



Transit Future and Rapid Transit Development

December 2017

Victoria Regional Transit

Overall System Scope:

- Second largest system in BC
- 100,000 passenger trips per day
 - 6.5% share of all trips in the region
 - Fixed route and Custom (handyDART)
- Carries more people per hour at lower cost per hour than Canadian peers

By the Numbers (2017/18):

- Fixed route system - 289 buses
- HandyDART service - 56 buses
- 941,399 service hours annually
 - 525 Transit Operators
 - 100 Mechanics and service people
 - 33 Dispatch, customer service and other
 - + others shared with BC Transit's provincial operations
- 55 routes with 2,300 bus stops

Victoria Regional Transit System Service Area



Day	Conventional	Custom
Mon-Thur	5:00am – 12:00am	7:00am – 10:00pm
Friday	5:00am – 2:00am	7:00am – 12:00am
Saturday	5:30am – 2:00am	7:00am – 12:00am
Sunday	6:00am – 12:00am	8:00am – 10:00pm

Regional Transportation and Transit Plans

- Douglas Transit Priority Plan (2007)
- E&N Commuter Rail Analysis (2010)
- Transit Future Plan Victoria Region (2011)
- Victoria Regional Rapid Transit Report (2011)
- Victoria Region Transit Priority Corridor Plan (2013)
- Victoria Region Bus Lane Project (2013)
- CRD Regional Transportation Plan (2014)
- Westshore Local Area Transit Plan (2015)
- McKenzie Interchange Project (2016)
- Island Highway Transit Priority & Park and Ride Study (2017)



Victoria Region: Transit Future Plan

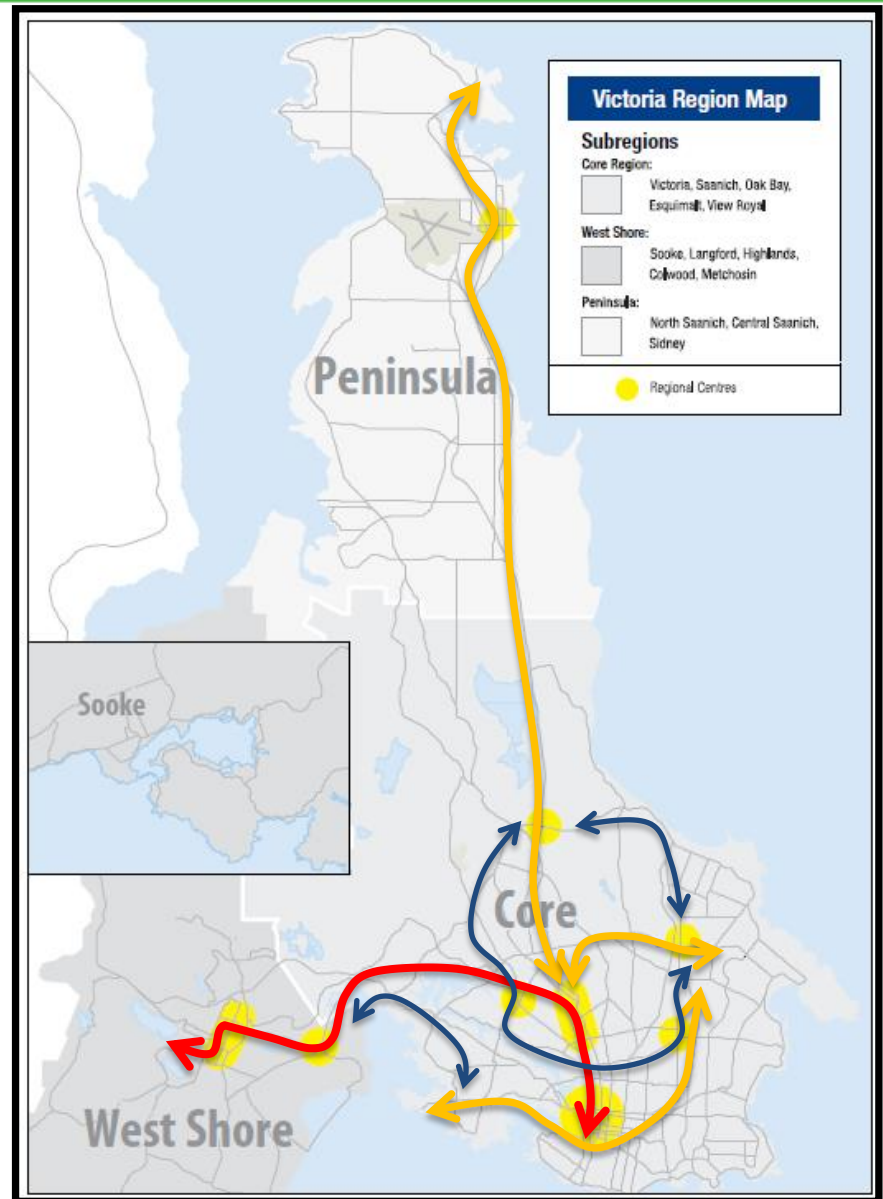


Land Use and Transit

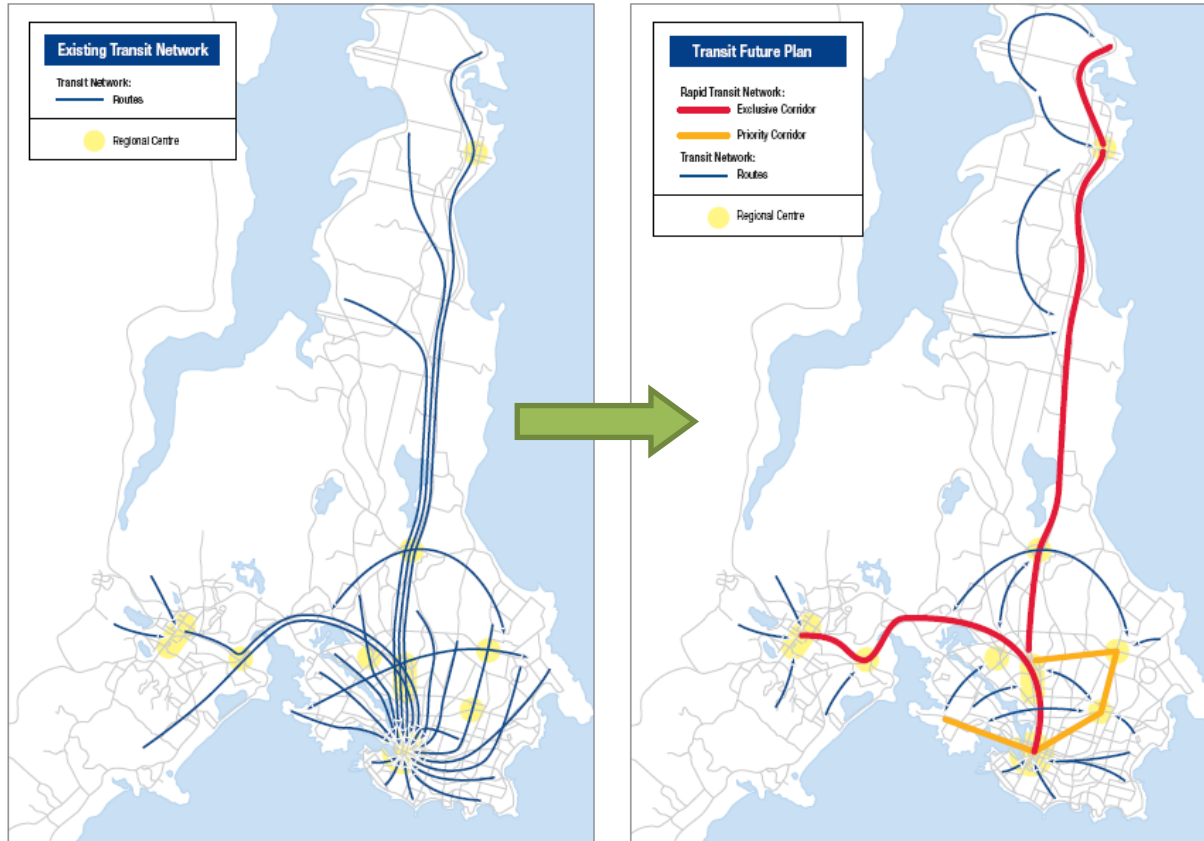
The Transit Future Plan (2010) has been designed to support the development of the region expressed through:

- The CRD Regional Growth Strategy
- Official Community Plans of each Municipality

The plan includes extensive input from local governments, businesses and the public.



Transit Future Plan



Transit Mode Share 6.5% (2010)

Transit Mode Share 12% (2035)



The Network – Service Layers

Rapid Transit Network (RTN)

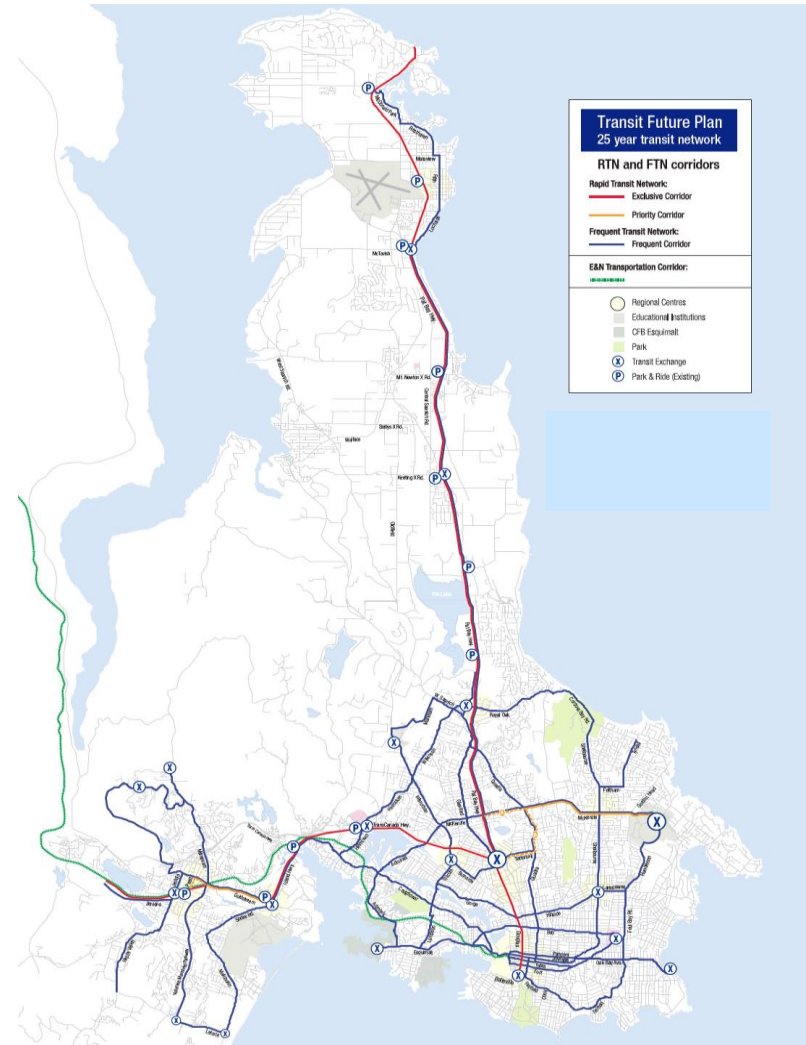
- Fast, frequent, and direct (service every 5 to 15 minutes)
- Exclusive right-of-way or extensive transit priority
- High-capacity bus, streetcar/tram, light rail

Frequent Transit Network (FTN)

- Direct, frequent (service every 5 to 15 minutes)
- Routes in mixed traffic with some transit priority
- Standard or high-capacity bus, streetcar/tram

Local Transit Network (LTN)

- Frequency (15 minutes or greater)
- Connection to local destinations and frequent/rapid networks
- Standard or small buses

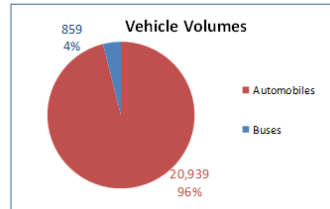
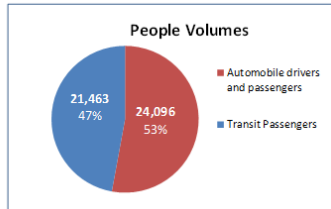
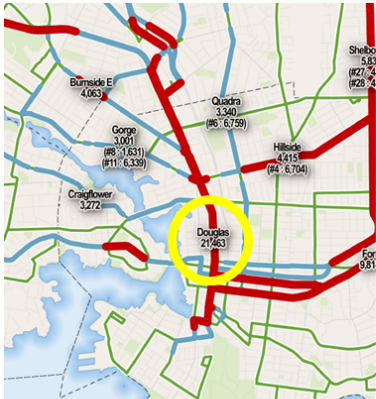


Transportation and Transit

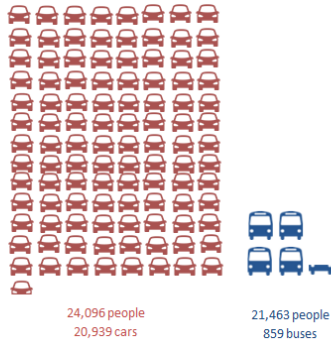
Today, **two out of three people** that travel to Downtown Victoria arrive from other municipalities

35 per cent of the employment in the region is on or adjacent to the Douglas Street Corridor

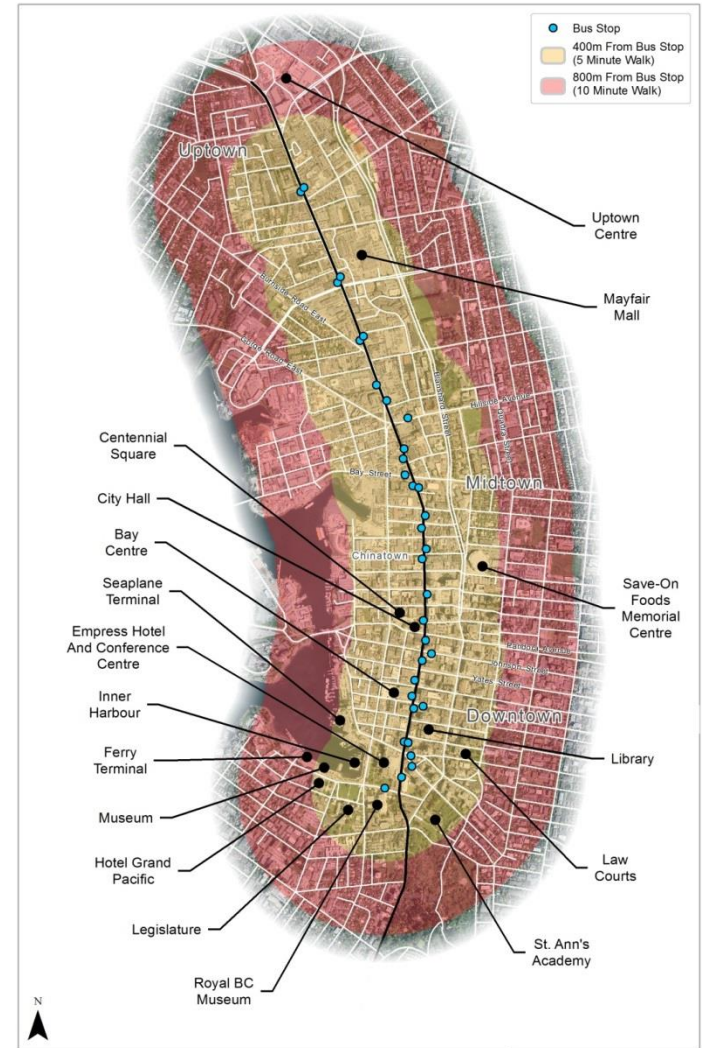
40 per cent of people travelling Douglas Street ride a bus during peak times



- Total People: 45,559 per day
- 47 per cent of the people travelling on Douglas are carried by four per cent of vehicles

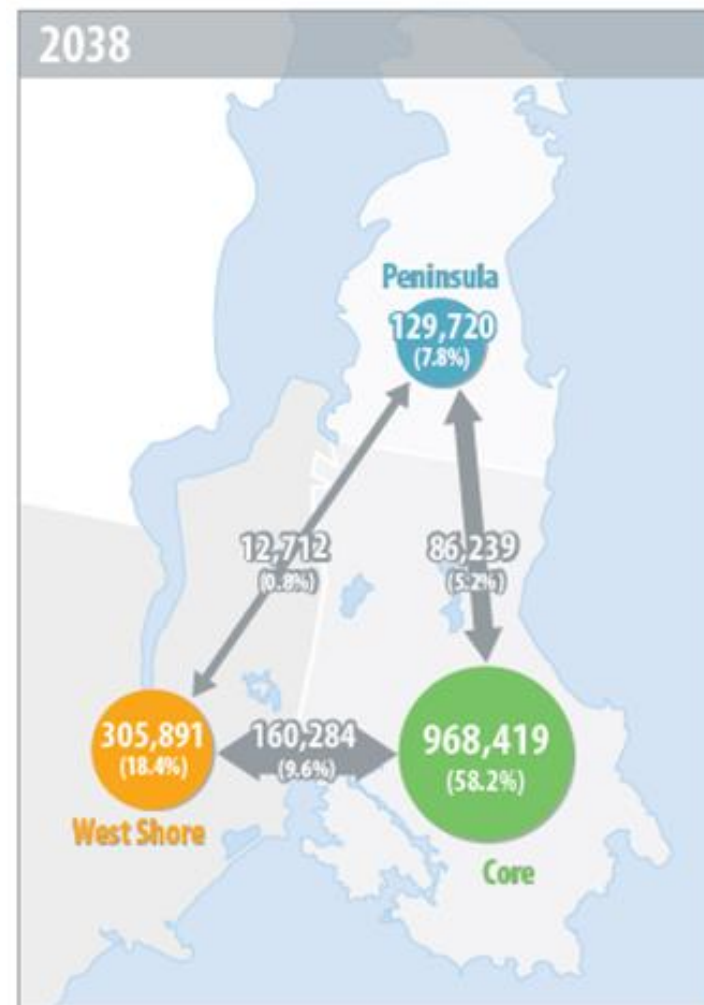


Source BC Transit and CRD Data



Greater Victoria and Highway 1 Fun Facts

- Population is expected to grow 27% by 2038 from 360,000 to 400,000 people
- Urban core will grow by 15%
- Westshore will grow by 69%
- In the future, there will be a 40% increase in the number of trips (by all modes)
- Traffic congestion is **already** a **major issue**
- Traffic now is 2,300 to 3,800 cars per peak hour
- Traffic in 2038 is forecast to be 6,300 to 6,800 cars per peak hour



Implementation Plan - Network Priorities

Priority 1 – Existing initiatives and network efficiencies

- Rapid Transit Planning (complete)
- Service optimization to address bus crowding (complete and ongoing)

Priority 2 – Establish critical transit facilities

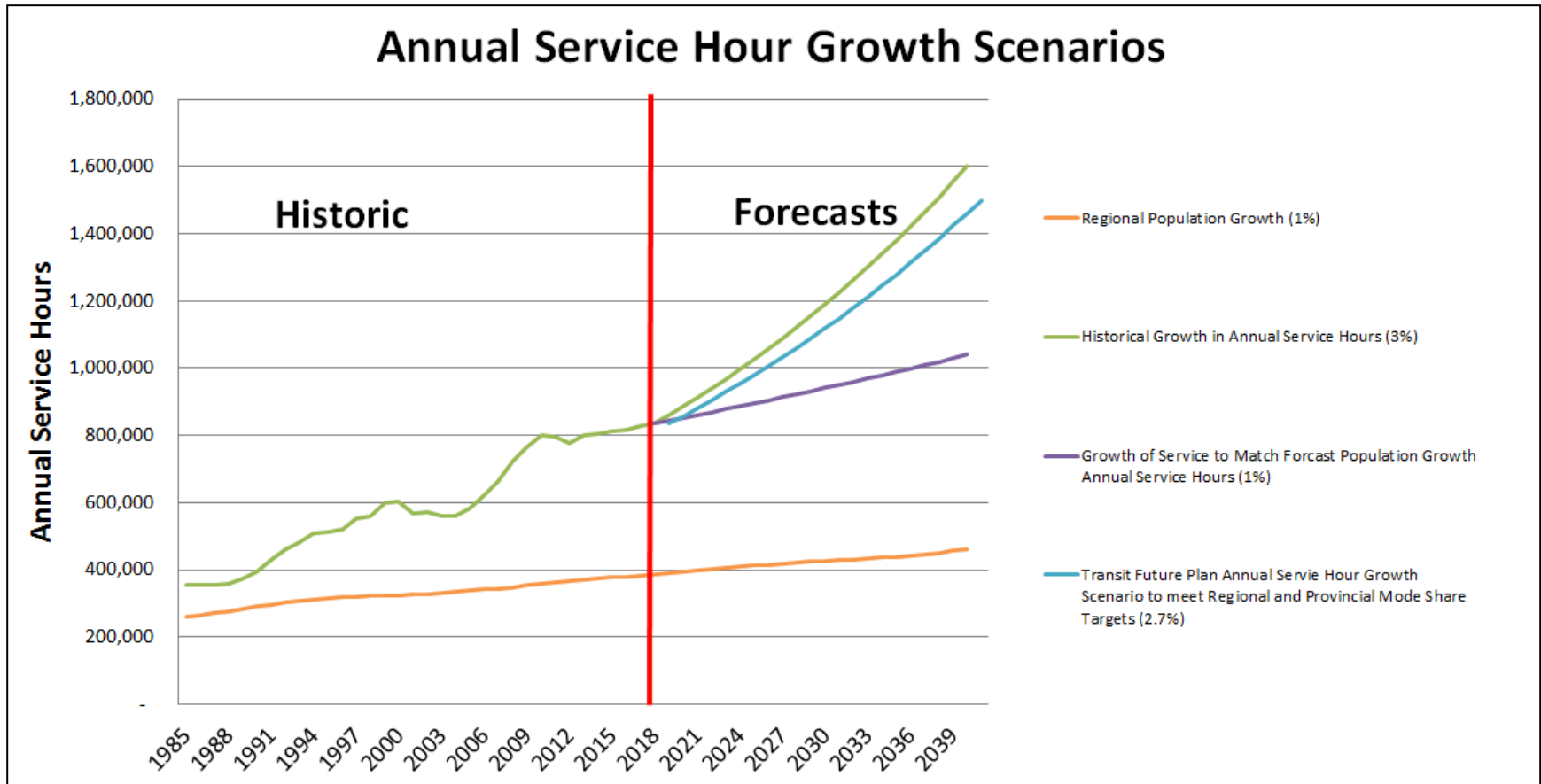
- UVic Exchange (Phase 1 complete)
- Operating Centres (handyDART in progress)
- Uptown multi-modal exchange (planning underway)

Priority 3 – Implement Rapid Transit Network and Frequent Transit Network

- Bus lane planning and implementation (in progress)
- Smart Bus (in progress)
- Service review and service standards (complete)
- Local Area Transit Plans (complete and in progress)



Service Development Scenarios



The Transit Future Plan forecasts a need for 1.5 million service hours and a fleet of 420 buses by 2035



Victoria Regional Rapid Transit Project

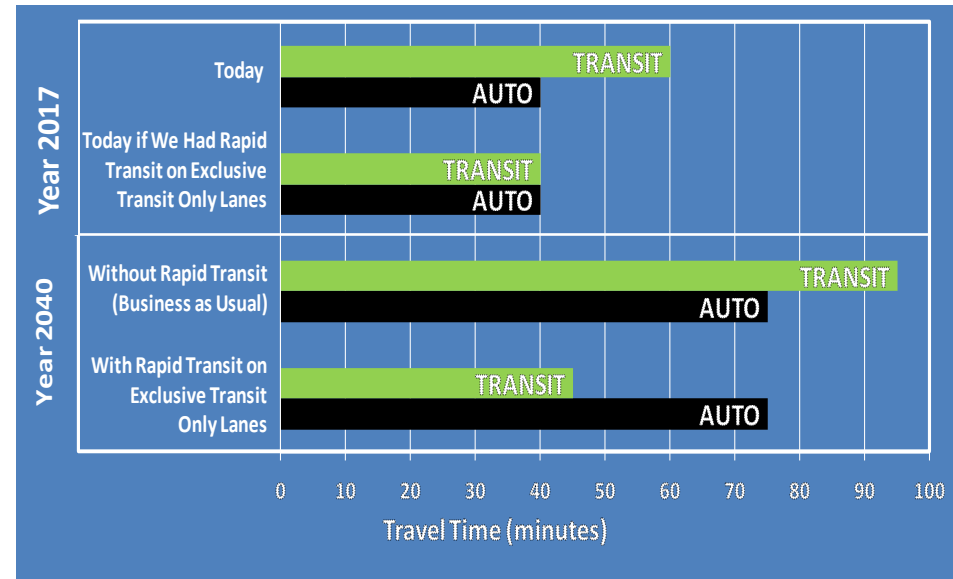
In 2008, BC Transit was tasked with developing a plan for a rapid transit connection between Downtown Victoria and the Westshore

- Based on extensive public consultation and detailed analysis, a preferred corridor was selected and Light Rail Transit (LRT) was identified as the preferred technology to meet the goals and objectives of the Victoria Regional Rapid Transit Project.
- LRT was found to have the capacity to achieve the project's goals, deliver the most long-term benefits for the Capital Region and had the highest level of community support.

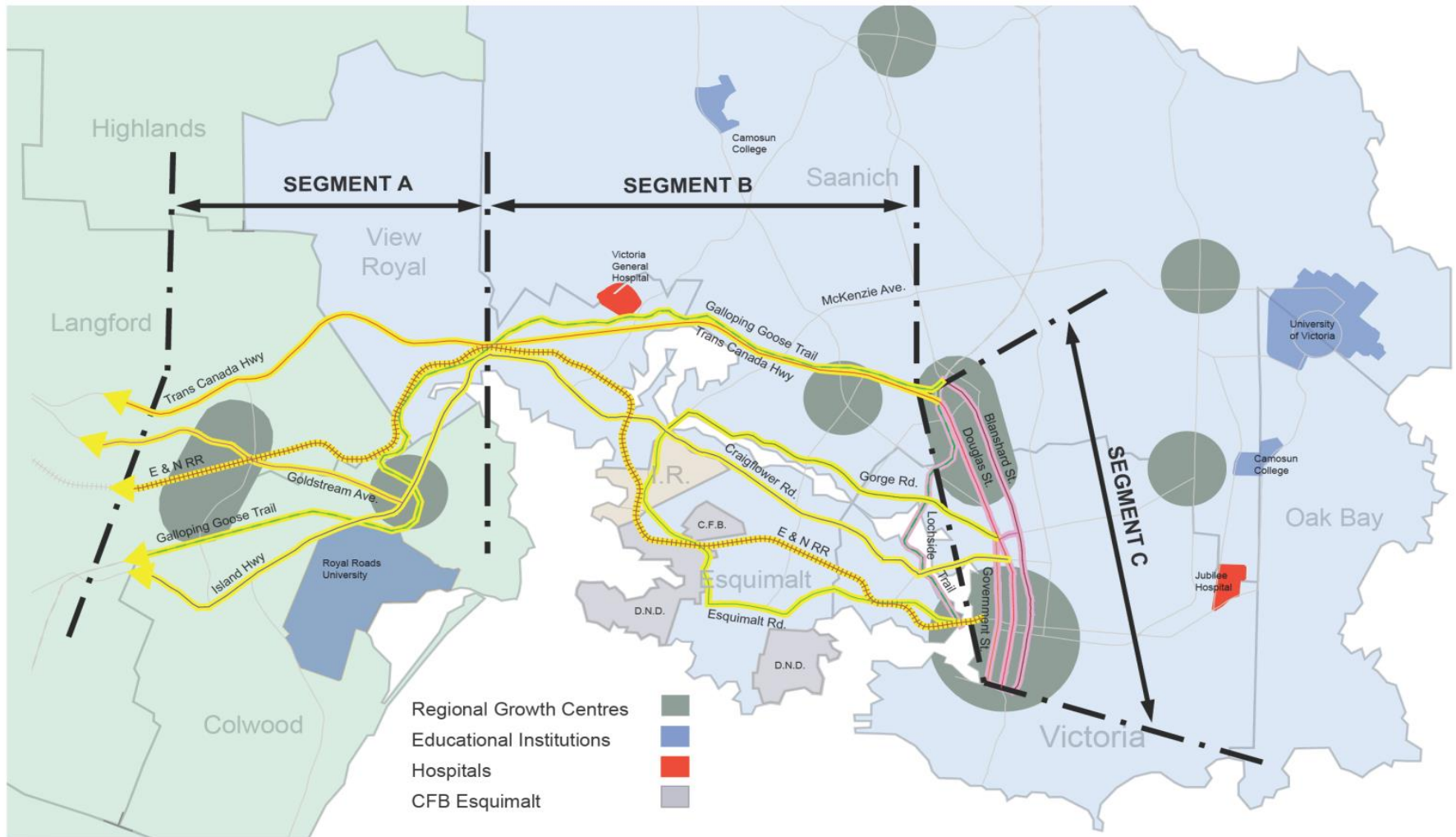


Rapid Transit Goals

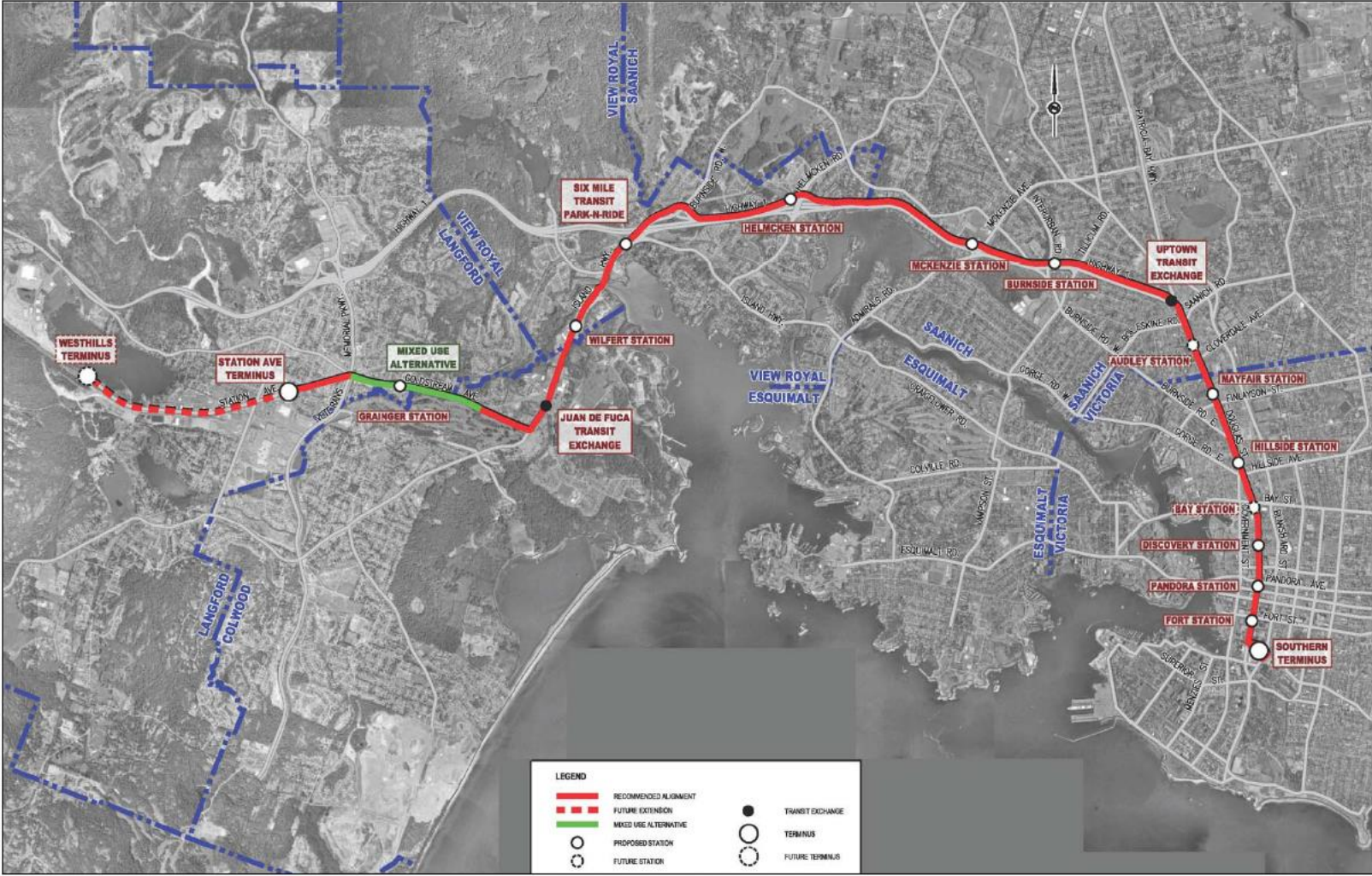
- Transit reliability
- Improved travel time
- Ridership and mode share
- Customer satisfaction
- Align with OCP and growth
- Improved access to downtown and surrounding area



Alignment Options Considered






Rapid Transit Alignment



Project Options

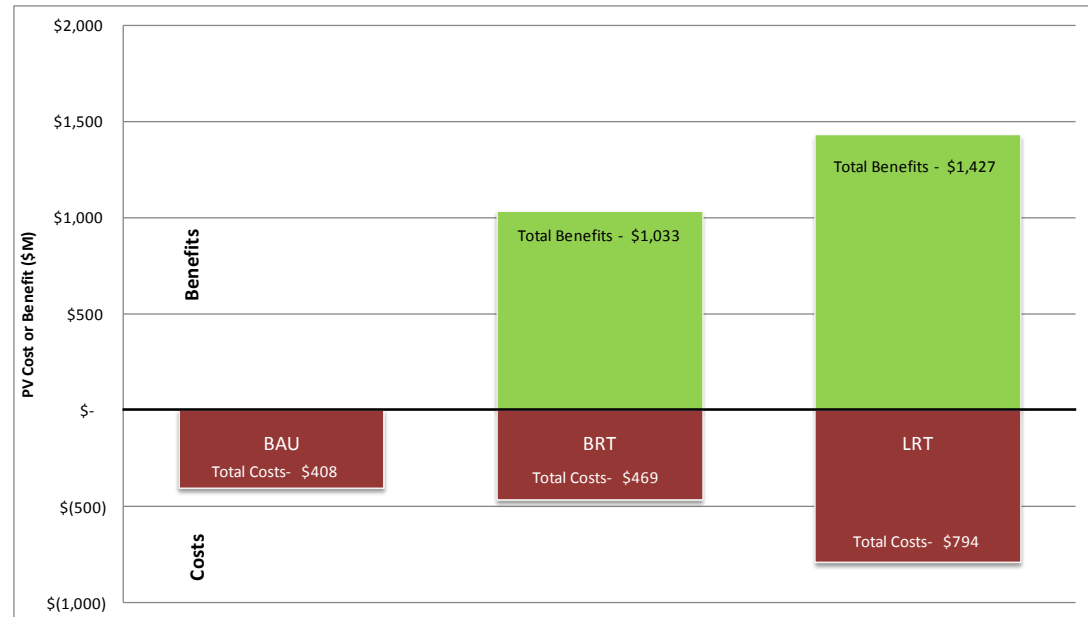
Three Alternatives Considered

	Business as Usual (BAU)	Bus Rapid Transit (BRT)	Light Rail Transit (LRT)
Description	Continues the use of existing conventional bus service increasing service on routes along the alignment	A rapid transit system with road-based technology using specialized buses on an exclusive right-of-way from Downtown to the West Shore	A rapid transit system using rail-based technology on an exclusive right-of-way from Downtown to the West Shore
Running Way and operational characteristics	<ul style="list-style-type: none"> • Transit priority measures like bus lanes, bus on shoulder and signal priority where feasible • On-board fare collection • Scheduled service at regular bus stops 	<ul style="list-style-type: none"> • Operates in exclusive right-of-way, segregated from other traffic • Off-board fare collection • High-frequency service does not require knowledge of schedule • Stops at stations with enhanced boarding 	<ul style="list-style-type: none"> • Operates in exclusive right-of-way, segregated from other traffic • Off-board fare collection • High-frequency service does not require knowledge of schedule • Stops at stations with level boarding
Peak Hour Travel Time From West Shore to Downtown	Existing: 60 minutes 2038: 1 hour 35 minutes	On introduction: 40 minutes 2038: 45 minutes	On introduction: 40 minutes 2038: 45 minutes
Vehicle Type and Capacity	12m Conventional Bus (80 passengers); system capacity is limited by bus size and number of vehicles able to operate on congested roadway and at bus stops 	20m Articulated Diesel Hybrid Bus (120 passengers); increases system peak-hour carrying capacity by 20% over conventional bus 	40m Electric Light Rail vehicle (230 passengers); more than doubles the system peak-hour carrying capacity of conventional bus 



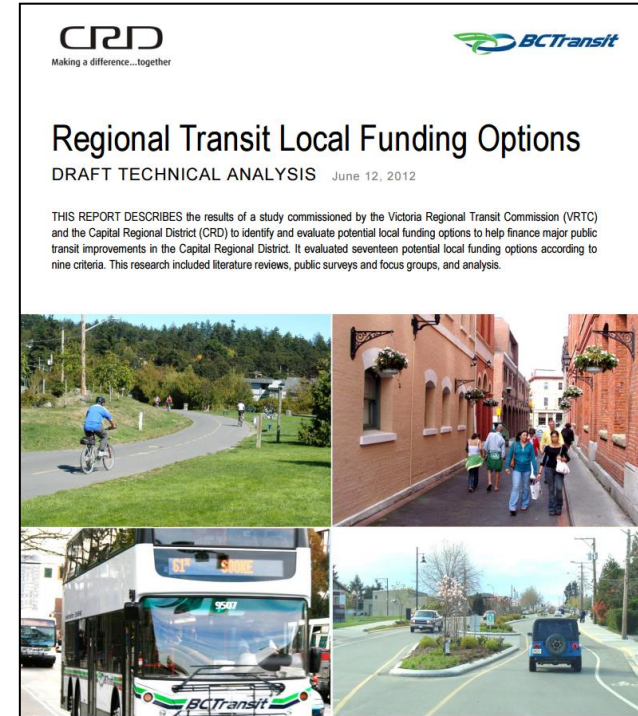
Multiple Account Evaluation Results and Recommendations

- BRT and LRT have benefit/cost ratios > 1.0
- LRT has the highest Net Present Value
- Community and political support for LRT is higher
- BRT delivers less ridership capacity and does not provide the system wide capacity to achieve the mode share targets of the Provincial Transit Plan
- BRT will be capacity constrained in the short term (approx. 10 years); LRT has no capacity constraints beyond the project lifecycle (>27 years)
- LRT identified as the preferred long-term rapid transit solution



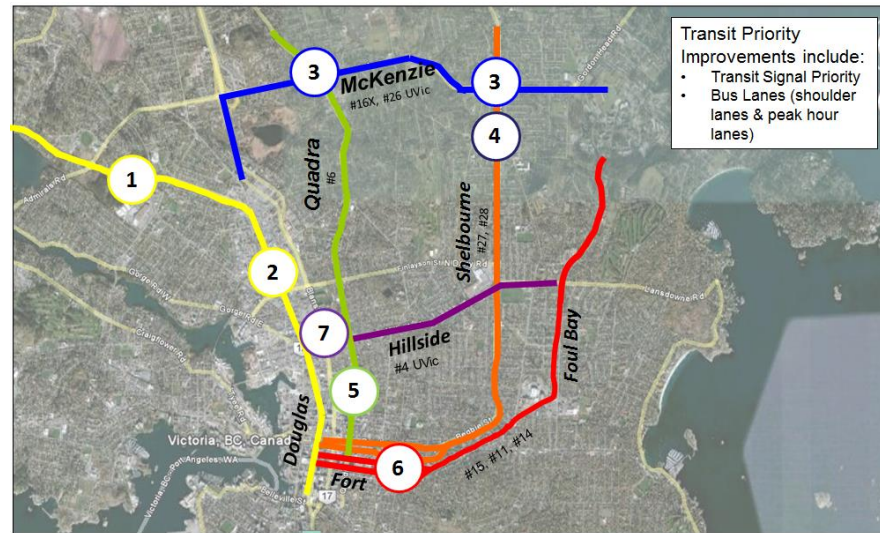
Outcomes

- In 2011 Rapid Transit Corridor endorsed
- In 2011 Light Rail Transit was the recommended technology option
- In 2012 the CRD led a study to identify local funding options
- Competing local infrastructure priorities (ex. bridge, sewage treatment) and funding availability prevented implementation
- BC Transit received direction from the Transit Commission to work with local governments and the Province, to preserve the corridor with incremental implementation of transit priority measures



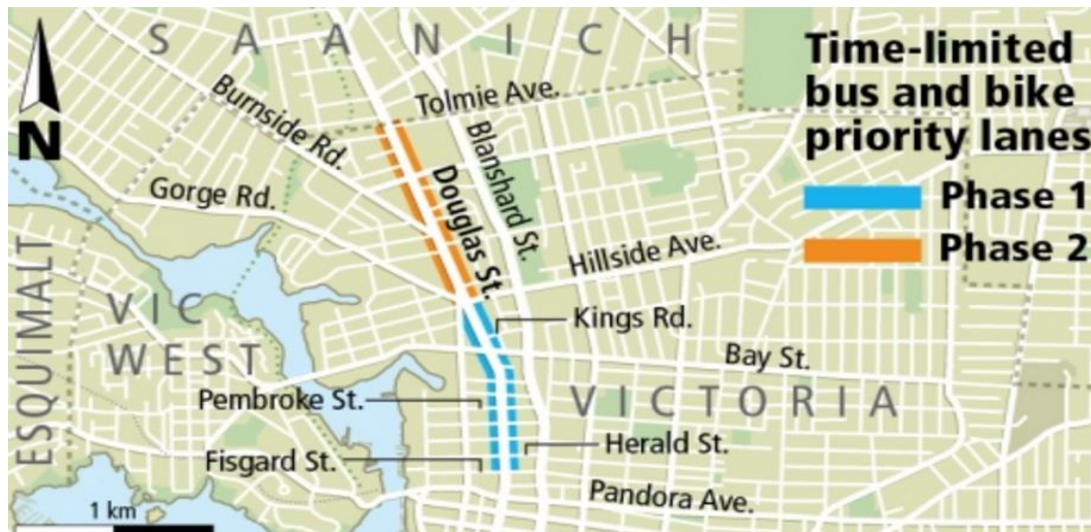
Victoria Regional Bus Lane Implementation

- City of Victoria
- Ministry of Transportation
- Colwood and View Royal
- Saanich



Douglas Street Bus Lanes Project

- In May 2013, City of Victoria and Victoria Regional Transit Commission approved the bus lanes.



Times Colonist - January 14, 2014

- Phase 1: Figgard to Hillside (North and South) - COMPLETE 2014
- Phase 2a: Hillside to Tolmie (Northbound) - COMPLETE 2015
- Phase 2b: Tolmie to Hillside (Southbound) – TENDERED TARGET 2018

Highway 1 Bus Lane Projects

McKenzie Interchange – Bus Lane – In construction



Douglas Street – Northbound Bus Lane - Tendered



Island Highway Transit Priority and Park & Ride Study

2013 Priority Concept



2017 Study

Working with Colwood and View Royal to improve transit travel times and improve Park & Ride capacity

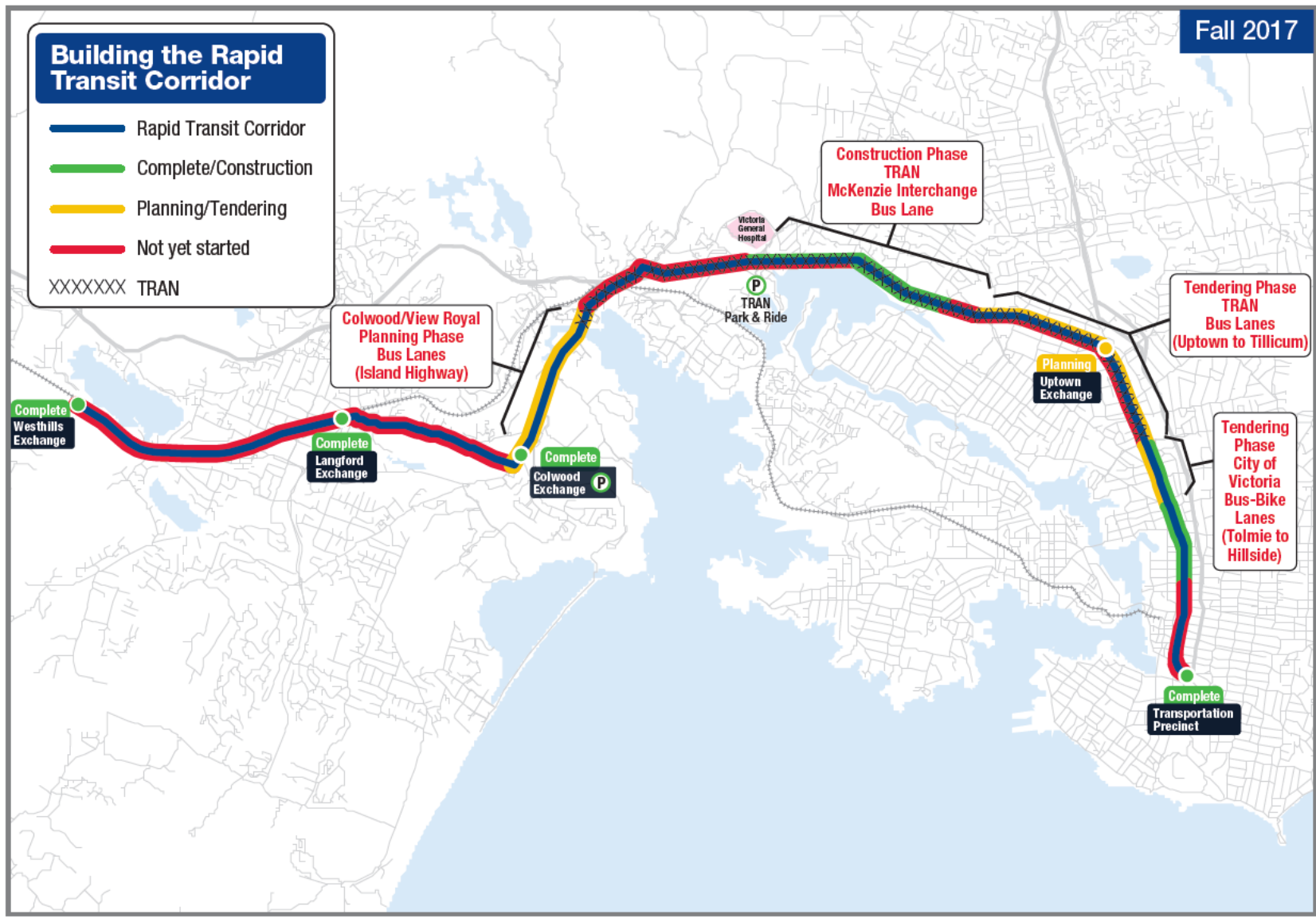
Objectives

- Review previous bus priority concepts from 2013
- Identify potential for additional park and ride capacity in the Westshore



Building the Rapid Transit Corridor

- Rapid Transit Corridor
- Complete/Construction
- Planning/Tendering
- Not yet started
- XXXXXXX TRAN



Victoria Region

Rapid Transit Network – Supporting Infrastructure

The development of the Rapid Transit Network includes other supporting infrastructure including:

- New and expanded transit exchanges at Uptown and Westhills
- Additional Park & Ride capacity in the Westshore
- New branded Rapidbus Stations
- Improved customer information
- SmartBus Technologies

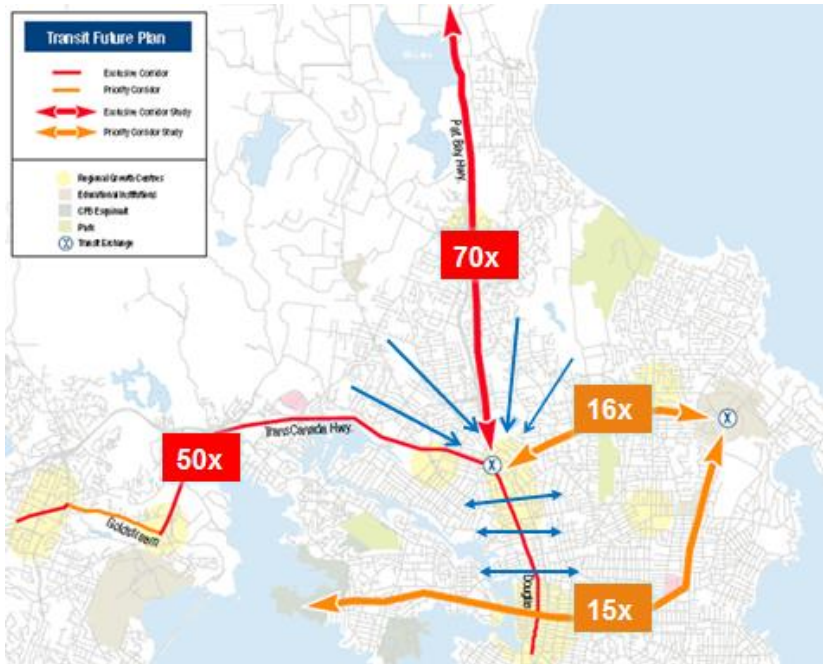


Westhills Transit Terminal

- Opened September 5, 2017
- Located adjacent to the Westshore YMCA
- Future Terminal for extending Rapidbus further into the Westshore



Uptown Transit Hub



A Multi - Modal Hub

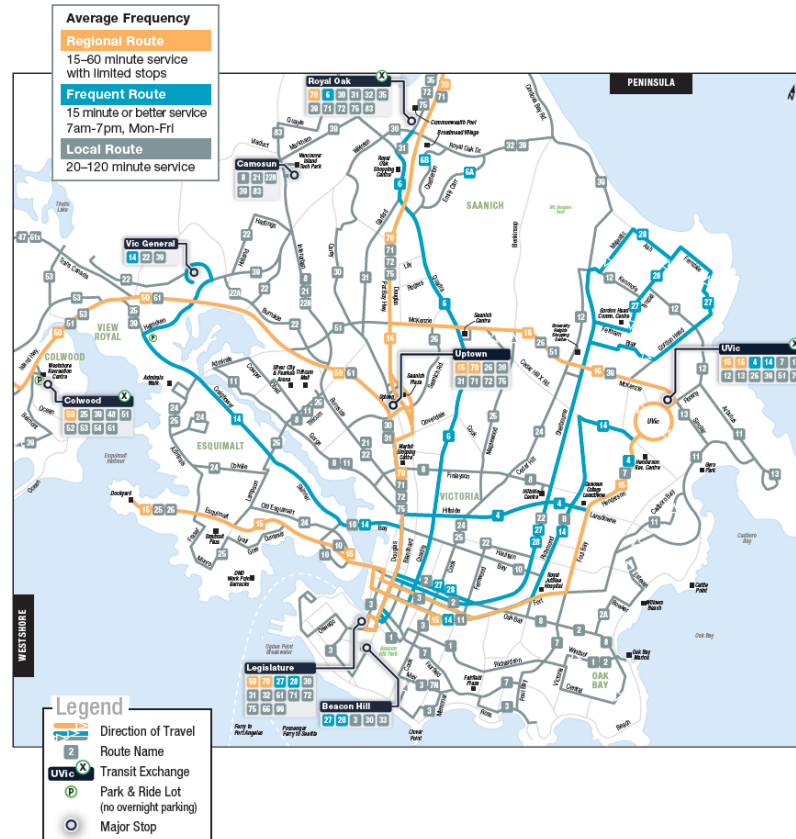
Supporting Saanich's Uptown Douglas Corridor Plan

- Enhance the role and identity of the Uptown Centre as a regional hub and focal point in Saanich
- Support a more attractive, vibrant and walkable urban centre
- Support a connected, sustainable and balanced transportation network that encourages more walking, cycling and transit use
- Enhance open spaces, cultural and community facilities
- Integrate public realm improvements and land use changes to support the development of complete streets and the future introduction of rapid transit



Branding and Improved Ease of Use

- More intuitive map design
- Markets Transit Future layers
- Improved wayfinding, service legibility



0001	
Douglas St.	
Rapid	
450	WestShore Line
470	McKenzie Line
Frequent	
04	Uvic
27	Gordon Head
28	Majestic
30	Royal Oak
31	Royal Oak
Local	
01	Downtown
02	Oak Bay
02A	Willows
07	Downtown
21	Interurban
32	Cordova Bay
52	Colwood
72	Langford
61	Sooke
72	Swartz Bay
Victoria's Regional Transit Commission	
www.bctransit.com 804-795-3939	

Your Trip Plan

Starting From: Langford, BC V9B, Canada
Destination: Victoria, BC, Canada

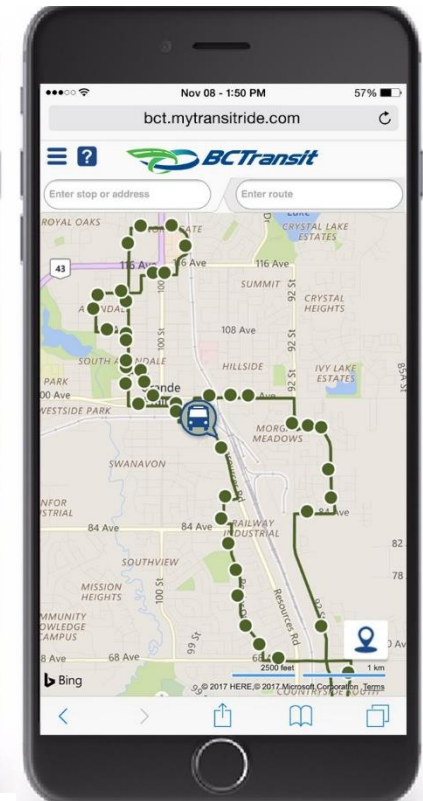
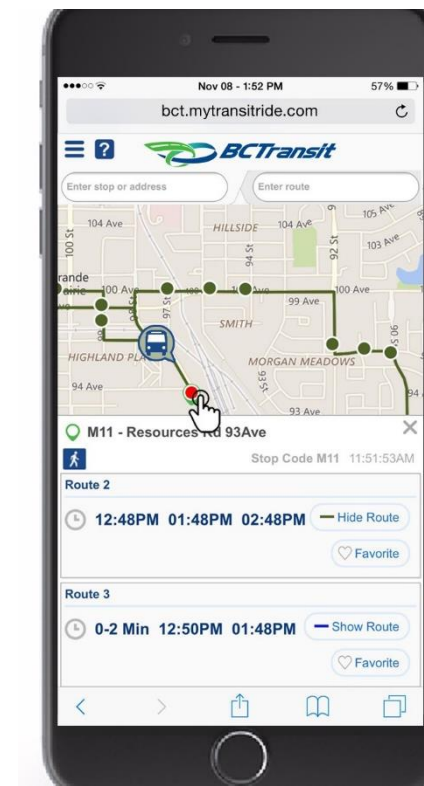
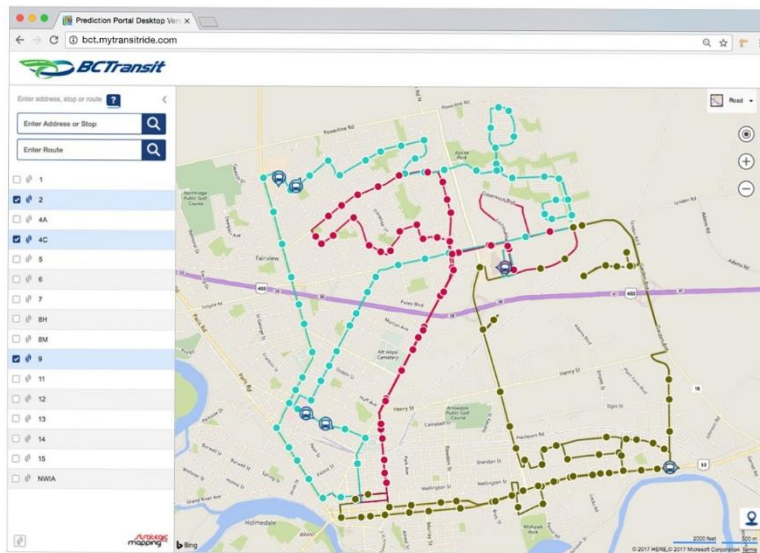
TRIP PLANNER

SUGGESTED ROUTES

- 35 mins
3:11pm - 3:46pm
81m → 950 → 0.2km
- 35 mins
3:21pm - 3:56pm
81m → 950 → 0.2km
- 35 mins
3:31pm - 4:06pm
81m → 950 → 0.2km
- 35 mins

Smart Bus and Customer Information

- Real-time information roll-out underway
- Expected to be available in Victoria by early 2019
- Will improve the customer experience

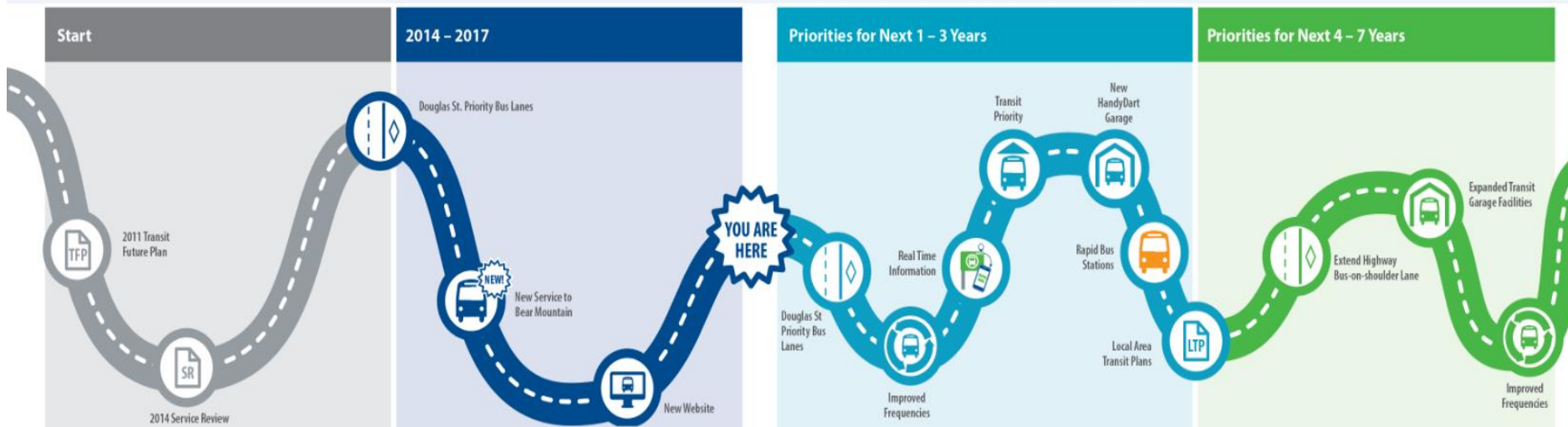


Stops/Stations

Future steps should include development of station locations and customer amenities



Victoria Regional Transit Future Plan Moving Forward





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