



Level 1B

LRT Proximity Study

2501 Greenbank Road

Site Plan Control Application

Canadian Tire Real Estate Limited

May 2023

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Level 1B LRT Proximity Study

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1.0 Introduction

Parsons has been retained by Canadian Tire Real Estate Limited to complete a Level 1B LRT Proximity Study in support of a Site Plan Control application for a proposed building expansion and associated site modifications. A pre-consultation for the proposal was held on December 22nd, 2022. The subsequent pre-consultation notes received from City Staff called for a Level 1B Proximity Study due to the proximity of the site to the Strandherd Transitway, which is slated for the future rapid transit corridor associated with Stage 3 LRT, and is within the Development Zone of Influence (DZI) in the Official Plan Annex 2.

1.1 Proposed Development

The current development proposal is to expand the existing Canadian Tire building towards Strandherd Drive and relocate the Garden Centre to the south within the existing parking area. The existing gas bar and car wash area is excluded from any site modifications. Site modifications include:

- Expansion of the existing building towards Strandherd Drive to include 650 sq. m of additional retail space as well as 560 sq. m of additional warehouse space.
- Relocation of the existing Garden Centre and frost shader within the surface parking in the southern portion of the existing surface parking area.
- Reduction in the number of vehicle parking spaces from 355 spaces to 309 proposed spaces which includes 12 barrier-free spaces. This represents a reduction of 46 vehicle parking spaces.
- Existing compactor door and existing exit door in the loading space area to be relocated to adjacent locations.
- Modifications near the main building entrance to include 4 new proposed e-commerce parking spaces to facilitate curbside pickup orders, and a proposed curb depression and sidewalk between the e-commerce spaces and the building.
- Existing refuse compound and existing stair in the loading space area to be modified.
- New landscaping is replacing displaced trees and augmenting tree and shrub planting on the site.
- Refreshing of the building elevations with new colours and signage.

It is also of note that no modifications are planned for the existing pedestrian pathway providing access to/from the site and the Strandherd Transitway. This pedestrian pathway is north of the loading space area and is perpendicular to Greenbank Road, providing access to transit from Greenbank Road along the north side of the site.

1.2 Site Plan Control Application

The Site Plan Control application package includes the following plans and reports which have been reviewed to complete this LRT Proximity Study report:

- Planning Rationale and Design Brief, prepared by Parsons.
- Site Plan, Floor Plan, and Building Elevations package, prepared by Turner Fleischer Architects.
- Plan of Survey, prepared by Annis, O'Sullivan, Vollebekk Ltd.
- Tree Conservation Plan and Landscape Plan, prepared by Douglas W. Kerr & Associates Ltd.
- Arborist Report, prepared by Thomson Watson Consulting Arborists Inc.
- Stormwater Management and Servicing Report, prepared by Parsons.
- Site Grading and Servicing Drawings, prepared by Parsons.
- TIA Screening Form, prepared by Parsons.
- Geotechnical Investigation Report, prepared by EXP Services Inc.
- Phase One ESA, prepared by GHD Limited.

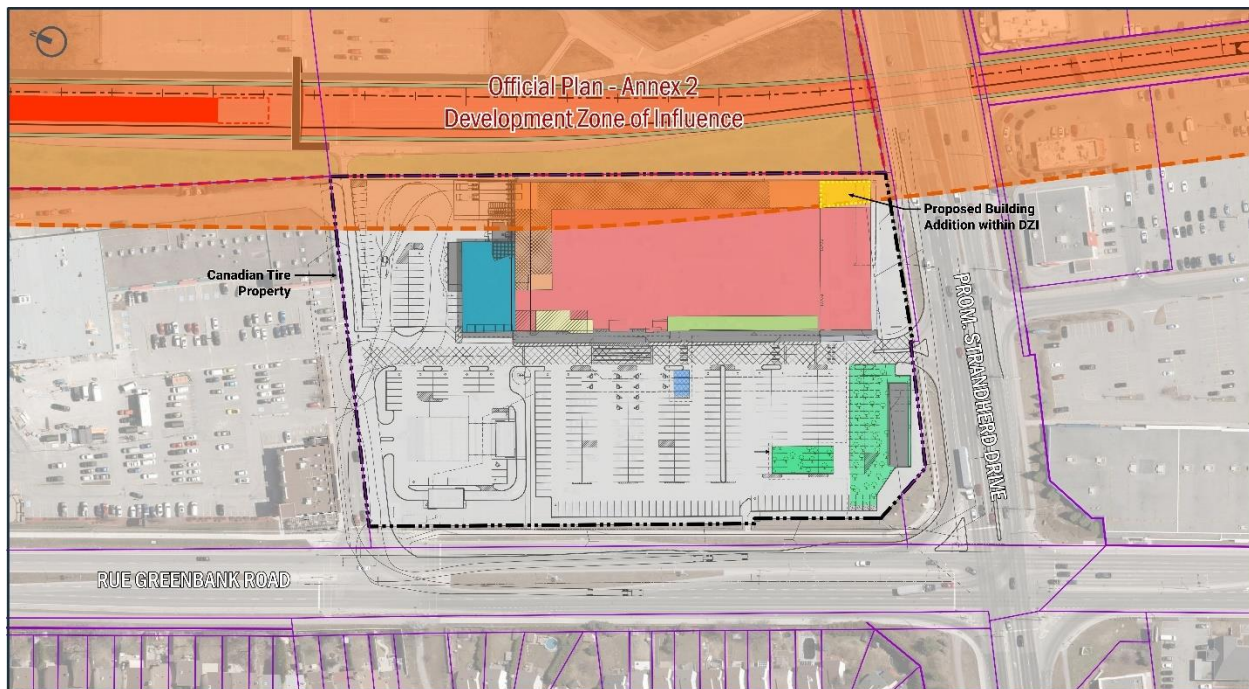
1.3 LRT Proximity Study

A Proximity Study involves the comprehensive review of the development proposal and how it relates to the City O-Train system’s assets, infrastructure, utilities and operations. This report presents a Level 1B Proximity Study according to the City’s draft 2022 O-Train System Proximity Study Guidelines.

A Level 1B Proximity Study is applied to developments within the Development Zone of Influence (DZI) which the City has established around the existing and future O-Train network, where minimal impact on the O-Train System is anticipated. Specifically, a Level 1B study addresses “development in proximity to future O-Train system / planned expansion including Protected Transportation Corridors with no reasonable prospect of future freight operations”.

As outlined in **Figure 1** below, the proposed development is adjacent to the existing Southwest Transitway, a Bus Rapid Transit (BRT) facility. The City has identified this rapid transit corridor for future conversion to Light Rail Transit (LRT) via the on-going Barrhaven Light Rail Transit (Baseline Station to Barrhaven Town Centre) and Rail Grade-Separations Planning and Environmental Assessment Study.

Figure 1: Development Zone of Influence (DZI) - from City of Ottawa GeoOttawa - proposed site plan added (Parsons, 2023).



2.0 Level 1B Proximity Study

2.1 Site Context

The site is located at the northeast corner of Strandherd Drive and Greenbank Road, known municipally as 2501 Greenbank Road. This location is at the northern extents of the Barrhaven Town Centre within the Suburban Transect Policy Area of the Official Plan. The site is surrounded by existing low-rise commercial land uses to the north and south, existing suburban form residential uses to the west (across from Greenbank Road), and the Strandherd Transitway to the east (rear of the site). Please see the Planning Rationale and Design Brief submitted as part of this complete Site Plan Control application for analysis of the relevant land use designations

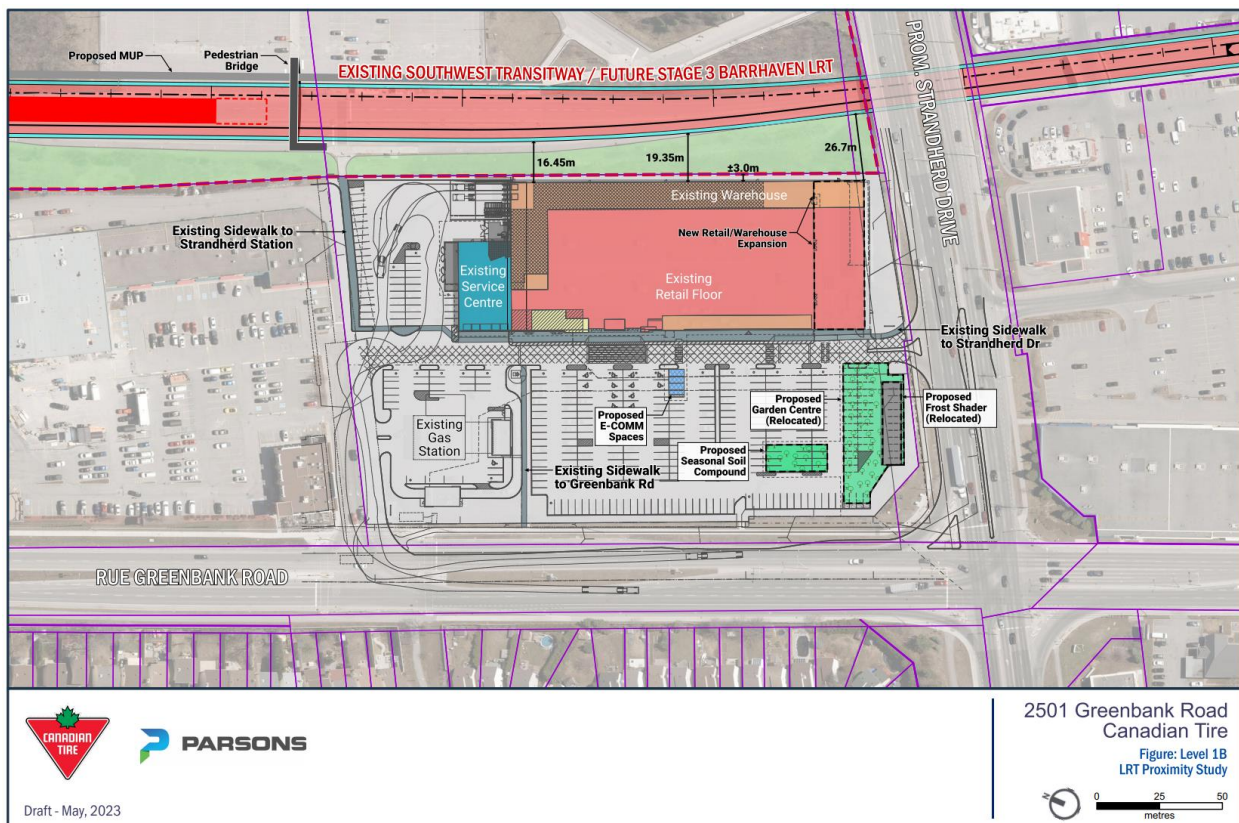
and a comprehensive description of the site context. This section of the Proximity Study focuses on how the site relates to the nearby existing Transitway and planned O-Train infrastructure.

2.2 Site Clearances

The site is oriented towards Greenbank Road, with the main entrance facing and setback generously from Greenbank Road by the existing surface parking. The existing Southwest Transitway / Future Stage 3 Barrhaven LRT is to the rear of the site, along the east property line, as shown in **Figure 2** below.

The proposed building expansion extends the building to the south but does not extend the building's easterly limit towards the existing Transitway right-of-way. Clearance from the existing/proposed Canadian Tire building to the existing Transitway/future LRT right-of-way is approximately 3.0 m. Clearances from the existing/proposed Canadian Tire building to future planned O-Train infrastructure range from 16.45m to 19.35m, and 26.7m when measured from various points as shown in **Figure 2** below. The future LRT alignment narrows as it approaches the Strandherd Drive overpass to the south, providing a clearance of 26.7m from the proposed building expansion at the southern end of the site.

Figure 2: Proposed Site Plan Clearances in relation to Future Stage 3 Barrhaven LRT (Parsons, 2023).



2.3 Transitway access at northeast of site

At the northeast of the Canadian Tire site, there is an existing sidewalk to the Strandherd Transitway station. This facility provides pedestrian and active transportation access to the existing bus rapid transit station. This pedestrian pathway is north of the Canadian Tire loading space area and is perpendicular to Greenbank Road, providing access to transit from Greenbank Road along the north side of the site. Users of this sidewalk are able to connect through the site to the sidewalk along Greenbank Road. This sidewalk will remain and is unmodified as a result of the proposed site modifications.

Figure 3: View of existing sidewalk to Strandherd Transitway, facing east (Parsons, 2023).



Figure 4: View of Transitway and Canadian Tire building from existing sidewalk, facing southeast (Parsons, 2023).



2.4 Strandherd Drive overpass at southeast of site

At the southeast of the site, the Canadian Tire building fronts onto Strandherd Drive which is an overpass at this area as shown in **Figure 5** and **Figure 6**. The existing Transitway passes underneath Strandherd Drive, as will the future Stage 3 LRT.

Figure 5: View of existing Transitway showing Strandherd overpass in the distance, looking south (Google street view)



Figure 6: View from Strandherd Drive overpass, showing existing Transitway below, looking north (Google street view)



2.5 2022 Draft O-Train System Proximity Study Guidelines

The draft O-Train System Proximity Study Guidelines have not been approved by Ottawa City Council at this time. The draft 2022 Guidelines are intended to update the 2013 Guidelines to reflect that the Confederation Line (Line 1) is now operational, and many other stations and alignments are under construction or have undergone Environmental Assessment approval. As such, the draft 2022 guidelines refer to “the O-Train system” instead of the Confederation Line.

It was confirmed during pre-consultation correspondence with City staff to utilize the draft 2022 Guidelines for this LRT Proximity Study Report. The 2022 Guidelines note that a Proximity Study should assess the following:

- *The risk of structural settlement and/or damage to O-Train system facilities;*
- *The risk of liability/litigation from damage to O-Train system facilities;*
- *The potential impact on access to O-Train system facilities for future use and maintenance of assets;*
- *The risk of operational impacts resulting from construction of the development;*
- *Protection of current and future O-Train system infrastructure needs, including: fire ventilation, station ventilation, additional exits, accessibility for persons with disabilities, and other operational requirements; and*
- *The risk of encroaching on a location required for future O-Train system works or operational requirements.*

2.6 Future Barrhaven LRT Extension

In 2018, the City of Ottawa initiated the *Barrhaven Light Rail Transit (Baseline Station to Barrhaven Town Centre) and Rail Grade-Separations Planning and Environmental Assessment Study*. The purpose of this study was to develop a Recommended Plan (functional design) for the future conversion of the existing BRT corridor (Southwest Transitway) and complete the Province of Ontario's *Transit Project Assessment Process (TPAP)*.

In the vicinity of the site, the future Barrhaven LRT extension will re-use the existing Southwest Transitway corridor and make use of the existing Strandherd Drive overpass located immediately adjacent to the planned development. North of Strandherd Drive, the existing Transitway climbs a grade to Strandherd Station and then has an at-grade intersection with Berrigan Drive further north. However, the future LRT is planned to remain low and enter into an open trench to be able to pass under Berrigan Drive, as no at-grade crossings are permitted along the LRT. This will result in Strandherd Station being rebuilt as a below-grade station within an open trench, with a planned pedestrian/cycling bridge constructed to provide access to the future LRT station as well as between existing developments along Greenbank Road and the community to the east of the station and park and ride.

The Recommended Plan for the Barrhaven LRT Extension has recently been re-approved by the City's Transportation Committee, with the TPAP anticipated to be completed by the end of 2023. There is currently no funding associated with the LRT extension, and implementation is unlikely in the near future. As part of the on-going Transportation Master Plan (TMP) update, the City will be reviewing the planned rapid transit network and developing an updated priority list for implementation.

2.6.1 Infrastructure

Future O-Train infrastructure adjacent to the planned development will consist of the LRT guideway, civil structures (Strandherd Drive overpass and LRT open trench) and Strandherd Station (which includes an existing park and ride and passenger pick-up and drop-off facility on the east side of the existing Transitway corridor).

The existing Transitway corridor appears to provide sufficient right-of-way to accommodate the above-noted facilities, and the Recommended Plan for the Barrhaven LRT Extension does not identify any additional property requirements in the vicinity of the site.

Figure 7 illustrates proposed O-Train system infrastructure in the vicinity of the site.

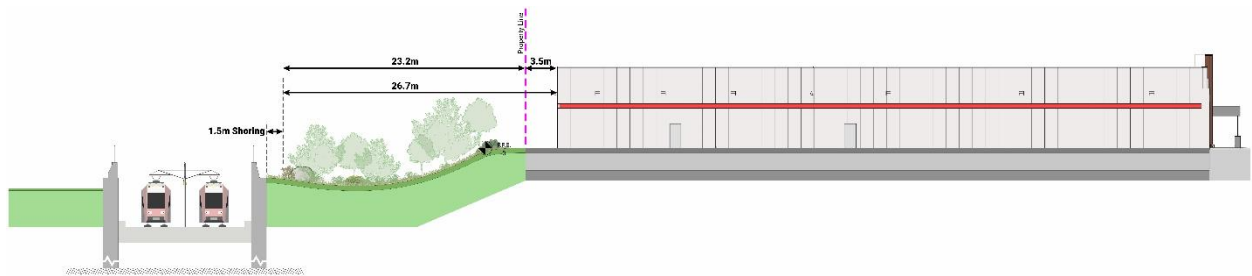
2.7 Level 1B Requirements

Level 1B refers to the fact that the O-Train system in the vicinity of the proposed development is a planned facility but not yet in operation, and that minimal impacts on the O-Train system are anticipated. The potential risks presented in Section 2.6 of this report are determined to not be exacerbated by the proposed development. In

the case of the proposed development, it is an extension of an existing building and will not result in development closer to the existing Transitway/future LRT corridor than currently exists.

As required by the 2022 draft Guidelines, a development cross-section for the Site Plan Application is presented below in **Figure 7**. The development cross-section in **Figure 7** illustrates the grading and clearances between the future LRT infrastructure and the southeast corner of the site where the building expansion is proposed to take place. A full-page version of **Figure 2** and **Figure 7** is also appended to this report.

Figure 7: Development Cross-Section of southeast corner of site (Parsons, 2023).



3.0 Conclusion

Overall, there is minimal risk to planned O-Train infrastructure associated with this development. The proposed development is an extension to an existing building, following the same easterly limit. Site alterations needed to accommodate the proposed building (e.g. minor excavation for slab on grade construction) will not present any new challenges or conditions when the existing Transitway is reconstructed to accommodate the Barrhaven LRT Extension. There also appears to be sufficient clearance between the existing property line and proposed LRT alignment to permit construction access and activities to occur during future conversion of the Southwest Transitway to LRT.

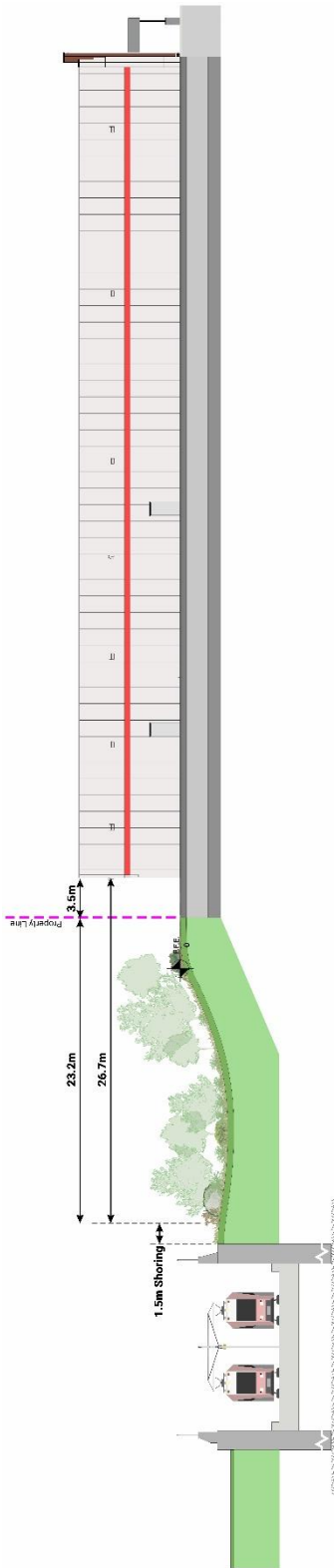
Respectfully Submitted,

Paul Croft
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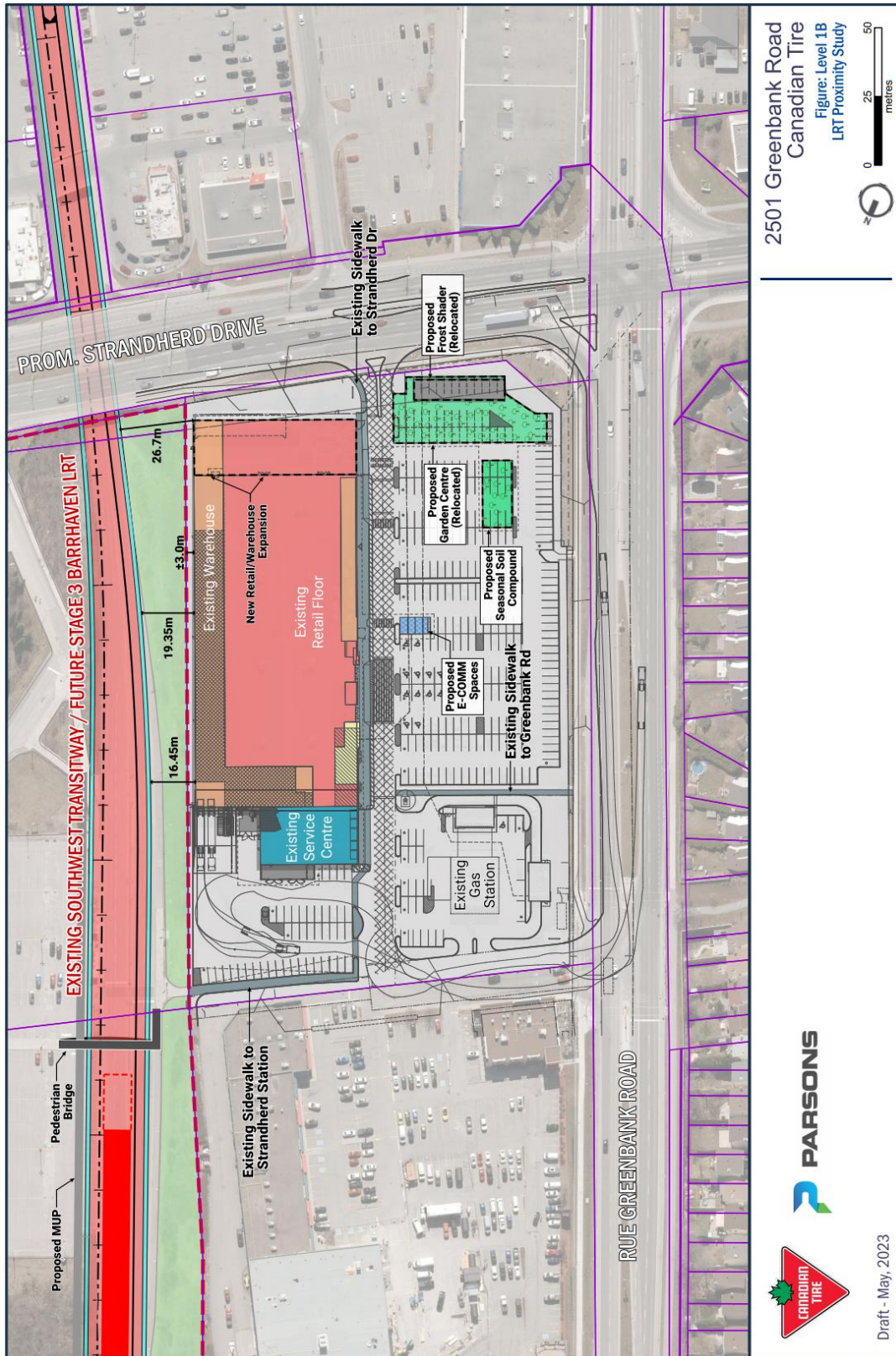
Rachel MacKnight
Planner/Urbaniste

4.0 Appendix

4.1 Development Cross-Section (full page Figure 7)



4.2 Clearances from existing Transitway/future LRT Right-of-way (full page Figure 2)



2501 Greenbank Road
 Canadian Tire
 Figure: Level 1B
 LRT Proximity Study

PARSONS

CANADIAN TIRE

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