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1 INTRODUCTION

The City of London is located in southwestern Ontario with a population of 383,822. Based on the current population, London is the largest city in Canada without a Rapid Transit system. The London Plan (2016) forecasts 77,000 new residents and 43,000 more jobs by 2035. Recent forecasts completed as part of the ongoing Development Charges Background Study have updated population growth to 84,000 new Londoners.

The City of London has undertaken several studies over the last decade related to improving transit reliability and frequency. The City’s new growth management strategy, as outlined in The London Plan (2016) focuses on growing up rather than outward growth, making efficient use of infrastructure, through transit oriented development to create a more sustainable and livable urban form. As part of achieving this aim, the City proposes constructing a Bus Rapid Transit (BRT) system.

London’s Rapid Transit Initiative began in 2014 under the brand “Shift.” The first stage was to complete a Rapid Transit Master Plan (RTMP), which was adopted by City Council in July 2017. The RTMP set out the 24-kilometre network of streets where dedicated lanes for transit should be implemented, and confirmed bus vehicles as the preferred Rapid Transit technology. The approved BRT network is expected to be transformative for the city, generating economic development and supporting long-term municipal sustainability, as quantified in the Business Case completed for the RTMP.

The second stage will be completed using the Transit Project Assessment Process (TPAP) as per Ontario Regulation 231/08. As part of the pre-planning activities prior to initiating the TPAP, there has been refinement of the approved BRT network through the development and evaluation of alternative design options, public and stakeholder consultation, and the identification of impacts and appropriate mitigation measures.

This draft Environmental Project Report (EPR) describes the project and details the consultation undertaken in preparation for initiating the TPAP. The draft EPR was circulated to the Ministry of Environment and Climate Change (MOECC) and relevant provincial ministries for review and comment prior to initiating the six-month TPAP process.

1.1 Purpose

BRT provides a plan to address a number of challenges the city will face as it continues to grow:

- **Transit Travel Times, Reliability and Service Frequencies** – Existing transit travel times in key corridors are not as reliable or competitive as personal auto travel, generally a result of buses operating in mixed traffic. Service frequencies on many routes can be 15 minutes or longer, making transit less attractive for commuters with choice. By implementing a more frequent and reliable BRT network, the overall transit network will become more attractive to a broader base of the population;

- **Land Use and Density** – Large portions of the existing urban area consist of single-use, low-density tracts of land. In many areas, drivers are incentivized to use their vehicle due to the availability of free parking. These factors are not conducive to active modes or local transit services. BRT will create an environment that supports investments in higher density, mixed-use residential and commercial developments along its corridors;

- **Growth Management** – The London Plan, as approved by City Council (June 2016) and by the province (December 2016), forecasts 77,000 new residents and 43,000 more jobs by 2035. Recent forecasts completed as part of the ongoing Development Charges Background Study have updated population growth to 84,000 new Londoners. If previous growth trends continue, large tracts of agricultural and rural lands will be consumed, requiring large capital and operating investments to build and maintain the new infrastructure required to support it. Transit-oriented development (TOD), to be inspired by BRT, provides a tool to help promote balanced growth and efficient use of existing infrastructure; and,

- **Growing congestion** – Under a Business-as-Usual (BAU) scenario, the volume of auto trips in 2035 will grow by more than 20% compared to 2009 volumes. The Smart Moves 2030: New Mobility Transportation Master Plan (TMP) proposed physical and operational road improvements to accommodate this demand, in addition to taking transit to the next level. Road widening improvements are more expensive over their lifecycle compared to transit, and in built-up areas are not feasible. Furthermore, road widening improvements in some areas are inconsistent with the goals of developing a multi-modal transportation network. BRT, however, is efficient at carrying large volumes of passengers compared to private vehicles, thereby reducing the need for further roadway expansions.

A number of opportunities exist which further support BRT:

- **Existing Transit Ridership and Growth** – During the afternoon rush hour (PM peak), more than half of all passenger boardings occur along a small subset of corridors, indicating strong community acceptance of transit along those corridors. Overall ridership was approximately 22.4 million trips in 2015; this has grown substantially from 12.4 million trips in 1996. Based on travel survey results from 2009 (the most recent comprehensive survey data available), transit trips accounted for 11.2% of daily trips in London. BRT will help increase transit ridership by attracting choice riders who are more influenced by travel time and reliability than by cost;

- **Commuter Travel Habits** – Existing average auto and transit trip lengths are approximately 5.0 km, which is a transit-friendly distance. This indicates that many existing trips could be competitively made by BRT;

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1 Census Profile, 2016 Census.
• **Existing Policy** – The TMP and The London Plan identified the need for a multi-modal transportation network to support all forms of travel. BRT service will provide service for trips not suited for active transportation or local transit service;

• **Catalyst for Change** – BRT investments are a catalyst for urban rejuvenation and inclusive community building that can lead to new private sector investments. These types of actions are needed if the City is to achieve its growth vision. This reflects the strong link between transportation, land use and urban form; and,

• **Land Use and Density** – Density downtown and along the potential RT corridors is three to seven times higher than the city average, with multiple major activity nodes along them. Many corridors have a good foundation for BRT, which will continue to grow.

1.2 **Study Area**

The study area includes the corridors identified in the RTMP for the approved BRT network (Exhibit 1-1), including bus turnarounds at each end, and a park-and-ride facility at the south end. The approved network is centred on the downtown and spans the city, bound by Fanshawe Park Road to the north, Exeter Road to the south, Second Street to the east and Wonderland Road to the west. Dedicated transit lanes will be located on Western Road, University Drive, Richmond Street, Clarence Avenue, Wellington Street, Wellington Road, Oxford Street West, Wharncliffe Road, Riverside Drive, Ridout Street, King Street, Queens Avenue, Dundas Street, Highbury Avenue and Oxford Street East.

The study area contains a number of natural features, including the Thames River, Medway Creek, and the Westminster Ponds. The approved BRT network will connect large-scale trip generators such as four hospitals (Victoria, St. Joseph’s, University and Parkwood), Fanshawe College, Western University and the affiliated colleges, Citi Plaza, the Covent Garden Market, Budweiser Gardens, the Western Fair District, White Oaks Mall, Masonville Mall and the commercial area at Oxford Street West and Wonderland Road.

The approved BRT network was assessed through the development and evaluation of Design Concepts for alternative configurations in order to reach a preliminary engineering design for the project. The RTMP identified nine focus areas for design development, as illustrated in Exhibit 1-2. The nine focus areas were expanded during the pre-planning phase to include the turnarounds for the north-and-west route ends, and Oxford Street West from Platt’s Lane to Wharncliffe Road.
1.3 Background

This project builds on three documents:

- Smart Moves 2030: The New Mobility Transportation Master Plan (2013);
- The London Plan (City of London Official Plan, 2016); and,

Additional planning context and previous relevant studies are discussed in Section 1.7.

1.3.1 Smart Moves 2030: The New Mobility Transportation Master Plan (2013)

The TMP is a long-term strategy for addressing and shaping the city’s population and economic growth, transportation demands and mobility needs. The TMP aims to provide more attractive travel choices for Londoners through a number of network enhancements, including the improvement of transit service and increased support for walking, cycling and carpooling.

The TMP also suggests that London’s transit service is a tool that can be used to influence the city’s future development, with the introduction of high-order transit corridors providing a critical platform for intensification, which in turn can further support robust transit ridership along these corridors.

Taking transit to the next level, including the development of a BRT system, is one of five pillars (Smart Moves) that the TMP is built on. RT is envisioned to form the spine of an integrated, multi-modal transportation network. The four other Smart Moves in the plan aim to support the RT vision and encourage new mobility options for Londoners. These are:

- Rethinking Growth to support the TMP through mixed-use intensification on RT corridors and within the urban area;
- Actively Managing Transportation Demand by strengthening Transportation Demand Management (TDM) efforts in areas such as education, outreach, and traveller incentives;
- Greater Investment in Cycling and Walking to encourage active transportation and increase access to the RT stops by providing last mile connections; and,
- A More Strategic Program of Road Network Improvements that focuses on improvements to support RT through selected road widening and corridor optimization, and other roadway network expansions and enhancements.

1.3.2 The London Plan (City of London Official Plan, 2016)

The London Plan is the City’s new Official Plan, which was approved by the Province on December 28, 2016, and is currently undergoing appeals. The London Plan sets out a new approach to city planning, and will guide development in London for the next 20 years. The Plan builds off of the Provincial Policy Statement (as discussed in Section 1.7), by encouraging infill development and increased densities in many areas of the city to promote walkability, revitalization of neighbourhoods and business areas. The Plan also emphasizes the reduction in the costs that can be achieved by limiting outward growth, reducing the consumption of farmland and energy, loss of tree canopy, and the release of greenhouse gases. The London Plan was developed in coordination with the RTMP, with each of the two studies incorporating the findings of the other. The City Structure Plan, a component of the London Plan, identifies three different policy areas:

- Urban Growth Boundary – This area defines the boundary between urban and rural London, and is the area within which all future urban development will occur.
• **Primary Transit Area** – Located more centrally within the existing Built-Area Boundary of London, this is an area that will accommodate a majority of the residential intensification and transit investments within the city. This area will also focus on improvements to the pedestrian realm and investment in cycling and active transportation facilities. The Primary Transit Area is generally bounded by Fanshawe Park Road to the north, Wonderland Road to the west, Southdale Road (west of White Oak Road) and Bradley Avenue (east of White Oak Road) to the south, and Highbury Avenue to the east.

• **Central London** – This area has several significant cultural heritage areas, and contains London’s downtown. Central London includes the lands generally bounded by Oxford Street, Adelaide Street and the Thames River. Infill and intensification will be facilitated in this area, with the potential for greater heights and densities than in other neighbourhoods, subject to the policies of The London Plan. Central London will also have a high standard for urban design, and will support high-quality pedestrian, cycling and transit environments.

The City Structure Plan also identifies various Urban Place Types with specific forms, uses and intensities, which include, but are not limited to:

- Neighbourhoods and business areas
- Transit environments.

Infill and intensification will be facilitated in areas that are centrally located around RT stops, to support a broad array of uses and create great destinations to live, shop, work and play.

**1.3.3 London’s Rapid Transit Initiative Master Plan (2017)**

Subsequent to the recommendations of the TMP, the City initiated the Shift Rapid Transit project in February 2015 to examine the existing and future state of transportation in London, and to develop a suitable RT network that would integrate with the existing transit system, as well as current and future land uses throughout the city. To direct this analysis, the City developed five objectives for RT (Exhibit 1-3).

**1.4 Vision for Rapid Transit**

The Vision for RT in London is built on the directions and policies set out in the London Plan, as well as the guiding principles established by the City at the outset of the RT project.

**1.4.1 Smart Growth**

Smart growth for urban centres is founded on strategic intensification, combined with mixed land uses, and access to high-quality transit, walking and cycling facilities. The London Plan has eight key directions to achieve its vision of the city in 2035, including building a mixed-use compact city, and placing a new emphasis on attractive mobility choices.

Building a mixed-use compact city includes the implementation of the City Structure Plan which focuses on strategically located high-intensity, mixed-use infill developments along RT corridors. Creating attractive mobility choices includes establishing a high-quality RT system to encourage use of transit, and incentivize the noted types of development along the RT corridors, and at transit villages and BRT stops. These developments will be further served through the integration of RT with facilities for walking and cycling.

**1.4.2 Mobility**

The London Plan identifies City Building Policies which provide over-arching direction on how the city will grow and develop over the next 20 years, among which is a policy on Mobility. This policy aims to make land use planning (through use, intensity and form) and

Based on these guiding principles, the 24-kilometre RT network was developed, with Bus Rapid Transit (BRT) identified as the preferred technology. All analysis and the creation of the routes, including all the design decisions and evaluation of design alternatives, is documented in the RTMP.

The BRT system is comprised of four segments, combined into two operational routes: the North-and-East route, and the South-and-West route. The BRT system will feature 38 stops (previously 35 in the RTMP), including one Central Transit Hub, to be located in Downtown London, where the two routes meet. Articulated (18m or 60ft) diesel or diesel-electric hybrid buses were identified as the preferred vehicle technology, with fully electric buses to be considered in the future.

The RTMP was undertaken in accordance with the requirements of the Municipal Class Environmental Assessment (MCEA) (2000, as amended to 2015). Through this process, Phases 1 and 2 of the MCEA were addressed in the RTMP, documenting the need and justification for RT, and recommending strategies to implement the project.

On July 25, 2017, London’s City Council approved the RTMP, which allowed the project to move into the next phase, the pre-planning for the Transit Project Assessment Process (TPAP).
mobility infrastructure planning (including RT service) mutually supportive, provide strong linkages between key origins and destinations within the city (e.g. Downtown, Transit Villages, employment areas, major institutions, etc), and support transit service in the Primary Transit Area by placing a high priority on pedestrian and cycling infrastructure.

1.4.3 Complete Streets

The London Plan classifies the streets within the RT corridors as Rapid Transit Boulevards, which follow Complete Streets principles. This classification encourages a very high-quality pedestrian realm, a very high standard of urban design, and the movement of a high volume of pedestrian, cyclist and vehicular traffic.

In order to achieve The London Plan vision for Rapid Transit Corridors and RTMP’s vision of complete streets, the following design principles are employed:

- Balanced multi-modal transportation;
- Environmental resiliency;
- Lively sense of space; and,
- Safety for all users.

1.4.4 Guiding Principles

As discussed in Section 1.3.1, the City developed five objectives as guiding principles specific to the development of an RT network. These objectives were used as the evaluation framework for the RTMP that established the approved BRT network, which has been further refined as documented in this report:

- **Economic Development and City Building**

  Positioning London to attract and retain new talent, jobs and investment will help sustain economic prosperity for all residents and businesses. The system will connect and invigorate major institutions, support the city-building efforts underway in the downtown and enhance London’s ability to attract new residents and investments. The system will also help realize the vision of the growth management strategy that focuses on promoting infill and intensification in strategic areas. BRT is a city-building catalyst that can help London to achieve its vision of becoming a world-class city.

- **Transportation Capacity and Mobility**

  The current transportation and transit network has already experienced overcrowding due to growing ridership and population. BRT offers an opportunity to reduce congestion by attracting latent transit demand, and by helping to address overcrowding that current users experience.

  Dedicated lanes for BRT will make the option more reliable, improve travel times, and enhance the user experience. This can be a catalyst for shifting mode choice away from personal automobiles to other modes. Integrating with active transportation modes, with a focus on enhancing the street-level experience for pedestrians and cyclists, and connecting to regional transportation hubs, will position BRT as a keystone of London’s emerging multi-modal transportation network.

- **Community Building and Revitalization**

  BRT needs to do more than just move people; it needs to create a sense of place and civic pride in the communities it connects. The system needs to improve accessibility for all residents across the city, not just those living in close proximity to a stop. Most importantly, BRT needs to help revitalize the city by attracting new growth and supporting compact and complete developments in strategic areas. Increasing density must be done strategically in order to create a vibrant, safe and inviting experience for pedestrians at street level.

  Encouraging growth through intensification will create vibrant new communities in underutilized areas of the city. Transit will help revitalize existing neighbourhoods and reduce pressures to develop in rural areas.

- **Ease of Implementation and Operational Viability**

  The BRT network must be practical to build and operate without negatively impacting the environment, heritage areas, or existing communities. BRT will travel along busy roadways and through existing vibrant communities that will need to continue to function through the construction period. During construction there will potentially be localized, short-term impacts to traffic and access along the corridors. Therefore, it is important to minimize disruptions and impacts during the implementation to support residents and local businesses. Once implemented, it is important to be able to adapt operationally and maintain infrastructure adaptability for future initiatives. Success of BRT also requires the system to be financially sustainable in the short- and long-term.

  Infrastructure and budget requirements must be aligned with the needs of London. Similarly, the long-term needs to operate the system must ensure it is economically viable, provides a balance between time savings and service coverage, and integrates within the city-wide transportation system.

- **Fiscal Responsibility and Affordability**

  Fiscal responsibility will be achieved by considering the return on BRT corridor investments in terms of ridership, transit user time savings and other transportation and
environmental benefits. Affordability means considering the financial resources required over the life of the project to maintain a healthy financial position.

1.4.5 System Resiliency and New Mobility

The rapid evolution of communication technologies has caused a ripple effect of disruption across most industries. The transportation industry has been no exception:

- The emergence of new app-based transportation services, such as Uber and Lyft, has expanded the market for ride-hailing services by offering lower prices, improved convenience and rider amenities, and stronger brand recognition compared to traditional taxis. These services include new features such as a split-fare and shared-ride / carpool functions, enabling two or more people to share rides and split the cost. These services have generated significant discussion and, in some cases, policy changes on the part of local governments.

- The impending arrival of connected and autonomous vehicle (CAV) technology is expected to have an even more significant impact, by changing the personal economics of transportation choice, and likely resulting in a shift in the current transportation paradigm.

When considering the future relevance and resilience of BRT, one of its greatest advantages is its adaptability. BRT service is adaptable in terms of its network scope, as connections to existing local service can easily be made. BRT infrastructure, in the form of dedicated lanes without overhead wires, can accommodate a wide range of vehicle types. As CAV technology evolves, it is reasonable to consider a future where driverless vehicles connect to Rapid Transit stops, or public transit vehicles have the ability to be dynamically routed to pick up passengers without necessarily following the same route every time. The City will have the flexibility to control what types of vehicles can use the dedicated lanes, and when, and to leverage the infrastructure to optimize operations as technology evolves.

Large-scale change is still pending, and will be gradual, but all levels of government are exploring how this change will impact investment in transportation resources, and the future of transportation infrastructure and services. At the time of writing, it is commonly understood that, while change is imminent, the fundamental need to move people rather than vehicles will remain. Traffic congestion is likely to remain fairly constant, where the demand to move people will meet or exceed the physical capacity of the road network.

Exhibit 1-4 shows the maximum person-carrying capacity of a lane for various vehicle types, including CAV technologies. Dedicated lanes for transit or other high-occupancy vehicles will continue to be a solution that enables a higher person movement capacity, and a more rapid flow of people along corridors where travel demand is high.

In London, the corridors selected for the BRT network are the highest capacity corridors in the city for moving people. These corridors will continue to form the main arteries of transportation in the city as the land uses along them continue to intensify.

The approved BRT network will be flexible and adaptive. The dedicated lanes can be integrated and optimized with emerging and future transportation technologies and services to ultimately improve transportation services across the city. As new technologies and services emerge, the City will have an opportunity to leverage the BRT infrastructure as part of an integrated mobility system, with BRT as the backbone (Exhibit 1-5).
1.6 Environmental Assessment Process

1.6.1 Transit Project Assessment Process

This study was completed in accordance with Ontario Regulation 231/08: Transit Projects and Metrolinx Undertakings (Transit Projects Regulation), under the Environmental Assessment Act (Ontario). The Transit Projects Regulation defines the TPAP, and exempts these projects from the traditional environmental assessment framework as defined under Part II (Environmental Assessments) and Part II.1 (Class Environmental Assessments) of the Environmental Assessment Act.

The TPAP requires consultation, identification of potential impacts, mitigation measures, and corresponding documentation. However, it starts with a transit project that has already been selected, and does not require assessment of the rationale for the project, nor planning alternatives or alternative solutions to a particular transit project.

Matters of provincial importance that relate to the natural environment, or have cultural heritage value or interest (matters of provincial importance), or a constitutionally protected Aboriginal treaty or right, are important considerations for the TPAP. Matters of provincial importance include, but are not limited to:

- A park, conservation reserve or protected area;
- Extirpated, endangered, threatened, or species of special concern and their habitat;
- A wetland, woodland, habitat of wildlife or other natural heritage area (e.g., prairie);
- An area of natural or scientific interest (earth or life science);
- A stream, creek, river or lake containing fish and their habitats;
- An area or region of surface water or groundwater, or other important hydrological feature;
- Areas that may be impacted by a known or suspected on-site or off-site source of contamination, such as a spill, a gasoline outlet, an open or closed landfill site, etc.;
- Protected heritage property (not restricted to property meeting the criteria as set out under the Ontario Heritage Act in Ontario Regulation 10/06, Criteria for Determining Cultural Heritage Value or Interest of Provincial Significance);
- Built heritage resources (not restricted to property meeting the criteria as set out under the Ontario Heritage Act in Ontario Regulation 10/06, Criteria for Determining Cultural Heritage Value or Interest of Provincial Significance);
- Cultural heritage landscapes (not restricted to property meeting the criteria as set out under the Ontario Heritage Act in Ontario Regulation 10/06, Criteria for Determining Cultural Heritage Value or Interest of Provincial Significance);
- Archaeological resources and areas of potential archaeological interest (not restricted to property meeting the criteria as set out under the Ontario Heritage Act in Ontario Regulation 10/06, Criteria for Determining Cultural Heritage Value or Interest of Provincial Significance);
- Natural environment matters of provincial importance (e.g., protected species, fish, or plants, or areas of ecological significance).

1.5 Project Proponent

The proponent for this transit project is the City of London. The London Transit Commission (LTC) is a key stakeholder, as the agent of the City responsible for the operation, repair, control and management of the municipal transit system on behalf of the City.

The Project Team is comprised of Rapid Transit Implementation Office staff, plus representatives from a number of key City departments, including Roads and Transportation, Planning – Urban Design, and LTC staff. The Project Team also draws upon the resources of staff from City departments that have an interest in the BRT corridors, or provide support to the study process, including, but not limited to: Water, Wastewater, Stormwater, Planning – Environmental and Parks, Planning – Urban Forestry, Structures, Development Services, Realty Services, Legal Services, Communications, Financial, and Geomatics.

A consultant team led by IBI Group, in association with WSP Global, was selected to guide the study through the Environmental Assessment process. The team is comprised of technical specialists from a range of disciplines including:

- IBI Group – Project management, civil engineering, streetscaping, architecture, traffic analysis, Intelligent Transportation Systems (ITS), public and agency consultation, Aboriginal consultation, stormwater management.
- WSP Global – Civil engineering, archaeology, cultural heritage, natural environment, noise and vibration, air quality.
- Golder Associates – Geotechnical engineering and contamination assessment.

Exhibit 1-5: Comparing Traditional and New Mobility

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<tr>
<th>Traditional Mobility</th>
<th>New Mobility</th>
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<tbody>
<tr>
<td>Ownership ● Competitive ● Hierarchal</td>
<td>Sharing ● Collaborative ● Networked</td>
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<tr>
<td>1 mode {either/or}</td>
<td>1 mode {many modes [all]}</td>
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Regulation 10/06, Criteria for Determining Cultural Heritage Value or Interest of Provincial Significance;

- An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the Niagara Escarpment Planning and Development Act;

- Property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the Oak Ridges Moraine Conservation Act, 2001 applies; and,

- Property within an area described as a key natural heritage feature or a key hydrologic feature in the Protected Countryside by the Greenbelt Plan under the Greenbelt Act, 2005.

The TPAP is a proponent-driven, self-assessment process that is required to be completed within six months of being initiated. The obligation to stay within that timeline is borne by both the proponent and the regulatory agencies overseeing the project. The six-month period is comprised of three parts, as illustrated in Exhibit 1-6:

1. **120-Day Consultation Period**, started by Notice of Commencement for the TPAP, which includes consultation with the public, regulatory agencies, aboriginal communities and identified stakeholders, and preparation of the EPR;

2. **30-Day Public Review Period**, started by Notice of Completion of the EPR, which provides review time for public, regulatory agencies, Aboriginal communities and other interested parties. Objections to the project may be submitted to the Minister of MOECC during this period; and,

3. **35-Day Ministerial Review Period**, started by conclusion of the previous period. The Minister of the MOECC reviews any objections and determines if the project may proceed, may proceed with conditions, or if the proponent must conduct additional work and submit a revised EPR to the Minister.

In light of the fixed timeline, proponents typically complete much of the work required for the TPAP prior to initiating the process, during a pre-planning phase. Section 1.6.2 discusses the work completed during the pre-planning phase of this project.

The MOECC does not have the authority to approve or refuse a transit project; however the Minister does have the authority to act if the transit project may have a negative impact on the above-noted matters of provincial importance, or constitutionally protected Aboriginal Treaty Right. Should the Minister act within the 35-day period, one of three notices may be given to the proponent:

- A notice to proceed with the transit project as planned in its EPR;

- A notice that requires the proponent to take further steps, which may include further study or consultation; or,

- A notice allowing the proponent to proceed with the transit project subject to conditions.

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1.6.2 Pre-Planning Activities

To complete the process within the prescribed 120-day time limit, numerous pre-planning activities were undertaken prior to the issuance of the Notice of Commencement for the TPAP. The following is a summary of pre-planning activities that have been completed as of March 2018:

- Analysis of existing and future conditions, development and evaluation of design alternatives, and selection of a preferred network alternative and technology as documented in the RTMP, including supporting technical studies;
- Additional or advancement of technical studies, including transportation, natural heritage, cultural heritage and archaeological, geotechnical, air quality, and noise and vibration (as discussed in Sections 3 and 4);
- Consultation with MOECC staff (as discussed in Section 5.2.2) to discuss timelines and requirements for this project under the TPAP, and review and confirm identified Aboriginal Communities, and stakeholder groups to be consulted;
- Consultation with Upper Thames River Conservation Authority (UTRCA) staff (as discussed in Section 5.2.2) to discuss areas of the project that fall within their regulated area and/or may impact waterways or wetlands;
- Advancement of the recommended engineering design (as discussed in Section 2);
- Preparation and implementation of a consultation program (as discussed in Section 5.2), which included:
  - Consultation with technical and government agencies;
  - Consultation with Municipal Advisory Committees;
  - Consultation with community stakeholders;
  - Consultation with emergency services;
  - Correspondence and four meetings with Aboriginal Communities - two meetings with the Chippewas of the Thames First Nation, and one meeting with Walpole Island First Nation and Six Nations of the Grand River Territory (Haudenosaunee);
  - Two rounds of Public Information Centres (PICs); and,
  - Consultation with affected property owners;
- Identification of matters of provincial importance within the study area (as discussed in Section 4.4.2.1); and,
- Identification of other potential provincial or federal EA requirements.

1.7 Planning Context and Previous Studies

Policies and legislation established at both the provincial and municipal levels have shaped and directed the development of the project. Over the past decade, various studies have examined different facets of RT as it relates to land uses, growing ridership, multi-modal transportation and economics. The following section is a summary of these policies, legislation, and studies as they relate to the London BRT. The RTMP provides additional details on the planning context that formed the basis of the approved BRT network.

The Planning Act – This is the provincial legislation that sets out the framework for Ontario’s land use planning and describes how land uses may be controlled and who may control them. The Act promotes sustainable economic development in a healthy natural environment, and provides for a land use planning system that is led by provincial policy. The Act also provides for planning processes that are fair, by making them open, accessible, timely and efficient, encouraging cooperation and coordination among various interests, and recognizing the decision-making authority and accountability of municipal councils in planning.

Provincial Policy Statement (2014) – The Provincial Policy Statement (PPS) is issued under the Planning Act through a multi-ministry initiative led by the Ministry of Municipal Affairs and Housing (MAH) to provide policy direction on matters of provincial interest related to land use planning and development. The PPS focuses on the efficient use of land and infrastructure in settlement areas through intensification and redevelopment, and encourages the protection of resources of provincial interest, public health and safety, and the quality of the natural and built environment. Improved access to transit and active modes of transportation serve to support this focus while preserving or improving these resources and interests.

Zoning By-law Z-1 – The City of London Zoning By-law provides a prescriptive regulatory framework to enforce the policies established in the Official Plan, including, but not limited to, the Urban Place Types. This is achieved through the provision of specifications on use, parking, building height and set-backs, lot coverage, density and gross floor area, among other matters.

LTC Long-Term Growth Strategy (2006) – This strategy was developed by LTC to identify ways that transit service in London could be improved to attract a greater ridership. This included a target for the proportion of trips made in London using transit, or transit modal split, of 10%, consistent with the 2004 Transportation Master Plan. The strategy recommended that BRT be implemented along eight corridors to improve speed, frequency, comfort and reliability of bus routes. The plan also considered a number of management policies related to land use and parking to support the proposed BRT service.

The Way Ahead: London’s Bus Rapid Transit Strategy – Business Case (2013) – This strategy was developed for LTC by AECOM to assess the benefits and costs of a new BRT service, and establish a delivery framework for the required improvements. Both infrastructure and service improvements are suggested, including the development of two
BRT corridors that intersect in London’s downtown, and local bus service improvements to enhance connections to the BRT network.

**Transit Priority Strategy for Bus Rapid Transit Implementation (2012)** – This strategy, prepared for the City of London by Paradigm Transportation Solutions Ltd., suggests attracting riders prior to the full implementation of the BRT network by applying simple infrastructure and service improvements. These improvements would also be designed to maximize the ability for them to remain useful as part of the full BRT design, minimizing throw-away costs. Suggested improvements include, but are not limited to, transit signal prioritization, designation of existing general traffic lanes as bus only or bus and high-occupancy vehicle (HOV) only, and restriction of traffic stops or parking near bus stops.

**Downtown London BRT Routing Options (2011)** – This document, prepared by Stantec, builds on the TMP, by examining various options for routing the two RT corridors through Downtown London. The report uses the preliminary RT corridors, which were later refined through the RTMP process. Five possible routes through downtown are examined using the preliminary corridors, which are all identified as feasible options, but with three performing the best through a preliminary level evaluation.

**Household Travel Survey Report (2009)** – To help inform the development of the TMP, a household travel survey was administered to residents within the City of London and the London Census Metropolitan Area. The survey sought and helped to identify current travel patterns and public attitudes towards transportation in London.

**LTC Route Structure and Service Guideline Review (April 2015)** – This study was conducted by LTC to review the entire transit network, assess the quality and performance of the existing system, and develop a five-year route and service plan to improve the network prior to the implementation of RT. The study focuses on identifying opportunities to reallocate underutilized resources to other areas of the system where additional resources are needed. This study also recommends additional express routes be added to the system, based on the success of existing express routes.

**LTC Transit Network Rapid Transit Integration Framework (August 2016)** – This study builds on the LTC Route Structure and Service Guideline Review (April 2015), and incorporates the Full BRT Network, as approved by Council in May 2016. The study recommends changing the existing LTC network to compliment and minimize duplication with RT service, achieve service design principles, maintain connections, meet policy headways, provide direct service and maintain effective operations. Given this study was undertaken prior to finalization of the RT corridors and related operating considerations (curbside vs centre-running), it will be revisited in 2018/19 to ensure the feasibility of the recommended service changes included within.

**Our Move Forward: London’s Downtown Plan (2015)** – This plan defines a vision and a set of values for a revitalization of Downtown London, as well as a planning framework, strategic direction, and a list of transformational projects. RT is identified as a component of revitalization throughout the plan, including as a focal point for some transformational projects, such as the Cross-river Connection, Richmond Walk, Queens Station, and Clarence Street Connector. Key activity generators and priority sites for redevelopment are also identified in this report, which were considered and accounted for during the development of the RTMP.

**Western University Campus Master Plan (2015)** – This plan identifies six key initiatives that will address the needs of the growing campus, some of which are directly benefited by RT. Moreover, the “Improve Campus Connectivity” initiative directly references RT as a component of improving active transportation choices and managing transportation demand.

**London ON Bikes – Cycling Master Plan (2016)** – This plan examines ways to increase the use of cycling as a mode of transportation through new infrastructure, programs, policies and actions in support of cycling. There is a strong multi-modal focus, including several references to the integration of the cycling network with the future BRT stop locations and corridors. The implementation of a cycle track on Queens Avenue in Downtown London is one of the premier features of this plan. However, the route established by the RTMP includes a couplet on King Street and Queens Avenue between Ridout Street and Wellington Street, which will preclude the development of the proposed Queens Avenue cycle track.

**Downtown London Parking Study (2014 Update)** – This study reviewed the parking inventory and demand in Downtown London, and developed recommendations consistent with, and in support of, the TMP. The study noted that while Downtown London has grown busier, there was not an immediate parking shortage or need to increase supply. The study sets out a vision and set of guiding principles that coincide with improved management of supply to support transit and active mobility networks.

**Downtown Parking Strategy – City of London (2017)** – This strategy is examining the implications of future development on existing parking conditions, based upon relevant outcomes of the TMP, RTMP, LTC Transit Network Rapid Transit Integration Framework, and Delhi ON Bikes and London’s Downtown Plan. The study aims to determine how much parking is needed, how much parking is provided, the City’s role in meeting future demand, financial implications of new facilities, the best service delivery model, and how best to maximize the investment of public funds.

**Western Road/Wharncliffe Road North Widening from Platt’s Lane to Oxford Street Municipal Class Environmental Assessment Study (2015)** – This study developed a set of improvements to be completed along Western Road/Wharncliffe Road from Platt’s Lane to Oxford Street. These improvements would occur directly north of the BRT corridor, where the route turns between Wharncliffe Road and Oxford Street. The preliminary engineering design for this project incorporates the improvements from this EA study for the intersection of Oxford Street West and Wharncliffe Road, with modifications as appropriate to accommodate RT infrastructure.

**Fanshawe Park Road/Richmond Street Intersection Improvements Environmental Assessment Study (on-going)** – This study developed a set of options to complete improvements identified in the TMP at Fanshawe Park Road and Richmond Street, which include additional through and turning lanes, and features that support active
transportation. These improvements would occur at the northern limit of the North-and-East BRT corridor. The preliminary engineering design has taken these improvements into consideration.

**Western Road and Sarnia Road/Philip Aziz Avenue Improvements Municipal Class Environmental Assessment (paused for completion of the TPAP for the RT initiative)**

This study has identified a need for improvements to address a high volume of pedestrian activity at the intersection, the addition of cycling facilities, northbound and eastbound turning movements, and stormwater management within the Western University Campus. The preliminary engineering design ties into this on-going EA study, as the boundaries of the two studies are contiguous. The Western Road and Sarnia/Philip Aziz Avenue Study will use the outcome of the TPAP to direct its design.

### 1.7.1 Other Relevant Studies

The development of this study also considered other recently completed or currently on-going plans and environmental assessments in the City, including:

- City of London Facility Accessibility Design Standards Manual (2007);
- Downtown London: Heritage Conservation District Plan (2013);
- Heritage Community Improvement Plan (2007);
- City of London Placemaking Guidelines (2007);
- City of London Urban Forest Strategy: Enhancing the Forest City (2014);
- Creating Dundas Place: A Flexible Street Scoping Study (2015);
- McCormick Secondary Plan (2015);
- Secondary Plan- London Psychiatric Hospital Lands (2016);
- Regeneration South of Horton Street: A Community Improvement Plan for London’s SoHo District (2011);
- Downtown London Community Improvement Plan; and,
- Old East Village Community Improvement Plan.