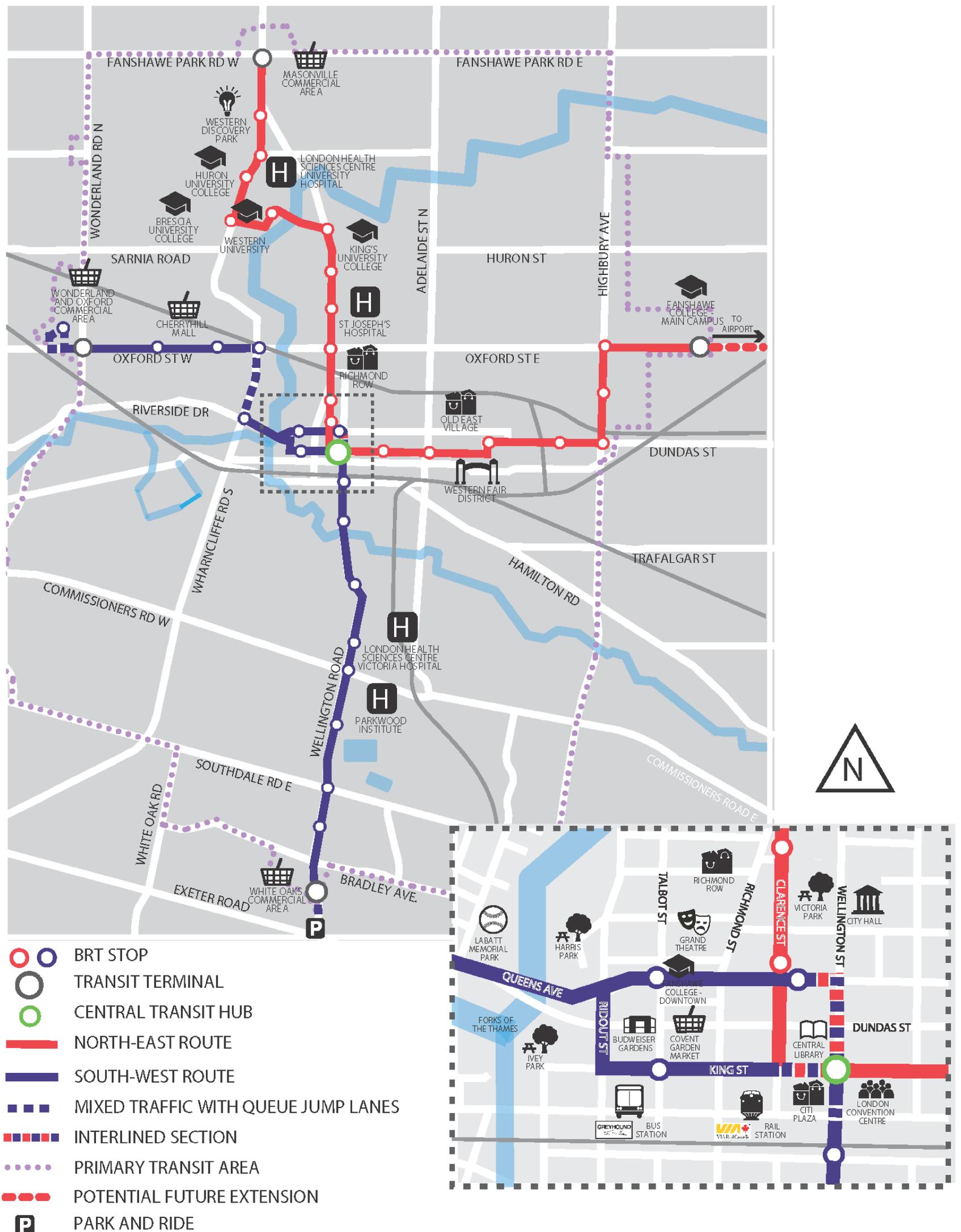


BUS RAPID TRANSIT NETWORK



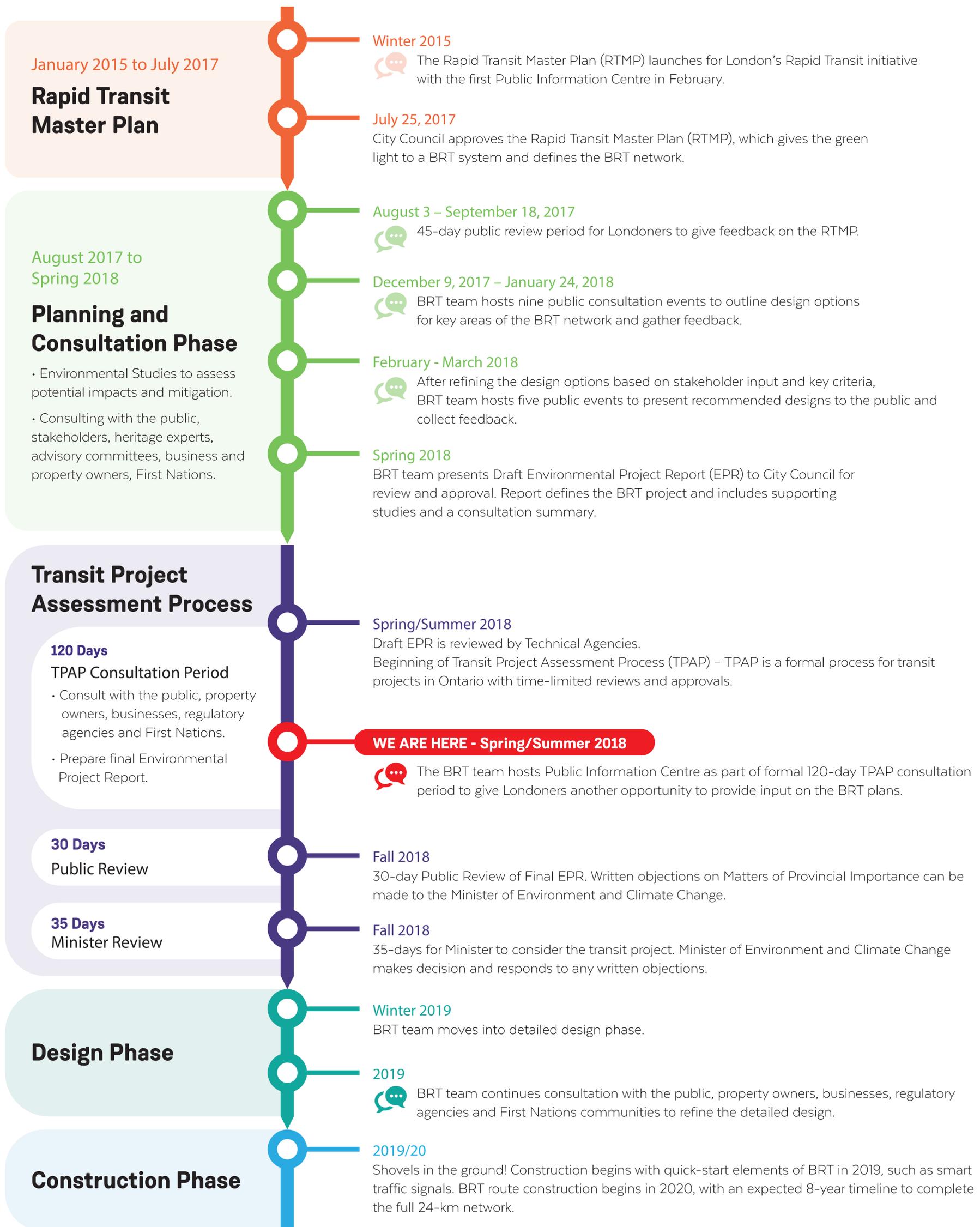
WHY WE'RE HERE

- Help fine tune the Council-approved design for the BRT network, brought forward May 8, 2018
- Provide feedback on the draft Environmental Project Report, which outlines the BRT project in detail, identifies the potential impacts and the plans to address them
- Learn more about matters that are of interest to the province – such as natural environment, cultural heritage, Indigenous relations – and understand how to give feedback on these issues

DECISIONS ALREADY MADE

- ✓ That the rapid transit vehicles will be buses
- ✓ Which routes the buses will run on
- ✓ Which streets will have dedicated centre-running or curbside bus lanes

BRT TIMELINE



HOW LONDONERS ARE HELPING TO SHAPE BRT

FOCUS OF CONSULTATION

**What type of transit system?
2015/2016**

**Where will Rapid Transit go?
2017**

**How will it work?
Late 2017**

**Recommended design
Spring 2018**

**WE ARE
HERE**

**Fine tune approved design
Summer 2018**

**Detailed design
2019-2020**

2 public events and 10 “Transit Tuesday” sessions to get feedback on Council-approved design.

Individual and neighbourhood consultations to get feedback on Council-approved design.

FEEDBACK WE'RE LOOKING FOR TODAY

- Do you have an idea we haven't considered yet for your neighbourhood?
- Are there aspects of the design you like?
- Do you have any questions about the impacts of BRT on your community?
- Is there anything you feel hasn't been addressed in the draft Environmental Project Report?
- Do you have a suggestion on how we can make BRT more accessible?



HOW TO CONTRIBUTE FEEDBACK

IN PERSON:

Attend a drop-in session where you can leave comments digitally or on a comment card.

ON THE PHONE:

Call the Rapid Transit Office and speak with a member of the project team: 519-930-3518.

ONLINE:

Visit www.londonbrt.ca and fill out an online comment card.

Leave comments directly on the interactive map of London's BRT system: www.londonbrtmap.ca

WHAT IS BUS RAPID TRANSIT?



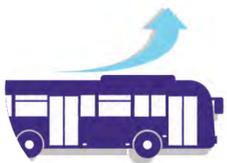
Dedicated lanes – lanes that only buses can travel on – for more reliable service.



Frequent service, with a bus every 5 – 10 minutes during rush hours.



Better connections to local transit, with connecting service provided every 10-20 minutes.



Service is rapid and reliable because buses aren't stuck in congestion with regular traffic.

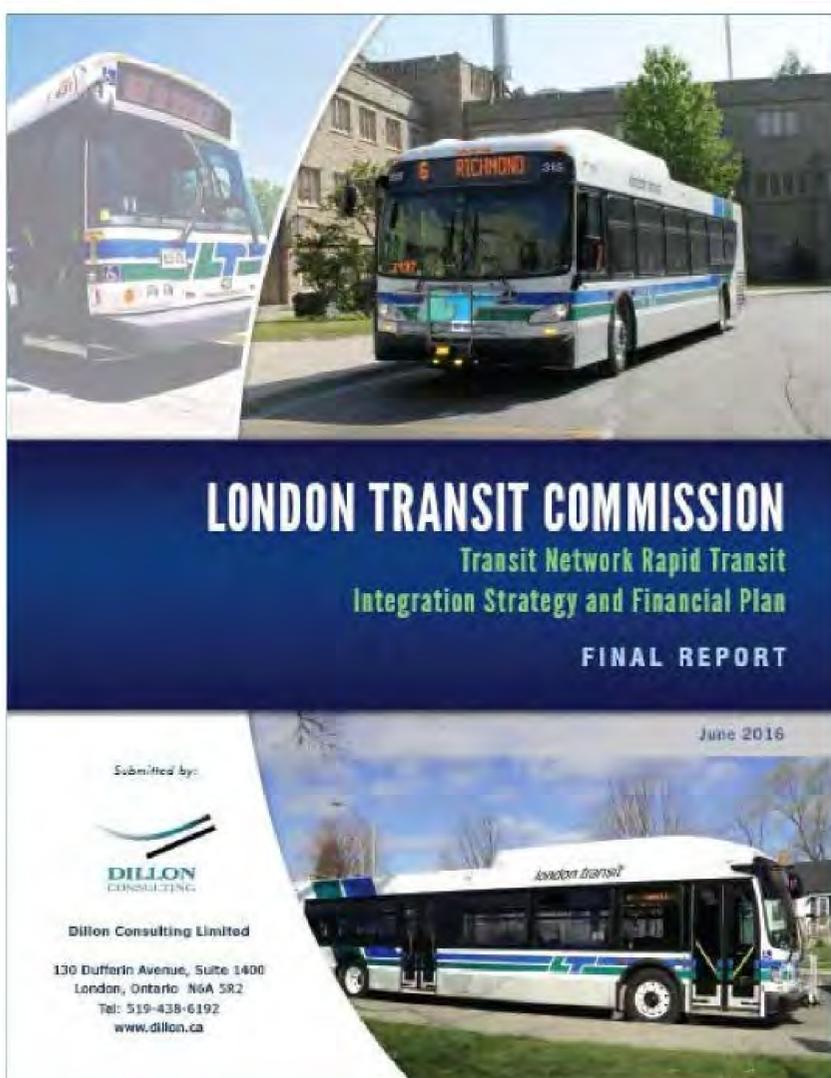


Smart signals implemented city-wide will support smoother traffic flow for all commuters – on buses, in personal vehicles, and on bicycles.

MAKING LOCAL BUS SERVICE EVEN BETTER

INTEGRATION WITH LOCAL SERVICES

- Rapid Transit does not replace the current LTC bus system.
- Combined transit service will increase by 35% between 2015 and 2035.
- Increasing specialized transit service by 35,000 hours from 2016 to 2019.



= More buses, in more areas, more often.

WHY BRT FOR LONDON?



35% increase in transit service hours means less waiting for the bus.



230,000 tonnes less greenhouse gas emissions with BRT.



Reduced road widening requirements along parallel corridors.



40% of Londoners will have a BRT stop within walking distance of their home.



60% of Londoners will be able to walk to work from new BRT stops.

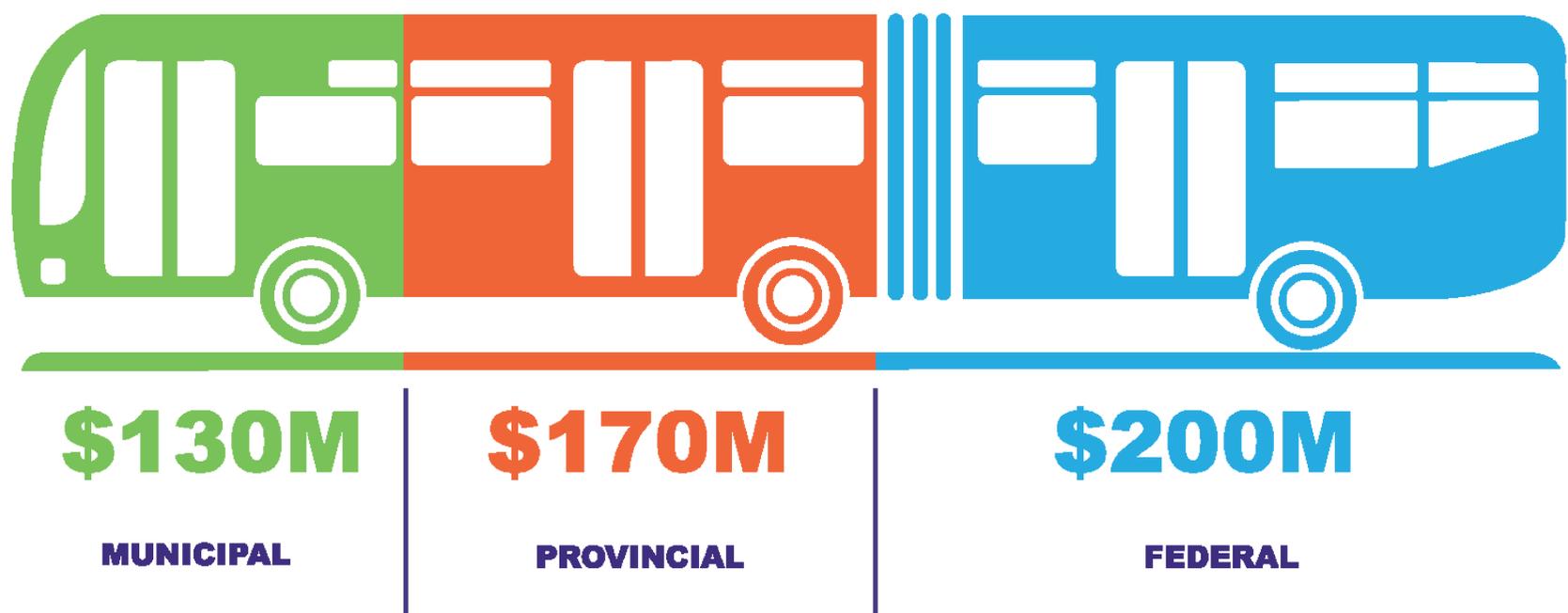


Revitalize 24 kilometres of main arterials that serve as gateways into our city.

FUNDING BRT

The City of London has committed \$130 million toward the estimated \$500 million Bus Rapid Transit Network. The Province of Ontario committed \$170 million to the project. To move forward, London is seeking approximately \$200 million from the federal government.

INVESTMENT WE ARE SEEKING: \$500M



BRT VEHICLE SPECIFICATIONS

- On the north-east corridor, BRT buses will run every 5 minutes, which can move up to 1,320 people per direction per hour.
- Vehicles are high capacity, accessible and offer comfortable seating.
- Vehicles run primarily in dedicated lanes, but also have the flexibility to operate in mixed traffic.



Mercedes-Benz
Smart Bus



Geneva



Cologne



Los Angeles

CENTRE-RUNNING VS CURBSIDE LANES

CENTRE-RUNNING	VS	CURBSIDE
Property Impacts		
<ul style="list-style-type: none">▪ Impacts at signalized intersections with dedicated left-turn lanes▪ Impacts at midblock with 1.5 metre wide raised island		<ul style="list-style-type: none">▪ Less impacts at signalized intersections than centre-running▪ More impacts midblock with 3.0 metre centre two-way left-turn lane
Streetscape Impacts		
<ul style="list-style-type: none">▪ More opportunity for plants / public art between Rapid Transit stops		<ul style="list-style-type: none">▪ Less opportunity for plants and public art between Rapid Transit stops
Transit Service		
<ul style="list-style-type: none">▪ More reliable Rapid Transit with much less interaction with turning/stopping vehicles▪ Local transit stops more frequently than Rapid Transit▪ Local buses use mixed traffic curb lane		<ul style="list-style-type: none">▪ Less reliable Rapid Transit due to interaction with turning vehicles and curbside stopping▪ Local transit stops more frequently than Rapid Transit, meaning more bus bays to allow BRT buses to pass▪ Local buses use the curbside BRT lane
Traffic Operations		
<ul style="list-style-type: none">▪ Unsignalized side streets and driveways are accessed by protected U-turns at signalized intersections▪ Requires all left-turns to occur at signalized intersections		<ul style="list-style-type: none">▪ Unsignalized side streets and driveways are accessed from centre two-way left-turn lane
Traffic Safety		
<ul style="list-style-type: none">▪ Safer with fewer conflict points▪ Emergency vehicles use centre transit lanes		<ul style="list-style-type: none">▪ More conflict points than centre-running▪ Less safe for EMS vehicles

ACCESSING MEDIAN STOPS



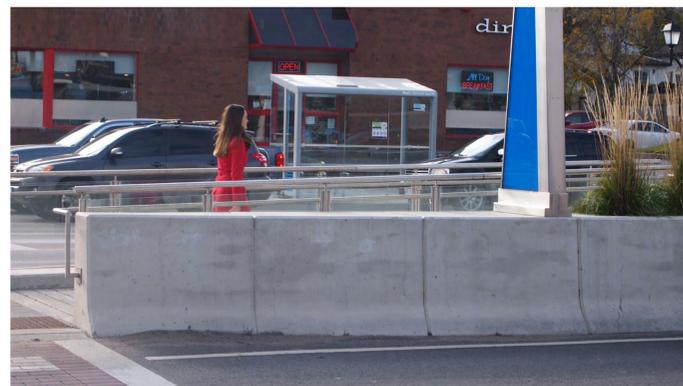
1 Jane arrives at her stop and pushes the “push to walk” button



2 ...and waits to cross the street.



3 When the walk sign goes on, Jane crosses one direction of traffic to get to the westbound platform – her direction of travel.



4 Jane gets to the stop platform and walks toward the boarding area.



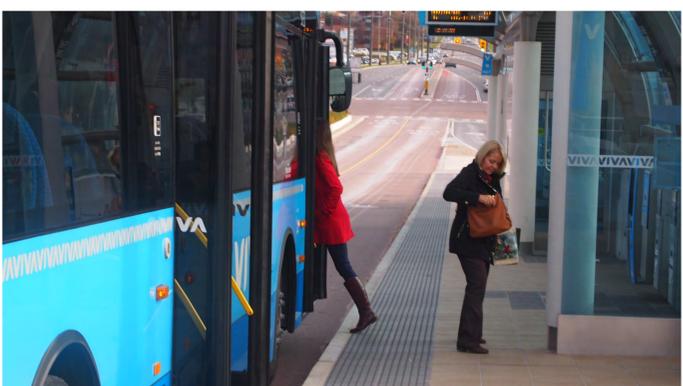
5 She checks the bus arrival information and sees that her bus will arrive in 3 mins.



6 Great! That’s enough time for her to pay her fare before she boards the bus.



7 Jane waits for her bus on the bench in the platform shelter.



8 Shortly after, her bus arrives, and she’s on her way.

KEY CONSIDERATIONS

Matters of Provincial Importance must be considered during the Transit Project Assessment Process, following Ontario Regulation 231/08.

Natural Heritage

- Park, conservation reserve or protected area
- Extirpated, endangered, threatened, or species of special concern and their habitat
- Wetland, woodland, habitat of wildlife or other natural heritage area
- Area of natural or scientific interest
- Stream, creek, river, or lake containing fish and their habitats

Hydrology

- Area or region of surface water or groundwater or other important hydrological feature
- Areas that may be impacted by a known or suspected on or off-site source of contamination

Heritage & Archaeology

- Protected heritage properties
- Built heritage resources
- Cultural heritage landscapes
- Archaeological resources and areas of potential archaeological interest

Indigenous Relations

- Constitutionally protected Indigenous or treaty rights and areas of concern

NATURAL HERITAGE

Mud Creek



- Road to be widened by approximately 6 metres to the north
- Channel realignment
- New culvert and wildlife passage
- Enhancement of valley

Medway Creek



- Bridge to be widened by approximately 12 metres to the east
- Avoidance of Environmentally Significant Area and Significant woodlands
- Habitat enhancement and restoration
- Compensatory mitigation requirements

Thames River at University



- Bridge structural requirements under review
- >1:1 habitat replacement
- Invasive species management strategy

Queens Ave Bridge over Thames River



- Bridge to be widened by approximately 0.4 metres to the north
- In-water works not anticipated
- Avoidance of direct impacts to Species at Risk
- Invasive species management strategy

Thames River at Wellington Rd



- Bridge to be widened approximately 9.4 metres to the east
- >1:1 habitat replacement
- Invasive species management strategy

Exeter Road

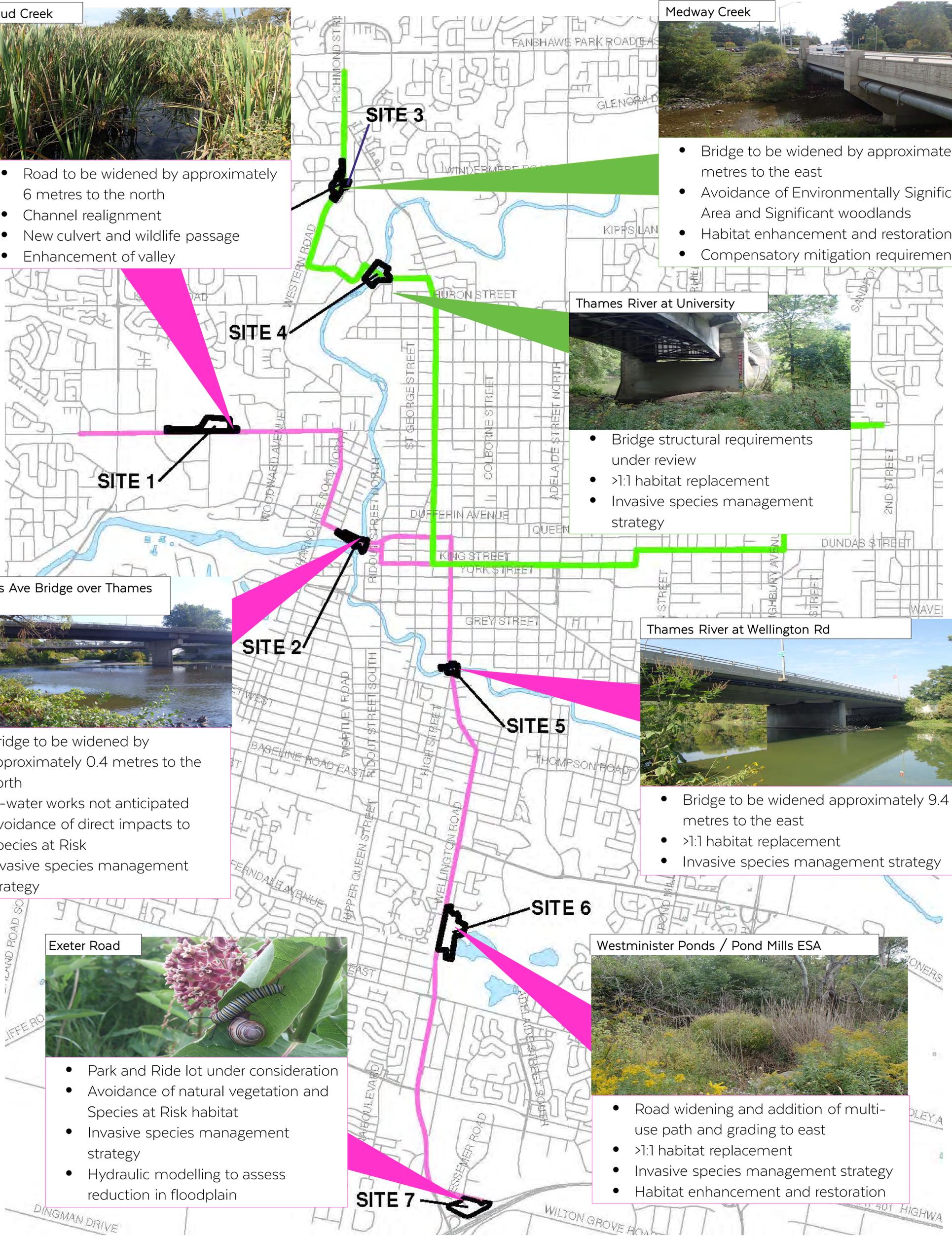


- Park and Ride lot under consideration
- Avoidance of natural vegetation and Species at Risk habitat
- Invasive species management strategy
- Hydraulic modelling to assess reduction in floodplain

Westminster Ponds / Pond Mills ESA



- Road widening and addition of multi-use path and grading to east
- >1:1 habitat replacement
- Invasive species management strategy
- Habitat enhancement and restoration



HYDROLOGY

The design strives to stay within the existing municipal road allowance to minimize impacts.

WORK COMPLETED:

- Geotechnical engineering and contamination assessment completed
- Water quantity and water balance calculation completed

IMPACTS:

- No areas of significant potential for contamination at BRT stop locations – low to moderate risks related to subsurface conditions are expected at a limited number of sites
- Nominal increase in impervious area as a result of the project

MONITORING AND MITIGATION:

- Construction at or near groundwater may require treatment of dewatering discharge
- Active remediation is likely not warranted given nominal depth of excavation for project

You can review the findings in more detail in the Appendices provided.

HERITAGE & ARCHAEOLOGY

The design strives to stay within the existing municipal road allowance to minimize impacts to the City's heritage and archaeological resources.

WORK COMPLETED:

STAGE 1

Archaeological Assessment: review of published information

STAGE 2

Archaeological Assessment: test pits of some undisturbed areas

CULTURAL HERITAGE SCREENING REPORT

Identification of properties with potential cultural heritage value or interest

POTENTIAL IMPACTS:

- 3 registered archaeological sites
- 8 historic cemeteries
- 17 areas with potential for deeply buried deposits
- 16 designated heritage properties
- 3 Heritage Conservation Districts
- 469 properties with potential cultural heritage value or interest

HERITAGE & ARCHAEOLOGY

The design strives to stay within the existing municipal road allowance to minimize impacts to the City's heritage and archaeological resources.

MONITORING AND MITIGATION:

- Determine archaeological potential of Victoria Park
- Stage 3 Cemetery investigations will be conducted within 10 metres of identified cemetery locations during detail design/prior to construction
- Appropriate strategies will be developed in consultation with the Ministry of Tourism, Culture and Sport and the City's Heritage Planners
- A Heritage Impact Assessment is recommended for the 16 designated properties and 3 Heritage Conservation Districts during detail design
- A Cultural Heritage Evaluation Report will be required for the potential heritage resources identified by the Cultural Heritage Screening Report and the approximately 110 listed properties within the corridor



You can review the findings in more detail in the Appendices provided.

INDIGENOUS RELATIONS

Indigenous communities that have been consulted include:

- Aamjiwnaang First Nation
- Caldwell First Nation
- Chippewas of the Thames First Nation
- Delaware Nation (Moravian of the Thames)
- Munsee-Delaware First Nation
- Oneida Nation of the Thames
- Bkejwanong Territory (Walpole Island)

What we have learned:

- Supportive of dedicated Rapid Transit lanes and reliable transit service
- Most concerned with impacts to natural space
- Recognition of the cultural and environmental significance of the Thames River
- Interested in archaeology work to be completed in undisturbed areas
- Interested in integration with high speed rail and smart technology for transit signals

Additional conversations will continue as the project progresses.

SUPPORTING TECHNICAL STUDIES



Noise and Vibration Assessment:

Impacts

- Noise levels at some sensitive receptors will increase due to the removal of some buildings

Monitoring and Mitigation

- Noise walls required at four locations
- Noise impacts will be less if electric buses are used



Air Quality Assessment:

Impacts

- Minor impacts or slight improvements to emissions, and a net greenhouse gas reduction
- Potential local air quality effects due to construction activities

Monitoring and Mitigation

- Tree planting adjacent to roadway along proposed BRT route
- Potential use of electric buses

SUPPORTING TECHNICAL STUDIES



Stormwater and Drainage:

Impacts

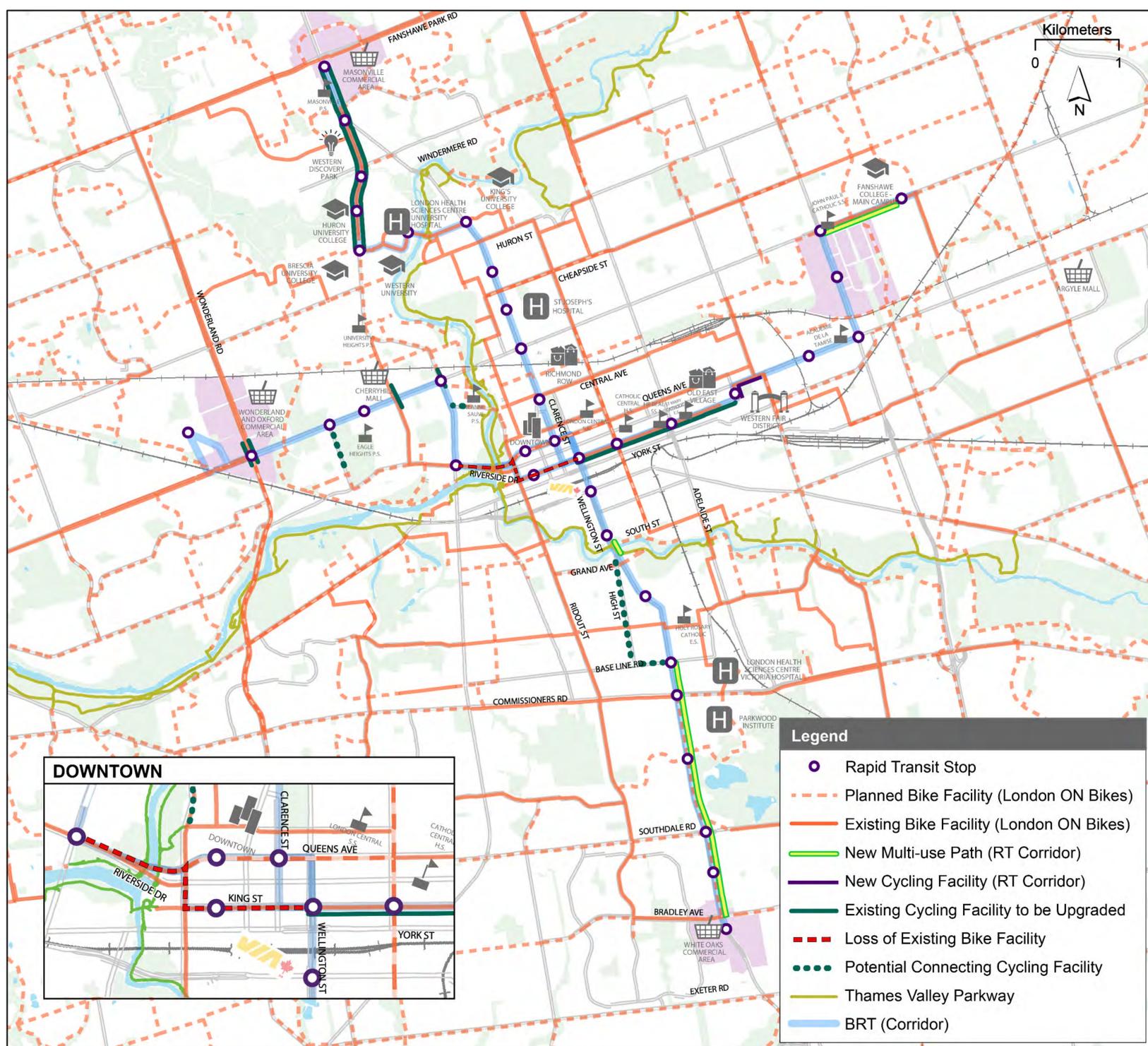
- Existing sewers may have capacity issues and require reconstruction
- Stormwater outlets to existing watercourses and environmentally sensitive areas, such as Mud Creek and Westminster Ponds, may require quantity or quality control

Monitoring and Mitigation

- Development of low impact development measures such as bio-retention areas, swales, and filtration to manage stormwater quantity and quality
- Liaison with the Upper Thames River Conservation Authority, the City of London, and approving agencies to consider net effects
- A sediment and erosion control plan will be developed in accordance with City of London guidelines

BETTER CYCLING

Dedicated bike facilities will be constructed along BRT corridors where space is available. Nearby bike routes will also be upgraded to ensure a complete network is available for cyclists. Bike parking will be provided at key locations to connect cyclists to transit.

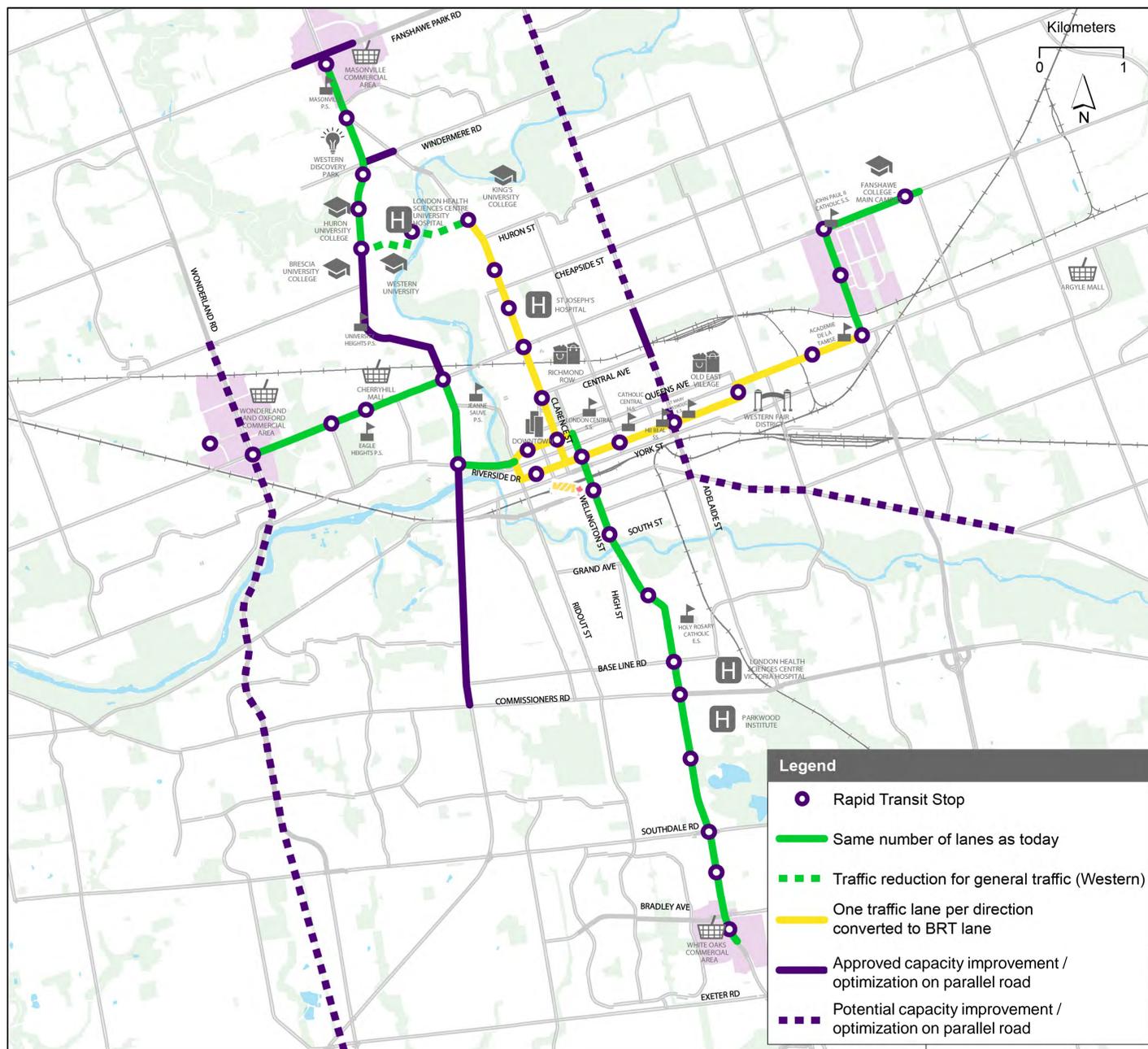


The City will update the cycling master plan (London ON Bikes) based on the approved BRT network.

MOVING PEOPLE

Bus Rapid Transit will move more people. Streets with transit lanes will also move pedestrians, cyclists and cars.

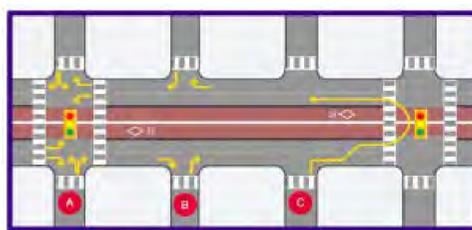
Where possible, streets will keep the same number of traffic lanes as today. Parallel roads such as Western Road, Wharncliffe Road and Adelaide Street will be improved.



Strategies to help keep traffic moving:



Upgrades to parallel roads



Protected left-turn and U-Turns at most signalized intersections for safe movement and access



Upgraded traffic signal technology and improved signal timing

RICHMOND STREET: TRAFFIC IMPACTS FROM OXFORD ST. TO UNIVERSITY DR.

What will happen to traffic with 2 general traffic lanes?

A detailed traffic analysis was undertaken using a large area to assess trip diversions to other corridors, and a more focused assessment of the specific operations of Richmond Street

Assessment of Impacts:

- Western Road and Adelaide Street accommodate traffic diversions
- Minimal through traffic from outside Old North diverted to local streets
- Reduced traffic capacity on Richmond Street, compared to today, induces minimal traffic diversion on parallel streets
- Travel time by car on Richmond Street increases by 1 to 1.5 minutes in peak hour, with minimal impacts outside of rush hour
- Traffic impacts for centre-running vs. curbside transit lanes are similar

RICHMOND STREET: TRAFFIC IMPACTS FROM OXFORD ST. TO UNIVERSITY DR.

Future traffic flows will be affected by changes to the road

- Widening of Western Road
- Closure of University Drive Bridge
- Opening of one lane on Blackfriars Bridge eastbound
- Grade separation of railway crossing at Adelaide Street
- Changes to traffic lanes resulting from Rapid Transit

Changes in traffic vs. today

- █ Increase
- █ Decrease



- Western University changes shifts some traffic to Richmond North (+200 cars NB; +16%)
- Primarily localized traffic changes and non-RT related

- Approximately 260 cars choose routes other than Richmond Street due to capacity reductions
- Traffic diverts to Adelaide Street and Western Road

- Minor diversion of local traffic to parallel streets (30-75 cars): St. George, Waterloo and Colborne (today's volume is 100-300 cars)
- Local streets do not see increases in "non-neighbourhood" traffic

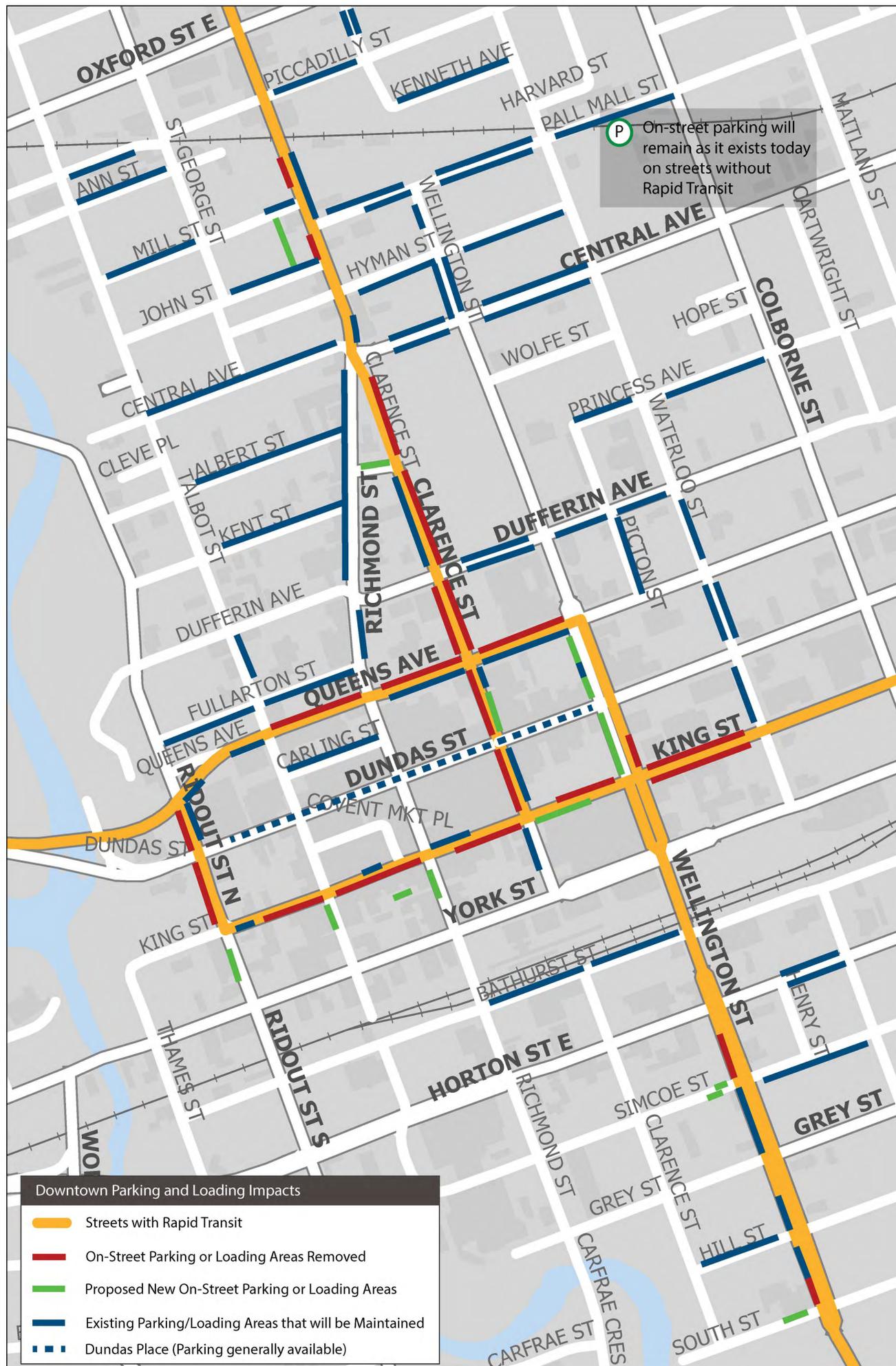
- Northbound travel time by car increases by 1-1.5 minutes in PM rush hour
- Minor impacts to southbound direction

- Improved Western Road attracts majority of traffic diverted from Richmond Street (~250 cars)
- Blackfriars Bridge open to eastbound traffic



PARKING AND LOADING

On-street parking and loading supply will change along streets with BRT. The map below identifies which areas will be impacted.



PARKING AND LOADING

These tables show the on-street parking spaces that will be removed along each block.

BLOCK	EXISTING ON-STREET PARKING (2018)	ON-STREET PARKING WITH BRT
South Corridor		
Wellington Street		
Horton to Simcoe	5	0
Simcoe to Grey	11	11
Grey to Hill	5	5
Hill to South	7	3
South Corridor Total	28	19
North Corridor		
Richmond Street		
Central to Hyman	5	5
Hyman to Piccadilly	20	9
North Corridor Total	25	14
East Corridor		
King Street		
Waterloo to Colborne	19	0
Colborne to Burwell	7	0
Dundas Street		
Ontario to Quebec	12	0
East Corridor Total	38	0

BLOCK	EXISTING ON-STREET PARKING (2018)	ON-STREET PARKING WITH BRT
Downtown		
Clarence Street		
King to Dundas	14	15
Dundas to Queens	21	13
Queens to Dufferin	18	0
King Street		
Ridout to Talbot	14	4
Talbot to Richmond	8	3
Richmond to Clarence	20	11
Clarence to Wellington	8	0
Wellington to Waterloo	25	10
Wellington Street		
King to Dundas	6	9
Dundas to Queens	3	8
Queens Ave.		
Wellington to Clarence	15	16
Clarence to Richmond	8	15
Richmond to Talbot	12	0
Talbot to Ridout	10	10
Ridout Street		
Queens to Dundas	16	8
Dundas to King	6	0
Downtown Total	204	122

Mitigation

As of 2015, there were 13,000 parking spaces in the downtown. Strategies for managing the reduction of 82 on-street spaces include:

- Promoting off-street parking supply
- Designating new on-street loading space on near-by side streets.
- Improving maintenance of public alleyways with access to commercial parcels.

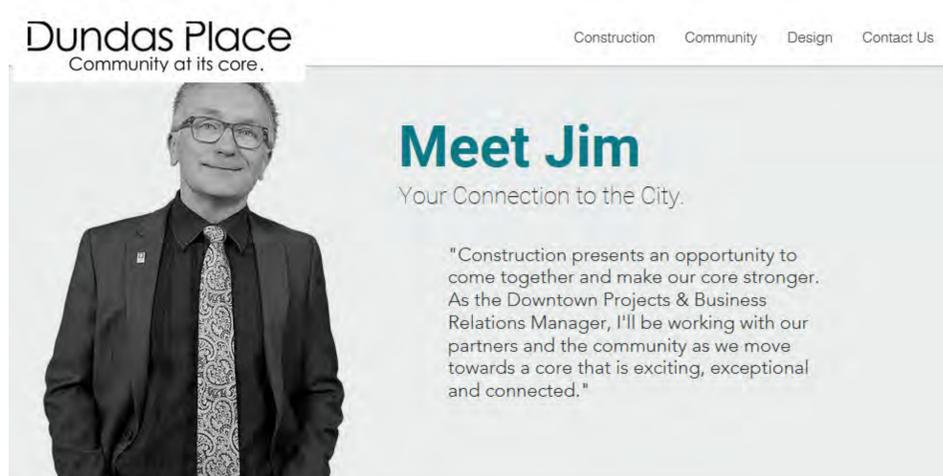


Example of parking/loading being relocated to a side street.

WHAT TO EXPECT DURING CONSTRUCTION

The City will:

- Provide timely, accurate and proactive information through real-time, on-site resources, and establish robust communications protocols.
- Work closely with businesses and property owners, targeting areas under stress from construction and making accommodations as needed.



(Left): The City is intensifying outreach and support for property and business owners during construction of the Dundas Place flex street. The BRT project will use a similar approach.

