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Project/File: THP M-Site | 1400 200191

City of Mississauga
300 City Centre Drive
Mississauga ON L5B 3C1

Reference: Technical Memorandum Addressing Mini-Roundabout Option for Bronte College Court, Trillium Health Partners, New Mississauga Hospital Tower, PAM 21-323 W7

Bronte College Court – Mini-Roundabout Design Concept

1. The Project

The Trillium M-Site Redevelopment project (the “Redevelopment”) proposes to demolish the Existing Hospital, Clinical Administration Building (CAB), and Camilla Care long-term care building located at 2250 Hurontario Street and replace it with a modern hospital building (the “New Hospital”). This redevelopment will result in a net increase of approximately 117,574 m² BGFA to a total of 208,046 m² BGFA (196,808 m² new and 11,238 m² existing GFA) and a net increase of approximately 320 beds.

The current Site Plan – see Drawing No. A-101 - proposes that Bronte College Court be widened northward onto the M-Site property to allow for a three-lane cross-section and a centre left-turn lane. Bronte College Court will connect directly to the main internal driveway that serves the new south parking garage as well as the pick-up / drop-off (“PUDO”) areas on the westerly face of the new hospital building.

The new right-of-way of Bronte College Court from Hurontario Street to its terminus is 21.5m. We understand that the Official Plan (OP) designates a 23m right-of-way for Bronte College Court. A right-of-way widening is usually shared between adjacent property owners.

In this case, it anticipated that the remaining 1.5m of right-of-way to achieve the OP right-of-way of 23m would be achieved if the property south of Bronte College redevelops. In the alternative an easement of 1.5m in favour of the City to achieve the 23 m right-of-way could be provided by Trillium recognizing that there are private sub-surface private services and related infrastructure along the north side of Bronte College.

Two driveways serving the Emergency Ambulance Garage and related parking will be provided to Bronte College Court in replacement of the existing driveway. The terminus of the municipal portion of Bronte College Court is shown in the Site Plan as an all-way stop.

A Parking Structure is located in the southwest quadrant of the Site. Phase 1 of the Parking Structure is an ‘Early Works’ required to continue to provide parking for the Existing Hospital during the construction of the New Hospital Tower.

A truck tunnel is provided in the basement of the Phase 1 Parking Structure. Project Co. will construct a ramp connecting the truck tunnel to the grade level street system west of the Parking Structure as part

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of the Hospital Tower development. Project Co. will also extend the truck tunnel east to the new Hospital Tower loading facility located in the south end of the basement level of the Hospital.

A separate Phase 1 Parking Structure Site Plan Application is currently under review by the City. The three-lane 'all-way stop' interim concept currently incorporated into the Phase 1 Parking Structure Site Plan be maintained until the new Hospital is constructed.

Trillium has confirmed that the mini-roundabout can be introduced without impacting the footprint or design of either the Phase 1 or Phase 2 Parking Structure. Project Co. would design and construct the final Bronte College Court configuration, which may incorporate the mini-roundabout, as part of the Hospital Tower and Phase 2 Parking Structure.

2. Purpose of this Memorandum

The City typically requires a cul-de-sac at the terminus of a public road to enable turnaround manoeuvres for City maintenance vehicles and other motorists as well as to delineate the end of the municipal right-of-way and the beginning of private property.

The current situation in which no cul-de-sac is provided at the end of Bronte College Court has existed for many years. As a practical matter, Trillium has confirmed that they clear the snow along Bronte College Court – the municipal right-of-way – from Hurontario Street to the west end of the right-of-way because they are able to mobilize faster than the City crews. The City typically repairs the street when asked to do so by Trillium.

The base Site Plan (Drawing No. A-101) provides for an 'all-way stop' intersection at the terminus of the municipal portion of Bronte College Court.

The City has asked Trillium to investigate the potential for implementing a 'mini-roundabout' at this terminus point. The 'mini roundabout' would effectively meet the City's objective of enabling City maintenance vehicles to turnaround. The City also believe that the 'mini-roundabout' better delineates the end of the municipal right-of-way.

City staff are proposing that the mini-roundabout portion of the street on top of the truck tunnel remain private with an easement in favour of the City. This approach would also apply to the private storm services on the east side of the mini-roundabout and along the north side of Bronte College Court.

BA Group in coordination with City Transportation staff has developed a functional design of the mini-roundabout for purposes of evaluation.

The evaluation of the relative merits of the 'all-way stop intersection' and the 'mini-roundabout' option for terminating Bronte College is actively underway. City Transportation staff would like the benefit of reviewing the Urban Transportation Report before making a final decision.

A discussion about the relative operational merits of the 'mini-roundabout' and 'all-way-stop' alternatives is provided in the Urban Transportation Report that is being submitted in support the Hospital Tower and Phase 2 Parking Structure Site Plan application. The review of the operational merits of the two alternatives is ongoing between Trillium and City staff.

The purpose of this memorandum is to confirm that the mini-roundabout can be physically designed and constructed in the context of the Phase 1/2 Parking Structure and the Hospital Tower. An alternative

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Site Plan incorporating the 'mini-roundabout' is attached – see Drawing No. A-101-RA.

A brief synopsis of the design attributes of the alternative Site Plan incorporating the mini-roundabout are noted below.

3. Mini-Roundabout Design

Implications for the Phase 1 And Phase 2 Parking Structure

- The mini-roundabout can be introduced without impacting the footprint or design of either the Phase 1 or Phase 2 Parking Structure.
- The only Phase 1 Parking Structure infrastructure affected by the introduction of the mini-roundabout instead of the all-way stop is a standalone Parking Accumulation Display Pylon and a standalone Clearance Bar at the entry to the facility. These two items are easily relocated and integrated with the east façade of the Parking Structure as part of the Phase 1 construction or when the Phase 2 Parking Structure and the mini-roundabout are constructed.
- Our grading review confirms that the mini-roundabout can be achieved in the context of the grading of the Phase 1 Parking Structure and future grading in support of the Hospital Tower and Phase 2 Parking Structure.

Pedestrian Movement

- As previously discussed RWDI, Trillium's wind consultant, has recommended that no pedestrian crossing along the northwest side of the roundabout be provided due to potentially severe winds. The design of Phase 2 of the Parking Structure provides for the formal grade related pedestrian entrance to be oriented to the north.
- This, in turn, orients pedestrians to the north and the crosswalk located at the northeast corner of the garage. This pedestrian path then leads directly east-west to the Walk-In Emergency Entrance and other Public Building entrances located along West side of the New Hospital Tower.
- Railings, planters, and related grading are proposed to deter pedestrians from crossing on the northwest side of the roundabout. In addition, vertical wind screens will be added to reduce the affects of the strong winds.
- The location of the Bronte College driveway and the geometry of the mini-roundabout make achieving a pedestrian crossing along the east side of the mini-roundabout difficult. Accordingly, pedestrians oriented to Bronte College will be best served by the sidewalk located on the south side of Bronte College.

Design Vehicles

- The mini-roundabout is configured to accommodate a Medium Single Unit design vehicle to turnaround – outside radius of the pavement is 13m.
- A mountable section of the centre island is provided to accommodate Fire and other large (semi-trailers) vehicles to negotiate travelling though the roundabout. The centre section of the roundabout is raised.
- Modified splitter islands are provided on the inbound approaches to the mini-roundabout.

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- Provision is made for Fire and other large (semi-trailers) vehicles to enter and exit the Bronte College driveway in advance of the roundabout.

Fire Route

- As previously noted, the mini-roundabout design accommodates a City of Mississauga Fire Truck. However, a portion of the 6m fire access route required by the building code on private property encroach upon raised medians and/or the boulevard. This condition will need to be accepted by the Fire Chief.

Municipal Right-Of-Way Definition

- The proposed municipal right of way is denoted by the blue dashed line illustrated in the conceptual grading and servicing drawing – see Figure 1. This right-of-way boundary incorporates the Bronte College driveway into the designated municipal right of way and excludes a private storm service and related catch basins outside of the municipal right-of-way.
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- The extent of the easement over private Trillium property in favour of the City to capture the roundabout and approach thereto will be determined in coordination with the City.

Lighting And Signage

- Details relating to lighting, traffic control signage and wayfinding signage will be determined as the design is advanced.

4. Conclusions

Taking into account all of the foregoing, the 'mini-roundabout' design concept, illustrated in the alternative Site Plan (Drawing No. A-101-RA), is physically feasible in the context of the planned Hospital Tower and Phase 1/2 Parking Structure.

City Transportation staff and Trillium are actively discussing the relative operational merits of the 'mini-roundabout' and the 'all-way-stop' design concepts. City Transportation staff would like the benefit of reviewing the Urban Transportation Report before making a final decision.

Regards,



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Attachment: Base Site Plan, Drawing No. A-101
Alternative Site Plan, Drawing No. A-101-RA
Conceptual Grading and Servicing, Figure 1

cc. Tony Yates | BA Group
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Michelle Innocente | Trillium Health Partners