

# Welcome

You are invited to review information about the  
Victoria Regional Rapid Transit project and provide input.



VICTORIA REGIONAL  
*rapid transit*



# What is the project and why are we here?

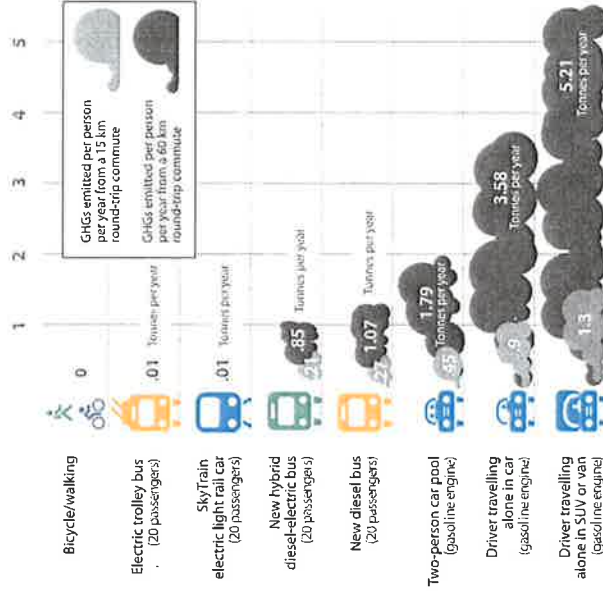
- To develop rapid transit for the Victoria region
  - Improving Victoria's regional transit system
  - Planning in a regional context
- To improve connections to regional growth centres, major employment centres, hospitals, gateways and education centres, and to support land use strategies
- To prioritize early deliverables including a rapid transit link to the West Shore



# What are the Goals?

- Develop transit options that offer an alternative to the single occupancy vehicle
- Make transit more attractive and easy to use
- Link regional growth centres and encourage transit-oriented development
- Support an integrated transportation network (including walking, cycling and transit)
- Develop an environmentally responsible solution supporting BC's goal of reducing greenhouse gas emissions
- Support a sustainable and affordable transit system

## Commuting Modes and Greenhouse Gas Emissions (GHGs)



The transportation modes we choose and the distances we travel affect the amount of greenhouse gases emitted yearly.

Source: 2004 RWDI for TransLink Data. Used with permission.



# Why Rapid Transit? What are we trying to achieve?

- We want to encourage more people to use transit by making it more attractive, convenient, efficient and reliable



- The release of the Provincial Transit Plan in January 2008 promoted the expansion of transit service in BC, to provide reliable, convenient transit service and increase rapid transit networks. The plan includes the following targets:
  - Reduce greenhouse gas emissions and other air contaminants from cars by 4.7 million tonnes cumulatively by 2020
  - Double transit ridership in BC to over 400 million trips/year by 2020
  - Increase transit market share in Victoria region from 7% to 9.5% in 2020 and 12% in 2030
- This means increasing Victoria region transit ridership from 22 million to 47 million passengers/year by 2030



# Rapid Transit Technologies

## At a Glance

Typical Characteristics of Each Transit System	RAPID TRANSIT SYSTEMS					Commuter Rail	
	Local Bus	Express or Rapid Bus	Modern Streetcar	Bus Rapid Transit (BRT)	Light Rail Transit		Metro / Subway
System Speed (including stops)	8 to 25 km/hr	15 to 30km/hr	15 to 40km/h	20 to 40 km/h	30 to 50 km/h	40 to 70 km/h	30 to 80 km/h
People Capacity / Vehicle	40-60	40-110	130-150	75-110	150-200 per car	180-280 per car	100-200 per car
Running Way	Mixed traffic	Mixed traffic and /or exclusive lanes with traffic signal priority	Mixed traffic and /or exclusive lanes / right of way	Exclusive right of way with signal pre-emption at crossings	Exclusive running way generally at-grade	Exclusive running way fully segregated	Exclusive right of way with priority at grade crossings
Stop/Station Spacing	< 0.3km	0.5 km to 2 km	< 2 km	0.5 km to 2 km	1 km to 2 km	1 km to 2 km	> 2 km
Other	Frequent stops; all-day service	Fewer stops; peak-period emphasis	Often confused with LRT	Connects high-density centres "LRT on rubber tires"; can be guided buses	Generally higher capacity than streetcar	High capacity for major metropolitan centres	Connects distant centres in peak commuting hours

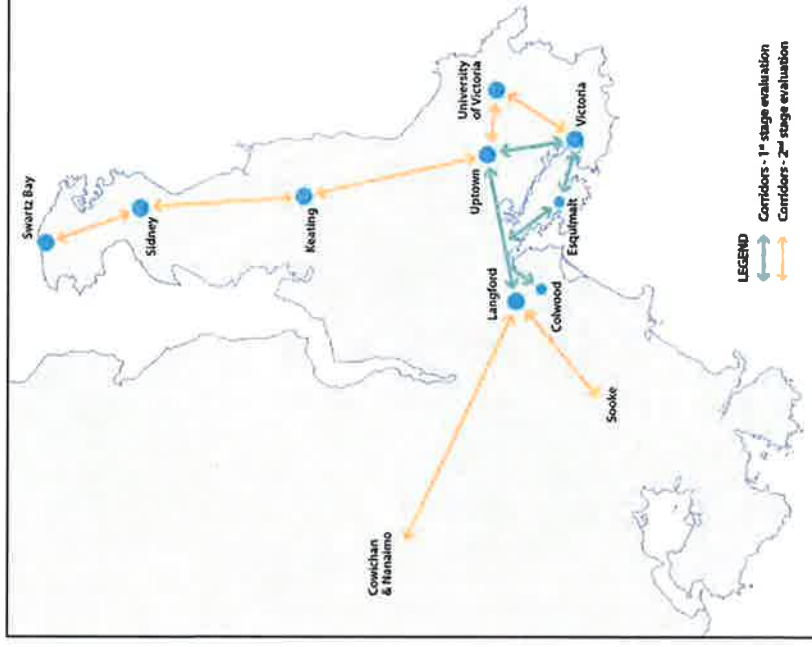




# Activities to Date

## Identification & Confirmation of Transit Corridors

The exercise of identifying and confirming regional transit corridors was fairly simple and straightforward, as the topography and existing travel corridors are well-established. Corridors connecting the West Shore to the Core Area are part of the evaluation for this first stage of the Rapid Transit system. Other corridors, such as those providing further connections to the Saanich Peninsula, University of Victoria, or points beyond the West Shore, will be part of the evaluation for future stages. The corridor identification process has also been a key component of the process to update the Transit Master Plan for the Capital Region, which is dovetailing with the Rapid Transit Project.



# Activities to Date

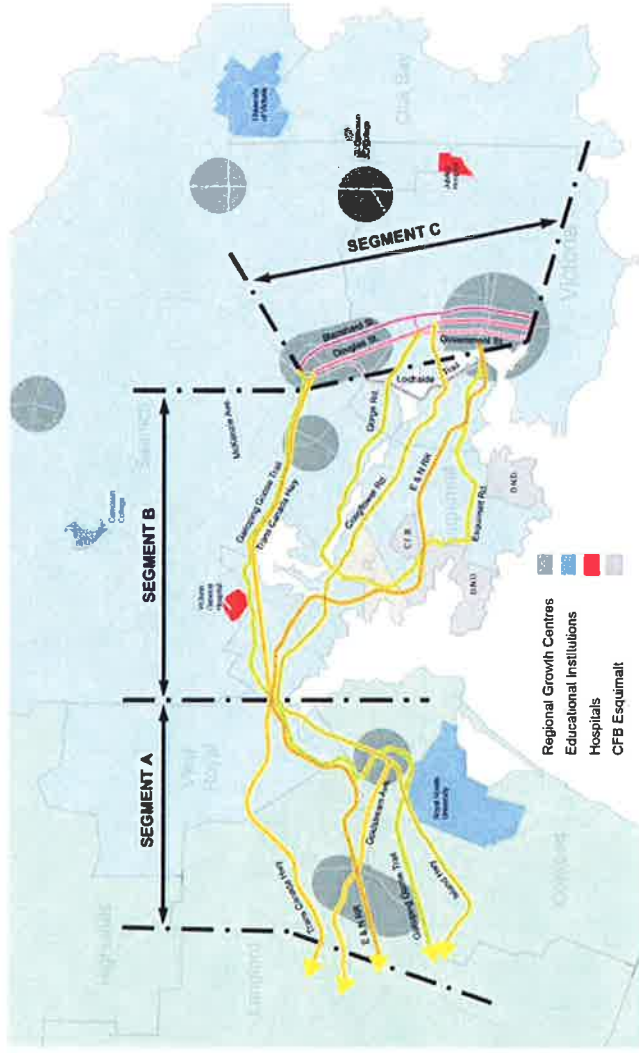
## Developing Alignment Options

When considering connections from the West Shore to the Capital Region's Core Area, we have a tendency to think about mode-based routes from end to end, such as the Trans-Canada Highway for motorists, the E&N for rail, or the Galloping Goose Trail for recreational cyclists. When it comes to taking people where they want to go, each has strengths and weaknesses as a potential Rapid Transit alignment.

For the study, the alignment options were broken into three segments:

- Segment A from the West Shore to the Colwood Interchange
- Segment B from the Colwood Interchange to the Core Area
- Segment C from Uptown to Downtown.

This provided an opportunity to "mix and match" segments to create the best overall rapid transit alignment from the West Shore to the Core Area and within the Core Area from Uptown to Downtown.

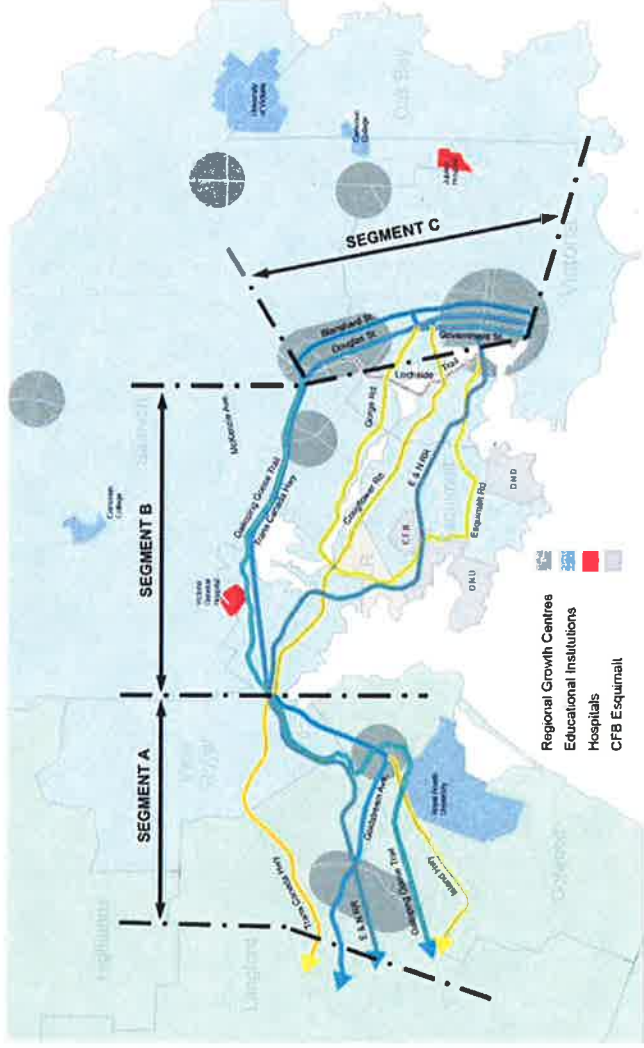


# Activities to Date

## Preliminary Screening of Alignment Options

Once the alignment options were identified, they were reviewed on a segment-by-segment basis to determine how well they scored against the project's Guiding Principles. This preliminary screening process included consideration of public input received in open houses held in Victoria and the West Shore in June 2009, as well as sessions held in the Spring.

Based on the preliminary screening of the alignments, feedback from municipal planners and engineers, and the results of the public open houses, the alignments shown in blue on the right were selected for a more detailed assessment.



# Segment A - WestShore to Colwood Interchange

E&N Transit Way



Galloping Goose Transit Way



Island Highway/Goldstream Curbside Transit Way



# Segment B - Colwood Interchange to Core

E&N Transit Way



Galloping Goose/TCH Transit Way



# Segment C - Uptown to Downtown

Blanshard Street Curbside Transit Way



Douglas/Government Curbside Transit Way Couplet



Douglas Street Curbside Transit Way



**LEGEND**

- Transit Way
- Bus Stop
- Bus Stop Number
- Maple Street



# The Analysis

## Results: Detailed Screening of Shortlisted Options

Legend: ■ "Green" ■ "Redden"

GUIDING PRINCIPLES	CRITERIA	Measurements	Weights	SEGMENT A: West Shore to Colwood Interchange		SEGMENT B: Colwood Interchange to Core		SEGMENT C: Uptown to Downtown	
				E&M / Gallop/Transit/Highway	E&M / Gallop/Transit/Highway	E&M / Gallop/Transit/Highway	E&M / Gallop/Transit/Highway	Douglas Street	Dooglas/Government/Campbell
TO DEVELOP TRANSIT OPTIONS THAT OFFER AN ALTERNATIVE TO THE SINGLE OCCUPANT VEHICLE (Does the alignment take people where they want to go today and in the future?)	Minimum measurement of people boarding/unboarding of existing people (movements)	Peak Riders and Emissions when 10 min walk of stations	10	7,000 Pwp / 5,800 Emp	8,400 Pwp / 5,100 Emp	3,200 Pwp / 4,100 Emp	31,100 Pwp / 40,500 Emp	27,800 Pwp / 41,900 Emp	94,500 Pwp / 64,200 Emp
	Maximum measurement of people (future trends) - 2026	Projected Population and Employment within 10 min walk of stations		11,000 Pwp / 10,200 Emp	11,000 Pwp / 11,000 Emp	4,800 Pwp / 7,600 Emp	48,000 Pwp / 70,000 Emp	46,000 Pwp / 70,000 Emp	48,000 Pwp / 70,000 Emp
MAKE TRANSIT MORE ATTRACTIVE AND CONVENIENT (Can you develop an exclusive transit lane to improve reliability, ease of use, and to allow for the implementation of a number of rapid transit technologies?)	Can the alignment accommodate a number of technologies?	Yes/No	8	Yes	Yes	Yes	Yes	Yes	NA
	Accountability to major nodes within a 10 min walk from the alignment	Yes/No		Yes	Yes	Yes	Yes	Yes	Yes
LINK REGIONAL GROWTH CENTRES THAT ENCOURAGE TRANSIT ORIENTED DEVELOPMENT (Does the alignment take Regional Growth Centres, major transit centres, trip hubs, gateways, stations, etc?)	Transit Oriented Development (TOD) consider opportunities of the alignment	High/Medium/Low	8	High	High	High	High	High	High
	Ability to support and connect to the transit network, major exchanges, park and rides and alternative modes	High/Medium/Low		High	High	High	High	High	High
SUPPORT AN INTEGRATED TRANSPORTATION NETWORK (How well does the alignment link to the regional network and support various transportation modes (bicycling, walking, transit, movement of goods, etc)?)	Ability to support the future rapid transit network for the rest of the region	High/Medium/Low	8	High	High	High	High	High	High
	Supports a balanced transit network on segments A, B, and C	High/Medium/Low		High	High	High	High	High	High
CONSIDER AN ENVIRONMENTALLY RESPONSIBLE SOLUTION (Does the alignment consider environmental impacts to develop a rapid transit corridor relative to other alignments (topography, rivers, etc)?)	Potential impacts to riparian/wildlife	High/Medium/Low	7	High	High	High	High	High	High
	Potential impacts to riparian/wildlife and noise (relative to existing)	High/Medium/Low		High	High	High	High	High	High
DESIGN A SUSTAINABLE AND AFFORDABLE TRANSIT SYSTEM (Does the alignment consider right of way (ROW) costs to acquire or reconfigure property, including potential and/or business impacts relative to other alignments?)	Potential Property Acquisition required	Cost (Cost/Net)		551 M (\$10.5M/ha)	548 M (\$11.2M/ha)	530 M (\$11.2M/ha)	548 M (\$11.2M/ha)	548 M (\$11.2M/ha)	502 M (\$11.2M/ha)
	Number of at-grade crossings	Total hectares		0.3	0.3	0.1	0.1	0.2	0.2
DESIGN A SUSTAINABLE AND AFFORDABLE TRANSIT SYSTEM (Does the alignment consider right of way (ROW) costs to acquire or reconfigure property, including potential and/or business impacts relative to other alignments?)	Number of bridges required or potential crossings	Number of bridges		3	3	3	3	3	3
	Potential residential building required (houses, apartments and safety)	Number of grade crossings		1	1	1	1	1	1
DESIGN A SUSTAINABLE AND AFFORDABLE TRANSIT SYSTEM (Does the alignment consider right of way (ROW) costs to acquire or reconfigure property, including potential and/or business impacts relative to other alignments?)	Potential Earthworks/Landscaping required	Linear Meters		4,700	7,300	11,000	NA	NA	NA
	Potential impact to existing greenbelts and allures	Cubic Meters		4,500	NA	3,200	NA	NA	NA
RANKING BY SEGMENT		High/Medium/Low		39,000	136,000	150,000	NA	NA	NA
		High/Medium/Low		Low	Low	Low	High	Medium	Medium
				2	3	1	1	1	3

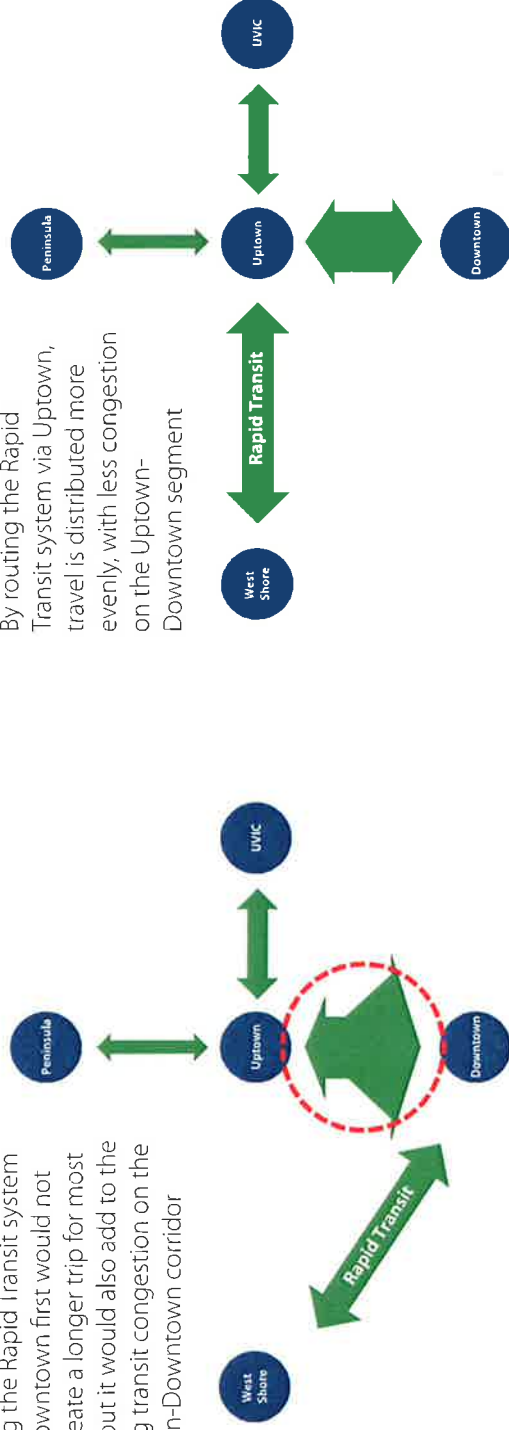


# The Concept of System Balance for Rapid Transit

The Uptown-Downtown segment is already the most congested transit corridor in the region. The majority of West Shore-related travel is distributed throughout the region, and Uptown is a natural distribution hub.

Routing the Rapid Transit system into Downtown first would not only create a longer trip for most users, but it would also add to the existing transit congestion on the Uptown-Downtown corridor

By routing the Rapid Transit system via Uptown, travel is distributed more evenly, with less congestion on the Uptown-Downtown segment



Unbalanced System

Balanced System

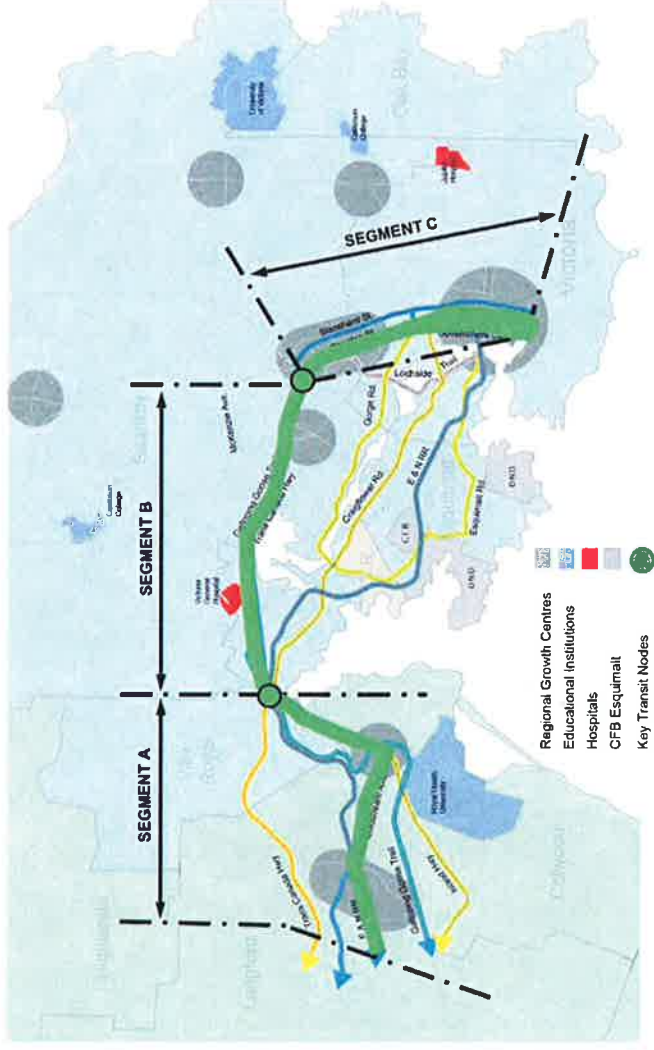


# Preferred Alignment for Further Study

## Detailed Screening Results

The preliminary short list was subjected to additional analysis to identify a preferred alignment for detailed evaluation and recommendation purposes. This alignment, shown in green on the map, was selected on the basis of potential demand, opportunities for transit-oriented development near the route, connectivity with other modes of transportation, impacts on properties and green space, number of grade crossings, ability to construct and expand in stages, balancing system loads, and many other factors.

The detailed evaluation of various design options will include consideration of the various rapid transit technologies.



# Rapid Transit, Commuter Rail and the E&N

The data analysis has shown that, for travellers from the West Shore, Uptown is a much more significant destination and better-located travel hub than downtown Victoria. This is the single most important reason that the Trans-Canada Highway/Galloping Goose Transit Way is the preferred alignment for Rapid Transit (i.e. every 10-15 minutes, all day, every day) service from the Colwood Interchange to the core area. Large employment destinations in Esquimalt, such as CFB Esquimalt and the Esquimalt Graving Dock, are more of a "commuter" market with peak period demand from Monday to Friday.

The Province is nearing completion of a study to determine the costs and viability of upgrading the complete E&N rail line for freight and passenger travel. This includes an assessment of current and forecast freight, passenger, excursion demand over the total corridor from Courtenay to Victoria and Port Alberni as well as infrastructure requirements and costs for commuter rail in the CRD.

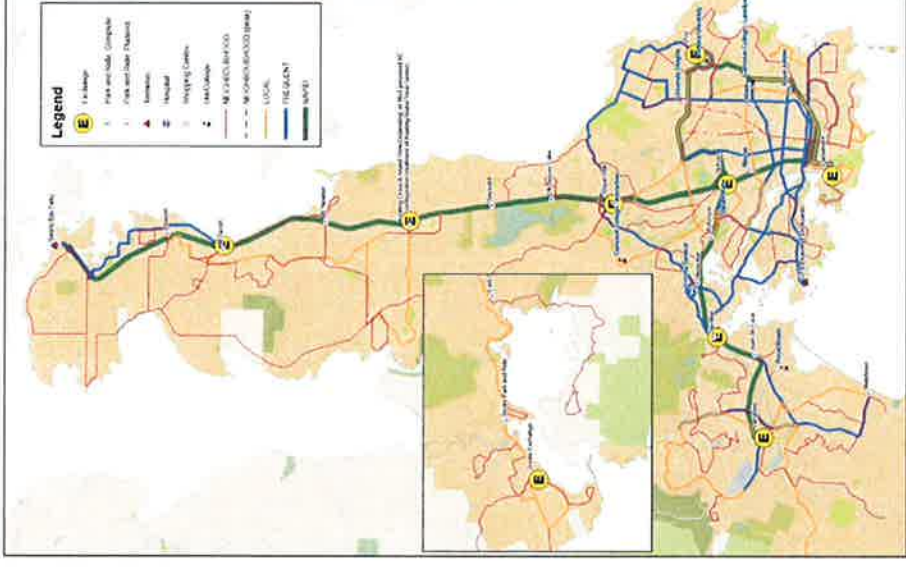


Best alignment for Rapid Transit  
Potential for Commuter Rail



# Rapid Transit and the Rest of the System

- BC Transit is preparing a 25-year master plan for transit service throughout the region
- The plan will include changes required to the existing service as a result of the rapid transit project, including:
  - Exchanges
  - Park & Rides
  - Scheduling
  - Transfer points
  - Feeder services



# Creating Opportunities

## Viable Transportation Choices, “Complete” Streets and the Liveable City

With an exclusive transit way to allow the introduction of reliable, attractive Rapid Transit, travellers will be able to bypass much of the congestion caused by single-occupant vehicles. The Trans-Canada Highway/Galloping Goose alignment will draw the highest number of users, thereby reducing greenhouse gases and freeing up roadway capacity for goods movement.

Through partnerships with Capital Regional District municipalities and the CRD itself, the opportunity exists to build on Greater

Victoria’s existing appeal by creating “complete” streets featuring a full range of transportation choices in a safe, attractive and liveable setting.



## What are the Next Steps?

- Present preferred alignment to Transit Commission and Board of Directors for approval to proceed to next phase
- Develop various design options, including technologies, on preferred alignment
- Develop business case for approval and implementation
- Continued consultation with key stakeholders and public throughout

