

TRAFFIC IMPACT STUDY UPDATE

Black Bear Ridge Resort,
North of Harmony Road between Highway 37 and
Homan Road
City of Belleville, ON

January 2026

Prepared For
Black Bear Limited
Partnership



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January 30, 2026

Mr. Alex Sharpe
Black Bear Limited Partnership

Re: Black Bear Ridge Resort, North of Harmony Road between Highway 37 and Homan Road, Belleville, ON, Traffic Impact Study Update

Dear Mr. Sharpe,

TRANS-PLAN is pleased to submit this Traffic Impact Study for the proposed redevelopment of the Black Bear Ridge Golf Course located north of Harmony Road between Highway 37 and Homan Road in the City of Belleville, Ontario, as part of the Official Plan Amendment (OPA) submission.

The study includes traffic counts, trip generation estimates, and intersection capacity and queue analysis for existing, future background, and future total traffic conditions of all phases. The findings indicate that the development will have a significant impact on traffic at all signalized intersections of the study area. Accordingly, Trans-Plan recommends the following mitigation measures, presented in different horizons:

To maintain acceptable traffic conditions in **2041 (five years after Phase 1 build-out)**, the study recommends the following:

- The east leg of Ashley Street at Highway 62 is proposed to be reconfigured from a shared left-right turn lane to a dedicated left-turn lane alongside a shared left/right-turn lane.
- A dedicated left-turn lane is recommended for both the east and west legs of Harmony Road at Highway 37.
- The intersection of the existing Black Bear Ridge and Harmony Road is recommended for signalization. In addition, the north leg of the intersection is proposed to be reconfigured from a shared left-right turn lane into two separate lanes, providing dedicated left-turn and right-turn lanes.
- At Harmony Road and Highway 37, the east and west legs are recommended to be reconfigured from a shared left/through/right lane to a lane configuration that provides a dedicated left-turn lane and a shared through/right-turn lane.
- At Blessington Road and Highway 37, the east leg will be improved by introducing a dedicated left-turn lane. Additionally, the AM peak hour signal timing will be optimized by allocating an extra 7 seconds to both the northbound and southbound approaches.
- Providing a dedicated left turn lane on the east leg of Casey Road at Highway 37. Additionally, the AM peak hour signal timing will be optimized by allocating an extra 7 seconds to both the northbound and southbound approaches.



To maintain acceptable traffic conditions in **2046 (ten years after Phase 1 build-out)**, the study recommends the following:

- The east leg of Ashley Street at Highway 62 is proposed to be reconfigured from a shared left-right turn lane to a dedicated left-turn lane alongside a shared left/right-turn lane. Additionally, the PM peak hour signal timing will be optimized by allocating an extra 5 seconds to both the northbound and southbound approaches.
- The intersection of the existing Black Bear Ridge and Harmony Road is recommended for signalization. The north leg of the intersection is proposed to be reconfigured from a shared left-right turn lane into two separate lanes, providing dedicated left-turn and right-turn lanes. In addition, the west leg is recommended to have an auxiliary left-turn lane.
- A dedicated left-turn lane is proposed for both the east and west legs of Harmony Road at Highway 37, along with AM peak signal timing adjustments—specifically increasing the cycle length from 83 seconds to 120 seconds—to improve intersection efficiency.
- At Blessington Road and Highway 37, the east leg will be improved by introducing a dedicated left-turn lane and optimizing signal timing during the AM peak to support smoother traffic flow.
- Casey Road's east leg at Highway 37 will also be upgraded with a dedicated left-turn lane and optimized signal timing during the AM peak hour to improve overall intersection performance.

To maintain acceptable traffic conditions by **2056 (completion of the future phases)**, the study recommends the following potential improvements. These are subject to future review and refinement based on updated traffic data:

- Adding two dedicated left-turn lanes and a shared left/right turn lane on the east leg of Highway 62 at Ashley Street and extending signal times for northbound and southbound traffic.
- Signalizing the intersection of Ashley Street and Harmony Road, providing a dedicated left and right turn lane in the westbound lane, and converting the southbound lane to two lanes (one for left turns, one for shared through/left turns).
- Signalizing the intersection of Harmony Road and River Road North.
- Signalizing the intersection of Harmony Road and Homan Road, providing a dedicated left and right turn lane in the southbound lane and adding a left-turn lane for eastbound traffic and a right-turn lane for westbound traffic.
- Signalizing the intersection of Harmony Road and Black Bear Ridge Site Access and providing a two-lane road with left and right turns at the existing Black Bear Ridge Site Access is recommended. Providing a left-turn lane for eastbound traffic and a right-turn lane for westbound traffic is also recommended.
- Signalizing the intersection of Harmony Road and proposed Site Access 2, adding a left-turn lane for eastbound traffic, and converting to a through and a shared through-right-turn lane for westbound traffic.



- Signalizing the intersection of Harmony Road and Harmony Public School, converting the eastbound lane to two lanes (one for through lane, one for shared through/right turns), converting the westbound lane to two lanes (one for through lane, one for shared through/left turns). Adding a "School Zone Maximum Speed" sign.
- Signalizing the intersection of Harmony Road and proposed Site Access 4.
- Converting eastbound lanes to five lanes (two left-turn lanes, one shared through/left lanes, two lanes for the right channelized lanes). Converting westbound lanes to three lanes (a left-turn lane, a through lane, and a shared through/right lane). Converting northbound lanes to five lanes (two left-turn lanes, a shared through/left lane, a through lane, and a shared through/right turn lane. Converting southbound lanes to four lanes (two left-turn lanes, a through lane, and a shared through/right turn lane. Signal timing optimization is recommended.
- Converting northbound and southbound right-turn lanes of Highway 37 and Cannifton Road/Blessington Road to through-right lanes, reconfiguring eastbound and westbound lanes with left-turn, and shared left/through/right turn lanes. Signal timing optimization is recommended.
- Converting northbound and southbound right-turn lanes of Highway 37 and Tank Farm Road/Casey Road to through-right lanes, reconfiguring eastbound and westbound lanes with left-turn and shared through/right turn lanes.

These changes are expected to alleviate congestion and improve overall traffic flow.

Sincerely,



Anil Seegobin, P.Eng.
Partner, Engineer

Trans-Plan Transportation Inc.
Transportation Consultants



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Transmittal Letter

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1. INTRODUCTION

Trans-Plan has been retained by Black Bear Limited Partnership to complete an update to the Traffic Impact Study (TIS), dated August 2024, for the proposed redevelopment of the Black Bear Ridge Golf Course located north of Harmony Road between Highway 37 and Homan Road in the City of Belleville, Ontario. This study includes the following tasks:

- Review and assessment of the existing road network
- Assessment of boundary roadway operations under future background conditions, including a review of traffic growth, area developments, and proposed transportation improvements in the study area
- Assessment of the impact of site-generated traffic on the study area intersections under future background and total traffic conditions
- Discussion of roadway and intersection improvements, as required, to accommodate the proposed development
- Confirm the updated TIS to all requirements detailed in MTO's TIS Guidelines (dated March 2023)

2. RESPONSE TO COMMENTS

Trans-Plan completed a Traffic Impact Study Update on December 12, 2025. This traffic impact study has been updated in response to the additional comments received from the peer reviewer, which necessitated clarifications to the previous submission. This traffic impact study update aims to address the following comments received from the peer reviewer,

- Peer Review Services, Black Bear Ridge Development by Greer Galloway, dated December 2025

The comments received and our responses, based on the updated TIS report, are as follows:

Peer Review Services by Greer Galloway, dated December 2025

Comment 1: *"GG believes the comments provided through previous revisions have resulted in a study that captures an appropriate collection of intersections, updated traffic count data and improved coverage of locally significant interests. The comments contained in this peer review are not particularly technical in nature but reflect a need for clarity in certain sections."*

TRANS-PLAN Response:

Trans-Plan acknowledges GG's comments and has revised the study to improve clarity in the relevant sections.

Comment 2: *"Clarity is required as to precisely where Harmony Road/Proposed Site Access 4 and Homan Road/Proposed Site Access 5 are located in Phases 2 and 3."*

TRANS-PLAN Response:

Figure 2 of the report has been updated, reflecting the markups of all site accesses.

Comment 3:

- i. Is there an illustration of the development at full build out? It is provided in separate documents as the 'Master Plan' but would be a relevant inclusion under this cover to illustrate elements referenced in the report through to the 2056 horizon – future phase access points, development land-use locations, Phase 1/2/3 boundary locations, etc.
- ii. It is presumed Proposed Site Access 2 and 3 are Street K shown in the draft plan drawing. Where are Site Access 4 and 5 located along their respective roads? They are on the schematic figures but local residents are likely to want a sketch more clearly illustrating their locations.
- iii. The role of the unnamed Street on Harmony Road serving "Units 3-19" is not clear and should be acknowledged. It does not appear to be an existing municipal road but functionally serves as a road/intersection similar to others considered in the study. It does not appear on the existing schematic figures and does not appear to have been considered in the modelling – is this Proposed Site Access 4?

TRANS-PLAN Response:

The road, which forms part of Site Access 4 is an existing private condominium road with an easement in favour of Black Bear Ridge Inc. that allows it to become a vehicular and pedestrian access road for future development of the lands (as well as a utility connection). Thus, we have included it as Site Access 4. A connection to that road via the Black Bear Ridge property exists today for maintenance and golf carts per that agreement. That future connection may not be required for some time (20+ years), as the area north of that access is slated for the final phase of the entire community. Figure 2 of the report has been updated, reflecting the markups of all site accesses.

Comment 4: "Table 1 "Source" column should be completed for all entries."

TRANS-PLAN Response:

Acknowledged. Table 1 column for TMC's source has been updated.

Comment 5: "The report notes that there is presently no public transit. If it's likely or even remotely possible for transit to be extended to this area in the future it may impact the report's conclusions, therefore a note in the report is warranted that transit will be considered as part of the future traffic investigation associated with Phases 2 and 3 (ie. when potential demand for transit occurs). The traffic report forecasts background traffic volumes, and so forecasting (or acknowledging) future public transit is important to note in the report for future analysis."

TRANS-PLAN Response:

Acknowledge. The report has been updated to note that, although no public transit currently serves the site, potential future transit service will be considered as part of the traffic investigations associated with Phases 2 and 3, should demand warrant it.

Comment 6: "It is noted that no horizon is considered beyond the full build-out date (2056). It is understood that the traffic study will be revisited as part of the approval process of future phases. This should be acknowledged in the report."

TRANS-PLAN Response:

Acknowledged. Section 8 of the report has been updated to note that 2056 represents full build-out and that the Traffic Impact Study will be revisited and updated as part of the approval and detailed design process for future phases.

Comment 7: “City documents are not likely to capture planned road improvements for the provincial highways referenced in the report. In an e-mail to the City dated June 19, 2025, the Ministry of Transportation has stated that the BBR proposal does not meet the Ministry definition of a “large traffic generator” and therefore falls outside of the Ministry’s zone of permit control. MTO notes that any access modifications within 400m of Provincial highway intersections shall be subject to MTO approvals and permit requirements. This should be noted in the report:

TRANS-PLAN Response:

Acknowledged. The report has been updated to note that the BBR proposal is not considered a Large Traffic Generator and is outside MTO permit control, and that any future access modifications within 400 m of Provincial highway intersections will be subject to MTO approvals as required.

Comment 8: “The description provided by the ITE for each land-use would be helpful to provide for the readers reference – particularly for those land-uses that it may not be clear what is captured by that land-use.”

TRANS-PLAN Response:

Acknowledged. Section 7.1 of the report has been updated to include brief descriptions of each ITE Land Use Code (11th Edition) used in the analysis, providing context for the traffic generation rates applied.

Comment 9: “The term Intersection Sight Distance is not described or used before Section 11.3 provides conclusions. Including reference to what ISD is and how it may differ from SSD and the 95/105m thresholds would provide the reader with some background to better understand the conclusions provided?”

TRANS-PLAN Response:

Acknowledged. Sections 11.3 and 11.4 have been updated to include a description of both SSD and ISD, including how ISD differs from SSD and the basis for the 95/105 m thresholds, to provide context for the sightline conclusions.

Comment 10:

- i. “We presume the intent is that the internal roads are to be stop controlled. We recommend a statement to this effect be included.”

TRANS-PLAN Response:

Acknowledged. Internal subdivision roads were not included in the traffic assessment and are assumed to operate as low-speed local residential streets with stop-controlled intersections, consistent with City of Belleville standards.

- ii. *“Harmony Road is currently a 2-lane road. The noted intersection recommendations appear to suggest Harmony Road will become a 4-lane road (Figure 15) under 2056 conditions. We recommend comment on road sections between intersections be provided where additional lanes are likely to be required (beyond localized widenings at intersection auxiliary lane approaches).”*

TRANS-PLAN Response:

Acknowledged. Harmony Road is assumed to remain a two-lane facility between intersections, with only localized auxiliary lanes (such as left- and right-turn lanes) provided at intersections, as described in Section 10. These assumptions form the basis of the current analysis. Any future modifications to lane configurations or roadway design, if required, will be reviewed and addressed through a future Site Plan application and supporting studies, as necessary.

3. CORRESPONDENCE

Before commencing this study, the Transportation and Planning staff at the City of Belleville and the Ministry of Transportation Ontario were provided with our study terms of reference for their approval and/or comments. Detailed comments are provided in Appendix A.

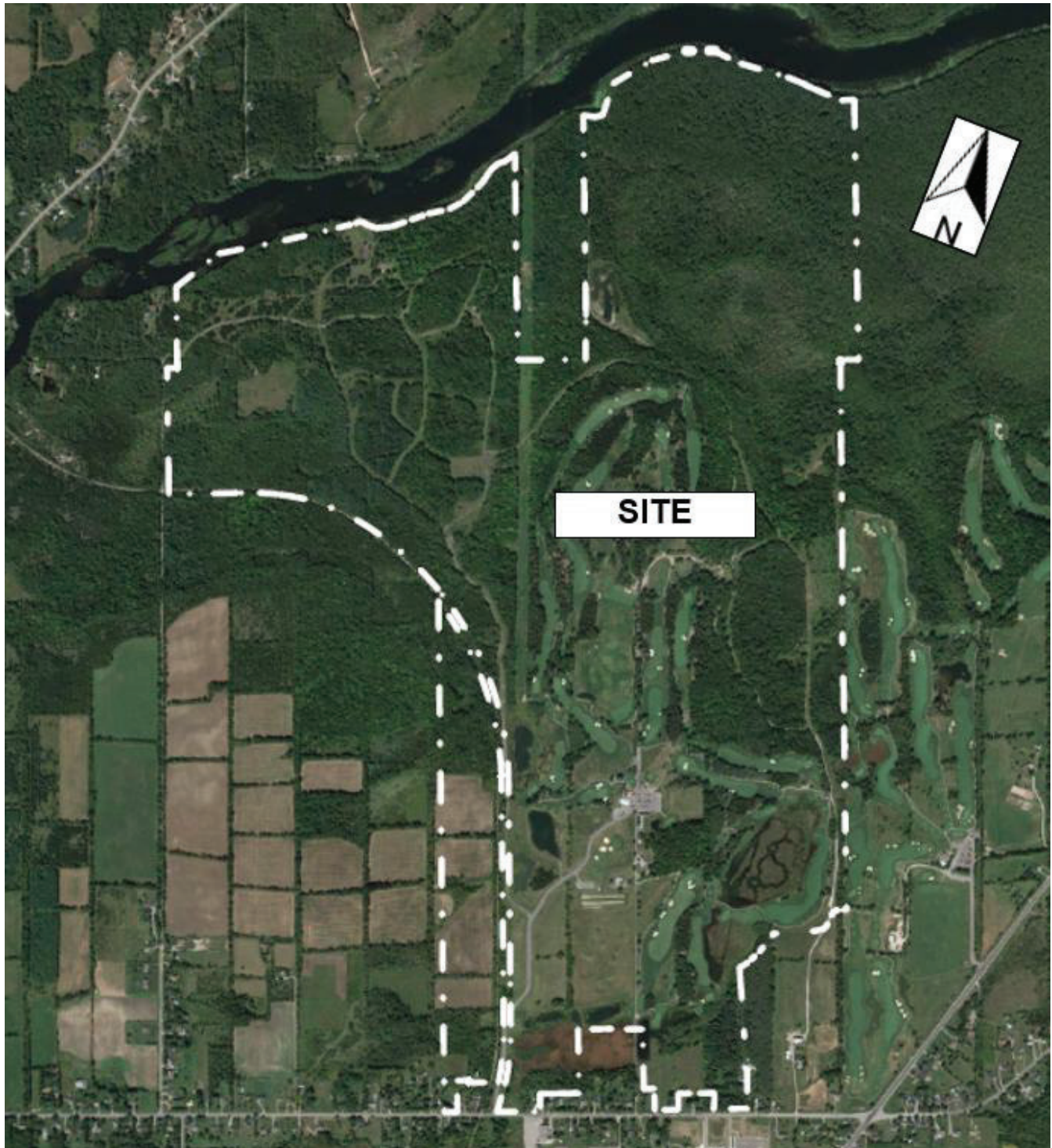
4. SITE CONTEXT AND PROPOSED DEVELOPMENT

The site, as shown in Figure 1 is located north of Harmony Road between Highway 37 and Homan Road in the City of Belleville. The proposed site plan is shown in Figure 2, together with the conceptual master plan reflecting the site access locations.

The subject is an existing golf course to be redeveloped into a full, four-season resort with commercial entertainment and recreational amenities, complemented by surrounding residential and mixed-use developments. Based on the Master Concept Plan, which is understood as still being finalized, but envisioned to comprise the following land uses:

- Single-family detached housing (with approximately 762 dwelling units and an average area of 1,500-2,500 sq. ft/unit)
- Single-family attached housing (Semi-detached Houses and Townhouses with approximately 153 and 610 dwelling units, respectively, and an average area of 1,500-1,800 sq. ft/unit)
- Multifamily Housing – Low Rise (Condominiums with approximately 610 dwelling units and an average area of 1,200-1,500 sq. ft/unit; Stacked Townhouses and Apartments with approximately 1,524 dwelling units each and an average area of 650-90 sq. ft/unit.
- Golf Course (79.22 ha)
- Resort Accommodations (7.1 ha)
- Stormwater management facilities (2.64 ha)
- Right-of-ways (23.55 ha), and
- Environmental protection areas (107.87 ha)

Figure 1 – Site Location



ORIGINAL PROPOSED TRAIL CONCESSIONS 5 AND 6

