Rapid Transit FAQs
From Initiation to Preliminary Design
SPRING 2010

Hamilton Public Works

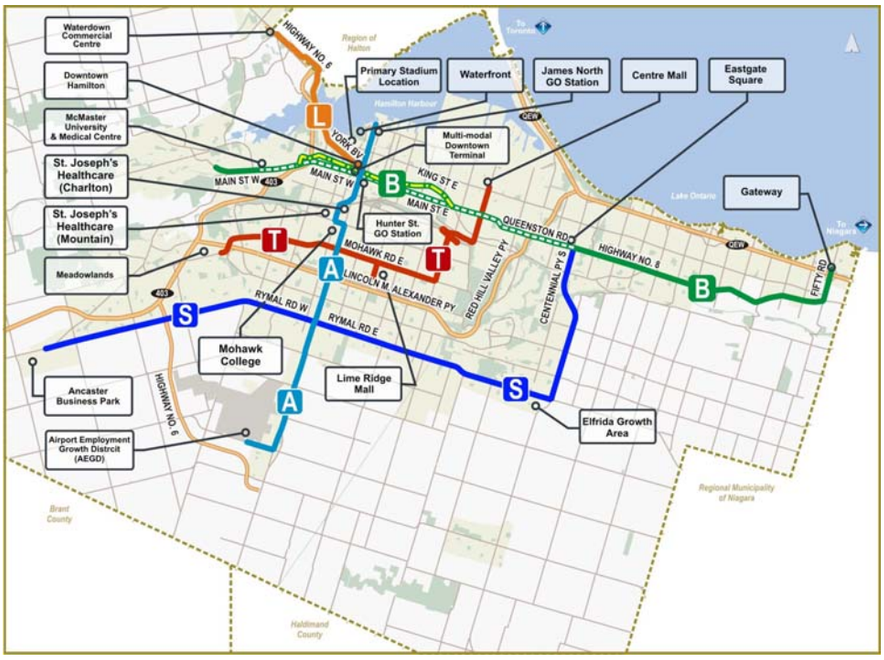
Rapid Transit
MOVING HAMILTON FORWARD

Why is the City of Hamilton interested in rapid transit?

Hamilton's Transportation Master Plan (2007) focuses on transit and transportation demand management, in combination with road capacity optimization before looking to road expansion. The provision of high order transit is a part of this overall strategy.

The Province of Ontario announced its MoveOntario 2020 vision in June 2007, which included two rapid transit corridors for Hamilton. Metrolinx, the Provincial body responsible for the implementation of MoveOntario 2020, completed the Regional Transportation Plan in November 2008. As part of this plan, five rapid transit corridors were identified, which form Hamilton's "B-L-A-S-T" network. These corridors include:

- B-Line – Main/King corridor, McMaster University to Eastgate Square, Top 15 priority project
- A-Line – James/Upper James corridor, Downtown to Airport, 15 year project
- T-Line – Mohawk to Meadowlands, 25 year project
- S-Line – Centennial to Ancaster Business Park, 25+ year project
- L-Line – Downtown to Waterdown, 25 +year project



The provision of rapid transit in Hamilton has become a key component required to meet long term goals for the City of Hamilton including:

- Hamilton's Vision Statement – Making Hamilton the best place to raise a child
- Corporate Strategic Plan
- Public Works Business Plan
- Planning's new Official Plan (which focuses on a nodes and corridors concept)

What is the guiding principle behind rapid transit planning?

Hamilton has taken a collaborative approach to rapid transit planning, involving staff from six different departments as part of a Corporate Working Team. From early on, the Rapid Transit Team also ensured that extensive public consultation was undertaken with stakeholders, corridor property owners and the general public. In order to ensure that rapid transit ultimately not only meets the goals of Public Works initiatives, but other corporate policies in addition to the public expectations, a vision statement was developed by the corporate working team (November 2008), supported by the public (December 2008) and endorsed by Council (January 2009) in order to guide future planning of rapid transit and other related initiatives.

Rapid Transit Vision Statement

Rapid Transit is more than just moving people from place to place. It is about providing a catalyst for the development of high quality, safe, sustainable and affordable transportation options for our citizens, connecting key destination points, stimulating economic development and revitalizing Hamilton. Rapid transit planning strives to improve the quality of life for our community and the surrounding environment, as we move Hamilton forward.

Why is the priority for rapid transit implementation the B-Line corridor?

The B-Line was identified as a top 15 priority project by Metrolinx in the Regional Transportation Plan (RTP). This recommendation coincides with one of the most utilized traditional transit routes currently operated by the HSR, within the most highly used transportation corridor in the City of Hamilton. The B-Line corridor also has the greatest potential for economic development and transformational opportunities for the City of Hamilton.

Why are we focusing on Light Rail Transit over Bus Rapid Transit?

During Phase 1 of the Rapid Transit Feasibility Study (RTFS), both Bus Rapid Transit (BRT) and Light Rail Transit (LRT) were reviewed from a constraints and opportunities perspective in order to determine if there were reasons that would eliminate a technology from further consideration. Both technologies were deemed to be appropriate. As part of Phase 2 of the RTFS, economic and community impacts were evaluated for each technology, as well as public consultation on the preferred mode of rapid transit in Hamilton. Although both technologies have been identified as being beneficial for the City of Hamilton, a greater potential for City transformation and economic development was identified with the implementation of LRT. There is also overwhelming support for the implementation of LRT over BRT by the public (Summer 2009 Survey Results - LRT 79%, 15% BRT, 6 % Neither [these results are similar to Summer 2008 results]). As such, in October 2008, City Council endorsed a recommendation by staff to pursue LRT for Hamilton.

Why are we recommending two-way transit?

From an operational perspective, transit is most effective when the start journey and end journey point are within the same corridor, attracting greater ridership to the system. In addition, greater economic benefits are shown to result from the implementation of bi-directional rapid transit within the same corridor, when compared with one-way transit operating in separate corridors.

Why are we recommending a median transitway?

Three options were considered for the location of the transitway within the existing right-of-way:

1) curbside
2) second lane
3) median

Curbside – this alternative would impact all driveways and cross-streets on the side of the curbside transit corridor, resulting in removing all access to these impacted parcels and eliminate all movements from the side streets on the side of the curbside transitway (all non-signalized intersections would be cul-de-sac'd and driveways eliminated). Crossing of the tracks would not be permitted. This restriction would be required to eliminate LRT and vehicle conflicts. Greatest Impact.

Second lane – this alternative would allow for access to driveways and cross-streets on the side of the second lane transit corridor, however it would result in the reduction of an additional lane of through capacity for general purpose traffic (over curbside) .

Median – although this alternative only allows for right-in/right out traffic movements from driveways and sidestreets, no access is fully restricted. Traffic traveling in the opposite direction of the desired destination is permitted u-turn opportunities at signalized intersections, to ensure that traffic coming from either direction can access each parcel. Least Impact.

Why are we recommending two-way traffic on King Street?

In conjunction with the recommendations of the Downtown Transportation Master Plan, once it was determined that two-way transit was the preferred configuration for rapid transit, a review of the one-way/two-way operation of Main Street and King Street was also undertaken. By maintaining one-way traffic, within the same ROW corridor as two-way transit, contra-flow operation between traffic and transit would be introduced. Primarily, from a safety perspective, this is not desired. In addition, contra-flow operations would not be desired as the location of the two-way transit operation would result in a curbside transitway. As mentioned previously, curbside transitways restrict access to all driveways and cross-streets on the side of the curbside transit corridor.

Why are we recommending the implementation of rapid transit on King Street as opposed to Main Street?

Although Main Street is less constrained in regards to right-of-way, King Street has been identified as the preferred corridor for two-way rapid transit for a number of reasons, including maintaining as much general purpose traffic capacity as possible. In the short term, focusing on the transformation of King Street results in a reduction of westbound traffic capacity. Transportation modeling done to date identifies that sufficient capacity exists within the lower city street network to address the loss of capacity on King Street, however, regardless of the preferred scenario selected, the introduction of rapid transit requires a substantial change in the trip-making characteristics of all motorists. As such, the City of Hamilton, in line with the recommendations of the Transportation Master Plan, will continue to be aggressive in regards to developing and supporting transportation demand management policies and programs.

King Street does present a number of challenges, however great community and economic opportunities also exist. The Downtown Transportation Master Plan supports two-way traffic, identifying King Street and York Boulevard as two-way pairs and Main Street and Cannon Street as one-way pairs. King Street, along the south side of The Gore was also

recommended for a trial as a Pedestrian Only Space. There is opportunity to introduce a similar concept, permitting transit, pedestrians, emergency services vehicles and delivery vehicles only, along other areas of King Street. King Street is also the primary spine of Hamilton's downtown core. This presents numerous opportunities for economic redevelopment.

What are the impacts to roadway capacity within the lower city road network?

Overall, there is sufficient capacity in the system for all traffic/transit options considered including:

1) one-way traffic/one-way transit
2) two-way transit on King with one-way traffic on Main/King
3) two-way transit on King with two-way traffic on Main/King
4) two-way transit/two-way traffic on King, one-way traffic on Main

Depending on the option reviewed, the number of trips required to be diverted to other routes varies. Options 1 & 3 require the least amount of diversion, while options 2 & 4 require the greatest amount of diversion, particularly in the afternoon peak hours.

In addition the City will be focusing efforts on Transportation Demand Management tools in order to reduce the overall impact on the roadway networks, by focusing on diverting 30-40% of trips from single occupancy vehicles (SOV's) to either transit, cycling, walking, telecommuting or other initiatives.

Generally, although there is sufficient capacity in the traffic system to accommodate these changes to the roadway network and existing traffic volumes, changes in how people currently move around the City will need to take place. If all road users continue to utilize SOV's and still choose to drive on King Street once rapid transit has been introduced, there will be congestion.

What are the impacts to traffic operations of a median transitway?

- Sidestreets and driveways will only be accessible through right-in/right-out movements.
- Signalized intersections will permit u-turns in addition to existing movements.
- Conflicts are minimized (no left turns within corridor, except at signalized intersections where left turn lane storage opportunities exist).
- Crossing of the LRT tracks is not permitted, except at signalized intersections.

What are the impacts to traffic signal operations as a result of rapid transit?

LRT will receive priority at all signalized intersections. Depending on each signalized intersection configuration and intersection volumes, additional movements may be permitted at the same time as the LRT, provided they are not conflicting or impact the priority of the LRT.

What are the primary impacts to parking and loading to King Street by introducing two-way traffic and two-way transit?

As a worst case scenario, it is anticipated that there will be no on-street parking or loading along the rapid transit corridor as a result of the introduction of rapid transit. This is a significant impact. Although there may be opportunities, through detail design, where some on-street parking/loading can be re-introduced, these areas have not yet been identified.

In order to address this significant impact, the Rapid Transit Team will work with corridor property owners and businesses in order to determine suitable measures to address the loss of on-street parking and loading. The initial Parking & Loading Study has identified potential opportunities to utilize existing alleyways, address the redevelopment of parcels and on-site parking and loading through site plan, identify shared loading opportunities and the identification of loading bays on adjacent side streets. This area requires further study and consultation with impacted properties/businesses.

How are typical city maintenance and operational issues dealt with as a result of the introduction of rapid transit on King Street (i.e. emergency response times, snow removal, garbage pick-up, roadway maintenance etc)?

Some of the above noted issues will be impacted by the design selected for rapid transit i.e. lane widths, use of single track, rolled transit median way barriers to allow vehicles to encroach into the transitway in one lane sections for emergency reasons, etc. Other issues such as garbage collection and typical roadway and infrastructure maintenance may need revised operational procedures developed for the rapid transit corridor. Continued rapid transit planning and stakeholder and public consultation will address these important issues.

What right-of-way restrictions exist on King Street? What options exist to address right-of-way restrictions? Given that Main Street is a wider corridor, should we be looking to implement rapid transit there instead of on King Street?

The right-of-way on King Street (property line to property line) ranges depending on the section of roadway. At its narrowest point (around Sherman Avenue) the ROW is as narrow as 15.8m. In the downtown, sections of ROW are as narrow as 17.3m. The minimum ROW for "fitting" rapid transit within the existing corridor is 20m, although this results in minimum lane widths and sidewalk widths. This does not include station location property requirements or signalized intersections property requirements. As, the right-of-way can be impacted through the design of the rapid transit corridor, Rapid Transit Team staff is considering various ways that the corridor design can be modified to minimize impacts. This

includes considering single tracks in some areas, minimal platform widths, minimal lane widths, minimal boulevard treatments and sidewalk widths. In some cases, substandard lane widths and sidewalk widths may be required when property acquisition opportunities are restricted by heritage and archeology features.

Although the majority of King Street has a more limited right-of-way over Main Street, there would still be a portion of the corridor, between the Delta and the Queenston Traffic Circle, that would still contain a limited ROW that would not be addressed by switching corridors.

Two-way traffic on King Street is supported by the existing Downtown Transportation Master Plan. As part of that plan, the one-way pair is Main Street (eastbound) and Cannon Street (westbound). King Street and York Boulevard are recommended for conversion. York Boulevard has been recommended for conversion in 2010.

The issues of conversion of Main Street to two-way traffic will be reviewed in the future, once rapid transit on King Street has been implemented and changes in traffic patterns established.

What public consultation has taken place to date? What stakeholder/corridor property owner/tenant consultation has taken place to date?

Public Consultation
Initial Public Consultation – May 6 & May 8, 2008 (RTFS Phase 1)
Second Round of Public Consultation – December 2 & December 4, 2008 (RTFS Phase 2 and Metrolinx)
Third Round of Public Consultation – June 1, June 3 & June 9, 2009 (RTFS Phase 3 and Metrolinx)

General Stakeholder Consultation
Stakeholder Consultations (individual presentations/meetings/public survey) – Summer/Fall 2008
Attendance at various Public Events – Summer 2008
First Meetings with Corridor Property Owners – February 23, 2009
First Formal Meeting with Stakeholders – February 23, 2009
Stakeholder Consultations (individual presentations/meetings/public survey) – on-going (April 2008 – Fall 2009)
Quarterly Newsletters to those on mailing list and corridor property owners – Summer 2008 – present

What are the next steps in rapid transit planning?
On April 1, 2009, the Province of Ontario announced $3.0 Million in funding for the City of Hamilton, for the planning, design and engineering (PDE) of the City's B-Line corridor and the A-Line Feasibility Study. The PDE study is expected to be awarded to the successful proponent in March 2010 with initiation of the study shortly thereafter. This next component will involve extensive public consultation with all stakeholders along the corridor. It will draw together the key findings of the work completed to date, determine engineering solutions and define the ultimate layout of the B-Line corridor, while preparing the A-Line corridor for future project implementation.

When does the City expect to hear from Metrolinx/Province about capital funding? When does the City expect a recommendation on mode technology (either LRT or BRT)?
The City of Hamilton has worked closely with Metrolinx to complete the Benefits Case Analysis (BCA) for the B-Line corridor. The Benefits Case Analysis is the Province's due diligence process by which all reasonable alternatives are evaluated from a cost/benefit perspective to define the best possible transit project for Hamilton. It provides a robust and consistent decision making platform utilizing a triple bottom line approach for each project. Each Benefits Case Analysis evaluates the relative merits and costs of alternative project options, which may include variations in the alignment, technology, performance, stations and/or phasing of the project. The purpose of the BCA is to undertake a comparative analysis of feasible options for a specific rapid transit project and present the results in such a way that it will assist decision makers to select a preferred option for implementation.

The BCA identified three project options for rapid transit implementation in Hamilton including BRT, LRT and phased LRT. Although full LRT is the highest cost option, it also generates the highest benefits in terms of travel time savings, ridership attraction and overall "qualitative" travel experience. LRT will also generate more significant economic development impacts such as employment, income and Gross Domestic Product (GDP) growth. The BCA also identifies LRT as having greater potential to shape land uses and uplift land values along the King-Main corridor.

It is important to note that Metrolinx did not recommend a mode/technology for Hamilton's rapid transit system, however they continue to support Hamilton in moving forward with the planning, design and engineering of the B-Line in order to finalize a design for future LRT implementation and move towards securing potential funding.

Why are we planning for this now if Metrolinx/Province hasn't yet confirmed their funding contribution or recommended technology?

Presently, the City of Hamilton is the only municipality in the Greater Toronto Hamilton Area (GTHA) to secure funding for the planning, design and engineering phase for any proposed rapid transit corridor. This shows that the Province considers rapid transit in Hamilton to be a priority. In addition, by undertaking these studies and consultation now, we are preparing to be ready for implementation as soon as possible.