

Mount Royal College Transit Service Plan

Background

In 2007 November response to Council Report C2007-78 West LRT Alignment, Budget and Project Delivery, Council directed the Administration to report back “on an implementation plan, and associated costs, for alternative or additional servicing options to include Mount Royal College, including, but not limited to, (future spur line or future connections (LRT), BRT and dedicated bus-ways”

An attached report to the above captioned report “2007 West LRT Report – Review of Alignment Options” provides an overview of several optional LRT alignments that were examined as having potential to provide direct LRT service to land uses such as Mount Royal, Westhills and Tsuu T’ina Nation lands. It was concluded that these options would not provide effective transit service for the entire West LRT service area and that they would require a significantly higher capital cost than the approved West LRT alignment. It was noted that Mount Royal College students, which currently have a significant level of transit use, would benefit in the future from improved transit travel times given the location of the nearby West LRT line.

The purpose of this report is to provide an outline of transit service improvements to significantly enhance transit service for Mount Royal College in conjunction with the implementation of West LRT and other elements of future transit networks.

Mount Royal College

Mount Royal College (MRC) is a major post secondary school with over 3,000 part time and 8,000 full time students and approximately 2,000 staff. The college campus, located in Calgary’s southwest near the intersection of Crowchild and Glenmore Trails, is experiencing significant growth both in terms of enrolment and campus development. As well, development is occurring on the nearby 100 acre Lincoln Business Park employment centre.

Currently, transit service to MRC consists of 7 bus routes that provide connections to all quadrants of the city including the downtown and inner city / Beltline and six CTrain stations. The service includes two direct express bus routes that offer limited stop service between Northwest and South LRT stations. On an average weekday these routes carry approximately 3,750 trips to and from MRC and the immediately adjacent area. This high level of ridership reflects the recent (2006) implementation of improved transit services and a student universal pass program that sees about 33 percent of full time MRC students using transit to travel to and from school.

Current Transit Service To MRC

Route	Service Area	Service Frequency Peak / Off Peak	Daily Trips To/From MRC
13	Downtown, Inner City SW	15 / 30 45	500
18	Downtown / Lakeview	15 / 30	850
20	Northwest / Southwest	10 / 20 / 30	1650
72	Circle Route – NE, NW, SE, SW	10 / 15 / 30	140
73	Circle Route – NE, NW, SE, SW	10 / 15 / 30	350
112	Westhills, Downtown	16 / 30	80
181	Brentwood LRT Stn Express	3 am / 5 pm trips	80
182	Anderson LRT Stn Express	3 am / 3 pm trips	100
		Total >	3,750

Transit Network Development

Calgary Transit continues to develop and refine a long range transit network plan that identifies future bus routes, LRT lines and other infrastructure required to serve Calgary's projected growth. In recent years, functional plans have been approved for a future Southeast LRT line and a concept plan has been adopted for a North Central LRT alignment. As well, numerous future bus routes have been identified to serve new growth areas and provide connections to LRT and other key destinations.

With an increased emphasis on developing a more sustainable city, transit must play a more prominent role in providing mobility. It is recognized that new strategies and tools are required in order to further increase the attractiveness and effectiveness of transit service. Calgary Transit, in conjunction with 'Plan It Calgary', is developing plans for a network of higher level transit services to link key high density nodes, many of which, like Mount Royal College are developing within established areas of the city.

LRT is clearly recognized as the highest level of transit service in Calgary. With completion of the planned six lines, the CTrain network will provide frequent, rapid, high capacity, limited stop service within exclusive rights of way in each of Calgary's major growth corridors. As well, higher density, Transit Oriented Development nodes will be developed at many CTrain stations to maximize the connectivity and travel capacity afforded by LRT.

It is recognized that a very significant level of investment is required to complete this planned LRT network. It is also recognized that Calgary's future transit network also will require high quality, cross-town connections to provide linkages between key development nodes being planned along the arms of the radial LRT network. However, it is not feasible to extend LRT to all concentrations of development. Areas such as the Foothills Hospital, Calgary International Airport, and Mount Royal College represent significant activity areas and travel destinations that deserve a higher level of service but extending LRT to these areas will be difficult and very costly since rights of way do not exist and they are not located on linear corridors.

Role of Bus Rapid Transit

Today, BRT operates in the Centre Street corridor and along the future West LRT alignment. This service commenced in 2004 and has expanded slowly as ridership has increased. BRT offers LRT-like amenities such as park and ride, enhanced bus stops and transit priority at traffic signals. In 2008, higher capacity articulated buses will be used exclusively on this route to meet demand. A similar style of service is envisioned in the near future to establish service along the future Southeast LRT route.

In addition to its role in developing ridership in future LRT corridors, Calgary Transit proposes that BRT should also be used provide a network of improved cross-town transit services. It is envisioned that BRT routes will be developed to provide all-day frequent, higher capacity, limited stop service to connect existing activity centres and support the expansion of higher density development outside of the LRT corridors. It is envisioned that BRT will integrate with LRT, local and mainline bus routes to provide a higher quality, affordable and attainable level of transit infrastructure and service. The strategy is to focus and encourage higher density, sustainable development along LRT and BRT corridors to enable Calgarians to meet all of their daily needs easily and without the need of an automobile.

Mount Royal College Service Proposal

The attached plan illustrates a proposed BRT route that would commence operation with the opening of West LRT. The service would provide express-like, limited stop service between the future Westbrook Mall station, Mount Royal College and Heritage LRT station. Travel time to MRC from Westbrook Station would be approximately 8 minutes while time from Heritage Station is estimated at 12 minutes. The route would operate via 37 Street, Glenmore Trail, 14 Street and Heritage Drive SW. This two-way service would operate every 10 minutes, approximately 15 hours each day using higher capacity articulated buses. Transit priority would be provided at traffic signals and could also be provided in the form of geometric roadway improvements (queue jumpers, exclusive lanes, where required) to minimize bus delays.

Using articulated buses, this service will provide an hourly capacity of approximately 600 passengers traveling between MRC and each of the CTrain stations. As well, this service could also be extended to serve the Rockyview Hospital.

The capital cost of providing this service is estimated at \$5 million for buses, transit priority measures and bus zone amenities. The annual net operating cost is estimated at \$500,000 (operating cost net of revenue and consolidation of other services).

It is recommended that this recommended BRT service be included in the package of bus service changes to be reviewed and discussed with community and transit stakeholders as part of the planning for the feeder bus network for West LRT.

Analysis of Alternatives

An alternative that was examined to the above proposed service was a BRT route that would extend from the downtown directly to MRC via Crowchild Trail with a further extension to connect with Heritage Station which is common to the recommended service. However, this option would require approximately double the investment in both buses and operating cost. As well, travel time and reliability on the downtown segment of this route would be negatively affected by an increasing level of traffic congestion expected on both Crowchild and Bow Trails.

The proposed service is also recommended since it better addresses the fact that about two-thirds of all student transit trips to MRC are carried by bus routes that do not originate in or travel through the downtown. The propose service would build on the current transit services that extend to most areas of the city via cross-town bus and LRT service. The proposed service would offer decreased travel times from most areas of the city by an average of 8 minutes or 20 percent. The following table provides an estimate of travel times using current services and approximate times with the implementation of West LRT and the proposed BRT route.

**Transit Travel Time Comparison Before and After Proposed MRC BRT
(Uses LRT Plus Proposed BRT Services)**

Origin	Current Travel Time	Projected Travel Time	Difference (mins)	Percent Improvement
Brentwood Stn	37	37	0	0
Whitehorn Stn	54	46	8	15
69 St SW Stn	25	19	6	24
Somerset Bridlewood Stn	41	30	11	27
McKenzie Towne	60	53	8	13

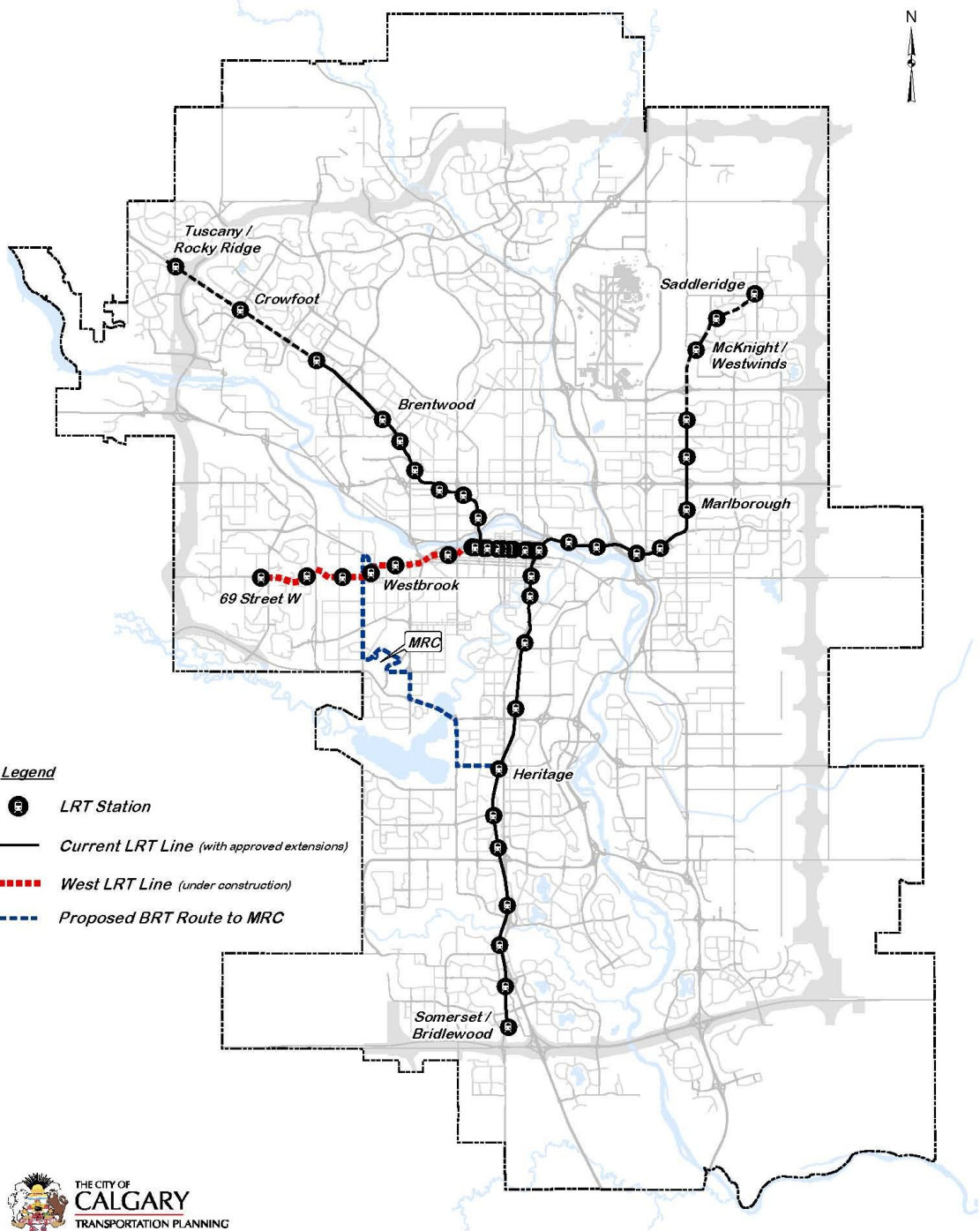
Conclusion





Mount Royal College and the adjacent Lincoln Business Park represent significant concentrations of development and activity that should receive a higher quality transit service to increase their accessibility and encourage even higher levels transit ridership. It is concluded that a high capacity, frequent, limited stop Bus Rapid Transit route should be implemented in conjunction with the opening of West LRT. This route would provide a direct connection between Mount Royal College, the future Westbrook Mall Station (West LRT) and Heritage Station (South LRT) using primarily articulated buses operating on existing roads. With direct connections to two LRT lines, and therefore, all parts of the current and future LRT network, the recommended route will offer significant travel time savings and provide improved transit service connections to most other areas of the city. This route also reinforces the cross-town nature of current transit travel to MRC.

The proposed BRT route represents an initial link within a possible future enhanced network of high quality cross-town BRT services intended to provide connectivity between LRT lines, to serve existing development nodes and encourage higher density development in key locations outside of current LRT corridors.

The proposed route should be planned as an integral part of the bus route revisions to be planned in conjunction with the public engagement process for West LRT. This service will require an estimated capital budget of \$5 million for buses, bus zone enhancements, and transit priority measures with an expected net operating cost of approximately \$500,000.

Proposed BRT Service For Mount Royal College



- Legend**
-  LRT Station
 -  Current LRT Line (with approved extensions)
 -  West LRT Line (under construction)
 -  Proposed BRT Route to MRC