



# TransLink Strategic Transportation Plan 2000 - 2005

April 2000



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### Executive Summary

This final version of the Strategic Transportation Plan is an updated version of the Draft Plan dated January 12, 2000. The revisions were based on the results of the public and stakeholder consultation conducted from January to March 2000. Details of the results of the consultation process, opinion surveys and agency and stakeholder feedback are described in a separate appendix document.

The Strategic Transportation Plan sets out the actions TransLink will take to respond to transportation needs in the region and support the Livable Region Strategic Plan for the next three to five years. It is an interim plan. Its strategies are those of the Livable Region Strategic Plan and Transport 2021, pending a coordinated review of long range strategies by TransLink and the Greater Vancouver Regional District in 2001. The Plan is substantive, proposing significantly increased expenditures for transit and selective development of roads in the region. Equally important, the Plan establishes a management program which will address transportation demand management, support alternatives to single occupant auto travel, establish road use priorities, apply technology to transportation, and emphasize goods movement, cycling, walking, safety and security, and marketing. The Plan calls for measuring achievement through an annual report to the TransLink Board and the public that will measure TransLink's achievement.

By many standards, our region is already relatively successful. We have achieved a land use form and level of transit use that would be the envy of many American and some Canadian cities. The proportion of trips made by the automobile has not increased in recent years. Transit services have improved and the SkyTrain system is now being expanded. Our town centres are beginning to provide the services required to become complete communities. Much residential development has been concentrated around Vancouver's urban core and the town centres. Vancouver is consistently rated one of the most livable cities in the world.

However, there are many challenges that this transportation plan must address. These will also need to be addressed in TransLink's longer range transportation plan and the review and update to the Livable Region Strategic Plan, which will be developed in concert in the next two years. Growth concentration objectives are not being fully achieved. Increasingly, employment growth is dispersing across the region. Transit supply is below plan needs, and the goal of a transit market share of 17% of rush hour travel by 2006 is not being achieved. Similarly, targets for other non-automobile travel (i.e. cycling, walking and carpool/vanpool) are not being achieved. Objectives for transportation demand management and trip reduction are not being met. Overall system management is fragmented across jurisdictional boundaries and less than comprehensive.

We need an effective management strategy to make the best use of our road and transit system, to manage transportation demand, and to provide transportation choice. We need to advance the development of rapid transit systems, and provide more and more varied transit services that will attract users and serve their needs. We need to better promote walking and cycling as low-cost and low-impact modes of travel. We need to address the needs of industry for the efficient movement of goods, and to make some provision for the continuing growth in automobile traffic, and this means key improvements to our road system. Partnership with other agencies – municipalities, the Greater Vancouver Regional District, the Province, and the private sector will be required to make these achievements possible.

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To pursue these objectives, the Strategic Transportation Plan will:

- Increase transit use by up to 29% by 2005
- Slow the growth of traffic congestion
- Provide a well-maintained and financed major road network
- Support more efficient goods movement
- Pursue new road facilities including the South Fraser Perimeter Road and a new bridge to replace the Albion Ferry
- Provide more frequent and less crowded transit services through an increase in the bus fleet of approximately 48%
- Offer a much more responsive and flexible bus service by providing a broader range of bus services, including more “B-Line” services, connections between town centres, and community shuttles
- Increase handyDART service by 25%
- Expand SkyTrain capacity
- Provide more choices for carpooling, vanpooling and other alternatives
- Provide new cycling facilities and a gradual increase in cycling
- Adopt new technologies to improve transportation services and operations
- Ensure better monitoring of the performance of the transportation system
- Maintain ongoing public consultation in the implementation of these changes

Overall, the Plan is forecast to increase transit ridership from 127 million in 1999 to between 153 million and 164 million passengers in 2005, depending on the impact of the proposed fare changes. This represents an increase in transit ridership of up to 29%, resulting in a transit market share of up to 12.5% of regional travel compared to 11% today. If the proposed transportation demand management and transit priority measures are implemented, transit ridership can be expected to be higher.

The additional services and capital programs set out in the Strategic Transportation Plan will increase TransLink’s annual costs from \$506.7 million in 1999 (scaled to twelve months) to \$814.4 million in 2005.

The Plan will be financed through existing and new sources of revenue: a transit fare increase averaging 25 cents on a one zone fare and similar proportional increases in other fares in 2000 and again in 2003; an automobile levy averaging \$75 per vehicle increasing annually by 5%, beginning in October 2001; and an additional charge of 14% to fees paid for off-street commercial parking starting in 2005. Prior to the increased parking tax, a regional parking strategy will be developed in consultation with municipalities and stakeholders. The mechanism by which the automobile levy will be structured will be determined during 2000 and will consider alternatives to a flat charge such as relating the charge to parameters such as vehicle use or pollution. The increase in transit fares will improve cost recovery, and the auto levy and parking charge represent initial steps toward transportation pricing. TransLink’s mandate means that these revenue sources will be devoted exclusively to transportation services and facilities.

Maintaining the quality of life in our region requires action. This Strategic Transportation Plan makes a clear choice to implement the programs and invest in the changes required to minimize the growth in automobile traffic and preserve the quality of life in our region.

## 1 - Introduction

### 1.1 Overview

The Strategic Transportation Plan is TransLink's blueprint for the next three to five years. It is an interim plan. It does not revisit long term goals and strategies, but rather adopts the goals and strategies of the Livable Region Strategic Plan and Transport 2021. The "mid-point" transportation supply and funding scenario used as the basis for discussions to establish TransLink provided further guidance. A longer term strategic transportation plan review, conducted in concert with the Greater Vancouver Regional District's review of the Livable Region Strategic Plan, will undertake a full review of these directions.

Our region is relatively successful, but many challenges remain. This Plan sets out how TransLink and the regional transportation system play their part in supporting the current vision and goals of the GVRD's Livable Region Strategic Plan. Investment in transit, maintenance and upgrading of major roads, and selective expansion in road capacity provide the infrastructure, but TransLink's management of the transportation system and the services it provides must be successful for us to achieve these goals.

Population growth will mean travel growth. The dispersal of employment and the failure to meet regional objectives for the location of new residential development will increase travel demand. Successful management of the transportation system requires coherent programs across components of the transportation system and across jurisdictions. It also requires effective management of programs to support alternative travel modes and manage transportation demand. Failure to provide alternatives, to manage transportation demand successfully and to manage the road system to make travel by transit convenient and fast, may make planned investment in transit services uneconomic and ineffective.

### 1.2 This Document

This document is structured in six main parts.

Following Section 1- Introduction, Section 2 – 'Our Region', provides the broad context for the plan, including a discussion of the role of TransLink in supporting the GVRD's Livable Region Strategic Plan.

Section 3 – 'Where We Are Today', outlines where the region is today in terms of how we travel around the region and the progress which has been made in meeting the vision of the Livable Region Strategic Plan.

Section 4 – 'The Strategic Transportation Plan' presents the five main components of the overall strategy: the vision and objectives; the transit plan; the roads and infrastructure plan; the management strategy; and the financial plan.

The vision and objectives set out the key directions for the Plan. The transit plan sets out the program for expanding and improving the transit system. The roads and infrastructure plan sets out the policies for maintenance of the roads system and the capital expenditure program to improve the road network and provide supporting facilities for the transit system and cycling. The management strategy deals with strategies to manage transportation demand, to manage TransLink's services, to finance and price the transportation system in a manner which

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supports desired transportation choices, and to track the progress of implementation. The management strategy also outlines some of the key partnerships and interdependencies that are critical to allow TransLink to support the region's vision to the fullest extent. The financial plan provides a projection of the costs of the plan components, including TransLink administration, and presents a financial plan to fund the implementation of the strategic plan.

Finally, Section 5 – 'Support for Regional Objectives' summarizes how the Plan supports the Livable Region Strategic Plan and other regional goals for air quality and economic development and Section 6 – 'Conclusions' provides some closing comments.

A separate appendix to the Strategic Transportation Plan provides information regarding the following:

- Livable Region Strategic Plan transportation choice policies;
- Transport 2021 policies;
- A review of the current situation relative to key objectives;
- Information on commuting patterns by sub-region for the journey to work;
- A summary of the technical development of the plan;
- Additional financial information; and
- Results of public consultation.

## 2 - Our Region

*"Greater Vancouver can become the first urban region in the world to combine in one place the things to which humanity aspires on a global basis: a place where human activities enhance rather than degrade the natural environment, where the quality of the built environment approaches that of the natural setting, where the diversity of origins and religions is a source of social strength rather than strife, where people control the destiny of their community, and where the basics of food, clothing, shelter, security and useful activity are accessible to all."* Creating Our Future, Greater Vancouver Regional District, 1990

Today, two million people call this region home. Over the next few decades, the population of the region is projected to grow by an amount equal to the number of people now living in the cities of Vancouver, Burnaby, Richmond, Surrey, North Vancouver, West Vancouver and New Westminster. That's more than a million new residents, and their arrival in our region will challenge this vision. Where will they live, work, play, go to school? How will they get to work, shops, the theatre, the beach? Will their travel reduce air quality? Will farmland still exist here?

To address these issues and to ensure this region's livability in coming decades, the Greater Vancouver Regional District and its member municipalities, in consultation with the public, crafted a comprehensive and far-reaching vision called Creating Our Future. The goal of Creating Our Future was to establish region-wide co-operation for managing growth and protecting the environment, in partnership with member municipalities and other governments.

### 2.1 Livable Region Strategic Plan

To get from vision to reality, the Greater Vancouver Regional District and member municipalities developed the Livable Region Strategic Plan with input from the public. The Livable Region Strategic Plan, which was adopted by the GVRD Board in January 1996, sets out four key strategies:

#### **1) Protecting the Green Zone**

Keep two-thirds of the region's total land as green space by protecting farmland, parkland, watersheds and ecologically sensitive areas. The Green Zone also helps establish a long-term boundary for urban growth.

#### **2) Building Complete Communities**

Increase focus on regional and municipal town centres by providing people with more opportunities to work, shop and access services close to where they live.

#### **3) Achieving a Compact Metropolitan Area**

Reduce sprawl by increasing population density in the established urban area.

#### **4) Increasing Transportation Choices**

Reduce dependency on single occupant vehicles by creating more efficient public transit and encouraging alternatives like walking, cycling and carpooling.

These strategies work together and depend on each other to achieve the goal of a livable region.

The Strategic Transportation Plan Appendix, which is available under separate cover, lists the Transportation Choice Policies for the Livable Region Strategic Plan.

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The specific strategy for increasing transportation choice comes from the 1993 Transport 2021 Long Range Transportation Plan, which was approved by the GVRD in June 1994. The specific policies of Transport 2021 are listed in the Strategic Transportation Plan Appendix document. Transport 2021 includes three related strategies:

1. Manage land use to reduce the need for new transportation facilities and increase the viability of alternatives to the private auto.
2. Manage transportation demand to provide incentives and disincentives to change travel choices to reduce auto use.
3. Manage transportation supply by providing road and transit facilities and services in a manner that supports and complements the land use and demand management strategies.

These strategies are interdependent. The transportation system must support a compact metropolitan area and help shape the growth of regional town centres. A successful compact metropolitan area and successful town centres will help make the provision of high quality transit services possible, and will support transportation choices like walking, cycling, and carpools. Protection of the green zone will support the compact metropolitan area.

There are many key decision-making bodies that determine the future of our region – municipalities, the Greater Vancouver Regional District, and the Province. Through planning, zoning, and capital investments in public facilities, these agencies will determine the success of our region. Careful management and strong partnerships will be necessary to ensure our joint success.

### 2.2 The Role of TransLink

TransLink, a regional transportation authority established in the Greater Vancouver Transportation Authority Act, is responsible for providing a regional transportation system that:

- (a) moves people and goods, and
- (b) supports
  - (i) the regional growth strategy, and
  - (ii) the air quality objectives and economic development of the transportation service region.

(Source: Greater Vancouver Transportation Authority Act, 1998)

The Greater Vancouver Transportation Authority Act mandates partnerships. TransLink and the Greater Vancouver Regional District must work together to establish a mutually agreeable strategic transportation plan and growth management strategy. TransLink must work with the municipalities in the development of the major road network. TransLink must consult broadly with interested agencies and the public in the development of its strategic and service plans, and its strategic plan must support the Livable Region Strategic Plan and regional air quality objectives.

TransLink's direct responsibilities include the Major Road Network (shared with municipalities) and the regional transit system (Coast Mountain Bus Company, SeaBus, SkyTrain, handyDART, West Vancouver Municipal Transit, Bowen Island Community Transit and West Coast Express). TransLink also manages the trip reduction service, transportation demand management, cycling and AirCare programs. New taxation powers and funding sources set out in the GVTA legislation will facilitate the funding of transportation improvements.

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Subsidiaries and contractors carry out TransLink's operational responsibilities. TransLink is a transportation planning and funding agency that will provide comprehensive management of the transportation system, and will work closely with other governments and user groups in this process.

### 3 - Where We Are Today



Greater Vancouver is a relatively successful region, but faces many challenges in future. Car ownership increases proportional to population growth, yet targets for the development of the transportation system, transportation demand management, and alternative transportation services are not being met. Without well-planned land use, an effective transportation system, and transportation demand management, continued growth in traffic can only mean increased traffic congestion, travel delays for commercial goods movement and auto drivers, and increased air pollution.

#### **Transportation Patterns**

If present trends continue, by 2005, the region's population will be making an additional 500,000 to 600,000 trips per day. If the transportation mode shares remain the same, about 77% of the trips will be made by car, 10% by public transit and 13% by walking/cycling.

*By 2006, Transport 2021 calls for 70% of trips to be made by car, 17% by public transit, and 13% of trips by walking or cycling.*

#### **Growth and Transport Choice**

The more people are clustered in an area, the easier it is to provide a cost-effective transit system, and the more likely it is that modes of travel like bicycling and walking will be feasible and convenient. In the past few years, approximately 63-65% of all new population growth in the GVRD has been located in the Growth Concentration Area (Vancouver, Burnaby, New Westminister, Port Moody, Port Coquitlam, Coquitlam, North Surrey and North Delta).

*The target for the Livable Region Strategic Plan is for 70% of all population growth to be within the Growth Concentration Area.*

#### **Employment and Transportation**

Overall, the concentration of jobs in downtown and the regional town centres was reduced from 44% to 37% between 1981 and 1996. The growth of office parks is a good example of the dispersal problem. This form of development is difficult to serve efficiently by transit and is largely car dependent, requiring workers to drive to work.

*One of the key strategies in the Livable Region Strategic Plan is the development of town centres to provide employment, shopping, and recreation opportunities near where people live. To the extent that employment is dispersed, these opportunities are lost, and transportation problems are worsened.*

#### **Congestion and Transit**

Increased congestion is hampering transit operations and delaying automobile traffic. Compared to many other metropolitan areas in North America, relatively little priority is given to the movement of buses on the region's roads. Bus speeds have decreased by around 7% in the last decade. This makes the service less attractive and much more expensive to provide.

*Transport 2021 advocated re-allocating roadway capacity to buses in order to maximize people-carrying capacity and make better use of investments.*

#### **Goods Movement**

Congestion is also affecting goods movement. A 1996 study of freight transportation reported that highways and roads leading to gateway facilities (e.g. Vancouver International Airport, Port of Vancouver) are operating in congested or near-congested conditions. Local businesses report that goods movement costs are increasing significantly.

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*A significant direction in Transport 2021 was to move goods effectively, efficiently, safely and reliably. Since Transport 2021 was completed, there has not been an explicit focus on goods movement.*

### **Rapid Transit**

The Province has recently undertaken extension of the SkyTrain system from New Westminster to Vancouver Community College in the Lougheed corridor. This line is part of two lines identified in Transport 2021, but completes neither. An initial agreement has been reached on extending the line to Coquitlam, but the final agreement has not been ratified.

*Transport 2021 called for the completion of three rapid transit lines by 2006, including the New Westminster to Coquitlam line, the Central Broadway to Lougheed line, and the Richmond line.*

### **Bus System**

Some improvements have been made in the bus system over recent years, including an increase in the bus fleet from 1,024 in 1997 to 1,109 in 1999, and the introduction of new services, including the highly successful Broadway B-Line. The reliability of bus service has also increased in the past two years.

*Transport 2021 proposed an almost doubling of the bus system (from 1,109 buses in 1999 to 1,900 by 2006), a much greater diversity of the types of transit services, including local community based services and new High Occupancy Vehicle lanes to increase the speed of transit service.*

### **Transportation Demand Management**

Limited vanpool and carpool programs are in place in the region, but no demand-side management programs (e.g. pricing measures and parking management) to limit single occupancy vehicle use have been implemented.

*Transport 2021 envisaged financial incentives for telecommuting, development of a regional parking strategy, and implementation of tolls in 2000.*

### **Walking and Cycling**

Walking and cycling are important parts of a transportation solution. A third of all work trips are less than 5 kilometres, within a reasonable travel distance by bicycle. The “catchment area” of bus routes can be greatly extended with suitable bus-bike facilities. A portion of the bus fleet is equipped with bike racks, and bike storage is being added at SkyTrain stations. Municipalities are developing bicycle networks. With suitable facilities, programs and services, there is potential to significantly increase the proportion of trips by bicycle.

*Objectives for town centres and growth concentration in the Livable Region Strategy support bicycles and walking as part of a transportation solution.*

### **Major Road Network**

The road network is not being expanded and requires improved maintenance. Management and operation of the road system has been fragmented between municipalities and the provincial government. TransLink and the municipalities have jointly defined a Major Road Network, and agreed on funding for maintenance and rehabilitation, and are working toward improved system management.

*The development of region-wide standards and funding for rehabilitation and maintenance of the major road system, and the potential for coordinated system management will lead to improvements in the road system.*

### **Air Quality Management**

Air quality in the region has improved, but projections based on increased congestion and automobile traffic suggest it will worsen in future. The Regional Air Quality Management Program has a number of components, some transportation-related, to address the problem, and TransLink’s AirCare program

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will ensure that automobiles operate within standards. Control in the growth of automobile traffic is a key tool to address air quality and the emission of greenhouse gases. Transportation demand management programs are required.

*Transportation demand management programs have not been implemented as called for by Transport 2021.*

The creation of TransLink provides a greater integration of land use and transportation planning and the potential for integrated management of the transportation system. The favourable transportation funding formula, with significant provincial cost sharing and new revenue sources, will support expansion of the transportation system. New revenue sources can be used to introduce a form of transportation pricing, and all revenues are devoted solely to transportation services.

TransLink's Strategic Transportation Plan uses these tools to address the challenges outlined in this section.

### 4 - The Strategic Transportation Plan

The development of this Plan was based on both the Livable Region Strategic Plan and Transport 2021 objectives, as well as the “Mid-Point Scenario” that provided the basis for the creation of TransLink. In the fall of 1999, a discussion paper containing three system development and funding scenarios was circulated to the public. These scenarios corresponded roughly to: (i) investment levels in the years preceding the formation of TransLink; (ii) the higher levels of expenditure envisaged in negotiations between the Greater Vancouver Regional District and the Province to establish TransLink; and (iii) still higher investment levels closer to those envisaged in Transport 2021. This paper was circulated widely to technical advisory groups and the public and comments were solicited.

In September of 1999, TransLink conducted a Future Search consultation with a broad range of stakeholder representatives over a two and a half day period. That process produced twelve generally agreed strategies for TransLink to pursue. With the comments from the public consultation on the discussion paper and the Future Search directions, and advice from municipal and Provincial staff, TransLink staff developed and evaluated a number of services and projects against the present base of services and facilities. The relative costs and benefits were assessed and a recommended package of service and facility improvements was developed for the Plan, which respects the results of the Future Search and the public and technical consultation.

The Strategic Transportation Plan is structured in five parts: 4.1 Plan Vision and Objectives, 4.2 the Transit Plan; 4.3 the Roads and Infrastructure Plan; 4.4 the Management Strategy; and 4.5 the Financial Plan. Each of these is outlined below. A fuller description of the development of the services and facilities component of the plan is contained in the TransLink Strategic Plan Appendices.

#### 4.1 Vision and Objectives

##### **The Vision**

The vision for TransLink’s services and strategic plan is *Enhanced Livability through Managed Mobility*. This short statement sets out our direction. Our efforts are directed at supporting the Livable Region Strategic Plan and the livability of our region. Enhanced livability means the ability to reach work and services conveniently and safely, and effective transportation for goods movement to support employment and economic growth. It means meeting customer needs and providing alternatives to the automobile, with the opportunity to walk or bicycle to work for many, to take transit locally and regionally, and to drive when necessary with reasonable congestion levels. It means improved air quality through a transportation system that provides reasonable alternatives to automobile use, and limits the growth in automobile usage. It means a transportation system that minimizes the effect of traffic and goods movement on residential neighbourhoods.

Managed mobility means a management system that addresses all aspects of the transportation system – transportation demand, carpooling and vanpooling, cycling, and walking, priorities for road use, cost-effective management of the transit system, and the use of current technology in operating and managing the transportation system. It means parking strategies and pricing transportation to limit the growth in automobile use. It means management in partnership with

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municipalities, the GVRD and the Province, TransLink's transportation providers, and the private sector.

### *Plan Objectives*

As an interim plan, this Strategic Transportation Plan is focussed on implementation over a three to five year period to support the goals of the Livable Region Strategic Plan. The objectives respond to public concerns expressed in the public process to create TransLink, the consultation process leading up to this plan, technical consultations with users, and a range of focus groups and customer consultations related to TransLink services. There are three global objectives:

1. **Enhance the transit system through expansion of existing services and provision of a range of new services that meet customer needs.** This objective is accomplished through the Transit Plan.
2. **Improve the Major Road Network through rehabilitation and upgraded maintenance of existing roadways and selective addition of new facilities that will support goods movement and relieve congestion at key locations.** This objective is accomplished through the Roads and Infrastructure Plan.
3. **Develop a system that implements transportation demand management, promotes the use of walking, cycling and other alternatives and will integrate management of all elements of the transportation system in a fiscally responsible manner and monitor the progress of implementation.** This objective is achieved through the Management Plan.

The following sections set out the Transit Service Plan, the Roads and Infrastructure Plan, and the Management Plan.

## 4.2 Transit Plan



The following sections outline the major components of TransLink's Transit Plan to 2005. It builds on the strengths of the existing fully integrated regional transit system and expands and broadens the range of services available to the region's diverse communities. While the Transit Plan identifies at a general level the specific transit initiatives to be implemented, these will be subject to periodic review and adjustment over the period of the plan, based on circumstances at the time. This may result in some service proposals being revised or new initiatives being identified.

The Transit Plan offers an expanded and broader range of transit services that are better suited to the diverse needs of this region's communities. It provides the transit expansion for TransLink to be competitive in its key markets. These markets are primarily trips for work and post-secondary education purposes, on the major trunk bus routes, as well as peak-period and mid-day travel in the Growth Concentration Area, the North Shore, Richmond and to the regional town centres. Outside these areas, transit services will be a combination of conventional services and new and innovative forms of public transport, such as Community Shuttle. The attractiveness, effectiveness and efficiency of this transit expansion can be significantly increased by giving much greater priority to buses on roads throughout the GVRD.

In overview, all services are expanded significantly, as set out in the following tables that show estimates of both the service hours and fleet plan for each service component for the period to 2005. The estimates of service hours and fleet requirements will be fine-tuned in each annual Program Plan and Budget.

### Transit Service Hours

*Estimated Annual Transit Service Hours (thousands), 2000-2005*

	2000	2001	2002	2003	2004	2005
<b>Service Type</b>	<b>(millions)</b>					
Bus (including SeaBus)	3.62	3.83	4.10	4.36	4.59	4.79
handyDART	0.44	0.46	0.47	0.49	0.51	0.53
SkyTrain	0.63	0.62	0.64	0.75	0.75	0.86
West Coast Express	0.03	0.03	0.03	0.03	0.03	0.03
<b>Total Annual Service Hours</b>	<b>4.71</b>	<b>4.93</b>	<b>5.24</b>	<b>5.63</b>	<b>5.88</b>	<b>6.21</b>

### Transit Fleet Plan

*Transit Fleet Plan, 2000-2005*

Vehicle Type	2000	2001	2002	2003	2004	2005
City Bus	1,042	1,074	1,137	1,193	1,254	1,323
B-Line	121	121	136	159	165	165
Express Bus	-	76	91	94	97	100
Community Bus	12	22	32	42	52	52
<b>Total Bus Fleet</b>	<b>1,175</b>	<b>1,293</b>	<b>1,396</b>	<b>1,488</b>	<b>1,568</b>	<b>1,640</b>
handyDART	243	252	261	275	286	296
SkyTrain Mark I	150	150	150	150	150	150
SkyTrain Mark II	20	60	60	67	73	97
West Coast Express (trains)	5	5	6	6	6	6

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The proposed expansion of bus services responds to current customer research that shows that the following three service improvements would get the most people to use transit:

1. More **B-Line bus service** with limited transit stops running every 10 minutes with traffic light priority and bus-only lanes.
2. More **direct service linking town centres** such as Surrey Centre, Metrotown, Lougheed Mall, Richmond Centre, Lonsdale Quay, Coquitlam Centre and Downtown Vancouver.
3. **Minibus service** to schools, hospitals, community centres and shopping in neighbourhoods and connecting to high volume transit lines.

In addition, the Plan proposes to increase frequency of services on many existing bus routes by up to 30-40% compared to today. This is a key determinant to attracting greater transit use because research shows that every minute spent waiting at a bus stop is perceived as three minutes by many passengers.

There will also be a greater degree of comfort on buses, with an overall fleet increase from 1,109 buses in 1999 to 1,640 by 2005, or 48%. The expansion of the fleet will be significant and will also offset the reduced seating capacity of newer vehicles. The fleet plan also includes financial provision for the replacement and expansion of the trolleybus fleet by 2002. A wish for expansion of the trolley fleet was a significant feature of the public consultation.

Overall, the package of transit improvements proposed in this Plan is projected to increase transit ridership from 127 million in 1999 to between 153 and 164 million passengers in 2005, depending on the impact of the proposed fare change. This represents a ridership increase of up to 29%. If the proposed transportation demand management and transit priority measures are implemented, transit ridership can be expected to be higher.

The following sections outline the specific components of the Transit Plan.

4.2.1 Bus System Improvement

**ACTION:** Expand and improve the quality and diversity of the region's bus service to better meet the different needs of each market in a timely and cost effective fashion.

In 1999, the TransLink Board endorsed the development of four distinct "brands" of bus service. These brands were identified as Express Bus, B-Line, City Bus and Community Shuttles. The overall bus strategy reflects this approach and moves to implement these four brands. The following outlines how each service brand will develop.

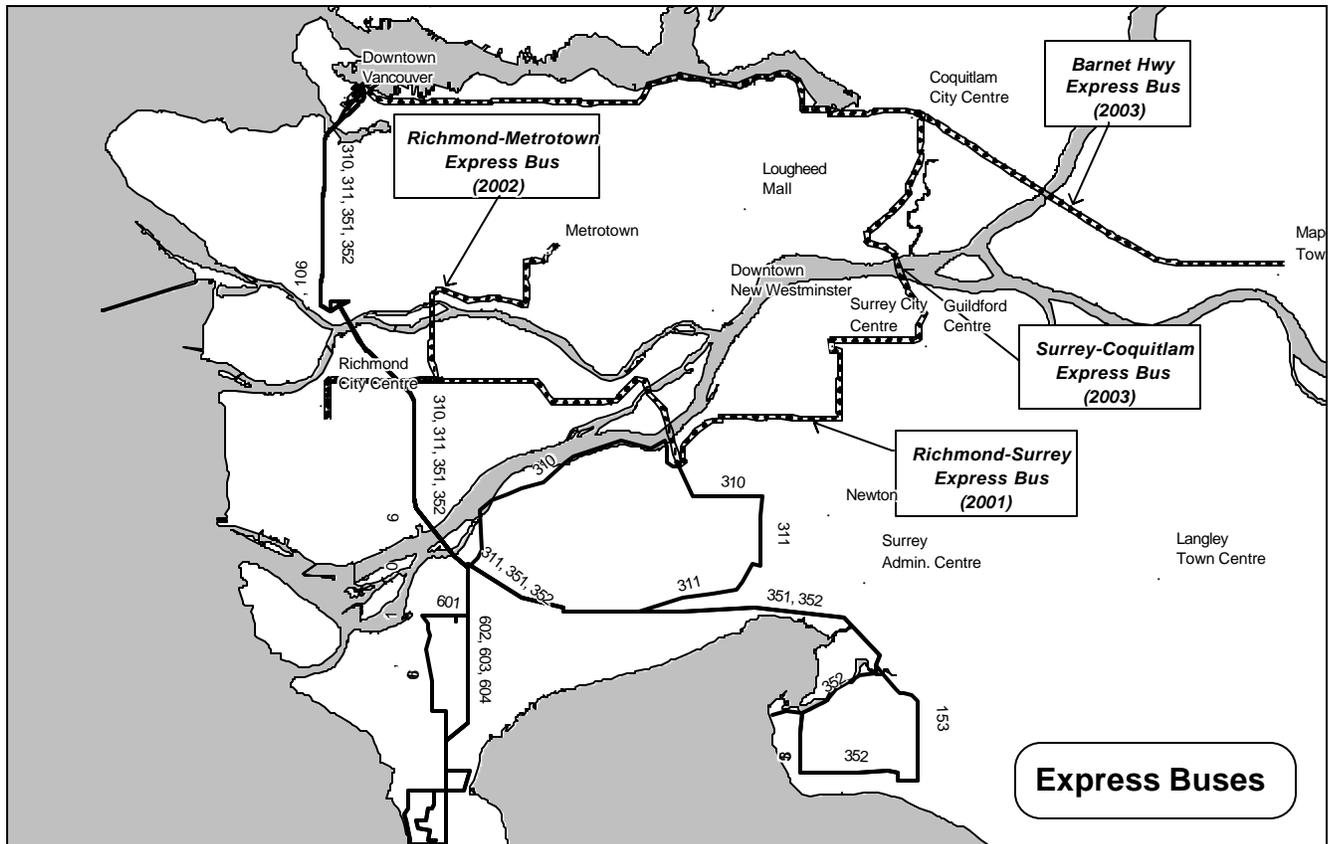
Express Bus



**Express Bus** is mainly aimed at the longer distance commuter market, using 'highway-type' buses to provide fast, comfortable service. To some degree, it is the bus equivalent of commuter rail. As shown in the map, existing express bus routes using Highway 99 will be improved in the next 5 years using a new fleet of 100 Express Buses. Standing should be eliminated on these routes.

Four new express bus routes will be introduced connecting the following regional town centres: Richmond Centre and Metrotown, Richmond Centre and Surrey City Centre, Surrey City Centre to Coquitlam Centre, and from Langley Centre to the new Braid Street SkyTrain Station or Downtown Vancouver. These will be subject to refinement as part of implementation and some may be marketed as "premium services" with fares appropriate to the level of service.

Existing and Proposed Express Bus Routes



## TransLink Strategic Transportation Plan

### B-Line

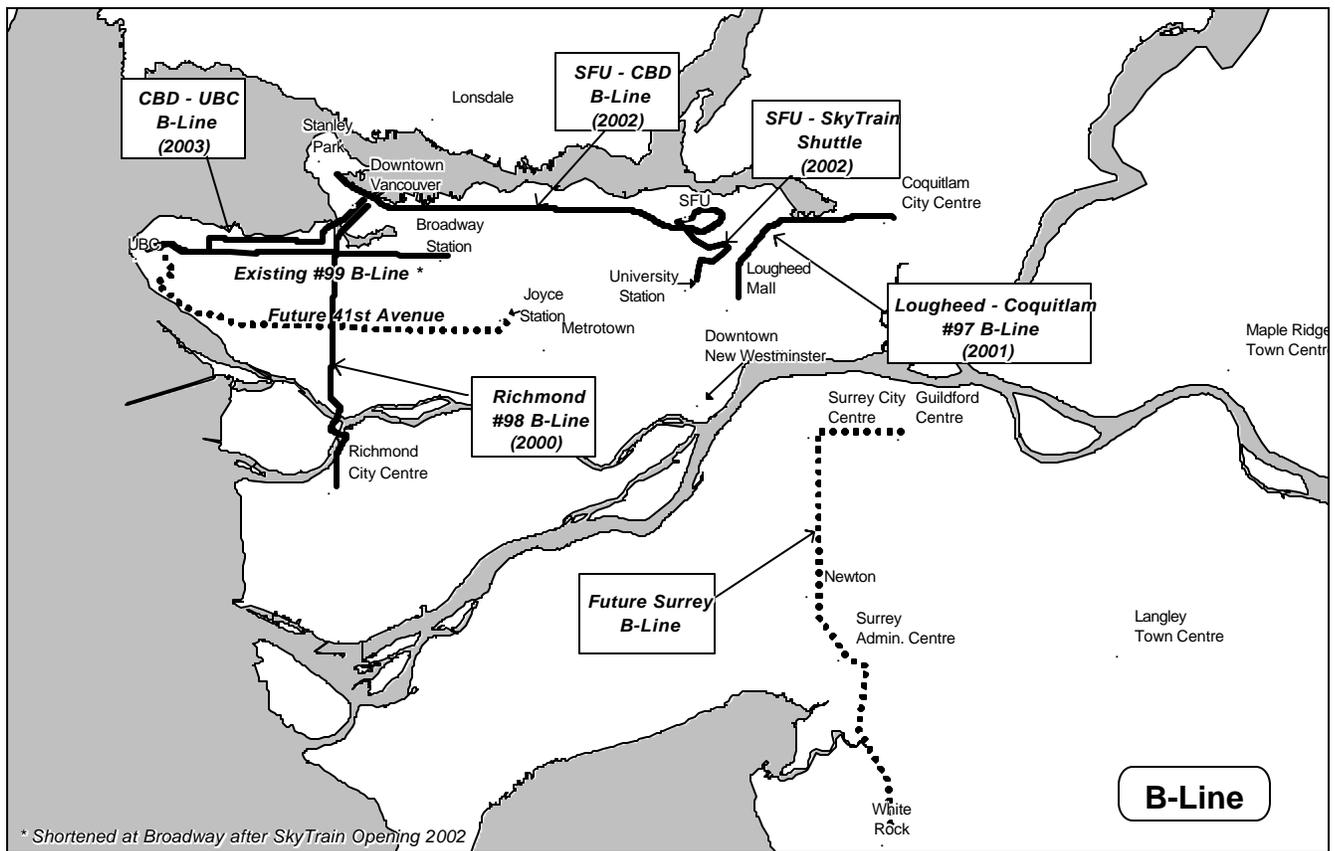


**B-Line** is a high frequency (minimum 10 minute headway), limited stop bus service. The first B-Line service in the region – the ‘99B’ on Broadway – resulted in a dramatic increase in ridership.

Future B-Line services will incorporate new technology that will communicate with the traffic signal system to ensure less delay at traffic lights, and provide accurate information to passengers about the length of time to wait for the next bus. The same system will drive automated on-board announcements of the next stop.

The map below outlines the planned phasing of B-Line routes throughout the region. It is estimated that a fleet of 165 articulated buses will be needed provide these services in 2005.

### B-Line



## TransLink Strategic Transportation Plan

### City Bus



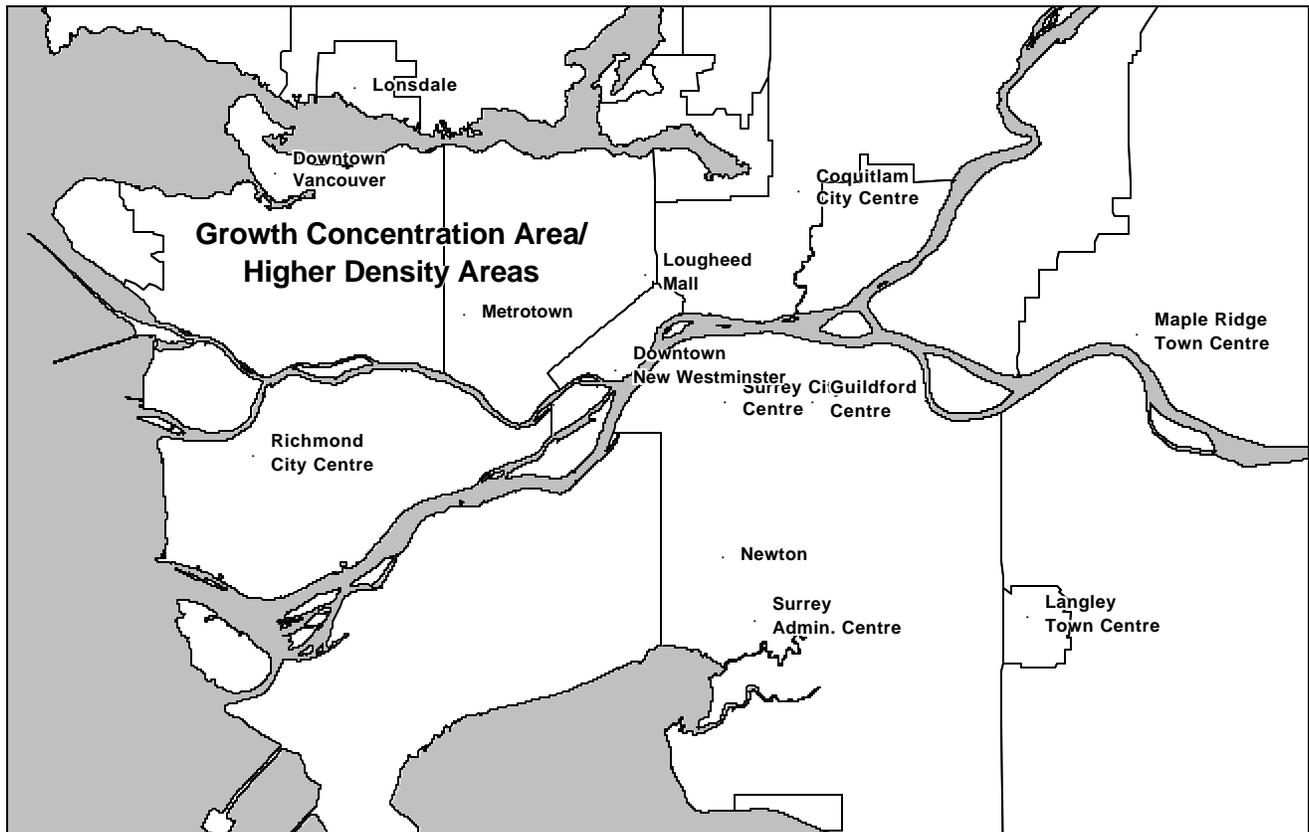
**City Bus** - is the brand name adopted for the local bus services with frequent stops that currently operate throughout the region and include the trolleybus services. City Bus comprises most of the bus service provided by TransLink today and will continue to remain the major part of bus services with 1,323 vehicles in 2005.

The overall strategy is to raise the level of City Bus service throughout the region, with a stronger emphasis on expansion higher density parts of the region (the Growth Concentration Area and parts of Richmond and the North Shore) and on trunk transit routes.

Selective components of this system will be improved by the introduction of some limited-stop services to improve travel speed, particularly in rush hours (e.g. 41<sup>st</sup> Avenue in Vancouver). Overall, it will reduce crowding and increase service frequency on many routes by up to 35%.

The overall objective will be to eventually provide a minimum of 10-15 minute service in peak hours in and 15-20 minute daytime service in high density areas.

### *City Bus Expansion: Focusses On High Density Areas of the Region*



### Community Shuttle (Minibuses)

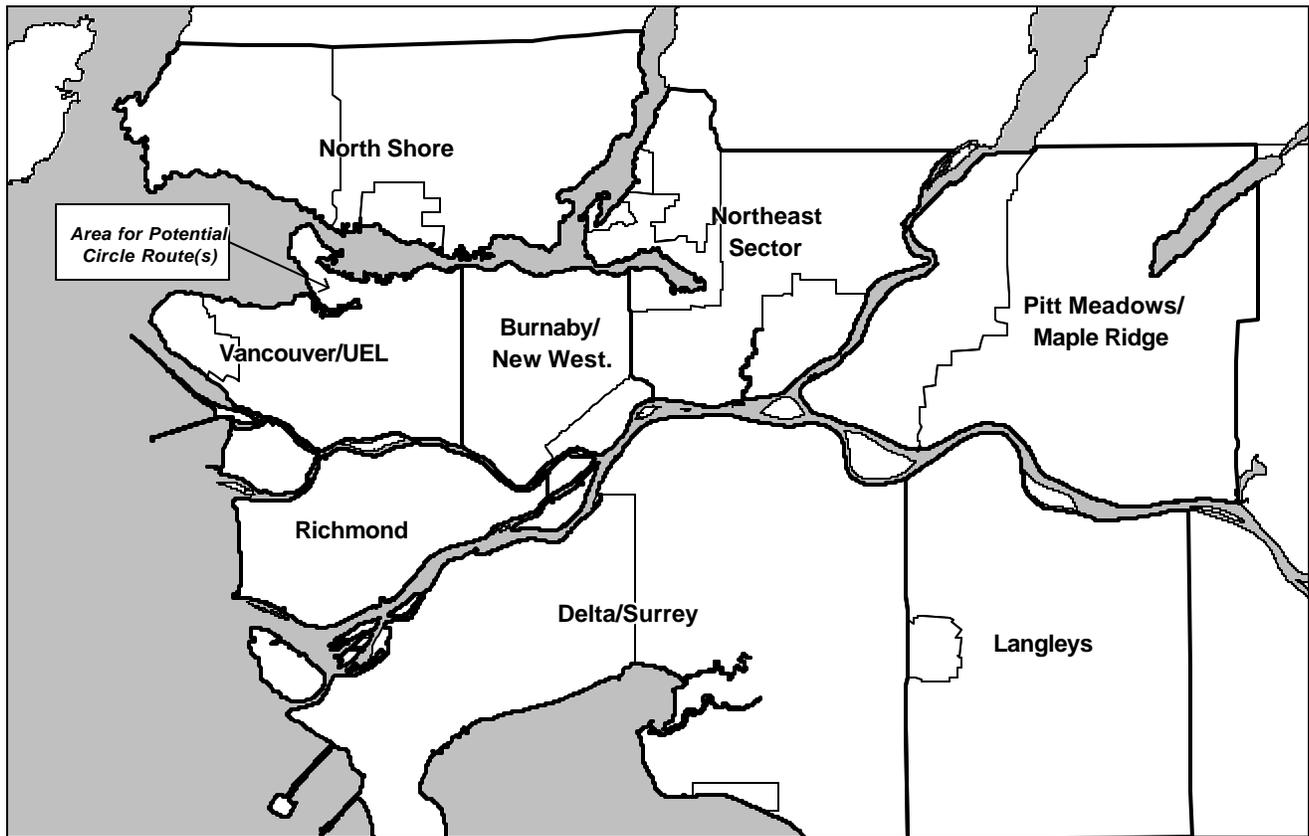


**Community Shuttle** is used as a generic description for services which can range from a shared ride taxi through to vehicles as large as 30' long, operating on fixed route transit services. There is great demand for these types of services, particularly in suburban areas where large 40' buses are expensive, ineffective and unwelcome by residential communities because of their actual and perceived impacts. There was significant demand for the introduction of minibuses in the Strategic Transportation Plan public consultation process.

Community Shuttle will primarily be used to replace existing conventional bus services that are under-performing and to provide a level of service more compatible with, and responsive to, local demand. Areas being considered for Community Shuttle over the next five years are shown in the map. Up to 90 Community Shuttle buses will be in service by 2005 in many areas throughout the region.

Opportunities also exist for Community Shuttle-type services in Downtown Vancouver as well as "circulator routes" in other town centres.

### Potential Community Shuttle Areas

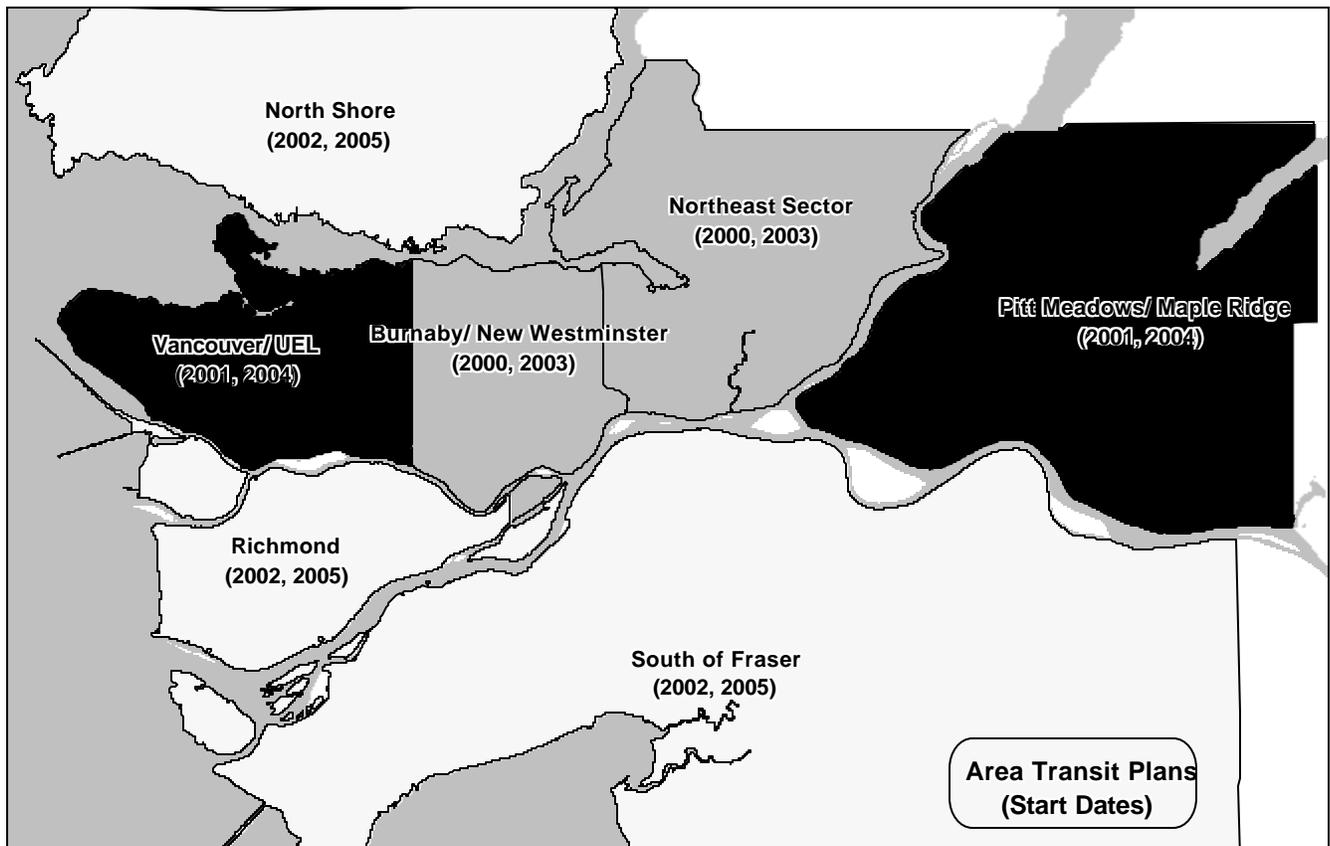


### 4.2.2 Area Transit Plans

**ACTION:** Maintain an ongoing cycle of community-based transit planning processes that identify specific implementation requirements for transit improvements.

In conjunction with TransLink's annual Program Plan, Area Transit Plans will be the main means of identifying the details and timing of the expansion of transit service identified earlier. Area Plans will identify how the transit strategies and policies will be implemented in each area for the short- and medium-term.

#### *Area Transit Plan Timing*



The Plans will focus on both service improvements within the local areas and enhanced connecting services to adjacent parts of the region. The planning process will develop innovative, integrated and cost-effective solutions in close consultation with municipalities, residents, transit users and other key stakeholders in each area.

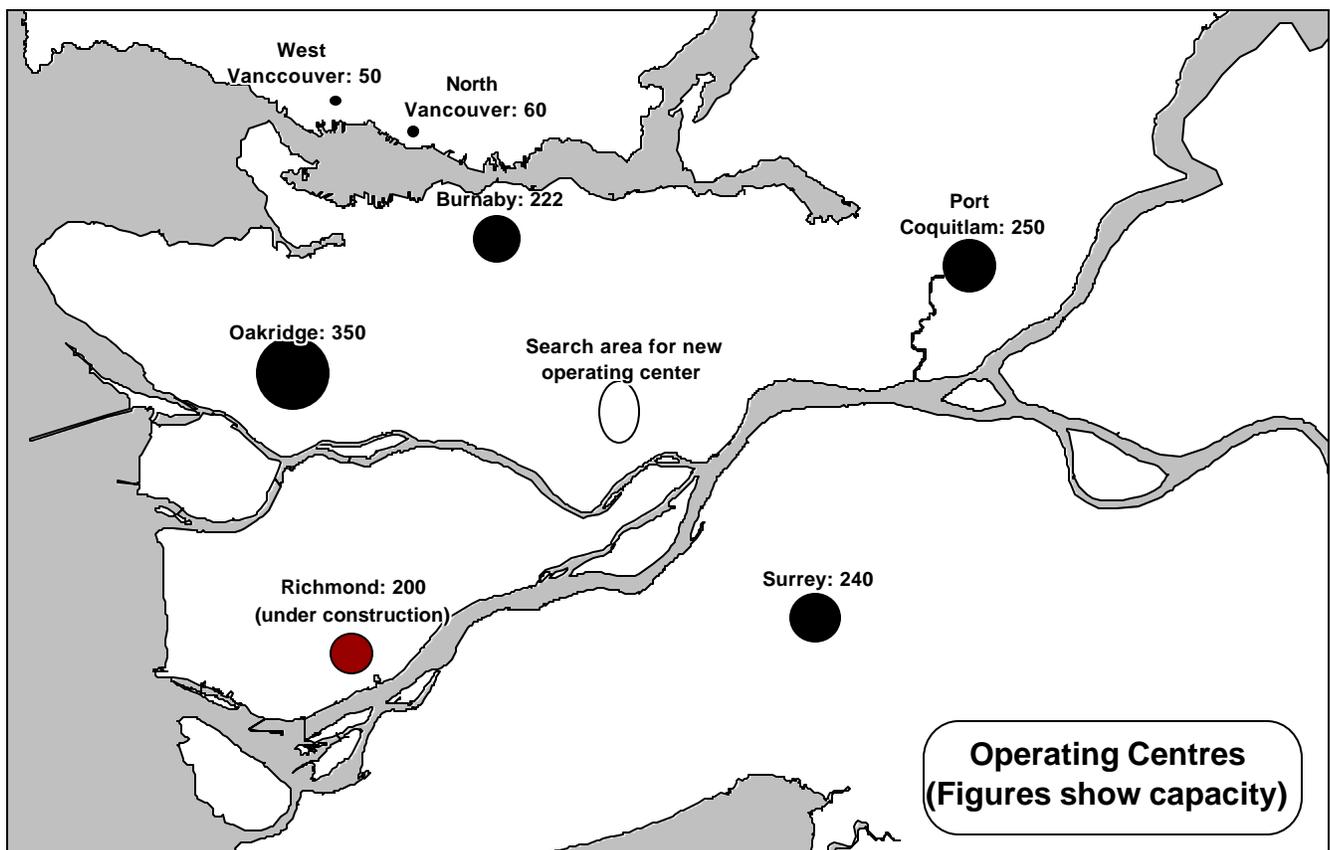
The overall intent is to introduce a fixed cycle for the development of Area Transit Plans.

### 4.2.3 Transit Operating Centres

**ACTION:** Provide adequate operating facilities in strategic locations to support the storage and maintenance needs of an expanding bus fleet.

Six operating and maintenance centres across the region are used to store and maintain the bus fleet. While there is some capacity to accommodate the growth planned in the fleet, it will not be adequate. One new operating centre (costing approximately \$30 million) will need to be built in the Burnaby/New Westminster area by 2003 and others will need to be upgraded or replaced (Oakridge, North Vancouver and Burnaby) to accommodate the expanded bus fleet. A second new centre will likely be needed before the end of the Plan period.

*Transit Operating Centre Capacity*



### 4.2.4 SeaBus



**ACTION:** Provide sufficient SeaBus capacity to meet the existing and future needs on the North Shore.

Growth in demand for SeaBus service is forecast to be modest, and studies conducted to date have not demonstrated significant need or justification for new vessels or more frequency in the medium term. However, some challenges exist in meeting demand for high demand periods, such as special events. TransLink will pursue alternatives for increasing the permitted carrying capacity of the existing vessels, so that demand can be met during these periods.

### 4.2.5 Potential New Ferry Services

**ACTION:** Explore new ferry services where they are more cost-effective than land-based alternatives and are compatible with the region's growth management strategy.

The transportation service region has significant opportunities for new and innovative passenger ferry services, particularly across the Fraser River and the Burrard Inlet, English Bay and False Creek. Many cities on the scale of Greater Vancouver, such as Sydney, Australia, have much more developed marine passenger services for meeting inter and intra-regional travel.

While water bodies are often perceived as barriers for transport, they also provide significant potential opportunities, particularly for transit. Ferry transit services can provide quick, efficient, reliable, congestion-free and cost-effective services from point-to-point. This potential is evidenced by the great successes of SeaBus and the False Creek Ferries in attracting passengers wanting congestion-free "shortcuts" for travel across waterways where a trip by car is much more circuitous and often inconvenient.

Research will be conducted over the next two years to identify opportunities that may exist for passenger services to supplement the existing SeaBus service and to possibly integrate existing private ferry services. The False Creek Ferries may lend themselves to integration with other transit services. There may be other places where private ferry operators can operate with limited or no subsidy as part of the regional transit system, including connections to Howe Sound locations such as Bowen Island as well as across the Fraser River. Based on preliminary work completed to date, it is possible that some of these options may be relatively cost-effective and warrant early implementation.

One potential service innovation that will be considered early in the course of the Plan is "FerryBus" connecting the Langleys with Maple Ridge using a minibus that crosses the Fraser River via the Albion Ferry.

### 4.2.6 Rail Transit



**ACTION:** Maximize the use of the existing SkyTrain line by providing increased capacity and improved safety and security.

**ACTION:** Work with the Provincial Government to complete the "T-Line" as defined in the GVTA Act by 2005.

**ACTION:** Develop an overall plan for a network of Intermediate Capacity Transit Systems which are affordable and offer a level of service which is capable of fully supporting the needs of the Livable Region Strategic Plan.

**ACTION:** Begin preliminary planning and design work for the Richmond/Airport rapid transit link to Vancouver.

**ACTION:** Work with the City of Vancouver and Canadian Pacific Railways to preserve the Arbutus railway corridor for transportation purposes.

Transport 2021 identified the need for five Intermediate Capacity Rapid Transit Systems, defined as systems capable of carrying up to 10,000 passengers per hour

## TransLink Strategic Transportation Plan

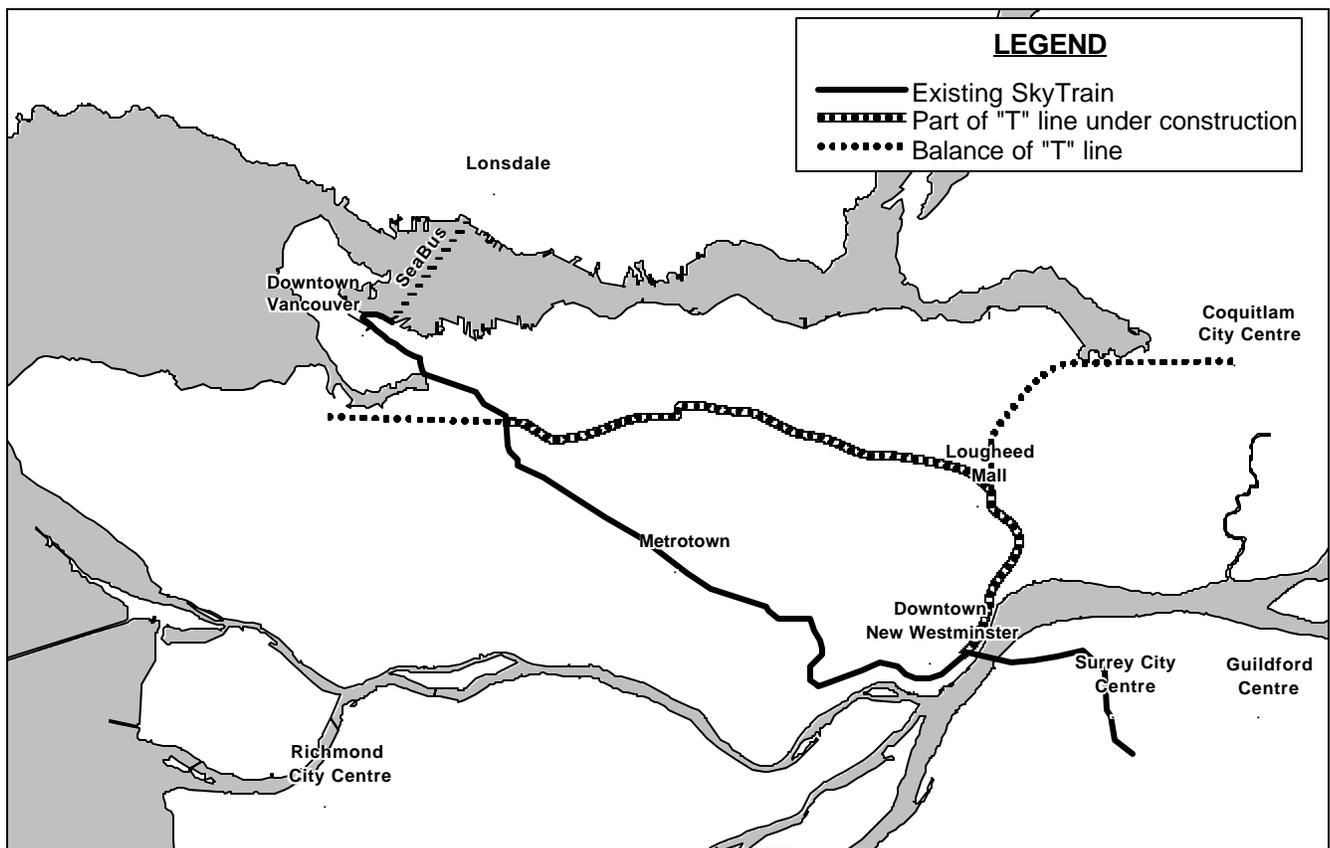
per direction, including segregated busways, LRT or SkyTrain, by the year 2021. Three such lines – New Westminster-Coquitlam, Lougheed to Central Broadway, and Richmond to Vancouver were to be completed by 2006.

The existing Vancouver-Surrey line is now at capacity in the peak periods and the number of vehicles will be expanded in line with previous expansion plans. By January 2001, TransLink will have taken delivery of 20 Mark II cars, which can provide a peak hour capacity increase of approximately 25% over current levels.

Two specific features of SkyTrain need to be addressed in the near term – fare collection and security. The fare system is perceived by many to result in ‘significant’ numbers of passengers not paying their fares. The issue of personal security is complex. While experience on the system itself suggests the problem is limited, the broader issue of the illegal drug activity in the vicinity of a few stations and the absence of full time personnel in stations further raises concerns by many members of the public.

Studies are underway in conjunction with the Rapid Transit Project Office that will evaluate the costs and benefits of barrier systems and the contribution of retail operations in stations to a sense of safety and security. TransLink will investigate changes in deployment of its security staff to increase their visibility. The results of these studies will be reported in the first half of 2000. Modification of some existing SkyTrain facilities may be appropriate, and if necessary, capital funding will be proposed in TransLink’s capital budget.

*Existing SkyTrain Line and the Planned “T-Line”*



## **TransLink Strategic Transportation Plan**

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The SkyTrain project currently being built by the provincial Rapid Transit Project Office is comprised of parts of two of the lines identified by both the Province and the GVRD as high priority. These are the New Westminster to Coquitlam Centre line and the Central Broadway to Lougheed Mall line and together are referred to as the "T"-Line.

The completion of these two lines, particularly the connection to Coquitlam Centre, is critically important to the achievement of the goals of the Livable Region Strategic Plan. While there is a funding agreement in place to complete the line to Coquitlam, there is not yet a design or final timeline, and the legal agreement between the Province and TransLink has not been finalized.

Completion of these arrangements, as well as planning and implementing the extensions to Coquitlam and Central Broadway, are high priorities. TransLink will continue to work with the Province to achieve agreement on these issues, with particular emphasis on the Coquitlam extension.

The current expansion of SkyTrain will address a portion of the regional need for intermediate capacity rapid transit. Regional plans identified development of the rail transit link from Richmond and the Airport to Vancouver as equal in priority. The planning process for this line will begin in 2001, and will provide input into the Olympic planning process as a potential regional legacy.

Regional plans have identified additional corridors where intermediate capacity rapid transit systems should be built, but these plans do not explicitly address the appropriate mix of technology for the entire network. It would be useful for the region to have a concept of a long-range 'mature' rapid transit network so that current and future choices can be made with an adequate understanding of the long-term context and consequences of decisions with particular facilities and technologies. The conceptual plan would also identify which corridors and rights-of-way need to be preserved now, and locations of key future interchange points. It will also identify existing rail corridors throughout the region that may not be needed for rail transit projects identified in existing plans, but should be considered as offering some long-term potential.

At the same time, TransLink should examine new intermediate transit technologies that have costs and capacities lying between the SkyTrain and conventional bus services. Neither SkyTrain nor buses may best meet all the needs of suburban transit. Other technologies such as light rail systems, busways, B-Line and guided bus transit systems may offer opportunities to meet regional needs at a lower cost and these should be considered in light of the overall network plan outlined above.

TransLink will undertake planning work to define the route, technology and timing of a rapid transit line connecting Richmond, Vancouver International Airport and Downtown Vancouver. This work will be undertaken in partnership with the municipalities, the Province, and the airport to be completed by the middle of 2001.

As part of the effort to ensure transportation corridors are preserved for future uses, TransLink will begin working immediately with the City of Vancouver and Canadian Pacific Railways to ensure the Arbutus corridor is preserved for transportation purposes. Such railway corridors in established urban areas are rare and present unique opportunities for enhancing the transportation network.

### 4.2.7 West Coast Express



**ACTION:** Expand the West Coast Express when it achieves a level of cost-recovery commensurate with the quality, cost and level of service provided relative to other components of the regional transit system.

West Coast Express has been in operation since 1995 and is now a mature service which is popular with its users. A number of decisions need to be made with respect to how the system develops, including the possible addition of a sixth train in 2002. Additional cars have been purchased to expand the capacity of the system without additional locomotives, and their use will be evaluated before an additional train is considered. A Trainbus service with the West Coast brand has proven popular and commands premium fares relative to the conventional system.

Potential issues related to expansion to a sixth train include the potential impact of the planned SkyTrain line to Coquitlam Centre, the level of cost-recovery of the service, and the overall impact on growth management in the region. Some previous studies suggest that the impact of SkyTrain access will be minimal, but these need to be reviewed. If effective links can be established from suburban locations to employment, it may be possible to generate additional usage.

It is proposed that a review be undertaken in 2000/2001 to examine usage and pricing and the impact of SkyTrain expansion to Coquitlam on West Coast Express ridership. Following the study, the desirability of the sixth train will be evaluated. This plan includes financial provision for the introduction of a sixth train in 2002. A fare increase will be recommended, in keeping with the recommended increase to bus fares.

### 4.2.8 Accessible Transit

**ACTION:** Increase the variety and number of travel opportunities available to people with disabilities by increasing handyDart services and moving towards a barrier free transit system usable by all members of the community.

The general demographic trend towards an older population and towards people with disabilities being more active has resulted in rapidly growing demand for handyDART.

Today, handyDART service requires pre-booking and is rationed, with priority being given to work, post-secondary education and medical trip purposes. While this has allowed the system to operate within its budgetary constraints, it has resulted in a low level of service to registered users that would be unacceptable to the population in general. To allow for some discretionary, spontaneous travel, handyDART registrants are allowed to buy \$80 worth of Taxi Saver vouchers for \$40 per month.

One relatively cost-effective way that TransLink can provide greater mobility and a high level of service to handyDART users is by making the conventional transit system fully accessible. TransLink policy is to move towards a conventional transit fleet that is 100% accessible to people with disabilities. This means that vehicles and facilities will be ordered, designed and, where feasible, retrofitted to be conveniently and fully accessible.

## TransLink Strategic Transportation Plan

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In addition, the handyDART service will be enhanced over the next five years through using improved scheduling and communications technology to improve its efficiency and reduce response time for users. TransLink will also support the introduction of shared ride services and the potential to accommodate some of the traditional handyDART users on Community Shuttle. Overall, the handyDART fleet will grow from 236 vehicles today to 296 in 2005.

### 4.2.9 Transit Passenger Facilities



**ACTION: Provide safe, convenient and comfortable off-vehicle facilities for passengers to access and use the transit system.**

The provision of bus stops, boarding areas and related facilities, including shelters, is usually the responsibility of member municipalities of the GVRD. Transit exchanges and park and ride facilities are the responsibility of TransLink. Collectively, these facilities are a key part of using the transit system, and their user-friendliness and convenience are important in attracting passengers to the system.

In the period covered by this plan, TransLink will develop warrants and guidelines for the provision of passenger amenities and work with municipalities to begin providing improved “on-street” facilities. Research shows that bus shelters are among the top three features wanted by passengers. The first step would involve researching the experiences of other transit agencies and reviewing these issues with GVRD member municipalities. The implementation of the warrants and boarding area designs will initially emphasize the construction of new shelters on high demand, high volume services.

Transit exchanges are an essential feature of the regional system. Well-designed transfer points and careful scheduling allow passengers to transfer between buses and onto SkyTrain, SeaBus and West Coast Express to complete their journey. The present philosophy of exchanges is to provide minimal facilities since the timed transfer system is intended to minimize passenger waiting, and security concerns have been addressed by reducing the incentive to loiter. This practice will be reviewed. Better-designed transit exchanges would allow people to feel safer and more comfortable using transit.

Park and ride lots play a supportive role in the TransLink transit system. Existing park and ride lots allow suburban customers to use automobiles to directly access high quality transit services such as express bus services, SkyTrain and the West Coast Express. While the downside to the use of park and ride lots is that widespread park and ride may encourage automobile dependency and low-density residential development, they clearly shorten single occupant vehicle trips.

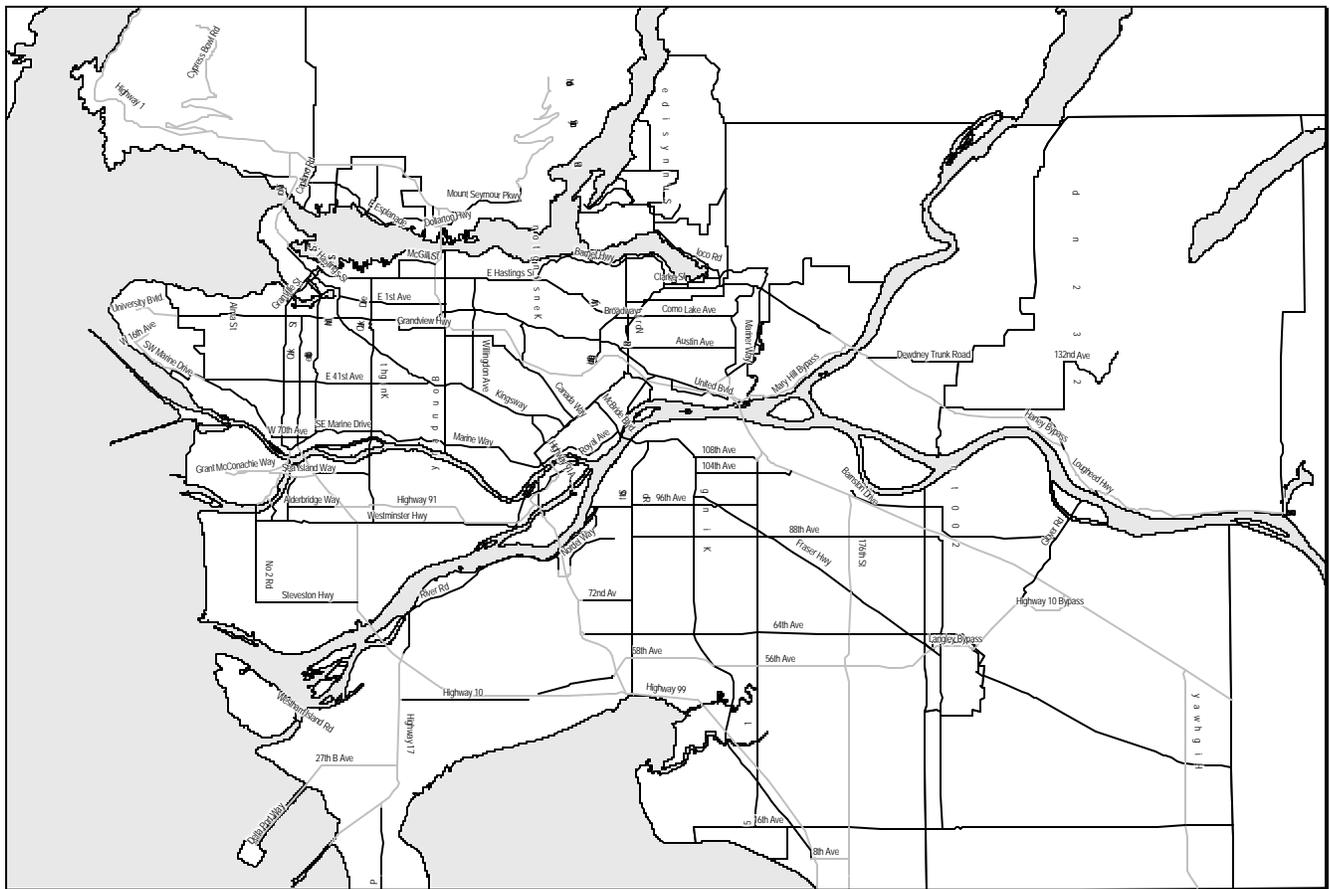
## 4.3 Road and Infrastructure Plan



This section of the plan outlines a strategy in which the Major Road Network and other key transportation infrastructure will be maintained and developed in the next five years. The recommended strategy is designed to ensure that existing assets are maintained and enhanced, and at the same time, provisions are made to address future network needs to meet the demands of a growing region. It should be noted that while the plan identifies at a general level the specific actions and projects to be pursued, these will be subject to periodic review and adjustment over the period of the plan, based on prevailing circumstances.

With respect to roads, the overall policy objective is to operate, maintain and develop the Major Road Network to meet acceptable standards, in a cost-effective manner and in support of regional transportation and growth management goals. Consistent with the 'integrated planning' approach that motivated the creation of TransLink and the Major Road Network, planning for the region's roads will consider its function as a network serving multiple modes and user groups. A concerted effort will be made during the course of the Plan to ensure the application of significant transit priority measures on the Major Road Network and other roads which are used by transit vehicles.

*The Major Road Network*



### 4.3.1 Major Road Network Designation

**ACTION: Maintain the integrity of the Major Road Network by including only roads that meet approved criteria.**

The Major Road Network is established to support regional level transportation demand and provide access to key activity centres in the region.

At present, a road is included in the Major Road Network if it:

1. Provides intra-regional access to predefined regional activity centre(s);  
**and**
2. Carries:
  - Minimum of 70% trips longer than 10 km in the peak hour and peak direction and total peak hour, peak direction traffic volume greater than 800 vehicles per hour, or
  - Minimum of 10 through buses in the peak hour and peak direction, or
  - Minimum of 800 trucks per day;  
**and**
3. Meets an overall check for reasonableness and completeness.

It is recognized that over time the network will need to be reviewed and refined to reflect changing land use and travel patterns and to ensure that it continues to fulfil a regional function. Whether the review should be conducted on a periodic basis (e.g. annually or bi-annually), or be triggered by significant events such as the construction of a major facility or significant changes in land use, will be the subject of further review in the year 2000.

### 4.3.2 Major Road Network Maintenance and Rehabilitation

**ACTION: Implement maintenance standards and cost tracking to ensure that the Major Road Network is maintained to acceptable standards and in a cost-effective manner.**

All roads in the Major Road Network remain under municipal control. Operations, maintenance, rehabilitation and construction are carried out by the municipalities. TransLink's role is to ensure that the Major Road Network is maintained and rehabilitated to acceptable standards and in a cost-effective manner. The funding for the maintenance and rehabilitation of the Major Road Network will increase to a level of \$12,000/lane-km/year and cover the following activities:

- Routine maintenance and operations of pavement, shoulders, drainage, pedestrian facilities, street lighting, traffic signals, road markings and delineation, signage, street cleaning, snow and ice control and vegetation control.
- Rehabilitation (major rebuilding) of existing pavement.
- Rehabilitation of other existing infrastructure such as curbs, shoulders, pedestrian facilities, drainage, street lighting and traffic signal system, etc.

A long term funding administration and performance monitoring arrangement will be developed and implemented to guide the maintenance and rehabilitation of the Major Road Network. It will include the identification of appropriate standards and a cost tracking system. In addition to the routine maintenance and rehabilitation on the Major Road Network, TransLink will also be funding major pavement rehabilitation of below-standard roads devolved from the Province.

## TransLink Strategic Transportation Plan

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Municipalities have also committed to do the same on the below-standard upgraded municipal roads.

### 4.3.3 TransLink Bridges

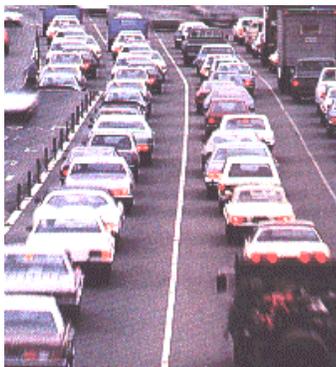


**ACTION: Maintain TransLink-owned structures to acceptable standards and in a cost-effective manner.**

TransLink owns three structures, namely the Knight, Pattullo and Westham Island Bridges. The Knight and Pattullo Bridges are major structures that are key elements of the Major Road Network. Arrangements will be made to ensure the maintenance of these structures is performed in a safe and economic manner.

All three structures are in need of some rehabilitation within the next 5 years. Structural and engineering work will be undertaken starting in 2000 in preparation for the rehabilitation works which will be completed by 2005 at an estimated cost of approximately \$45 million.

### 4.3.4 Road Capital Projects



**ACTION: Improve the efficiency of the Major Road Network by funding annual programs of minor capital projects on the network and maximize the investments by establishing cost-sharing arrangements with municipalities.**

**ACTION: Develop partnerships with municipal, provincial and federal governments and the private sector in the planning, funding and implementation of major capital projects.**

**ACTION: Establish a capital allocation of \$5 million in 2000, rising to \$40 million in 2004, for provision of new major road facilities in partnership with other agencies.**

**ACTION: Act, in consultation with the municipalities, to establish a clear process for assessing environmental and community impacts of major transportation projects.**

Prior to TransLink being established, there was no Major Road Network. As a result, there was no plan identifying future capital needs for the Major Road Network.

In 1999, municipal staff on the Major Roads Technical Advisory Committee started to investigate capital needs. The Major Roads Technical Advisory Committee examined the level of future capital spending and concluded that the total level of capital spending on the "Strategic Road Network", regardless of jurisdiction, should be approximately \$120 million annually. This would include both improvements to the existing Major Road Network, as well as new projects that might be Major Roads or provincial roads.

To reflect a cost-sharing principle in these projects, it was concluded that TransLink should allocate a capital funding envelope of approximately half of the total; therefore a figure of \$60 million is identified. As discussed below, the capital budget will be structured in two components (i.e., minor and major projects).

#### Minor Capital Projects

A main focus of the capital program will be to fund an on-going program of minor capital projects aimed at managing and improving the efficiency of the

## TransLink Strategic Transportation Plan

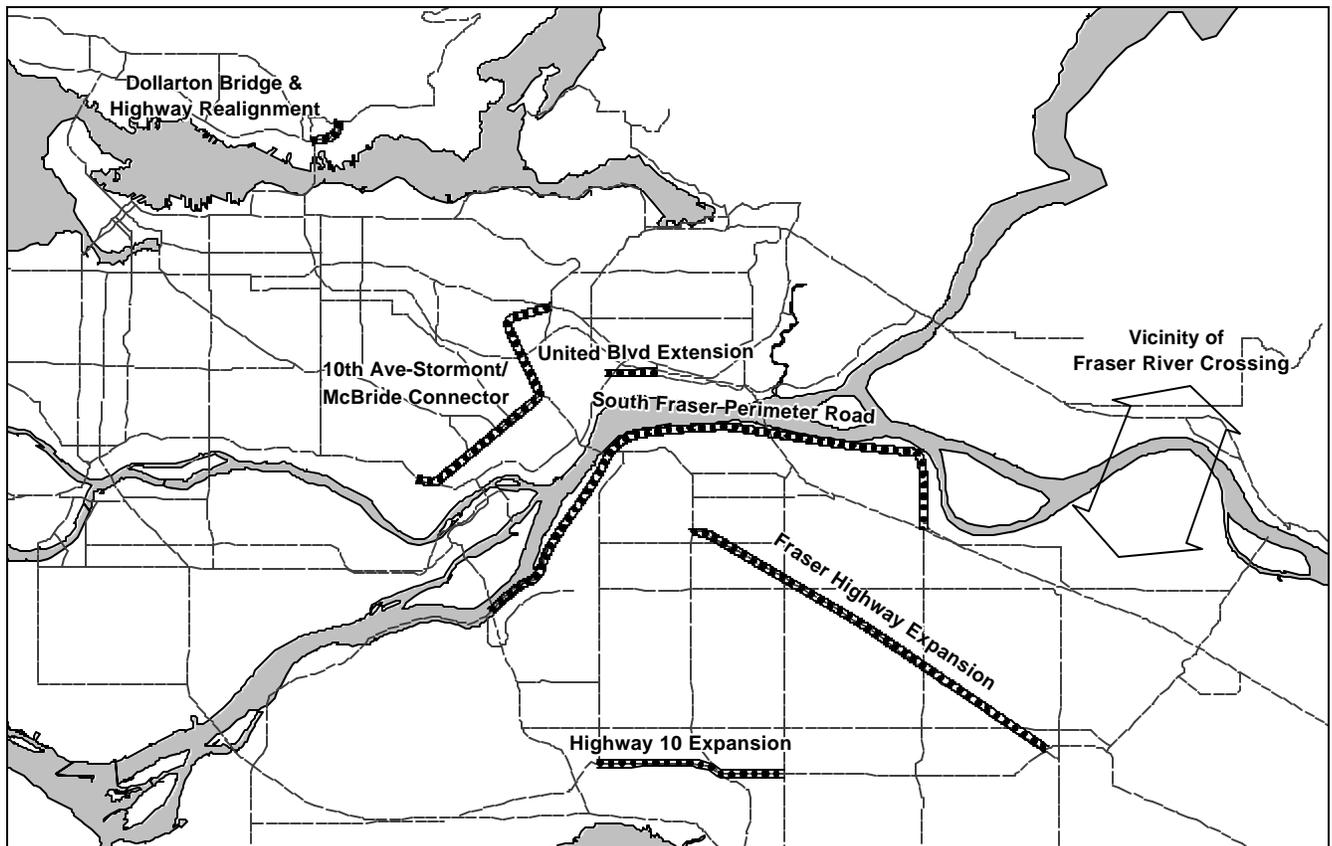
existing network, such as intersection, geometric, safety and network continuity improvements, etc. A carefully planned and co-ordinated program of small projects could collectively defer or minimize the need for more costly constructions of large-scale new facilities which often have more social and environmental impacts and might or might not support regional land use objectives.

An initial annual TransLink budget of \$10 million will be allocated in the year 2000, which will incrementally increase to \$20 million by 2005. The Major Road Network Minor Capital Program will be administered using a 50/50 municipal and TransLink cost-sharing arrangement. Each municipality will be eligible for project cost-sharing for up to an amount based on a pre-determined formula. The Major Road Network Minor Capital Program will be implemented based on a rolling 5-year planning cycle. A project evaluation or “business case” process will be developed and implemented in 2000 to determine the eligibility and priorities of the projects.

### Major Capital Projects

TransLink will pursue the establishment of a partnership with the Province so that a “Strategic Road Network”, comprised of the Major Road Network and provincial facilities, can be planned as one seamless system of ‘important’ or ‘strategic’ roads which serves the region. This will provide the needed framework to advance much needed network-level road improvements and system initiatives such as regional signal co-ordination and Intelligent Transportation Systems applications.

### Potential Major Capital Projects



## **TransLink Strategic Transportation Plan**

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A review of existing agency plans was conducted to identify candidate projects which might have a strategic role in serving the transportation demand of the region. A number of projects appear to have general support by various agencies as indicated by their planning documents (Livable Region Strategic Plan, Transport 2021, Lower Mainland Highway Improvement Outlook, municipal and Gateway Council plans, etc.).

TransLink will seek partnerships with the Province and others in further examination of the following projects:

- South Fraser Perimeter Road
- North Fraser Perimeter Road (United Boulevard extension)
- Fraser River Crossing (which will replace the Albion Ferry service)
- Stormont-McBride Connector
- Fraser Highway widening
- Highway 10 widening
- Dollarton Bridge and Highway realignment

Further analysis and a full scale Multiple Account Evaluation are needed to fully weigh the benefits against the potential impacts of these projects including environmental and social impacts, support for regional land use objectives, impact on transit, and financial implications. The initial planning work will be conducted in the year 2000, and pending the findings of this work, an implementation plan will then be developed for the recommended projects.

The plan includes the provision of an annual funding envelope, starting with \$5 million in 2000 and increasing to a funding level of \$40 million by 2005, to start to implement selected strategic major road projects. By March 2001, TransLink will work with municipalities, the GVRD, the Province and federal agencies to identify a process for establishing priorities for major capital projects. This will include identifying broader assessment of community, environmental and other impacts. However, the Plan recognizes that TransLink is not a direct operator of major roads and, to some extent, the establishment of priorities will be significantly dependent on others and their funding priorities. Nonetheless, TransLink will seek to clarify the public process for determining the roads capital program.

The process for dealing with major road capital is illustrative of TransLink's role and function as the convenor of partnerships and its ability to create a forum between government and non-government entities to deal with transportation issues.

It should be noted that many of the candidate projects may lend themselves to tolling or other methods of cost recovery (e.g. South Fraser Perimeter Road, Fraser River Crossing).

Many factors will determine whether a major road capital project can proceed, including local acceptance, the availability of senior government cost-sharing, and major development plans. The proposed annual allocation is not associated with any particular project, and should be accumulated until a feasible and desirable project is identified.

### 4.3.5 Transit Priority

**ACTION:** Work with municipalities to develop a comprehensive program for providing priority to TransLink buses on the Major Road Network.

The public consultation process identified that improved bus speed is a top priority. While this can be addressed to some degree with limited stop bus routes, an aggressive transit priority program is needed to give bus greater “status” on the region’s roads.

Growing traffic congestion increases transit travel time and reduces reliability. This adversely affects transit competitiveness and increases TransLink’s cost of providing service. Since 1990, it is estimate that growing congestion has added an estimated \$15 million in annual operating costs to TransLink’s bus services. Congestion delay not only increases operating costs and vehicle requirements in maintaining existing service levels, it precludes the deployment of these resources to increase and improve service.

In many cases, improving transit speeds and reliability represents a least-cost solution to service improvements. Some priority measures (such as bus “bulges”) are simple, low-cost changes that be done relatively quickly. Other measures (such as bus lanes and bus friendly signals) may require more resources and time to implement.

Rail is popular, in part, because its segregation from traffic offers freedom from traffic congestion. Insofar as transit priority measures can mimic this avoidance of congestion, they represent a low-cost way of capturing some of the same benefits of rail.

TransLink will work with municipalities early in the Plan to develop a program that identifies priority measures for implementing transit priority on the Major Road Network and other municipal roads used by transit.

### 4.3.6 Albion Ferry



**ACTION:** Operate the Albion Ferry service in an efficient and cost-effective manner and develop a strategy to implement a fixed link crossing.

The Albion Ferry provides the only crossing of the Fraser River between the Port Mann Bridge and the Mission Bridge in Abbotsford. The number of vehicles using the ferry has been increasing steadily. In 1998, the ferry carried 1.4 million vehicles. The ferry is currently operating at its vehicle carrying capacity during the peak periods.

A permanent and high standard connection between the areas is needed to accommodate the anticipated travel between the North and South Fraser. A strategy to implement a fixed link crossing in the medium term (i.e. 5 to 10 years) will be developed over the next two years. In the interim period, until a fixed link crossing is in place, TransLink will continue to provide the existing ferry service in an efficient and cost-effective manner. To accommodate the anticipated ridership growth without adding to the fleet, a number of short-term, low cost initiatives such as schedule adjustment, carpool lanes and better bus access will be explored.

### 4.3.7 Cycling Infrastructure



**ACTION:** Implement a program for the development of cycling infrastructure and supporting facilities.

The Plan includes financial provision to allow a program for the development of a regional cycling network of local and regional facilities, modal interchange facilities (e.g., bike lockers and racks) and other cycling facilities.

### 4.3.8 Intelligent Transportation Systems Implementation



**ACTION:** Develop a vision and strategic plan for Intelligent Transportation Systems in the region in 2000, and implement initiatives based on that plan in subsequent years.

The detailed nature and arrangements for broad Intelligent Transportation Systems implementation are uncertain at this time. Provision has already been made for automatic vehicle location and signal integration for the Richmond B-Line, and for electronic fareboxes. Existing funding can provide for a trial implementation of automatic passenger counters.

Other expenditures in 2000 will be primarily operating costs associated with consultant development of an intelligent transportation systems vision and implementation strategy for the region.

A provision for intelligent transportation systems of approximately \$2 million per year has been included in the projected capital expenditures, and some allowance made for operating costs. Alternative private sector capital funding mechanisms may also be applicable to intelligent transportation systems. A more definitive picture of costs and benefits can be provided after initial studies are complete.

One key factor to achieving increased operating efficiencies in all TransLink services and infrastructure is much better information regarding transit ridership, and travel times, patterns and usage by all modes, including goods vehicles. In order to optimize investment in transportation, better data is needed so that “smarter” decisions can be made. A particular emphasis will be made to improve the gathering and evaluation of transit data that has suffered from under-investment in recent years. It is proposed to deploy enhanced monitoring systems and technologies that aid in the process of realizing economies in the system and provide better customer information. This will start with the manual collection of data in 2000 and by 2005 it is planned to have deployed several systems.

### 4.4 The Management Strategy

#### 4.4.1 Demand Management

##### i) Transportation Pricing and Revenue Generation

**ACTION:** Move toward road pricing, with tolls on new facilities to recover cost as permitted under the Greater Vancouver Transportation Authority Act, and a request to the Province for authority for system tolling to manage use.

**ACTION:** Implement an annual vehicle charge, with the structure of the charge – e.g. flat, mileage based, pollution based – with further public consultation, as a move toward transportation pricing and as part of the Financial Plan.

**ACTION:** Implement a parking tax, established within an overall parking policy, as part of a transportation pricing program to limit the growth of single occupant vehicle travel and as part of the Financial Plan.

**ACTION:** Ensure that transit users pay a fare that reflects the benefit they receive from the transit system and overall recovers at least 50% of the system operating cost, while maintaining fares at a level which will promote use and a fare structure which will maintain affordability for the economically disadvantaged.

**ACTION:** Develop a fare strategy by the end of 2001, including a technology plan.

**ACTION:** Develop a comprehensive program to minimize transit fare evasion and maximizes fare compliance and revenues while maintaining system operating efficiency.

**ACTION:** Consider the application of benefiting area charges in the development of new transportation facilities.

Pricing use of the transportation system in a way that will limit the growth in single occupant vehicle travel is a powerful tool for overall management of the transportation system. It also provides revenue for the development and operation of the system. Achieving the transportation improvements envisaged in this transportation plan will require significant capital and operating expenditures, and will require additional revenues.

To the maximum extent practical and equitable, TransLink should raise the revenues required in ways that shape transportation demand. From this perspective, the “best” sources of revenues are those directly associated with use of the transportation system, rather than charges that are separated in time (annual charges). Tolls and parking charges are superior to annual charges. In many circumstances, tolls may also make road capacity available for goods movement by reducing auto utilization of the tolled facility, and providing time savings through reduced congestion which will justify the tolls paid by trucks and other road users.

The opinion research and consultation revealed a public preference for the implementation of system tolling over a flat vehicle charge. Such an approach to

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pricing infrastructure, raising revenues and managing peak period road use is more effective than an annual vehicle charge.

The public acceptance of such an approach to transportation financing will likely increase if concomitant reductions in non-transport related revenue sources coincides with its introduction (e.g. expenditure remaining equal, the measure is revenue neutral). It will also increase if such pricing is coordinated with incentives for transportation alternatives (e.g. combined transit pass/car insurance product, etc.).

At present, TransLink does not have the authority to 'system toll' and will need to work with the Provincial government to develop the necessary amendments to the GVTA legislation.

Fares are of critical importance to TransLink as a major determinant of transit use and TransLink's single largest source of revenue. Within the overall system, there are broad differences in cost recovery. Individual bus routes can vary from close to 100% to less than 20%, however the bus system as a whole is around 48% today. SkyTrain is higher, approaching 80% of operating costs. Recovery on the West Coast Express is less than 40%. Currently, transit recovers approximately 50% of operating cost through fares, and the Plan establishes this as a minimum target for fare recovery (these ratios are important indicators in the capital market).

TransLink will develop an overall fare strategy in 2000/01 that also incorporates a fare collection technology plan. This strategy will address concerns regarding the "coarseness" of the zone system and will seek to more directly relate fares to the cost and benefit of the service provided and the trips that are taken. Significant revisions to the fare structure may have to await the introduction of "smart card" technology. This technology offers the potential for a more flexible fare structure, distance pricing, variable charges by time of day, and user incentives.

The fare strategy will also examine the potential for innovative fare products. One potential innovation is a "U-Pass," or a "universal" pass program. U-Pass programs offer the potential to address the transit needs of major institutions and employers by providing improved transit services and a range of alternative services. These are combined with bulk transit pass sales and transportation demand management measures, such as parking fees, to reduce the cost of the passes. TransLink is currently investigating the feasibility of the U-Pass system with the University of British Columbia. The improved accessibility provided by transit and other alternatives, combined with greater incentives to leave the car at home, can significantly reduce single occupant vehicle trips and increase transit ridership.

The perception of fare evasion was a common issue in the Strategic Transportation Plan consultation process, particularly in relation to SkyTrain. Fare evasion raises concerns about equity for paying passengers and the efficient use of public resources, and is an issue that transit systems globally must contend with.

While monitoring of fare evasion on the TransLink system has shown that it is lower than many perceive it to be, it is still a significant issue and steps must be taken to minimize losses and also to demonstrate that these steps are effective.

A Fare Compliance Cost-Benefit study is currently underway that will identify cost-effective measures of maximizing fare compliance, specifically in 'proof of

payment zones' (e.g. SkyTrain and Richmond B-Line). Examples of potential measures include the possible introduction of turnstiles at SkyTrain stations, increased enforcement by ticket checkers and the use of 'SmartCards' that automatically debit the appropriate fare when the transit system is accessed. The automatic fareboxes, scheduled for installation beginning 2000 on all TransLink buses, is one immediate measure that will increase fare compliance and minimize driver-passenger disputes.

In many cases, new rail transit systems and major roads bring disproportionate benefits to adjacent property owners. The Greater Vancouver Transportation Authority Act allows for benefitting area charges, and the application of these charges should be considered on major new facilities. There are, however, many challenges that exist in implementing a benefitting area charge. The practicality and equity implications of such a charge will need to be evaluated before serious consideration is given to its use.

In order to fund expanded transportation services, TransLink will require additional revenue in 2000 and succeeding years. While transportation pricing is central to achieving the Livable Region Strategic Plan objectives, there is limited ability to apply pricing fully at this point. TransLink should move quickly to implement an approach which will both fund the immediate needs of the transportation system and provide the ability to price choices to influence demand in future. The actions above implement this direction.

### ii) Parking Management

**ACTION:** As matter of priority, establish through the Regional Administrators Advisory Committee (RAAC) a process to develop Regional Parking Strategy by the end of 2001.

The supply, price and regulation of parking are key determinants of individual mode choice. Since the choice of whether to drive, ride a motorcycle, take transit or a taxi, walk or cycle is based on the relative attractiveness of these various modes, the supply and price of parking influence the decision to drive or ride a motorcycle.

Parking management is a central element in the Transportation Demand Management strategy of the Livable Region Strategic Plan and Transport 2021. These plans set a target for various TDM measures to produce a 10% reduction in peak hour vehicle trips by 2021 and a 25% increase in transit ridership. Parking management is central to achieving this, however little action has been taken in this area to date.

Transport 2021 recommended that development of a regional parking strategy should start by 1994. The region is therefore 5 years behind projected implementation for this critical component of the transportation system.

The transit investment strategy of this Plan is based on the assumption that TransLink and member municipalities will take steps to manage parking. TransLink, in partnership with the municipalities, and in consultation with community and business interests, will work to develop a Draft Regional Parking Plan to manage the supply, pricing and regulation of parking by the fall of 2001.



### iii) Alternatives to the Single Occupant Vehicle



**ACTION:** Expand vanpool and carpool programs, encourage the development of shared use vehicles, and promote these alternatives and teleworking as alternatives to the single occupant vehicle.

There are many non-traditional forms of transportation services that offer a broader range of consumer choice and can be used to reduce dependence on single occupant vehicles. In 2000, TransLink will work to develop a comprehensive plan for these choices that can be deployed by TransLink and its partners in a staged manner over the following four years. Where appropriate, pilot projects may be introduced in 2000. Program components will include:

1. **Ridesharing:** Expand existing carpool, vanpool and ridematching programs; and examine current program structure. Assess opportunities to gain efficiencies and, where possible, deliver more cost-effective service through a re-organization of major program components.
2. **Advocacy and Education:** Expand existing Employer Services program (Go Green Choices); pursue legislative and policy changes that would support the growth of the rideshare market and other preferred modes; and integrate all elements of the Trip Reduction program into a brand identity package.
3. **Shared Vehicles:** Provide support for the development and use of shared-use vehicles in the region.
4. **'Virtual Offices':** Assess the potential for expansion of teleworking (telecommuting) and related forms of technologically-driven communications forums to contribute to a reduction in work-related single occupant vehicle trips.

#### 4.4.2 Cycling

**ACTION:** Work with municipalities and the Province to provide a range of cycling programs, services and infrastructure that increase the use of cycling as a mode of transport for all trip purposes.

The bicycle has the potential to replace many local and some regional trips for work, shopping, social and recreational purposes. Compared to some other cities, cycling's potential in the GVRD appears to be relatively untapped. While some progress on improving cycling conditions has been made in recent years, the regional transportation system is not well adapted to cycling. Roads and bridges do not accommodate cyclists very well, end-of-trip facilities (such as racks, bike lockers and change rooms) are not common, fear of traffic is a deterrent to many and there are few educational and promotional programs to encourage people to cycle safely.

The first five years of TransLink's cycling strategy will define a regional role in cycling that complements the efforts of the local and provincial governments and will focus on priority infrastructure, services and programs that will reduce car trips in the region. A significant amount of work has already been completed in the process of developing a Comprehensive Regional Bike Plan. This plan is being prepared in consultation with municipal staff and will include the following directions:

1. In partnership with municipalities and the Province, develop and fund a comprehensive network of local and regional bicycle routes.

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2. Develop and implement cycling programs and communications initiatives (e.g. awareness, education, safety, skills training) that promote cycling as transportation.
3. Make all transit services bicycle accessible by:
  - providing bike racks on all buses in the region as early as possible;
  - expanding rack and secure bike locker facilities at potential key transit nodes; and
  - working towards accommodating bikes on SkyTrain.

### 4.4.3 Walking

**ACTION: Construct pedestrian-friendly transit interchanges.**

**ACTION: Work with municipalities to establish design criteria for major road capital programs to ensure that full attention is paid to pedestrian amenity.**

“Walkability” is the cornerstone to a region’s efficient ground transportation. Almost all trips begin and end with walking. Walking remains the cheapest form of transport for able-bodied people. As with cycling, walking has good potential to play a more important role in the future for a variety of trip purposes, including school, work, shopping and recreation. About one-quarter of all trips are less than 1.5 km long, a comfortable walking distance for many people. A walkable community provides the most affordable transportation system any community can attain. Land use planning is the most significant determinant of walking trips, but TransLink can play a direct role through design of pedestrian-friendly transit interchanges, and through ensuring that attention is paid to pedestrian amenity in the design of Major Road Network capital projects.

### 4.4.4 Major Development Review

**ACTION: Give priority to finalizing the process whereby TransLink reviews Official Community Plan amendments and “major development proposals.”**

**ACTION: Work with municipalities to establish criteria for developments which support the Livable Region Strategic Plan from a transportation perspective and seek the cooperation of municipalities through their development approval processes to ensure development supports the Strategic Transportation Plan.**

Official Community Plan amendments and major development proposals, especially those outside town centres, can have a significant impact on the ability of the transportation system to meet Livable Region Strategic Plan objectives. The Greater Vancouver Transportation Authority Act states that TransLink “...review and advise the Greater Vancouver Regional District, the municipalities and the government regarding the implications to the regional transportation system of ... major development proposals and provincial highway infrastructure plans in the transportation service region”. For this purpose, TransLink will give priority to developing processes and reaching agreement with municipalities on the criteria for evaluating Official Community Plan amendments and major development proposal.

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Some work toward establishing criteria for major development proposals has been undertaken, but this must be completed and a review process established. This is an important TransLink function that requires attention.

More generally, municipalities are frequently presented with rezoning proposals outside their primary development areas. These developments can be difficult to reach by walking or cycling, or serve with transit. Some municipalities have suggested that it would be helpful for TransLink to propose criteria for evaluation of these developments for use by municipalities in their zoning process.

This is a complex issue, involving many interests. It will be addressed in the review of the Livable Region Strategic Plan and long range transportation plan which will begin in 2001. TransLink will allocate time to this issue, in preparation for this review.

### **4.4.5 Customer Focus**

#### **i) Market and Customer Satisfaction Research**

**ACTION: Conduct market research to determine customer needs prior to the implementation of new transit and alternative transportation services and evaluate customer satisfaction after the services are in place.**

New transit services and vanpool, carpool, and other alternatives must meet customer needs and preferences if they are to be effective and economical. Market research can help to determine what type of service best meets customer needs, what equipment features will be most attractive, and what fares or fees can be charged. Customer satisfaction research will allow assessment of service decisions and guide future service changes. TransLink will conduct this research on all new services and will conduct regular customer satisfaction surveys.

#### **ii) Plan for Safety and Security**

**ACTION: Pursue improvements to personal safety and security in and on transit services through the application of Crime Prevention Through Environmental Design Principles and the evaluation of the cost-benefit of barrier systems and additional staffing at key locations.**

**ACTION: Improve road safety by working with municipalities to maximize safety through the design and management of transportation infrastructure and services and through partnerships with public and private organizations.**

There are two aspects of “safety” that TransLink must address. The first relates to personal safety (i.e. fear of assault) while the second relates to accident safety.

With respect to personal safety, transit users have identified safety and security as significant issues at transit exchanges and on the transit system. While, by all reasonable measures, the transit system is safe, improvements can be made, and user perception may be an important factor in promoting transit use.

Major studies are underway with the Province’s Rapid Transit Project Office to address the benefits of barrier systems, station design, and the contribution of retail uses to a perception of security in SkyTrain. There is merit in continuing review of existing SkyTrain facilities and bus exchanges, and some capital

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expenditure for improvements in the existing SkyTrain system may be warranted. TransLink staff will undertake the review of the existing system.

With regard to traffic accidents, TransLink has a responsibility to work with municipalities to ensure the design and management of the road system improves public safety for all transportation system users. Every year in the GVRD, approximately 90 people are killed and 16,700 are injured in motor vehicle accidents. In particular, “vulnerable road users” such as pedestrians and cyclist bear a disproportionate impact of these accidents. Public awareness, improved infrastructure and service design and increased use of alternative modes can all help to reduce accidents.

TransLink needs to monitor and evaluate safety on its transportation network and feed the evaluation of this information into the planning and management of the system.

There is also much that can be done to gain synergies with other agencies and organizations doing work to improve safety. TransLink can work with government agencies such as ICBC and the Ministry of Transportation and Highways, as well as road user interests (e.g. pedestrian, cycling, motorcycling and auto groups).

In particular, TransLink will need to establish a strong working relationship with ICBC to measure transportation safety and develop protocol for addressing safety issues of mutual responsibility.

### iii) Customer Information

**ACTION: Support the shift to preferred transportation options through improved access to accurate, timely and user-friendly service information.**

Accurate, easily accessible, and ultimately real time information is an important component in achieving full utilization of all services. For maximum benefit, information must be made available wherever travel decisions are made: at home, schools and malls, on the street, at a station or stop, and on-board a vehicle. Real time information permits informed customer decision-making and provides users with a greater sense of control. An internet based system will be one of the main foundations for improved access to information.

TransLink will implement significant improvements to access schedule information through the internet and will introduce real time information on the Richmond B-Line in 2000.

### iv) Public Consultation

**ACTION: Provide information to the public and seek public input broadly on major decisions, both in a variety of ways.**

TransLink’s decisions and programs have a significant impact on all members of the public – everyone uses the transportation system, the public pays the cost, and most people are impacted by how others use the system. The Greater Vancouver Transportation Authority Act mandates consultation with interest groups on a variety of TransLink decisions.

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TransLink will undertake consultation in a variety of ways – through traditional public meetings, by internet information dissemination and input, by hotline input, by formal public surveys, stakeholder consultation and workshops, and “advertising” with informal surveys. TransLink will seek to provide full information and gain maximum input, and document public positions in any consultation process.

### **v) Marketing**

**ACTION: Develop a comprehensive marketing and information program with an emphasis on reducing single occupant vehicle use and increasing transit ridership and revenues.**

**ACTION: Develop a strategy to communicate to the public the full range of TransLink’s mandate/responsibilities with regard to regional transportation.**

The successful implementation of the plan will depend in part on how the expanded services are marketed and information is provided to the travelling public. New services should have a demonstrated market and provide the features necessary to attract new customers. All services will be reviewed to determine an appropriate level of marketing support, and all marketing programs will include specific ridership and customer awareness objectives and evaluation measures. Emphasis will be put on marketing specific branded services by sub-region, and on marketing alternative transportation services.

TransLink’s public communications and advertising will identify the overall role of TransLink in preserving the livability of the region through its transportation programs, providing a context for the full range of TransLink services.

Public perception of TransLink’s identity as a new regional transportation authority is most strongly associated with its transit function, due in large part to transit’s high visibility and consistent media coverage portraying it as a “transit company.” There is little public awareness of TransLink’s full range of responsibilities including the building and maintaining of the Major Road Network, cycling initiatives, Transportation Demand Management programs and AirCare. The Strategic Plan opinion poll conducted in March 2000 indicated that while 83% of the region’s residents are aware of TransLink, only 4% were aware of its role with major roads and bridges.

The region’s residents must be aware of TransLink mandate, powers and responsibilities so that the public can be better informed about, and engaged in, transportation issues and decision-making.

### **vi) Specialized Transit Markets**

**ACTION: Identify the potential for ‘premium fare products’ that offer greater comfort and convenience to new markets of transit passengers.**

In some markets, it is difficult for a standard transit service to compete with the convenience and comfort offered by the private automobile. However, there is some indication that some car drivers may be willing to pay a ‘premium fare’ for bus or ferry services that offer amenities such as guaranteed seating, laptop plug-ins, air conditioning and on-board services, for example. TransLink will investigate the potential for such services and, where viable, facilitate their implementation.

### 4.4.6 Management of the Major Road Network

**ACTION:** Give priority to transit, goods movement and high occupancy vehicles ahead of single occupant vehicles and develop a regional road use priority plan with municipalities by the end of 2001.

**ACTION:** Pursue municipal support for early implementation of expanded transit priority measures on the region's road system to provide attractive, faster, more reliable and safer transit services.

**ACTION:** Achieve co-ordination of network signal operation to facilitate regional movement needs.

The Major Road Network is the primary element of the regional transportation system. It provides the infrastructure for goods movement, buses, as well as the automobile, motorcycles and bicycles. Management of the Major Road Network will have a substantial impact on the effectiveness of the transportation system.

This management plan supports the allocation of road use priorities and/or capacity between buses, vanpools and carpools, commercial vehicles, automobiles and motorcycles to make best use of the transportation system. More broadly, there is merit in considering the concept of accommodating High Priority Vehicles such as trucks, taxis, or airport traffic, in specific lanes or facilities, separately or in conjunction with High Occupancy Vehicles.

TransLink will work with municipalities to achieve early implementation of transit priority projects. Currently, there are only 25 kilometres of bus and high occupancy vehicle lanes and 9 bus-activated traffic signals in place in the TransLink service area. In this area, TransLink is well behind almost all other major cities. Today, most of the existing transit priority facilities are on Provincial highways, with relatively few measures on municipal roads where most of the buses operate. To increase the attractiveness of bus services and reduce operating costs and ensure full utilization of additional transit services, substantial expansion of transit priority measures is required on roads throughout the Greater Vancouver region. The introduction of transit priorities can involve significant local tradeoffs and will require the full involvement and co-operation of municipalities.

More broadly, TransLink will pursue, with municipalities, a comprehensive regional road use priority plan with a target completion date of late 2001 to identify the infrastructure requirements and policies needed to support giving road use priority to selected users. The plan will identify operational policies (vehicle occupancy, vehicle type, time of day, charges if any, etc), project types and locations, and implementation timing. The analysis will take into consideration factors such as actual road space utilization, emissions, safety, and user charges.

The Major Road Network provides an opportunity to achieve system-wide improvements in traffic operation. Traffic signal co-ordination on the regional network is an important first step that is both cost-effective and could be implemented relatively easily. Major user benefits include reduced travel delay, vehicular emissions, fuel consumption, and mechanical wear. Signal co-ordination could increase intersection capacity without expensive physical expansions.

TransLink will work with the municipalities to develop a plan to integrate differing municipal signal systems regionally for inter-municipal co-ordination and

standardization. Phased implementation of plan components will occur starting after 2001, possibly in conjunction with other potential Intelligent Transportation Systems applications within an overall regional Intelligent Transportation Systems framework.

### **4.4.7 Technology Applications**

**ACTION: Plan and implement Intelligent Transportation Systems where there is a demonstrated increase in efficiency, safety, productivity, cost-effectiveness, support for goods movement, accessibility to timely information, or support for alternative modes of transportation; or where Intelligent Transportation Systems provide significant decreases in delays, emissions, and energy use.**

Intelligent Transportation Systems apply the latest technologies and techniques to increase the efficiency and effectiveness of the current transportation system. It consists of a broad range of diverse technologies that enhance transportation system management and control, provide priority for selected users, manage highway incidents to minimize delay and reduce accidents, support data collection and monitoring operations, and disseminate information on the operations of the transportation infrastructure to users.

Physically, Intelligent Transportation Systems range from internet-linked information kiosks and electronic toll collection systems, to real-time transit vehicle management and ultimately, fully automated automobiles travelling on, and interacting with, "smart" roads.

The range of applications is wide. Some aspects of Intelligent Transportation Systems will be applied within a single organization, such as Automatic Passenger Counters and Automatic Vehicle Location in transit. Other applications may be system-wide, and in many cases, common technology can support a range of applications across organizations. There is merit in taking a broad view. TransLink has established an Intelligent Transportation Systems subsidiary to provide a vehicle for cooperative investigation of the benefits of Intelligent Transportation Systems. The participating agencies have agreed to shared funding to develop of an Intelligent Transportation Systems vision and strategy for the region. When the vision and strategy are completed, implementation proposals for components of the system will be brought forward. The vision and strategy should work towards a larger integrated system, where appropriate.

### **4.4.8 Air Quality**

**ACTION: Establish a mechanism to evaluate the impacts of specific TransLink transportation decisions on air quality, linking these to Greater Vancouver Regional District-adopted air quality principles.**

**ACTION: Complete the approved capital expenditure program to upgrade the AirCare stations and test equipment and deliver an enhanced, self-funded, vehicle inspection program that identifies vehicles emitting excessive pollutants and requires effective repairs prior to re-licensing.**

**ACTION: Continue testing and evaluation of bus technology, and consider emissions and potential future regulation on fine particulates as criteria in the selection of engine technologies for the transit system.**

**ACTION: Work with Greater Vancouver Regional District Air Quality staff to support transportation-related air quality programs.**

The maintenance of the current air quality of the region requires that continuing attention be paid to ensuring that the vehicles operating in the region are doing so as efficiently as possible, as well as to programs for reducing vehicle trips and kilometres traveled. During the term of the Plan and for some time beyond, the AirCare technology and program will ensure that vehicle emission control systems are operating correctly. In the longer term, as modern vehicle technologies advance and older vehicles leave the road, the emissions prevention potential of AirCare may be reduced.

The Plan proposes that TransLink follow up on previous Greater Vancouver Regional District recommendations regarding criteria for light trucks and sport utility vehicles in relation to the AirCare II program. It also proposes ensuring a high level of coordination between AirCare and the AirCare On Road Program (ACORP).

While transit vehicles contribute a relatively low proportion of the total emissions in the region, the transit fleet is large. Reduced emissions would be desirable, and TransLink can provide leadership in this area. Evolving technologies such as fuel cells and hybrid engines may offer future benefits. Existing technologies with lower emissions have to date involved tradeoffs in passenger capacity, operating cost, and reliability that, with the exception of the trolley fleet replacement, has made diesel the preferred technology. However, increasing concern about the impact of particulate emission and the development of new regulations in the United States make it necessary that TransLink remain fully involved in the evaluation of new technologies and consider emissions as a criterion in all purchases.

The Greater Vancouver Regional District Air Quality Program includes consideration of vehicle fuels and engine technologies. TransLink will work with program staff to support these efforts.

### **4.4.9 Goods Movement**

**ACTION: Facilitate goods movement on the regional transportation system through selective implementation of road improvements that will benefit goods movement, road priority measures, and implementation of technology.**

**ACTION: Provide a co-ordinating role in the development of supportive policies and infrastructure for goods movement.**

**ACTION: Work towards the definition of a 'Major Commercial Network' that identifies a network of routes for the efficient distribution of goods in the region.**

Commercial vehicle movements, especially in comparison with passenger vehicles on the road network, can be supported in a tangible way on the roadway network. The reduction of congestion delays to goods movement will yield a number of economic, environmental, social and safety benefits.

Little work has been done since the adoption of Transport 2021 in 1993 to explicitly address the needs of goods movement. In 1999, as part of the preparation of this Plan, TransLink has been developing a dialogue with the

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goods movement industry. TransLink will begin to develop specific plans and policies to support goods movement more fully, starting in 2000. The following principles should be considered in the development of an overall approach to goods movement:

1. Maximize use of existing infrastructure through assignment or road priorities, implementation of new technologies, or other enhancements.
2. Invest in new infrastructure with benefits to commercial movements, not primarily increased capacity for single occupancy vehicles.
3. Require commercial users to pay for their proportionate use of new infrastructure where the net results are cost neutral.
4. Preserve goods movement corridors from encroaching and incompatible developments.
5. Explore increased use of rail and waterways for goods movement and enhanced intermodal integration between all goods movement modes.

A regional trucking survey identifying major origins and destinations and travel patterns for trucks is currently being conducted. This information will be used to identify issues and needs for the efficient distribution of goods by truck in the region and will form the basis of policy development for trucking in the region. This information will also help to identify priority projects and management actions necessary to facilitate goods movement by truck.

### **4.4.10 Corporate Management**

#### **i) Financial Policy**

**ACTION: Develop prudent financial policies to ensure TransLink's long term financial health.**

At this juncture, very few financial policies exist to guide the preparation of a financial plan. The legislation stipulates that TransLink cannot budget for a deficit and that a debt limit is to be established and is required to be approved by the GVRD board.

The Strategic Transportation Plan recommends that TransLink establish financial policies. TransLink will over the next year develop a full set of financial policies relating to development, investment and use of reserves, liability management, including debt amortization and non-debt capital funding, debt ratios, and operating cost recoveries.

While formally approved policies are not yet in place, there are certain strategies that are prudent to apply and are consistent with local government practices:

- Retaining a reserve balance that recognizes the uncertainty of revenue sources and other unexpected events.
- Maintaining fare revenues at a minimum fifty percent of operating costs. This is the level recommended by industry and credit rating agencies.
- Creating or maintaining debt capacity and reducing overall costs by amortizing debt over a period which is less than the useful life of the asset being financed.
- Applying revenue sources which are appropriate to the program, and ideally from a financial perspective, are stable, predictable, easily understood and simple to administer.

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A particular requirement of this plan is to recognize the significant SkyTrain investment of \$650 million in 2006.

These strategies and issues have been recognized in the preparation of the model information and derivation of proposed revenue strategies.

### ii) Pursue Operating Efficiencies

**ACTION: Pursue operating efficiencies through investigation of alternative services and service delivery mechanisms and the achievement of internal efficiencies.**

**ACTION: Develop terms of reference for consultant services to review the organization and operations of TransLink and its subsidiary organizations for consideration by the Board.**

TransLink and its subsidiaries expend significant public dollars. These dollars must be spent cost-effectively. While operating efficiencies alone cannot fund the sizeable expenditures required to expand the transportation system, they can contribute to it and must be pursued.

Through its Area Plans and business plans, TransLink will investigate alternative services and service delivery mechanisms and the achievement of internal efficiencies. Consultant services to review TransLink and subsidiary organizations and the application of industry “best practices” will be considered in 2000, and a program reported to the Board.

### iii) Integrated Work Plans and Monitoring

**ACTION: Develop a comprehensive management program that recognizes the interdependence of the actions proposed in this Plan and monitor progress on the Plan and objectives through an annual progress report to the Board.**

**ACTION: Implement comprehensive monitoring and evaluation of the regional transportation system to ensure that it supports broader regional objectives and optimizes future transportation investments.**

**ACTION: Conduct and maintain ongoing route-level performance monitoring and evaluation to ensure the effective and efficient use of transit resources, including trial use of automatic passenger counting technology.**

As the Plan demonstrates, the transportation system is complex. Policy directions may be mutually supportive or conflict. Transportation pricing can support a desired transportation outcome while raising required revenue. Bus technology choices (e.g., diesel vs. alternative fuel buses) may be made primarily on the basis of cost-effective operation, rather than air quality goals. Technology applications in one area may have application elsewhere, and a failure to take a comprehensive view may create future problems.

The various elements of the Plan must work together. If the management program and transportation demand management are not successful, planned transit investments may not be economic. If transit and road improvements cannot meet their objectives, then plans will have to be revisited. Factors such as population growth, economic growth, fuel prices and the impact of e-commerce and technology, for example, can positively or negatively impact the

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implementation of the Plan. TransLink must monitor progress, and be prepared to alter its programs, or even to change direction. That means developing integrated work plans that recognize these interconnections. It means regular monitoring to check our assumptions about how the system works as a whole, and to provide early warning of any issues. It will then be possible to take corrective action.

The success of the plan is dependent upon the municipalities and the Province as well the actions of TransLink and its subsidiaries. TransLink will seek the cooperation of these agencies in the monitoring program. Monitoring will be accomplished through an annual report, informed by an extensive data collection program, to the Board and public as a context for TransLink's service planning and budget development.

Information is a primary tool for planning and managing the regional transportation system. The approach in this plan is to set specific targets that can be measured and monitored. Without information, progress against targets cannot be measured.

Currently, the monitoring of the transportation system is done either through ad-hoc surveys or data collection programs that do not adequately address planning, evaluation and management needs. No formal integration of the data collection activities exist to ensure consistency in regards to time period, design, and acquisition methodologies. A concerted effort can provide synergistic benefits of timely, reliable, and adequate data collection for effective planning, evaluation and management and reduce the costs of data collection.

The expansion in transit services will require improved route-level performance monitoring to ensure that resources are allocated optimally.

Currently, TransLink's route performance monitoring capabilities are insufficient to meet the needs for planning and evaluating services. Today, transit information is only gathered on 0.6% of service provided and is of limited volume and statistical validity.

As part of its deployment of technology, TransLink will build on the results of its recent Automatic Passenger Counter demonstration project and will move towards implementation of an Automatic Passenger Counter system in 2000, with an estimated 10-15% of the bus fleet equipped with counter units by 2001.

These systems use infrared or optical beams to count passengers as they board and alight. The data collected is linked to stops and travel time, and provides detailed information on route performance. The Automatic Passenger Counter system will be designed to integrate with other system monitoring technologies such as the forthcoming electronic fareboxes and the potential implementation of an automatic vehicle location system.

Starting in 2000, TransLink will design a comprehensive monitoring and data collection program for all aspects of the transportation network, and seek partnerships with other agencies to create a regional transportation information plan. Data collection and ongoing analysis to measure performance will be implemented. Resources will be provided to ensure that this essential monitoring and analysis is done in a timely and effective manner.

### ***4.4.11 Federal Participation in Transportation***

**ACTION:** Work with the Greater Vancouver Regional District, municipalities, the Province of BC and other government and non-government agencies to seek a direct federal role in the funding of urban transportation in metropolitan areas.

Increasingly, metropolitan regions are becoming more significant generators of economic activity. Collectively, they comprise a substantial component of many industrialized countries' economies. Most national governments explicitly recognize that the degree to which people, goods and services can move efficiently within metropolitan areas is vital to the national economy and preservation of the environment. Providing directed funding to urban areas to facilitate this is in the national interest.

For example, in the United States, the Intermodal Surface Transportation Efficiency Act (ISTEA) that was implemented in the early 1990s directed funding to metropolitan areas in a coordinated multi-modal manner. This was followed by the TEA21 legislation (Transportation Efficiency Act for the 21<sup>st</sup> Century) that built on the successes of ISTEA.

The situation in the United States contrasts starkly with that in Canada where the Federal government provides little or no funding. This places the region and Canada at a disadvantage because, ultimately, if we are unable to move people, goods and services as effectively as can be done in Puget Sound, Greater Portland or the Bay Area of San Francisco, our economy will suffer.

In addition, during the Strategic Transportation Plan consultation process, the need for the federal government to take some responsibility in this area was a common theme. In particular, there was significant concern regarding the use of the estimated \$300 million per year in fuel taxes collected by the federal government in the GVRD.

It is proposed that while continuing to lobby for directed federal funding of through the Federation of Canadian Municipalities, TransLink also seek to establish a broad coalition of regional stakeholders in support of a specific program of transportation projects in this region.

### 4.5 Financial Plan

**ACTION: Identify suitable revenue sources consistent with the Transportation Pricing and Revenue Generation and strategy to fund the Plan, in a manner that complies with the Corporate Policy – Financial Management strategy.**

At the time that it sought the establishment of the GVTA, the GVRD placed financial considerations as one of its prime objectives. Its specific goal was to establish funding sources that were stable, predictable and appropriate. The financial plan attempts to reflect these regional goals as well as recognizing the multi-modal nature of the transportation system, transparency and, as far as possible, a user-pay approach to financing.

These considerations recognize that there are synergies in benefits to all transportation system users when improvements to individual components of the system are made. For example, car drivers in a corridor may benefit from an improvement to the transit service in that corridor because of reduced congestion. In other instances, an improvement in one part of the region may benefit users who live in another area (e.g. the proposed B-Line buses from Downtown Vancouver to UBC and SFU will benefit North Shore residents who travel by transit and car).

The sum of these factors highlights the need for an integrated approach to funding the system that is neither mode or geographically based.

#### **4.5.1 Transportation is Expensive**

Transportation is expensive in social, financial, and environmental terms. In order to limit social and environmental costs, the proposals set out in this plan are costly in financial terms. Construction of rail transit, purchase of buses and expansion of the major road network requires significant capital expenditures. Transit services do not fully recover operating costs, and requires subsidy. Transportation costs are a significant part of regional expenditures, even with the revenues transferred from the Province and provincial support for rapid transit.

The program proposed in this plan represents a choice to pursue quality of life. It was known at the time that TransLink was established that the increased investment in transportation would need to be funded from the new sources available, including vehicle levies and increased parking fees.

#### **4.5.2 Nature of the Financial Plan**

The financial information included in this section is intended only to provide an overall picture of TransLink finances for the next five years, and demonstrate that the Plan can be financed. The figures presented in this section are not a budget. The Strategic Transportation Plan describes new programs that are not yet fully developed, for which the timing is uncertain, and for which only very preliminary estimates are available.

Many projects will depend on cost sharing with the Province or municipalities, and will not proceed without that support. Accordingly, the figures presented are broad estimates of expenditures and revenues, based on assumptions about the timing of transit and road expenditures and Board approval for fare increases and

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other revenues. Given the potential fluctuations of some revenues sources, e.g. fuel tax revenues which may changes with higher fuel prices, monitoring of both revenues and expenditures will be critically important. Some capital projects may not be implemented within the time frame, and TransLink's annual monitoring program may suggest changes to later program years.

### 4.5.3 Plan Assumptions

TransLink uses a long-range financial model to develop estimates of the financial impact of proposed expansion scenarios and resulting additional funding requirements.

Table 1 presents the key assumptions that drive the Plan financial projections, including those regarding inflation, interest rates, productivity improvements and population growth. The figures for 1999 represent a 9-month fiscal year.

		Table 1: Plan Assumptions							
		Budget	Projected						
		1999	2000	2001	2002	2003	2004	2005	2009
<i>Internal</i>									
Transit Service Hours (millions)		3.48	4.71	4.93	5.24	5.63	5.88	6.21	6.76
Transit ridership (with no fare increases) (millions)		95.3	130.9	137.1	143.9	151.9	157.3	163.9	176.4
Transit Fleet									
	Buses	1,125	1,175	1,293	1,396	1,488	1,568	1,640	1,783
	SkyTrain Cars	150	170	210	210	217	223	247	257
	WCE Trains	6	5	5	6	6	6	6	6
	Custom Vans and Buses	251	243	252	261	275	286	296	351
Capital Expenditures									
	Transit Related (\$ million)		286.1	156.3	187.9	157.7	137.0	129.6	81.2
	Road Related (\$ million)		26.6	31.1	44.7	67.3	83.9	79.4	65.4
	Other Capital (\$ million)		13.4	4.5	5.0	5.6	7.1	7.1	7.3
<i>External</i>									
Inflation			0.9%	1.1%	1.3%	1.5%	1.5%	1.5%	1.5%
Long-Term Borrowing Interest Rates			6.5%						
Productivity Targets			-0.5%	-0.5%	-0.5%	-0.5%	-0.5%	0.0%	0.0%
Population Growth			2.5%	2.5%	1.8%	1.8%	1.8%	1.8%	1.6%

The financial figures presented are planning projections, not budgets. They are based on estimated costs when the plan was prepared (1999). Both the long range model and a three year budget projection will be updated in TransLink's annual reports throughout the Plan period.

### 4.5.4 Financial Outlook

Table 2 below provides a revenue and expenditure summary for the plan period to 2005 assuming volume-based growth in existing revenue sources only. The Appendix document provides a more detailed summary of revenues and expenditures. The figures for 2009 are shown on the following tables for context purposes only.

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	<i>Budget</i>		<i>Annualized</i>		<i>Projected</i>				
	1999	1999	2000	2001	2002	2003	2004	2005	2009
<b>Revenues</b>									
Operating	147.2	203.6	214.2	221.1	230.1	241.0	248.6	257.8	249.0
Taxation	235.4	284.5	289.2	312.8	324.3	339.1	348.6	364.1	394.5
<b>Total Revenues</b>	<b>382.6</b>	<b>488.1</b>	<b>503.4</b>	<b>533.9</b>	<b>554.4</b>	<b>580.1</b>	<b>597.2</b>	<b>621.9</b>	<b>643.5</b>
<b>Costs</b>									
Operating Costs	312.8	430.4	453.2	483.9	519.4	551.6	576.6	611.7	671.2
Debt Servicing Costs	60.2	76.3	91.2	114.9	141.6	163.7	181.4	202.7	335.8
<b>Total Costs</b>	<b>373.0</b>	<b>506.7</b>	<b>544.4</b>	<b>598.8</b>	<b>661.0</b>	<b>715.3</b>	<b>758.0</b>	<b>814.4</b>	<b>1007.0</b>
<b>Surplus/(Deficit)</b>	<b>9.6</b>	<b>(18.6)</b>	<b>(40.9)</b>	<b>(64.8)</b>	<b>(106.6)</b>	<b>(135.2)</b>	<b>(160.8)</b>	<b>(192.5)</b>	<b>(363.4)</b>

As outlined above, expenditures increase from \$373 million in 1999 (9 month fiscal year) to \$814 million in 2005. Without any new revenue measures the 2005 annual deficit is \$192.5 million.

The 2005 deficit in the Plan compares to a projected deficit of \$106 million in the mid-point scenario. However the mid-point projection assumed a 5% fare increase in 2000 and fare increases at inflation from 2002 onward. If this is removed, the mid-point 2005 annual deficit is approximately \$133 million. The major reasons for the difference in the projections are increased transit service levels and \$330 million in roads and bridges capital (not anticipated in the mid-point scenario).

### 4.5.5 Revenue

#### i) Existing Revenue Sources

TransLink's existing revenue sources are derived from:

- transit fares;
- residential and commercial property taxes;
- parking sales taxes;
- AirCare test fees;
- levies on BC Hydro residential electricity accounts; and
- gasoline taxes.

There is little potential to adjust most of these revenue sources:

- The AirCare fees are limited in legislation to the amount needed to recover the emission testing program and administration costs.
- The power levy is limited to the current \$1.90 charge per month per account.
- The gasoline taxes are limited to the amounts specified in legislation.
- The parking tax is a transfer of the Provincial 7% sales tax and is fixed.

Within existing revenue sources, property taxes and transit fares can be increased to fund TransLink programs. Property tax is unrelated to transportation use, and would not meet TransLink objectives for transportation pricing. Regional direction is that "transportation should pay for transportation", and TransLink's

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Board has stated that property tax should not be used to fund transportation expenditures beyond present levels.

### **ii) Potential New Fees and Charges**

In addition to a possible increase in transit fares, TransLink has the power to introduce the following:

- cost recovery tolls on improvements to parts of the Major Road Network
- charges on any owner or operator of a motor vehicle in the region, (charges can be variable or different by specified class) as of October, 2001
- a tax on non-residential parking lots by area and/or number of spaces
- an additional local ad valorem tax of up to 21% of parking fees (as of October 2001 if the full agreement with the Province on rapid transit cost sharing is implemented in legislation)
- taxes on properties within specified zones that benefit from nearby transportation stations or facilities that TransLink constructs or funds.

Of these potential revenue sources, only vehicle charges can be easily implemented in the short-term. Tolls and taxes on specific properties that benefit from projects may be useful for specific projects and will be considered, but may not be relevant within the Plan period given the time frame for major new initiatives. A charge on non-residential parking stalls/parking area where parking is provided free appears to be difficult to implement due to the structure of the legislation.

The parking ad valorem tax, if implemented, would have a significantly different impact across the region and would require careful introduction, but may have some early potential. Further work on parking charges is planned, which may lead to proposals for legislative amendments that will make a combination of an ad valorem charge and a per stall charge more feasible as a region-wide tool.

### **iii) Revenue Strategy**

As indicated above, the potential revenue sources available to fund the increased expenditures in transportation are:

- Vehicle Charges
- Parking Taxes
- Transit fares
- Tolling and benefiting property charges for any major capital projects which are suitable and are developed with the Plan time frame.

A revenue strategy should target both car and transit users. All of the above revenue sources are appropriate to fund the aspects of the program proposed.

A vehicle levy, in particular a distance-based charge, would begin to address the congestion and other problems caused by failing to signal vehicle operators the full costs of their use of the transportation system. An increase in parking tax would complement the motor vehicle charge by targeting commuter traffic and travel to high volume, congested locations. Both motor vehicle charges and parking taxes will be more readily justified with the existence of more attractive transit alternative proposed in the plan.

A transit fare increase is appropriate. The last overall transit fare increase took place in 1993, and adjustments to the fare structure were made in 1997. Even

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with these adjustments, transit fares in the region are comparable to or below those in other major cities.

Substantial improvements in transit have and are being provided in this Plan. The Vancouver Regional Transit Commission, previously responsible for transit operations in the region, had concluded that a fare increase would be required in 2000, and it is fair to say that a fare increase is required to recognize transit improvements that are already committed and underway. A fare increase today relates as much or more to recovering cost increases for expanded service, which has already been implemented, rather than funding future service increases.

### iv) Revenue Proposal

In order to meet the revenue requirements for the proposed program in the plan, the following additional revenue measures are proposed:

- Transit fares – increasing transit fares by the equivalent of 25 cents on a single zone fare (currently \$1.50) in June 2000 and again in January 2003. Similar increases would be made to other fares.
- Vehicles charges - introducing a charge on motor vehicles averaging \$75 per car, with the structure of the charge to be determine after public consultation, effective October 2001, increasing at 5% per year after 2002.
- Parking taxes – applying an additional local parking ad valorem tax of 14% effective Jan, 2005 and if possible applying a parking charge to non-residential parking provided at no cost
- Pursue tolling and benefiting property charges for any major project which is suitable and is developed within the plan timeframe

Table 3 illustrates the financial impact of the new revenues. The Appendix document provides a more detailed summary of Plan revenues and expenditures.

	<i>Budget</i>		<i>Annualized Projected</i>						
	1999	1999	2000	2001	2002	2003	2004	2005	2009
<b>Revenues</b>									
Operating	147.2	203.6	227.0	245.0	254.6	290.6	300.8	312.0	356.8
Taxation	235.4	284.5	291.3	338.4	421.9	443.4	459.9	504.6	571.3
<b>Total Revenues</b>	<b>382.6</b>	<b>488.1</b>	<b>518.3</b>	<b>583.4</b>	<b>676.5</b>	<b>733.9</b>	<b>760.7</b>	<b>816.6</b>	<b>928.1</b>
<b>Costs</b>									
Operating Costs	312.8	430.4	453.2	483.9	519.4	551.6	576.6	611.7	671.2
Debt Servicing Costs	60.2	76.3	91.2	114.9	141.6	163.7	181.4	202.7	335.8
<b>Total Costs</b>	<b>373.0</b>	<b>506.7</b>	<b>544.4</b>	<b>598.8</b>	<b>661.0</b>	<b>715.3</b>	<b>758.0</b>	<b>814.4</b>	<b>1007.0</b>
<b>Surplus/(Deficit)</b>	<b>9.6</b>	<b>(18.6)</b>	<b>(26.1)</b>	<b>(15.4)</b>	<b>15.5</b>	<b>18.6</b>	<b>2.6</b>	<b>2.2</b>	<b>(78.9)</b>
<b>Reserve Balance</b>	<b>44.2</b>	<b>44.2</b>	<b>18.1</b>	<b>2.7</b>	<b>18.2</b>	<b>36.8</b>	<b>39.5</b>	<b>41.7</b>	<b>(215)</b>

As outlined in the summary, the new revenue measures will fund the new service requirements and leave a reserve balance of \$42 million in 2005.

The proposed set of revenue measures will charge both car and transit users. A vehicle levy introduces transportation pricing, in that it recognizes the impact that

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the vehicle has on road requirements and the environment. The fee will be structured to capture as much TDM effect as possible. The charge will be lower for those who drive less and higher for those who drive more.

By 2005, it should be possible to apply a parking charge in a balanced way across the region. The proposed tax is sufficiently small to have only a modest differential impact, given the significant increases in parking costs that have been applied in the commercial market over the last several years.

*The Plan, while aggressive, is financially viable. Appropriate revenue sources exist to fund the transit expansion and maintain and selectively expand the major road network. The need to use these revenue sources was identified in the work leading to the establishment of TransLink, and the public has identified the importance of investment in the transportation system.*

### 5 - Support for Regional Objectives

#### 5.1 Regional Growth Management Strategy

The Strategic Transportation Plan goals, objectives and actions explicitly support the Livable Region Strategic Plan. The planned extension of SkyTrain is consistent with the regional plan. The substantial expansion of the transit system, including the emphasis on connecting town centres supports the plan. Careful expansion of the Major Road Network is consistent with regional plan. Together, the planned expansion of rail transit and the bus system support the growth pattern proposed in the regional plan. The Financial Plan application of vehicle and parking charges begins the implementation of transportation pricing. Most importantly, the management strategy, with its emphasis on implementing transportation demand management, supports the regional plan.

The Strategic Transportation Plan has been developed from the Livable Region Strategic Plan. For the Strategic Transportation Plan to be successful, the Greater Vancouver Regional District and its 21 member municipalities must create land use patterns that promote more choice in transportation, including greater use of transit, walking, and cycling.

TransLink's planned development of a long range Strategic Transportation Plan in concert with the review and updating of the Livable Region Strategic Plan, commencing in the fall of 2000, will ensure that the two Strategic Plans are consistent and mutually supportive.

#### 5.2 Air Quality

The Strategic Transportation Plan seeks to manage the transportation system to manage demand, limit the growth in single occupant vehicle travel, increase walking and cycling, and increase the provision of transit. Through the operation of the AirCare program, TransLink will ensure that emissions from private automobiles are minimized as much as possible.

One of the greatest threats to air quality in this region is the increase in private car use that would occur if this plan were not to achieve its objectives. Providing more attractive alternatives to single occupant vehicles (e.g. walking, cycling, transit, carpooling and telecommuting) is the most effective use of transportation resources. At present, over half the rides on transit are on zero emission vehicles (trolleybuses and SkyTrain). Making the transit system more attractive to choice users is a more effective air quality strategy than trying to eliminate emissions from buses.

In its review of the Air Quality Management Plan, the GVRD has identified greenhouse gas emissions as a concern. Canada's commitment to the Kyoto Protocol to reduce greenhouse gas emissions has set challenging objectives. The management of transportation demand, the AirCare program, and the efficient operation of the transportation all support the reduction of greenhouse gases.



### 5.3 Economy

The Strategic Transportation Plan seeks to make the best use of available resources to better serve the regional economy. Providing alternatives to the private car will reduce pressure on the road system at peak periods, facilitating the movement of goods. Moreover, the Plan explicitly looks to improvements to access to the ports and airport, and improvements to the road system that will serve goods movement. The Major Road Network Priority Program will give a higher priority to goods movement in future. Application of Intelligent Transportation Systems, as proposed in the Plan, has the potential to facilitate improved goods movement. A more efficient, effective transportation system can better serve the needs of the regional economy. The Greater Vancouver Regional District will be developing economic objectives in the next revision to the Livable Region Strategic Plan. TransLink will work with the Greater Vancouver Regional District and stakeholders to develop transportation related economic indicators which will permit monitoring of future plans and progress in this area.

### 6 - Conclusions

Maintaining quality of life in the region in the face of growth and changing development patterns presents a significant challenge. The Strategic Transportation Plan proposes an ambitious and broad program to address that challenge:

- A focus on management of the system, including transportation demand management, developing a system of priorities for the regional road system, programs to support bicycling and walking, and implementation of “best practices” technology.
- A commitment to work in partnership with other agencies.
- A program to collect the data necessary for effective and efficient management of the system.
- Expansion of SkyTrain to complete the lines from New Westminster to Coquitlam and Lougheed Mall to Central Broadway.
- Expansion of bus services and introduction of new types of services to provide service to suburban areas and between town centres.
- Selective improvements to the road system and the creation of necessary infrastructure to support the transit operation.
- Increases in fares, the introduction of a vehicle charge in 2001 and a parking charge in 2005 to finance the Strategic Transportation Plan, and a direction to move toward selective pricing of transportation services to improve system operation, while maintaining emphasis on the efficiency of the system and cost reduction.
- An annual review of progress in Plan implementation, with a recognition of the need to adjust the Plan as circumstances change to ensure its effectiveness and affordability.

As the region grows, the transportation system will have to change, and collectively, by action or inaction, we will create our future. The Plan makes a conscious choice to invest in transportation services that will support quality of life and the Livable Region Strategic Plan. Automobile drivers and transit riders will pay these costs in user charges. Public recognition of this choice and support for these initiatives will be needed for them to succeed.