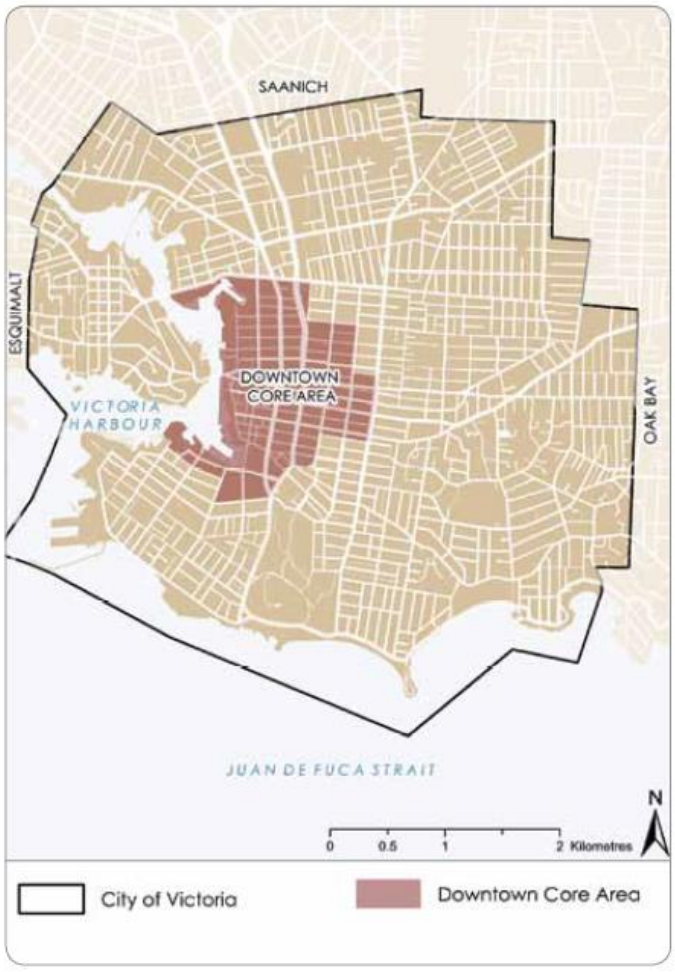
VICTORIA DOWNTOWN CORE BUS CIRCULATOR OPTIONS REPORT

1.0 INTRODUCTION

On January 30th, 2014 the City of Victoria Council passed a resolution requesting BC Transit formally explore options for a circulator bus route in the downtown core. This request was presented to the Victoria Regional Transit Commission (the Commission) at its February 18th, 2014 meeting and the Commission passed a motion that staff investigate the feasibility of a downtown circulator and prepare a response to outline options and the associated expected costs.

In response, BC Transit staff met with City of Victoria staff and elected officials to confirm the objectives for a circulator route in order to establish service options and associated costing. The City of Victoria's vision for the service is to provide accessible and affordable transit that supports the economic development and vibrancy of the downtown core with a transit service oriented to both residents and visitors. The City confirmed the following objectives for a downtown circulator service, including:

- Consist of a standalone route that only operates in the downtown core between key destinations in the north and south end of downtown Victoria.
- Be easily distinguishable from other transit routes that link neighbourhoods with the downtown core.
- Operate annually, seven days a week (from morning until early evening).



The City also requested that options developed should include a fare-free scenario and a fare paid option.

This report provides an overview of the existing service and potential service options for a downtown transit circulator route, the costs, and the associated impacts/opportunities of making it a fare-free service.

2.0 EXISTING TRANSIT SERVICES

2.1 Transit Service Levels

The downtown core is well served by transit with service levels and transit network coverage exceeding the Victoria Regional Transit System (VRTS) Service Design Standards. A number of existing bus routes converge onto Douglas Street and provide a spine of very frequent service from the northern end of the downtown core to the BC Legislature building with a bus every one to five minutes. The map below displays the frequency of trips per service hour during the morning rush hour which exceeds the service design standards for local transit routes. There is also very frequent service on Fort and Yates Streets between downtown and Fernwood due to bus routes converging on these streets.

Transit service is available early in the morning and late into the evening seven days a week in the Victoria downtown core, with additional late evening service on select routes Fridays and Saturdays. The hours of operation are shown in the following table:

Hours of Operation

Service Day	Start Time *	End Time *
Mon-Thurs	5:30 am	12:00 am
Friday	5:30 am	1:30 am
Saturday	5:40 am	1:30 am
Sunday	6:40 am	11:15 pm

*****Approximate

2.2 Transit Coverage/Service Area

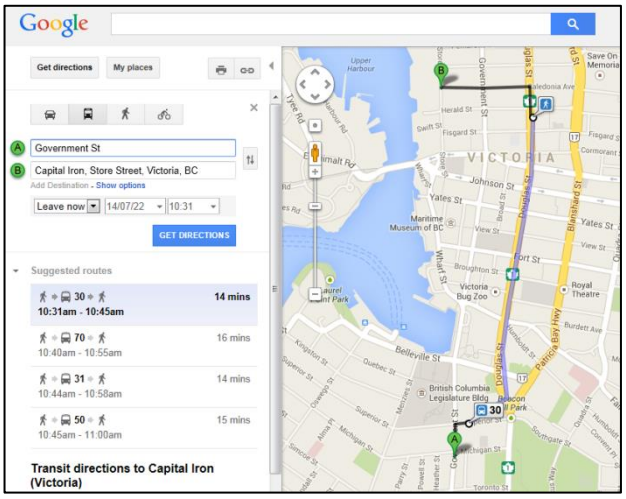
Existing transit network coverage (walking distance to transit stops) is also very good in the downtown core as shown in the following map. The approved VRTS Service Design Standard for transit network coverage is to provide service coverage (within 400 metres walking distance of a transit route) to at least 85 per cent of the region's residential and employment population within the Capital Regional District's Urban Containment Boundary. Service coverage in the downtown core exceeds this standard with over 95 per cent of the population and area destinations within a 200 metre walk to transit.

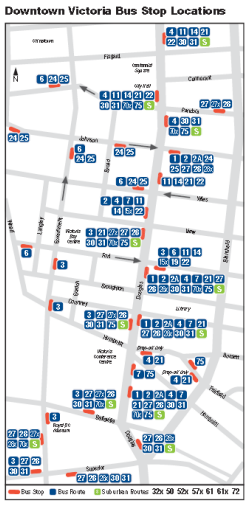
To provide additional context, under the existing routing, coverage and frequency, sample walk times and route frequencies for common visitor destinations / travel patterns are as follows:

From	To	Transit Service Frequency (in minutes)	Total walk time/distance to access transit (in minutes/metres)
Fisgard at Government	Belleville at Government	4-10 min	5 min / 400m
Fisherman's Wharf	Douglas at Yates	15-30 min	4 min / 400m
Store St. at Chatham	Belleville at Menzies	4-10 min	10 min /770m

2.3 Transit Information

There are a number of options available in the downtown core to access transit route and schedule information, including at bus stops, online and in print. Bus stops are signed and transit information posters are available at most bus stops. There is also transit route and schedule information online at the BC Transit website and on the Google Transit trip planner. The VRTS publishes a transit system Rider's Guide with a network map, and route and schedule information is available for each route in the region.





Regular transit riders who are familiar with the transit system can easily circulate from the one end of the downtown core to the other using existing service. As is standard, first time transit riders or visitors to the city may initially find the number of choices in the transit system overwhelming for downtown circulation. There are a range of information sources already in place to help them with that first trip, including calling the customer information line, asking an operator for help navigating the system and using the Google Trip Planner to map a route on a smart phone.

Work is also underway to further simplify that first trip. One of the next steps already in progress is to develop strategies that will improve customer understanding of the services available with marketing and branding concepts that align with the development of the Rapid, Frequent and Local Transit service hierarchy identified in the Transit Future Plan. This will include changes to the network and route maps, schedules, and signage information to improve the customer's ability to easily identify and understand the transit system and downtown transit circulation.

3.0 REVIEW OF DOWNTOWN CIRCULATORS

Staff undertook a review of downtown circulators in Canada and the key discoveries indicated that the success of circulator service depends on the goals initially established and that travel times need to be competitive with walking travel times (i.e. frequent service).

Some circulator services are differentiated from regular transit services, with targeted marketing or a specialized brand to be easily understood by people such as visitors to the City. Fares for downtown circulator services are sometimes the same as the regular transit system fares and in some cases they are lower or free. Circulator services that do not charge a fare attain much higher levels of ridership than services that do charge a fare.

Transit service needs to be frequent enough to be competitive with walking otherwise most customers would likely choose to walk. Less frequent services may be helpful for people who are unable or do not wish to walk for reasons such as weather, frailty or a disability.

A common goal of downtown circulators is to move people and if high frequencies and free fares are used to realize this goal, then downtown circulators will perform well. For example, in Winnipeg, 70 boardings an hour were attained with free fare and a 9 minute headway; however, walk distances in downtown Winnipeg are considerably longer than in downtown Victoria. Another common goal is to achieve an appropriate level of cost-effectiveness. As a result, nominal fares are introduced and frequencies decreased. It was noted for these systems that resulting performance declines significantly with lower boardings per service hour.

The following table summarizes the downtown circulators assessed in this report:

COMPARISON OF DOWNTOWN CIRCULATORS				
TRANSIT SYSTEM	**FREQUENCY (in minutes)**	**FARE**	**BOARDINGS PER HOUR**	**COST RECOVERY**
Calgary (2014) Route 31	60	$0.00	13	0.0%
Vancouver (1991)	45	$0.00	30	0.0%
Victoria (1987) (Summer)	22	$1.00	7	14.0%
London (Estimates)	15	$0.25	15	6.25%
Winnipeg (1986) 99 DASH	9	$0.00	70	0.0%
Winnipeg (1991) 99 DASH	9	$0.50	27	21.5% (1992)
Winnipeg (2014) 1 Downtown Spirit	15-20	$0.00	34	0.0%
Winnipeg (2014) 2 Downtown Spirit	15-20	$0.00	32	0.0%
Winnipeg (2014) 3 Downtown Spirit	35-40	$0.00	39	0.00%

3.1 Langford Trolley Service

The Langford Trolley is a shuttle service for local commuters, visitors, special events and local businesses within Langford. The service is accessible to everyone and the fare is by donation. The service operates every 30 minutes and serves major shopping and recreational areas in Langford. The loop is approximately 12 kilometres long and encompasses: West Shore Town Centre, Goldstream Village, Millstream Village, and City Centre Park.

Service runs seven days a week from 10:00 am to 6:00 pm with two half hour breaks. The trolley was purchased by the West Shore Developer's Association as a gift to the City. Operational costs for the service are mainly funded by advertising, amenity contributions from developers, and donations from trolley users.

3.2 Examples from Other BC Transit Systems

The following outlines services from other transit systems within BC where existing routes are performing the function of a circulator:

- **Whistler Transit** - In partnership with the Resort Municipality of Whistler, BC Transit operates a similar fare free shuttle service on three routes which provide an important service for visitors to the resort. Two routes circulate through the upper and lower Whistler Village while the third operates during the summer only and provides service between the Whistler Village and a nearby lake. Service is every 15-30 minutes depending on season, time of day and route. The service is subsidized with revenue generated by a hotel tax which offsets the loss of revenue to the municipality from not collecting fares.

- **Kelowna Regional Transit, Central Fraser Valley Transit:** Both of these systems operate "Shopper Shuttle" routes that provide a circulatory function. Rather than visitors, these routes are targeted more for the needs of seniors and others who may have mobility difficulties to connect to key destinations.
    - Within the Central Fraser Valley system, the 39 Shopper Shuttle operates in Mission and connects its hilly, densely populated residential neighbourhood with its downtown, key malls, recreation centre, hospital and several seniors facilities.
    - Within Kelowna, the 9 Shopper Shuttle connects a high density neighbourhood containing a large proportion of seniors with its downtown, a rec centre and the region's largest mall.

  In the Kelowna and Mission cases, routes operate as part of the regular system and regular fares apply. While frequency is fairly low (every 60-120 minutes), what they do show is the opportunity to integrate circulator services connecting key shopping/recreational destinations with services targeted to specific high density neighbourhoods and particular passenger markets. These would be good starting points

to consider if the City wishes to expand the scope of downtown circulation to instead look at how its neighbourhood-to-neighbourhood services operate. In other words, rather than a stand-alone downtown loop (as originally envisioned by the City), there may be opportunity to restructure local routing between neighbourhoods bordering downtown to provide circulation within downtown itself.

4.0 DOWNTOWN CIRCULATOR CONCEPT

The City of Victoria provided the following parameters for the downtown transit circulator study:

- Design a service that would appeal to both residents and visitors;
- Connect key destinations in both the north and sound end of town; and,
- Include both a fare-free scenario and a fare paid option.

A conceptual option has been developed based on discussions between the City of Victoria and BC Transit to provide an understanding of the costs associated with a circulator route. Additional route planning will be required if direction was given to proceed into implementation of this service to finalize route timing, select bus stop locations and confirm bus turn movements. The downtown circulator route would be an annual service that operates seven days a week from morning until early evening.

The Victoria downtown core is a walkable distance, with some of the longest walk distances only 1.5 to 2 kilometres. This takes the average person approximately 17 to 26 minutes to walk. The same travel time by transit would take 9 to 12 minutes. Transit service would need to operate every 10 minutes or less to be competitive with walking otherwise most customers would likely choose to walk. Less frequent services may be helpful for people who cannot want to walk for reasons such as weather, frailty or disability.

Three service options were developed based on 10, 15, and 30 minute frequencies and two fare options were developed assuming a fare free and a paid fair option ($1). Key assumptions used in this analysis include:

- Service would be provided seven days a week between 8:00 a.m. to 8:00 p.m.
- Service would be provided with medium duty buses (i.e. 35’ two door vehicles).
- Ridership estimates are based on 10-25 rides per hour depending on frequency and fare levels.

4.1 Routing

The routing of the service is designed to serve both residents and visitors to the City with circulation through the downtown and past or in close proximity to most of the tourist attractions in the area. Historically the streets identified on the conceptual route in the Inner Harbour District can be difficult to operate on in the summer as pedestrian activity and traffic conditions can cause variable congestion and delays along the route. The timing takes traffic delays into consideration as well as, stop service time, and bus recovery.

Belleville Terminal to North Downtown

The bus route starts and ends adjacent to the Belleville Ferry Terminal and routes along Wharf Street to Chatham and returns south on Government or Douglas to Ogden Point. The route distance is 3.9 kilometres. Service is bi-directional and the route cycle time is 35 minutes a round trip.

The route would require new bus stop zones approximately every 300 metres along the route adjacent to key intersections and destinations. This could be as many as 18 new bus zone locations within downtown. Potentially this might mean a loss of parking at some of these locations; a metered parking stall generates approximately $3,000 of revenue a year. A standard bus zone is the length of 4 parking stalls.

4.2 COSTING

Costing for this service was based on the Victoria Regional Transit Commission funding formula. The tables below describe the costs and ridership levels association with both fare and fare free options and service frequencies of 10, 15 and 30 minutes.

Table 1: Circulator Service Options and Costs Based on Frequency and Fare Level

Belleville Terminal – Downtown Loop	Costs						Local Share of Costs with Fare Options		
	Buses	Service Hours	Local Lease Fee Share ($)	Operating Cost ($)	Total Cost ($)	Local Share of Costs ($)	Free	$1.00	Ave Fare $1.60
							Total Local Share ($)	Total Local Share ($)	Total Local Share ($)
Ten Minute Frequency	6	12,500	223,259	1,150,000	1,373,259	1,008,709	1,008,709	821,209	708,709
Fifteen Minute Frequency	4	8,333	148,839	766,636	915,475	672,452	672,452	547,457	472,460
Thirty Minute Frequency	2	4,166	74,420	383,272	457,692	336,194	336,194	273,704	236,210

In order to meet these parameters and provide a service that would make the circulator bus route more attractive than walking within the downtown core, approximately six buses and $1.4 million per annum in operating funding would be required. The local share of these costs would be approximately $1,000,000 annually and operating costs could be offset by as much as $300,000 dollars with revenue from a fare paid option.

Table 2: Further Detail on Estimated Ridership and Revenue by Each Frequency and Fare Option

Bellville Terminal - Downtown Loop	Free			$1.00 Fare			Status Quo (Regular System Fares)		
	Rides/hr	Rides	Revenue ($)	Rides/hr	Rides	Revenue ($)	Rides/hr	Rides	Revenue ($)
Ten Minute Frequency	25.0	312,500	-	15.0	187,500	187,500	15.0	187,500	300,000
Fifteen Minute Frequency	15.0	124,995	-	10.0	83,330	83,330	10.0	83,330	133,328
Thirty Minute Frequency	15.0	62,490	-	10.0	41,660	41,660	10.0	41,660	66,656

* Annual Cost of a medium duty bus $54,480 and the current cost per service hour for the Victoria Regional Transit System is $92/hour. The number of service hours to operate these services is an estimate and final costs will be determined when a detailed operation plan is developed.

4.3 ALTERNATIVE OPTIONS

Alternative options to a stand-alone downtown bus circulator service that could be considered to improve downtown transit service include promoting existing services on Douglas Street or restructuring existing services into a service that connects Victoria's village centres (as proposed in its Official Community Plan) with its downtown neighbourhoods.

4.3.1 Promote existing service on Douglas Street

As discussed previously, a number of existing bus routes converge onto Douglas Street and provide a spine of very frequent service from the northern end of the downtown core to the BC Legislature with a bus every one to five minutes. There is also very frequent service on Fort and Yates Streets between downtown and Fernwood due to bus routes converging on these streets. One way of improving the use of transit through downtown would be to look at ways that transit customer information could be more effectively promoted to help people to better understand how to move around on transit through the downtown on these existing services.

4.3.2 Village/Downtown Connector

Consideration could also be given to restructuring existing transit services to create a service that circulates through downtown and tourist areas, as well as connect with village centres identified in the Victoria Official Community Plan (including James Bay Village, Cook Street Village and/or Fernwood Village). A restructuring of existing services would likely have a lower cost but may impact existing transit customers. A downtown/village connector route would likely perform higher in terms of ridership throughout the year and could potentially improve connections between the downtown core and urban villages. A new service plan would need to be developed with public consultation.

Service Area Transit Plans of the James Bay and Jubilee neighbourhoods were already proposed over the next two years as part of the Victoria Regional Transit System 2013/14 Service Review recommendations and integration with Downtown and the larger transit network would be part of this work.

5.0 PRIORITIZATION OF TRANSIT SERVICE IMPROVEMENTS

The Transit Future Plan and VRTS Service Review, endorsed by the Transit Commission, provide strategic transit improvement priorities to develop the Frequent and Rapid Transit Network as well as improve service coverage in developing neighbourhoods in the Westshore. A downtown circulator was not identified or raised as a priority by the Transit Commission or the public during consultation.

In addition, existing transit operating facilities only have room to store and maintain another 13 buses before maximizing capacity. This means that in the near-term future there is limited capacity to maintain or store buses to address strategic priorities identified to develop the transit system. Service options that involve the acquisition of additional buses must be carefully considered and prioritized to ensure they provide maximum value.

6.0 FUNDING OPTIONS

A number of potential funding options are available should the VRTS or the City of Victoria wish to pursue a downtown circulator route as described in sections 4.0-4.2:

1. The circulator route could be funded by the Transit Commission and be part of the regular service. It would be subject to regional priorities and service expansion funding.

2. The City could partner with downtown associations and enter into an agreement with a private operator separate from BC Transit and the Transit Commission.

3. BC Transit and the City of Victoria could discuss the possibility of operating a circulator route as a standalone operating agreement between the City of Victoria and BC Transit, separate from the existing VRTS transit system. However, this option may require changes to the regulations or legislation under which BC Transit operates.

7.0 CONCLUSION:

1. Existing transit service levels in Downtown Victoria exceeds the Service Design Standards approved by the Commission;

2. Downtown Victoria is a walkable distance and a circulator route would need to be frequent enough to be competitive with walking or it would likely not be productive;

3. Downtown circulators are demanding of system resources even when they are productive. Downtown circulators in London, Vancouver, and Victoria (1987) have been canceled due to problems with productivity and/or cost-effectiveness;

4. Improvements to transit customer information could be considered to make downtown transit circulation easier to understand for customers new to transit;

5. Alternative options could be considered to improve downtown transit circulation such as restructuring existing transit services in conjunction with local transit to surrounding neighbourhoods or partnerships outside of the Victoria Regional Transit System Services; and,

6. Directing new resources to a downtown circulator route may limit the Transit Commission's ability to implement strategic initiatives identified in the Victoria Regional 2011 Transit Future Plan and 2013/14 Service Review.