

**CITY DOCUMENT: SHIFT RAPID TRANSIT UPDATE FOR STRATEGIC PRIORITIES AND POLICY
COMMITTEE MEETING NOVEMBER 9, 2015**

FOR INFORMATION

As Board members are aware, the City of London has made a commitment to the introduction of Rapid Transit. This is a significant and complex undertaking that will have profound implications for the City, and for the University, given our community is the largest user of transit. Commencing back in April of 2015, Administration and City representatives have been meeting to consider routes and options. On November 4, 2015 the City posted an update on Shift Rapid Transit for discussion at the upcoming meeting of Strategic Priorities and Policy Committee (a City Committee). This document indicates that the City Administration's preferred option for transit on the North-East Corridor, which includes the University, is light rail. The University learned of this recommended option on November 4.

History of Discussions:

Following is a record of the discussions between the University and the City regarding Rapid Transit:

April 27, 2015 – meeting at the University to discuss initiative including possible routings and options

June 2, 2015 -- informal presentation to the Property & Finance Committee including possible routings and options.

June 3, 2015 – consultation presentation to the broader University community

August 25, 2015 – meeting at City Hall regarding many files including Rapid Transit

September 22, 2015 – meeting with City transportation officials to lay out University concerns and considerations regarding Rapid Transit

In addition there have been two key document exchanges:

July 28, 2015 – document sent to a City official noting a number of outstanding files. This is what was stated relative to Rapid Transit:

We've had two good discussion sessions with City officials regarding this but much remains to be done. The prospect of having Rapid Transit move through our campus has profound implications to Western. I note that there has been an intent to finalize the routing with City Council in October. On Western's behalf, I need to go on record to state that no one should assume the routing will move through our campus, until such time as agreements are reached on a number of important campus land considerations. And please take note that once University Administration has achieved such agreements, our Governors who hold the ultimate authority on all land matters, need to approve as well which has to follow our official process. Given the importance of the RT file and the requirements and changes that will be included, we want to ensure that all aspects of the RT project and planning are properly defined, structured and finalized.

And the City's response on the same date: Noted. We are undoubtedly aware of the significance of the RT initiative and its impact on Western. We have spoken with our Legal department who are researching other 'transit hub' agreements with hopes to discuss with Western as soon as possible.

October 13, 2015 – document sent by City official entitled: Geometric Design Plan for LRT through the University of Western Ontario Campus. While there have been internal University meetings to discuss this document, there have been no meetings with City officials to discuss it as yet.

I have replicated the exchange from July 28 because we remain in the same position today, except that the City has now declared light rail as the preferred option for the North-East Corridor. The document also tells us this node would have tracks and catenary (overhead wires).

University Concerns:

The majority of University-related traffic on campus is pedestrian (our students); some 35,000 each day in the academic year. We also have a very residential campus in contrast to several others, for example the GTA universities, which are more commuter campuses on public streets. Safety of pedestrians and cyclists on our residential campus on University private roads is of paramount importance. The amount of cut through traffic on campus is significant and the prospects of that increasing with the addition of more lanes on certain campus routes to accommodate Rapid Transit is high. Our discussions to date have noted the need to introduce traffic calming measures.

The land required to accommodate Rapid Transit (with dedicated lanes) is significant. Development of new buildings on campus is already constrained because of the increasing restrictions on building in the proximity of the Thames River and Medway Creek.

The introduction of Rapid Transit on campus will require the construction of a new five-lane bridge across the Thames River on University Drive. The current bridge is iconic; it marks the main vista onto the University Campus. It currently has two narrow lanes plus sidewalks; only one bus at a time can cross the bridge. Replacement of a two-lane bridge with one that is five lanes wide is a profound change to a key feature of Western's campus and will (absent other measures) serve to invite significant additional traffic to route through campus.

Capital costs and whether the University would be asked to cost share in any part of these is unknown. Subsequent operations and maintenance costs and responsibilities are unknown.

We have also had a recent student tragedy: on the night of October 7 a car struck a first year student, Andrea Christidis, as she was walking on the sidewalk on Lambton Drive back to her residence, Sydenham Hall. Andrea died of her injuries on October 9. This tragedy prompted many to express concerns about the volume of vehicular traffic on campus and implications for pedestrian and cyclist safety. Administration has committed to undertake a review of potential measures that can be introduced to enhance the safety of campus for everyone. It is reasonable to observe that in the face of this tragedy, the mood on campus as it pertains to vehicular traffic has shifted.

The University – City discussions to this point have centered on a Rapid Transit solution focused on busses. There have not yet been any discussions specifically about a light rail solution, except to share the University's preliminary conclusion that it was not possible to introduce light rail given campus space constraints. This was likely the driving force behind the creation of the City document received on October 13 the purpose of which was to "present the conceptual geometric plan prepared for a potential light rail alignment through the campus of the University of Western Ontario."

The University concerns remain largely the same with the light rail option, noting that the space requirements will be even greater than under the bus rapid transit option and the operating and maintenance requirements will be different and potentially more complex in a light rail option. We had looked at the bus rapid transit option to rationalize the number of busses on campus hoping to eliminate buses from Alumni Circle altogether. The option of light rail now introduces the possibility of having both busses and trains on our campus, and the stations cannot co-mix. Finally, the prospect of having tracks and overhead wires through our campus is of major concern. Western with its consistent collegiate gothic

architecture and beautiful landscaped areas is one of the most beautiful campuses in Canada. This is threatened with the prospect of installation of overhead wires including across the distinctive bridge on University Drive.

As already noted, as of November 5, 2015 there have been no discussions with the City specifically focused on the light rail option, although this is being planned. We would see the next steps to include discussions with the City with a goal of outlining the University's concerns and working through potential options and alternatives. We are also hopeful that the City will soon be in a position to provide a draft memorandum of understanding so we can work through that as well. Once we can reach agreement on both routing and a memorandum of understanding that addresses land, cost and other considerations we will be in a position to make recommendation to Property & Finance and the Board.

Gitta Kulczycki
Vice-President (Resources & Operations)

TO:	CHAIR AND MEMBERS STRATEGIC PRIORITIES AND POLICY COMMITTEE MEETING ON NOVEMBER 9, 2015
FROM:	ART ZUIDEMA CITY MANAGER
SUBJECT:	SHIFT RAPID TRANSIT UPDATE

RECOMMENDATION

That on the recommendation of the City Manager, the following actions **BE TAKEN** with respect to the Shift Rapid Transit initiative:

- a) the information regarding the preferred Rapid Transit system, technology (types of vehicles) options and potential costs **BE RECEIVED** for information;
- b) the Civic Administration **BE DIRECTED** to utilize the Hybrid Network, which uses using a combination of bus and light rail vehicles, as the preliminary preferred alternative and the basis for the next round of community engagement and public input for the Rapid Transit Environmental Assessment;
- c) the Civic Administration **BE DIRECTED** to work with Western University to identify a preferred route through the campus area and to develop a memorandum of understanding with Western University regarding the preliminary preferred routing and implementation requirements through the campus;
- d) the preliminary preferred Rapid Transit system routes **BE INCORPORATED** into the draft London Plan as the basis for the Plan's final community information and consultation processes; and
- e) the Civic Administration **BE DIRECTED**, in partnership with the London Transit Commission, to continue to pursue available funding opportunities for Rapid Transit with other orders of government.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Civic Works Committee - June 19, 2012 - London 2030 Transportation Master Plan
- Civic Works Committee - October 7, 2013 – Bus Rapid Transit Strategy
- Civic Works Committee – April 7, 2014 – Timelines for Major Environmental & Engineering Reports
- Civic Works Committee – July 21, 2014 – Rapid Transit Corridors Environmental Assessment Study Appointment of Consulting Engineer
- Civic Works Committee – June 2, 2015 – Rapid Transit Funding Opportunities
- Civic Works Committee – August 24, 2015 – Shift Rapid Transit Initiative Appointment of Survey Consultants

BACKGROUND

Purpose

The purpose of this report is to provide Committee and Council with an update regarding the Shift: Our Rapid Transit Initiative (Shift), and seek direction on the next steps in the Rapid Transit Environmental Assessment process and related funding requests.

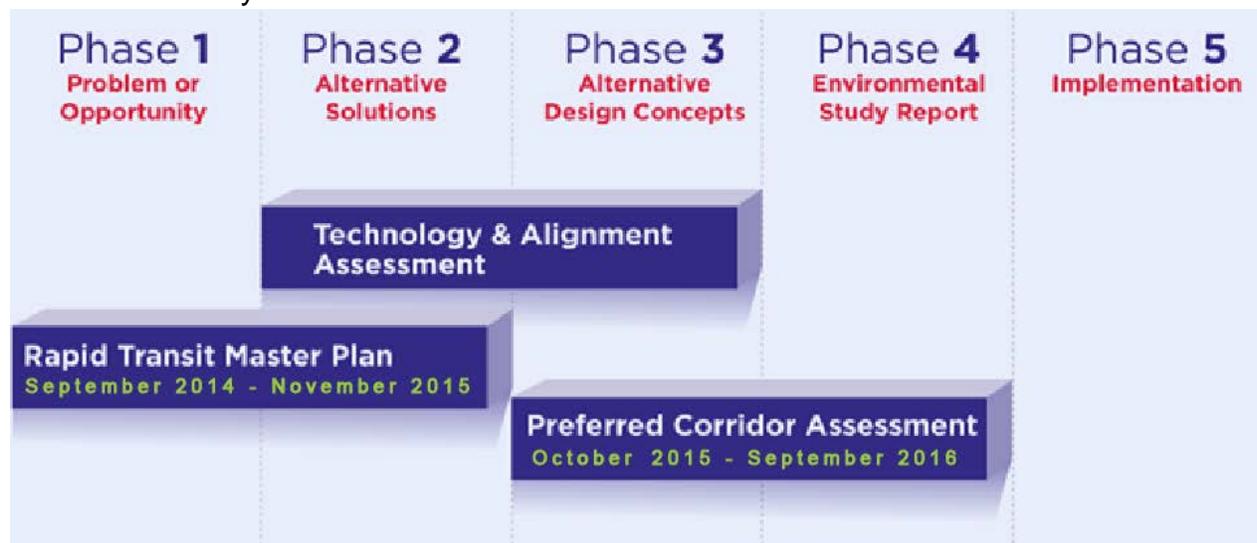
Context

Rapid Transit is the primary recommendation of the Smart Moves Transportation Master Plan (TMP), is identified in the current Official Plan, and represents a cornerstone of The London Plan and Council's 2015 - 2019 Strategic Plan. The 2015 – 2019 Strategic Plan identifies the Rapid Transit Implementation Strategy as a means to deliver convenient and connected mobility choices as part of a strategic area of focus called "Building a Sustainable City".

Following a significant research and public consultation process, the Shift Rapid Transit initiative is progressing towards the finalization of the preferred routes, technologies and network. The value of Rapid Transit is underscored by Council's financial commitment of approximately \$125 million for Rapid Transit implementation, funded primarily through Development Charges.

The implementation of a Rapid Transit system is a central component of London's land use and transportation policy, which will help shape the city's future pattern of growth, encourage intensification and regeneration, and stimulate economic growth for decades to come. Rapid Transit, combined with a strong base transit system with appropriate service coverage and frequency, will facilitate more transit trips, reduce traffic volumes and making transit a quicker, more convenient and comfortable option for residents.

The Rapid Transit Environmental Assessment (EA) is being undertaken to create a Rapid Transit Master Plan (Master Plan) that adheres to the legislative requirements of the Environmental Assessment Act. The Master Plan will provide a strategy for building a Rapid Transit system that will help meet the City's economic development, mobility, environmental and community buildings objectives while still being operationally feasible and economically viable.



The EA is progressing towards the stage of determining a preferred Rapid Transit system network structure (routes) and identifying the types of rapid transit technology (vehicles) to be used for each route. This report provides an overview of the work undertaken to date and outlines the next steps in the process.

DISCUSSION

The Rapid Transit project began in September of 2014. The community engagement component of the process was initiated in early January of 2015 with the launch of the Shift branding for the study.

Problem and Opportunity Statement

London is facing a number of problems which Rapid Transit can help solve:

- **Growing Congestion-** The volume of auto trips will grow by 25% by 2030. While the recommended road network improvements identified in the TMP will accommodate some of the demand, greater emphasis on a multi-modal transportation network is required. Rapid Transit is efficient at carrying large volumes of passengers compared to private vehicles, thereby reducing the need for future roadway construction, and will have a positive impact on the environment. London is a city of rivers and bridges, and Rapid Transit will provide a more efficient and effective way of crossing them.
- **Transit Travel Times and Service Frequencies-** Existing transit travel times are not competitive against auto travel. Service frequencies (time spacing between bus arrivals at a transit stop) on many routes are often 15 minutes or longer during peak periods, making transit an impractical option for many commuters (people who have an option to drive or take public transit). By implementing a frequent and fast Rapid Transit spine, in conjunction with supporting route structure improvements, the transit network can become an attractive option to commuters offering rapid, reliable, comfortable and frequent service;
- **Land Use and Density-** Large portions of the existing urban area consist of large single-use, low-density tracts of development. These uses often take forms that present inconvenient and unpleasant walking environments, making transit usage less attractive. These factors are not conducive to active modes or conventional transit services. Rapid Transit will create an environment that supports investments in more dense, mixed-use residential, commercial, office and institutional developments along its corridors and at future Transit Village nodes;
- **Growth Management** - The London Plan (draft) forecasts 77,000 new residents and 43,000 more jobs by 2035. Communities around London, which rely on London's amenities and institutions, are also growing. A spread pattern of growth could lead to very high infrastructure costs, consume significant amounts of agricultural land, and have significant environmental impacts. Rapid Transit offers a tremendous incentive for greater proportions of new development to

establish along rapid transit corridors and nodes. Transit-oriented development provides a tool to help promote growth, regenerate urban areas, encourage positive forms of infill and intensification and make efficient use of existing infrastructure;

A number of opportunities exist which also support Rapid Transit:

- **Existing Transit Ridership and Growth-** During the peak periods, more than half of all passenger boardings occur along a select number of corridors, indicating strong community acceptance of transit and a well-developed culture of transit use. Overall ridership grew to 24.1 million trips in 2014. Rapid Transit will help build ridership by attracting more choice riders who may be influenced by faster travel times;
- **Commuter Travel Habits-** The average auto and transit trip lengths were both 5.0 km in 2011, a transit-friendly distance. This indicates that many existing trips could be competitively made by Rapid Transit;
- **Existing Policy-** London's TMP and Official Plan (OP) identified the need for a multi-modal transportation network to support all forms of travel. Rapid Transit will enhance the conventional transit service; enable a growth in transit modal share and facilitate the health benefits associated with active transportation segments at the beginning and end of every transit trip.
- **Catalyst for Change-** Rapid Transit investments are a catalyst for urban rejuvenation and inclusive community building, that in turn can lead to new private sector investments. These types of actions are necessary if the City is to achieve its growth vision. This reflects the strong link between transportation, land use and urban form; and city building.
- **Land Use and Density-** The density downtown and along the potential Rapid Transit 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 Rapid Transit, which will only grow.

Community Engagement

An extensive community engagement effort has been undertaken to assist in the planning and impact assessment process for Shift. The engagement was undertaken by a multi-disciplinary team that included staff from Engineering and Environmental Services, Planning, Communications and London Transit.

Consultation was undertaken with technical and government agencies, municipal advisory committees, First Nations, major institutions (Western University and Fanshawe College) property owners, Business Improvement Associations (BIAs), community groups, student associations and the general public.

The engagement was conducted using a variety of communications and outreach methods in order to provide a wide range of options for the public and stakeholder groups to provide input. They were able to choose their level of involvement from the following options:

- Public Information Centres (2 PICs to date),
- Presentations to stakeholder groups,
- Project website, including interactive program for collecting information,
- Contacting the project team (phone, e-mail, fax, regular mail),
- Project eNewsletters,
- Project surveys,
- Social media (over 1,500 followers on Twitter, Facebook, YouTube and Instagram), and
- Pop-up booths at public events.

To date, the Shift engagement team has attended more than 50 events through which over 12,500 contacts with the public have been made.

Guiding Principles for a Preferred Rapid Transit System

The justification for a Rapid Transit system was a primary recommendation of the TMP. The evaluation and selection of a preferred Rapid Transit network forms the basis of the EA analysis in Phase 2. To frame the EA analysis, the following guiding principles were used based on the strategic goals set by the City, policy documents and the core attributes necessary to support Rapid Transit.



Throughout the assessment, the corridors were evaluated against these principles to ensure these overarching themes and objectives were being addressed:

- **Transportation Capacity and Mobility Focus**
The current transportation and transit network is experiencing overcrowding due to the growing ridership and population. Rapid Transit offers an opportunity to reduce overcrowding by providing a more efficient and higher capacity public transportation system.
- **Community Building and Revitalization Focus**
Encouraging growth through intensification will create vibrant new communities in under-utilized areas of the city. Rapid Transit will help to revitalize our Downtown – the heart and image of our City. Furthermore, rapid transit will help to regenerate existing neighbourhoods and reduce pressures to develop in rural areas.

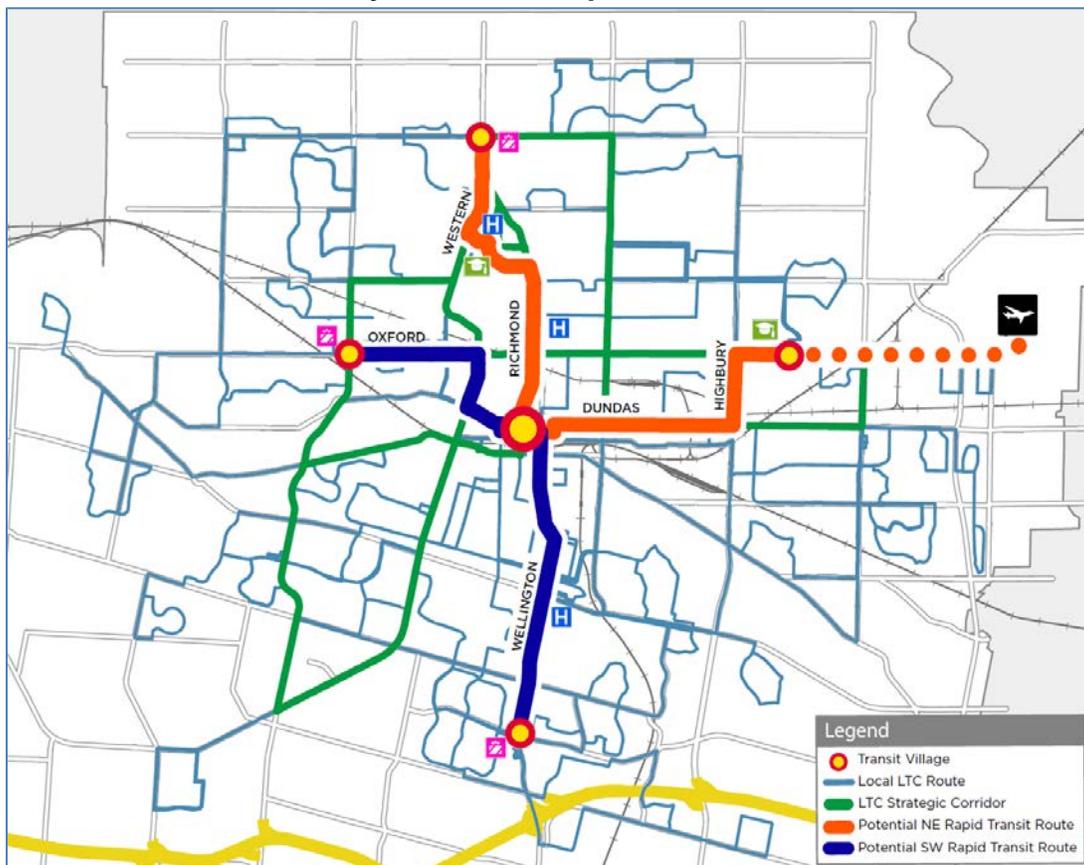
- **Economic Development and City Building Focus**
Rapid Transit has been shown to spur new development along the defined corridors, attract new jobs and help draw and retain millennial talent. It is a city-building catalyst that can help to build London's image in Canada and abroad as a top-tier city – one that can compete vigorously for investment, jobs and talent.
- **Ease of Implementation and Operational Viability**
The preferred Rapid Transit network must be practical to build and operate, minimizing and mitigating impacts on the environment, heritage areas, and existing communities. 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 with service coverage, and integrates within the city-wide transportation system.

These four principles have been applied throughout to the Shift initiative.

The Preliminary Preferred Rapid Transit Network

The Preliminary Preferred Rapid Transit network serves major destinations including the Downtown, transportation hubs, retail centres, post-secondary institutions, research centres, office areas, hospitals, entertainment destinations and large employers. It integrates with the larger transportation network that includes automobiles, local buses, inter-city travel, potential future High Speed Rail, cyclists, pedestrians and goods movement.

Preliminary Preferred Rapid Transit Network



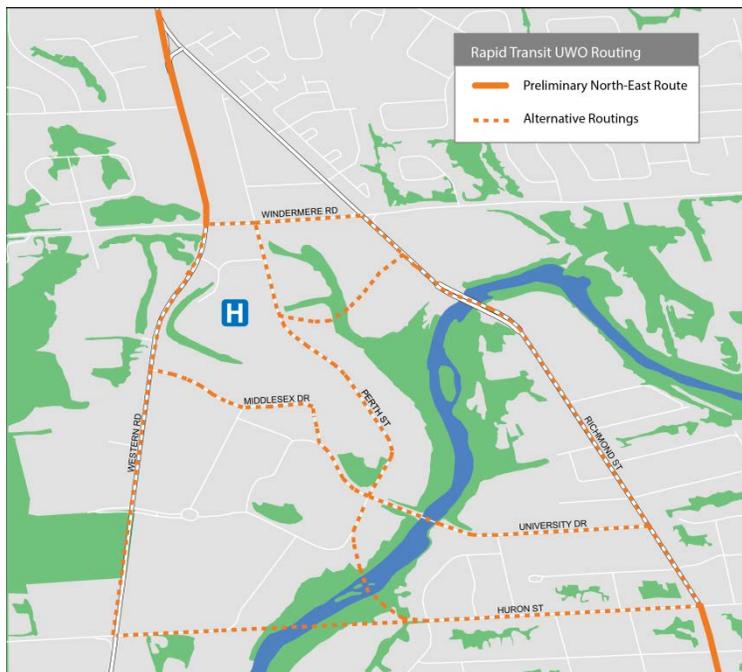
The Rapid Transit network will be defined by two main corridors. The North-East Corridor (orange line) connects Masonville Place, Western University, Western Research Park, London Health Science Centre-University Hospital site, St. Joseph's

Hospital, Downtown London, Old East Village, the London Psychiatric Hospital redevelopment lands, Fanshawe College and the London International Airport (longer term).

The South-West Corridor (blue line) connects White Oaks Mall, London Health Sciences Centre-Victoria and Children's hospital sites, Downtown London and the Oxford-Wonderland residential and commercial hub. Shift has also determined detailed routing options in the downtown and the two corridors meet along King Street with a proposed central transfer station in the area of King Street and Clarence Street.

The Rapid Transit network will consist of the two main corridors that will operate in conjunction with the existing transit route structure. A key initiative of the London Transit Commission, identified through the Route Structure Review, is to support the Rapid Transit system through the restructuring/refinement of the existing route structure to provide greater connectivity and integration with the introduction of higher frequency transit routes along strategic corridors (shown on the map by green lines) and enhanced local feeder services to support ridership on the rapid transit corridors. Rapid Transit will also integrate with air, rail and active transportation networks.

Western University Corridor Options



The preliminary preferred corridor alignment through Western University requires special consideration in order to ensure the campus is conveniently serviced while maximizing potential rapid transit system ridership, maximizing service efficiency and minimizing environmental and social impacts.

Various corridor alignments have been reviewed with the Western University administration and have been presented to the Property and Finance Committee

at Western.

In order to finalize the corridor alignment through the university and gain concurrence prior to the completion of the Rapid Transit Master Plan, it is recommended that a Memorandum of Understanding be developed with Western University for a preferred rapid transit alignment and principles related to the capital construction and ongoing maintenance and operation considerations.

Rapid Transit Network Alternatives

The implementation of a Rapid Transit system, together with a strong base transit system with appropriate service coverage and levels of service, will improve travel time performance, increase the passenger capacity of the transit network and improve the

quality of service for transit passengers. This will be achieved through several characteristics that differentiate Rapid Transit from local bus services including:

- Frequent and reliable service along the Rapid Transit corridors, allowing riders to use the service without needing to consult a schedule
- Limited key stops along the Rapid Transit corridors to ensure high operating speeds
- Dedicated lanes for Rapid Transit, separated from other traffic where feasible
- Timing traffic signals to improve efficiency for transit vehicles
- Enhanced stations: that is, transit stops with larger, more prominent waiting areas, larger shelters, seating, and potentially an enclosed waiting area integrated with urban uses (within transit-oriented building forms)
- Utilization of vehicles with enhanced passenger amenities and comfort features

The type of vehicle technology (vehicles) used, which are distinctly branded and higher capacity. They are a defining feature of a Rapid Transit system. There are a large number of Rapid Transit technologies available. A review of a long-list of possible technologies was undertaken to determine which are most applicable to London.

Bus Rapid Transit (BRT) or Light Rail Transit (LRT) generally aim to achieve the same goals: improved travel times, predictability, passenger comfort, and passenger capacity. Both technologies can operate on surface streets and may or may not include elements such as a dedicated running way, limited stops, off-board fare collection, minimized conflicts with traffic at intersections, safe, attractive and permanent stations, and high-capacity vehicles.

If aligned to the central median in the road right-of-way, the vehicles benefit from speed increases by avoiding conflicts with right-turning traffic and slow or stopped taxis, bicycles, delivery vehicles, and other causes of delay typically found in the curb lane. LRT provides for tracks and catenary (overhead wires) clearly identifying the presence of rapid transit at all locations, while BRT can operate on conventional road surfaces.

Based on ridership forecasts, and the existing and planned land uses, the potential vehicle technologies that are appropriate for London are BRT and LRT. Each of these technologies achieves the goal of moving more people in less space with improved travel times. Based on the assessment, various rapid transit network technology options were reviewed. A network assessment, which combined the list of preferred corridors and the findings of the applicable technology review, was utilized to develop a set of network alternatives as follows:

1. Base BRT Network Alternative
2. Modified BRT Network Alternative
3. Hybrid BRT/LRT Network Alternative
4. LRT Network Alternative

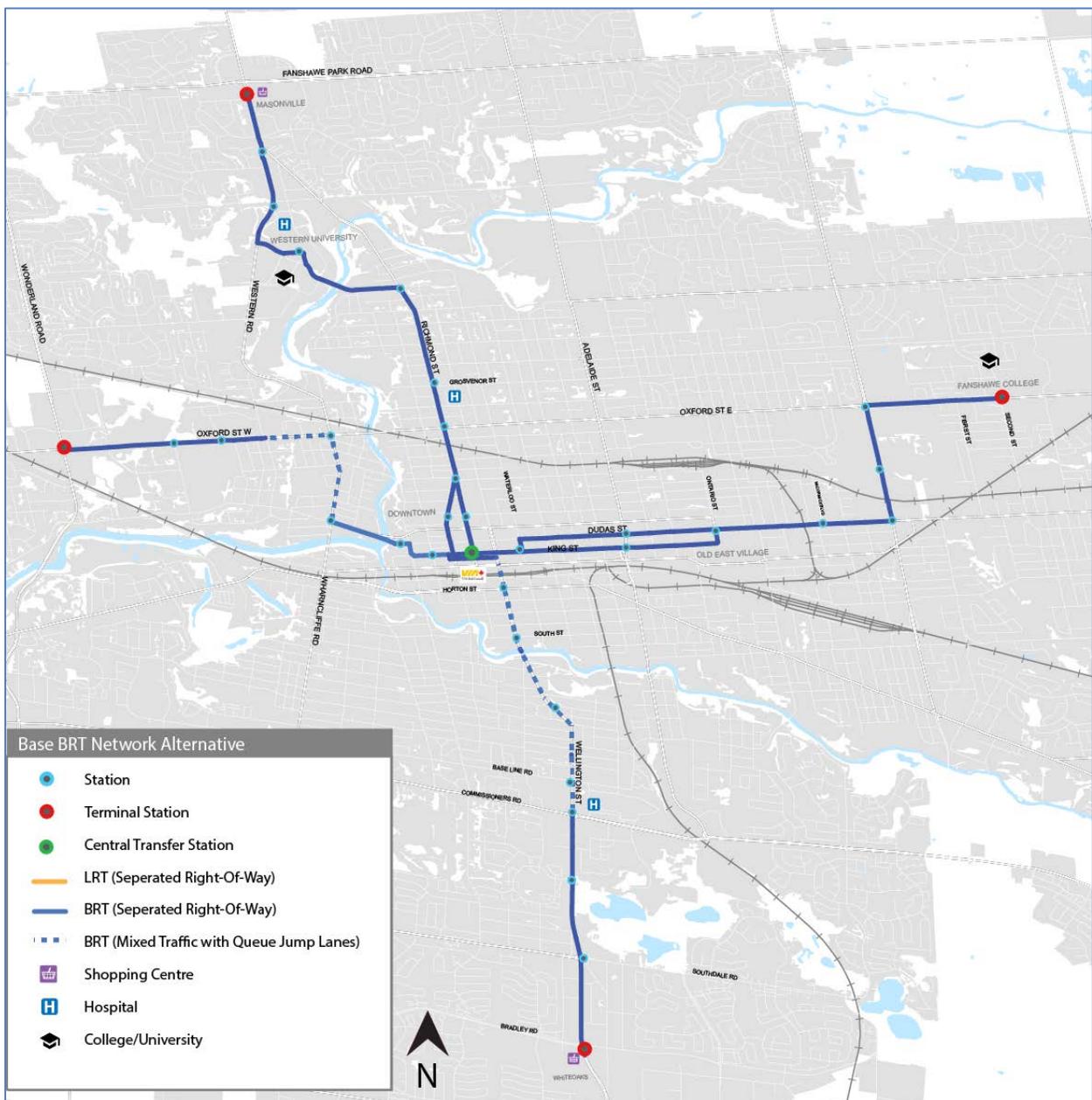
The key characteristics of these alternatives are discussed below, followed by an overall network comparison summary.

Base BRT Network Alternative

The BRT network previously developed through the TMP and LTC business case was refined to reflect updated conditions.

The alternative does not include dedicated transit lanes in a number of constrained corridors (Wellington Street) and retains the at-grade crossing of the Canadian Pacific Railway (CP) tracks on Richmond Street in the Richmond Row area.

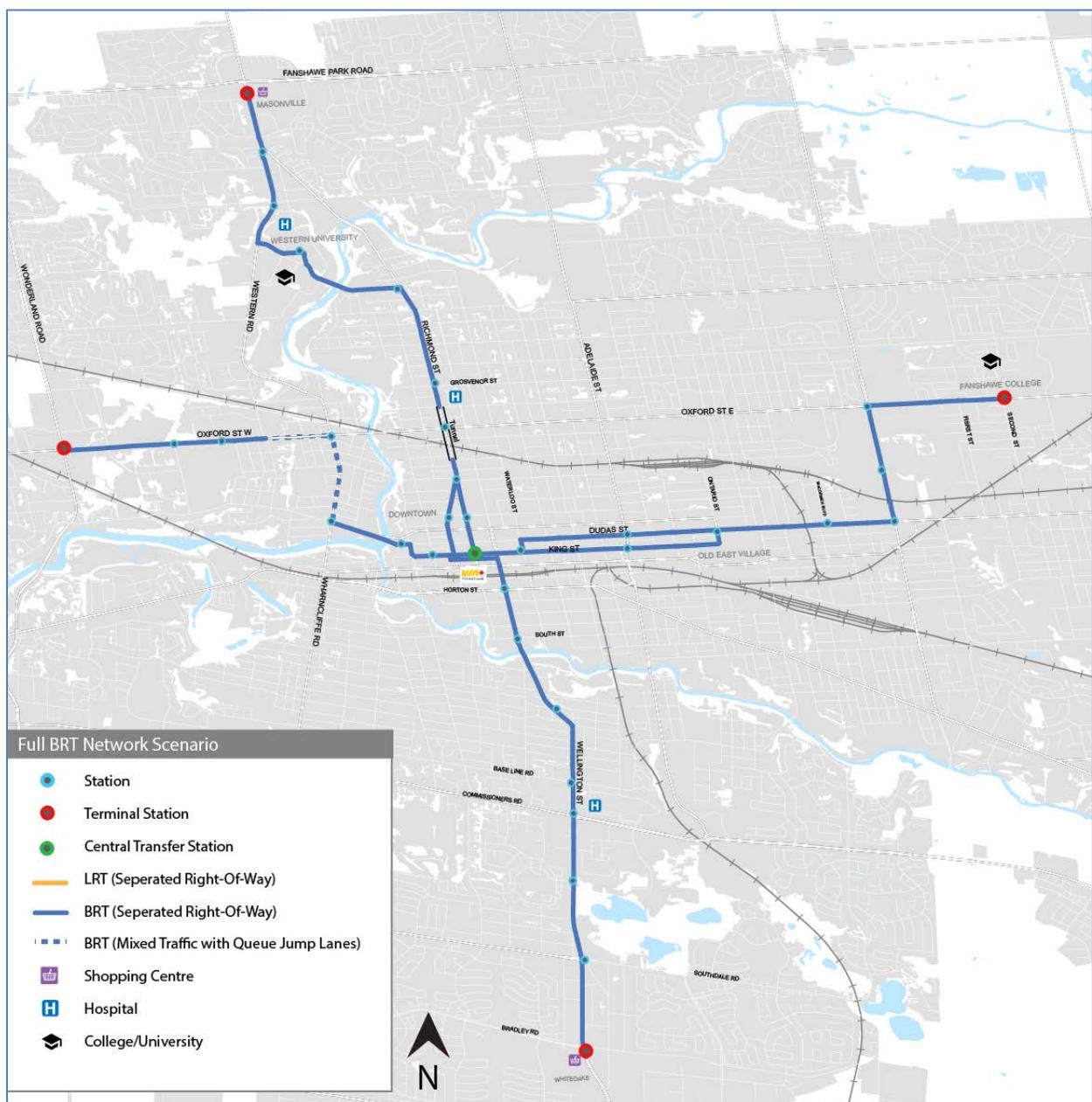
The projected capital cost of this alternative is \$260 – \$280 million, which is slightly lower than the TMP alternative which was estimated to cost \$380 million.



Full BRT Network Alternative

This BRT network alternative incorporates additional road widening along the corridors and a number of major structural projects, including a Richmond Street Rapid Transit Tunnel under the CP railway and fully separated transit lanes on Wellington Street between Commissioners Road and Horton Street. This alternative also includes allowances for a replacement bridge over the North Thames River on University Drive, pending finalization of alignments through Western University.

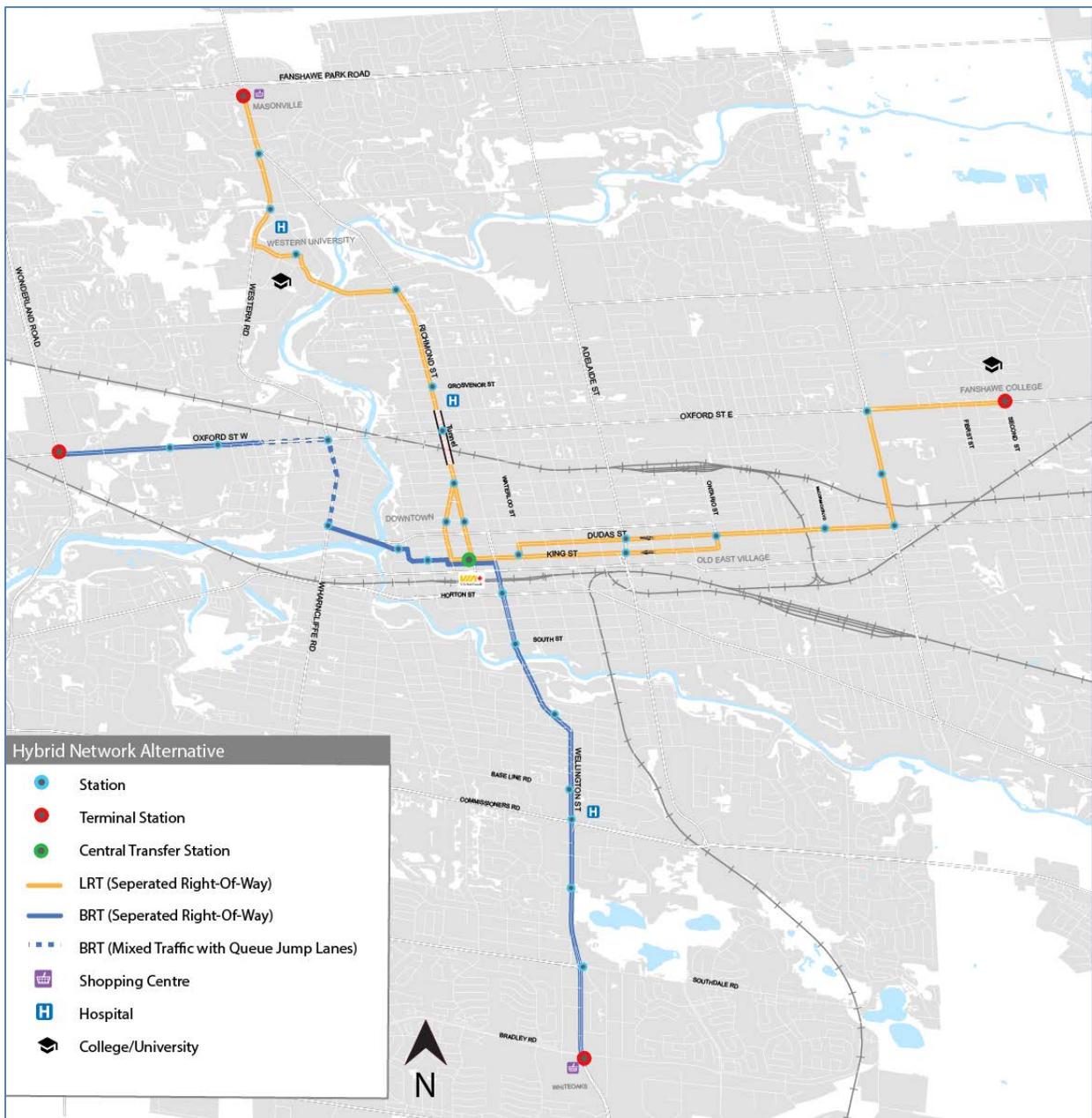
The estimated capital cost for this alternative is \$475 - \$525 million. The cost differences between this alternative and the base alternative are primarily related to the Richmond Street tunnel and allowances for property costs on Wellington South. However, these major enhancements would improve transit travel times and transit reliability over the Base BRT option.



Hybrid Network Alternative

This alternative network incorporates LRT along the north and east corridors via downtown with BRT along the south and west corridors. It also incorporates additional widening along the corridors and a number of major structural projects, including a Richmond Street Rapid Transit Tunnel and widening of Wellington Street south of Horton Street to provide for fully separated lanes.

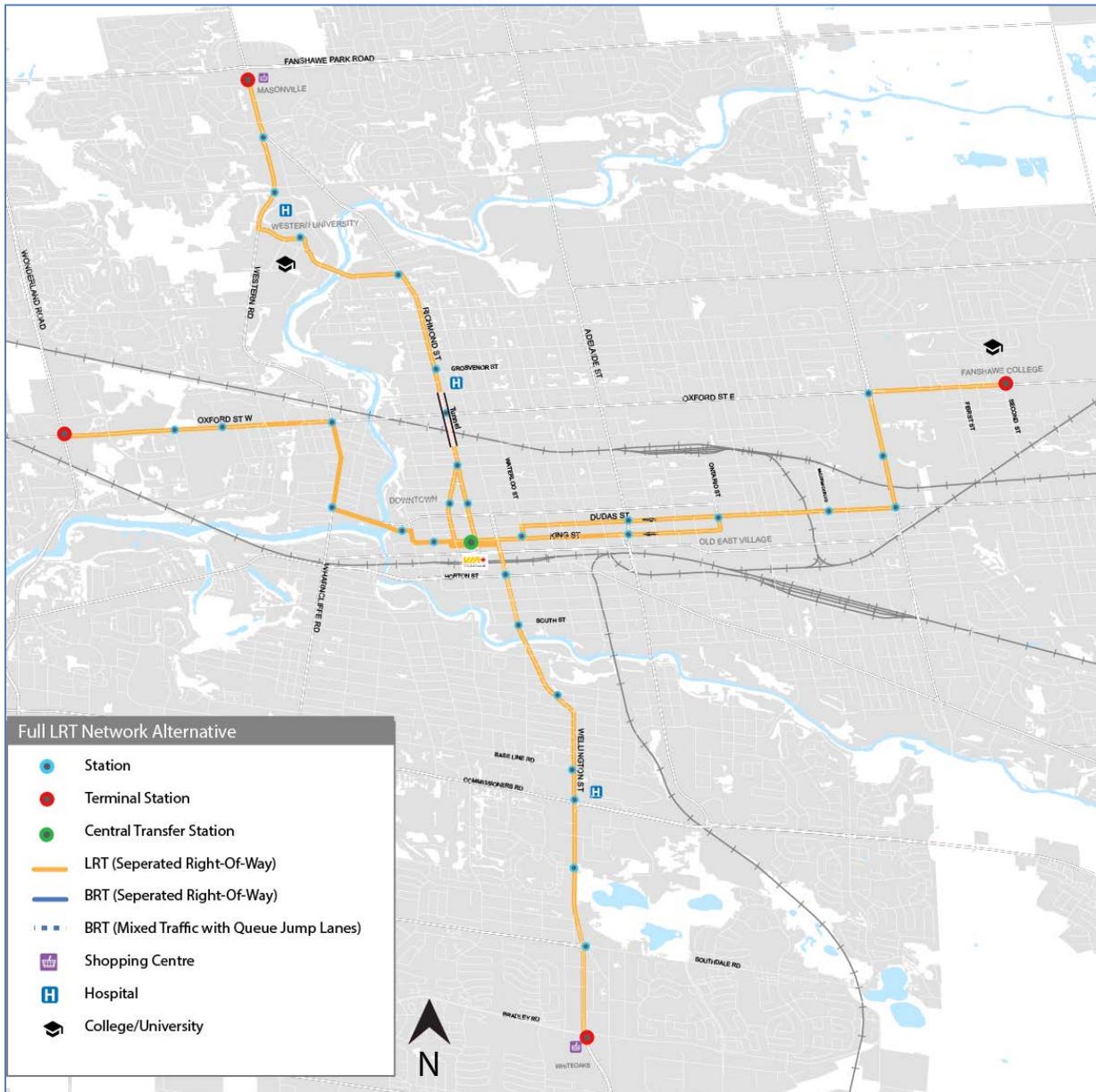
The selection of the north and east corridors for LRT was to a large extent based on ridership. These corridors have high ridership today and projected ridership growth in these corridors reaches the minimum levels for LRT to be considered. There is good potential for walk in traffic given the major institutions and area businesses that are directly along the corridors. The estimated capital cost for this alternative is \$850 - \$900 million. The major differences between this alternative and the Full BRT alternative is the added cost for rail tracks, electrical overhead power, LRT vehicles and a new LRT maintenance facility.



LRT Network Alternative

This alternative network incorporates LRT along all the corridors. It also incorporates additional widening along the corridors and the same structural projects as the previous two alternatives. The estimated capital cost for this alternative is \$1.1 - \$1.2 billion. This works out to approximately \$45 million per kilometre, which is within the range of typical costs from other jurisdictions. This option also requires a new LRT maintenance facility.

One of the advantages of this alternative is that the entire rapid transit network would utilize the same technology. The disadvantage, however, is that the LTR capacity is more than is needed for the projected ridership on the west and south corridors. As a result, either the frequency of trips would need to be reduced (likely to 15 minutes) or a higher subsidy per passenger would be required. Based on preliminary estimates, this subsidy could be over \$1 million per year.



Network Alternative Comparison

The EA process requires the assessment of all public undertakings on the potential to affect the environment from a natural, social, cultural, constructed and economic perspective. The guiding principles for the network assessment of the rapid transit system include:

- Transportation Capacity and Mobility
- Economic Development and City Building
- Community Building and Revitalization
- Ease of Implementation and Operational Viability

Any of the four network and technology alternatives examined will achieve these guiding principles to varying degrees in the long term.

From a Transportation Capacity and Mobility perspective, there are few differences between BRT and LRT. LRT may offer a slight advantage in that it can be perceived as a premium service thereby attracting more new riders to transit. While BRT's regular and reliable service will capture significantly more riders over time than conventional bus service, LRT stands to transform the image of transit in London in a more pronounced way, encouraging more discretionary riders to use transit over other modes of transportation. BRT may require fewer transfers, while at the same time offering greater flexibility to optimize routes and service levels to match demands and travel patterns.

LRT would have fewer benefits than BRT in the west and south corridors. In these corridors, the lower projected ridership would dictate lower frequencies and any travel time savings offered by rapid transit would be negated by longer waiting times. In the north and east corridors, the future projected ridership growth reaches the minimum levels for LRT to be considered.

The BRT and LRT are being planned to have the same quality of stations and number of stations, and both would run in dedicated lanes. The LRT would have catenary (overhead electric wires) and rails.

From a City Building and Community Building perspective, the permanency of the rail infrastructure associated with the LRT provides an advantage. Residents and businesses perceive an advantage to being close to the LRT, which is attractive to community investment and this can lead to greater demand for residential and business development.

Rapid Transit (either BRT or LRT) is an effective catalyst for growth and development and it can help to achieve the goals of compact urban form. In doing so, it can help avoid the high financial, environmental and social costs of a more sprawling form of development – high infrastructure and servicing costs, consumption of farmland, pressure on natural heritage areas, increased emissions and energy consumption, etc.

LRT can also have a greater impact on the city's image as a top tier city in North America. Many of Ontario's cities that are competing with London for talent, jobs and investment have, or are developing, LRT systems, including Ottawa, Hamilton, Waterloo, Kitchener and Brampton-Mississauga. Across Canada, cities such as

Montreal, Calgary, Edmonton and Surrey have, or are planning, light rail rapid transit systems. This is in addition to larger cities such as Toronto and Vancouver which both have extensive LRT networks in place. The city image benefits of LRT can also apply to our institutions, helping them to present a world-class image, being connected to one-another and our regional-provincial transportation hub by light rail.

The benefits of LRT over BRT would be greater in the north and east corridors. These corridors are anchored by University Hospital, St. Joseph’s Hospital, Western University and its affiliated colleges, the University Research Park, Fanshawe College, the Old East Village, Masonville Mall, the Downtown and many other trip generators. These areas have a higher potential for land use uplift and intensification.

From an Ease of Implementation and Operational Viability perspective, the construction of the Rapid Transit infrastructure will require consideration of the impacts on the existing mobility needs. BRT implementation is quicker and less disruptive as LRT has greater constraints due to the technology requirements and impacts on existing infrastructure.

In selecting a preferred alternative, it is also important to consider phasing options. The options can be implemented in a phased manner starting with the west and south corridors. A “quick-start” type BRT system could operate in the north and east corridors prior to the construction of the Richmond Street tunnel, which is a significant component of the Rapid Transit system cost. This phasing would allow many parts of the city to benefit from rapid transit prior to implementing Rapid Transit in the north and east corridors. The following table provides a summary of how the alternatives compare across different criteria (relative assessment - ✓ = slightly positive impacts - ✓✓ = positive impacts - ✓✓✓ = very positive impacts)

Rapid Transit Network Alternative Comparison

Criteria	Base BRT	Full BRT	Hybrid BRT/LRT	LRT	Comments
City Building	✓	✓✓	✓✓ ^{1/2}	✓✓✓	<ul style="list-style-type: none"> • LRT systems attract development near the corridors and station areas to a greater degree than BRT as development industry values permanency of rail. • LRT can have a more positive impact on city image. • BRT has been proven to induce development and many aspects of BRT (stations, runningways, and urban design enhancements) can be similar to LRT. • LRT can more effectively encourage a more compact form of city growth.

Criteria	Base BRT	Full BRT	Hybrid BRT/LRT	LRT	Comments
Quality of Service	✓	✓✓	✓✓ ^{1/2}	✓✓✓	<ul style="list-style-type: none"> LRT provides a smoother ride and is perceived as a premium service.
Transit Ridership	✓	✓✓	✓✓	✓✓	<ul style="list-style-type: none"> New riders will be attracted to LRT due to comfort/quality. LRT has the potential to have more of a transformative impact on the image of transit in London. BRT's higher frequencies and fewer transfers are attractive to transit riders.
Frequency of Service	✓✓	✓✓ ^{1/2}	✓✓	✓	<ul style="list-style-type: none"> BRT enables more frequent service due to the smaller capacity of the vehicle.
Accommodation of Demand	✓✓	✓✓	✓✓	✓	<ul style="list-style-type: none"> Projected peak hour demand can be accommodated by BRT or LRT. LRT vehicles will be significantly under-utilized in the west and south corridors, and off-peak periods.
Capital Cost	✓✓✓	✓✓✓	✓✓	✓	<ul style="list-style-type: none"> Capital and vehicle costs are greater for LRT. LRT vehicles have a longer life than BRT vehicles. LRT requires a new special purpose maintenance and storage facility.
Constructability	✓✓✓	✓✓	✓✓	✓	<ul style="list-style-type: none"> BRT has fewer construction impacts, with greater flexibility in terms of phasing.
Operating Cost	✓✓	✓✓✓	✓✓	✓	<ul style="list-style-type: none"> Above certain ridership levels, LRT has lower operating costs because few vehicle and drivers are required to provide the same capacity as BRT. LRT will be more expensive in the short-medium term given projected ridership.
Maintenance	✓✓✓	✓✓	✓ ^{1/2}	✓	<ul style="list-style-type: none"> LRT tracks and vehicles are more complicated to maintain and require specialized equipment and staff.

Criteria	Base BRT	Full BRT	Hybrid BRT/LRT	LRT	Comments
Transportation User Cost	✓	✓✓	✓✓	✓✓ ^{1/2}	<ul style="list-style-type: none"> Both BRT and LRT facilitate lower car ownership and less private vehicle mileage, although LRT is able to draw more people away from private vehicles.
Right-of-way Impacts	✓✓✓	✓✓	✓	✓	<ul style="list-style-type: none"> Road widening is required for both BRT and LRT. Additional property required to accommodate turns for LRT.
Flexibility of Transit Service	✓✓✓	✓✓	✓✓	✓	<ul style="list-style-type: none"> BRT has greater flexibility for adjustment of routing. LRT is limited in capability to deal with disruptions in the event of emergencies/right of way blockages.
Compatibility with Land Use	✓	✓ ^{1/2}	✓✓	✓✓ ^{1/2}	<ul style="list-style-type: none"> LRT may be seen as more acceptable in tighter corridors such as Dundas Street and Richmond Street. With new technologies, LRT vehicles are generally quieter than buses.
Environmental Compatibility & Impact	✓✓	✓✓	✓✓ ^{1/2}	✓✓✓	<ul style="list-style-type: none"> LRT is powered by electricity, no emissions in the corridor from vehicle operation. BRT vehicles generate more emissions as they utilize diesel or hybrid technologies.

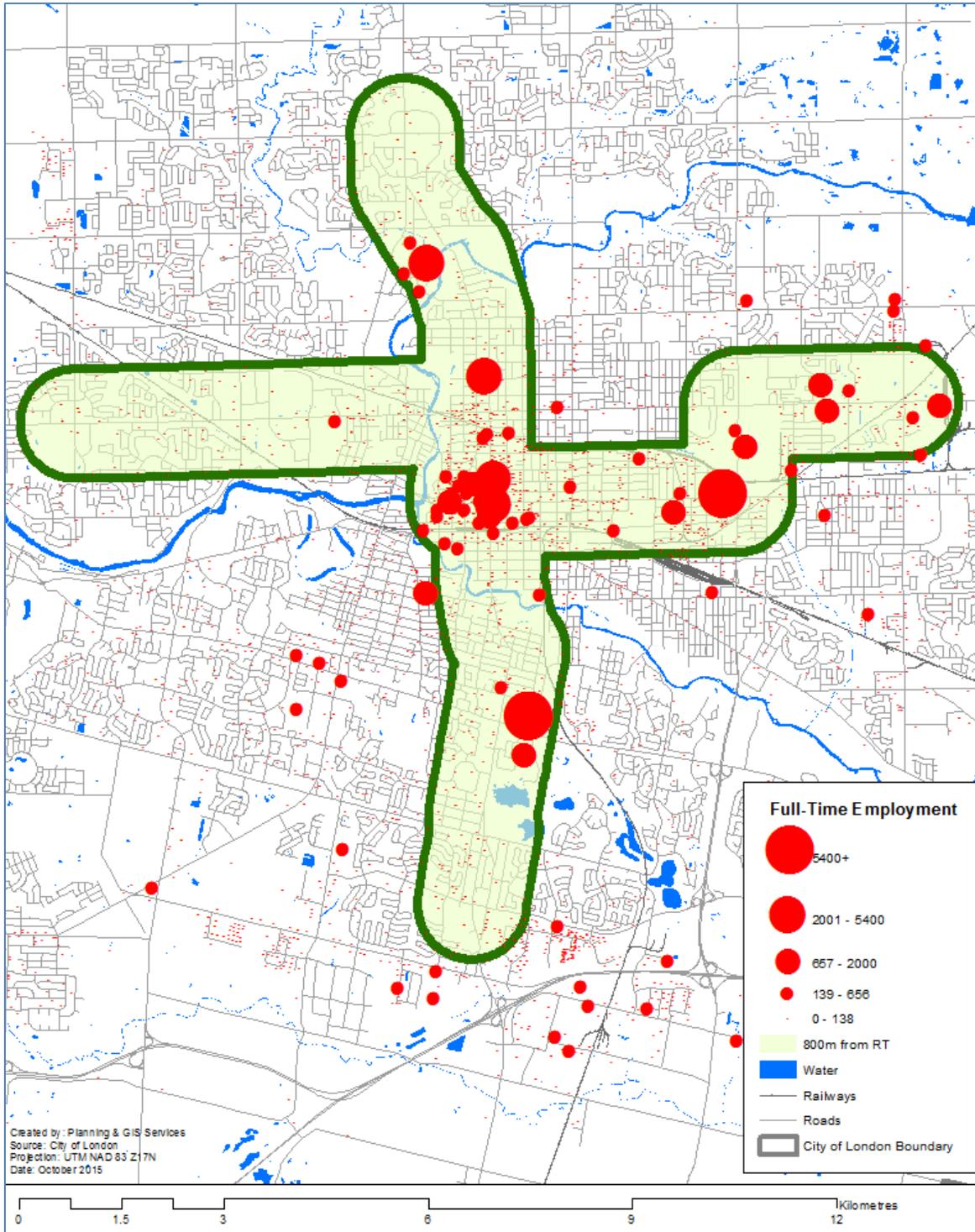
Note: ✓ = slightly positive impacts - ✓✓ = positive impacts - ✓✓✓ = very positive impacts.

Preliminary Rapid Transit Business Case

The downtown continues to be an important part of London. The city is structured along key corridors radiating out from the downtown - Wellington Street to the South, Richmond Street to the North, Oxford Street to the west and Dundas Street/Oxford Street to the east.

Most of the city's major institutions and commercial areas are located along these corridors. In terms of employment, 65 percent of all full time employment is located within 800 metres from the proposed RT corridors as illustrated on the following map.

Location of Major Employment Clusters in London Relative to Proposed Rapid Transit Routes



Over the next 20 years, London is projected to grow by 77,000 people and 43,000 jobs. By focusing this growth on Rapid Transit corridors, London can capitalize on its established transit-supportive urban form, becoming a more attractive city in Ontario for regeneration and sustainable cost-effective growth.

Factors that support a transformation and investment in Rapid Transit include:

- The draft London Plan implements a policy and planning framework to direct a large portion of London's future growth to the Downtown and along Rapid Transit Corridors.

- Almost 40% of London's future population and jobs would be within walking distance of the proposed Rapid Transit system.
- London is well connected to other parts of Ontario by rail, road, air and intercity bus. Rapid Transit would provide the local connections to these broader provincial networks supporting travel to London's major employers and institutions, as well as allowing greater access to other part of Ontario for London residents. With the implementation of High Speed Rail in the Quebec-Windsor Corridor, these benefits would be significantly amplified.
- Rapid Transit would serve to connect major economic activities in London – universities, colleges, hospitals, financial institutions, manufacturing and a rapidly growing high-tech industry. There is significant marketing potential associated with these connections – one being a “knowledge-based city”. Connecting Rapid Transit to economic growth is also critical to encouraging students who are educated in London to stay in London.

The Rapid Transit plan is the backbone of an integrated, multimodal transportation network that will provide enhanced travel options to Londoners. The current Official Plan and the draft London Plan, further reinforce Rapid Transit role in a future London.

Other factors that support investment in Rapid Transit include:

- Londoners continue to identify transit and transportation as a top issue facing the community in annual citizen surveys.
- Over 40,000 contacts have been made with the public and stakeholders as part of TMP, Shift and The London Plan. Throughout the discussions, there has been overwhelming support for Rapid Transit.
- Usage of London's existing transit system, LTC, has been growing steadily. At 63 annual rides per capita and 24.1 million rides per year, LTC significantly outperforms its peer systems. LTC currently carries more riders than Hamilton, MiWay (Mississauga), Grand River Transit (Waterloo) and York Region Transit/VIVA.
- With Rapid Transit, transit ridership in London is projected to increase to 33 million rides per year by 2035. This represents an increase of 40% over today's ridership
- London is the 11th largest urban area in Canada. All of the top ten cities, and some outside of the top ten, have some form of rapid transit.

As part of the Rapid Transit Master Plan, preliminary business cases were developed for each of the options using the Multiple Account Evaluation (MAE) approach, the standard by which the Province reviews transit projects. The MAE approach provides a qualitative and quantitative evaluation across a wide range of factors or “accounts” to identify the benefits and impacts of each Rapid Transit alternative. The business cases are a broad-based assessment of the benefits and costs of a new Rapid Transit service.

The business case takes into account not only the financial implications of the new Rapid Transit service, but also the transportation user benefits and the economic, environmental, operational and social impacts of the RT Strategy.

Recognizing the four guiding principles identified in the beginning of this report, the assessment considers the following categories of benefits:

- Operational viability and implementation
- Transportation user considerations which measures travel time savings, auto operating cost savings and safety benefits from reduced road traffic
- Environmental consideration which captures the impact on greenhouse gas (GHG) emissions
- Financial considerations which consists of the net capital and net operating costs (transportation and maintenance) associated with the Rapid Transit alternatives
- Economic development which captures land use uplift as well as the impact of capital spending on employment and output in the short-term and the impact of additional services and operations associated with the Rapid Transit Strategy over the long term
- City building and social/community considerations, which describes the impacts of the Rapid Transit Strategy on land use shaping and City Building potential

The Network Alternatives Summary provides an overview of the assessment taking into account the various benefits. The benefits vary for the various network alternatives, the area of most notable difference in terms of benefit relate to City Building and Economic Development.

The preferred network alternative that is recommended to form the basis for the next round of community engagement and public input is the Hybrid network which utilizes BRT technology on the west and south Rapid Transit corridors and LRT technology on the north and east corridors.

Further assessment of the economic development benefits and refinement of the capital and operating/maintenance costs will be undertaken as a next step in the EA process.

Network Alternatives Summary

Network Alternatives		Base BRT	Full BRT	Hybrid	Full LRT	
Operational	2035 Ridership Projection (M) (Annual riders - 24 M today)	31.4	31.6	32.0	32.1	
	Projected Travel Time Savings (# minutes faster than transit today)	From King/Richmond to:	Time Savings (min)	Time Savings (min)	Time Savings (min)	Time Savings (min)
		Western University	5.5	7	7	7
		White Oaks	3	4.5	4.5	4.5
		Fanshawe College	7.5	7.5	7.5	7.5
	Wonderland Road	1	1	1	1.5	
Operational Flexibility		High	High	Medium	Low	
Transportation Benefits	Transit User Benefits (NPV \$M)	465	523	597	623	
	Qualitative User Benefits	✓	✓	✓✓	✓✓✓	
Environmental Benefits	GHG emissions savings (NPV \$M)	2.03	2.18	2.47	2.55	
Financial	Total Capital Cost (\$M)	260 - 290	475-525	850-900	1,100-1,200	
	City of London Max. Contribution to Capital Cost (\$M)	125	125	125	125	
	Cost per km (\$M/km)	11	21	36	45	
	Operating and Maintenance Costs (Annual \$M) *	13.8	12.1	11.1	11.5	
	NPV Capital Costs including Quick Start(\$M)	280	497	880	1142	
	Net Incremental Operating Costs (NPV \$M)	370	319	287	252	
	Benefit-Cost Ratio Including Environmental and Economic Development	1.19	1.16	1.05	0.99	
Economic Development	Land Value Uplift (\$M)	80	90	110	115	
	Short Term GDP Gains (NPV \$M)	123	227	399	520	
	Long Term GDP Gains (\$M)	16	14	13	12	
City Building and Social Community	Catalyst for Compact Urban Form of Growth	✓	✓✓	✓✓½	✓✓✓	
	Potential Impact on City Image	✓	✓✓	✓✓½	✓✓✓	
	Urban Regeneration Benefits	✓	✓✓	✓✓½	✓✓✓	
	Catalyst for Development	Moderate potential to attract outside investment and to promote intensified development along the RT corridors		High potential to attract outside investment and to promote intensified development along the RT corridors		

Note: ✓ = slightly positive impacts - ✓✓ = positive impacts - ✓✓✓ = very positive impacts.
 (*) Annual maintenance costs in 2035 expressed in current dollars. LRT will be more expensive in the short-medium term given projected ridership; NPV = Net Present Value (Life Cycle Costing)

Preliminary Network Implementation

As part of the Rapid Transit EA, a preliminary implementation plan was developed taking into account constructability, financing constraints, land acquisition and the greater coordination with other construction projects.

Through the City's Smart Moves Transportation Master Plan, a number of transportation growth projects have been identified over the 2015-2025 timeframe that have an influence on the implementation of the Rapid Transit network. Improvements at the Canadian National (CN) and CP railway grade separations along Wharncliffe and Western Road are critical to the viability and implementation of the Rapid Transit network. Rehabilitation to the Queens Street and Kensington bridges is required in the short term to deal with deficiencies and potential modification of travel lanes to accommodate Rapid Transit.

Providing construction relief traffic capacity and detours for current LTC routes during the implementation of the rapid transit network is critical to ensure mobility in the downtown and parallel transportation corridors.

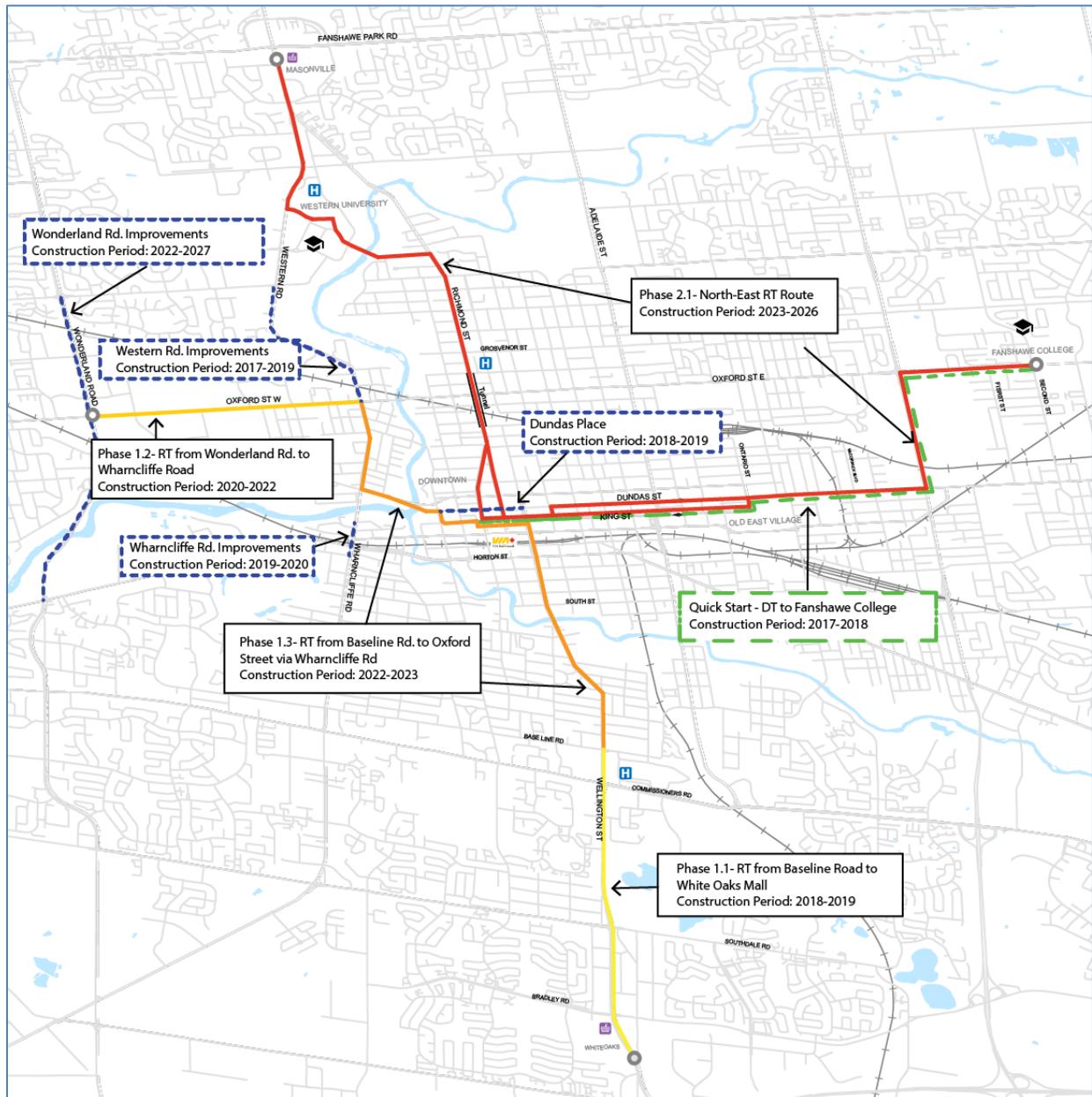
In addition, several initiatives related to water and wastewater projects and the Downtown Plan (Dundas Place) are scheduled for potential implementation during that timeframe. All these projects require coordination with utilities, in particular London Hydro, as they have numerous upgrades being planned.

A key consideration is the need for improved transit service in the short term. The implementation of a "Quick Start" program along a number of key corridors to allow for a growth in transit ridership is being proposed, similar to the implementation plans in other municipalities.

The initial stages of implementation will feature semi-express service along the planned rapid transit corridors, utilizing technologies such as transit signal priority to improve travel times. Providing a higher overall quality service in the early stage of implementation is critical to start building ridership and immediately increasing transit modal share.

An initial preliminary implementation phasing and timelines are shown on the following map.

Preliminary Rapid Transit Phasing



The next phase of the EA will determine in more detail the implementation timing and cross sectional elements. Details regarding the Rapid Transit network implementation such as the proposed cross sections, utilization of exclusive rapid transit lanes, mixed traffic use lanes, the removal of auto purpose lanes to transit only, removal of on-street parking, will be determined taking into consideration the social, environmental, engineering and financial impacts of each design option.

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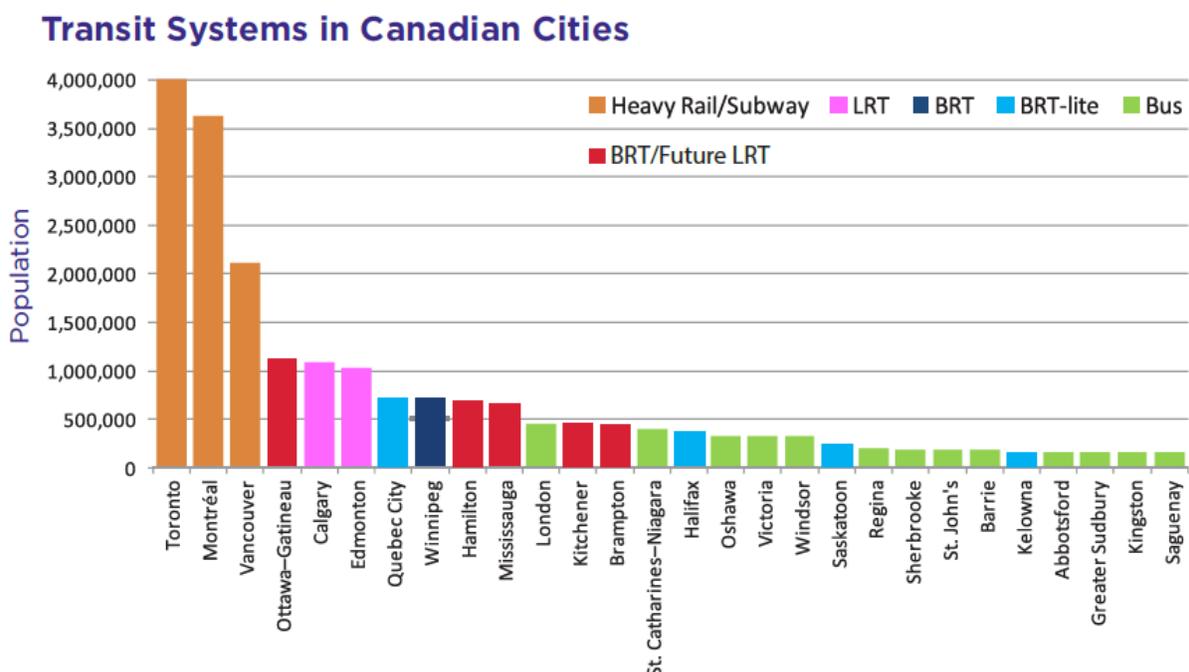
The capital cost to implement Rapid Transit in London will vary considerably (from \$260 million to \$1.2 billion) depending on the network alternative selected by Council. As identified through the EA, many factors influence the estimated cost including routing, technology option (BRT versus LRT) and potential enhancements to the network alternatives (tunnel, bridge upgrades).

In addition to the capital costs to implement Rapid Transit in London, there will also be ongoing annual operating costs. The estimates identified also vary depending on the network alternative selected. It is important to note that the estimates reflect the annual cost once the Rapid Transit system has been implemented and is operating at an optimal level. These costs will need to be accommodated in future years' property tax operating budgets once the Rapid Transit system is operational. It should also be noted that, as with any business plan, the Rapid Transit system may require an infusion of tax subsidy in the initial years to build ridership, so the optimal level of operating cost can be attained over the long term; this would further impact operating budgets.

The numbers used in the report are high level based on long term projections and will be refined through the EA process and future budget cycles.

Rapid Transit Funding

London is now the largest city in Canada without a BRT or LRT system. Several communities that are smaller than London also have, or are in the process of building, a BRT or LRT system.



It is important to note, there are no known examples where municipalities have built a Rapid Transit system on their own. Significant investments from other orders of government are required and the precedent of governments working together to invest in public transit is well established in Canada. Implementation of Rapid Transit in London will be no exception: investments from other orders of government will be required.

Fortunately, public transit has been identified as a priority by the City of London, the Government of Ontario, and newly elected Government of Canada. This section provides an overview of the current environment with each partner with respect to investments in Rapid Transit in London.

City of London: Laying the Foundation

The City of London has a long history of investing in public transit in London. Council continues to invest in the operation of London's current transit system on an annual basis, and over the past few years, has also invested significantly in the planning work towards designing London's future transit systems.

To lay the foundation for future investment, Rapid Transit has been included in the 10-year capital plan and the 2014 Development Charges background study. It should be noted, however, that the dollar figured used in these documents were based on best available information at the time – specifically, the preliminary cost estimates for a full BRT system, which did not include significant capital works, nor were the estimates based on a detailed Environmental Assessment. Therefore, based on available information at the time, the amount included in the budget is approximately \$380 million, with an assumption of \$250 million in Provincial and Federal dollars (yet to be confirmed); \$117 million from Development Charges; and, \$12 million from the property tax payer.

As such, London City Council has set aside approximately \$125 million to invest in Rapid Transit implementation, funded primarily through Development Charges. This contribution is considered to be fixed, regardless of which Rapid Transit option is ultimately selected. It should be expected that the City of London will also bear additional costs during and after the implementation of Rapid Transit, including the ongoing operating expense and the cost of capital and related upgrades. Combined, this represents a significant municipal investment, ready to be leveraged with funding from other orders of government.

Province of Ontario

The Ontario Government has committed to investing \$130 billion over 10 years in Ontario's infrastructure, representing the largest infrastructure investment in the province's history.

This investment includes a \$31.5 billion *Moving Ontario Forward* plan, comprised of \$16.5 billion for transit projects in the Greater Toronto Hamilton Area (GTHA) and \$15 billion for "transportation and other priority projects" outside the GTHA.

Through this fund, the Province has recently announced major contributions to other cities' transit projects, including:

- \$1.6 billion support for the Hurontario-Main Light Rail Transit (LRT) project connecting Mississauga and Brampton;
- \$1.2 billion for the Finch West LRT project in the City of Toronto;
- Up to \$1 billion for a cross town LRT project in Hamilton linking the university to the downtown and other major nodes; and
- Investments in Kitchener-Waterloo and Barrie.

The Province's funding model for other cities' transit project has varied. Transit projects identified through the Big Move, the Greater Toronto and Hamilton Area (GTHA) regional transportation plan, is based on an investment strategy approved by Metrolinx, an agency of the Government of Ontario created to improve coordination and integration of all transportation within the GTHA.

The delivery of these projects is undertaken through public-private partnerships (P3), which are performance-based approach to procuring public infrastructure, and the systems are owned and operated through Metrolinx. These projects have been typically funded at 100 percent by the Province.

Existing projects outside of the GTHA are driven and managed by the municipality (Waterloo, Ottawa). Funding for these rapid transit initiatives has been subject to one third funding partnerships with the Province and Federal government.

During the summer of 2015, the Province led a consultation process called *Moving Ontario Forward – Outside the GTHA* to determine how funding would be allocated outside of the GTHA. The discussion guide specifically referenced Rapid Transit in London as a potential project for funding.

With Council direction, the City of London was an active participant in the *Moving Ontario Forward – Outside the GTHA* process, advocating for an investment in Rapid Transit in London. A formal written submission was made in advance of the September 18, 2015 deadline, which is attached as [Appendix A](#). The City's submission included several support letters from a range of community partners who are supportive of a Provincial investment in Rapid Transit in London.

This submission requested a commitment for "full funding of up to \$1.1 billion for Rapid Transit in London" and an invitation to work with the City of London as the right option for London is selected. The \$1.1 billion reflects the highest possible cost based on the network alternatives, less the City of London's committed contribution, and represents an upper limit based on the most expensive network alternative (full LRT). Once Council has identified a preferred alternative for London, this will be communicated to Provincial partners to amend, if required, the City of London's request.

It is unknown at this time how the unallocated funding for outside the GTHA will be distributed. On a purely per capita basis, London's "share" of the \$15 billion is between approximately \$805 million (based on City population) to \$1 billion (London CMA). However, there may be other projects funded through the Moving Ontario Forward program that will also benefit London, such as High Speed Rail.

Government of Canada

The newly elected Federal Government has committed to investing in public transit in Canada's cities. The Liberal platform, *Real Change: A New Plan for a Strong Middle Class*, included a commitment to quadruple federal investment in public transit, investing almost \$20 billion more in transit infrastructure over the next 10 years.

The platform also included commitments to establish a Canadian Infrastructure Bank to provide low-cost financing for new infrastructure projects, and to improve the process for the New Building Canada Fund.

Details on all of these programs are yet to be announced, but will be closely monitored by Civic Administration.

A key step towards securing funding for Rapid Transit in London is to identify the preferred network alternative, and the associated costs. Once Council has made a decision about the preferred alternative, continued conversations with federal and provincial leaders will take place to provide more precise information about London's needs, and determine what possibilities may exist to work together to invest in a Rapid Transit system for London.

Regardless of the alternative selected, Rapid Transit will have considerable economic, social and environmental benefits for London, Ontario and Canada. An investment of this scale will provide needed stimulus for the economy of London and Southwestern Ontario, while improving connectivity and quality of life. It is encouraging to see governments working together to invest in public transit in Canada's cities, and it is hoped that an investment in London's transit system will be forthcoming over time.

CONCLUSION

The Rapid Transit Environmental Assessment is delivering on Council's Strategic Plan objective of "Building a Sustainable City" through the implementation of convenient and connected mobility choices. Rapid Transit represents a significant component of the draft London Plan, the Transportation Master Plan, and many other strategic documents approved by Council.

Rapid Transit, combined with a strong local transit service with appropriate service coverage and levels of service, will facilitate significant social, economic and environmental benefits for London and Southwestern Ontario, and is arguably one of the most important decisions that this Council will make during its term as it will impact the London community for generations to come. This report has been prepared with considerable community input and technical analysis to provide Council with the information required to make a critical decision regarding London's future.

Major decisions on transit system investment are best made as part of a comprehensive EA process that considers affordability and investment needs relative to available funding. A decision on the preliminary preferred network alternative will provide a clearer picture on short and long term implementation options, project viability and will advance the dialogue of funding with the other levels of government.

The final Rapid Transit Master Plan will be developed following input from the community on the network alternatives. Subject to Council approval, the next round of community engagement for Shift is scheduled for December. A public meeting is tentatively scheduled for December 2nd and a drop in location will be located at City Hall from December 5th to December 18th.

Following the input from the public on the preliminary preferred rapid transit routes and network, the Rapid Transit Master Plan will be presented to Council for approval tentatively in January of 2016. Subsequent to the approval, the preliminary design stages will be undertaken and the project is anticipated to be completed in the fall of 2016.

Acknowledgements

This report was prepared with input from the Shift Rapid Transit Steering Committee members, including Kelly Paleczny, General Manager, LTC, John Ford, Director of Transportation, LTC, Jay Stanford, Director, Environmental Programs and Solid Waste, Sean Galloway, Manager of Urban Planning and GIS, Doug MacRae, Division Manager, Transportation Planning and Design and Rob Andrusevich, Manager II, Communications.

SUBMITTED BY:	REVIEWED & CONCURRED BY:
EDWARD SOLDI, P.ENG. DIRECTOR, ROADS AND TRANSPORTATION	KATE GRAHAM DIRECTOR, COMMUNITY & ECONOMIC INNOVATION
REVIEWED & CONCURRED BY:	REVIEWED & CONCURRED BY:
JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER	JOHN FLEMING MANAGING DIRECTOR, PLANNING AND CITY PLANNER
RECOMMENDED BY:	
ART ZUIDEMA CITY MANAGER	

cc. London Transit Commission
Brian Hollingworth, IBI Group

Appendix "A"

Moving Ontario Forward – Outside the GTHA submission



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Friday, September 18, 2015

The Honourable Brad Duguid
Minister of Economic Development, Employment, and Infrastructure
8th Floor, Hearst Block
900 Bay Street
Toronto, Ontario
M7A 2E1

Dear Minister Duguid,

RE: City of London Submission – Moving Ontario Forward

We are pleased to participate in the *Moving Ontario Forward – Outside the GTHA* consultation process with the Ministry of Economic Development, Employment and Infrastructure.

We commend the Ontario Government for its leadership in making unprecedented and needed investments in Ontario's infrastructure. The *Moving Ontario Forward* plan will facilitate important economic, social and environmental benefits for all Ontarians, and the \$15 billion allocated for outside of the Greater Toronto Hamilton Area (GTHA) will enable key projects to move forward in communities across the province. We also appreciate the mention of London in the recent provincial budget and *Moving Ontario Forward* consultation discussion guide as a potential location for investment in Rapid Transit infrastructure.

London is Ontario's 6th largest city, and the 2nd largest outside the GTHA after Ottawa. London has a population of 381,000 within the city boundary and 450,000 in the metropolitan area. London is also the regional hub of Southwestern Ontario, serving 2.5 million Ontarians in the region who rely on London's health care and educational institutions, as well as services and amenities such as sports, music, culture, and recreation.

Over the next 20 years, London will grow by at least 77,000 people, adding approximately 43,000 jobs to the local economy. This growth will put a strain

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on the city's roadways and public transit system which are already operating over capacity. Ridership has grown by 94% over the last 20 years, and we expect it to grow an additional 40%, to 33 million rides per year, by 2035. London has the highest per capita transit ridership among peer municipalities in Ontario.

In a 2015 survey, Londoners identified infrastructure, transportation and economic development as the three most important issues facing the city. Council has identified Rapid Transit as a top priority, because of the positive and transformative impact it will have on all three issues facing London. Rapid Transit is an essential part of our strategic documents:

- Council's *2015-2019 Strategic Plan* identifies Rapid Transit as a key strategy towards 'Building a Sustainable City';
- London's new draft Official Plan, *The London Plan*, is currently in its second draft and envisions more efficient and compact growth and a more sustainable city designed around Rapid Transit corridors;
- The Transportation Master Plan, *SmartMoves*, defines how all modes of transportation will be improved and integrated; and
- *Shift*, London's Rapid Transit Initiative, redesigns public transit and the broader transportation system in London.

To date, more than 40,000 Londoners have been directly involved in building these plans, demonstrating the considerable momentum in the community for Rapid Transit in London. City Council has made a significant commitment of just under \$100 million, funded primarily through Development Charges, towards the implementation of a Rapid Transit system.

We are in the process of completing an extensive Environmental Assessment to identify optimal corridors, station locations, preferred technology, and costs for Rapid Transit in London. Through this process, we have identified an optimal Rapid Transit route, split into two corridors:

- A North-East Corridor, connecting Masonville Place, Western University, St. Joseph's Hospital, the London Health Sciences Centre, Downtown London (including amenities such as Budweiser Gardens, Covent Garden Market, Museum London, many cultural sites and hundreds of small businesses), the Old East Village, Fanshawe College, and future connection to the London International Airport; and

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- A South-West Corridor, connecting White Oaks Mall, the London Health Sciences Centre, Downtown London, and the Oxford-Wonderland residential and commercial hub.

The attached document provides a map of these two corridors. Through the Environmental Assessment, we are examining options to implement Rapid Transit along these corridors, including Bus Rapid Transit, Light Rail Transit, and hybrid models. City Council will be considering these options this fall. Public consultation is currently underway.

Importantly, both Rapid Transit corridors will be integrated into other transportation modes, including rail, air, road, bus transit, and active transportation routes. We are pleased that the Government of Ontario is moving ahead with plans for High Speed Rail which will transform community connections across southern Ontario from Windsor to Toronto, and we view Rapid Transit to be well aligned and supportive of these plans.

Rapid Transit will facilitate substantial economic, social and environmental benefits for London and Southwestern Ontario, but it will require a substantial infrastructure investment from the Ontario Government. We commend the leadership of the Province by investing in Rapid Transit in other Ontario cities, and strongly urge the Province to invest in London and Southwestern Ontario.

Specifically, we request the Ontario Government commit to full funding of up to \$1.1 billion for Rapid Transit in London. This investment is in line with the commitment which has been made to other communities and an appropriate share of the *Moving Ontario Forward* fund. We welcome the opportunity to work with the Province as we select the Rapid Transit option that is right for London.

The attached document provides an overview of what Rapid Transit would look like in London, and its many benefits for our community and region including job creation and economic investment, reduced congestion, compact and walkable communities, reduced Green House Gas emissions, convenience and accessibility and cost savings. An investment in Rapid Transit in London would also provide a major stimulus for our local and regional economy through significant job creation and long term economic growth for the 2.5 million Ontarians receiving services from London.

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Rapid Transit will benefit local businesses, health care and educational institutions, and nonprofit organizations. This project has wide public support and continues to be an important priority for the London and surrounding communities. We have included letters of support from the Chamber of Commerce, the London Economic Development Corporation, Western University, Fanshawe College, health care institutions, and many other partners.

We wholeheartedly support the Ministry's draft Guiding Principles, tabled during the consultation process, as a framework for making decisions on future investments. We believe that Rapid Transit in London fulfills each principle by benefitting Londoners as well as those 2.5 million in the Southwest Ontario region in the following ways:

- **Collaboration:** London's Rapid Transit plans have already involved significant collaboration between community partners, and implementation would require continued partnership. Additionally, the City has already met with Infrastructure Ontario and would welcome an opportunity to work together on implementing Rapid Transit in London;
- **Interconnectivity:** Rapid Transit in London would integrate with existing rail, air, road, bus and active transportation networks, and connect with regional transportation systems including future High Speed Rail;
- **Openness to Bold Solutions:** We fully appreciate the transformative impact that Rapid Transit will have in London, and we are open to innovative approaches for its implementation, including a range of financing and implementation options;
- **Shared Investments:** We are committed to investing in Rapid Transit in London, through a municipal contribution that is larger than that of other similarly-sized Ontario cities;
- **Evidence Based:** Our Rapid Transit plans will be rooted in an extensive Environmental Assessment process, supported by detailed research and analysis, and are well integrated into the City's other key strategic and guiding documents;
- **Outcome Oriented:** Our engineers and planning experts have reviewed many options and have selected the options which will have the most transformative impact on London, based on consideration for important economic, social and environmental outcomes;

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- **Regionally Focused:** We know that the 2.5 million Ontarians living in the Southwest region rely on London's institutions, services and amenities, and the benefits of this investment will extend far outside of London's boundaries; and
- **Adaptive and Responsive:** With a commitment from the Ontario Government, we will continue to work towards detailed implementation plans which account for unforeseen circumstances and implications of climate change, further ensuring London's ability to thrive as a city today and tomorrow.

If you have any questions, I would welcome an opportunity to speak with you. Should your staff require further information, please contact Kate Graham, Director, Community and Economic Innovation at the City of London at kgraham@london.ca or 519-661-2500 ext. 5879.

Thank you again for your leadership in *Moving Ontario Forward* and your continued commitment to supporting Ontario's communities. I look forward to working with you to make strategic investments in infrastructure which will improve the lives of Londoners and Ontarians.

Sincerely,



Mayor Matt Brown
City of London

- cc. The Honourable Kathleen Wynne, Premier of the Province of Ontario
The Honourable Deb Matthews, Deputy Premier and MPP, London North Centre
The Honourable Steven Del Duca, Minister of Transportation
Ms. Teresa Armstrong, MPP, London-Fanshawe
Mr. Jeff Yurek, MPP, Elgin-Middlesex-London
Ms. Peggy Sattler, MPP, London West

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