Realigned Greenbank Road and Southwest Transitway Extension – Draft Environmental Study Report Addendum

July 2025

Prepared for:
The City of Ottawa

Prepared by:
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Project/File:
163601340

Stantec

Executive Summary

In 2013, the City of Ottawa initiated a planning and environmental assessment (EA) study to develop a Recommended Plan to extend the realigned Greenbank Road and the Southwest Transitway south from their previously planned terminus at Cambrian Road in Barrhaven South. The study was conducted as a Schedule 'C' undertaking following the Municipal Class Environmental Assessment (October 2000, as amended in 2007) (Class EA) process, which is approved under the Ontario *Environmental Assessment Act* (OEAA). The project's Recommended Plan was originally approved by Ottawa City Council on November 14, 2013. An Environmental Study Report (ESR) (MMM Group 2014) was prepared to document the planning and decision-making process followed and was issued for a 30-day review period.

As the original EA was completed more than 10 years ago and construction has not begun, and design changes to the roadways have been proposed, this Addendum Report has been prepared in accordance with the 2024 MCEA process. This Addendum will review existing conditions, anticipated environmental impacts and mitigation measures before the project can proceed. As part of the Preliminary and Detail Design phase, additional environmental studies were completed to update information regarding site conditions, the assessment of impacts, and recommended mitigation measures. These additional studies have been referenced in preparation of this ESR Addendum Report, where applicable.

This project is following the approved environmental planning process for Schedule C projects under the MCEA (October 2000, as amended in 2007, 2011, 2015, 2023 and 2024). This ESR Addendum is available for public, government agencies and Indigenous Community review in accordance with the requirements of the MCEA. Subject to comments received following the Notice of Addendum, the City intends to proceed with the construction of this project in 2026 and 2027. A copy of this document is available for review on the project website at https://ottawa.ca/en/city-hall/public-engagement/public-engagement-project-search/greenbank-road-realignment-and-southwest-transitway-extension

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1 Introduction

1.1 Environmental Study Report

In 2013, the City of Ottawa initiated a planning and environmental assessment (EA) study to develop a Recommended Plan to extend the realigned Greenbank Road and the Southwest Transitway south from their previously planned terminus at Cambrian Road in Barrhaven South. The study was conducted as a Schedule 'C' undertaking following the Municipal Class Environmental Assessment (October 2000, as amended in 2007) (Class EA) process, which is approved under the Ontario *Environmental Assessment Act* (OEAA). The project sought to complete the design of the realigned Greenbank Road and Southwest Transitway Extension between Marketplace Avenue and Chapman Mills Drive in the north and Barnsdale Road in the south, including a new 610 mm diameter transmission watermain along the realigned Greenbank Road from Market Place to the south side of the Jock River.

The project's Recommended Plan was originally approved by Ottawa City Council on November 14, 2013. An Environmental Study Report (ESR) (MMM Group 2014) was prepared to document the planning and decision-making process followed and was issued for a 30-day review period. The Recommended Plan as documented in the 2014 ESR generally includes the following components:

- Extending realigned Greenbank Road as a four-lane divided arterial from Cambrian Road to Barnsdale Road, approximately 800 metres west of the existing Greenbank Road.
- Extending the Southwest Transitway within the median of realigned Greenbank Road from Cambrian Road to a terminal station and 400-space Park and Ride lot within the urban expansion area of Barrhaven South, approximately 400 metres north of Barnsdale Road.

- Modifying the intersection north of Cambrian Road to accommodate bus turning movements at Cambrian Road.
- Constructing a new intersection at Barnsdale Road between realigned Greenbank Road and existing Greenbank Road to accommodate cycling facilities and conform to City arterial road design guidelines.
- Improving the existing Greenbank / Barnsdale intersection including full signalization.
- Implementing geometric modifications to the Greenbank / Prince of Wales intersection to address existing operational issues.
- Replacing the Prince of Wales and Bankfield intersection with a two-lane, four-legged roundabout.
- Constructing a new connection between First Line Road and a new two-lane, three-legged roundabout on Prince of Wales Drive south of Bankfield Road.

As the original EA was completed more than 10 years ago and construction has not begun, this Addendum Report has been prepared to address the lapse of time in accordance with the 2024 MCEA process. In addition, this Addendum also documents design changes to the roadway that have been proposed during Preliminary and Detail Design phases of the project. This Addendum will review existing conditions, anticipated environmental impacts and mitigation measures before the project can proceed.

1.2 Preliminary and Detail Design

The City retained Stantec to complete the Preliminary and Detail Design for “Phase 1” works from Riverboat to Cambrian. A key map showing the study area is provided in Figure 1. These works include:

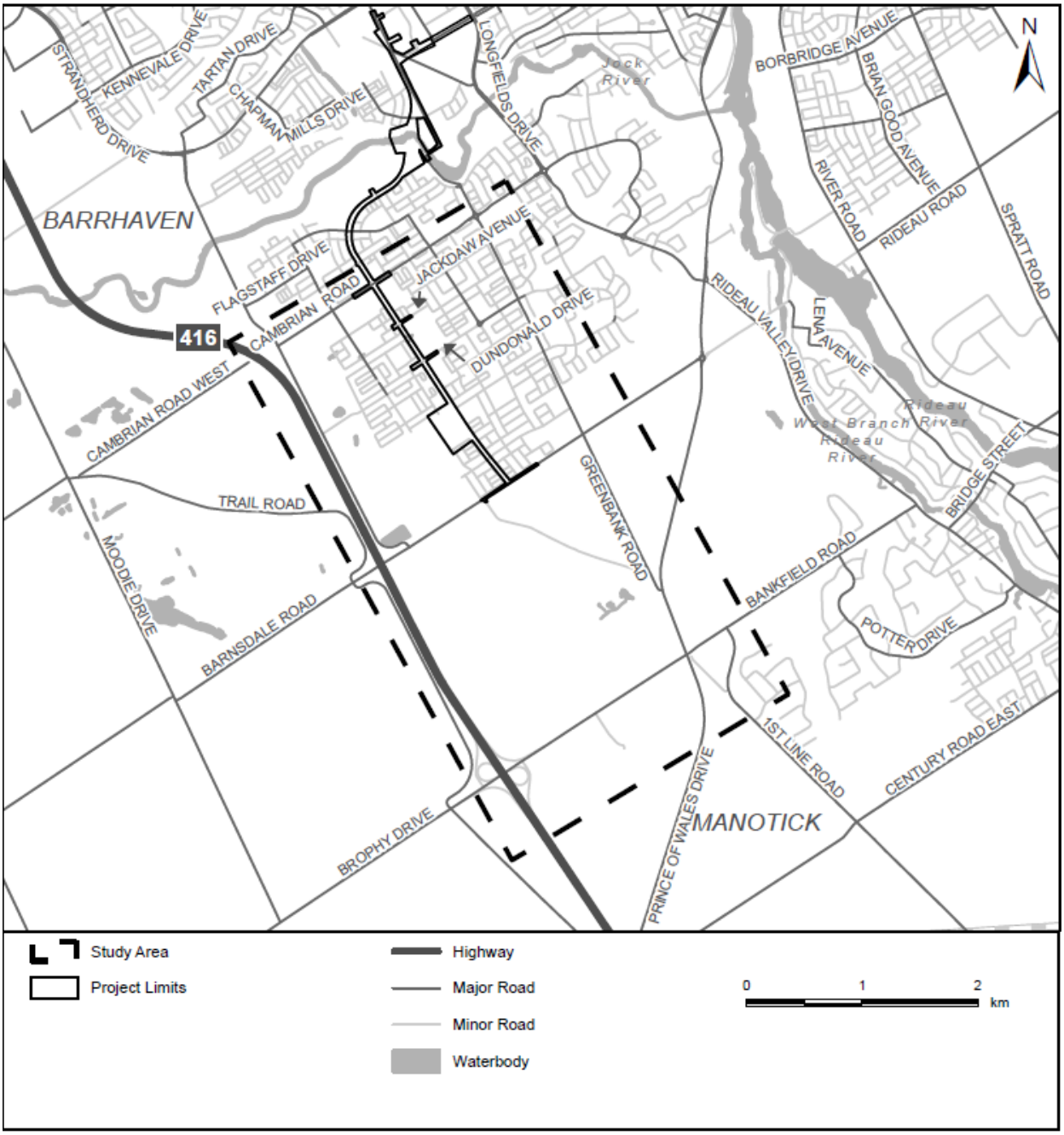
- Construction of a new 4-lane arterial roadway with vegetated median (interim) and facilities for pedestrians and cyclists along the realigned Greenbank Road corridor.
- Phase 1 will not include transitway works beyond the proposed intersections, transit works will be included in our later Phase.
- Connecting municipal servicing including storm sewers underneath the Greenbank Road alignment, and watermain and utility works per the 2014 ESR to the existing development surrounding the site.
- Constructing protected intersections, including general traffic lanes / curbs, cycling and pedestrian facilities, outer boulevard bus stops with minor deviations from 2014 ESR.
- The Phase 1 works are planned for construction between 2026 and 2027.

Since the 2014 ESR was completed, further review of adjacent development plans and consultation with landowners has been carried out. To better integrate with the grading plans of the abutting developments, a change to the vertical profile of realigned Greenbank Road has been recommended between Cambrian Road and Dundonald Drive. This change to the design results in an approximately 0.5 m raise of the grade of the roadway compared to the original Recommended Plan.

As part of the Preliminary and Detail Design phase, additional environmental studies were completed to update information regarding site conditions, the assessment of impacts, and recommended mitigation measures. These additional studies have been referenced in preparation of this ESR Addendum Report, where applicable, and include:

- Stage 1 Archaeological Assessment: Greenbank Road Realignment and Southwest Transitway Extension
- Stage 2 Archaeological Assessment: Greenbank Road Realignment and Southwest Transitway Extension
- Greenbank Road Realignment and Southwest Transitway Extension – Marketplace Avenue to Barnsdale Road – Natural Environment Habitat Inventory and Impact Assessment Report
- Geotechnical Investigation – Greenbank Road Re-Alignment and South-West Transitway Extension Segment 1: Marketplace Avenue to Cambrian Road
- Geotechnical Investigation – Greenbank Road Re-Alignment and South-West Transitway Extension Segment 2: Jock River Bridge and Watermain Crossing
- Geotechnical Investigation – Greenbank Road Re-Alignment and South-West Transitway Extension Segment 3: Cambrian Road to Barnsdale Road
- Hydrogeological Assessment Greenbank Road Realignment and Southwest Transitway Extension, Marketplace Avenue to Cambrian Road, Ottawa, ON
- Hydrogeological Assessment Greenbank Road Realignment and Southwest Transitway Extension, Cambrian Road to Barnsdale Road, Ottawa, ON
- Modified Phase I Environmental Site Assessment Greenbank Road Realignment and Southwest Transitway Extension, Marketplace Avenue to Barnsdale Road, Ottawa, ON

Figure 1 Study Area



1.3 Addendum Process

The 2024 MCEA process requires that if the period of time from the Notice of Completion exceeds 10 years, and construction has not commenced, an exercise will be undertaken to confirm mitigation measures are still valid given the current planning context (Section A.4.3, MCEA 2024). The review shall be recorded in an Addendum to the report and placed on the public record.

The Addendum process is also used to review and address design changes that may occur following completion of an ESR. A proposed significant design change requires review and documentation of the following:

- Identification the circumstances necessitating the change
- Determination of potential environmental implications of the proposed change, along with any measures for mitigating potential adverse environmental effects
- Documentation of the proposed changes, rationale, implications, and mitigation measures in an Addendum to the ESR.
- Filing of the Addendum report for a minimum period of 30-calander days, with a Notice of Addendum issued to potentially affected members of the public and review agencies, as well as those who confirmed their desire to be notified of the filing of the Addendum.

1.4 The Public Record

This Addendum Report is following the approved environmental planning process for Schedule C projects under the MCEA (October 2000, as amended in 2007, 2011, 2015, 2023 and 2024).

This ESR Addendum is available for public, government agencies and Indigenous Community review in accordance with the requirements of the MCEA. Subject to comments received following the Notice of Addendum, the City intends to proceed with the construction of this project in 2026 and 2027. A copy of this document is available for review on the project website at https://ottawa.ca/en/city-hall/public-engagement/public-engagement-project-search/greenbank-road-realignment-and-southwest-transitway-estension

1.5 Comments

This ESR Addendum will be filed for a 30-day comment period; interested persons may provided written comments to the study team by August 21, 2025. All comments and concerns should be sent directly to the following contacts:

Andrew Krisciunas, M.E.Sc., P.Eng.
Senior Engineer, Infrastructure Projects
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City of Ottawa
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Email: Andrew.Krisciunas@ottawa.ca

Gordon Chamberlain, P.Eng.
Project Manager
Stantec Consulting Ltd.
Phone: (613) 739-2910
Email: Gordon.Chamberlain@stantec.com

In addition, a request may be made to the Ministry of the Environment, Conservation and Parks for an order imposing additional conditions or requiring a comprehensive environmental assessment may be made on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include your full name and contact information.

Requests should specify what kind of order is being requested (additional conditions or a comprehensive environmental assessment), explain how an order may prevent, mitigate or remedy potential adverse impacts, and can include any supporting information. The request should be sent in hardcopy or by email to:

Minister of the Environment, Conservation and Parks
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto, ON M7A 2J3
Email: minister.mecp@ontario.ca

Director, Environmental Assessment Branch
Ministry of Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto, ON M4V 1P5
Email: EABDirector@ontario.ca

Requests shall be sent to the City of Ottawa by mail or by email.

2 Identification of Changes to the Preferred Design

2.1 Vertical Alignment

Since completion of the 2014 ESR, the proposed design of the realigned Greenbank Road has been refined to better coordinate with the works of adjacent landowners, developers, and other stakeholders throughout the limits of the project.

Through meetings and correspondence with stakeholders, two private developments requested if the proposed vertical alignment of the roadway between Cambrian Road and Dundonald Drive could be raised to better accommodate the abutting developments. In response to this request, Stantec developed a revised design to raise the roadway profile to better align with development grading.

By incorporating the updated profile revision (representing a grade raise of up to 0.5 m above the profile from the 2014 ESR Recommended Plan), the design will meet the intent of the Master Servicing Studies prepared for development of the surrounding areas and better accommodate grading between the corridor and abutting developments.

2.2 Protected Intersections

Since the 2014 ESR, the City of Ottawa has updated its design guidelines to consider protected intersections that allow for separated cycling and pedestrian facilities to improve safety of vulnerable road users. Due to the high traffic volumes and operating speed of the realigned Greenbank Road, separated raised cycle tracks are preferred. A comparison of the 2014 Recommended Plan for the intersection of Greenbank Road with the updated protected intersection design is provided in Figure 2 and Figure 3, respectively.

Updated designs for the intersections consider implementation of protected intersections, where notably, in the updated version, there is the addition of pedestrian and cycling facilities onto Cambrian Road. Similar protected intersection design considerations have been applied to all intersections within the study limits (Cambrian, Jackdaw, Dundonald, Kilbirnie, Park and Ride, Cappamore, Barnsdale). Implications of this design change include improved safety for vulnerable users, reduced crossing distances, and introduction of additional refuge, for example.

Figure 2 Intersection of Greenbank Road and Cambrian Road: 2014 ESR Plan (MMM Group 2014)

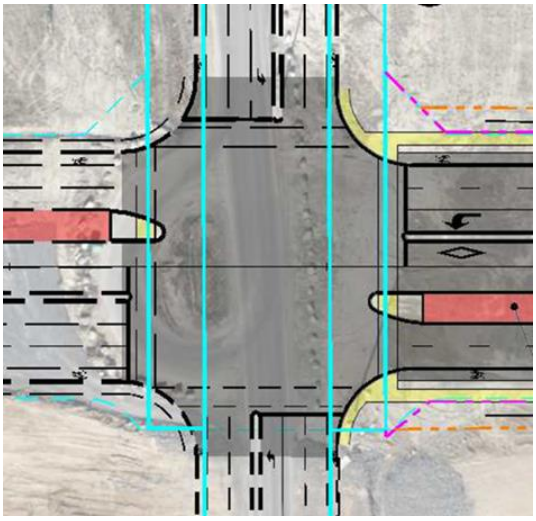
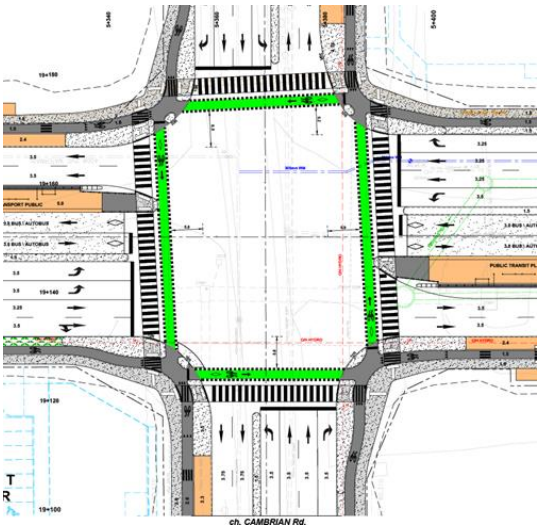


Figure 3 Intersection of Greenbank Road and Cambrian Road: Updated Plan



3 Changes in Environmental Setting (2014-2025)

3.1 Planning and Land Use

3.1.1 Planning Policies

In 2006, the City of Ottawa approved a Recommended Plan for Realigned Greenbank Road, which incorporated the Southwest Transitway as a median bus rapid transit facility terminating at Cambrian Road. This plan had been defined through the Greenbank Road from Malvern Drive to Cambrian Road EA and the Southwest Transitway Extension Class EA and was subsequently incorporated in the Barrhaven South Community Design Plan (CDP) (City of Ottawa 2006). The Barrhaven South Transportation Master Plan, a supporting document to the CDP, identified the realigned Greenbank Road and Southwest Transitway corridor as a key component of the transportation network in the community. This plan also recommended converting the existing Greenbank Road bridge over the Jock River into a pedestrian/cycling facility only. Although the 2006 CDP identified a preferred alignment to extend Greenbank Road south of Cambrian Road to the limit of the former Urban Boundary, it did not include a functional design for the facility.

One June 12, 2012, a new Urban Expansion Boundary area was added to the City's Official Plan which allowed for expansion of the Urban Boundary south to Barnsdale Road. The urban expansion and rapid growth experienced in Barrhaven South have resulted in the rapid advancement of development proposals for the urban lands between Cambrian and Barnsdale Roads.

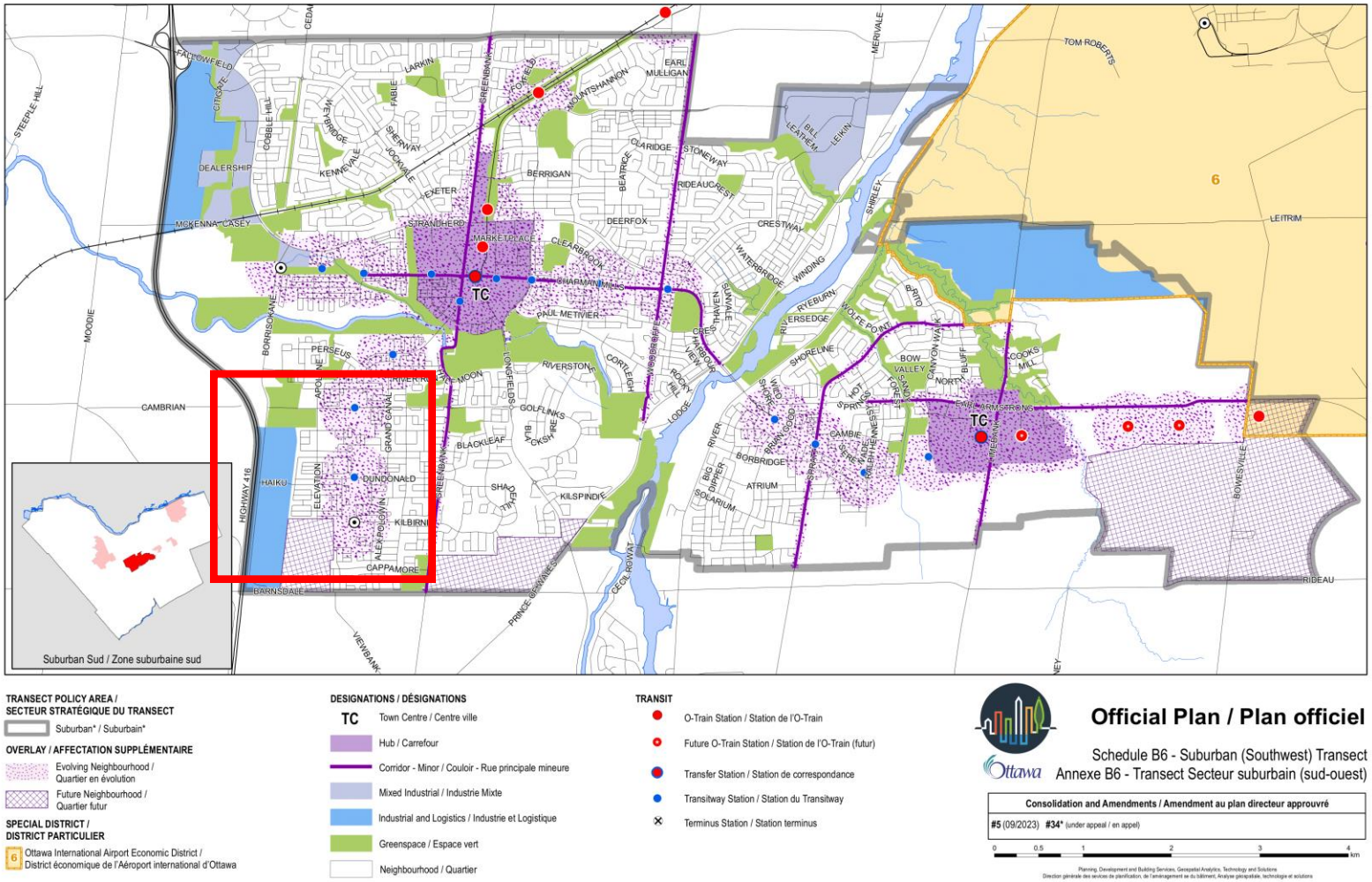
3.1.2 City of Ottawa Official Plan (2021)

The City of Ottawa updated its Official Plan in 2021 (City of Ottawa 2021), identifying five strategic directions in Section 3: Growth Management Framework:

- Designate sufficient land for growth
- Support intensification
- Design new neighbourhoods to be 15-minute neighbourhoods
- Focus rural growth in villages
- Meet employment needs

The Study Area is located within the Suburban (Southwest) Transect in the 2021 Official Plan, as shown in Figure 4. The lands are designated as evolving and future neighbourhoods. Future neighbourhoods are areas added to the urban boundary and identified for future growth to accommodate new housing, industry, businesses, parks and cultural assets (City of Ottawa n.d.).

Figure 4 Schedule B6 – Suburban (Southwest) Transect (Official Plan, 2021, approximate study area shown in red



3.1.3 Transportation Master Plan

The Transportation Master Plan (TMP) sets out the City's approach and policies to guide how people, vehicles and goods will move through the City of Ottawa for the next 25 years (City of Ottawa 2023). The City is in the process of updating its TMP. The TMP – Part 1 was approved by City Council on April 26, 2023. Part 1 includes the TMP Policies, Active Transportation Projects and Networks, and Transit and Road Project Prioritization Frameworks for TMP Part 2. The following key themes have been identified in the TMP Part 1:

- Meeting the mobility needs of our growing city
  - Coordinate land use and transportation planning
  - Advance regional competitiveness
- Address climate change
  - Reduce greenhouse gas emissions from transportation
  - Adapt to a changing climate
- Create a healthy and equitable transportation system
  - Improve access for people who experience transportation-related barriers
  - Continue to invest in safe and healthy "complete streets"
  - Make it easier to walk, bike, or take transit
- Respond to emerging travel technologies and trends
  - Use data to manage change
  - Leverage new mobility technologies and services

TMP Part 2 is currently underway and includes the TMP Capital Infrastructure Plan, which will identify transit and road projects required to accommodate future travel demand.

3.2 Natural Environment

The 2014 ESR identified that the environment within the study area is primarily agricultural, consisting of cropland, pasture and hedgerows. Much of the land is flat, poorly drained, and has artificial drains and pockets of marsh at various locations. Urban land use was occurring in the Study Area, resulting in removal of hedgerows from many agricultural fields. This process has continued since the 2014 ESR was prepared and the environment surrounding the study area has been subject to disturbance as a result of adjacent private development.

As part of the current Detail Design phase of the project, a review of updated background information, existing conditions, and assessment of impacts was completed by Stantec and documented in a Natural Environment Habitat Inventory and Impact Assessment Report (2022). Background data collection was conducted to identify natural heritage features within the study area, including designated natural areas (e.g., provincially significant wetlands (PSW)) and records of species at risk (SAR) and/or species of conservation concern (SOCC) species. Field investigations were completed to identify significant species that may be present in the study area. Stantec's field program was completed in conjunction with both the wildlife active periods and vegetation growing seasons of 2021, which is typically defined as the period between April and October in any given year. The sections below provide a summary of key findings.

Stantec's study area for the natural heritage investigation was comprised of four sections: 1a, 1b, 1c, and 1d. Sections 1c and 1d overlap with the study area of this ESR Addendum Report (Figure 5); findings related to Sections 1a and 1b are not discussed further in this report.

Figure 5 Section 1c and 1d from the Natural Heritage Study (Stantec 2022)

3.2.1 Ecological Land Classification & Vegetation

In the original ESR (2014), a variety of upland, wetland and aquatic vegetation communities were documented based on field surveys from June 25 to 27, 2013. Vegetation communities identified included: mixed forest, deciduous forest, cultural meadow and woodland, and wetland communities including swamp and marsh.

During the updated natural heritage report (Stantec 2022), initial characterization of existing vegetation communities was completed by interpreting available aerial imagery. Vegetation was identified, and communities were verified and assessed in the field. Community characterizations (ecosites and vegetation types) were based on the Ontario Ecological Land Classification (ELC) system (Lee et al. 2008).

Stantec completed vegetation community characterizations (ELC) on May 25, 2021, which were timed to maximize observations of species during their late spring/early summer flowering period. Dominant vegetation species within each community were recorded and used to determine ecosites and vegetation types. Provincial significance of vegetation communities and plant species was based on the rankings assigned by the NHIC.

The following ELC were found in the Study Area (Appendix A):

- FOM – Mixed Forest
- OAGM2 – Perennial Cover Crops
- CV – Constructed
- CGL-2 – Parkland
- CVR-1 – Low Density Residential
- SWM – Mixed Swamp
- MEM – Mixed Meadow
- FOD – Deciduous Forest
- CVI-1 – Transportation
- CVR-4 – Rural Property
- OAG – Open Agriculture

During Stantec's 2021 field survey, only a small patch of remnant forest (FOM) was observed within the NDMNRF identified boundary of the Significant Woodlands found in the Study Area.

3.2.2 Breeding Amphibian Survey

Breeding amphibian habitat was observed in the mixed swamp (SWM) vegetation community. Breeding amphibian activity was recorded at one survey station. No amphibian species protected the provincial ESA were observed in the Study Area for this Addendum report during Stantec's breeding amphibian surveys.

3.2.3 Blanding's Turtle Habitat Suitability Assessment and Visual Encounter Survey

Blanding's turtles have been observed in the Jock River upstream of the Study Area; as such there is potential for Blanding's turtle occurrence within the Study Area. No Blanding's turtles were observed during the visual encounter surveys. Furthermore, no observations and/or suspected Blanding's turtle sign (e.g., mortality, depredated nest) were observed.

The mixed swamp (SWM) vegetation community was not completely accessible and visible from the Site and could not be fully assessed during field surveys. This community included a small, man-made pond, however, the depth of the water is unknown but may be suitable for overwintering. As this feature is completely surrounded by constructed (CV) areas with no natural vegetation communities connecting it to other wetland habitats, Blanding's turtle are anticipated to be discouraged from accessing this feature.

3.2.4 Breeding Bird Survey

One species listed as special concern under SARO was observed during breeding bird surveys. A grasshopper sparrow was heard in the mixed meadow (MEM) community in the southern portion of the study area (Section 1d).

3.3 Cultural Heritage

The 2014 ESR identified one listed built heritage property (3872 Greenbank) within the study area for this Addendum, and one property with potential built heritage interest (3865 Barnsdale Road). No further cultural heritage studies have been carried out as part of this Addendum.

3.4 Archaeology

Stantec completed a Stage 1 Archaeological Assessment in July 2021 for the Greenbank Road Realignment and Southwest Transitway Extension from Marketplace Avenue to Barnsdale Road. The Stage 1 Archaeological Assessment, comprising background research and a property inspection to confirm areas of archaeological potential, resulted in the determination hat the majority of the study area (38.57 ha, 86.10%) has been subject to previous disturbance, was low and wet, or has been previously assessed and retains low to no archaeological potential. The remaining portions of the study area (6.23 ha, 13.90%) exhibit potential for the identification and recovery or archaeological resources. Stage 2 archaeological assessment was recommended for those portions of the study area where archaeological potential has been identified, primarily located near the Jock River, outside of the study area for this Addendum.

Stantec completed the Stage 2 Archaeological Assessment test pit surveys in 2022, during the functional design phase of the Project. The Stage 2 Archaeological Assessment was completed under Project Information Form number P415-0402-2022 from November 3 to 5, 2022. The study area subject to this Addendum was documented as “Previously Assessed, Low to No Archaeological Potential” and “Previously Disturbed, Low to No Archaeological Potential” with no further archaeological work required.

No archaeological resources were identified during the Stage 2 assessment of the project. In accordance with Section 2.2 and Section 7.8.4 of the Ministry of Citizenship and Multiculturalism's (MCM) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), no further archaeological assessment of the study area is required.

3.5 Geotechnical

A soil and bedrock inventory for the Study Area was completed as part of the 2014 ESR (MMM 2014). The results of this study indicated that subsurface conditions in the area consisted mainly of glacial till and sand deposits, dating from the last period of glaciation, 10,000 to 12,000 years ago. This till consists of sandy silt with variable amounts of clay, gravel, cobbles, and boulders.

In certain areas, till deposits are overlain by marine deposits of silt and silt clay (known as Leda clay) remaining from the period when the area was flooded by the Champlain Sea. In the Study Area, it has a soft to firm consistency. The clay and silt deposits are susceptible to frost. Organic subsurface deposits, such as peat, are also found in a small area near the Study Area.

Since the 2014 ESR additional geotechnical investigations have been completed to support Preliminary and Detail Design phases. In the report titled Geotechnical Investigation – Greenbank Road Re-Alignment and South-West Transitway Extension Segment 3: Cambrian Road to Barnsdale Road, the following findings were reported:

- The subsurface profile encountered along the proposed alignment typically consists of near-surface layers of fill, underlain by sand to silt, silty clay/clayey silt, and till strata. Bedrock was not encountered within the investigated depths (up to 6.7 m depth) at the borehole locations along the alignment. Groundwater was encountered at depths of 4.4 m and 6.1 m below ground surface or elevations of 102.2 m and 99.4 m at the installed monitoring wells.

- The proposed alignment and profile and the watermains and storm sewers will require excavation within clay, silt to sand, and/or till soils. The proposed excavations will also extend below the groundwater levels encountered during the geotechnical investigation.
- The clay typically had a soft to stiff consistency at the borehole locations while the non-cohesive soils were classified as very loose to very dense and till deposits were classified as loose to very dense at borehole locations.

3.6 Hydrogeological

As indicated in the ESR (MMM 2014), the groundwater depth in the Study Area is likely to range from 0.5 to 8.0 m below ground surface reflecting the local topography. Organic deposits in the area of Cambrian Road are likely associated with a high groundwater outflow along the toe of the glaciofluvial ridge.

The glaciofluvial deposits in the southern portion of the Study Area make up the northern limits of the Kars Esker formation (MMM 2014). A review of MOE water well records indicated presence of wells along Greenbank Road and Viewbank Road and the intersection of Bankfield Road and Price of Wales Drive (MMM 2014). These wells may be associated with residential septic systems.

A Phase 1 Environmental Site Assessment conducted as part of the original ESR, identified potential presence of contaminants in the soil and groundwater in the Study Area (MMM 2014).

Since the 2014 ESR, Stantec has completed a Hydrogeological Assessment for the Greenbank Road Realignment and Southwest Transitway Extension, Cambrian Road to Barnsdale Road, Ottawa, ON. Key findings from that report include:

- The Site is located within the Jock River watershed, within the jurisdiction of the Rideau Valley Conservation Authority (RVCA); the Jock River is located approximately 850 m north of Cambrian Road and flows easterly to the Jock River
- Based on available groundwater quality results, it is expected that treatment of groundwater would be required to reduce total suspended solids (TSS), total manganese, and total phosphorus to acceptable concentrations to discharge to the storm sewer and to reduced selected metals to discharge to the environment during construction dewatering.

4 Potential Impacts and Proposed Mitigation Measures

The original 2014 ESR presented a list of recommended mitigation measures and commitments for during construction and operations. Effects and mitigation measures from that report have been reviewed for relevance and new mitigation measures have been added, based on the studies described in Section 3.

4.1 Natural Environment

4.1.1 Impacts on Significant Natural Heritage Features

Potential impacts associated with the project include vegetation removal (i.e., tree removal, grubbing) and grading (i.e., removing topsoil and levelling slopes) within the construction footprint.

The following significant natural heritage features have been identified as occurring within the study area and are anticipated to be impacted directly:

- Habitats of species of conservation concern (grasshopper sparrow)

Construction impacts such as sedimentation and erosion and encroachment outside of the development footprint are expected to be short-term in nature. Direct (i.e., mortality, habitat loss) or indirect (i.e., noise, barriers to movement) impacts to wildlife may also occur and are expected to be long-term (i.e., the life of the road).

4.1.2 Impacts on Vegetation Cover

In order to facilitate the road realignment and extension, vegetation removal within the site is required.

None of the vegetation communities observed in the Study Area are considered significant. Additionally, none of the vegetation communities were observed as providing habitat for threatened or endangered vegetation species protected under the ESA.

4.1.3 Impacts on Significant Woodlands

During Stantec's 2021 field survey, only a small patch of remnant forest (FOM) was observed within the NDMNRF identified boundary of the Significant Woodlands found in the Study Area. As such, impacts to the Significant Woodlands as a whole already occurred as a result of the ongoing development adjacent to the Study Area. The remaining remnant forest (FOM) patch within the boundary of the Significant Woodland may experience the following impacts associated with the City's Project:

- Increased sediment and herbicide/pesticide load
- Increased biological contamination (e.g., invasive species)
- Construction impacts (e.g., dust, encroachment)
- Traffic impacts (e.g., dust)

The Study Area is directly adjacent to the remnant forest (FOM) patch within the Significant Woodland boundary and is not anticipated to be cleared as part of the City's Project. As such, no vegetation removal or grading within the Significant Woodland is expected in the Study Area. The remnant forest (FOM) patch within the Significant Woodland boundary found in the Study Area is approximately 3.90 ha and is surrounded by constructed lands. The adjacent forest near the Jock River is to be preserved as parkland.

4.1.3.1 Long-Term Development Impacts

As a majority of the Significant Woodlands within the Study Area have already removed, long-term impacts on this feature are not anticipated as a result of the City's Project. The City's Project is not anticipated to impact the Significant Woodland as no vegetation

clearing or grading is required within the remnant FOM community within the boundary of the Significant Woodland.

4.1.4 Mitigation Measures

General Construction Mitigation

The potential indirect impacts associated with the project are primarily from construction related activities. Most of the potential impacts are common to various types of construction and can be controlled using standard mitigation measures for erosion and sediment control. The primary principles associated with sedimentation and erosion protection measures are to:

- Minimize the duration of soil exposure
- Retain existing vegetation, where feasible
- Encourage re-vegetation
- Divert runoff away from exposed soils
- Keep runoff velocities low
- Trap sediment as close to the source as possible

To address these principles, mitigation measures recommended for implementation during construction are described below:

- Access and temporary workspace areas should be minimized to the extent possible to limit destabilization of soils near the work area.
- Dust should be controlled by using water instead of chemical suppressants in dust-sensitive areas.
- No equipment should be permitted to enter natural areas beyond the barrier fencing.

- All exposed soil areas should be stabilized (using native seed mixes, sourced locally if possible) and re-vegetated, through the placement of seed and mulching or seed and an erosion control blanket, promptly upon completion of construction activities.
- In addition to any specified requirements, additional silt fence and/or silt logs should be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency.
- Sediment and erosion controls should be monitored regularly and properly maintained as required. Controls are to be removed only after the soils of the construction area have been stabilized and adequately protected or until cover is re-established.
- The limits of construction adjacent to natural features to be retained will be fenced prior to construction and monitored during construction (along with sediment and erosion control measures) to make sure that the limits are maintained with respect to vehicular traffic and soil or equipment stockpiling.
- The Contractor should be required to restore disturbance to any natural features affected by construction to pre-construction conditions.

Avoidance of Wildlife

- A visual search of the work area should be conducted by construction contractors before work commences each day, particularly for the period when most wildlife is active (generally April 1 to October 31). Visual inspections will locate and avoid snakes, turtles and other ground dwelling wildlife such as small mammals. Visual searches will include inspection of machinery and equipment left in the work area overnight prior to starting equipment.
- If wildlife is encountered, work at that location should stop, and the animal(s) should be permitted reasonable time to leave the work area on their own.

- Any observations of species at risk or species of conservation concern should be reported to MECP within 48 hours. Species at risk should not be handled, harassed, or moved in any way, unless they are in immediate danger.

Migratory Birds

The MBCA provides legal protection of migratory birds and their nests in Canada. The loss of migratory bird nests, eggs and or nestlings due to tree cutting or other vegetation clearing can be avoided by limiting clearing of vegetation to outside of the general nesting period for forest nesting migratory birds in this region (C3) as identified by Environment and Climate Change Canada (ECCC) (i.e., between April 8 and August 31) (ECCC 2018). If work must be performed within this window, a survey for active nests or breeding should be conducted by a qualified biologist before work commences and additional mitigation measures (e.g., implementation of avoidance distances during construction) implemented, if required. It is understood that all of the recommendations presented herein are addressed by standard specifications in the City of Ottawa Standard Tender Documents.

4.2 Archaeological Resources

The study area has been cleared for archaeological potential, as documented in the Stage 2 archaeological assessment. Should any new areas (not previously assessed) to be impacted by ground disturbing activities be identified, further archaeological assessment may be required.

Should previously undocumented archaeological resources be discovered during construction, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act.* The proponent or person discovering archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (Government of Ontario 2002) requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Government and Consumer Services.

4.3 Traffic Management / Construction Staging

To construct this section of the realignment, the ESR indicated there may be a need for temporary lane closures and that a traffic management plan would be developed to minimize disruptions to the public. This approach has not changed, and it is anticipated that local access will be maintained throughout construction for motorized traffic, pedestrians and cyclists.

4.4 Erosion and Sediment Control

During construction, erosion and sediment control (ESC) measures are required to minimize sediment laden runoff. The following measures should be implemented, in addition to those noted in Section 4.1.4:

- ESC measures (e.g., silt fences, straw bales) will be implemented, as required, prior to, and maintained during the construction phases, to prevent erosion and sedimentation.
- Daily inspections should be completed of discharge locations and energy dissipation and ESC measures and change/replace as needed.
- The ESC measures may need to be upgraded and/or amended as site conditions change to minimize sediment laden runoff from leaving the work areas.
- Additional ESC supplies area to be kept on site and be used as necessary.
- All materials requiring stockpiling (fill, topsoil, etc.) are to be stabilized and kept a safe distance from any sensitive natural features

4.5 Spill Control and Prevention

During the completion of construction work, the potential for wastes and spills should be addressed to ensure that there is minimal impact to the natural environment from the project. The following mitigation measures are to be followed:

- Activities, including equipment maintenance, will be controlled to prevent the entry of petroleum products, debris, rubble, concrete or other deleterious substances into the surface water.
- Refueling and maintenance of vehicles will occur greater than 100 m from surface water features
- The contractor should ensure that all waste materials from construction activities shall be safely disposed of through an appropriate waste management facility and in compliance with the MECP regulations
- In the even of a spill of fuel or other hazardous material during construction, remedial actions must be undertaken immediately. The Contractor should have spill containment kits at the Site.
- Spills with the potential to create an impact to the environment should be reported to the MECP as required by the provincial spills' legislation.

4.6 Management of Excess Soils

The On-Site and Excess Soil Management Regulation (Ontario Regulation (O.Reg.) 406/19) came into effect in 2019, after the completion of the 2014 ESR. The regulation provides rules and requirements for the reuse and management of excess soil generated by construction projects. An Assessment of Past Uses (APU) report, Sampling and Analysis Plan (SAP) and Soil Characterization Report (SCR) are being prepared as part of the Detail Design phase to plan for the management of excess soils in accordance with O.Reg. 406/19.

4.7 Summary of Mitigation Measures

Mitigation measures from the 2014 ESR and new mitigation measures identified through the studies carried out during Preliminary and Detail Design phases are summarized in Table 1. Discussion of fisheries and aquatic habitat has been omitted from the table as there are no watercourses located within the study area for this Addendum.

Table 1 Summary of Potential Impacts and Mitigation Measures (modified from 2014 ESR)

Socio-Economic Environment

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Land use and property requirements	The right-of-way between Cambrian and Barnsdale roads is inconsistent with draft Plans of Subdivision previously submitted to the City.	• The City should work with the relevant landowners to revise the draft plans prior to approval.	Landowner consultation has been carried out regarding the proposed design, including grade raise.
Land use and property requirements	The Recommended Plan requires approximately 11.1 ha of property outside of existing right-of-way.	• The City should work with landowners to obtain the required land in accordance with the Planning Act, Official Plan and applicable City policies.	Additional property impacts resulting from the grade raise of realigned Greenbank Road have been discussed with and agreed to by adjacent landowners.
Air Quality	Future concentrations of airborne pollutants within the study area are expected to fall below MOE's Ambient Air Quality Criteria limits.	• No mitigation required.	No change.
Noise	Future noise levels are not expected to exceed the mitigation thresholds identified in the City's Environmental Noise Control Guidelines. An exception is at 3690 Bankfield Road, where the noise level is projected to rise above 60 dBA.	• Future noise levels are not expected to exceed the mitigation thresholds identified in the City's Environmental Noise Control Guidelines. An exception is at 3690 Bankfield Road, where the noise level is projected to rise above 60 dBA.	No change.
Ground Vibration	Future ground vibration levels within the study area are expected to remain below levels at which they may cause annoyance or structural impacts.	• No mitigation required.	No change.
Traffic	Construction activities may result in temporary lane closures at crossing roadways.	• A traffic management plan should be developed in detail design and implemented during construction to minimize disruptions to the public.	No change.

Natural Environment

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Terrestrial Ecosystems	The Recommended Plan will remove approximately 3.1 ha of vegetation and associated wildlife habitat.	• Vegetation damage and removal should be minimized to the greatest extent possible. • Exposed soils should be revegetated using a native seed mix appropriate for the site conditions. • In-water work and work within wetlands should be avoided to the greatest extent possible. • Additional protective measures (e.g., two rows of silt fencing and straw bales) should be applied where the corridor passes adjacent to the swamp in the north end of the study area.	• Access and temporary workspace areas should be minimized to the extent possible to limit destabilization of soils near the work area. • Dust should be controlled by using water instead of chemical suppressants in dust-sensitive areas. • No equipment should be permitted to enter natural areas beyond the barrier fencing. • All exposed soil areas should be stabilized (using native seed mixes, sourced locally if possible) and re vegetated, through the placement of seed and mulching or seed and an erosion control blanket, promptly upon completion of construction activities. • In addition to any specified requirements, additional silt fence and/or silt logs should be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency. • Sediment and erosion controls should be monitored regularly and properly maintained as required. Controls are to be removed only after the soils of the construction area have been stabilized and adequately protected or until cover is re-established. • The limits of construction adjacent to natural features to be retained will be fenced prior to construction and monitored during construction (along with sediment and erosion control measures) to make sure that the limits are maintained with respect to vehicular traffic and soil or equipment stockpiling. • The Contractor should be required to restore disturbance to any natural features affected by construction to pre-construction conditions. • ESC measures (e.g., silt fences, straw bales) will be implemented, as required, prior to, and maintained during the construction phases, to prevent erosion and sedimentation. • Complete daily inspections of discharge locations and energy dissipation and ESC measures and change/replace as needed. • The ESC measures may need to be upgraded and/or amended as site conditions change to minimize sediment laden runoff from leaving the work areas. • Additional ESC supplies area to be kept on site and be used as necessary. • All materials requiring stockpiling (fill, topsoil, etc.) are to be stabilized and kept a safe distance from any sensitive natural features.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Terrestrial Ecosystems	Additional, indirect vegetation losses are expected to result from exposure to the new habitat edge that remains after construction.	• Environmental inspections should be conducted during construction to ensure that protection measures are implemented, maintained and repaired and that remedial measures are initiated where warranted.	No change.
Terrestrial Ecosystems	The vegetation communities to be impacted are not considered rare and are planned for residential development. However, rare plants were observed in some of the communities. These include the regionally rare stinging nettle and black walnut; the regionally uncommon American spikenard, smooth goldenrod, alderleaf buckthorn, false nettle, rough bedstraw and glaucous honeysuckle, woodland strawberry, and rough bedstraw; and the provincially uncommon short-styled sanicle.	• As lands on either side of the proposed corridor are identified for development, the long-term viability of these plants in situ is considered to be low. Surveys should be conducted prior to construction to investigate opportunities to transplant regionally rare plants.	No change.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Terrestrial Ecosystems	Vegetation may be subjected to sedimentation, contaminant spills, or altered hydrological conditions.	• Silt fencing should be installed at the limit of the construction zone for the duration of construction to prevent the movement of sediment into vegetation communities and of wildlife into the construction zone. • Vehicle maintenance and refueling should be confined to designated areas a minimum of 30 m away from watercourses and wetlands, and all activities should be controlled to prevent entry of petroleum products or other deleterious substances, such as debris, waste, rubble, or concrete material, into the natural environment. • The hydrologic regime of wetland communities in the study area should be maintained using culverts and a granular road base to allow movement of water beneath the road.	• During the completion of construction work, the potential for wastes and spills should be addressed to ensure that there is minimal impact to the natural environment from the project. The following mitigation measures are to be followed: • Activities, including equipment maintenance, will be controlled to prevent the entry of petroleum products, debris, rubble, concrete or other deleterious substances into the surface water. • Refueling and maintenance of vehicles will occur greater than 100 m from surface water features • The contractor should ensure that all waste materials from construction activities shall be safely disposed of through an appropriate waste management facility and in compliance with the MECP regulations • In the even of a spill of fuel or other hazardous material during construction, remedial actions must be undertaken immediately. The Contractor should have spill containment kits at the Site. • Spills with the potential to create an impact to the environment should be reported to the MECP as required by the provincial spills legislation.
Terrestrial Ecosystems	Migratory birds or other wildlife may be disturbed during construction.	• Wildlife incidentally encountered during construction should not knowingly be harmed and will be allowed to move away from the construction area on its own. In the event that wildlife encountered during construction does not move from the construction zone, the Contract Administrator (CA) should be notified. • If active snake nests are encountered, the Contractor should take appropriate measures to avoid disturbance to the nest and the CA should contact a Kemptville District MNR biologist to discuss mitigation options.	• A visual search of the work area should be conducted by construction contractors before work commences each day, particularly for the period when most wildlife is active (generally April 1 to October 31). Visual inspections will locate and avoid snakes, turtles and other ground dwelling wildlife such as small mammals. Visual searches will include inspection of machinery and equipment left in the work area overnight prior to starting equipment. • If wildlife is encountered, work at that location should stop, and the animal(s) should be permitted reasonable time to leave the work area on their own. • Any observations of species at risk or species of conservation concern should be reported to MECP within 48 hours. Species at risk should not be handled, harassed, or moved in any way, unless they are in immediate danger.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Terrestrial Ecosystems		• Vegetation clearing or grubbing should occur outside the migratory bird breeding season (April 15 to August 15) to avoid destruction of nests and disturbance of their nesting. If vegetation clearing or grubbing does not occur outside the breeding season, this activity should be preceded by a bird nest survey conducted by a qualified biologist before work begins. If an active nest is identified within or adjacent to the construction site, the Contractor should take appropriate measures to avoid disturbance to the nest and the CA should contact a Kemptville District MNR biologist to discuss mitigation options.	• The Migratory Birds Convention Act (MBCA) provides legal protection of migratory birds and their nests in Canada. The loss of migratory bird nests, eggs and or nestlings due to tree cutting or other vegetation clearing can be avoided by limiting clearing of vegetation to outside of the general nesting period for forest nesting migratory birds in this region (C3) as identified by Environment and Climate Change Canada (ECCC) (i.e., between April 8 and August 31). If work must be performed within this window, a survey for active nests or breeding should be conducted by a qualified biologist before work commences and additional mitigation measures (e.g., implementation of avoidance distances during construction) implemented, if required. Note: MECP has taken over responsibility for the Species at Risk Act in Ontario since completion of the 2014 ESR.
Terrestrial Ecosystems	Habitat to be removed or fragmented by this project includes habitat suitable for the following Species at Risk (SAR): barn swallow, bobolink, eastern meadowlark, milksnake, butternut, ram's head lady's slipper, and short-eared owl. However, only bobolink was observed in areas to be affected.	• At each planning stage for this project, and immediately prior to construction, a review of Species at Risk information should be undertaken to ensure that any changes in species status or new occurrence data can be appropriately addressed. • Surveys should be conducted prior to construction to identify and assess any butternut in or adjacent to the project work area, and to confirm the absence of ram's-head lady's-slipper in the mixed swamp. • Activities associated with the project works may require registration with MNR for butternut and/or bobolink. • This may include compensation plantings of butternut and/or creation of alternate bobolink habitat.	No change for the Addendum study area. Note: MECP has taken over responsibility for the Species at Risk Act in Ontario since completion of the 2014 ESR.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Terrestrial Ecosystems		• All construction site staff should be trained to identify SAR that could occur in the area and will follow the protocol established for addressing and reporting SAR species that are found in the construction area. If a • SAR is encountered within or adjacent to the construction site, the Contractor will advise the CA, who will contact MNR. • If construction activities are such that continuing construction in that area would result in a contravention of the Endangered Species Act, all activities will stop and the CA will contact the Kemptville District MNR SAR biologist to discuss mitigation options. SAR or potential SAR will not be handled prior to consulting with the MNR SAR biologist, unless the handler has SAR training.	

Cultural Environment

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Built heritage	The recommended plan is anticipated to have no direct impacts on recognized cultural heritage resources and minimal impact on resources of potential concern; however, there is the potential for impacts to associated landscape features.	• During the detailed design and construction for areas adjacent to the recognized built heritage property at 4229 Viewbank Road and the properties of potential heritage concern at 3865 Barnsdale Road, 4263 Greenbank Road, 3668 Bankfield Road and 3724 Bankfield Road, every effort should be made to avoid impacts to the existing landscape features on these properties. If avoidance is not possible, landscape features should be reinstated following construction. • In the event of any future alterations to the recommended plan that would result in potential direct or indirect impacts to a previously recognized or potentially significant cultural heritage resource, further research should be undertaken to identify the specific heritage significance of the affected resources and whether mitigation measures should be adopted. The nature of the research should be appropriate to the cultural heritage resource and the level of previous identification/recognition.	No change.
Built heritage	The existing dwelling and associated outbuildings at 3724 Bankfield Road, which are of potential built heritage concern, may be demolished to facilitate the construction of the Prince of Wales / Bankfield roundabout.	• In the event that the dwelling and outbuildings at 3724 Bankfield Road are demolished to accommodate the roundabout, MTCS and City of Ottawa heritage planning staff should be consulted to determine whether a cultural heritage impact statement is required.	No change.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Archaeological resources	Implementing the Recommended Plan will disturb several areas of archaeological potential identified in the Stage 1 archaeological assessment carried out for this study. Temporary property needs, including access roads, staging areas, and other works associated with construction, may also result in disturbances to areas of archaeological potential.	• Portions of the Recommended Plan identified as exhibiting archaeological potential should be subject to Stage 2 archaeological assessment prior to the initiation of soil disturbances or other alterations associated with the proposed works. Should the detail design process identify additional areas to be impacted (i.e. soil disturbances or other alterations) by the proposed works, further archaeological assessment may be required. • The status of on-going archaeological assessments related to subdivision development within the present overall study area should be verified with the Ministry of Tourism, Culture and Sport prior to undertaking any Stage 2 assessment for the Greenbank Road and Southwest Transitway Extension project. • Any required future Stage 2 archaeological assessments should be undertaken by a licensed consultant archaeologist in accordance with the Standards and Guidelines for Consultant Archaeologists (MTCS 2011). • Fieldwork requirements would vary with property conditions: ploughable lands should be ploughed, allowed toweather, and assessed by means of a pedestrian survey at 5-metre intervals, whereas parcels in which ploughing is not viable should be assessed by means of a shovel test pit survey conducted at 5-metre intervals.	• Stage 1 and 2 Archaeological Assessments have been completed and no further assessment is required. Should any new areas (not previously assessed) to be impacted by ground disturbing activities be identified, further archaeological assessment may be required. • Should previously undocumented archaeological resources be discovered during construction, they may be a new archaeological site and therefore subject to Section 48(1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the Ontario Heritage Act. • The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (Government of Ontario 2002) requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Government and Consumer Services.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Archaeological resources		• If archaeological resources are encountered during project work, the Ministry of Tourism, Culture & Sport (MTCS) should be notified and activities impacting archaeological resources should immediately cease until a determination of their nature and significance is carried out. • As per the Cemeteries Act, R.S.O. 1990 c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force), if human remains are discovered during project work, the Ministry of Tourism, Culture and Sport, the Ottawa Police Service, and the Registrar of Cemeteries at the Ministry of Consumer Services should be notified immediately	

Technical Considerations

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Geotechnical and hydrogeological	A high-water table was identified and wet conditions anticipated in portions of the study area, particularly near Cambrian Road.	• A thicker pavement structure, permanent subdrains, and geotextile / geogrid at subgrade level may be required in areas of wet conditions.	No change.
Geotechnical and hydrogeological	Areas of elevated groundwater are possible within sandy deposits in the study area.	• Cut sections of roadway may be limited, and dewatering may be required in order to install buried services in areas of elevated groundwater within sandy deposits. • Dewatering will require a Permit to Take Water (PTTW) to ensure compliance with the Ontario Water Resources Act, and groundwater level monitoring before, during and after dewatering.	• Amendments to regulations for construction dewatering have entered into effect on July 1, 2025. An Environmental Activity and Sector Registration is required.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Geotechnical and hydrogeological	Potential for soil/groundwater contamination has been identified in portions of the study area.	• A Phase 2 Environmental Site Assessment (ESA) is recommended during detail design to identify any required mitigation measures for the four sites identified during the Phase 1 ESA as having medium to high environmental risk.	No change.
Geotechnical and hydrogeological	The Kars Esker and surrounding system of sandy deposits are identified as a significant local groundwater resource. A localized cluster of water wells (and likely septic systems) has been identified within this system, particularly in the Prince of Wales / Bankfield area. It is currently unknown whether these wells are developed at shallow depth in overburden. Construction activities (e.g., encroachment, temporary groundwater lowering) and day-to-day operations (e.g., road salting and runoff) have the potential to impact groundwater quality and quantity.	• The design of intersection improvements should consider the short- and long-term impacts on the quantity and quality of the groundwater in the esker formation, as well as on existing wells and septic systems. Mitigation measures could include pre-construction well surveys, groundwater quality monitoring during construction and replacement of wells developed at shallow depth in overburden with deeper wells, as necessary. • An appropriate stormwater management plan, which may include stormwater ponds and grassy swales for storage and treatment, should be confirmed in preliminary and detail design.	No change.
Geotechnical and hydrogeological	Silty clay present in portions of the study area is compressible and highly frost susceptible.	• A grade raise restriction of up to 1.5 m may apply in areas underlain by silty clay deposits. The placement of any fill material must be carefully planned and controlled to avoid excessive consolidation settlement of these deposits. Transitway station foundations in these areas may have reduced bearing capacity. In general, to avoid differential settlement and heaving of widened roadways, the fill material used below the widened portion should be frost compatible with the fill materials below the existing roadway. Geotechnical and hydrogeological considerations should be reviewed and confirmed during preliminary and detail design.	No change.

Factor (2014 ESR)	Impact (2014 ESR)	Mitigation (2014 ESR)	Updates to Mitigation (2025)
Excess soils management	The project will generate excess soils that need to be managed in accordance with O.Reg. 406/19.	• N/A, as O.Reg. 406/19 came into effect after the 2014 ESR.	• An Assessment of Past Uses (APU) report, Sampling and Analysis Plan (SAP) and Soil Characterization Report (SCR) are being prepared as part of the Detail Design phase to plan for the management of excess soils in accordance with O.Reg. 406/19.

5 Future Permits and Approvals

The list of potential permits and approvals required for implementation of the project has been updated since the 2014 ESR. The following municipal and provincial approvals may be required.

Municipal

- **City of Ottawa –** Noise By-law exemption, if construction work is required outside of the permissible time periods listed in the City's Noise Control By-law.
- **Utilities –** Approval for utility relocations as required.

Provincial

- **Ministry of the Environment** – Environmental Activity and Sector Registry for construction dewatering activities.
- **Rideau Valley Conservation Authority (RVCA) –** Approval under Section 28 of the Conservation Authorities Act for any placing of fill, construction in or on flood plains, wetlands or ponds within the RVCA's regulated areas.

6 Consultation

Two Public Information Sessions (virtual, 2021 and in-person, 2025) have occurred, as well as communication with adjacent landowners/developers during Detail Design of this project.

On July 8, 2021, a virtual Public Information Session was held with over 40 members of the public in attendance. A majority of comments provided were regarding the construction schedule, as well as the current condition and/or capacity of the existing transportation infrastructure within the project corridor, given the pressures of population growth and additional traffic contribution from adjacent development projects in the area.

An in-person Public Information Session was held on February 13, 2025, to provide an update on the Preliminary Design and project schedule. There was opportunity for public comment, and a FAQ memo was subsequently issued to address resident questions/concerns. Questions and comments were accepted through the Comment Sheets, online, and by email until February 27, 2025.

6.1 Notice of Addendum

The MCEA process requires a Notice of Addendum be issued to all potentially affected members of the public and review agencies, including all those who were contacted during the original Class EA planning process. A period of 30 calendar days will be provided for review of the ESR Addendum and comment by the public and stakeholders. The Notice will include information about how to request a higher level of study (i.e., an individual or comprehensive EA) or that conditions be imposed (e.g., requiring further studies) by MECP prior to proceeding to implementation of the project. This was previously referred to as a Part II Order request; however, under amendments to the Environmental Assessment Act passed in July 2020, these provisions now apply

only in instances where adverse impacts to constitutionally protected Aboriginal and / or treaty rights may occur.

A Notice of Addendum was published and distributed to the study contact list on July 11, 2025, via email or mail. Interested persons are encouraged to review the ESR Addendum available on the project website and to provide comments by August 21, 2025. In addition, a request may be made to the Ministry of the Environment, Conservation and Parks for an order requiring a higher level of study (i.e., requiring an individual / comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g. require further studies), only on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights.

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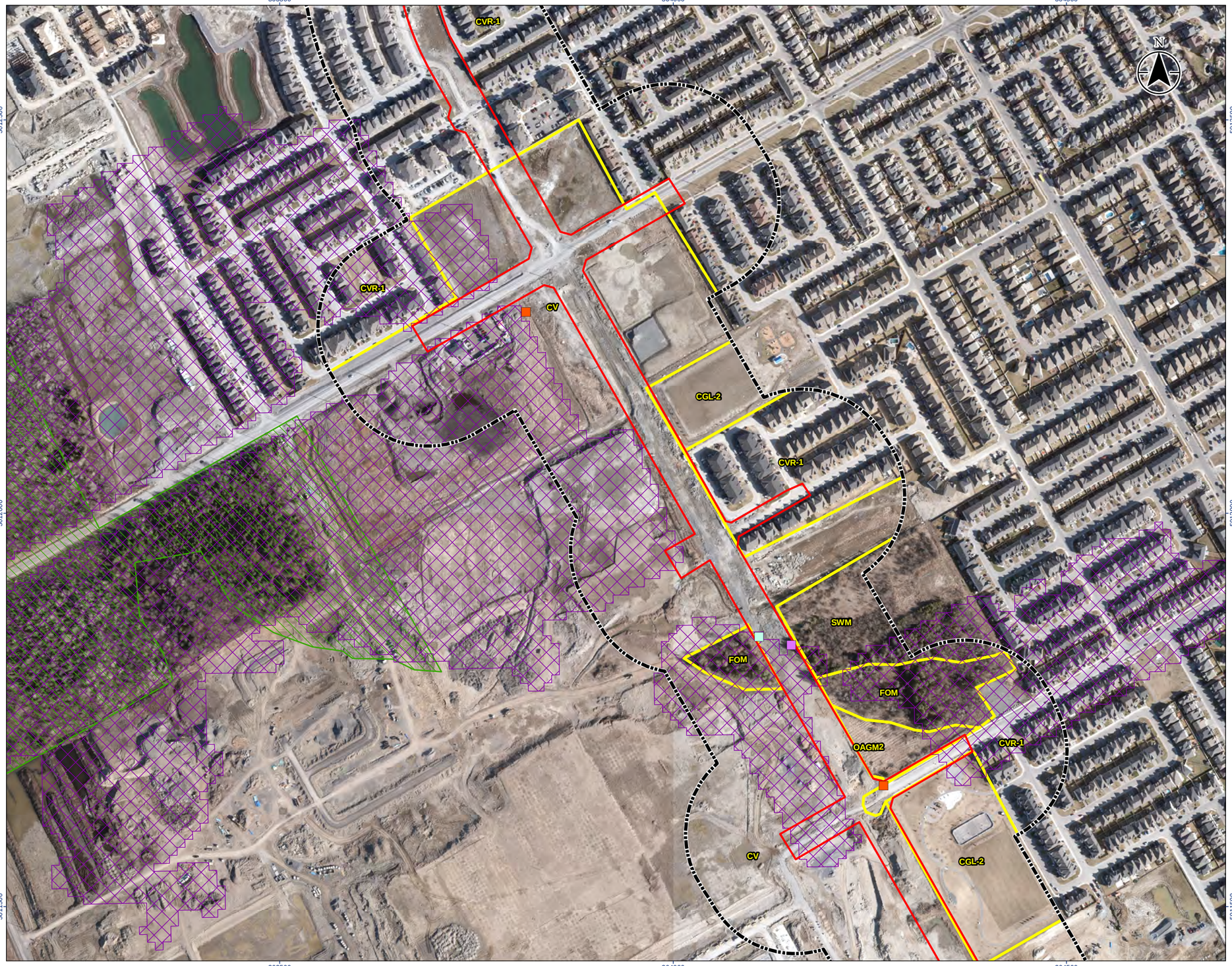
Stantec. 2021. Modified Phase I Environmental Site Assessment Greenbank Road Realignment and Southwest Transitway Extension, Marketplace Avenue to Barnsdale Road, Ottawa, ON

Appendices

Appendix A Ecological Land Classification Mapping



Stantec

Legend

- Project Limits
- Study Area
- Natural Heritage System

Ecological Land Communities

- FOM - Mixed forest
- OAGM2 - Perennial Cover Crops
- CV - Constructed
- CGL-2 - Parkland
- CVR-1 - Low Density Residential
- SWM - Mixed Swamp
- Ecological Land Classification Boundary
- MNRF Significant Woodlands

Survey Locations

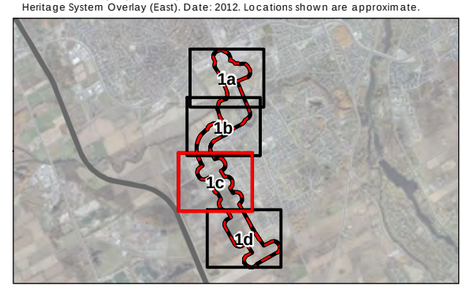
- Breeding Bird Survey Station
- Amphibian Survey Station
- Blanding's Turtle Survey Station

0 100 200 metres

1:5,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 MTM 9
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2019.
3. Orthoimagery © City of Ottawa, 2021. Imagery Date, 2021.
4. Natural Heritage System: City of Ottawa, Offical Plan - Schedule L1, Natural Heritage System Overlay (East). Date: 2012. Locations shown are approximate.



Project Location
Ottawa, ON

163601340 REVF
Prepared by CL on 2022-01-10

Client/Project
City of Ottawa
Greenbank Road/Southwest Transitway
Ottawa, ON

Figure No.
1c

Title
Greenbank Road Realignment Natural Heritage Features and Environmental Survey Results

364000 364500 365000

5011000

5010500

CV

CVR-1

MEM

FOD

CVR-4

CV

CVR-4

OAG

CVI-1

N

Stantec

Legend

Project Limits

Study Area

Ecological Land Communities

MEM - Mixed Meadow

FOD - Deciduous Forest

CV - Constructed

CGL-2 - Parkland

CVI-1 - Transportation

CVR-1 - Low Density Residential

CVR-4 - Rural Property

OAG - Open Agriculture

Ecological Land Classification Boundary

MNRF Significant Woodlands

Survey Locations

Breeding Bird Survey Station

Species of Conservation Concern

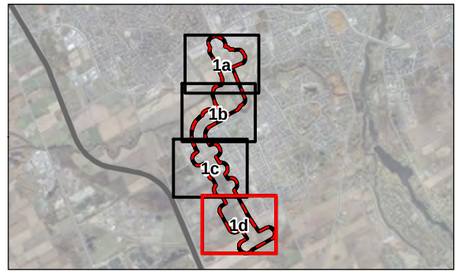
Grasshopper Sparrow

0 100 200 metres

1:5,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 MTM 9
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2019.
3. Orthoimagery © City of Ottawa, 2021. Imagery Date, 2021.
4. Natural Heritage System: City of Ottawa, Offical Plan - Schedule L1, Natural Heritage System Overlay (East). Date: 2012. Locations shown are approximate.



Project Location
Ottawa, ON

163601340 REVF
Prepared by CL on 2022-01-10

Client/Project
City of Ottawa
Greenbank Road/Southwest Transitway
Ottawa, ON

Figure No.
1d

Title
Greenbank Road Realignment Natural Heritage Features and Environmental Survey Results