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24 March 2022
Project: 200669

Sarah Reeve
Senior Development Coordinator
SkyDev
5 Douglas Street, Suite 301
Guelph ON N1H 2S8

Dear Ms. Reeve:

RE: 10-24 GROVE STREET, RESIDENTIAL REDEVELOPMENT, CITY OF BARRIE TRANSPORTATION DEMAND MANAGEMENT REPORT

Paradigm Transportation Solutions Limited was retained by SkyDev to conduct this Transportation Demand Management Report for the proposed redevelopment of 10-24 Grove Street West. The subject lands are located generally south of Highway 400 and west of Bayfield Street in the City of Barrie.

Figure 1 illustrates the subject site location.

Redevelopment Concept

Existing Site

The subject lands include a former YMCA recreational centre building and two residential properties. Access to the former YMCA site was facilitated via an all-turns private driveway connection to Grove Street West and one direct connection to the current terminus of Toronto Street at the westerly limits of the site. The existing YMCA building and accesses will be removed to permit the redevelopment to proceed. The two residential properties fronting on Grove Street West will also be demolished as part of the proposed redevelopment.

Proposed Redevelopment

The proposed redevelopment will consist of three residential apartment towers, ranging in height from 23 storeys to 27 storeys, connected via a five-storey podium, where a total of 798 units will be provided in this section of the redevelopment. A separate nine-storey residential building containing 130 units is proposed at the southerly limits of the site.

Overall, a total of 928 dwelling units will be constructed via a mix of studio, one- and two-bedroom units. The redevelopment is expected to be completed in three phases, with full build-out anticipated to occur by 2028. Development statistics are summarized as follows:

- Phase 1:
  - Building 1: 23-storey building containing 251 units
  - Building 2: 25-storey building containing 258 units
  - Phase 1 build-out is expected in 2025
- Phase 2:
  - Building 3: 27-storey building containing 289 units
  - Phase 2 build-out is expected in 2026
- Phase 3:
  - Building 4: nine-storey building containing 130 units
  - Phase 3 build-out is expected in 2028

Access to the site will be provided via an all-turns private driveway connection to Grove Street West. It is noted that a secondary emergency access only connection will also be provided to Grove Street West. During Phase 1 of development, it is our understanding that the existing site driveway connection to Toronto Street will remain in place; however, it will be removed once Phase 2 commences.

Figure 2 illustrates the site plan.

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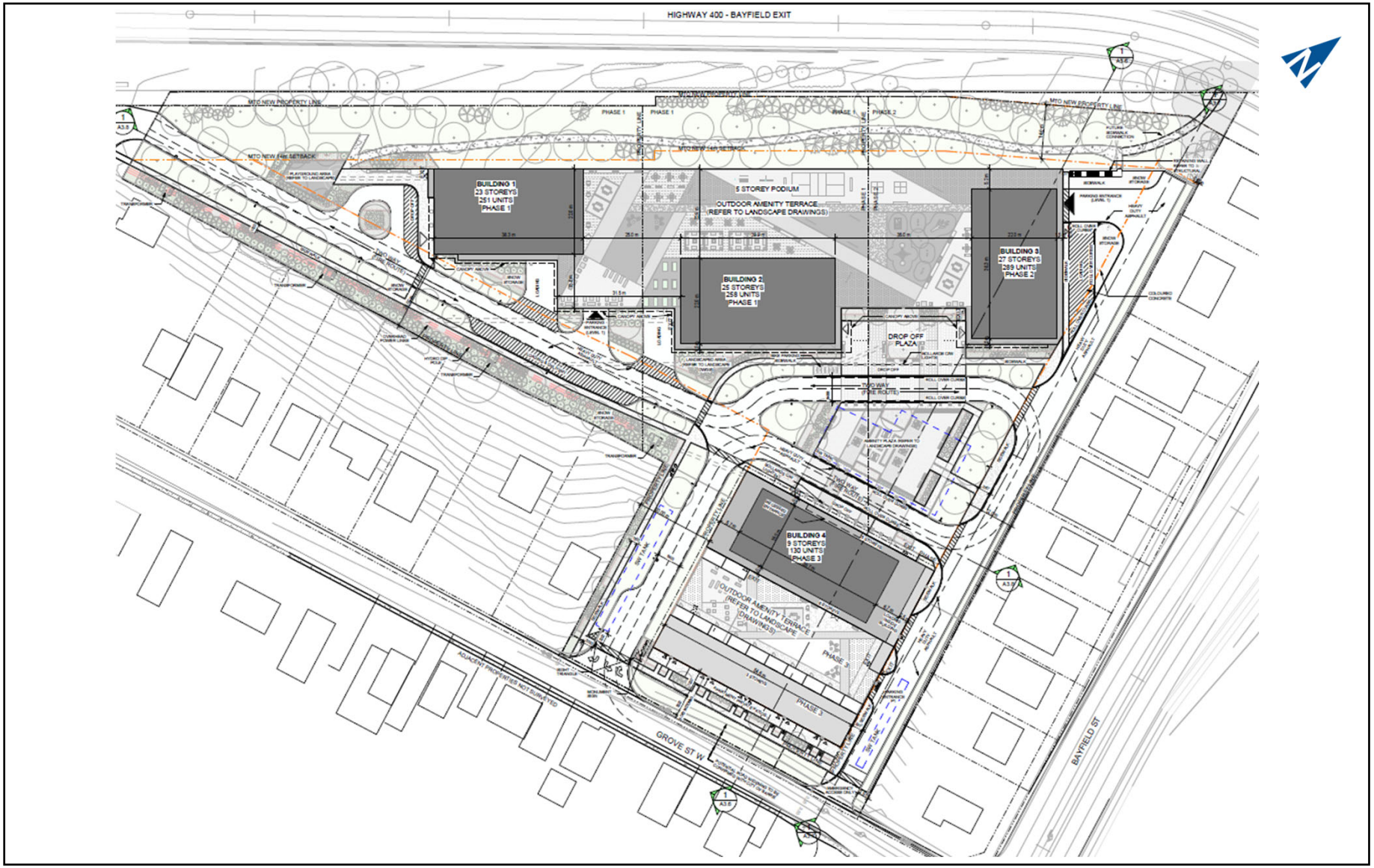
Study Area and Subject Site Location



Proposed Site Plan

Figure 2

Existing Active Transportation Facilities

Pedestrian Facilities

Available sidewalk infrastructure provided within immediate proximity of the site is as follows:

- The south side of Grove Street West, west of Bayfield Street;
- The north side of Grove Street East, east of Bayfield Street; and
- Both sides of Bayfield Street.

The adjacent municipal pedestrian network is well connected and relatively continuous. The exceptions noted for adjacent roadways include sidewalk provisions as follows:

- Coulter Street, north side only;
- Rose Street, south side only;
- Grove Street West, south side only, west of Bayfield Street;
- Grove Street East, north side only, east of Bayfield Street;
- Dalton Street, south side only;
- Mary Street, east side only; and
- Maple Avenue, west side only.

Delineated crosswalks, pedestrian signal heads and curb let-downs are provided at the intersection approaches and four corners at Bayfield Street and Grove Street. The side street pedestrian signal phases are activated via push buttons (i.e., actuated).

It is our understanding that with redevelopment of the site a sidewalk will be constructed along the north side of Grove Street from the site limits to Bayfield Street. This will facilitate pedestrian access between the site and the adjacent municipal sidewalk network.

Cycling Facilities

Sharrows, indicating a shared on-road vehicle/bike lane are delineated on the entirety of Grove Street from Toronto Street in the west to Penetanguishene Road in the east. This is an isolated bike facility that does not connect to any other bike routes or facilities.

As per the City's Transportation Master Plan[1], Toronto Street, 190 metres west of the site, and Davidson Street, 875 metres east of the site, are designated as a future "signed bike route". St. Vincent, 1.5 kilometres metres east of the site, is designated as a future buffered bike lane. The timing of implementation is not known at this time.

[1] Figure 3-6 Existing Cycling Network, Transportation Master Plan, City of Barrie, June 2019

Transit Service

Barrie Transit operates five routes within the study area serving the development site. These routes provide service to key locations throughout the City including the Georgian Mall, Georgian College and two GO Transit train stations. Transit connections to the larger City transit services can be made both at street-level and the Downtown Terminal located approximately one kilometre south of the site (i.e., approximately a 15-minute walk).

The closest transit stops are located on the southeast corner (northbound service) and southwest corner (southbound service) of Bayfield Street and Grove Street East located approximately 185 metres or a 2-3-minute walk from the site. Transit amenities at these stops include a shelter and seating.

In summary, the site is adequately served by local transit, which also provides connections to larger transit hubs facilitating inter-regional travel by public transport.

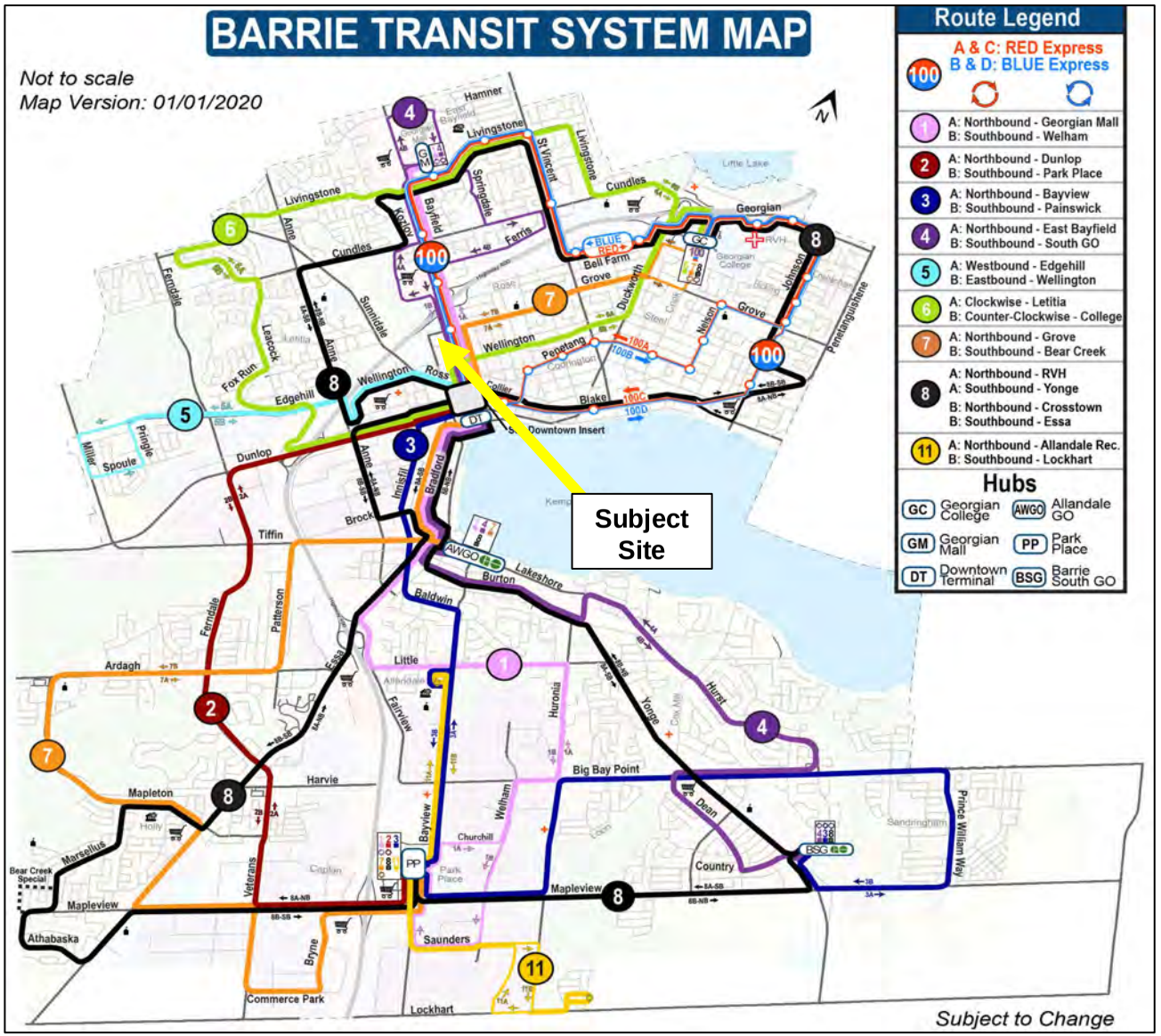
Table 1 summarizes the exiting transit routes servicing the subject site based upon current information posted online.

Figure 3 illustrates the existing transit network near the site.

TABLE 1: EXISTING BARRIE TRANSIT ROUTE INFORMATION

Route	Description	Operating Hours
1A Georgian Mall (northbound) 1B Welham (southbound)	Route 1 is a north-south route that operates between Park Place shopping centre in the south and Georgian Mall in the north.	Weekday service runs from about 5:00 AM to midnight on 20-minute headways. Saturday service runs from about 7:00 AM to midnight on 30-minute headways. Sunday service runs from about 9:00 AM to 10:00 PM on alternating 30 and 60-minute headways.
4A East Bayfield (northbound) 4B South GO (southbound)	Route 4 is a north-south route that operates between the Barrie South GO station in the south and Georgian Mall in the north. It also provide service to the Allandale GO station and Downtown Barrie.	Weekday service runs from about 5:30 AM to 11:30 PM on 60-minute headways. Saturday service from about 7:30 AM to 11:30 PM on 60-minute headways. Sunday service runs from about 9:00 AM to 10:30 PM on 60-minute headways.
6A Letitia (northbound) 6B College (southbound)	Route 6 is a circular route that begins and ends at the Downtown (Barrie) Terminal. It provides service through several residential areas, Georgian Mall and Georgian College.	Weekday service runs from about 5:45 AM to midnight on 30 to 60-minute headways. Saturday service from about 7:15 AM to midnight on 30 to 60-minute headways. Sunday service runs from about 9:00 AM to 10:30 PM on 60-minute headways.

Route	Description	Operating Hours
7A Grove (northbound) 7B Bear Creek (southbound)	Route 7 is a north-south route that operates between Park Place shopping centre in the south and Georgian College in the north. It provides service to the Holly Recreation Centre, Allandale GO station and Downtown Terminal.	Weekday service runs from about 5:30 AM to midnight on 60-minute headways. Saturday service from about 6:30 AM to midnight on 60-minute headways. Sunday service runs from about 9:30 AM to 10:00 PM on 60-minute headways.
100 A/C Red Express (clockwise) 100 B/D Blue Express (counter-clockwise)	Route 100 is a clockwise/counter-clockwise route that operates to/from the Downtown Terminal. It provides service to Georgian Mall and Georgian College.	Weekday service runs from about 7:00 AM to 10:30 PM on predominantly 25-minute headways. Saturday service from about 7:45 AM to 9:30 PM on 45-minute headways. Sunday service runs from about 9:30 AM to 9:30 PM on 45-minute headways.
Within the study area, all routes operate on Bayfield Street. The closest stops are located on the southeast corner (northbound service) and southwest corner (southbound service) of Bayfield Street and Grove Street East about 185 metres, or a 2-3 minute walk, southeast of the site.		



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Barrie Transit Network

Transportation Demand Management (TDM)

Overview

A Transportation Demand Management (TDM) plan can assist in reducing single occupancy vehicle trips, which in turn reduces the number of site generated vehicle trips and by proxy could lower the demand for parking. TDM includes programs, policies and infrastructure that promote a shift in thinking towards a multi-faceted approach to transportation planning. With proper implementation, TDM can encourage transit, cycling, and walking modes as alternatives to the private automobile.

TDM programs consider how people's choices of mode travel are affected by land use patterns, development design, parking availability, parking cost, and the relative cost, convenience, and availability of alternative modes of travel. Various TDM strategies are used to influence those factors so that alternatives to single occupant vehicle travel, such as transit or carpooling, are more competitive. TDM strategies that can be considered at a residential site development can be divided into two basic categories:

- **Pre-occupancy:** Measures that need to be done while a development is being designed and built; and
- **Post-development:** Measures that can be done once people have moved into the development.

While strong opportunities exist within vicinity to the subject site to allow for sustainable transportation practices, the ability to leverage these opportunities will ensure achievement of the end goal of reducing single-occupant vehicle travel and increasing uptake in sustainable travel modes.

The pre-occupancy actions are critical because they are most likely to determine how attractive, convenient and safe alternative travel will be once the site is occupied. Before a site is occupied, or during a remodel, it can be designed to be convenient and safe for pedestrians and cyclists. As well, vehicle parking can be provided to meet but not exceed demand.

After the development is built, incentives can be offered, but those incentives will not work as well if the site and its surroundings are already auto-oriented. The incentives generally include subsidies to use transit or rideshare services and information regarding where and how to use alternative modes of transportation.

TDM is one of the tools that municipalities are using to create vibrant and sustainable communities. Using policies and programs to make active and sustainable transportation more convenient, a TDM approach to transportation can deliver long-term environmental sustainability, improve public health, create stronger communities, and build more prosperous and liveable cities.

Potential TDM Measures

To further promote sustainable modes of travel, TDM measures that will be implemented at the site are described below.

Walking

The pedestrian accessibility of a development is essential is helping to ensure that those that can walk, do. Proper pedestrian connections to the surrounding community ensure safety for users and enhance the experience of those that choose to walk. Effectively, providing a high-quality pedestrian realm will ensure that walking and transit-based travel is a viable and attractive alternative.

Pedestrian travel within the study area is already facilitated by an existing municipal network. Sidewalks currently exist on the south side of Grove Street West, the north side of Grove Street East and both sides of Bayfield Street. Delineated crosswalks and curb let-downs and actuated pedestrian signal are provided on all four corners at the Bayfield Street and Grove Street intersection.

The applicant will provide sidewalks connecting the site to the adjacent municipal sidewalk system which will make walking a more attractive option. Signage, pavement markings, trees and bollards will be utilized where appropriate to identify and emphasize the major pedestrian routes through the site. The current and proposed pedestrian access and walkability serving the site is safe, accessible, and provides continuous linkages and connections.

To further enhance the attractiveness of walking, proper lighting will be provided throughout the site and near all building entrances and exits. Weather protection will be provided at the building's main entrances. This may be in the form of a building overhang, or a stand-alone structure. Additionally, maintenance of on-site and nearby pedestrian facilities would be provided to enable year-round pedestrian access and usage.

The future landscaping plan should consider enhancing the common areas to include pedestrian amenities such as benches or seating areas.

Cycling

The strategy to entice bicycle usage by residents and their visitors is to enable bicycle use as a convenient travel option through the provision of physical and operational infrastructure, and to work with the City and other stakeholders to enhance the local cycling network. This will enable bicycle use as an attractive alternative to automobile use.

In creating an environment that supports pedestrian and cycling activity, the public space must be accessible, safe and comfortable to encourage movement on the street and in the surrounding area(s).

The applicant should consider the provision of long-term secure bicycle storage spaces either within the underground parking garage or within locker/storage units. The spaces shall be

located near elevators and/or main entrances. Short-term bike parking, in the form of bike racks should be located and provided near each building's entrance.

The City does not currently include bike parking requirements within Zoning By-law 2019-141. The long-term and short-term bicycle parking spaces should be provided at rates agreed upon during consultation with City staff.

Transit

The proposed residential development intends to continue to make use of existing transit services within the area to reduce automobile related travel to and from the site.

The availability of convenient and desirable transit options can reduce the number of personal automobile trips. As previously discussed, public transportation is provided via five Barrie Transit routes. The routes provide good connectivity to the broader transit network and key destinations within the City, including institutional land uses, recreational facilities and shopping. Effectively, the subject site is accessible for those travelling within and beyond the City of Barrie (inter-regional) and provides an alternative to automobile travel.

Bus shelters with bench seating and waste and recycling receptacles are provided at the northbound and southbound transit stops located on the southeast and southwest corners of the Bayfield Street and Grove Street intersection, respectively.

To further enhance transit usage, it is recommended that building management provide information about transit services, including maps and schedules, within the main lobby or common area of each building. Additionally, the provision of transit incentives to purchases of new residential units may should be considered. The distribution of pre-loaded transit passes will allow residents to trial the use of transit for commuting and/or recreational travel purposes.

Parking

TDM measures aim to reduce automobile ownership and private single-occupant vehicle trips, thereby reducing the need for an over-supply of parking with the intent of encouraging the use of other forms of transportation. However, the parking supply should not be reduced to a point in which significant parking issues are created. Managing parking supply helps to reduce the undesirable impacts of parking demand on local and regional traffic levels and can result in positive impacts on community livability and design.

The following is recommended to further encourage residents to utilize sustainable travel modes:

- Provide only the minimum amount parking required under the site-specific zoning. At present, the site is required to provide 1.0 space per unit. This special provision is a reduction from the requirement of 1.5 spaces per unit.

  The site is proposing to provide approximately 1.2 spaces per unit for all development phases, or 1,119 parking spaces based on the proposed site plan. This proposed parking supply it anticipated to adequately serve the parking demand and would not

result in any spill over impacts to adjacent streets as each unit could be allotted a parking space. While an excess of parking supply would result, it is noted not to be an excessive amount as the supply does reflect a reduction from the original municipal requirements. It is anticipated through active parking management by property management that the surplus of parking can be utilized to accommodate visitor parking demands;

- Unbundle parking spaces from the cost to rent a unit. This is more equitable and efficient since occupants are not forced to pay for parking they do not need and allows consumers to adjust their parking supply to reflect their needs. Given the availability of transit, prospective residents may not own a vehicle or opt to forego their vehicle;
- Limiting the number of parking spaces a unit can lease/rent/own ensures a stable and adequate supply is available for those requiring parking. Any surplus spaces could be leased on a month to month basis to those requiring additional parking beyond the limit, until such time as a resident under the limit requires parking. Alternatively, these spaces could be used to top-up the visitor supply during periods of peak activity such as holidays; and
- Assign specific/numbered spaces to users to ensure parking is available for them when required. This also provides for easy tracking of available parking for both residents and visitors.

Carpooling and Carshare

Ride-share/carpooling involves two or more people sharing a vehicle for a trip. The cost of the journey (fuel, tolls, parking, etc.) can be split between the driver and passengers, resulting in savings for all concerned. This also reduces the number of vehicle trips and parking demands.

Carpooling tools such as Car Pool World[2] set up online ride sharing databases. These databases enable people to enter their daily journey so that the database can automatically search out coworkers whose journeys match. It is recommended that notice boards are installed in the lobby of each building with information to help residents who may want to organize informal carpools.

Ride sharing opportunities can also be used in combination with carpool parking stalls. These parking stalls are typically positioned in desirable locations (i.e. next to the building entrance) and are specifically reserved for vehicles with two (2) or more people. Providing a convenient parking location can be a good incentive for residents and visitors to carpool. The applicant will identify which parking spaces could be reserved for carpool vehicles if demand exists.

At present, there are no car share providers within the City of Barrie.

[2] https://www.carpoolworld.com/

Wayfinding and Travel Planning

Increasing awareness of sustainable transportation opportunities for residents of the redevelopment will be considered. New residents of the building will be provided with a welcome package that outlines the available transit and active transportation options such as the availability of bicycle parking, bike routes, etc. Signage will be installed within buildings' lobbies and common areas directing residents to nearby transit and active transportation facilities. The lobbies and common areas may contain kiosks or message boards where transit route and schedule information is provided.

Providing awareness of commuting events such as Bike to Work Day and promotional materials that inform residents that all Barrie Transit buses are equipped with bike racks can either be regularly distributed to residents or provided at the kiosk/message board.

Education/Promotion and Incentives

The following measures will be implemented to inform residents of existing transit and active transportation opportunities and encourage their usage:

- Travel planning resources will be provided within a welcome package for residents containing transit and active transportation maps and a list of community resources; and
- Wayfinding signage will be provided in the lobbies, common areas and near main entrances.

The added benefit that marketing materials prepared for the site can highlight the robust TDM plan including the availability of onsite travel planning resources and the site's proximity to transit and active transportation.

Conclusions and Recommendations

Conclusions

The above TDM measures should assist in mitigating the site's impact on the adjacent road network, promote a strong and vibrant economy, and create a livable community that has a balanced transportation network that accommodates all modes of transportation.

Recommendations

- Based on the TDM elements outlined above, the following is recommended:
  - Provide safe, well-lit and attractive walkways for pedestrian and benches or seating areas throughout the site and that connect to the external sidewalk system;
  - Long-term and short-term bicycle parking is provided at the rates agreed upon during consultation with City staff;
  - Property management to provide transit schedules and maps within each buildings' lobby;

- The site provides at least the minimum amount parking required under the site-specific zoning, or about 1,119 parking spaces based on the proposed site plan and not to provide an excessive amount that will continue to encourage automobile ownership and usage;
- Parking spaces are unbundled from the cost to rent a unit;
- The number of spaces a unit can lease is limited to ensure a stable and adequate supply is available for those requiring parking;
- Parking spaces are assigned to users to ensure parking is available for them when required;
- The applicant identify which parking spaces could be reserved for carpool vehicles; and
- Signage is installed within the building lobbies directing residents to nearby transit and active transportation facilities.

Yours truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED

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