

***The Greater Vancouver Transportation Authority (TransLink) –
An innovation in transportation governance and funding***

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ABSTRACT

Concepts such as competition, subsidy elimination and private service delivery have transformed the national and international transportation industries in recent decades, but their implementation in urban transportation markets has been slow and limited. The new urban transportation governance and funding arrangements in Greater Vancouver represent the most comprehensive effort to date to apply these concepts in an urban setting. The new arrangements, which were negotiated between the provincial government and the Greater Vancouver Regional District as part of the implementation of a regional growth management and transportation strategy, feature creation of a single political authority (TransLink) for regional roads, transit, transportation demand management, promotion of transportation alternatives and vehicle emission control. Controlled by local government, the new authority must operate within the Greater Vancouver Regional District's policies and plans for growth management, air quality management, economic development and public finance. TransLink derives its revenues predominantly from transportation sources, including fares, fuel taxes and parking sales taxes, and it has the power to implement additional revenue measures such as vehicle charges, parking taxes, tolls and other user charges. By bringing together political responsibility for managing supply and demand for all modes of transportation on a regional level, the Greater Vancouver innovations may provide an example that will be useful to other urban regions attempting to deal with growth while responding to global environmental issues such as climate change.

1 Introduction - The Greater Vancouver Region

In the past 25 to 30 years, national and international transportation systems have been transformed by the introduction of market principles: elimination of subsidies, user pay, competition, product diversification and private delivery of service. The process of applying these principles to transportation within urban regions has been slower and less complete, due in part to the deep and entrenched direct and indirect subsidies for all modes of urban transportation - especially the private auto - and the need to support alternative transportation to those for whom the private automobile is not a feasible choice for economic or physical reasons.

This paper describes one of the most comprehensive attempts yet undertaken in North America, if not the world, to implement a market-based approach to urban transportation in a major metropolitan area within an overall framework of public policy objectives for urban livability, environmental quality and economic prosperity.

1.1 Socio-economic profile

Greater Vancouver is Canada's third largest urban region. The region is Canada's Pacific gateway for the movement of people and goods between Canada and the Asia Pacific region, including the west coast of the United States. Blessed by a spectacular natural setting and a temperate climate (by Canadian standards) Greater Vancouver has developed a reputation as a seaside city with a particular ambience that is often compared with Cape Town, South Africa or Sydney, Australia.

Greater Vancouver has been among the fastest growing urban regions in Canada and the United States for most of the past thirty years, and its 3,000 square kilometres are now home to 2 million people. The region's growth was initially driven by the provision of services to the Province of British Columbia's forestry, mining, fishing and farming economy, but more recently has generated its own economic momentum through the development of financial services, high technology industry, tourism and film production.

As compared to other regions, Greater Vancouver's urban development has had to deal with a number of unusually demanding physical constraints (Figure 1). The dominant physical feature of the region is the bed and floodplain of the Fraser River. This is the most important river in North America for the Pacific salmon, a species that depends upon high environmental quality in the river estuary to support the migration of more than one billion juvenile and adult salmon each year between upriver spawning grounds and the rearing areas of the North Pacific ocean. The region is hemmed in by the Strait of Georgia to the west, the Coast Mountains to the north and east, and the United States border to the south. It contains Canada's best agricultural land with the best climatic conditions for growing the widest range of crops.

Added to these physical constraints is the need to provide for the region's throughput functions - the ports, airports, rail lines, ferry terminals and inter-city road links that are critical to maintaining the region's economic competitiveness as a gateway for global trade.

1.2 Governance

Canada's constitution assigns to the 10 provinces almost the entire responsibility for the governance of human, economic and natural resources within their boundaries, including the creation and alteration of local government entities. In Greater Vancouver, the primary responsibility for local government services lies with the region's 20 (soon to be 21) municipalities.

These municipalities are members of the Greater Vancouver Regional District (GVRD), a local government entity established by provincial legislation to provide inter-municipal services as determined by the member municipalities. Currently, the GVRD provides municipalities with water, sewage disposal, solid waste disposal, 9-1-1 emergency telephone and labour relations services. In addition, it operates regional housing, air quality management and regional parks services on behalf of the members. It carried out hospital planning and capital financing until this function was transferred to the provincial government as part of the governance changes that are the subject of this paper.

The GVRD is governed by a Board of Directors comprising 32 locally elected representative chosen by member municipal council, plus two (soon to become one) members elected directly to the board from the region's unincorporated areas. The organization has 1,000 employees and a 1999 budget of \$C 330 million.

Prior to the changes described in this paper, the responsibility for transportation services in the region was predominantly with the provincial government, which operated all transit services through a provincially-owned corporation, contracted services and several wholly-owned private subsidiary companies, and it provided for most of the main road functions through a provincial ministry as part of its inter-city roadway system. The Province also operated a motor vehicle emission testing system known locally as AirCare through a private contractor. Municipalities were responsible for local streets as well as major roads within their boundaries that were not part of the provincial system.

1.3 Urban transportation system

To accommodate the region's varied travel requirements, the existing transportation system is complex and multi-modal. The transportation system facilitates movement by automobiles, trucks, various forms of transit (e.g. buses, rail and ferries), bicycles and on foot.

The regional road network serving regional movements comprises 6,200 lane-km of arterial roadways and highways. The regional road network is utilized by the more than one million private vehicles owned by the region's residents, more than 20,000 private and for-hire trucks used for freight transport and the road-based transit fleet. Nearly one-third (2,200 lane-kms) of the arterial and highway system is in the network, with the remainder being the provincial highway system within the region (Figure 2).

The supply of parking is relatively abundant throughout the region, including Downtown Vancouver, where 50,000 off-street parking spaces are available (0.4 spaces per downtown employee).

The regional transit system consists of both conventional and alternative services, as described below.

- 1,070 buses operating on 176 individual routes
- SkyTrain automated light rapid transit system (150 cars and 28 kilometres of track)
- SeaBus harbour ferry
- West Coast Express commuter rail service (5 trains and 65 kilometres of track)
- 227 handyDART minibuses which provide service to residents with disabilities
- 94 vanpools operated by the Jack Bell Foundation provide a ridesharing service
- 20 park and ride lots, providing close to 7,500 parking spaces

The region's residents own more than 600,000 bicycles and have access to approximately 800 kilometres of dedicated bike paths or bike lanes. In addition, an increasing proportion of the transit system is accessible to bicyclists through the bus bike rack and bicycle locker programs.

Of the 5 million or so trips taken on a typical workday, the majority are made in a private automobile (75% of which 55% are drivers and 20% are passengers). Regionwide transit plays a lesser role at 10%, but carries almost 45% of all trips to and from the central core of Vancouver.

On a typical weekday, the region's residents make more than 5 million trips:

Trip Purpose	
Work trips	35%
School trips	15%
Personal business trips	50%

Mode Share	
Automobile	75%
Walking	14%
Transit	10%
Bike	1%

Personal business trips, e.g. shopping and recreation, dominate. Work and school trips make up the remainder of the trip types. However, it should be noted these trips are made primarily during the rush hours.

1.4 Transportation Funding

Annual expenditures to provide regional transportation are estimated to be in the order of \$CAN 550 million. More than \$500 million of this expenditure is for the transit service, which recovers about 30 percent of its costs from the farebox. The remaining expenditures are for operation and maintenance of roads, operating costs of two small vehicle ferries on the Fraser River, costs of vanpool and carpool promotion programs and transportation planning costs. Prior to the changes described in this paper, funding for these expenditures came from a variety of sources, including user charges, provincial tax sources and municipal property taxes. There is no federal funding program for urban transportation in Canada.

2 The Challenge: Managing growth and transportation

Since the late 1940s, the region had had various forms of regional planning organization in place. When the GVRD was created in 1967, regional planning was assigned to it as a statutory function. While this function was successful in articulating a number of fundamental directions, including avoidance of urban sprawl and development of a transit-oriented transportation system, its efforts were dogged by political controversy at both the local and the provincial levels. This conflict culminated in 1982 and 1983, when the provincial government, in a series of changes designed to streamline and downsize the public sector, enacted legislation eliminating the GVRD's nascent role in transit and its regulatory role in regional land use planning. The GVRD retained a data-based service in land use and transportation, providing information and advice to municipalities and other government users.

This hiatus in regional planning coincided with a spurt of rapid growth in the region, and by the late 1980s the impact of growth on the region's quality of life became a significant issue for the residents and their representatives on the GVRD Board.

2.1 The *Creating Our Future* vision

The GVRD Board tackled the growth management issue by launching a broadly-based public consultation program called Choosing Our Future, which produced a vision statement and action plan entitled *Creating Our Future*, which was adopted by the GVRD Board in 1990. The vision was:

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, and where the basics of food, clothing, shelter, security and useful activity are accessible to all.

The Board also made the following key commitments based upon the vision:

- To develop and implement an Air Quality Management Plan with a target of reducing emissions by 38 % between 1985 and 2000;
- To develop and pursue an air quality, land use and transportation strategy that gives priority to walking, cycling and transit over the private auto;
- To assume responsibility for the operation of the regional transit system;
- To review and revise as necessary the region's mandates in land use and transportation.

2.2 The *Livable Region Strategic Plan/Transport 2021*

Creating Our Future provided the basis for the development of an integrated growth management and transportation strategy. The GVRD and its member municipalities led the growth management component, while the transportation component was developed by a joint steering committee of provincial, regional and municipal staff members. The two projects shared office premises and a common public consultation program.

The result of this process was the *Livable Region Strategic Plan* (Figure 3). The four main elements of the Plan were as follows:

- **Protect the Green Zone** by setting aside from urban development the areas that have a higher value as working farm, working forest, watersheds, wetlands, environmentally sensitive areas and parklands. Through the process, municipalities allocated two thirds of the region's land base to the Green Zone.
- **Build complete communities** in which is it possible to work, shop, learn and play within easy distance of home for residents throughout the region.
- **Achieve a compact metropolitan region** by focusing two-thirds of the next 1 million residents in the existing built-up urban area rather than encouraging continued sprawl of low-density residential development further up the Fraser Valley.
- **Increase transportation choice** through the implementation of the *Transport 2021* long range and medium range plans that are based on the following three-part strategy:
 1. **Manage land use** in accordance with the *Livable Region Strategic Plan* to reduce the need for new transportation facilities and services and to support the more efficient transportation modes.
 2. **Manage transportation demand** through support for carpool and vanpool measures first and then through implementation of regulatory and pricing measures such as road pricing and parking strategies.
 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.

The *Livable Region Strategic Plan* was adopted by the GVRD Board in January 1996 with the formal support of all 20 member municipalities. In February of that year, the provincial government recognized the Plan as an official regional growth strategy under enabling provincial legislation enacted the previous year.

2.3 Implementation challenges

With the Plan in place, attention turned to the implementation measures required to bring it into effect. The two key links were between the Plan's land use policies and municipal planning and zoning, and between the Plan's transportation policies and provincial road and transit mandates.

The link to local plans was achieved through a provision in the new legislation requiring municipalities to adopt regional context statements incorporating the regional plan's policies in local land use planning documents. This process was substantially complete by mid-1998.

Achieving the linkage to provincial transportation decision-making was more elusive. Although the Province formally supported the regional growth strategy, its approach to implementation was complicated by several factors, including a persistent annual deficit, a growing long-term debt, and a tradition of using transportation services and infrastructure investments to help meet the government's broader political and economic objectives. These issues came into focus in the effort to develop agreement between the GVRD and the Province on the implementation of the two light rail lines that were the cornerstone to the *Livable Region Strategic Plan/Transport 2021* strategy. It quickly became evident that important governance and funding issues were involved and that these extended well beyond the light rail project, and the parties agreed to approach them through a separate set of negotiations.

3 Negotiation of new transportation governance and funding arrangements

The GVRD's objectives for the negotiations were to achieve a stable, predictable and appropriate financial arrangement, to acquire control over transit and transportation demand management, to establish a network of major roads within the region and to implement the *Livable Region Strategic Plan/Transport 2021*'s objectives for transit, including light rail. The Province's objectives were never made public in detail, but they appear to have included transferring some of the transit system's debt off the Province's books, capping the Province's financial exposure for providing operating funds for the transit service, achieving a rationalization of road responsibilities to permit the Province to focus its attention on facilities with a truly provincial function and protecting the affected provincial employees from negative change. Both parties appear to have been in agreement that significant change in the then-current arrangements would be needed to implement the regional growth strategy and provide effective transportation services to the public going forward into the future.

The GVRD and the Province appointed negotiators in early 1997 and they produced a recommended agreement in the fall of that year for consideration by the parties. The GVRD conducted an extensive public and municipal consultation process in the winter of 1997, and both the GVRD and the Province ratified the agreement in February 1998. The two parties then jointly developed the enabling legislation, which was enacted by the provincial Legislature in the summer of 1998. Following establishment of an interim Board and other transition activities, the new organization officially came into being on April 1, 1999.

4 The Greater Vancouver Transportation Authority (TransLink)

4.1 Powers and responsibilities

The legislation creates a new organization, the Greater Vancouver Transportation Authority (subsequently renamed TransLink) to plan, develop and operate urban transportation services in Greater Vancouver and more specifically to provide transit, support for a major road network, transportation demand management services and vehicle emission control services. As is increasingly common in many countries outside North America, TransLink is structured to reflect a purchaser-provider model for the delivery of transportation services (Figure 4). TransLink has the powers of a natural person in carrying out its responsibilities, including the power to contract for the delivery of service and to create subsidiaries. In addition, it has a number of the regulatory and pre-emptive powers of government, including the power to approve of independent transit services, the power to expropriate property, and the power to establish fares, user charges and taxes. The legislation establishes that TransLink, its subsidiaries and contractors are not a common employer under the provincial labour legislation.

4.1.1 Transit

TransLink has assumed ownership of the Vancouver regional transit system and the separate private corporation that operates the SkyTrain rail service. It has taken responsibility for the existing contractual arrangements for the operation of the West Vancouver municipal transit service, West Coast Express commuter trains and custom transit services for the disabled in the region. It has the ability to deliver existing and new services through any of these entities or through the creation of new subsidiaries or new contractual arrangements.

4.1.2 Major Road Network

TransLink was required to create, by bylaw, a Major Road Network comprising roads whose primary function is broader than local but not broad enough to warrant their inclusion in the provincial highway system. This network, includes roads that were formerly provincial as well as those municipal roads that qualify for inclusion in the network. Municipalities have ownership and responsibility for the components of the Major Road Network that lie within their boundaries, but they receive funding for maintenance and rehabilitation of these facilities in accordance with a formula that, when fully phased in, will cover all of these costs. TransLink is developing a modest fund for capital improvements on the network and pursuing common approaches to signalization, traffic management and intelligent transportation systems.

Planning for the network is coordinated with the ongoing responsibility of the Province for planning and development of the provincial highway system within the region.

4.1.3 Transportation Demand Management

TransLink takes over responsibility from the GVRD for supporting carpool/vanpool and employer outreach programs. These are the initial step in a transportation demand management strategy approved in 1997 by the GVRD and the Province. Later stages in the strategy will need to await public acceptability that will be built through provide more effective transportation alternatives and will involve a regional parking strategy and, ultimately, road pricing and other strong measures capable of influencing transportation demand. TransLink has the necessary legislative authority to implement these measures.

4.1.4 Vehicle emission testing

In 1992, the Province established a mandatory program to test vehicles for conformity with emission regulations, and responsibility has been transferred to TransLink. A private contractor operates this program on a cost-recovery basis.

4.2 Governance and accountabilities

TransLink is governed by a 15-person board of directors comprising three provincial representatives (either Members of the Legislature from the region or Cabinet ministers with related responsibilities) and 12 locally elected representatives appointed by the GVRD Board in accordance with a formula to ensure geographic representation.

The legislation requires the new organization to act in support of the *Livable Region Strategic Plan/Transport 2021* and in accordance with the economic and air quality objectives of the GVRD. More specifically, TransLink is required to:

- Prepare a Transportation Strategic Plan for approval by the GVRD Board.
- Secure GVRD Board approval for any increases in tax rates.
- Secure GVRD Board approval for any increase in the initial borrowing limits set in the legislation.

In addition, the legislation requires TransLink to consult with the public, stakeholders and other governments prior to taking certain actions.

TransLink has a defined role in relation to the activities of the GVRD and its members as well. It will be required to approve of any revision or update of the *Livable Region Strategic Plan* and it must be given the opportunity to comment on municipal official community plans and major development proposals.

4.3 Finance

Among the most innovative features of the new structure are the financial arrangements. The two tasks facing the negotiators were:

- To find a way of continuing the contribution from traditionally provincial revenue sources while palatably introducing some funding from the property tax.
- To provide the new authority with a revenue base that was diverse, stable and acceptable to the public and local government.

The first task was accomplished by the Province agreeing to retain the debt for the SkyTrain guideway infrastructure and transfer to the authority additional fuel tax revenues and the proceeds from the provincial sales tax on commercial parking in the region. In addition, the Province agreed to take over the entire responsibility for hospital capital financing in the region, a function to which the GVRD had contributed 40% of the cost, to provide “tax room” for TransLink to establish a property tax levy for transportation purposes.

The second task was accomplished by giving TransLink access to a wide range of transportation-related revenues that could be implemented in the future, including an annual vehicle charge, tolls on facilities it finances, parking taxes and transportation user charges.

An analysis conducted during the negotiations indicated that TransLink would have the jurisdictional and financial wherewithal to implement a significant expansion in transit service on the scale contemplated in the *Livable Region Strategic Plan/Transport 2021*. Assuming no use of new revenue sources and modest increases in fares, this expansion would generate a net revenue requirement of about \$190 million on an overall budget of \$1.06 billion in the tenth year. TransLink would face the manageable challenge of meeting this revenue requirement through use of existing revenue sources, implementation of new revenue sources, efficiency improvements or moderate reduction in planned expenditures.

4.4 Early decisions

The new arrangements for transportation governance and funding were negotiated and implemented during a time of unprecedented political and economic turmoil in British Columbia. Measures taken by

the provincial and federal governments to download their financial responsibilities to local governments and communities had created an atmosphere of extreme distrust. Transit in the region had a history of volatile labour relations, and the transition process offered both the opportunity to begin implementing changes and the threat that the changes could jeopardize the whole project.

4.4.2 Bus organization

The key organizational decision concerned the structure of the large bus operation that TransLink would inherit as one or more subsidiaries from the Province. The negotiated agreement provided for a bus organization study to be conducted by consultants as a transitional activity to provide the new Board with a structure that would ensure delivery on the appetite for change generated by public and other commentary on the quality and efficiency of this service. The study identified two alternatives to the status quo: reorganizing the system into several separate operating companies or establishing one company with distinct operating sub-units. After a lengthy process of consultation and discussion, the Board decided to retain a single company with separate operating units and to assess the effectiveness of this arrangement in meeting the objectives for change.

4.4.2 Rail Transit

The decision made by the Province and the GVRD to separate the negotiations on transportation governance and funding from the rail transit project meant that the Province was free to pursue the rail project with relatively minor involvement from local government. The legislation establishing TransLink provided that the regional authority would pay 40 % of the capital cost if the authority and the Province were able to agree on the “design, scope and cost” of the project. The Province established a project office to design and implement the project. This office produced new studies that challenged the feasibility of implementing conventional light rail technology in the designated corridors within the original capital cost estimates. The Province decided to switch to the Bombardier SkyTrain technology for the project, which would be built in an initial phase comprising one part of each of the two lines that were identified as priorities. The Province entered into an agreement under which Bombardier would supply the system, establish a “Centre for Advance Transit Systems” in Greater Vancouver to support the world-wide marketing of this technology, build an operations and maintenance training centre for all SkyTrain systems worldwide, and take over the operation of both the existing and the new system in Greater Vancouver.

The decision took local government in the region completely by surprise, which turned to great concern when attention shifted to the significant implications for the development, operation and financing of the

services for which TransLink was to assume responsibility. A particularly important concern was that the accelerated construction schedule and higher capital cost for light rail could lead to the cannibalization of the bus system and/or the preemption of full implementation of the two planned rail lines, both of which would be contrary to the region's fundamental strategic objectives in land use and transportation. As detailed design proceeded, the project office began deleting stations, bus transfer facilities and impact mitigation measures that were essential to proper implementation and operation of the transportation services in an urban setting. Once again, a solution was sought through negotiations, in which local government was represented initially by the GVRD and later by TransLink. In June 1999 these produced an agreement under which TransLink and the Province agreed to share equally in the cost of providing additional facilities to make the initial phase of the project work. TransLink will receive a significant increase in its parking tax revenues and hold onto its capital contribution until it can be applied to the completion of the second phase that is essential to performance of its regional transportation role.

Notwithstanding the confusion and frustration they entailed, the negotiations demonstrated the ability of the new regional authority to assert its control over the development of the regional transportation and the protection of the region's communities and their taxpayers. Thus the wheel came full circle, as the new governance arrangements that had their origin in the effort to implement light rail became the vehicle for achieving resolution of this long-standing issue.

5 Conclusions

5.1 Three key innovative features

The reorganization of transportation governance and funding in Greater Vancouver is attracting considerable attention abroad for the degree in which it applies key principles of transportation economics in an urban setting. To our knowledge, this innovation is unique in North America (and possibly the world) in embodying the following three key features:

- Responsibility for roads, transit, transportation demand management, promotion of alternate transportation modes and vehicle emission controls is consolidated under one political authority controlled by local government.
- The authority is required to operate within the broader policy context set by regional government for regional growth management, air quality, economic development and public finance.
- The authority's transportation services are funded primarily from transportation revenue sources – fares, fuel taxes, parking taxes, vehicle test fees, vehicle charges and tolls.

Each of these features is an important innovation in and of itself; when applied in combination they establish a strong capability to encourage the development of market conditions in which transportation supply and demand are managed within the context of broader regional objectives for livability, prosperity and environmental quality.

5.2 Implications for global issues

The next 100 years have been called “The Urban Century.” In a few years, more than half the earth’s population will live in cities for the first time in human history. It is estimated that the global population will be 8.5 billion people by 2025 (from approximately 5.8 billion today). The vast bulk of this 2.7 billion person increase is expected to occur in developing countries, and fully 90% of it is expected to be born or to settle in cities.

The implications of these statistics for the management of urban regions are staggering. Any approach to providing transportation for these regions that is based upon the 20th Century thinking of meeting mobility needs through private autos is bound to fail. Approaches that treat urban transportation as a marketplace and focus attention on both supply and demand management have far greater prospects for success.

And success is not something that can only be measured on a local scale. Transportation is a major source of greenhouse gas emissions that are contributing to global climate change. Three quarters of the urban transportation greenhouse gases in Canada come from personal automobiles, sport utility vehicles and light trucks. Changing urban transportation is therefore critical to the attainment of the greenhouse gas reduction targets set in 1997 in Kyoto.

This suggests a significant role for national governments who have responsibility for setting and meeting greenhouse gas reduction targets, who derive significant tax revenues from the urban transportation sector and who can therefore be logically expected to contribute to the solution of urban transportation problems. In Canada, the GVRD and other urban regional governments have proposed that the federal government follow the lead set by British Columbia and the GVRD in making available federal fuel tax revenues to support urban transportation programs to enhance sustainability.

The innovations in urban transportation governance and funding made in Greater Vancouver are far from perfect and in many respects just a first step. They appear, however, to have significant potential to assist other urban areas in establishing new directions, to the benefit of the residents of these areas and all residents on the planet as we confront some of the most significant challenges humanity has yet faced.

Figure 1



Figure 2

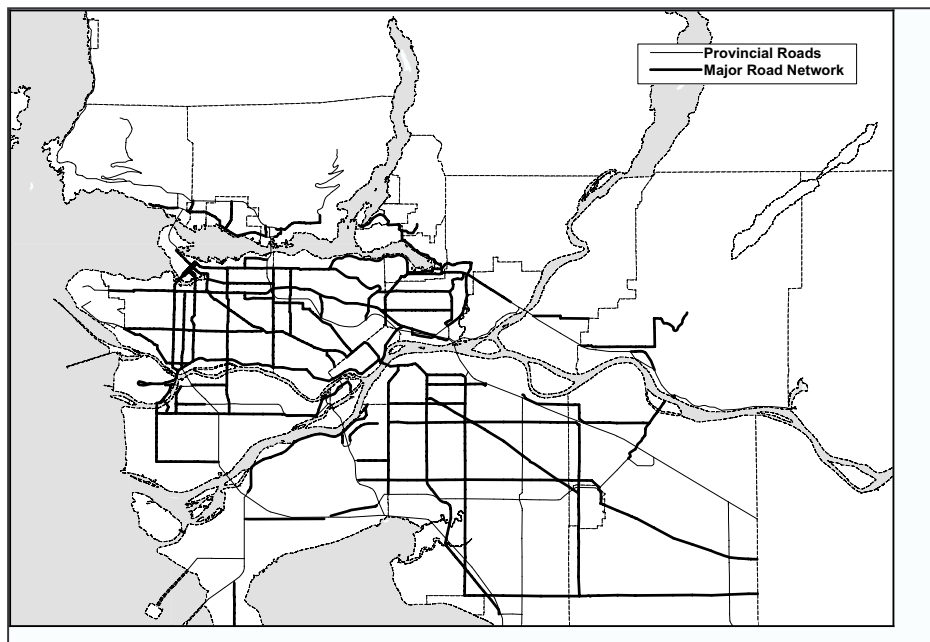


Figure 3

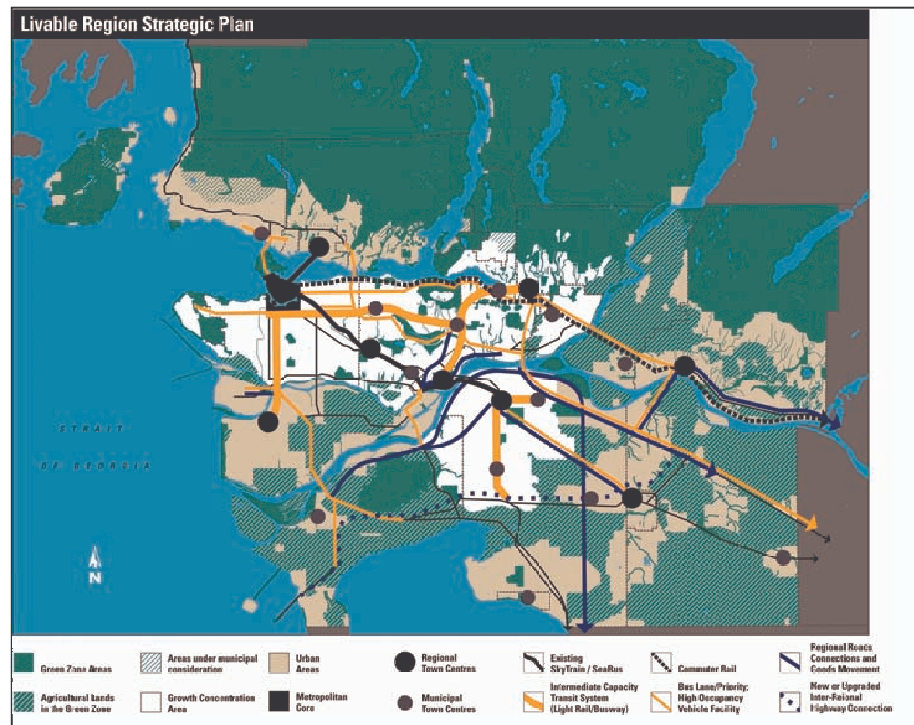


Figure 4

