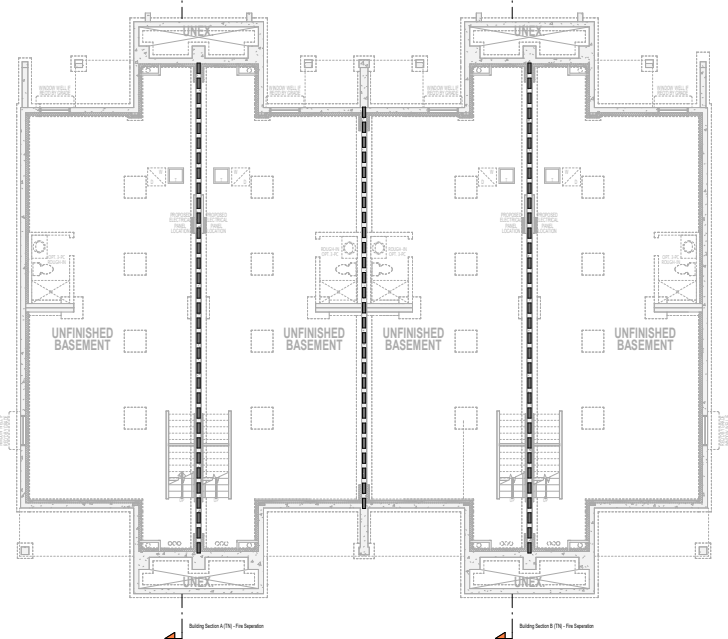


Rear Elevation of a 12 unit back-to-back townhouse. (Prepared by Bim Studio + Organica Studio.)

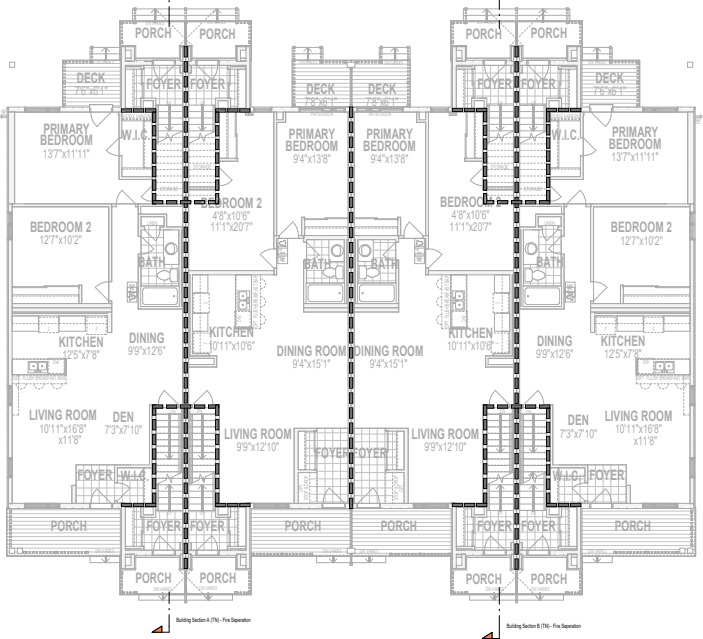


Left Elevation (Upgrade) of a 12 unit back-to-back townhouse. (Prepared by Bim Studio + Organica Studio.)

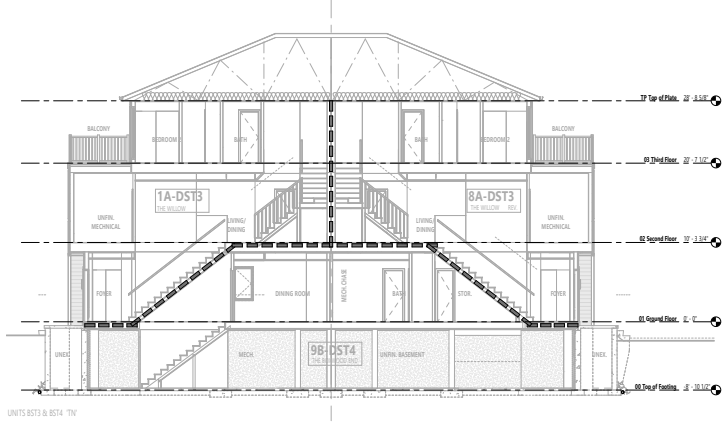
Floor Plans and Sections



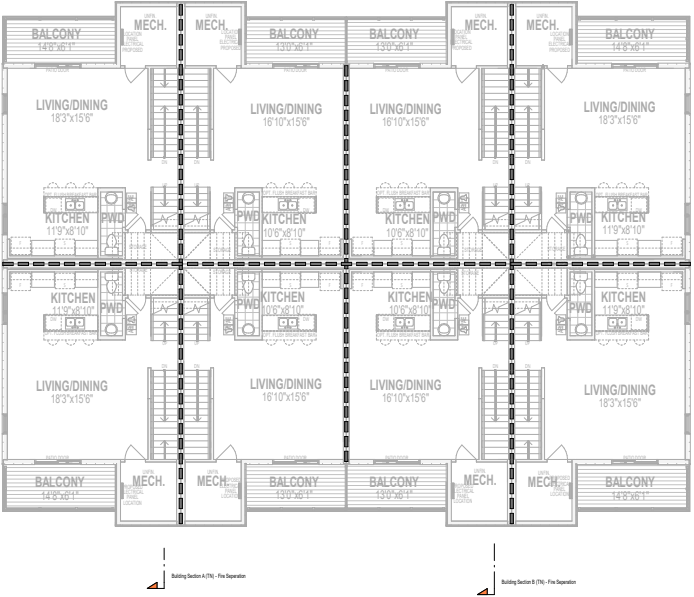
BASEMENT



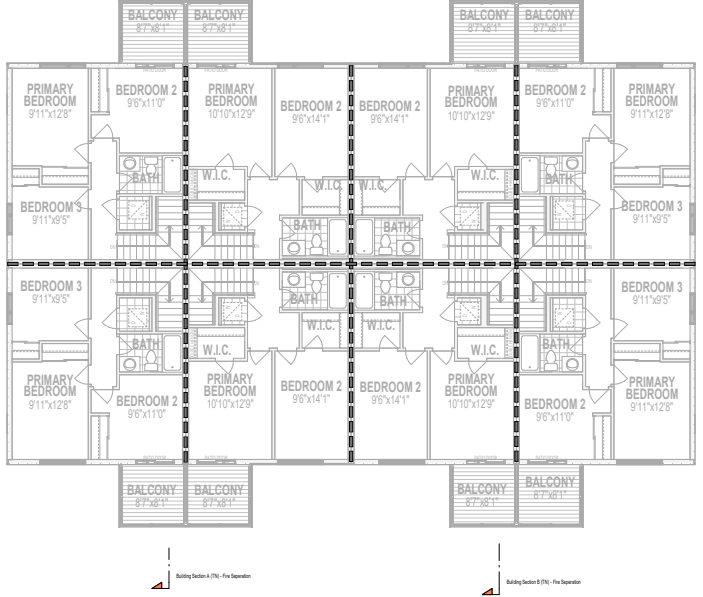
GROUND FLOOR



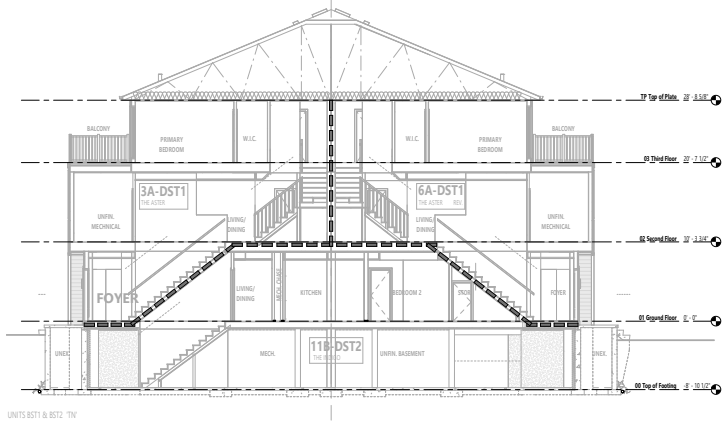
BUILDING SECTION A-A



SECOND FLOOR



THIRD FLOOR PLAN



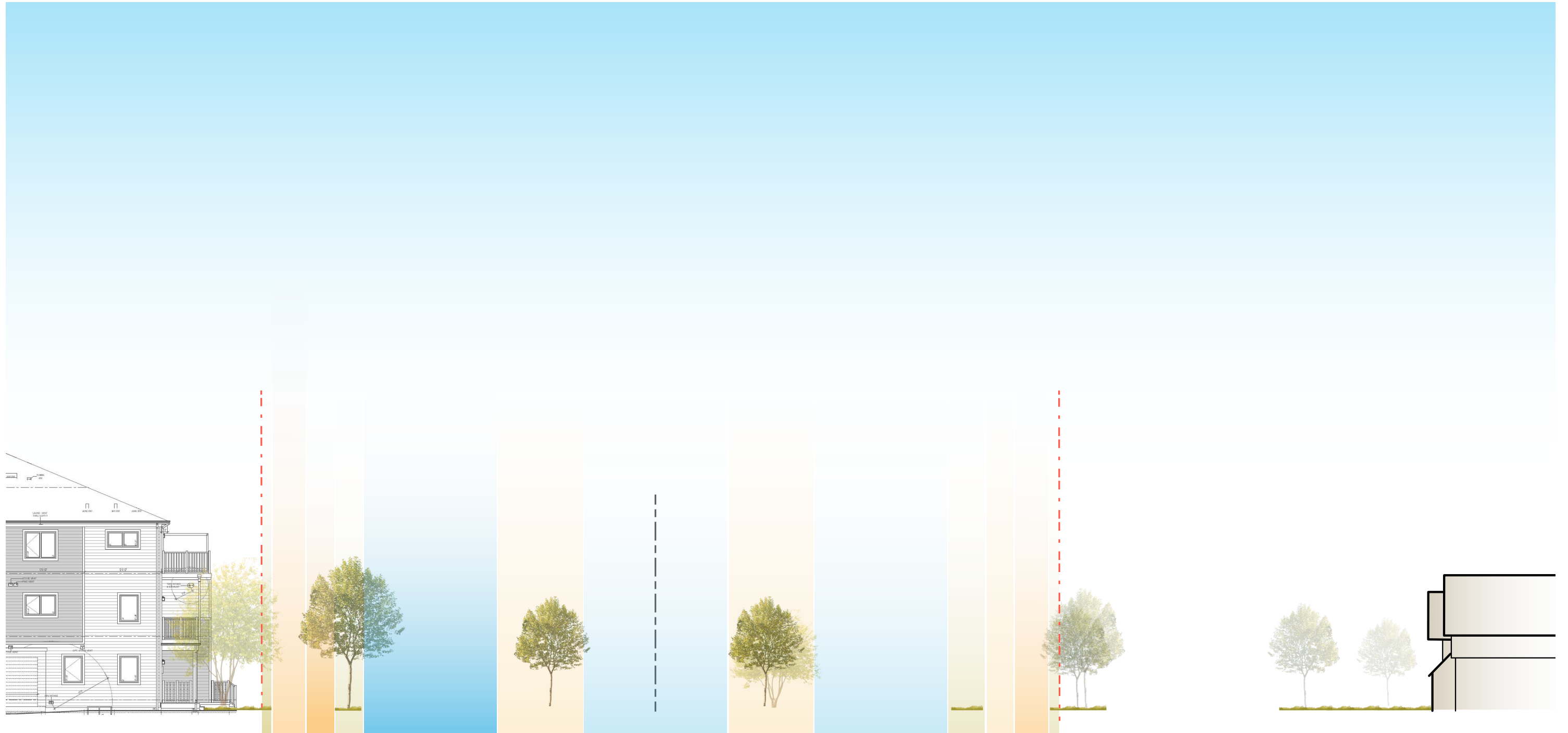
BUILDING SECTION B-B

Floor Plans and Sections of a 12 unit back-to-back townhouse. (Prepared by Bim Studio + Organica Studio.)

Massing Perspectives

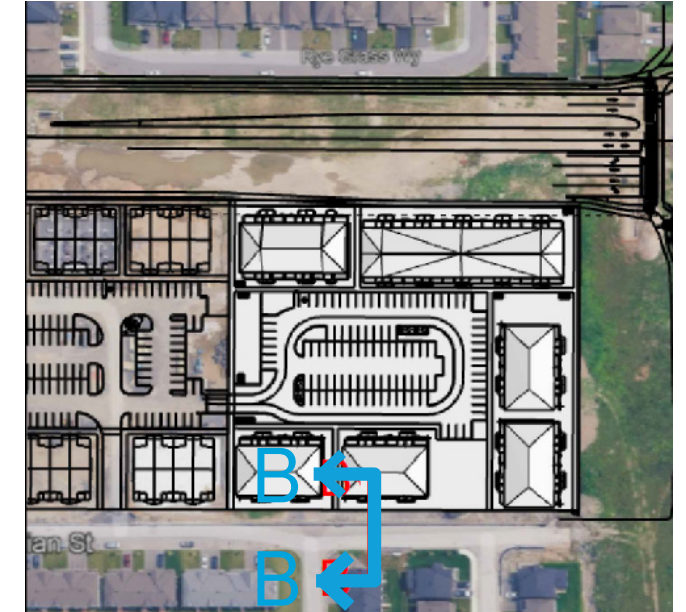


Massing Study showing proposed development within context. (Prepared by Korsiak + Fotenn.)



Cross Section across new Greenbank Road. (Prepared by Korsiak + Fotenn).

Cross Section BB



Cross Section across Obsidian Street. (Prepared by Korsiak + Fotenn).

DESIGN DIRECTIVES

04

Response to City's Design Policies

This document should not replace or replicate the Planning Rationale. A more extensive and detailed list of responses to specific policies and guidelines is provided on Section 4.0 of the Planning Rationale submitted along with this package. Below is a concise summary of how the proposed development responds to City's design directives outlined in the following documents:

- / City of Ottawa Official Plan (2022)*
- / Barrhaven South Urban Expansion Area Community Design Plan (2018)*
- / Transit-Oriented Development Guidelines (2007)*
- / Urban Design Guidelines for Greenfield Neighbourhoods (2007)*
- / Building Better and Smarter Suburbs: Strategic Direction and Action Plan (2015)*
- / City of Ottawa Zoning By-law (2008-250)*

The proposed development increases the supply and mix of housing options in the Barrhaven South area, by offering low-rise neighbourhood-appropriate missing middle residential use, in a stacked back-to-back townhouse typology. It responds to market needs and local demand by providing an additional housing option in an efficient, dense and transit-supportive design, in a location with existing and planned infrastructure and public service facilities. By diversifying the range of housing arrangements, it supports a broader variety of ages and income levels in the area.

Although a greenfield development, the proposed development represents a positive evolution towards a more intensive use of the area through the creation of a 93-unit, PUD on a vacant lot, while respecting the existing character of the surrounding residential area.

The development supports sustainable transportation by providing a dense built form in proximity to a future public transit corridor and proposing pedestrian-friendly and bicycle-friendly design to encourage greater use of walking and bicycles for daily transport. The proposed

Pre-Application Consultation Comments

A Pre-Application Consultation Meeting was held on November 22, 2024. As a result of this meeting, the following comments were received from the Urban Design team at the City of Ottawa. Responses to these comments are also provided below.

| | Urban Design Comment | Response |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | Staff encourage the applicant to further explore ways of making a commercial component work on the site. Please discuss with Minto the viability of the adjacent parcel south of the site, this site if combined with the subject site would increase commercial street visibility and options for site layout. | A residential development plan has been selected for the site. The reasons for this selection are further explained in the submitted Planning Rationale |
| 4 | More detailed comments will be provided when the applicant decides on a proposal to move forward with. | N/A |
| 5 | Whatever use is proposed along the future Greenbank realignment will require a greater building setback from the property line to accommodate trees. | To maximize site use efficiently, tree planting is a focus of other areas of this development rather than the space along the future Greenbank realignment. The accommodation of a temporary walkway limits the space for tree planting. However, there could be additional tree planting opportunities once new sidewalks are built as part of the realigned Greenbank corridor and the temporary walkway is removed. |
| 6 | Surface parking should be fully screened from street frontages. | The site design features back-to-back townhouses arranged on the perimeter of the property screening the surface parking from street frontages. |
| 7 | There should be sufficient setbacks along side property lines for tree planting. Generally increasing the amount of permeable surfaces should be sought. | Adequate setbacks are provided along the North, West and South property line for tree planting. Additionally, greenspace is featured in various locations on the site. |

FOTENN
Planning + Design