

**Living Arts Drive Extension  
Municipal Class Environmental  
Assessment**

Project File

March 26, 2018

Prepared for:

City of Mississauga



Prepared by:

Stantec Consulting Ltd.




## Sign-off Sheet

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**LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**

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Introduction

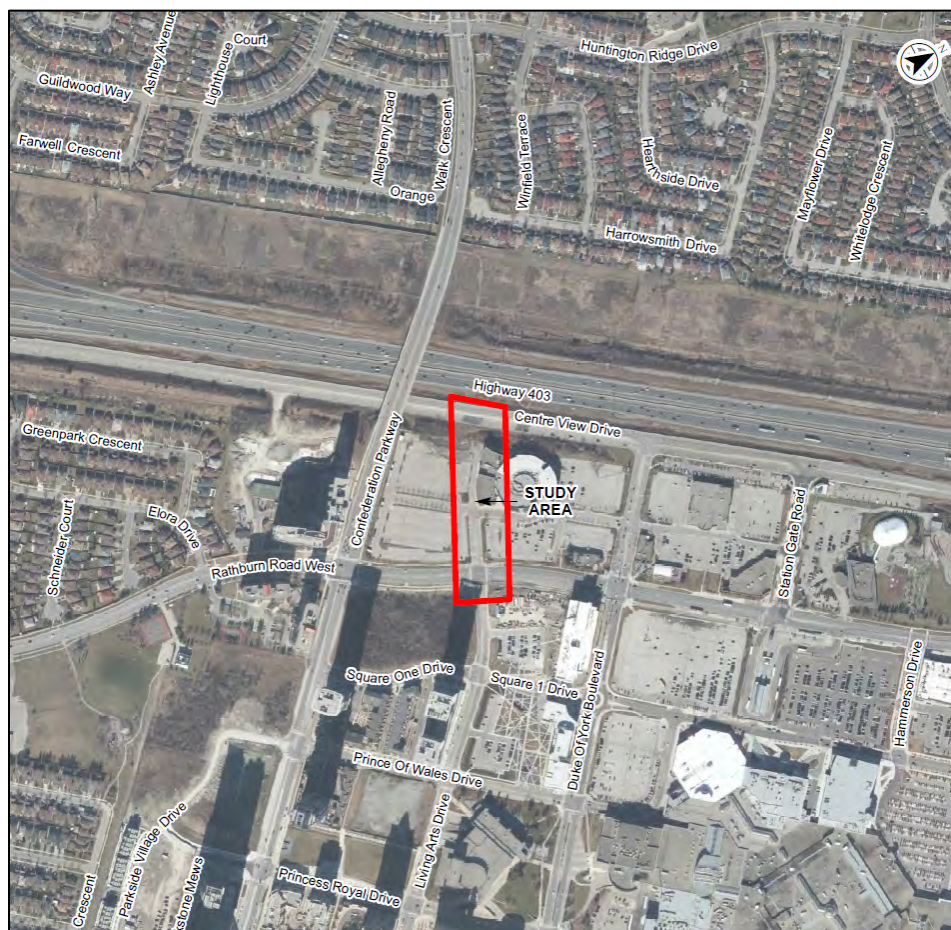
## 1.0 INTRODUCTION

The City of Mississauga (City) retained Stantec to carry out a Municipal Class Environmental Assessment (EA) study to evaluate the need to extend Living Arts Drive, from Rathburn Road West to Centre View Drive (please refer to Figure 1 below). The study was carried as a Schedule 'B' project in accordance with the Municipal Class EA document, dated October 2000 (as amended in 2015), and approved under the Ontario Environmental Assessment Act. This Project File report documents the planning process used to identify the problems/opportunities, define the solution, and is structured to fulfill the requirements of Phases 1 and 2 of the Municipal Class EA process.

### 1.1 STUDY AREA

The study area is generally situated between Rathburn Road West to the south, Centre View Drive to the north, a movie theatre and associated asphalt-paved parking area to the east, beyond which is Duke of York Boulevard, and asphalt-paved parking areas to the west, beyond which is Confederation Parkway (please refer to Figure 1).

Figure 1 Study Area Location Plan



## 1.2 MUNICIPAL CLASS EA PROCESS AND SELECTION OF SCHEDULE

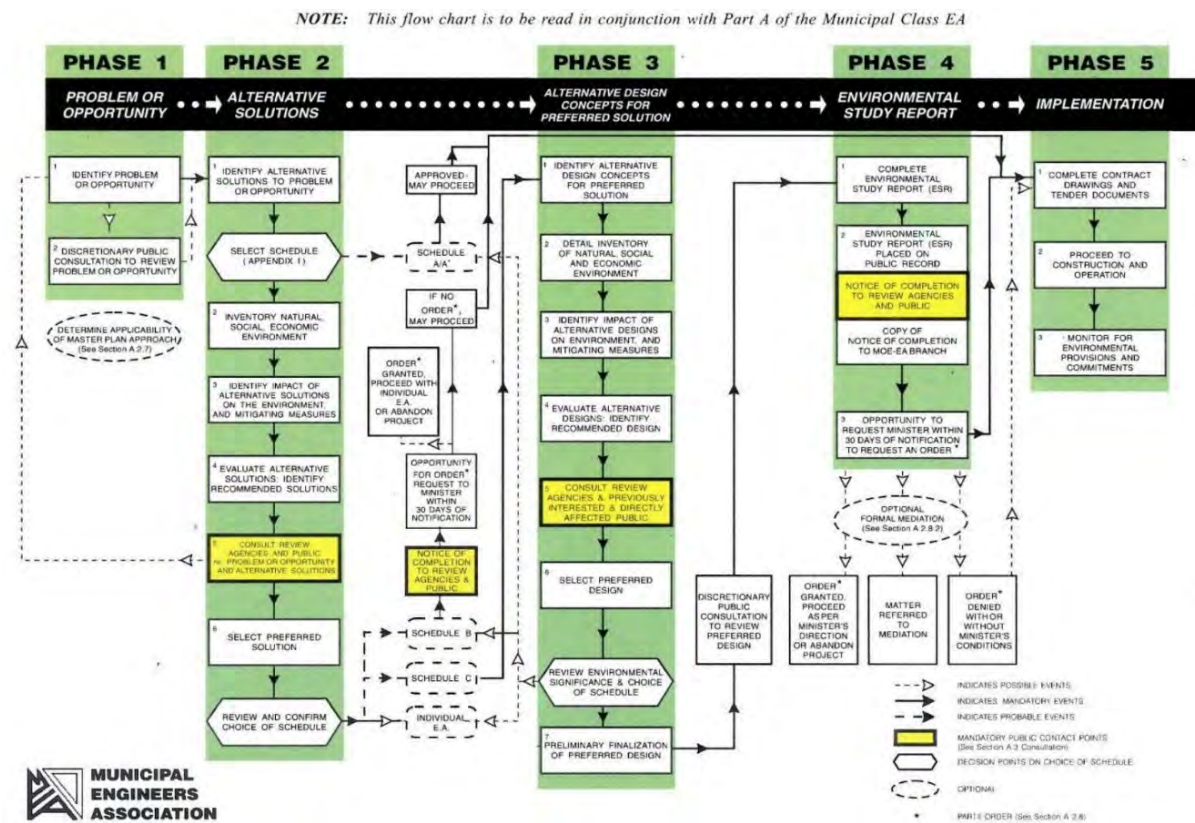
A Municipal Class EA is described as an approved planning process for an undertaking (project) that must be followed to meet the requirements of the EA. Since environmental impacts vary from project to project, Municipal Class EA projects are classified in terms of the following schedules:

- **Schedule A** – Normal or emergency operational and maintenance activities with minimal environmental effects, and so are pre-approved;
- **Schedule A+** – Also pre-approved, but requiring public notice prior to construction;
- **Schedule B** – Improvements and minor expansions to existing facilities with potential for some adverse environmental impacts, and so requires a screening process including consultation prior to construction; and,
- **Schedule C** – Construction of new facilities and major expansion of existing facilities.

The selection of the appropriate project Schedule is dependent on the anticipated level of environmental impact, and for some projects, the anticipated construction costs. The selection of **Schedule B** is recommended when the cost to construct a new road or other linear paved facility is expected to be less than \$2.4M, and generally include minor expansions to existing facilities. The proposed extension of Living Arts Drive falls into this category.

As illustrated in **Figure 5**, the Municipal Class EA document outlines a five (5) phase planning and design process. Schedule B projects are required to follow Phases 1 and 2 of the Municipal Class EA process.

**Figure 2 Study Municipal Class EA Process**



## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Introduction

The filing of the Project File for public review completes the planning stage for Schedule B projects. The Project File for this study will be available for a public review for a thirty (30) calendar day period commencing **March 26, 2018**. A Notice of Completion is published to announce the review period. Copies of the Project File will be available for review and comment until **April 25, 2018**, at the following locations during normal business hours, and online at the City of Mississauga website:

**The City of Mississauga**  
**Office of the City Clerk**  
300 City Centre Drive, 2<sup>nd</sup> Floor  
Mississauga, ON L5B 3C1  
Telephone: 905.615.4311  
Monday-Friday: 8:30 am to 4:30 pm  
Weekends: Closed

**Central Library**  
301 Burnhamthorpe Road West  
Mississauga, ON L5B 3Y3  
Telephone: 905.615.4745  
Monday-Thursday: 9:00 am to 9:00 pm  
Friday: 9:00 am to 6:00 pm  
Saturday: 9:00 am to 5:00 pm  
Sunday: 1:00 pm to 5:00 pm

If no outstanding concerns are brought forward during the review period, the City of Mississauga may proceed to detailed design and construction.

If members of the public, Indigenous communities, interest groups and/or government agencies feel that their concerns have not been addressed through the Municipal Class EA study process, a person or party may request the Minister of the Environment and Climate Change to make an order for the project to comply with Part II of the EA Act (referred to as a Part II Order), which addresses Individual Environmental Assessments. The Minister determines whether or not this is necessary, with the decision being final.

Anyone wishing to request a Part II Order must submit a written request within the thirty (30) calendar day review period, to the Minister of the Environment and Climate Change with a copy to the Director, Environmental Approvals Branch and the City of Mississauga Project Manager:

**Honorable Chris Ballard**  
**Minister of Environment and Climate Change**  
77 Wellesley Street West, 11<sup>th</sup> Floor  
Toronto, Ontario M7A 2T5  
E-mail: minister.moecc@ontario.ca

**Director, Environmental Approvals Branch**  
**Ministry of the Environment and Climate Change**  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario M4V 1P5

**Dana Glofcheskie, P. Eng.**  
**Project Manager, City of Mississauga**  
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Tel: 905-615-3200, ext. 8243  
Email: dana.glofcheskie@mississauga.ca



## 2.0 CONSULTATION

One of the objectives of the Municipal Class EA study process is to ensure that from the earliest stages of planning, consideration is given to the environment that might reasonably be expected to be affected by a project. A summary of the consultation activities carried out as part of this study is provided herein.

### 2.1 STUDY WEBSITE

A website for the study was established through the City of Mississauga's website at study initiation. Information related to the study was posted to this website during the study process and updated accordingly, including notifications (Study Commencement, Public Information Centre (PIC), and Completion), and copies of material presented at the PIC. The website address is: [www.mississauga.ca/livingartsea](http://www.mississauga.ca/livingartsea).

### 2.2 STUDY EMAIL ADDRESS

An opportunity for users to become part of the study mailing list and/or submit their comments was available through a study email address ([LivingArtsEA@stantec.com](mailto:LivingArtsEA@stantec.com)). The study email address was provided on the Notifications of PIC and Study Completion, and presented at as part of the PIC.

### 2.3 STUDY CONTACT LIST

A study contact list, comprising residents, businesses, utilities, Indigenous community representatives, and agencies that may have an interest in this project, was developed at the initiation of the study. This list was updated regularly based on feedback received throughout the study.

### 2.4 STUDY NOTIFICATIONS

Three (3) separate notifications were distributed via mail/email at key points in the study to those indicated on the study mailing list, and to those who had expressed an interest in the project. In addition, all residents, tenants and business owners located within approximately 300 m of the study area received all notifications. Each notification was also published in 2 separate issues of the Mississauga News and posted on the study website. A copy of all study notifications is provided in **Appendix A.1** of this Project File.

#### 2.4.1 Notice of Study Commencement

A notice signifying the initiation of the study was sent to those indicated on the study mailing list on June 15, 2017. The notice was also advertised in the Mississauga News on June 15 and 22, 2017, and posted on the City's website.

#### 2.4.2 Notice of PIC

A notice of PIC was sent to those included on the study mailing list on September 21, 2017. The notice was advertised in the Mississauga News on September 21, 2017 and September 28, 2017, and posted on the City's website.

Consultation

### 2.4.3 Notice of Study Completion

The Notice of Study Completion was issued to those included on the study mailing list on March 22, 2018. The notice was also advertised in the Mississauga News (March 22 and 29, 2018), and posted on the City’s website.

## 2.5 PUBLIC AND AGENCY CONSULTATION

The following provides a summary of the feedback received from the key agencies:

**Table 2-1 Public and Agency Consultation Record**

Entity	Comments	Action
Peel Region	<p>With the planned LRT, it will be important to enable prioritize [sic] active transportation to enable first and last mile connections for transit users. While existing infrastructure on Centre View is not supportive of active transportation (lack of appropriate infrastructure such as MUT/bike lane), the current EA has the potential to set a precedent for future studies/development of the area. Connectivity of pedestrian and cycling routes will be important in order for active transportation to be a feasible option for residents.</p> <p>Consider the feasibility of some additional forms of protective infrastructure/physical separation for cyclists – for example, on the indicated bike lanes, the use of bollards can increase cyclist comfort. Furthermore, within the roundabout, ensure there is clear indication about the routing of pedestrians and cyclist and their potential interaction with vehicles.</p> <p>Given the leisure/entertainment destinations in the immediate vicinity of the study area, it will likely serve as a destination for transit users at the beginning or end of their trip. Therefore, consider protecting cyclist and pedestrian movement within the plaza (crosswalks, signage, flashing beacons) to increase safety and comfort.</p>	<p>Noted.</p> <p>As requested, these suggestions will be further considered during detailed design.</p>

Copies of correspondence with the public and agencies is included in **Appendix A.2** of this Project File.

## 2.6 PUBLIC INFORMATION CENTRE

A PIC was held on October 5, 2017, from 5:30 pm to 7:30 pm in the Great Hall at the Mississauga Civic Centre, located at 300 City Centre Drive, Mississauga, Ontario. The PIC was held in a drop-in format to allow stakeholders and members of the public to view study information, including the project background, the Municipal Class EA process, Alternative Solutions considered and associated criteria, evaluation of alternatives, and the recommended solution. A preliminary design for the recommended solution was also presented as part of the PIC.

Members of the Project Team were available to discuss and/or respond to any questions or comments. Attendees were encouraged to complete a comment form and discuss the study with members of the Project Team. Following the PIC, the display material and a comment form were made available on the study website.

Six (6) attendees signed in to the PIC and no written comments were received at and/or following the PIC. However, based on conversations held with Project Team members at the time of the PIC, attendees were generally interested in the project and Municipal Class EA process, and no specific issues/concerns were raised.

## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Consultation

A copy of the materials presented at the PIC is provided in **Appendix A.3** of this Project File. A copy of the comment form available at the PIC is also included.

## 2.7 INDIGENOUS CONSULTATION

The study area is located within and/or in proximity to the Traditional Territory of Indigenous communities. As such, the following Indigenous communities and organizations were included on the study contact list:

- Six Nations of the Grand River
- Mississaugas of the New Credit First Nation
- Haudenosaunee Confederacy

The Indigenous communities listed above were circulated on all the study notifications, as indicated in the Indigenous Consultation Log provided in **Appendix A.4** of this Project File. A copy of all correspondence carried out with Indigenous communities is also included in Appendix A.4.

## 2.8 AGENCY AND STAKEHOLDER CONSULTATION

The proposed extension traverses an existing, privately-owned commercial/retail property currently occupied by Cineplex Cinemas Mississauga. Individual agency and stakeholder meetings were held during the initial stages of the study to introduce the study and discuss potential issues, concerns, property impacts and property acquisitions, as generally summarized below. A copy of all correspondence with stakeholders, as well as copies of the minutes from each stakeholder meeting is included in **Appendix A.5** of this Project File and briefly summarized in **Table 2-2** below.

**Table 2-2 Record of Stakeholder Consultation Activities**

Stakeholder	Communication	Date	Summary
Oxford	Meeting	July 17, 2017	Meeting to introduce the study and discuss the following details: <ul style="list-style-type: none"><li>• Project overview, including objectives and timelines</li><li>• Field work to be conducted as part of study and associated schedule and permission to enter requirements</li><li>• Preliminary proposed design, anticipated property impacts and property acquisition process</li></ul>
Ministry of Transportation	Meeting	July 20, 2017	Meeting to introduce the study and discuss the following details: <ul style="list-style-type: none"><li>• Project overview, including objectives and timelines</li><li>• Field work to be conducted as part of study</li><li>• Preliminary proposed design, anticipated property impacts and requirements for the MTO's property acquisition process</li></ul> The need to acquire a small portion of MTO property within the northwest limit of the extension was confirmed and the property acquisition process was initiated between the City and the MTO.

**LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**

Consultation

**Table 2-2 Record of Stakeholder Consultation Activities**

<b>Stakeholder</b>	<b>Communication</b>	<b>Date</b>	<b>Summary</b>
Alectra Utilities	Meeting	July 26, 2017	<p>Meeting to introduce the project and discuss the following details:</p> <ul style="list-style-type: none"> <li>• Project overview, including objectives and timelines</li> <li>• Preliminary proposed design, anticipated property impacts and requirements to accommodate the utilities future infrastructure (transformer substation) within the study area</li> </ul> <p>As a result of this meeting, the approximate size, location and needs of this utility were determined and will be further considered and accommodated during detailed design.</p>
Oxford	Email	August 4, 2017	<p>City issued email request to Oxford to review and provide comments regarding the preliminary proposed design concept. A copy of the preliminary proposed design concept for the extension of Living Arts Drive, as well as a preliminary property acquisition plan was provided as part of the email transmission.</p>
Oxford	Email	September 1, 2017	<p>Response from Oxford to City providing preliminary comments regarding the preliminary proposed design concept, in particular the inclusion of a roundabout at the new, mid-block intersection. In addition, consideration of future traffic growth, large vehicles were also suggested as part of the email.</p>
Oxford	Email	September 12, 2017	<p>Email response from City issued in response to Oxford's request to provide a design comparison between a standard and roundabout intersection as part of the September 1, 2017 email correspondence, a formal memorandum was prepared and issued by the City accordingly.</p>
Oxford, R.J. Burnside and BA Group	Meeting	September 28, 2017	<p>Meeting to discuss preliminary proposed design concept and associated issues and concerns in more detail. At this meeting, Oxford agreed with the need to extend Living Arts Drive; however, continued to express their concern with the preliminary proposed design concept, particularly with the potential roundabout design proposed as part of the new mid-block intersection of the Living Arts Drive extension, including: the proximity of the roundabout to the existing Living Arts Drive and Rathburn Road West intersection, the suitability of this type of intersection treatment within the downtown; the safety of pedestrians crossing at the roundabout; and, the impacts to future land uses on adjacent property owned by Oxford.</p>
Oxford	Email / Letter	October 26, 2017	<p>Formal letter response prepared from Oxford to City indicating their support for a new connection between Rathburn Road West and Centre View Drive, including a new mid-block intersection. The response further expressed the property owner's concern with the potential roundabout design for the new mid-block intersection.</p>

Existing Conditions

## 3.0 EXISTING CONDITIONS

Living Arts Drive currently consists of a 2-lane, north-south roadway, situated between Rathburn Road West and Burnhamthorpe Road. This section of road traverses the City's Downtown Core Character Area, an area comprising of a mix of uses, including high density residential, commercial, office, institutional, entertainment, parks and civic uses, and served by MiWay Transit Route 6, seven (7) days a week. On-street parking is available along Living Arts Drive to the south of Square One Drive.

Centre View Drive generally spans east-west between Mavis Road and Rathburn Road West. Rathburn Road West is a key east-west transportation route with a multi-use trail is present along the south side.

### 3.1 TRAFFIC SAFETY PERFORMANCE

A safety performance assessment was conducted as part of this study to review collision records, human factors considerations, societal costs, road geometrics.

Based on the findings of the safety performance assessment, there are no locations exhibiting demonstrably poor safety performance.

A detailed description of the existing traffic conditions in the study area is provided as part of the Safety Performance Assessment report, provided in **Appendix B** of this Project File.

### 3.2 TRAFFIC AND TRANSPORTATION ASSESSMENT

An assessment of existing and future traffic conditions was completed for the study area as part of the City's review for the extension of Living Arts Drive. The assessment included an analysis of existing conditions, traffic forecasts, and operational performance for the study area and the following associated intersections:

- Centre View Drive / Mavis Road;
- Centre View Drive / Duke of York Boulevard;
- Centre View Drive / Station Gate Road;
- Rathburn Road West / Station Gate Road;
- Rathburn Road West / Duke of York Boulevard;
- Rathburn Road West / Living Arts Drive;
- Rathburn Road West / Confederation Parkway; and
- Square One Drive / Living Arts Drive.

Based on the findings of this assessment, existing traffic conditions in the study area are generally characterized by good operations at network intersections during the a.m. peak hour. The intersections of Centre View Drive and Mavis Road, and Rathburn Road West and Confederation Parkway are approaching or operating at capacity in the p.m. peak hour.

A detailed description of existing traffic conditions analysis and associated methodology is included as part of the Traffic and Transportation Assessment Report, provided in **Appendix C** of this Project File.

## 3.3 PROVINCIAL POLICIES

### 3.3.1 Places to Grow – Growth Plan for the Greater Golden Horseshoe (2017)

The Growth Plan for the Greater Golden Horseshoe (GGH) is one of the fastest growing regions in North America, and generally spans around Lake Ontario, from Niagara Falls to Peterborough. The GGH is forecasted to add an additional 4.5 million people and nearly 2 million jobs by the year 2041. The Growth Plan for the GGH has been prepared under the *Places to Grow Act* (2005) and provides guidance on transportation, infrastructure planning, land-use planning, urban form, housing, natural heritage and resource protection. The Plan focuses on linking urban growth centres through a multi-modal transportation network that uses efficient public transit and highway systems to move people and goods.

Updates to The Growth Plan for the GGH took effect on July 1, 2017 and build upon the successes of the 2006 Plan, continuing towards the achievement of complete communities that are compact, transit-supportive, and make effective use of investments in infrastructure and public service facilities. Living Arts Drive is situated within Downtown Mississauga, a designated Urban Growth Centre of the Growth Plan. These designated areas are considered regional focal points for population and employment growth and are to be planned as vibrant, mixed-use, transit-supportive communities. The Growth Plan directs Downtown Mississauga to achieve 200 residents and jobs combined per hectare by 2031.

Planning for the extension of Living Arts Drive conforms to the policy direction of the Growth Plan by encouraging the development of compact communities, providing opportunities for inter-modal linkages and integrating vehicular and active transportation modes to support urban growth.

### 3.3.2 Provincial Policy Statement

The Provincial Policy Statement (PPS) was issued in 2005 under the authority of section 3 of the *Planning Act*. Updates to the PPS came into effect in April 2014 and build upon the policy direction on matters of provincial interest related to land use planning and development. Key policy objectives of the PPS that are particularly relevant to this study are:

- Promote the use of active transportation, transit, and transit-supportive development, and provide for connectivity among transportation modes;
- Protect nearby employment areas; and
- Strengthen the protection for transportation corridors and promote land use compatibility for adjacent lands.

### 3.3.3 Region of Peel Official Plan

The City of Mississauga is a lower tier municipality within the Region of Peel. The Region of Peel Official Plan (OP) provides a long-term regional strategic policy framework for the more specific objectives and land use policies within municipal OPs, which must conform with the Region's OP. The over-arching theme within the Region's OP is sustainability, acknowledging the various environmental, social, economic, and cultural imperatives to create and maintain a healthy, vibrant, and safe community. The study area is located within the Conceptual Urban Growth Centre. Modifications in the study area will contribute to the goals and objectives of the Regional OP and the Urban Growth Centre Policies by supporting walking, cycling, and access to public transit.

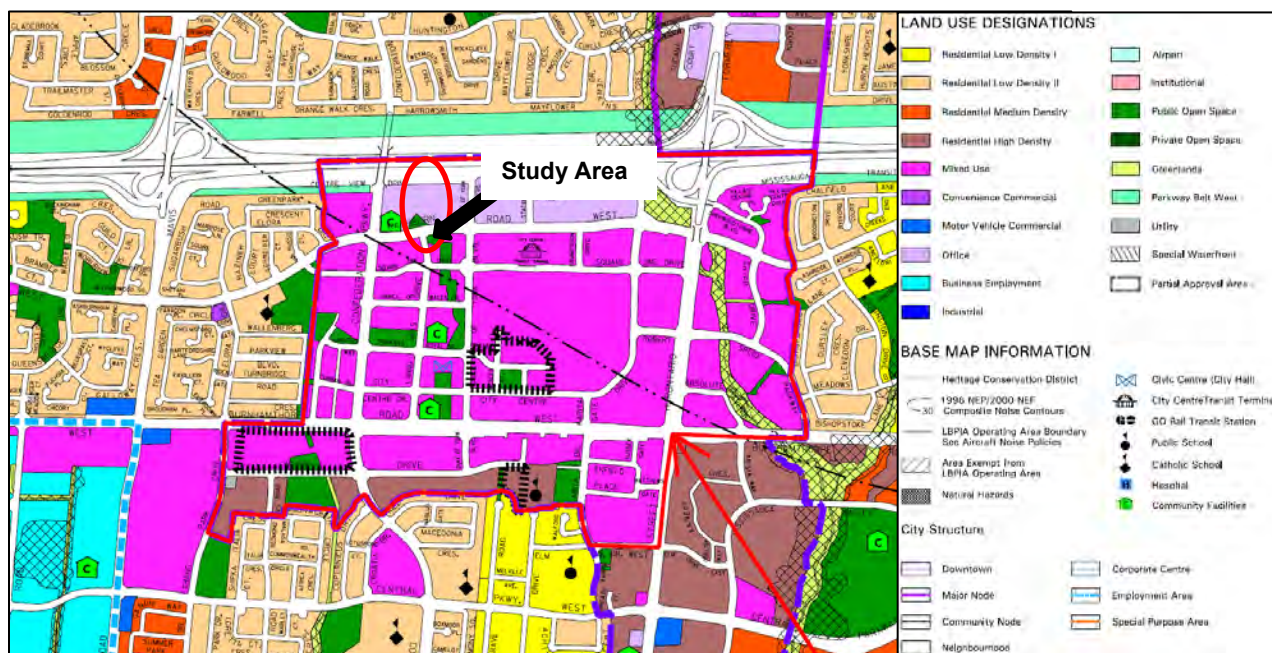
Existing Conditions

3.3.4 Mississauga Official Plan (2016)

The City of Mississauga OP is intended to guide the City's growth and development to the year 2031. The policies of the OP are designed to manage and direct the next stage of the City's growth (i.e., redevelopment and intensification), and will help the City adapt to the effects of growth on the social, economic, cultural, and natural environments. The City's 2011 population and employment (i.e., 738,000 and 455,000, respectively) is expected to grow to 805,000 and 510,000, respectively, by 2031.

According to Schedule 10 of the City's OP (please refer to **Figure 3**) land uses surrounding the study area primarily consist of designated Office use, with the exception of the designated Mixed Use land uses situated to the south of Rathburn Road West.

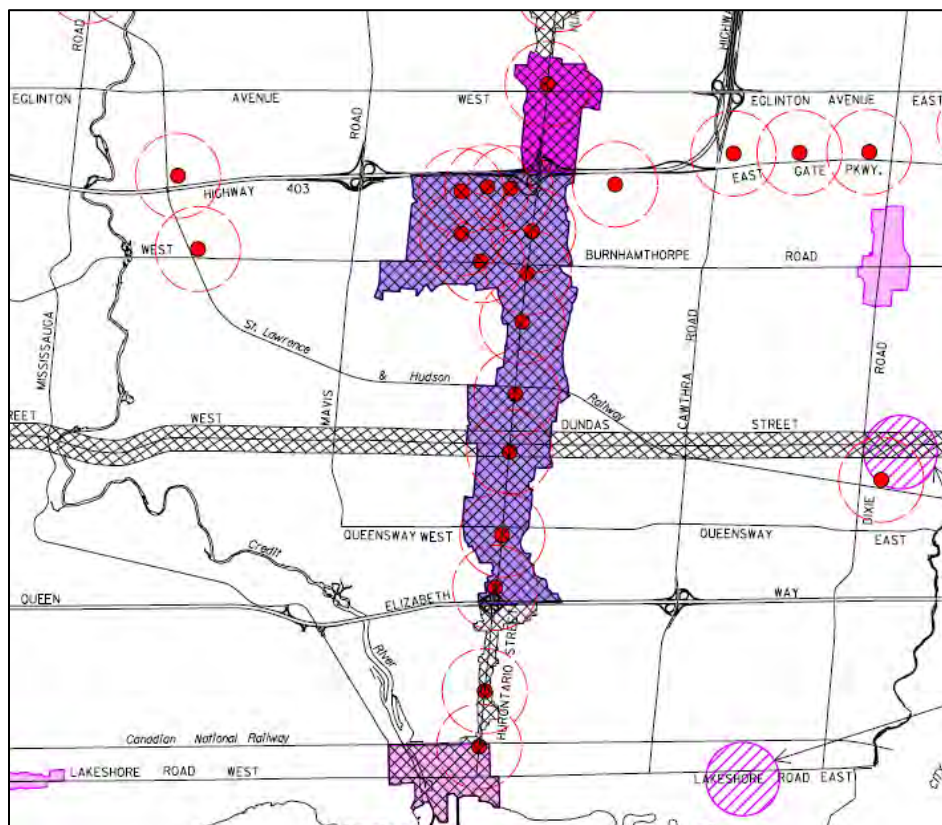
**Figure 3 Schedule 10, Land Use Designations Plan**



The study area also lies within a designated Intensification Area (please refer to **Figure 4**) and the Hurontario Intensification Corridor. As per Section 5.1.4 of the City's OP, most of the City's future growth will be directed to its Intensification Areas. In addition, designated Corridors are to be planned to accommodate multi-modal transportation, become attractive public spaces, and developed with complimenting land uses.

Existing Conditions

Figure 4 Schedule 2, Intensification Areas



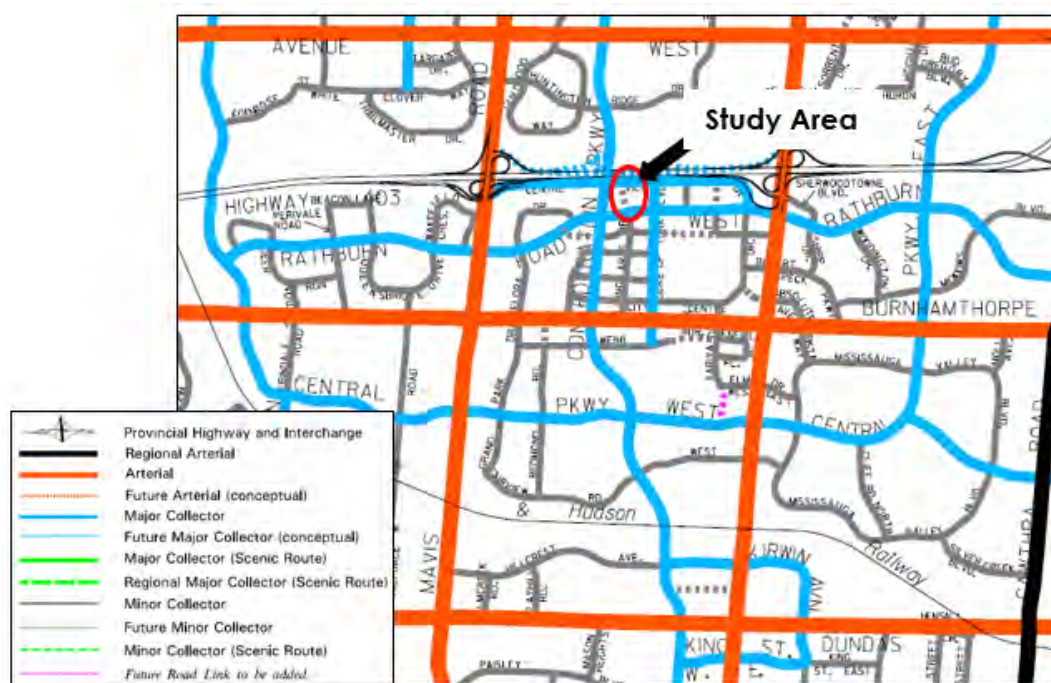
As per the transportation-related policies outlined in Section 8.1 of the OP, the City of Mississauga will: ensure that the transportation system provides connectivity among transportation modes for the efficient movement of people and goods; create a well-connected multi-modal transportation system; and, ensure that transportation corridors are protected to meet current and projected needs for various travel modes. The policies of the OP recognize that the creation of new roads will be required to support more compact development and the increased traffic volumes associated with future growth.

Living Arts Drive is designated a Minor Collector in the City's OP. These types of roadways are to be designed to accommodate low levels of traffic and controlled access to private property. The future extension of Living Arts Drive as a Minor Collector is indicated as part of the City's long term road network, as illustrated in Schedule 5 of the OP (please refer to **Figure 5**). Rathburn Road West and Centre View Drive are both classified as Major Collectors, intended to serve a moderate volume of business and goods movement traffic.



Existing Conditions

Figure 5 Schedule 5, Long-Term Road Network



As per Section 8 of the City's OP (i.e., *Create a Multi-Modal City*), road network planning shall balance the needs of transit, cyclists, pedestrians, goods movement, and motorists.

The City's OP suggests that roads within the Downtown Core provide frequent through access. Further, the City's commitment to implementing a range of measures to optimize safety and efficiency of the multi-modal transportation system is indicated in the OP, through the design of roads that: provide for the safe movement of all road users; are context sensitive; and, minimize the disruption to the Natural Heritage System and preserves existing tree canopies, where possible. Specifically, the design of roads within Intensification Areas will create a safe, comfortable, and attractive environment for pedestrians, cyclists and motorists.

### 3.3.5 Mississauga Official Plan Amendment No. 8 (Downtown Core Local Area Plan, 2015, under appeal)

The *Downtown Core Local Area Plan* (Official Plan Amendment 8) forms part of the Mississauga OP, and contains policies and schedules specific to the Downtown Core. The following goals and objectives of the *Downtown Core Local Area Plan* (DCLAP) support modifications to the road network in the study area:

- Create a vibrant Downtown by strengthening the transportation system, improving linkages/access, and enhancing the pedestrian experience;
- Create a fine-grained, well-connected road network that supports multiple modes of transportation; and
- Develop an urban environment that includes high-quality public spaces.

As per Section 2.1 of the DCLAP, the road system is to be completed to improve vehicular, cyclist and pedestrian movement, as well as to create urban development parcels. The objectives of the DCLAP also encourage the

## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Existing Conditions

following through development in the Downtown Core: comfortable and safe pedestrian and cyclist movement; accessibility; attention to pedestrian access; and, vehicular and transit access into and out of the Downtown Core.

The study area also lies within the Rathburn District, currently comprising a mix of suburban retail uses and surface parking lots. This area is envisaged as a prestigious employment district, given its visibility and access to Highway 403 and higher order transit. Office and employment uses will be encouraged within the highly designed and pedestrian friendly area.

### 3.3.6 City of Mississauga Strategic Plan

The City of Mississauga's *Strategic Plan* (2009) is characterized by its five "Strategic Pillars for Change": move, belong, connect, prosper, and green. The study area is located within an area that will experience employment and population growth by 2031, resulting in additional commercial vehicles in the area. The extension of Living Arts Drive positively contribute to several of these pillars by supporting:

- Development of walkable, connected neighbourhoods;
- Prioritizing the development of a multi-modal transportation system;
- Improving the transportation system by creating new links in the street network and encouraging active transportation;
- Meeting the needs of its employment areas;
- Supporting the development of a vibrant downtown for Mississauga; and
- Encouraging new development in areas that are well-served by transit.

### 3.3.7 Downtown 21 Master Plan (2010)

The City's Downtown21 Master Plan, implemented through MOPA8/Downtown Core Local Area Plan (under appeal), is a Council received document which provides direction and guidance for the street network in the Downtown Core. The *Downtown 21 Master Plan* builds upon the City's 2009 *Strategic Plan*, and seeks to implement its "Strategic Pillars for Change". Objectives of the *Downtown 21 Master Plan* include:

- Encourage development of a multi-modal transportation system to create a livable, compact, and accessible downtown for Mississauga;
- Prioritize active transportation when designing new streets;
- Provide connections to nearby higher-order transit (i.e. future Light Rail Transit);
- Ensure jobs, homes, and services are within walking distance of each other; and
- Use small block sizes for new developments.

Creating smaller blocks within the Downtown is expected to result in the following benefits:

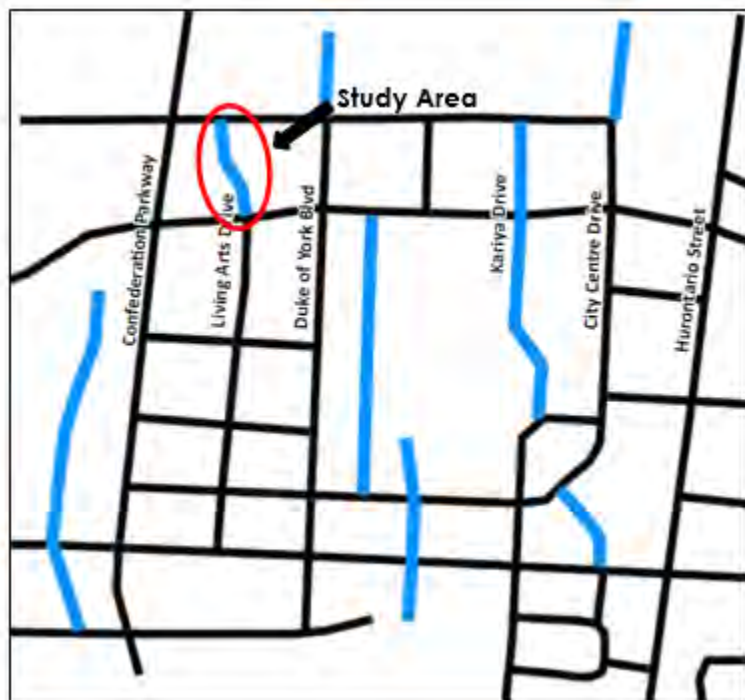
- Multiple routing and turning options for vehicles, increasing capacity at intersections
- intersections functioning as traffic calming measures through even and frequent spacing of intersections and encouraging vehicle travel at slower speeds.
- Street network redundancy and associated routing options for emergency vehicles
- Direct and comfortable routing options for pedestrians and cyclists;
- An active and vibrant pedestrian environment; and
- Maximum accessibility to transit stations and flexibility in transit operations and bus routing.

## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Existing Conditions

A number of proposed new north-south and east-west road connections are proposed as part of the Downtown21 Master Plan to facilitate these objectives, including the extension of Living Arts Drive from Rathburn Road West to Centre View Drive (please refer to **Figure 6**).

**Figure 6 New North-South Streets – Downtown21 Master Plan**



### 3.3.8 City of Mississauga Cycling Master Plan (2010)

The City's vision to make Mississauga a bicycle friendly community was set forth in the City's 2010 Cycling Master Plan. This planning document outlines the City's vision for a network of primary and secondary bicycle routes. Primary routes form the backbone of the cycling network, and provide the most direct access to key destinations, including higher order transit stations. Facilities within a primary route may include bicycle lanes, shared-use lanes, and multi-use lanes. Secondary routes provide links between primary routes, and serve a more community-focused function. Facilities within a secondary route may include bicycle lanes, shared-use lanes (i.e. sharrows or signed routes). The existing multi-use trail located on the south side of Rathburn Road West is identified as a Primary Route in the plan.

While cycling facilities are not planned along Living Arts Drive as part of the 2010 Cycling Master Plan, the City's Active Transportation Division is currently undertaking a review and update of the Plan in collaboration with the Mississauga Cycling Advisory Committee as part of its commitment to build a city that supports different ways to travel. The *Does Cycling Move You?* initiative will guide City planning for cycling projects and programs until 2022.

### Existing Conditions

#### 3.3.9 Living Green Master Plan (2012)

The Living Green Master Plan (LGMP) was prepared by the City in 2012 as a 10-year action plan to prioritize the City's environmental goals and objectives of the 2009 Strategic Plan in a sustainable way. Planning for the extension of Living Arts Drive supports the objectives of the LGMP by supporting the development of a compact, mixed-use urban form and encouraging alternative modes of transportation.

#### 3.3.10 2014 Future Directions - Master Plan for Parks and Forestry

The Parks and Forestry Master Plan serves to guide Mississauga's decisions regarding sustainable planning and management of parks and natural areas for continued enjoyment by residents and visitors. The Plan provides a number of recommendations, from parkland dedication ratios for new development in different areas of the City, to strategies for the location and acquisition of City owned parkland. The extension of Living Arts Drive will support the objectives of the Master Plan by recognizing the importance of street design to the success and quality of life in the downtown, and providing safe and attractive connections for pedestrians and cyclists.

#### 3.3.11 Existing and Planned Transit Operations

As noted above, Living Arts Drive is currently served by MiWay Route 6, 7 days a week. In addition, Light Rail Transit (LRT) service is planned along Hurontario Street, between the Port Credit GO Station, through Downtown Mississauga, to the Shoppers World Terminal in Brampton. This Hurontario-Main LRT system is anticipated to be built and operational by 2021 and will service segments of Burnhamthorpe Road West, Duke of York Boulevard, Rathburn Road West, and Hurontario Street.

Section 8.2.3 of the OP recognizes that Mississauga's transit network forms part of the interregional transportation system and will be supported by compact, pedestrian-oriented, mixed-use development. Schedule 3 of the DCLAP/MOPA8, and outlines the City's planning for LRT along Rathburn Road West, along the south limit of the study area, as well as LRT Station Areas to the east and south of the study area.

### 3.4 NATURAL ENVIRONMENT

#### 3.4.1 Natural Heritage

The significance and sensitivity of the natural features within the study area, as well as within 120 m surrounding the study area, was assessed through a desktop review of available information and site visit conducted in June 2017, to identify potential impacts of the proposed extension on natural features, and recommend appropriate measures to avoid or minimize potential negative impacts. Based on the findings of the assessment, the study area overlays a built landscape, that primarily consists of existing commercial infrastructure and asphalt-paved surfaces. Vegetation cover in the study area is limited to a cultural hedgerow vegetation community located at the north end of the study area, which comprises disturbance-adapted flora that is common to urban environments. No significant natural features, designated natural areas, species at risk or provincially rare species were identified in the study area.

A detailed description of the natural features in the study area is documented as part of the Natural Heritage Review Memorandum, provided in **Appendix D** of this Project File.

### Existing Conditions

#### 3.4.2 Tree Inventory and Assessment

A Tree Inventory and Assessment was completed as part of this study to identify individual trees that may be impacted by the project and document existing health, condition, diameter at breast height (DBH) and dripline radius. The study area contains predominantly non-native tree species that are landscape plantings for the parking lot area of the existing Cineplex Cinemas Mississauga property. The trees were observed to be generally young and in good, fair, or poor condition. These tree species include Amur Maple (*Acer ginnala*), Russian Olive (*Elaeagnus angustifolia*), Ash (*Fraxinus* sp.), White Ash (*Fraxinus americana*), Honeylocust (*Gleditsia triacanthos* 'inermis'), Juniper sp. (*Juniperus* sp.), Apple sp. (*Malus* sp.), Buckthorn (*Rhamnus* sp.), and Elm sp. (*Ulmus* sp.).

Based on the findings of the inventory, there are no rare or endangered species within the study area. The detailed results of the inventory are documented within the Arborist Report, provided in **Appendix E** of this Project File.

#### 3.4.3 Source Water Protection

The 2006 *Clean Water Act* (CWA) protects existing and future sources of municipal drinking water. As part of the CWA, vulnerable areas are delineated around surface water intakes and wellheads for every existing and planned municipal residential drinking water system that is in a Source Protection Area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) or surface water Intake Protection Zones (IPZs). According to the Source Protection Plan, no WHPAs are located within the study area. However, the study area is situated within and/or in close proximity to Intake Protection Zone (IPZ-2), an area defined as being on the water and land surrounding a municipal surface water intake. Since this system takes water from Lake Ontario, as opposed to an inland river or lake, none of the prescribed threats under the Clean Water Act (2006) can be considered significant. As such, no Source Protection Plan policies apply to the study area.

#### 3.4.4 Soil Quality

A Phase I Environmental Site Assessment (ESA) was conducted to determine the potential for subsurface soil and/or groundwater contamination within the study area, as well as within a 150 m radius of the study area. Based on the results of the Phase I ESA, the following was noted:

- Potentially contaminating activities in the study area included:
  - The importation and placement of fill materials
  - Storage and placement of de-icing salt; and
  - Records of spills and registered waste generators in the area.

In addition, fill of unknown quality was assumed to be present on-site as part of previous site development activities.

Based on the above, a Limited Phase II ESA was carried out on-site to confirm or refute the presence of impacted soils in association with the above activities. The Limited Phase II ESA was completed as part of the geotechnical investigation for this study, and included three (3) boreholes, advanced to depths ranging from 1.9 m below ground surface (bgs) to 3.3 m bgs. Selected soil/fill material samples were collected from the boreholes and submitted to a laboratory for analysis of metals and inorganics, polyaromatic hydrocarbons, petroleum hydrocarbons (fractions F1 through F4), and volatile organic compounds. Based on the results of the Limited Phase II ESA, the soil samples met the applicable Ministry of Environment and Climate Change standards for the parameters analyzed; however, all samples exceeded the applicable MOECC standard for electrical conductivity (EC) and sodium adsorption ratio

## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Existing Conditions

(SAR). The EC and SAR impacted soil/fill material is inferred to be related to the historic/seasonal application of road de-icing salt on and/or near the study area.

Based on O. Reg. 153/04 section 48 (3) and R.R.O. 1990, Regulation 339, Section 2, the elevated concentrations of EC and SAR would be exempt from an exceedance since the study area roadway would be considered a highway and use of de-icing salt is made for the purpose of keeping the highway safe for traffic. As such, the impacts associated to EC and SAR are not considered an issue of potential environmental concern.

A detailed description of the ESA activities is documented in the Phase One and Limited Phase Two Environmental Site Assessment Report, provided in **Appendix F** of this Project File.

## 3.5 CULTURAL HERITAGE

### 3.5.1 Cultural Heritage

A Cultural Heritage Resource Assessment (CHRA) was conducted as part of this study to identify potential built heritage and cultural heritage landscapes within and/or adjacent to the study area. Based on the results of the CHRA, there are no protected or potential heritage resources within, or adjacent to, the study area.

A copy of the CHRA is provided in **Appendix G** of this Project File.

### 3.5.2 Archaeological Assessment

A Stage 1 Archaeological Assessment (AA) was carried out in accordance with Ministry of Tourism, Culture and Sport (MTCS) *Standards and Guidelines for Consultant Archaeologists* (2011) to determine the potential for archaeological resources to be present within the study area. The findings of the Stage 1 AA indicated that the archaeological potential of the study area has been removed by previous disturbances related to the late 20th and early 21st century development within the study area, which involved major landscaping and grading below topsoil. As such, the study area has low or no archaeological potential, and no further archaeological assessment of the study area is required.

A copy of the Stage 1 AA was submitted to the MTCS for review and approval. A response from the MTCS was received on July 25, 2017, indicating that the Stage 1 AA report has been entered into the Ontario Public Register of Archeological Reports without technical review. As such, no further archaeological assessment is required for the study area.

A copy of the Stage 1 AA report is provided in **Appendix H** of this Project File.

## 3.6 ENGINEERING ENVIRONMENT

### 3.6.1 Drainage and Stormwater Management

A drainage and stormwater assessment was prepared to document the existing drainage and water quantity and quality conditions in the study area, evaluate the relative impacts of the Preferred Solution, and recommend measures to mitigate the potential impacts.

## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Problem/Opportunity Statement

The study falls within the Cooksville Creek Subwatershed and is under the jurisdiction of the Credit Valley Conservation Authority (CVC). Two catchment areas generally bisect the study area. In general, stormwater flows in a southerly direction and is conveyed towards catchbasins (CBs) located within the parking areas within and bounding the study area to the east and west. Flows are subsequently conveyed through storm sewer pipes to manholes which outlet at Rathburn Road West.

The detailed findings of the drainage and stormwater assessment are documented within the Drainage and Stormwater Management Report, provided in **Appendix I** of this Project File.

### 3.6.2 Geotechnical Investigation

A geotechnical investigation was undertaken to determine the condition of the existing pavement structure, as well as the subsurface soil and groundwater conditions in the study area.

In general, the existing pavement condition in the study area was observed to be in fair condition with slight to moderate cracking. Subsurface conditions encountered during drilling generally consisted of asphalt and granular subbase underlain by fill, beyond which clayey silt till and weathered shale. Groundwater was measured at approximately 1.15 m bgs in one borehole following drilling.

A copy of the Preliminary Geotechnical and Pavement Investigation Report is included in **Appendix J** of this Project File.

## 4.0 PROBLEM/OPPORTUNITY STATEMENT

Based on a review of existing conditions within the study area, the following problems and opportunities have been identified:

- Downtown Mississauga is transitioning from a suburban, auto-oriented centre to an urban, pedestrian-oriented experience that is rich in character.
- A key principle in the City is to build a multi-modal transportation system that supports a vibrant downtown and relies on a range of transportation modes.
- A compact street network helps to create urban blocks and provide additional routing within the Downtown.
- Mississauga Transitway and future Hurontario Light Rail Transit are both located within the Downtown.
- A new north-south road connection is needed for all users to maximize access into and beyond the Downtown.

Based on the above, the Problem and Opportunity Statement established for this Project is as follows:

**Downtown Mississauga is envisaged as a high-density, dynamic urban core, with smaller block sizes, a high-quality public realm, and a broad range of transportation choices. A new north-south, multi-modal connection is required to provide alternative routing into and beyond the Downtown Core, additional access to both existing and planned transit, improved pedestrian and cycling connections, and to support the creation urban blocks and a fine-grained street network within an emerging urban context.**

## 5.0 ALTERNATIVE SOLUTIONS

The Project Team generated five Alternative Solutions to ensure that all feasible solutions to the identified problems and opportunities were given fair consideration. The Problem and Opportunity Statement identifies that road modifications in the study area are required to provide better access to, from, and within downtown Mississauga; to accommodate future development adjacent to the study area; to facilitate the creation of a smaller, fine-grained street network; and to further develop a multi-modal transportation system. As such, the following planning alternatives were identified:

### **Alternative 1: Do Nothing**

Maintain existing transportation system conditions within the study area (i.e., no modifications).

### **Alternative 2: Improve Transit, Employ Transportation Demand Management (TDM) Measures**

Improve access to, from, and within downtown Mississauga by discouraging single-occupant vehicles and encouraging carpooling; shifting travel demands to time periods outside of congestion periods; and, encouraging alternative modes of transportation (e.g., transit, cycling, walking).

### **Alternative 3: Improve Alternative North-South Routes**

Upgrade parallel roadways to reduce growing travel demands in the area;

### **Alternative 4: Improve Localized Intersection Operations**

Modify existing intersections by adding turning lanes and optimizing signal timing.

### **Alternative 5: Extend Living Arts Drive**












































Extend Living Arts Drive from Rathburn Road West to Centre View Drive.



## 5.1 EVALUATION OF ALTERNATIVE SOLUTIONS

An evaluation framework was developed in consideration of all aspects of the environment, as well as comments received following study commencement and confirmed in consultation with the public and other stakeholders. The existing environment was taken into consideration leading to a descriptive, qualitative assessment based on the measures developed within each category.



The alternatives were assessed using a reasoned argument approach. This methodology identifies the differences in net impacts associated with the various alternatives. The relative significance of the impacts is assessed and provides clear rationale for the selection of a recommended solution. The results of the assessment are presented in the following tables. In addition, the findings of the Evaluation of Alternative Solutions were presented as part of the Public Information Centre.



Evaluation Criteria	Alternative 1: Do Nothing	Alternative 2: Improve Transit, Employ Transportation Demand Management Measures	Alternative 3: Improve Alternate North-South Routes	Alternative 4: Improve Localized Intersection Operations	Alternative 5: Extend Living Arts Drive (Rathburn Road West to Centre View Dr.)
<b>Planning and Transportation</b> 					
<b>Provincial Planning Objectives</b> Consistent with the Growth Plan for the Greater Golden Horseshoe (2017) and Provincial Policy Statement (2014) policies.	 Does not encourage development of compact communities, provide opportunity for inter-modal linkages and/or improve integration of vehicle and active transportation modes to support urban growth.	 Consistent with the PPS policy to promote the use of active transportation and transit; however, does not encourage the development of compact communities, provide opportunity for inter-modal linkages and/or improve integration of vehicle and active transportation modes.	 Improvements to alternative north-south routes may provide opportunity to improve intermodal linkages and promote active transportation and transit; however, it does not encourage development of compact communities to support urban growth.	 Localized intersection improvements may improve integration of vehicle and active transportation modes to some degree; however, it does not encourage development of compact communities, provide opportunity for inter-modal linkages to support urban growth.	 Encourages development of compact communities, improves inter-modal linkages and integration of vehicle and active transportation modes to support urban growth.   Extending the road will create new, smaller urban blocks and provide an opportunity to accommodate multi-modal travel.
<b>Municipal Planning Objectives and City Building</b> Satisfies the goals and objectives of the City of Mississauga's Official Plan, Downtown 21 Master Plan, MOPA8/ Downtown Core Local Area Plan.  Supports future development opportunities.	 Does not address the City's planning objectives for the study area.	 Currently being implemented through City planning policies but does not address the objectives of the study area.	 Consistent with City's planning objectives for other corridors in the City but does not address the objectives of the study area.	 Consistent with City's planning objectives for the City overall but does not address the objectives of the study area.	 Fully addresses the City's objectives for the study area by: supporting compact development; improving linkages/strengthening the multi-modal transportation system; improving access into and out of the Downtown Core.
<b>Safety</b> Offers opportunity to improve vehicle travel safety/reduce collisions (based on opportunity to reduce congestion and provide alternative routing).	 Does not provide an opportunity to improve vehicle travel safety, as traffic congestion is anticipated to increase over time due to planned growth within and adjacent to the study area.	 May provide an opportunity to reduce vehicle use and congestion in the short term, thereby improving vehicle travel safety.   Limited opportunity to improve vehicle travel safety over the long term as traffic congestion is anticipated to increase over time due to planned growth within, and adjacent to, the study area.	 May provide an opportunity to reduce vehicle use and congestion in the short term, thereby improving vehicle travel safety.   Limited opportunity to improve vehicle travel safety over the long term as traffic congestion is anticipated to increase over time due to planned growth within, and adjacent to, the study area. Limited opportunity to reduce vehicle use over either the short or long term.	 Provide an opportunity to reduce congestion in the short term, thereby improving vehicle travel safety. Limited opportunity to improve vehicle travel safety over the long term as traffic congestion is anticipated to increase over time due to planned growth within, and adjacent to, the study area. Limited opportunity to reduce vehicle use over either the short or long term.	 Provides an opportunity to improve vehicle travel safety in the short term due to reductions in traffic congestion within the study area.   Anticipated to improve vehicle travel safety over the long term by reducing traffic congestion and provide an alternate routing.
<b>Pedestrian and Cycling Accommodation</b> Provides safe and comfortable pedestrian access to area amenities.  Supports active transportation (walking and cycling).	 Does not provide opportunity to enhance the pedestrian environment within the study area.   Does not support development of a multi-modal transportation system for existing and future land uses.	 Does not provide opportunity to enhance the pedestrian environment within the study area.   Somewhat supports development of a multi-modal transportation system for existing and future land uses.   Discontinuity of sidewalk sections and no provision for bike lanes.	 Does not provide opportunity to enhance the pedestrian environment within the study area.   Supports development of a multi-modal transportation system for existing and future land uses on other corridors but not within the study area.	 Provides limited opportunity to enhance the existing pedestrian environment within the study area. Somewhat supports the development of a multi-modal transportation system for existing and future land uses.   Discontinuity of sidewalk sections and no provision for bike lanes.	 Provides opportunity to enhance the pedestrian environment within the study area.   Best supports development of multi-modal transportation system for existing and future land uses by implementing new active transportation connections, through creation of new sidewalks and on-street cycling lanes on both sides of the roadway, and new connections to a future multi-use trail along the south side of Centre View Drive and existing sidewalks and MUT along Rathburn Road West.
<b>Transit</b> Facilitates improved integration of transit services into the existing and planned system.	 Does not provide opportunity to integrate transit services into the overall transportation system.	 Facilitates improved integration of transit services into the overall transportation system.	 Potential for limited improvements to the integration of transit services into the overall transportation system.	 Potential for limited improvements to the integration of transit services into the overall transportation system.	 Potential for limited improvements to the integration of transit services into the overall transportation system.
<b>Traffic Operations</b> Improves existing and future traffic operations and levels of service (LOS).	 Does not provide opportunity to improve existing and future traffic operations.	 TDM measures anticipated to reduce vehicle travel to some degree, however, not anticipated to improve traffic operations and LOS associated with future traffic operations.	 Moderate potential to improve traffic operations and LOS in the short term; however, not anticipated to address future traffic needs.	 Moderate potential to improve traffic operations and LOS.   Does not provide corridor capacity improvement.	 Highest potential to improve traffic operations and LOS.   Anticipated to provide sufficient capacity to accommodate existing and future travel demands.

Evaluation Criteria	Alternative 1: Do Nothing	Alternative 2: Improve Transit, Employ Transportation Demand Management Measures	Alternative 3: Improve Alternate North-South Routes	Alternative 4: Improve Localized Intersection Operations	Alternative 5: Extend Living Arts Drive (Rathburn Road West to Centre View Dr.)
<b>Planning and Transportation</b> 					
<b>Network Connectivity</b> Facilitates improved access to, from and within Downtown Mississauga.	Does not provide alternate multi-modal routing into and out of the Downtown.  ○	Does not provide alternate multi-modal routing into and out of the Downtown.  ● May facilitate access to some degree through slight reduction in vehicle travel/improved traffic operations.	Does not provide alternate multi-modal routing into and out of the Downtown.  ● May facilitate access to some degree through increased capacity/improved traffic operations.	Does not provide alternate multi-modal routing into and out of the Downtown.  ● May facilitate access to some degree through improved intersection capacity/operations.	Provides alternate multi-modal routing into and out of the Downtown.  ● Redundancy in the road network will facilitate access through improved capacity and operations for all travel modes.
<b>Emergency Response</b> Provides opportunity to improve response time and/or emergency service vehicles access.	Does not provide opportunity to improve emergency vehicle access and/or response times.  ○	Slight reduction in auto use may improve network operations and associated emergency service vehicle response times in the short-term.  ● No change to existing emergency vehicle access.	Modest improvement in network operations may improve response times in the short term.  ● No change to existing emergency vehicle access.	Modest improvement in network operations may improve response times in the short term.  ● No change to existing emergency vehicle access.	Redundancy and improved traffic operations in the road network provides ease of access for emergency vehicles.  ●
<b>Planning and Transportation Summary</b>	Least Preferred	Partially Preferred	Partially Preferred	Partially Preferred	Most Preferred
<b>Socio-Economic Environment</b> 					
<b>Public Realm</b> Provides streetscape and landscape enhancement opportunities.  Facilitates creation of smaller, urban blocks.  Supports creation of a dynamic urban core.	Does not provide opportunity to enhance the existing public realm, create smaller, urban blocks and/or support creation of a dynamic urban core.  ○	Improvements to transit and TDM measures assist in supporting a dynamic urban core; however, do not provide streetscape opportunities or create smaller, urban blocks.  ●	Does not provide opportunity to enhance the existing public realm, create smaller, urban blocks and/or support creation of a dynamic urban core within the study area.  ●	Localized intersection improvements (e.g., roundabout) provide streetscape/landscape enhancement opportunities and may support the creation of a dynamic urban core to some degree; however, do not facilitate the creation of smaller urban blocks.  ●	Extending the roadway provides an opportunity to implement streetscape/landscape features in the design, create smaller urban blocks and support a dynamic urban core.  ●
<b>Property</b> Requires acquisition of private property.	No property acquisition.  ●	No property severance/ acquisition expected.  ●	Property severance/ acquisition expected.  ○	Limited property severance/ acquisition expected.  ●	Property severance/ acquisition is required  ○
<b>Property</b> Maintains, improves, and/or maximizes opportunities to improve access to private properties.	Does not provide opportunity to improve access to private property within the study area.  ○	Does not provide opportunity to improve access to private property within the study area.  ○	Does not provide opportunity to improve access to private property within the study area.  ○	Does not provide opportunity to improve access to private property within the study area  ○	Provides maximum opportunity to improve access to private property within the study area.  ●
<b>Accessibility</b> Provides opportunity to improve accessibility/ reduce barriers in the built environment.  Ability to accommodate accessibility design guidelines (AODA/City).	Does not provide opportunity to improve accessibility and/or accommodate AODA/City guidelines.  ○	Provides limited opportunity to improve accessibility and/or accommodate AODA/City guidelines.  ○	Does not provide opportunity to improve accessibility within the study area.  ● Provides opportunity to improve accessibility design features on alternative north-south routes.	Accessibility improvements limited to study area intersections.  ●	Provides opportunity to accommodate accessibility as per AODA and City design guidelines within the study area.  ●

Ranking Order of Preference: Most Preferred ● Partially Preferred ● Least Preferred ○

Evaluation Criteria	Alternative 1: Do Nothing	Alternative 2: Improve Transit, Employ Transportation Demand Management Measures	Alternative 3: Improve Alternate North-South Routes	Alternative 4: Improve Localized Intersection Operations	Alternative 5: Extend Living Arts Drive (Rathburn Road West to Centre View Dr.)
<b>Socio-Economic Environment</b> 					
<b>Business Operation</b> Maintains or improves commercial goods movement.  Facilitates access to existing business operations.	Does not provide opportunity to improve commercial goods movement within the study area and to/from the Downtown.  ○ Maintains access to existing business operation, however does not provide opportunity to improve access to future property uses.	TDM measures may improve traffic operations/facilitate goods movement in the short term.  ● Maintains access to existing business operation, however does not provide additional access to support future business development.  Lack of improvements within study area may delay development interests.	Improved capacity on other routes may improve traffic operations/facilitate goods movement in the short term.  ● Does not provide infrastructure required to support future development within the study area.  Lack of improvements within study area may delay development interests.	Improved operations on other routes may relieve travel demands/facilitate goods movement in the short term.  ● Does not provide infrastructure required to support existing and future development.  Lack of improvements within study area may delay development interests.	Redundancy in the road network anticipated to improve commercial goods movement within the study area and to/from the Downtown.  ● Improvements in the study area anticipated to support development interests within the study area.
<b>Noise</b> Avoids increase in traffic noise levels in noise sensitive areas (NSAs) on alternate north-south routes (no NSAs within the study area)	○ High potential to increase noise in NSAs in association with increased traffic volumes/congestion.  ○ Noise mitigation measures can be implemented (i.e., noise barrier walls).	● Moderate potential to increase noise in NSAs in association with increased traffic volumes/congestion.  ● Noise mitigation measures can be implemented (i.e., noise barrier walls).	○ High potential to increase noise in NSAs in association with increased traffic volumes/congestion.  ○ Noise mitigation measures can be implemented (i.e., noise barrier walls).	● Moderate potential to increase noise in NSAs in association with increased traffic volumes/congestion.  ● Noise mitigation measures can be implemented (i.e., noise barrier walls).	● Anticipated reduction in traffic congestion anticipated to decrease noise in NSAs.  ● No noise mitigation measures required.
<b>Socio-Economic Environment Summary</b>	Least Preferred	Partially Preferred	Least Preferred	Partially Preferred	Most Preferred
<b>Cultural Heritage</b> 					
<b>Archaeology</b> Affects areas identified as having archaeological potential.	● No impact.	● The findings of the Stage 1 Archaeology Assessment (AA) determined that the study has limited or no potential for recovery of archaeological resources.	○ Highest potential to affect areas having archaeological potential.  ○ Undisturbed lands on alternate routes have the potential for the recovery of archaeological resources.	● The findings of the Stage 1 AA determined that the study has limited or no potential for recovery of archaeological resources.	● The findings of the Stage 1 AA determined that the study has limited or no potential for recovery of archaeological resources.
<b>Cultural Heritage</b> Affects identified and/or potential heritage resources.	● No impact.	● The findings of the Cultural Heritage Assessment confirmed that there are no built heritage resources and/or cultural heritage landscapes within the study area.	○ Highest potential to affect cultural heritage resources.	● The findings of the Cultural Heritage Assessment confirmed that there are no built heritage resources and/or cultural heritage landscapes within the study area.	● The findings of the Cultural Heritage Assessment confirmed that there are no built heritage resources and/or cultural heritage landscapes within the study area.
<b>Cultural Heritage Summary</b>	Most Preferred	Most Preferred	Least Preferred	Most Preferred	Most Preferred

Ranking Order of Preference: Most Preferred ● Partially Preferred ◐ Least Preferred ○

Evaluation Criteria	Alternative 1: Do Nothing	Alternative 2: Improve Transit, Employ Transportation Demand Management Measures	Alternative 3: Improve Alternate North-South Routes	Alternative 4: Improve Localized Intersection Operations	Alternative 5: Extend Living Arts Drive (Rathburn Road West to Centre View Dr.)
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**Natural Environment**   

<b>Climate Change</b> Ability to increase resilience to climate change (e.g., severe weather events) within study area.	<input type="radio"/>	Does not provide opportunity to increase resilience to climate change.	<input type="radio"/>	Does not provide opportunity to increase resilience to climate change within study area.	<input type="radio"/>	Provides limited opportunity to increase resilience to climate change.	<input checked="" type="radio"/>	Provides best opportunity to increase resilience to climate change within the study area through provision of appropriate stormwater management/design features, in accordance with current CVC and City requirements.		
<b>Vegetation/Trees</b> Potential to affect vegetation communities, individual trees.	<input checked="" type="radio"/>	Does not affect existing vegetation communities, individual trees	<input checked="" type="radio"/>	Does not affect existing vegetation communities, individual trees	<input type="radio"/>	Anticipated to impact existing vegetation communities/individual trees (beyond study area). Impacts can be mitigated planting new trees/vegetation.	<input checked="" type="radio"/>	May impact existing vegetation community/individual trees. Impacts can be mitigated planting new trees/vegetation.	<input type="radio"/>	Anticipated to impact existing vegetation communities/individual trees, although given the anthropogenic nature of study area, impacts are not considered significant.  Impacts can be mitigated by planting new trees/vegetation.
<b>Wildlife</b> Potential to impact wildlife.	<input checked="" type="radio"/>	Does not impact potential habitat for urban-tolerant wildlife and/or breeding birds.	<input checked="" type="radio"/>	Does not impact potential habitat for urban-tolerant wildlife and/or breeding birds.	<input type="radio"/>	Anticipated to impact potential wildlife and/or breeding bird habitat areas (beyond study area). Impacts can be mitigated by conducting removals within appropriate timing windows.	<input type="radio"/>	May impact potential wildlife and/or breeding bird habitat areas (beyond study area). Impacts can be mitigated by conducting removals within appropriate timing windows.	<input type="radio"/>	Anticipated to impact portion of fragmented cultural hedgerow, which may provide habitat for some urban-tolerant species.  Impacts can be mitigated by conducting removals within appropriate timing windows.
<b>Air Quality</b> Potential to affect air quality.	<input type="radio"/>	Continued congestion within the Downtown may affect local air quality.	<input type="radio"/>	Slight improvement to traffic flow anticipated. May improve local air quality to small degree	<input checked="" type="radio"/>	Modest improvement to traffic flow anticipated. May improve local air quality to some degree.	<input checked="" type="radio"/>	Modest improvement to traffic flow anticipated. May improve local air quality to some degree.	<input checked="" type="radio"/>	Improved multi-modal capacity anticipated to improve local air quality.

<b>Natural Environment Summary</b>		<b>Most Preferred</b>	<b>Most Preferred</b>	<b>Least Preferred</b>	<b>Most Preferred</b>	<b>Most Preferred</b>
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**Technical**    

<b>Construction Feasibility</b> Disruption to existing traffic and property access during construction.	<input checked="" type="radio"/>	No disruption.	<input checked="" type="radio"/>	No disruption to existing property access/ traffic operations anticipated within the study area.	<input checked="" type="radio"/>	Temporary disruption to traffic operations and property access during construction within other areas of the Downtown.	<input checked="" type="radio"/>	Temporary disruption to traffic operations and property access during construction.	<input checked="" type="radio"/>	Temporary disruption to traffic operations and property access during construction.
Potential to coordinate construction with other City initiatives.	<input checked="" type="radio"/>		<input checked="" type="radio"/>		<input checked="" type="radio"/>		<input checked="" type="radio"/>		<input checked="" type="radio"/>	
<b>Utilities</b> Potential to impact existing utilities.	<input checked="" type="radio"/>	Does not impact existing utilities.	<input checked="" type="radio"/>	Does not impact existing utilities.	<input type="radio"/>	Anticipated to impact existing utilities beyond study area.	<input checked="" type="radio"/>	Moderate impact to existing utilities, when compared to Alternatives 3 and 5.	<input type="radio"/>	Anticipated to impact existing utilities.

Ranking Order of Preference: Most Preferred  Partially Preferred  Least Preferred

Evaluation Criteria	Alternative 1: Do Nothing	Alternative 2: Improve Transit, Employ Transportation Demand Management Measures	Alternative 3: Improve Alternate North-South Routes	Alternative 4: Improve Localized Intersection Operations	Alternative 5: Extend Living Arts Drive (Rathburn Road West to Centre View Dr.)
<b>Technical</b>					
<b>Stormwater Drainage</b> Provides opportunity to reduce stormwater quantity and/or improve stormwater quality.	No impact to existing stormwater quality/ quantities.  ○ Does not provide opportunity to reduce stormwater quantity/improve quality.	No impact to existing stormwater quality/ quantities.  ○ Does not provide opportunity to reduce stormwater quantity/improve quality.	Impacts to existing stormwater quality/quantities anticipated.  ○ Opportunities to reduce stormwater quantity/improve quality outside study area.	Moderate impact to existing stormwater quality/ quantities.  ● Provides limited opportunity to reduce stormwater quantity/improve quality.	Low impact to existing stormwater quality/quantities. Majority of study area currently paved.  ● Provides best opportunity to improve stormwater drainage within the study area through provision of appropriate stormwater management features.
<b>Costs</b> Relative capital/ construction, operation and maintenance costs.	No cost.  ●	Lowest cost.  ●	Highest cost.  ○	Low-moderate cost.  ●	Highest cost.  ○
<b>Technical Summary</b>	Partially Preferred	Partially Preferred	Least Preferred	Most Preferred	Partially Preferred
<b>Addresses Project Opportunity Statement</b>	x	x	x	x	✓
<b>OVERALL SUMMARY</b>	<b>Not Carried Forward</b>  While Alternative 1 would not impact private property, natural heritage features and/or individual trees, it does not provide an opportunity to enhance the existing public realm, create smaller, urban blocks, support the creation of a dynamic urban core and/or development of a multi-modal transportation system for existing and future land use.  In addition, Alternative 1 does not address the Problem and Opportunity Statement for this project.	<b>Not Carried Forward</b>  While no impacts to private property are expected in association with this Alternative 2, it does not provide an opportunity to: provide alternative multi-modal routing into and out of the Downtown; improve access to private property; or, enhance the public realm in the study area.  This alternative is generally consistent with the City's planning objectives; however, it does not address the goals and objectives for the study area.  In addition, Alternative 2 does not address the Problem and Opportunity Statement for this project.	<b>Not Carried Forward</b>  While this alternative is generally consistent with the City's planning objectives, it does not: address the goals and objectives for the study area; improve access to private property within the study area; or; provide alternative multi-modal routing into and out of the Downtown.  In addition, Alternative 3 does not address the Problem and Opportunity Statement for this project.	<b>Not Carried Forward</b>  While impacts to private property is expected to be limited in association with Alternative 4, it does not provide an opportunity to: provide alternative multi-modal routing into and out of the Downtown; improve access to private property; or, enhance the public realm in the study area.  This alternative is generally consistent with the City's planning objectives; however, it does not address the goals and objectives for the study area.  In addition, Alternative 4 does not address the Problem and Opportunity Statement for this project.	<b>Carried Forward</b>  While the extension of Living Arts Drive is expected to impact private property and vegetation/trees, it fully address the City's objectives for the study area by maximizing access to, from and within the Downtown for all modes of transportation, creating smaller, urban blocks and a fine-grained street network, and providing redundancy in the road network for all vehicles.  In addition, Alternative 5 fully addresses the Problem and Opportunity Statement for this project.

### 5.2 SELECTION OF THE PREFERRED SOLUTION

Based on the results of the evaluation, **Alternative 5**, Extension of Living Arts, fully addresses the identified problems and opportunities by maximizing access to, from, and within downtown Mississauga for all modes of transportation, contributing to the smaller, fine-grained downtown street network; providing redundancy in the road network for all vehicles; and, supporting a multi-modal transportation system. Alternative 5 addresses many of the selected evaluation criteria by creating an urban environment and meeting planning objectives, as well as improving pedestrian and cyclist accommodation, network connectivity, and property access.

As noted as part of the Evaluation of Alternative Solutions, Alternative 1 is unable to address any aspect of the Problem and Opportunity Statement. In addition, Alternatives 2, 3 and 4 only partially address the Problem and Opportunity Statement and do not support the creation of urban blocks, a fine-grained street network, and/or provide alternative routing into and beyond the Downtown Core.

### 5.3 FUTURE TRANSPORTATION CONDITIONS

In general, projections indicate that future traffic conditions would remain unchanged or improve with construction of the Living Arts Drive extension given the expected growth in the Downtown. The Rathburn Road West and Duke of York Boulevard intersection will be impacted by the Hurontario LRT. Projections indicate a slight improvement in traffic conditions, as the extension would provide an alternate north-south route in downtown Mississauga. The intersection of Living Arts Drive intersection with Rathburn Road West is projected to experience some additional congestion due to the extension of Living Arts Drive to the north, and the diversion of traffic from Duke of York Boulevard.

The detailed assessment of future traffic conditions is provided in **Appendix B** of this Project File.

### 5.4 PRELIMINARY DESIGN FOR THE PREFERRED SOLUTION

At this time, the Preferred Solution includes the extension of Living Arts Drive, from Rathburn Road West to Centre View Drive. The proposed extension will consist of a 26 m ROW consisting of 2.5 m sidewalks on either side of the right-of-way (ROW), on-street bicycle lanes in each direction, a new, signalized intersection with Centre View Drive and, a new, mid-block intersection.

Moving forward to the design development stage, the City will also be considering the following design elements:

- Traffic operations at existing intersections, as well as new intersections created by the extension;
- Proximity of new intersections to existing intersections;
- Accommodation of pedestrians, cyclists, and users of other forms of active transportation;
- Accommodation of existing and future land uses; and
- Existing and future utility needs.

It should be noted that the design of the new mid-block intersection will be established during detailed design, in consultation with the affected property owner.

The preliminary proposed design concept for the Preferred Solution is provided within **Appendix M** of this Project File.

## 6.0 POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

### 6.1 VEGETATION

The proposed extension overlays a built landscape, that primarily consists of existing commercial infrastructure and asphalt-paved surfaces. Vegetation cover in the study area is limited to a cultural hedgerow community, which comprises disturbance-adapted flora that is common to urban environments. A portion of this hedgerow feature will be removed to accommodate the new intersection of Living Arts Drive and Centre View Drive. However, no significant natural features, designated natural areas, species at risk or provincially rare species were identified in the study area.

Potential indirect impacts to natural areas that are adjacent to the proposed extension include inadvertent vegetation disturbance, interaction with migratory birds, soil compaction, sedimentation, contamination from spills, noise and dust generation. These indirect impacts are associated with the construction phase of the proposed extension and are temporary in nature. Standard mitigation is available to prevent negative interaction or inadvertent encroachment into these areas, or to provide sediment and erosion control. The primary principles associated with sediment and erosion protection are to: 1) reduce the duration of soil exposure; 2) retain existing vegetation, where feasible; 3) encourage re-vegetation; 4) divert runoff away from exposed soils; 5) keep runoff velocities low; and to 6) trap sediment as close to the source as possible. The preliminary proposed sediment and erosion control plan is outlined as part of the Natural Heritage Review Memorandum, provided in **Appendix D** of this Project File, and will be confirmed during detailed design.

### 6.2 INDIVIDUAL TREES

In total, eighty (80) trees were inventoried and assessed as part of this study. As part of the extension of Living Arts Drive, approximately thirty-three (33) trees are expected to be retained and approximately forty-seven (47) may be removed. It should be noted that some of the trees expected to require removal consist of Ash species. There is concern about the long term survivability of Green Ash throughout most of Ontario due to Emerald Ash Borer. The City's policy is to remove ash species where necessary during construction due to their short lifespan. The detailed tree inventory, assessment of impacts and Tree Management Plan is offered in the Arborist Report, provided in **Appendix E** of this Project File.

### 6.3 TRAFFIC NOISE

A traffic noise and vibration assessment was undertaken to identify the potential changes in noise and vibration levels associated with construction and operation of the extension of Living Arts Drive, and determine the need for mitigation, if any.

The City of Mississauga's Noise Policy is more stringent than the provincial noise guidelines (i.e., if the change in daytime sound levels is greater than or equal to 5 dBA, and/or the overall sound levels associated with a project is greater than or equal to 65 dBA). As such, the City's criteria were used to determine mitigation requirements for this

## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Potential Impacts and Proposed Mitigation Measures

study. Based on the traffic data used as part of this study, daytime sound levels were calculated at outdoor living areas (OLAs) identified in proximity to the proposed extension. In total, two (2) OLAs were considered representative of several dwellings located near the study area (i.e., at Greenpark Crescent and Elora Drive, located approximately 300 m west of the study area).

Based on the findings of the assessment, traffic noise levels following construction and during operation of the proposed extension will not exceed the City's 60 dBA objective noise level at any of the OLAs. As such, no noise mitigation is required in association with the project.

The detailed traffic noise assessment is documented within the Road Traffic Noise Impact Assessment report, provided in **Appendix K** of this Project File.

## 6.4 AIR QUALITY

An air quality impact assessment was undertaken to evaluate the potential change in air quality associated with the extension of Living Arts Drive. Sources of air emissions expected to be associated with the extension of Living Arts Drive are related to changes in traffic and associated combustion gases from burning fossil fuels (e.g., gasoline and diesel) and fugitive dust. Fugitive dust emissions can be generated by road traffic during the movement of cars and trucks.

Based on the findings of the evaluation, background air quality levels for the primary air contaminants in the study area are estimated to be lower than their related criteria, with the exception of benzene (annual average) and Benzo(a)Pyrene, for which baseline concentrations exceed their respective criteria. These exceedances are common in southern Ontario, and are not unique to the study area.

Emissions from vehicle engines are expected to decrease, given improved fuel combustion conditions and generally decreased idling times within the local traffic network.

Even though future traffic on the proposed extension of Living Arts Drive is expected to increase, the potential change in air quality on the nearby residential receptors is expected to be low, and the increase of the traffic due to the proposed extension is not expected to change the baseline air quality compliance status of the study area. Further, with the implementation of new vehicle emissions standards in the future, additional reductions in vehicle combustion emissions are expected and would serve to lower the contribution from road traffic to the ambient air quality concentrations.

During construction, sources of related emissions are expected to be primarily related to non-road construction equipment engines and on-road truck engines. Fugitive dust from vehicle traffic over temporary unpaved surfaces will also be generated. Total construction-related air emissions will be temporary, anticipated over several weeks to potentially months. Construction emissions can be mitigated by ensuring that well-tuned and maintained engines are provided with construction equipment, and that proper project planning and management ensures a short duration for potential unpaved vehicle traffic surfaces. If necessary, temperature barrier and/or road wet suppression can be applied to control fugitive dust emissions during the construction period. Emissions associated with construction of the proposed extension will be temporary in nature and manageable.



### Potential Impacts and Proposed Mitigation Measures

The details of the assessment of potential air quality impacts is documented in the Assessment of Potential Air Quality Impacts, provided in **Appendix L** of this Project File.

## 6.5 DRAINAGE AND STORMWATER MANAGEMENT

Additional stormwater runoff from new pavement can impact receiving watercourses and cause flooding, erosion, and water quality impacts. Quantity and quality control measures to treat runoff should be considered for all new impervious areas and, where possible, existing surfaces. Stormwater Management Criteria developed for this study are based on the City Design Manual and CVC SWM Criteria.

Based on existing site conditions, the following outlines potential approaches to stormwater management for the extension of Living Arts Drive; however, the approach to SWM will be confirmed during detailed design:

- Water Quantity Control: A stormwater detention system along with an orifice tube at the downstream end of the system will reduce the 100-year post development flow rate to the 2-year pre-development flow rate.
- Water Quality Control: three alternatives are proposed to achieve quality control: Silva Cells in conjunction with CB Shields® on all CBs, Goss Trap with infiltration trenches or a Jellyfish® system will be used to achieve the quality control target of 80 % TSS removal efficiency for the Site.
- Water Balance: A minimum post-development recharge of the first 5 mm rainfall will be achieved provided it is feasible based on the native soil percolation rate and groundwater table elevation.
- Conveyance: Based on evaluation of the existing conditions and available alternatives, it is recommended to connect the proposed storm sewer into the existing municipal storm sewer at EXMH18 within the intersection of Rathburn Road West and Living Arts Drive.

A detailed description of the SWM plan and associated evaluation of alternative SWM measures is documented in the Drainage and Stormwater Management report, provided in **Appendix I** of this Project File.

## 6.6 GEOTECHNICAL/PAVEMENT STRUCTURE

The subgrade soils within the new road section generally consist of native clayey silt (till) and clayey silt (till)/shale complex. Based on the expected traffic on the proposed extension, as well as the type and strength of subgrade soil, the recommended pavement structures are briefly summarized below. The detailed construction procedures, including are described in the Geotechnical Investigation and Pavement Design Report, provided in **Appendix J** of this Project File.

### **Extension of Living Arts Drive**

- 40 mm HL 3 surface course
- 100 mm HDDB (Heavy Duty Binder Course)
- 200 mm of 19 mm Crusher Run Limestone (CRL) Base Course (or Granular A Base)
- 385 mm Granular B Type II Subbase (minimum)
- Prepared and Approved Subgrade

### **Living Arts Drive and Rathburn Road West Intersection**

- 40 mm HL 1 surface course
- 120 mm (2 lifts) HDDB
- 200 mm of 19 mm Crusher Run Limestone (or Granular A Base)
- 400 mm Granular B Type II Subbase

## LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

### Monitoring, Mitigation, and Commitments

- Prepared and Approved Subgrade

#### **Living Arts Drive and Centre View Drive Intersection**

- 40 mm HL 1 surface course
- 140 mm (2 lifts) HDBC
- 200 mm of 19 mm Crusher Run Limestone (CRL) Base Course (or Granular A Base)
- 350 mm Granular B Type Subbase Course
- Prepared and Approved Subgrade

Any disturbed or damaged pavement resulting from construction of the proposed extension should be restored to match the existing pavement structure.

The detailed pavement design recommendations are documented in the Geotechnical Investigation report, provided in **Appendix J** of this Project File.

## 6.7 EXCESS SOIL/FILL MATERIAL

All soil samples submitted for chemical analyses met the applicable MOECC Standard; however, exceedances of EC and/or SAR were noted in all of the soil samples analyzed. It should be noted that the samples selected for analysis were collected from the boreholes located on the existing driveways/roadways. The elevated EC and SAR values identified in the submitted samples are inferred to be associated with the seasonal application of de-icing salt to the roadways.

Some of the soil/fill material generated at the site during construction can be re-used on-site, provided that the soils will not be in contact with groundwater, or re-used at a receiving site which is not considered as an environmentally sensitive site and would accept the soil as per the test results. In addition, some of the excess soils generated from construction in other locations may be disposed at facilities which are suitable to accept salt-impacted excess soil and would accept the soils based on the analytical results. The detailed locations of these soil sample locations are outlined in the geotechnical investigation, provided in **Appendix J** of this Project File.

In addition to the above, one (1) composite soil sample, comprising soil samples recovered from each of the boreholes (i.e., BHs 1 through 9), was submitted for analysis of Toxicity Characteristic Leaching Procedure (TCLP) to characterize the quality of the soils for disposal purposes. The results of the TCLP analysis indicated that excess soils generated from the study area during construction are considered non-hazardous, and could be disposed at a licensed receiving facility. Should any visual or olfactory evidence of contamination be identified during construction, further chemical analyses are recommended.

## 7.0 MONITORING, MITIGATION, AND COMMITMENTS

**Table 7-1** summarizes the various environmental sensitivities/areas of concerns related to the design and construction of the Preferred Solution concept that were identified during this study, and will serve as a reference during detailed design and construction. City of Mississauga contract administration staff should undertake normal supervisory activities with respect to the administration of environmental controls incorporated into the contract package, as well as ensuring their effective application in accordance with the spirit and intent of this report.

**LIVING ARTS DRIVE EXTENSION MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**

Monitoring, Mitigation, and Commitments

**Table 7-1 Mitigation Measures, Detailed Design, and Implementation Commitments**

Item	Description
Individual Trees	<ul style="list-style-type: none"> <li>• Tree protection fencing shall be installed to protect trees identified for preservation in accordance with City standards</li> <li>• The project arborist will review and approve the location of the fencing, prior to commencement of construction activities, in coordination with City staff approval.</li> <li>• Tree protection fencing will remain in place throughout construction activities and will be inspected weekly and repaired, if required.</li> <li>• All trees designated for preservation must be flagged in the field. All designated preservation areas must be left standing and undamaged during site works.</li> <li>• The Tree Protection Zone (TPZ) is not to be used for any type of storage. No trenching or tunneling for underground services shall be located within the TPZ. Construction equipment shall not be allowed to idle or exhaust within the TPZ.</li> <li>• Trees shall not have any rigging cables or hardware of any sort attached or wrapped around them, nor shall any contaminants be dumped within the protective areas.</li> <li>• No contaminants shall be dumped or flushed where they may come into contact with the feeder roots of the trees.</li> <li>• If roots from retained trees are exposed, or if it is necessary to remove limbs or portions of trees after construction has commenced, the Project Arborist shall be informed and the proper actions conforming to City Policies and By-laws shall be carried out.</li> <li>• Upon completion of the tree removals, all felled trees will be removed from the site. No lumber or brush from the clearing will be stored on-site. Any chipping, cutting or brush cleanup will be completed outside of the bird nesting season.</li> </ul>
Migratory Birds	<ul style="list-style-type: none"> <li>• No construction activities/tree removals will take place during the primary nesting period for this area (i.e., between April 1 and August 15).</li> <li>• A no-disturbance buffer will be delineated and maintained for the duration of the nest activity, which will be determined using periodic checks by the avian biologist. Work will not resume within the nest buffer until the nest is confirmed to be no longer active.</li> </ul>
Air Quality	<ul style="list-style-type: none"> <li>• During construction, vehicles/machinery and equipment will be in good repair, equipped with emission controls, as applicable, properly maintained and operated within regulatory requirements.</li> <li>• Water and/or non-chloride dust suppressants will be applied during construction to protect air quality associated with dust.</li> </ul>
Stormwater/ Drainage	<ul style="list-style-type: none"> <li>• The final design of the stormwater drainage system will be completed in accordance with the City of Mississauga Guidelines.</li> </ul>
Sediment and Erosion Control	<ul style="list-style-type: none"> <li>• The Erosion and Sediment Control Plan will be confirmed during detailed design, and designed in accordance with current City guidelines and the requirements of the Greater Golden Horseshoe Area Conservation Authorities (GGHA CAs) Erosion &amp; Sediment Control Guidelines for Urban Construction (2006).</li> </ul>
Excess Soil Management	<ul style="list-style-type: none"> <li>• All excavated soils will be handled in accordance with the MOECC’s guidance document entitled, “Management of Excess Soil – A Guide for Best Management Practices”.</li> <li>• All waste generated during construction will be disposed of in accordance with MOECC requirements.</li> <li>• Should any visual or olfactory evidence of contamination be identified during construction, further chemical analyses will be carried out.</li> <li>• Should any spills occur during construction, the Spills Action Centre of the Ministry of Environment and Climate Change will be contacted immediately.</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• Standard noise mitigation measures shall be installed on construction equipment and equipment will be properly maintained.</li> <li>• Construction equipment shall be turned off when not in use (i.e., a no idling policy).</li> <li>• Construction activities will be completed in accordance with the City’s Noise Control By-Law 360-79.</li> </ul>

**Table 7-1 Mitigation Measures, Detailed Design, and Implementation Commitments**

Item	Description
	<ul style="list-style-type: none"> <li>Where noise levels for construction equipment exceed the criteria in the MOECC noise guidelines and policies, the contractor shall provide equipment that complies with the MOECC noise criteria where reasonably available.</li> <li>Instances where adherence to the local bylaws is not possible and mitigation is not feasible, an exemption shall be considered, prior to construction.</li> </ul>
Geotechnical	<ul style="list-style-type: none"> <li>Engineered fill monitoring and sufficient foundation inspections, subgrade inspections, in-situ density tests and materials testing shall be carried out during construction to confirm that the conditions exposed are consistent with those encountered in the boreholes advanced as part of this study, and to monitor conformance to the pertinent project specification.</li> </ul>
Property	<ul style="list-style-type: none"> <li>The City will continue to engage with the affected property owner during detailed design to establish the configuration of the new mid-block intersection proposed as part of the extension of Living Arts Drive.</li> </ul>
Utilities	<ul style="list-style-type: none"> <li>The City will continue to engage with Alectra Utilities and Region of Peel during detailed design.</li> </ul>

Mitigation measures shall be implemented and maintained through on-site inspections by the City of Mississauga staff who will ensure that the natural, social, and economic environments are not impacted by the construction activities and/or that impacts are minimized. The inspection staff will also ensure that items such as sedimentation controls and appropriate signage are maintained throughout construction.

Appropriate signage shall be implemented to identify detour routes at the time of temporary roadway/sidewalk closures. In addition, closure events and restricted access to residents and/or businesses shall be minimized to the greatest extent possible to facilitate vehicle and pedestrian movement during construction.

## 7.1 THIRD PARTY APPROVALS AND PERMITS

Following the successful completion of the Class EA process documented in this Project File prepared under the Municipal Class EA (October 2000, as amended in 2015), all requirements will have been met. Other approval requirements will be addressed for the project during detail design and may include:

- Health and safety requirements during construction under Ontario's *Occupational Health and Safety Act*;
- Continued engagement with utilities in the area;
- Ministry of the Environment and Climate Change, Environmental Clearance Approval (ECA) permit for new storm sewer and stormwater management facilities; and
- Third-party utility companies and associated approval of designs/agreements required for the relocation of physical plant to accommodate construction of the Preferred Solution.

The City of Mississauga By-Law 254-12 (amended by 13-13) has been used to identify tree removal and injury permit requirements. Permitting is required for trees greater than 15 cm DBH; trees that are in poor condition greater than 15cm DBH require a permit but are excluded from the permit fee. Ash trees are exempt under the by-law, as they are being decimated by the invasive emerald ash borer beetle; a separate form is required to be submitted to expedite the removal process for Ash trees.

The Canadian *Environmental Assessment Act* (CEAA) was not triggered for this project.