Capoak Inc. and Redoak G & A Inc. Proposed Redoak/Capoak Residential Development

Transit Facilities Plan

GHD | 6705 Millcreek Drive Mississauga Ontario L5N 5M4 Canada

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Executive Summary

GHD Ltd. was retained to prepare a Transit Facilities Plan (TFP) for a proposed residential subdivision development located northeast quadrant of the intersection of Dundas Street East and Eighth Line Road, in the Town of Oakville.

The subject development proposal is within the North Oakville East of Sixteen Mile Creek Secondary Plan. The proposed development consists of 116 single family detached units, 457 townhouse units, 8 live/work units, and with up to an additional 24 part or future residential units. For the Dundas Street Urban Core blocks, a total of approximately 578 residential units has been assumed consisting of 542 condominium apartment units and 36 back-to-back townhouse units.

Internal to the development, Street 'A' (east-west) is planned as an Avenue/Transit Corridor, and more specifically a secondary transit corridor. Avenues / Transit Corridors are Town of Oakville roads used to connect between neighbourhood centres and urban core areas. Secondary transit corridors (Street 'A') are recommended to have a service frequency of 10-15 minutes.

The proposed design criteria for Street 'A' to accommodate transit services includes 22.0 metres right-of-way width, 12.0 metres curb-face to curb-face width, and consequently 4.75 metres wide boulevards on each side of the roadway.

As per the DT's bus stop amenities warrant, Street 'A' warrants the implementation of Stop 'D' – Basic transit stops. However, as per the recommendation of Oakville Transit, the Street A at Eight Line transit stop has been elevated and a Type A – shelter info stop has been proposed. As a result, the following transit stops are recommended:

The following Stop 'A' transit stops are recommended:

- A westbound nearside transit stop on Street 'A' at the Eight Line.

The following Stop 'D' transit stops are recommended:

- An eastbound nearside transit stop on Street 'A' at the internal north-south Street 'B' which provides direct access to Dundas Street East;
- A westbound nearside transit stop on Street 'A' at the internal north-south Street 'B' which provides direct access to Dundas Street East;
- An eastbound nearside transit stop on Street 'A' at the internal north-south Street 'L', approximately 100 metres west of the site's easternmost site limit; and
- A westbound nearside transit stop on Street 'A' at the internal north-south Street 'L', approximately 100 metres west of the site's easternmost site limit.

We trust that this satisfies your requirements, but do not hesitate to contact the undersigned if you have any questions.

GHD

William Maria, P. Eng.

Senior Project Manager

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1. Introduction

1.1 Objective and Retainer

GHD Ltd. was retained to prepare a Transit Facilities Plan (TFP) for a proposed residential subdivision development located northeast quadrant of the intersection of Dundas Street East and Eighth Line Road, in the Town of Oakville.

The site location within the local transportation network is shown in **Figure 1**.

The objective of the TFP is to:

- Identify the location and design of transit streets, transit stops and related passenger amenities for each bus stop, and transit-priority treatments at intersections where applicable;
- Demonstrate that roadway design will appropriately and adequately accommodate anticipated transit services to the satisfaction of the Town; and
- Identify and associated property requirements.

1.2 Study Team

The GHD team involved in the preparation of the study are:

- William Maria, P. Eng., Senior Project Manager
- Ameer Al Rijjal, MEng., Transportation Planner

Figure 1 Site Location

2. Development Plan

2.1 Location and Study area

The subject development proposal is within the North Oakville East of Sixteen Mile Creek Secondary Plan. As part of the North Oakville community this development will contribute to a target future population of 55,000 and employment of 35,000.

The Town's planning approach is for a Transit-first community with transportation attributes that promote non-automobile travel, including mixed-use development (an urban core area is planned adjacent to Dundas Street), transit supportive densities and a pedestrian /cyclist friendly grid based street system.

2.2 Study approach

The 2022 and 2027 planning horizon was used to define the future traffic conditions and transportation needs of the proposed development because it corresponds to the build-out horizon year used in the Traffic Impact Study (TIS). This study therefore assumes the projected 2022 and 2027 traffic road and traffic characteristics in the assessment of road function, geometrics and design for all modes of transportation required in the Town's terms of reference.

2.3 Development context

Figure 2 presents the proposed Development Plan which consists of 116 single family detached units and 457 townhouse units, 8 live-work units, and with up to an additional 24 part or future residential units. For the Dundas Street Urban Core blocks, a total of approximately 578 residential units has been assumed consisting of 542 condominium apartment units and 36 back-to-back townhouse units.

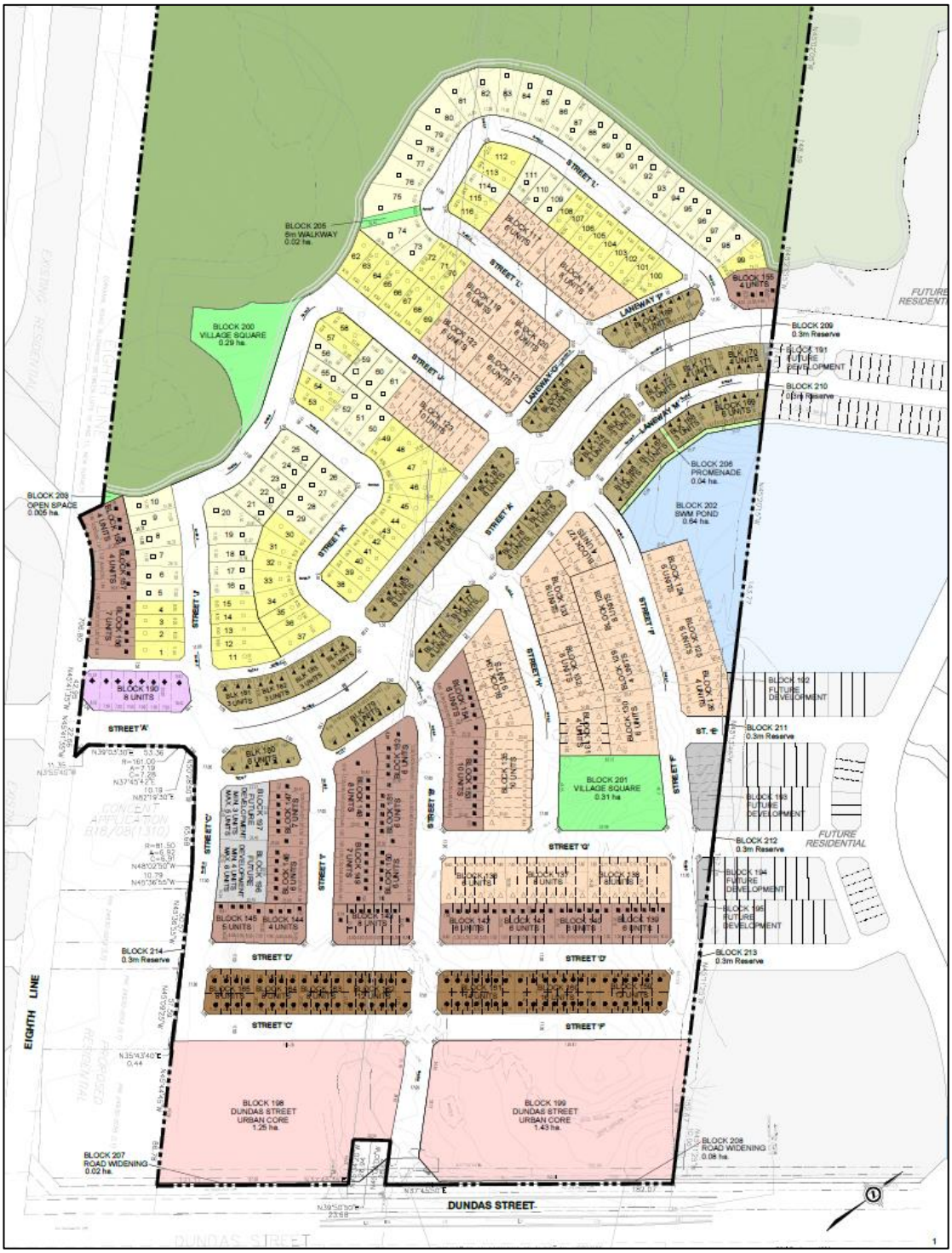

Figure 2 Redoak/Capoak Development Plan

3. Transportation network

3.1 Road network configuration

The road network hierarchy within North Oakville is generally classified as follows:

Major Arterials / Transit Corridors are inter-regional routes under the jurisdiction of the Region of Halton and includes Dundas Street which is designated as a BRT route.

Minor Arterials / Transit Corridors are Town of Oakville roads used to distribute traffic to and from major routes and connect urban areas and density nodes.

Avenues / Transit Corridors are Town of Oakville roads used to connect between neighbourhood centres and urban core areas, and includes the site's proposed east-west Street 'A' from Eighth Line to the site's easternmost extent.

Connectors / Transit Corridors are roads for inter-neighbourhood travel, and includes Eighth Line from Dundas Street to the site's proposed east-west Street 'A'.

Local Roads / Private Roads for connection to individual properties and townhouse blocks.

Lanes for rear access to individual properties and townhouse blocks.

Direct access to the site from Dundas Street East is proposed via a single right-in/right-out access at Street 'B'. Additional accesses are also proposed via two unsignalized intersection connections to Eighth Line (Street 'A' and the Laneway to Block 190), and 5 east/west connections through future development lands to the east at Street 'A', Street 'E', Street 'D', Street 'G' and Laneway "M".

The proposed North Oakville East Transportation Plan is shown in **Figure 3**.

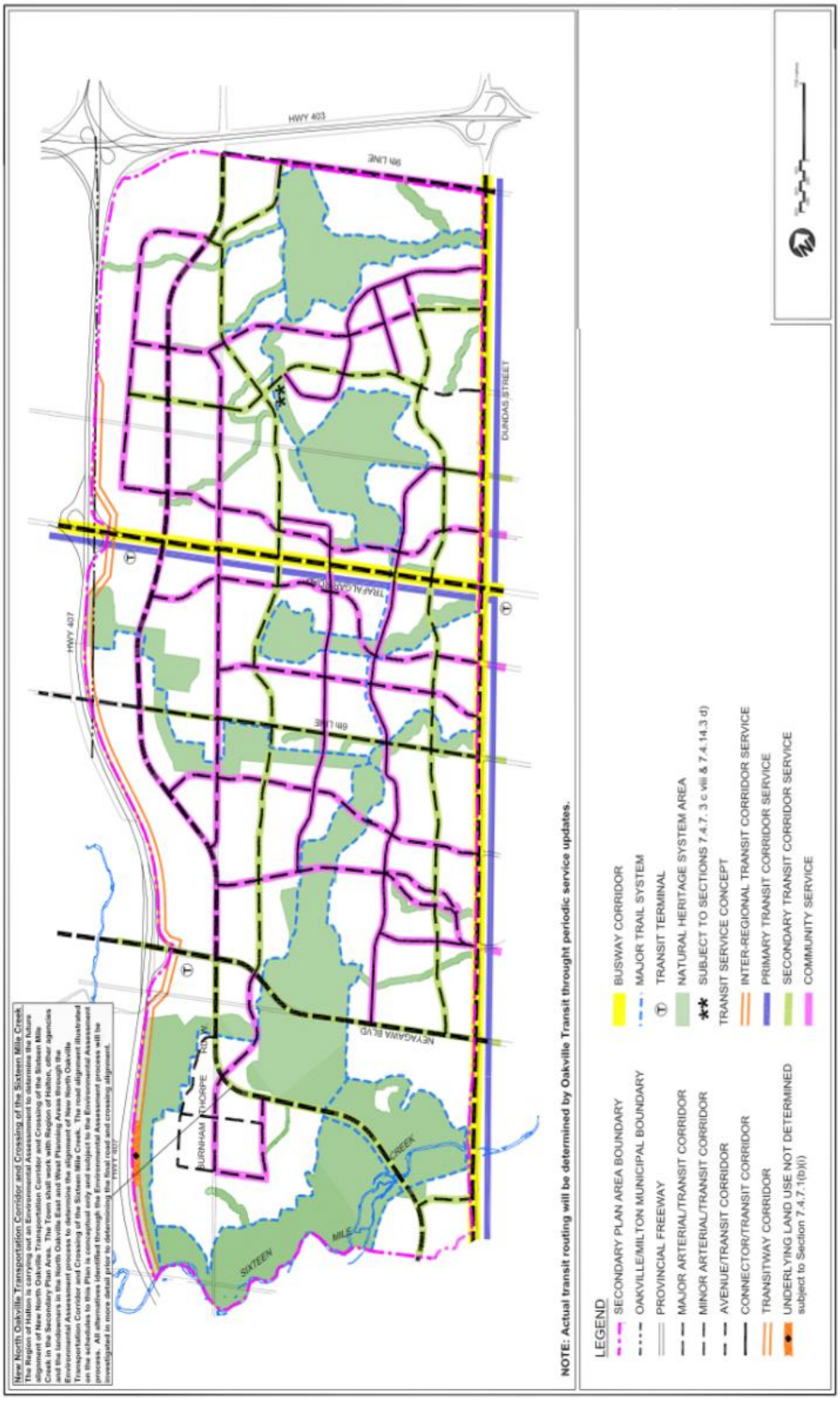

Figure 3: North Oakville East Transit Facilities Plan

3.2 Existing Road Network

The following describes the existing road infrastructure within the study area.

Dundas Street East is an east-west urban arterial road under the jurisdiction of Halton Region. It currently has a six lane urban cross-section with a posted speed limit of 60 km/h through the study area. Dundas Street East has a signalized t-intersection with Prince Michael Drive, consisting of auxiliary right and left-turn lanes in the eastbound and westbound directions, respectively, and with the future extension of Prince Michael Drive northwards the intersection will become a four-legged intersection with the addition of auxiliary left and right-turn lanes in the eastbound and westbound directions, respectively. It also has a signalized four-legged intersection with Eighth Line, consisting of auxiliary left and right-turn lanes in both directions.

Eighth Line is a north-south urban collector road under the jurisdiction of the Town of Oakville. South of Dundas Street it has a four lane urban cross-section with a posted speed limit of 50 km/h. North of Dundas Street it has a two lane cross section with a posted speed limit of 50 km/h. Eighth Line has a signalized four-leg intersection with Dundas Street East, consisting of auxiliary left-turn lanes on both the north and south approaches.

3.3 Existing Pedestrian and Bicycle Facilities

There is currently a multi-use path on the south side of Dundas Street East and sidewalks on both sides of Eighth Line south of Dundas Street.

3.4 Planned Study Area Network

Upgrades to the east side of Eighth Line are expected north of Dundas Street East as development to the east progresses. Eighth Line is planned to have sidewalks on both sides of the road and a signed bike route as per the Town of Oakville Active Transportation Master Plan.

3.5 Planned Transit Services

Dundas Street on the south perimeter of the development is a primary transit (busway) corridor planned to have future BRT service, which in addition to the Uptown Core area on the south side of Dundas Street currently has good transit service. The existing transit route servicing the vicinity of the site is Oakville Transit Route #24 running east-west on Dundas Street East, as shown in **Figure 4**. Far-side transit stops are available for both directions at Eighth Line and at Prince Michael Drive. This route provides connections to the South Common Centre, Uptown Core, Oakville GO and Sheridan College.

Internal to the development, Street ‘A’ (east-west) is planned as a secondary transit corridor.

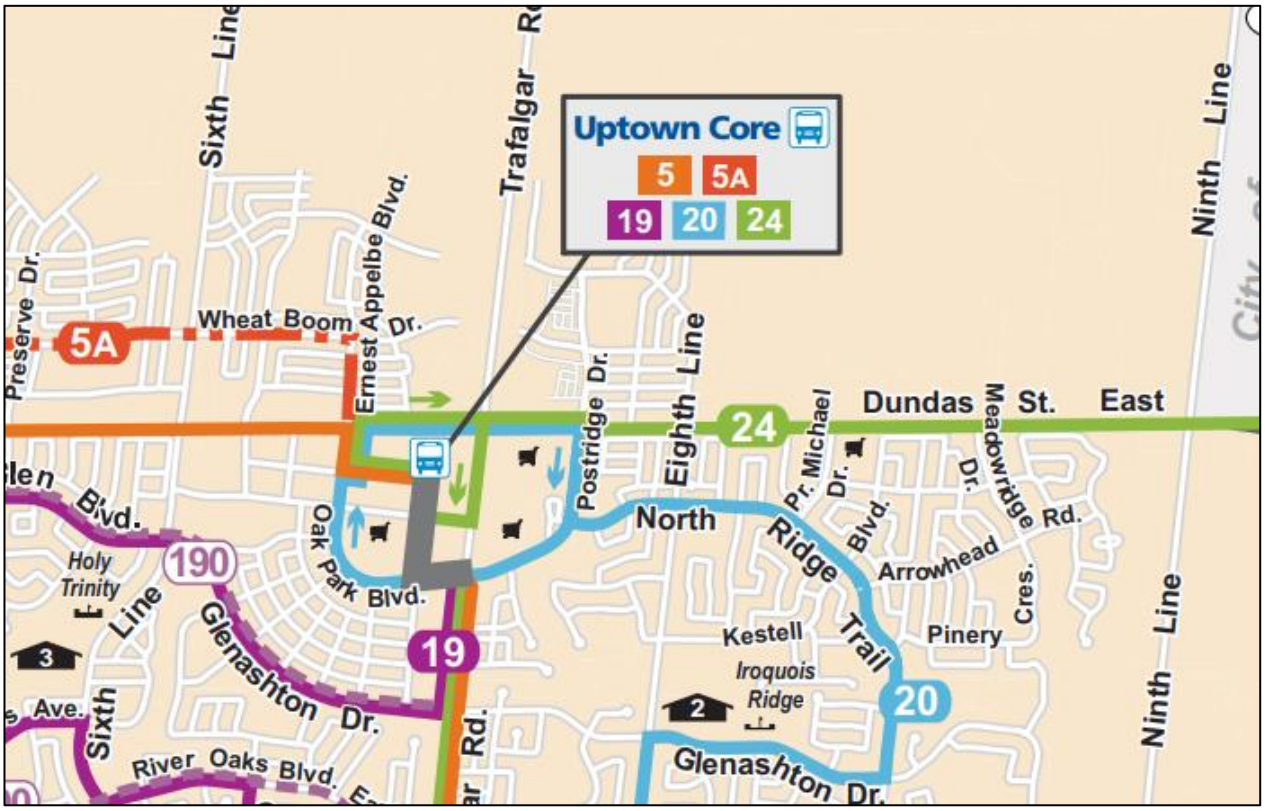

Figure 4: Oakville Transit Map

4. Transit Facilities Design Criteria and Plan

4.1 Transit Corridor – Cross-Section Design

Table 1 presents the proposed design criteria of the Street 'A' Avenue/Transit Corridor.

Table 1 Cross Section Design Criteria

Design Criteria	Street 'A'
Road Type	Avenue/Transit Corridor
Type of Urban Area	Neighbourhood Centre
Lane Pattern	2.25m curbside parking 4.0m travel lane 4.0m travel lane 2.25m curbside parking
Face-of-Curb to Face-of-Curb Width	12.5m
Right-of-Way Width	22.0m
Boulevard Width	4.75m each side
Sidewalk Provisions	Both Sides
Cycling Facilities	Signed Bike Route
Transit Facility Location	Boulevards

4.2 Transit Stops

4.2.1 Transit Stop Classification

As per Exhibit 21 of the Town of Oakville's North Oakville Secondary Plan Transit Plan, Avenue/Transit Corridors in general urban and suburban areas are to have Stop 'C' or Stop 'D' transit stops.

As per Exhibit 22 of the Town of Oakville's North Oakville Secondary Plan Transit Plan Developer's Toolkit (DT), **Table 1** presents the Town's warrant for determining the recommended bus stop amenities. Street 'A' through the Preliminary Development Plan has been awarded no points, which as per the DT warrants the implementation of Stop 'D' – Basic, as shown in **Figure 5**.

As per Exhibit 3 of the DT, secondary transit corridors (Street 'A') are recommended to have a service frequency of 10-15 minutes.

Although the warrant suggests that a Stop 'D' – Basic is warranted for all stops along Street A, in response to Town of Oakville staff the transit stop nearest Eight Line has been upgraded to a Stop 'A' – Sheltered Info Stop.

Table 2 Warrants for Bus Stop Levels of Amenities

Activity	Justification	Point Value	Points Awarded
High Boarding / Transfer Location	Local Road Connector Arterial / Avenue	1 2 10	0 2 pts near Eighth Line, 0 pts internal to site 0
Mobility Needs Location	Seniors group home, medical clinics, libraries, hospital, shopping malls	7	0
Activity Location	Apartment, secondary and post-secondary schools	3	0
Exposure to Elements	A stop with high-speed traffic (60 km/h or more) or on a road with more than two lanes	3	0
Wait Time	Headways of 20 minutes (or more) between buses	2	0
Request	Request from Public	2	0
Total Points Awarded			**2 pts near Eighth Line, 0 pts internal to site**

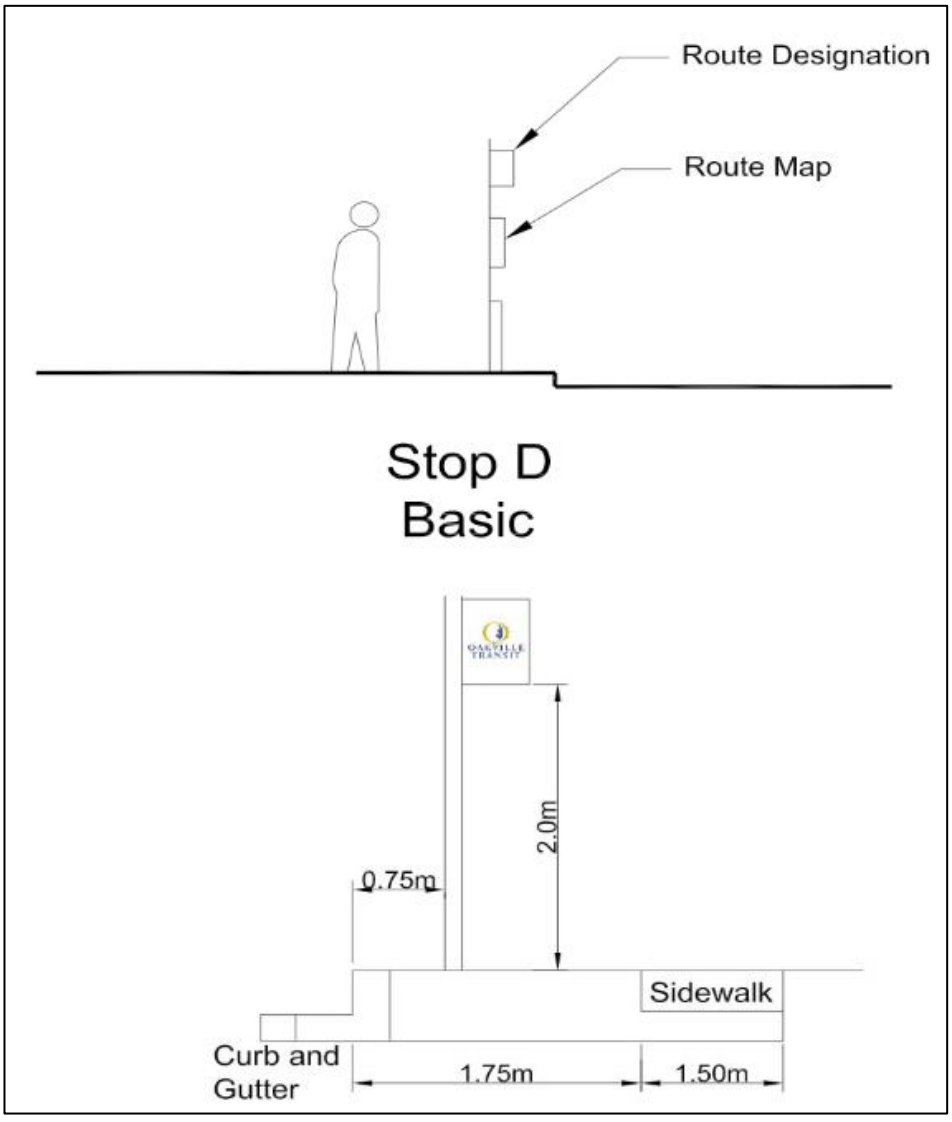

Figure 5: Stop 'D' Basic

As per Exhibit 23 of the DT, the proposed passenger amenities at Stop 'D' transit facilities are as follows:

- Sign and post;
- Route designation;
- Route schedules;
- Route maps; and
- Shelter pads.

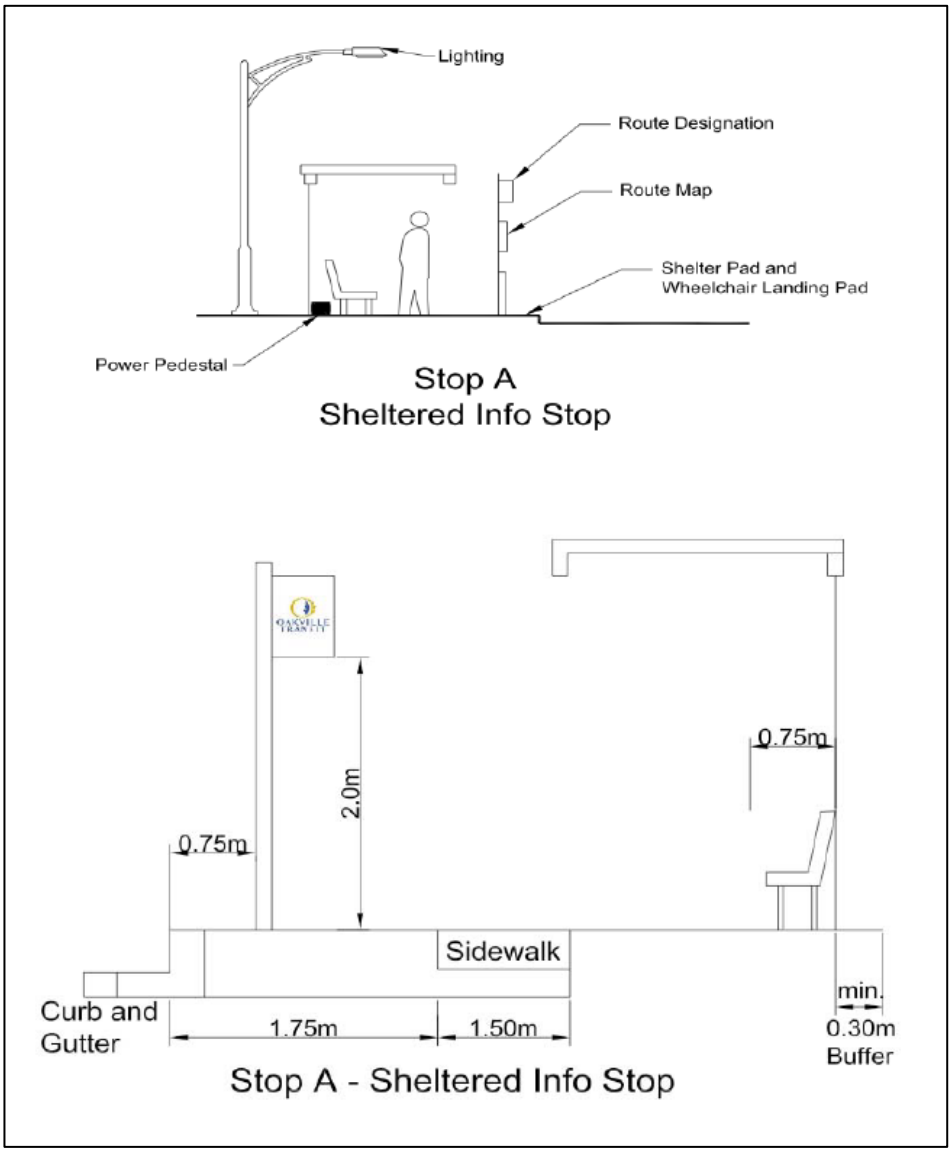

Figure 6 Stop 'A' Sheltered Info Stop

As per Exhibit 15 of the DT, the proposed passenger amenities at Stop 'A' include:

- Sign and post;
- Benches;
- Shelter;
- Route designation;
- Route schedules;
- Route maps;
- Shelter pads; and
- Lighting.

4.2.2 Transit Stop Location

As illustrated in Figure 7, both Transit Stop Types A and D are recommended.

The following Stop 'A' transit stops are recommended:

- A westbound nearside transit stop on Street 'A' at the Eight Line.

The following Stop 'D' transit stops are recommended

- An eastbound nearside transit stop on Street 'A' at the internal north-south Street 'B' which provides direct access to Dundas Street East;
- A westbound nearside transit stop on Street 'A' at the internal north-south Street 'B' which provides direct access to Dundas Street East;
- An eastbound nearside transit stop on Street 'A' at the internal north-south Street 'L', approximately 100 metres west of the site's easternmost site limit; and
- A westbound nearside transit stop on Street 'A' at the internal north-south Street 'L', approximately 100 metres west of the site's easternmost site limit.

It is expected the adjacent development to the east will be required to propose a transit stop on Street 'A' at its intersection with Prince Michael Drive.

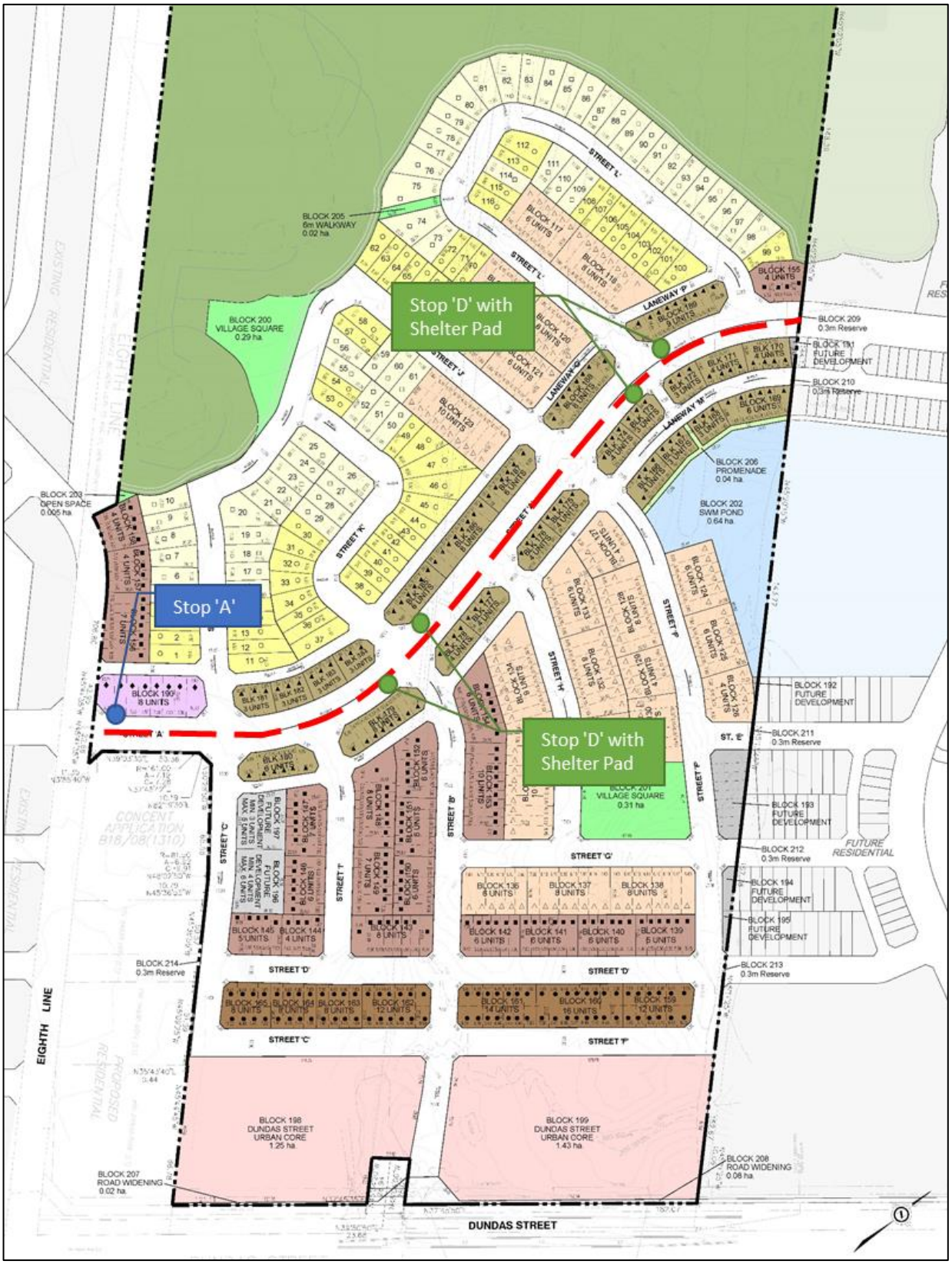

Figure 7 Potential Transit Stop Locations