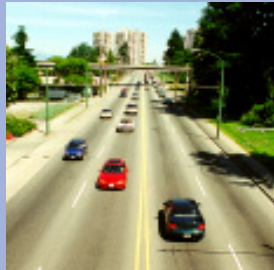









The Burnaby Transportation Plan






Adopted by Burnaby Council 1995 March
Revised 2004 January

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A New Direction

Transportation is essential to the life of a community. Both residents and businesses in Burnaby depend on access to an efficient transportation system for the movement of people and goods. Burnaby, however, is also a part of a growing Greater Vancouver region, and is affected by travel through the community from the more rapidly developing suburban areas on the east and south to employment, shopping, and other attractions in Burnaby and Vancouver. As automobile ownership continues to increase faster than population growth in the region, the demand for travel will place increased stress not only on the transportation network, but also the livability of the community.



The first Burnaby Comprehensive Transportation Plan, developed in the late seventies, has guided the development of the transportation system in the City over the past decade. Progress has been made in implementing the policies defined in the Transportation Plan including those dealing with the development of the road and transit system, and the protection of residential neighborhoods. Over the next decade, however, not only must continuing efforts be made to pursue these policies and others in the Plan, but the Plan must also adapt to the changing context for transportation planning represented by TransLink, Greater Vancouver Transportation Authority, and the need to promote alternatives to the private automobile and to respond to livability issues emerging from environmental concerns.



These considerations, coupled with initiatives from the GVRD towards the development of the Livable Region Strategic Plan in the early nineties, suggested the need for major renewal of the City's transportation plan to meet the transportation challenges over the next fifteen years. The Burnaby Transportation Plan was developed through 1993 and 1994 with extensive public consultation and adopted by Council in 1995 March.

Subsequently, in early 1998 the GVRD ratified an agreement with the Province to develop a regional transportation authority, the Greater Vancouver Transportation Authority (GVTA) to plan, fund and operate transportation services in the Lower Mainland. The inception of the GVTA (now TransLink) represented an opportunity to link land use and transportation planning at the regional level and to plan transportation modes including roads, transit, cycling and pedestrian links together.

This reprinting of the Burnaby Transportation Plan includes revisions to the Plan to cover the period up to December 2003. It involves changes to Section 2 Perspectives on Regional Growth and Section 3 Outlook for Transportation in Burnaby to reflect the development of the GVTA (TransLink) and updates to Section 6 Long Range Transportation Program and Section 7 Five Year Transportation Program. The transportation networks in Section 8 are also revised to reflect changes since the Burnaby Transportation Plan was adopted in 1995.



Burnaby Transportation Plan

The Burnaby Transportation Plan provides a comprehensive review of transportation needs in Burnaby over the next fifteen years including the following components:



Perspective on Regional Growth

An assessment of the changing regional context for transportation focusing on the major trends in regional growth and travel to be addressed by the Burnaby Transportation Plan over the next thirty years. This context follows from work undertaken by the GVRD.



Outlook for Transportation in Burnaby

An evaluation of the impact of regional growth and development on travel in Burnaby and the need for system improvements.



Strategy for Transportation

The definition of a vision, as well as goals and policies for transportation in Burnaby to recognize the growth and development in the Lower Mainland and the City over the next thirty years.



Action Plan for Transportation

A description of programs required to implement the policies defined in the Strategy for Transportation. It specifies the objectives and implementation actions for each action program.



Long Range Transportation Program

A set of priorities for improvements to the road, transit, traffic operations, cycling and pedestrian networks over the next fifteen years.



Five Year Transportation Program

A program for improvements to major roads to provide for transit, trucks, cycling and pedestrians over a five year period in Burnaby.



Transportation Networks

The identification of ultimate transportation networks including roads, transit, SkyTrain, cycling and pedestrian networks.



An Evolving Transportation Plan

At the time of adoption in 1995 March, it was noted that the Burnaby Transportation Plan was not a static document but would evolve to meet changing conditions over time.

This process was intended to prevent the gradual erosion of the Transportation Plan over time and maintain it as a current document for transportation planning, programming and financing in the City of Burnaby. To support this objective, this report outlines a process for updating each component of the Burnaby Transportation Plan on a regular basis.



Perspective on Regional Growth

Required Updating:

- In response to changing growth forecasts or to revisions in regional land use or transportation policy.

Timing:

- Reviewed every five years and amended as required.



Outlook for Transportation in Burnaby

Required Updating:

- In response to changes in the City's growth forecasts or the City's Official Community Plan.

Timing:

- Reviewed every five years and amended as required.



Strategy for Transportation

Required Updating:

- Review transportation policies to ensure currency.

Timing:

- Reviewed every five years and amended as required

Approvals:

- Traffic and Transportation Committee and Council.



Action Plan for Transportation

Required Updating:

- As existing programs are completed and new programs develop.

Timing:

- Every two - five years

Approvals:

- Traffic and Transportation Committee and Council.



Long Range Transportation Program

Required Updating:

- Revised as new projects are developed or existing projects completed.

Timing:

- Annually at the January meeting of the Traffic and Transportation Committee.



Five Year Burnaby Transportation Program

Required Updating:

- Annually

Timing:

- Annually at the January meeting of the Traffic and Transportation Committee.

Approvals:

- Revised to reflect Council approval of Capital Program.



Transportation Networks

Description:

- Includes all of the transportation networks in the Transportation Plan including the road system, transit system, high occupancy vehicle (HOV) system, truck system, Bike Route network, pedestrian system, traffic operations measures and neighbourhood protection actions.

Required Updating:

- As transportation networks or standards change.

Timing:

- Annually as changes are made.

Approvals:

- Transportation Committee and Council.







Perspective on Regional Growth

Centrally located in a growing urban region, the City of Burnaby faces significant challenges in maintaining a viable transportation system for the movement of people and goods. The transportation system in the City must not only serve the needs of its own residents, but also the growing demands of residents of surrounding communities to travel to work, shopping and recreation in Burnaby, and through Burnaby to other areas of the Region. Setting a future direction for transportation in the City requires a responsiveness to the expressed desires of Burnaby residents and an awareness of the future demands for transportation generated by growth.

This "Perspective On Regional Growth" provides a regional outlook on growth and travel in the Lower Mainland. It outlines a number of approaches for dealing with regional growth and assesses their implications and sets forth directions for transportation in the future. This outlook for regional growth follows from work undertaken by the Greater Vancouver Regional District in the development of the Livable Region Strategic Plan (LRSP).



The Trend

Its Implications

Under current trends, the development patterns and travel behaviour which determine our use of the transportation system today would not be fundamentally altered. Continuing the current trend therefore means the following:

- (I) **Land use**
the distribution of population and employment in the Lower Mainland would follow the current trend with most of the population growth locating in suburban areas of the North East Sector and Maple Ridge, Surrey, and further east up the Fraser Valley and most of the employment locating in the core areas of Vancouver, Burnaby, Richmond and North Shore. This separation of homes and work places would lead to longer commuting trips.
- (II) **Mode of travel**
under the trend the attractiveness of the private vehicle relative to other modes would remain essentially the same as it is today. There would be little effort to improve the time, convenience and comfort of transit to actively compete with the private vehicle.
- (III) **Travel behaviour**
the trend assumes no major intervention to change travel behaviour, to reduce our use of the private vehicle or to shift travel away from peak periods.

Population Growth and Distribution

The volume of travel to be accommodated by the transportation system in the Lower Mainland is directly related to the level of population growth in the region. In the past, the number of trips taken by all residents of the Region has tended to grow at approximately the same rate as population.

The GVRD estimates that the population of the Lower Mainland will grow approximately 68% from the current 2.2 million in 2001 to 3.0 million by 2021.

If nothing is done to change the trend approximately 74% of the total population growth to 2021 would occur outside the Core Metropolitan Area municipalities of Vancouver, the North Shore, Burnaby, New Westminster, Richmond and the NE Sector. Suburban areas up the valley including Maple Ridge, Langley, Abbotsford would experience a doubling of their current population while the Core Metropolitan Area population would grow by only 33%. By 2021 only 32% of the population would live in the Core Metropolitan Area as compared to 54% today.

Figure 2.1

Lower Mainland Population: 1961 - 2021

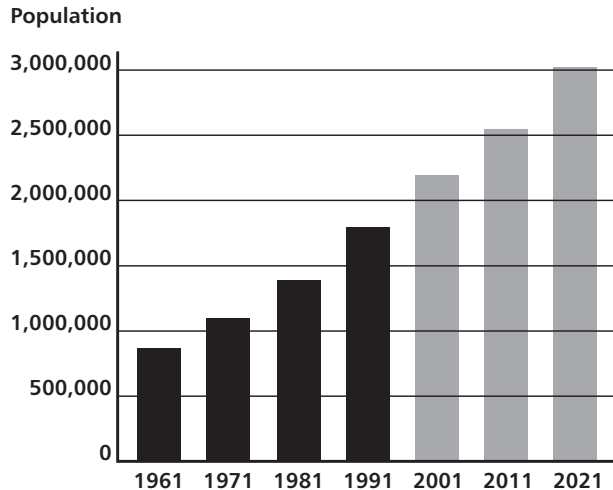
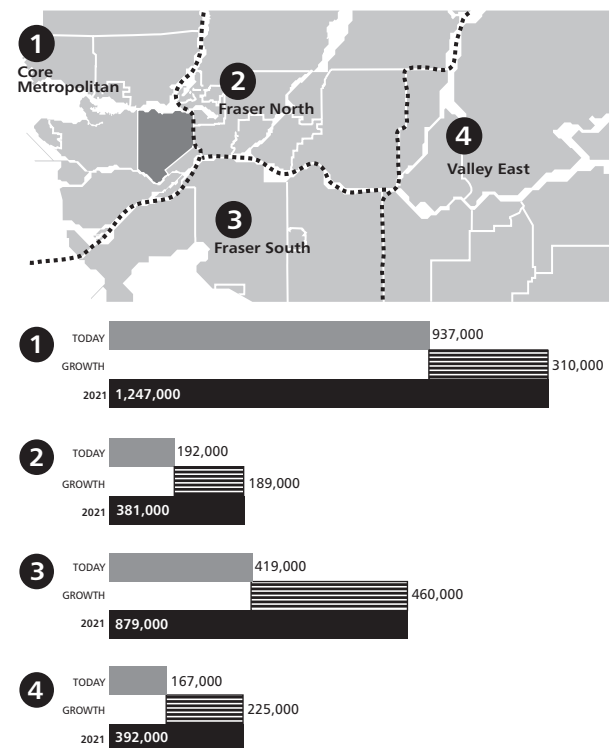


Figure 2.2

Lower Mainland Population: 1991 - 2021 Trend Growth



Employment Growth and Distribution

The location of employment relative to population is responsible for the length and the mode of the peak period commuting trip. If employment does not locate in suburban areas in sufficient numbers to balance the growth in population, then commuting distances cannot be significantly reduced.

As shown in Figure 2.3, employment in the Lower Mainland is expected to grow by 700,000 jobs from the current 826,000 to 1,530,000 million by 2021. Under the current trend, most (63%) of the total increase in employment of approximately 700,000 jobs would locate in suburban areas. As a result the share of total employment in the Core Metropolitan Area would decline from the current 68% to 54% by 2001 as shown in Figure 2.4.

Figure 2.3

Lower Mainland Employment: 1971 - 2021

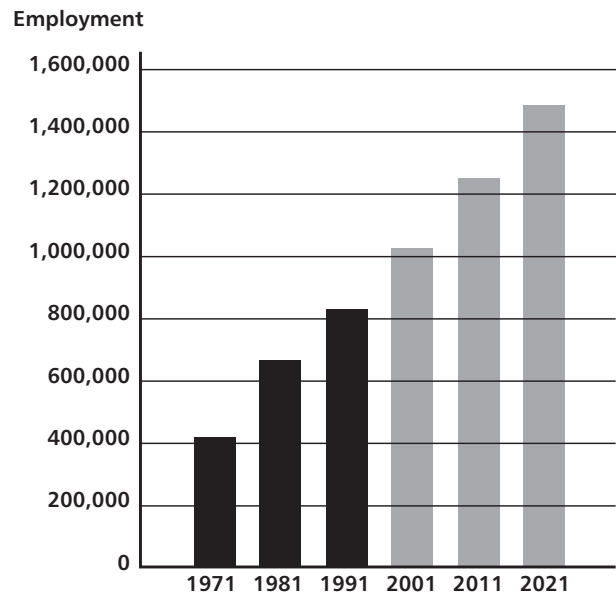


Figure 2.4

Lower Mainland Employment: 1991 - 2021 Trend Growth

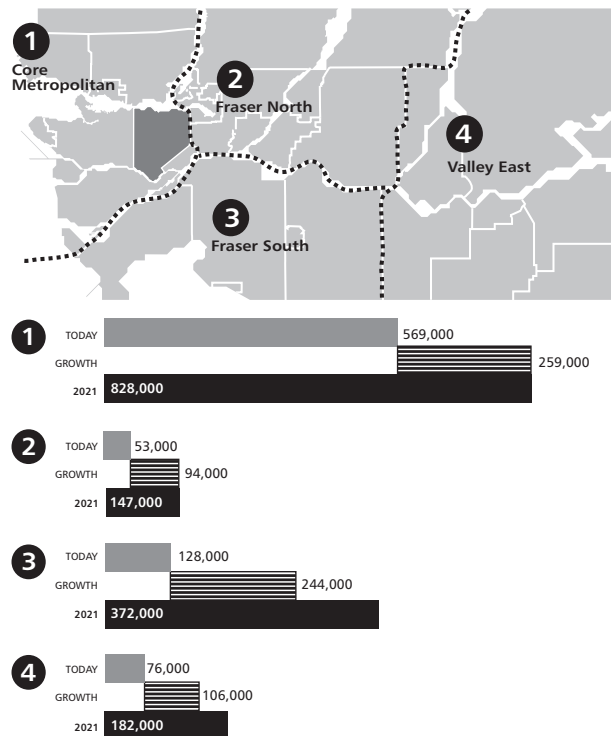


Figure 2.5

A.M. Peak Hour Trips Increase 1991-2021

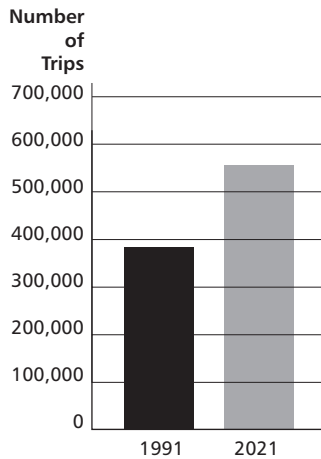


Figure 2.6

Transit Share Declines 1991-2021

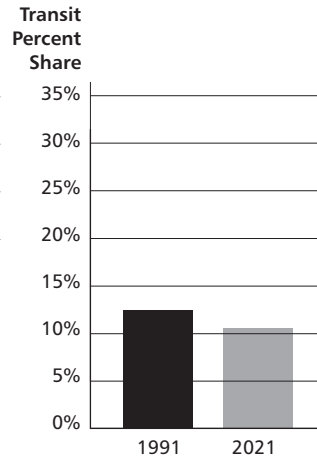


Figure 2.7

Average Trip Lengthens 1991-2021

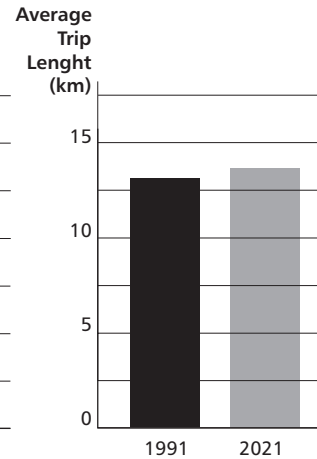
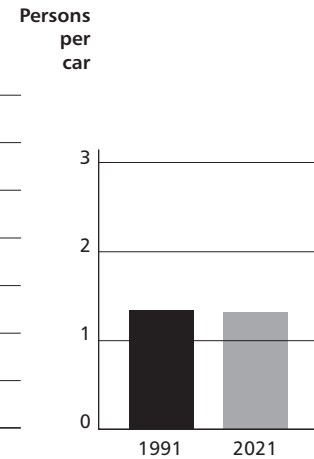


Figure 2.8

Auto Occupancy Unchanged 1991-2021



Transportation Implications of Trend Growth

Continuing the current trend in regional growth would have important implications for the way we travel especially during rush hours.

Rush hour travel would increase (Figure 2.5)

As the transportation system is sized to meet peak demands, the volume of peak period travel is the most significant in planning for future transportation needs.

The GVRD forecasts that under the current trend, total trips during the peak hour will increase by approximately 71% from the current 392,000 to 669,000 by 2021. This is roughly equivalent to the rate of population growth.

Transit share would decline (Figure 2.6)

As the Lower Mainland population becomes increasingly suburban, this dispersed development pattern would be more difficult to serve by transit.

In 1996 transit carried approximately 12.5% of all trips in the region during the morning peak hour (7:30-8:30 a.m.), with private vehicle trips accounting for 82.5% and bicycles and pedestrians accounting for 5%. If current trends continue, however, by the year 2021 the transit share of total peak hour trips could decline to 10.3%.

Average commuter trip would lengthen (Figure 2.7)

With increasingly suburban population growth, combined with the continued concentration of employment in the core municipalities, the average length of a commuter trip would lengthen from an average of 13.1 km to 13.7 km.

Auto occupancy would not change (Figure 2.8)

As the continuation of current trends involves no change in travel behaviour, there would be no incentive to use automobiles more effectively through carpooling. As a result, average auto occupancy (number of people per auto) remains unchanged.

Looking at these implications, it becomes increasingly clear that continuing the current trend growth leads the Lower Mainland Region in the wrong direction. The increasing suburbanization of population would mean not only longer commuting trips, but the likelihood that more of these trips would be taken as single occupant vehicles (SOVs) one person in one car instead of in transit or carpools. Continuing the trend would therefore place increased pressure on an already congested road system leading to demands for more roads with higher costs and potentially more air pollution. To avoid this trend, the GVRD assessed the implications of changing the trend by managing both the growth of the Region and managing the demand for travel. The next section assess the implications of measures to change the trend.



Figure 2.9
Trend Growth

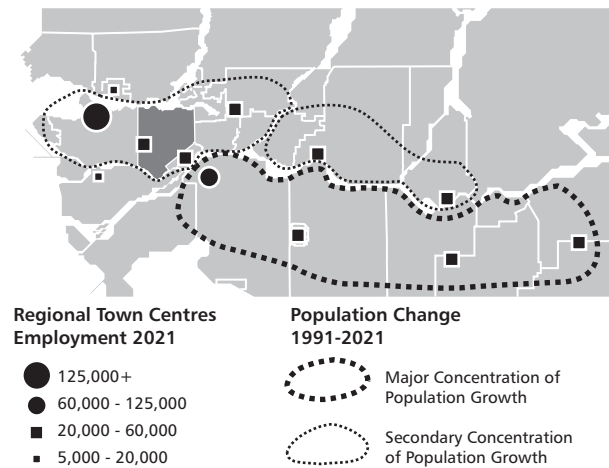
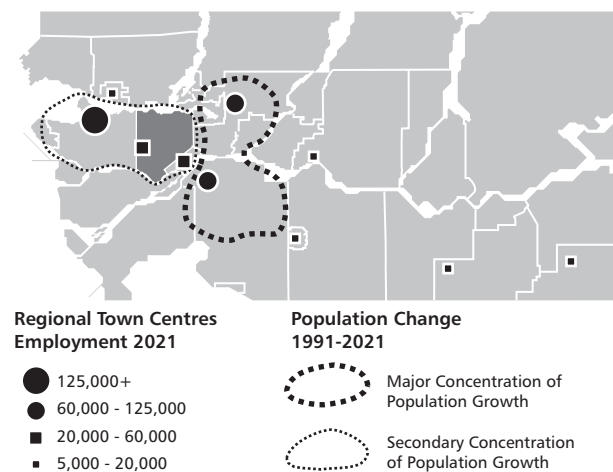


Figure 2.10
Managed Growth



Changing the Trend

What is Required?

Changing the trend in travel will require measures to manage both the growth of the Region and the demand for travel. The concept of managing the growth of travel involves a significant departure from the traditional approach of responding to travel growth by steadily increasing the supply of transportation facilities to meet demand. Changing the trend requires the application of measures to bring the level of overall travel into balance with the provision of transportation facilities. Applied regionally, this approach would focus on a two pronged approach of managing growth and managing the demand for travel.

Managing Regional Growth

Growth Concentration Area

Continuing the current trend of regional development within current municipal plans would result in regional growth spreading up the south side of the Fraser Valley from Surrey to Chilliwack as shown in Figure 2.9. Population in the Core Metropolitan Area would grow by only 310,000.

To accommodate population growth of approximately 1.2 million by 2021, the Livable Region Strategic Plan (LRSP) proposes to concentrate growth within the already urbanized area of the Lower Mainland, termed the Growth Concentration Area (GCA) as shown in Figure 2.10. Under this scenario, the population of the GCA (the Burrard Peninsula, the Northeast Sector, North Surrey and North Delta) would increase by a projected 1.14 million people, including 370,000 in Vancouver and Burnaby, and 770,000 in the Northeast Sector and Surrey.

Managing regional growth would require the application of land use planning measures to direct the growth of population and employment in conformance with a regional plan. Municipal Official Community Plans have been adopted in the context of one Livable Region Strategic Plan which will be reviewed in 2000-2002. The LRSP would aim to achieve a balance of population and employment in order to maintain the opportunity to live close to work, shopping and recreation.

Transportation Implications

All of the growth options involve focusing the growth in population and employment in different areas of the Lower Mainland, but the overall level of growth regionally remains the same under all options and travel behaviour does

Figure 2.11

Total Trips Unchanged a.m. Peak Hour

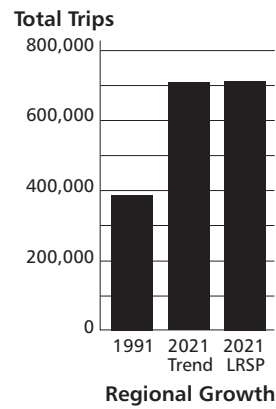


Figure 2.12

Travel Distances Unchanged a.m. Peak Hour

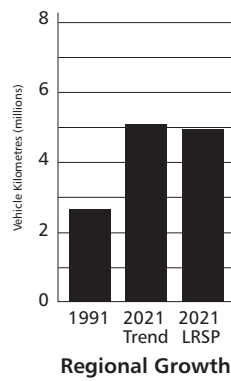


Figure 2.13

Transit Share Increases a.m. Peak Hour

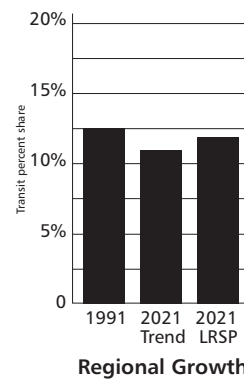
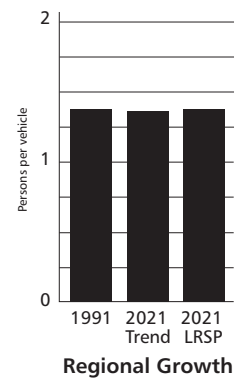


Figure 2.14

Auto Occupancy Unchanged a.m. Peak Hour



Transportation Demand Management (TDM) Menu

POSSIBLE TDM MEASURES	DESCRIPTION
1. TELECOMMUTING	Promotional program with a target for elimination of total a.m. peak hour work trips.
2. EMPLOYER BASED TRIP REDUCTION PROGRAMS	Implement mandatory trip reduction by-laws applicable to all employers with greater than 100 workers at single work sites (40% of total employees): target reduction: 10%.
3. BUS PRIORITY MEASURES	Provide bus queue jumpers at all bridge/tunnel approaches, existing and committed bus priority projects including bus lanes on selected new road lanes but excluding taking away existing general purpose lanes for bus lanes.
4. HIGH OCCUPANCY VEHICLE LANES	Provide at existing and committed projects permitting car and van pools to use bus queue jumpers, including all trips from outer suburbs to Burrard Peninsula.
5. PARKING CHARGES	Increase by 50% all CBD parking rates and increase Regional Town Centre parking fees to 75% of 1991 average CBD rate.
6. GAS TAX	Increase the gas tax and increase fuel price at the pump.
7. CBD LICENCE FEE	Impose \$3 fee on all vehicles destined to the CBD during the a.m. peak hour.
8. ROAD PRICING	Impose fee on all private vehicles on all bridges into the Burrard Peninsula during the a.m. peak hour.

not change appreciably as shown in Figures 2.11 - 2.14. Managing land use without managing the demand for travel by focusing growth in the metropolitan area does not have a significant impact on the volume of transportation or the way people travel. The total number of trips, travel distance, and the number of people per car would remain unchanged under either Trend or Livable Region Strategic Plan growth distributions.

Clearly, redistributing growth within the Lower Mainland without other measures would have relatively little impact on the magnitude of overall travel, travel distances, or the number of persons per car i.e. carpooling. The higher densities would however increase transit usership. Only transit ridership would increase due to the higher population densities.

Managing the Demand for Travel

The Need For Transportation Demand Management (TDM)

While the distribution of population and employment has an influence on the commuting trip, it is the travel behaviour of commuters which determines the transportation facilities required to meet future needs. As previously noted, managing transportation demand implies active involvement by public agencies in efforts to change travel behaviour including reducing overall peak period travel or increasing the use of alternative modes of travel (transit, carpools, etc.). The means by which these objectives are achieved includes a wide range of measures applied to change travel behaviour and are termed Transportation Demand Management (TDM).

Transportation Demand Management includes a variety of measures as shown in Figure 2.15 to shift travel away from peak periods (flexible working hours, telecommuting), to discourage solo travelling (peak hour



Figure 2.16

Auto Trips Decrease with TDM

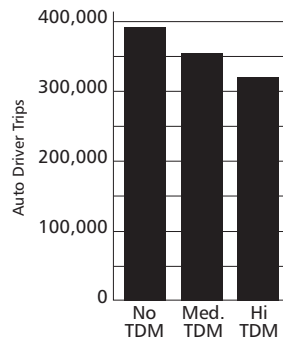
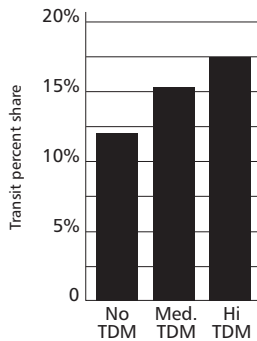


Figure 2.18

Transit Share Increases with TDM



road tolls, parking charges) or to enhance the attractiveness of alternative modes (bus priority lanes, high occupancy vehicle lanes, bicycle lanes, etc.).

Transportation Implications of TDM

The GVRD assessed two levels of TDM measures (moderate and high).

As shown in Figures 2.16 to 2.19, the application of these two levels of TDM had important implications for transportation in the Region. The total number of trips taken and the number of vehicles on the road were less with TDM and more significantly the transit share and the number of carpools (i.e. auto occupancy) increased. The application of transportation demand management clearly yields major benefits for transportation and ultimately livability in the Region.

Figure 2.17

Transit Trips Decrease with TDM

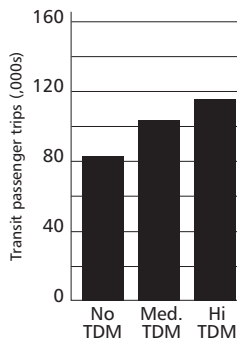
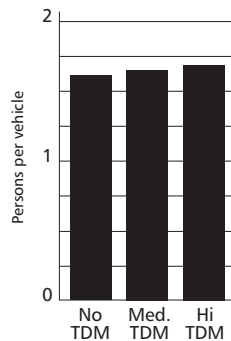


Figure 2.19

Auto Occupancy increases with TDM



The Livable Region Strategic Plan

The regional approach centers on a growth strategy which concentrates population and employment within the developed metropolitan area, and a transportation strategy which focuses on carrying people during peak periods more efficiently by transit, carpools and cycling rather than as solo drivers in their own private vehicles. Assessment of the transportation implications of the dual approach of managing growth and managing the demand for transportation suggest that both are required. Concentrating growth within the developed urban area without a transportation strategy would lead to slightly higher transit use but would not change the total volume of trips, the lengths of trips and the number of people per vehicle.

Coupled with efforts to manage the transportation system and the demand for travel, however, the growth strategy begins to yield positive results. The number of vehicles using the road system decreases while transit and carpool travel increases in proportion to the level of transportation demand management (TDM) measures applied.

This dual approach of growth management and travel management sets the Region on an opposite course to the trend through land use and transportation strategies which are mutually supportive. Concentrating growth within the urban area reduces the need for travel by providing greater opportunities to live close to work, school and recreation and generating the increased densities required to support transit.

In tandem with measures which provide the necessary incentives and disincentives to change travel behavior, the combination of managing growth and managing travel would encourage people to use the transportation system more efficiently, particularly during peak periods. This is the foundation of the transportation strategy in the Livable Regional Strategic Plan.







Outlook for Transportation in Burnaby

The Livable Regional Strategic Plan sets in place a structure to direct the growth and development of the Lower Mainland over the next thirty years and provides a context for the City of Burnaby to set policies for land use and transportation. These policies are in the Official Community Plan (OCP), the Burnaby Transportation Plan (BTP), and other plans to foster the orderly growth of the city. Setting a regional context is particularly important as Burnaby is to play a major role in accepting a significant proportion of the total growth of the Region. And clearly this growth would have a major impact on transportation needs of the community.

This Outlook for Transportation in Burnaby follows from the previous section using the regional growth projections to forecast future travel in Burnaby and assess its implications for the development of the transportation system in the City. It begins with a review of the existing transportation network in Burnaby, its historical context and its major components including road, transit and truck networks. The impact of growth on this transportation network is then assessed, leading to an identification of the major transportation issues facing the City of Burnaby over the next thirty years.



Transportation in Burnaby

Background

Transportation has played an important role in the development of the City. While the earliest road links (Kingsway, Hastings, Douglas Road) were developed in the early 1900s, the growth in residential development during the period between World War I and World War II was the result of the availability of public transportation, particularly the inter-urban tram lines including the Central Park line and the Burnaby Lake line.

After the Second World War, the rapid increase in private car ownership accelerated the suburbanization process. The increase in private car usage was compounded by a corresponding decline of both the popularity of transit and public investment in transit.

The late fifties and early sixties saw a rapid expansion of the highway system including the Burnaby Freeway. As early as the late 1960s, however, it was becoming increasingly apparent that continuing expansion of the road system to meet traffic demands was neither appropriate nor desirable. The introduction of new arterials and freeways into existing built up residential areas was found to be socially unacceptable, as well as expensive. However, despite a marked reduction in new arterial construction, the process of urban development and travel demand has continued to produce more travel on an increasingly congested network.

Transportation Network

Reflecting its character as an urban community, the City of Burnaby has a well developed transportation system with networks providing for a broad range of mode options including private vehicles, rapid transit, trucks and buses, with a more recent recognition of the role of bicycles and pedestrians. These modes are accommodated on a number of networks including a road, transit, truck and urban trail network.

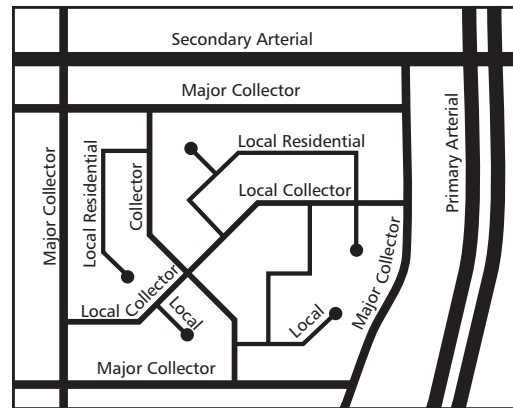
Roads

The existing road system in Burnaby is based on a Road Network Concept. Major collector streets are intended to collect traffic from large areas of Burnaby and distribute this traffic to the arterial system. Primary and secondary arterials provide mobility by emphasizing the movement of vehicles. To maintain this function, access to adjacent properties is restricted. Most streets in Burnaby, however, fall into the category of local streets

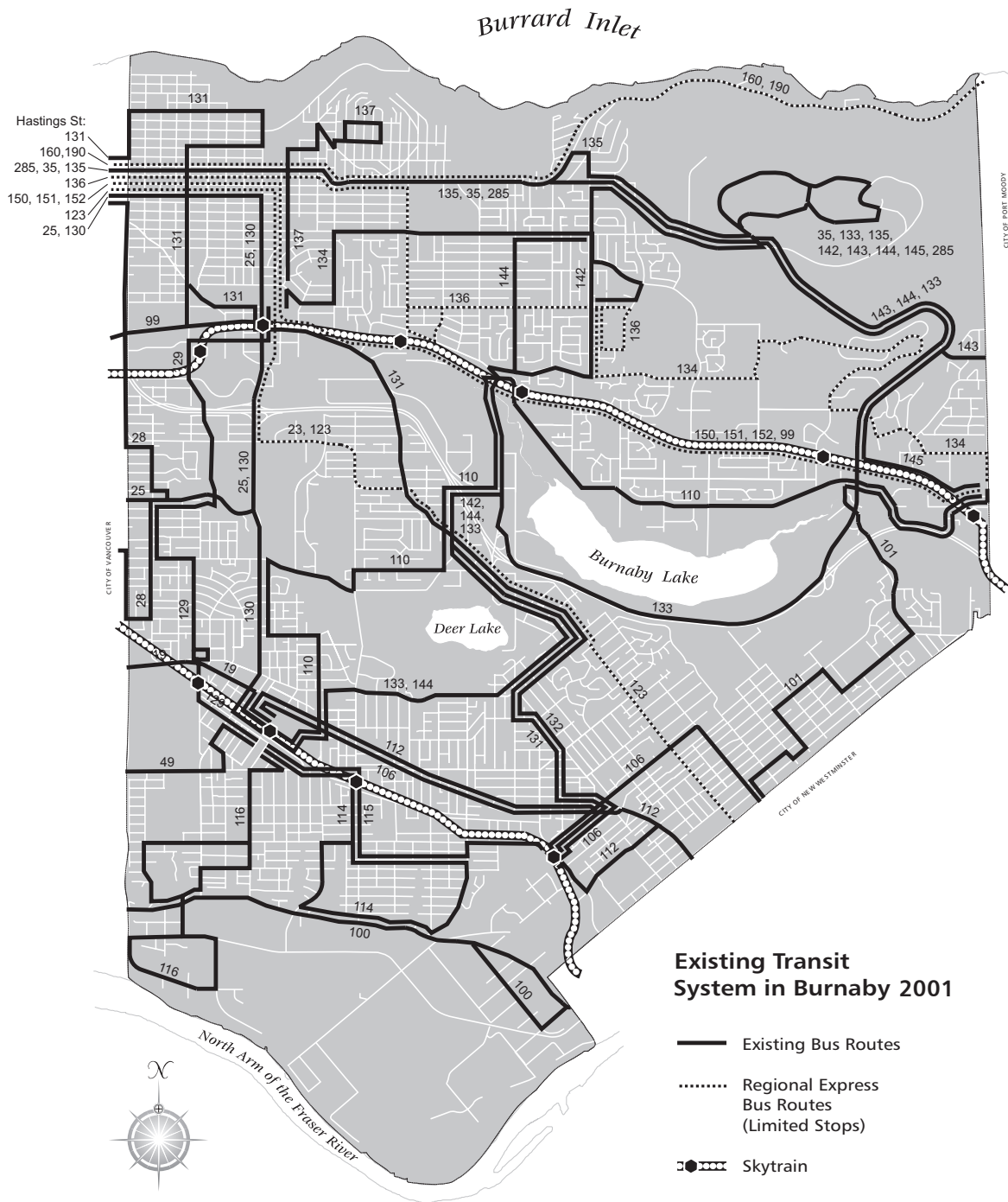
which provide full access to residential areas but discourage mobility.

Most primary and secondary arterials which accommodate regional traffic are part of the TransLink Major Roads Network (MRN) which is funded by TransLink and the City of Burnaby. Highway 1 (The Trans Canada Highway) is the jurisdiction of the Provincial Ministry of Transportation and Highways.

All other streets in Burnaby are planned and maintained by the City of Burnaby. These streets range from arterials such as Willingdon Avenue and Kensington Avenue, to major collector streets such as Patterson and Gilley down to local collector and local residential streets.



Road Network Concept



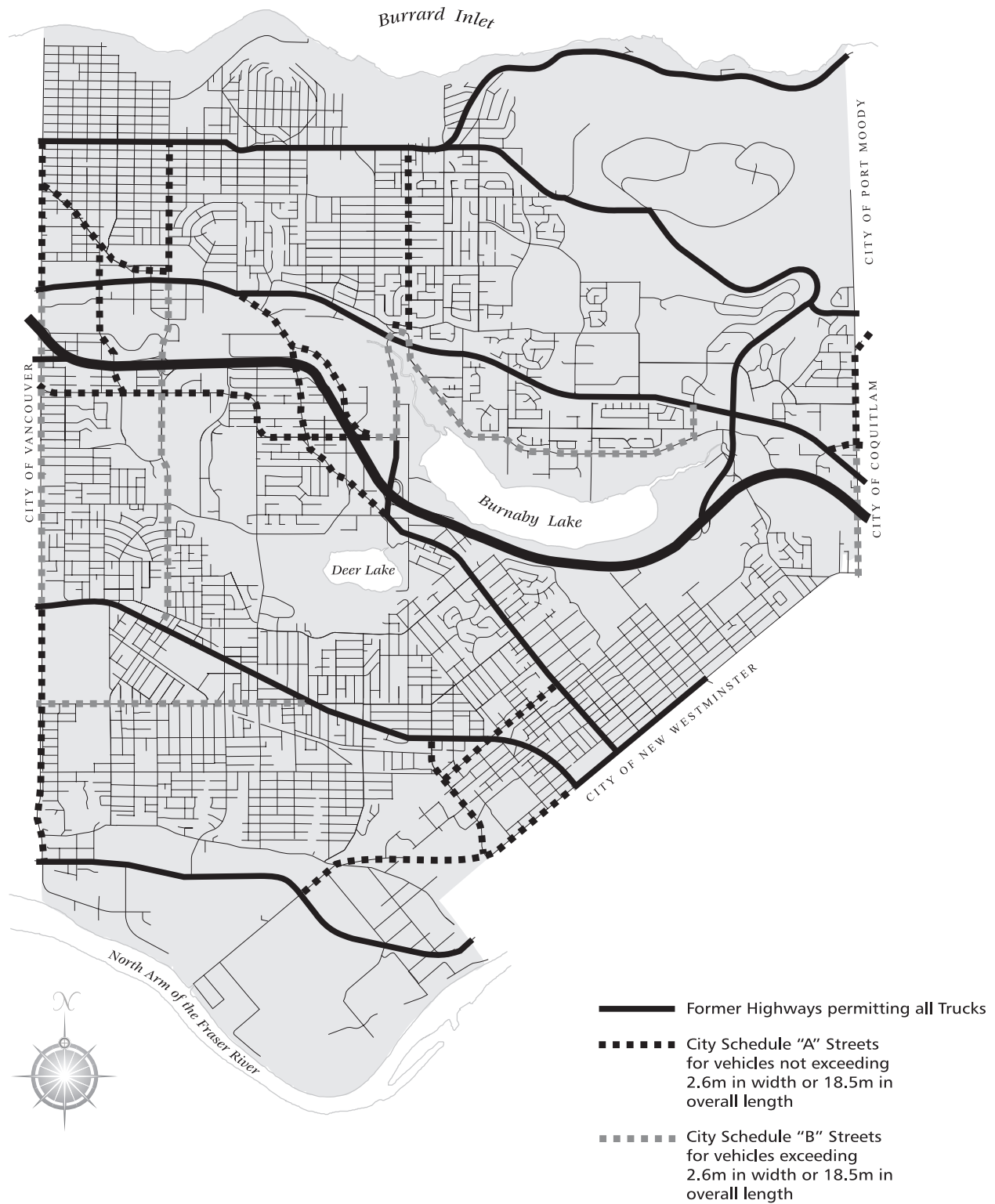
Transit

The transit system consists primarily of a bus network integrated with SkyTrain which runs through Burnaby from Vancouver to Surrey. This network consists of the following service elements:

SkyTrain - The Vancouver to Surrey SkyTrain line provides four stations in Burnaby at Patterson, Metrotown, Royal Oak, and Edmonds. Local buses, especially in Central and South Burnaby, are integrated with SkyTrain. Completion of the Millennium Line by late 2002 will require restructuring of the bus system to serve the new SkyTrain stations.

Regional Express Buses - Regional express bus routes, including the #99, #100, #151, and #152, operate from the N.E. Sector via the Barnet and Lougheed Highways with limited boarding and alighting stops in Burnaby. Regional express bus services, including the #135, #136 and the #123, originate in Burnaby from SFU, Montecito and New West minster respectively and operate direct to downtown Vancouver.

Local buses - Local bus routes provide connections between residential areas and the major activity areas, including town centers.



Truck Routes

The truck route network provides for the movement of goods by road through and within the City of Burnaby. Truck routes include all roads classified as Provincial Highways and certain City roads designated as truck routes in the Burnaby Truck Route Bylaw. While Provincial Highways generally permit

use by all sizes of trucks, use of designated City truck routes by trucks is restricted by the size of the vehicle.

The truck route system in Burnaby shows some discontinuities due to the lack of a fully developed arterial system.



2001 Average Weekday Volumes

Original Destination	Number	Percentage of Total
1. Through Burnaby	19,000	23%
2. To Burnaby from elsewhere	33,000	40%
3. From Burnaby to elsewhere	20,600	25%
4. From Burnaby to Burnaby	9,900	12%
5. All Trips	82,500	100%

Daily Travel

Currently, in a single day approximately 850,000 trips are taken in and through the City of Burnaby by both auto and transit, representing about 25% of all trips taken in the Region. These include all trips coming to Burnaby, originating from Burnaby, and passing through Burnaby. Only 82,500 trips, or less than 10% are taken during the morning peak hours between 7:30am and 8:30am. Some important characteristics of these trips are noted in the following:

(i) most trips in Burnaby are not through trips but travel

from other municipalities to Burnaby. This travel pattern reflects the City's attractiveness as an employment destination,

(ii) through trips without an origin or destination in Burnaby represent only 23% of the total,

(iii) most trips are taken by private automobile (81.5%) but the number of trips carried by transit is higher in Burnaby at 16.5% than the region as a whole. Only 2% of all trips are taken by bicycle.

The Trend for Burnaby

Population Outlook

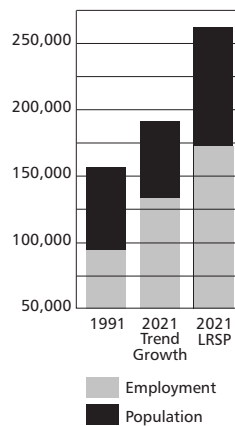
The population of the City of Burnaby in 1991 was approximately 158,600. Based on current trends, the population of the City is forecast at about 190,000 by 2021.

As this rate of population growth is slower than the region as a whole, the proportion of total regional population residing in Burnaby is expected to decline from the existing 8.9% to 6% of total regional population by 2021.

Employment Outlook

If current trends continue, the number of jobs in Burnaby will increase from 95,500 now, to 130,000 in the year 2021. However, since employment in the outer suburban municipalities of Surrey, Delta, Coquitlam, Langley, and Maple Ridge will grow faster than Burnaby, the City's percent of total regional employment could still fall from the current 11.3% to 8.6%.

Burnaby Growth 1991-2021



Trend Travel in Burnaby

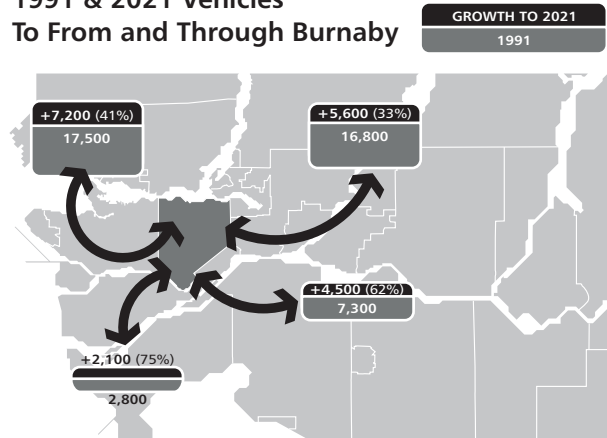
If there is no intervention to manage growth and transportation, travel in Burnaby, like the rest of the Region, would continue to follow the current trend.

Under the current trend, by 2021, travel in Burnaby would be expected to grow from the current 850,000 trips daily to approximately 1.2 million trips - an increase of 40% over current traffic volumes. During the morning peak hour, travel could rise from 82,500 trips in 1991 to 114,000 trips by 2021.

Of the total 114,000 trips during the peak hour, transit would carry approximately 22,000 or 20%, while 90,000 would travel by private vehicle, and 2,000 would cycle.

While transit would increase its share substantially in the future, the number of private vehicles on the road

1991 & 2021 Vehicles To From and Through Burnaby



network in Burnaby during peak rush hour would rise from the current 51,000 to 72,000. Most private vehicle travel is currently between the City and the NE Sector municipalities (16,800 vehicles) and the City and Vancouver (17,500 vehicles). As travel grows on these corridors, adding road capacity will be an increasing challenge, especially in the NE Sector (Coquitlam, Port Coquitlam, Port Moody) to Burnaby corridor where the capability to construct new roads is constrained by topography.



The Challenge of the Livable Region Strategic Plan

More People and Jobs

Under the Livable Region Strategic Plan, most of the estimated 1.2M increase in population would be directed to a Growth Concentration Area comprising Vancouver, Burnaby, New Westminister, the NE Sector, and Surrey/Delta. The population of Burnaby would reach 267,000, an increase of 75% over the trend.

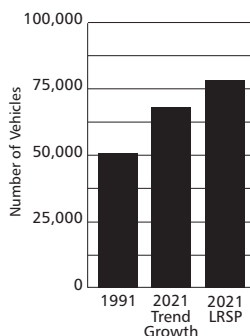
The proposals to manage growth and transportation through more concentrated development in the Burrard Peninsula and Surrey/Delta imply radical changes to the way residents of Burnaby will live and transport themselves over the next thirty years. From Burnaby's perspective, the regional plan will mean up to 90,000 more residents and 40,000 more jobs in the City than if growth was not managed according to a regional plan. As most of the jobs would not be taken by Burnaby residents, commuting into the City from the eastern municipalities, a growing phenomenon, would be higher if growth is more concentrated than under the current trend. For Burnaby, acceptance of its part in the management of regional growth presents challenges that would not arise if the Region simply continued on its current trend.

More Travel in Burnaby

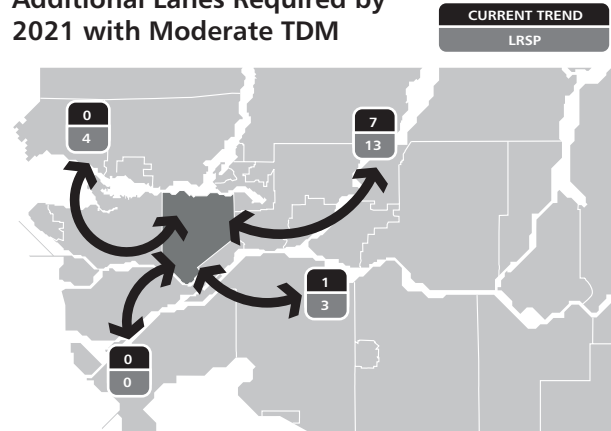
The impact of the Livable Region Plan growth management strategy on travel can be summarized as follows:

- (i) by 2021 travel in Burnaby would double from the current 850,000 trips per day to 1.6 million per day, while peak hour travel would increase from the current 85,000 trips to approximately 150,000 trips
- (ii) the higher density in the Growth Concentration Area could boost transit usage to 25% of all trips compared to 19.2% according to the Burnaby trend
- (iii) due to the higher population in the city, the number of vehicles on the road in Burnaby would be higher (78,500) compared to the current trend (71,800).

Vehicles on Burnaby Road Network a.m. Peak (7:30-8:30 a.m.)



Additional Lanes Required by 2021 with Moderate TDM



More Roads?

The Growth Concentration Area will require considerably more transportation to accommodate the increased travel generated by higher densities. Even assuming the current trend and the moderate application of Transportation Demand Management, at least 7 additional highway lanes would be required between Burnaby and the NE Sector. Under the Livable Region Strategic Plan this rises to 13 lanes to/from the NE Sector, 3 lanes to/from Surrey and 4 lanes to/from Vancouver. Due to topographical and other constraints, however, it will be especially difficult, costly and environmentally problematic to provide this level of highway capacity in the NE Sector-Burnaby travel corridor.

The Livable Region Strategic Plan, while supporting increased transit usage relative to trend growth, also generates more vehicles traveling on an already congested road network in Burnaby during the peak hours. Without major improvements to the highway and rapid transit system, traffic congestion will worsen leading to longer travel times for the commuter, increasing delay and cost to move goods, and greater stress on the livability of Burnaby neighborhoods due to traffic infiltration. A strategy to manage growth is clearly necessary to deal with the pressures of a burgeoning population and economy in the Region, while maintaining the quality of life residents of Greater Vancouver have come to expect. From the City's perspective, however, concentrating growth within the metropolitan area will mean more peak period travel in Burnaby than would result from not managing growth and allowing current trends to dictate future travel demands. To maintain the livability of the City of Burnaby under the Livable Region Strategic Plan, both transportation demand management and rapid transit will be required.

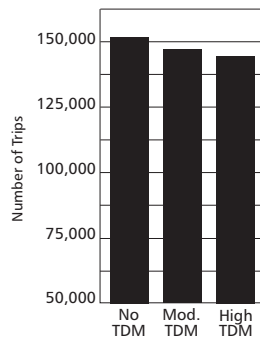
Meeting the Challenge

Transportation Demand Management Required

Pursuit of a more compact urban form in Burnaby, with its concentration of travel, will require Transportation Demand Management (TDM) measures to deflect increased private vehicle travel to alternative modes. To assess the need for TDM measures, the impact of both a moderate and high TDM strategy (assuming a Managed Growth Strategy) was evaluated for Burnaby.

The application of TDM measures has been shown to not only reduce total peak hour travel, but more importantly, shift this travel from the private vehicle to alternative modes. Total person trips during the AM peak hour in Burnaby of 151,000 under the Livable Region Strategic Plan Growth would decline to 148,000 with moderate and 143,500 with high TDM measures. This reduction is due to travel shifting out of the peak periods to avoid travel disincentives such as road user fees, increased downtown parking charges, etc.

Impact of TDM on Trips in Burnaby
(Livable Region Strategic Plan)



Transportation Demand Management, however, has more marked effect on the travel mode used by commuters. By 2021, the transit share of peak hour trips in Burnaby could rise from the current 16.5% to 30%. More importantly for the livability of Burnaby, the diversion of commuters to transit substantially lowers the number of vehicles using the Burnaby road network. Private vehicle volumes in 2021 are reduced from 78,000 without TDM to 61,000 vehicles with moderate TDM and to 58,000 vehicles with high TDM. Managing transportation demand is clearly required to complement growth management and maintain the livability of Burnaby neighbourhoods against the pressure of more growth and more private vehicles.

Rapid Transit Critical

Development of rapid transit along the Lougheed Highway from the NE Sector to Burnaby and Vancouver provides the transportation capacity which cannot and should not be provided through further expansion of the highway system. It would accommodate the most rapidly growing segments of regional travel, including trips from the NE Sector to Burnaby and to Vancouver, and from Burnaby to Vancouver. As shown in the table, a

Lougheed rapid transit line is expected to carry approximately 4,800 riders during the peak hour. This is equivalent to the opening ridership in 1986 for the Vancouver to New Westminster SkyTrain line. In Burnaby, with rapid transit in the Lougheed Corridor, the number of AM peak hour trips taken by transit could increase by 6,000.

The Lougheed corridor presents enormous opportunities to coordinate the Livable Region Strategic Plan with the provision of Skytrain similar to the approach followed by the 1975 Livable Region Program. It would allow Burnaby to play a major role in accepting increased growth under the Livable Region Strategic Plan, while minimizing the impacts of this growth on the community and the transportation system. Most of the growth in population and employment could be focused on the Lougheed corridor at densities which would fully support rapid transit. In this way, Burnaby would be a prime example of a Regional Growth Strategy which integrates land use and transportation in a way which maintains livability.

SKYTRAIN RIDERSHIP

	SKYTRAIN TO NEW WESTMINSTER 1987	SKYTRAIN TO SCOTT ROAD 1992	MILLENNIUM LINE
PEAK HOUR PEAK DIRECTION)	4,500	7,500	4,800
WEEKDAY	72,000	120,000	78,600
ANNUAL (MILLIONS)	21.4	36	21.6





Strategy for Transportation

The Strategy for Transportation sets the future course for transportation in the community. This future direction is founded upon the assessment of regional growth trends, the outlook for transportation in Burnaby, and the directions from the community, as outlined in the preceding sections of the Plan. Together, these inputs provide consistent directions for the future of transportation in Burnaby, all of which are embodied in the Strategy.

The Strategy for Transportation comprises three parts:

- (i) a Transportation Vision as a statement of a future end state to work towards through the provision of transportation in Burnaby.
- (ii) seven Transportation Goals summarizing the aspirations of the community which would be pursued in support of the Transportation Mission.
- (iii) thirty-seven Transportation Policies which define specific actions to be undertaken to achieve the Transportation Goals.

The Strategy, as outlined in the following sections, provides a road map for transportation in Burnaby, which defines the Transportation Vision as the ultimate destination and a set of Transportation Goals as directions to get there.



Transportation Vision

The Transportation Vision summarizes the views, perceptions and aspirations of the community towards the provision of transportation in Burnaby. It defines a future vision which is not immediately achievable, but commonly

held by the community and supported by its City government.

That the City of Burnaby, in consultation with its residents and other public and private agencies, strive to facilitate the efficient movement of people and goods in Burnaby in a cost effective manner which enhances the environment and livability of the entire community.

- 1 "In consultation with its residents and other public and private agencies" imposes a requirement to inform and discuss transportation issues and proposals with the larger other transportation service providers and community on an ongoing basis.
- 2 "Strive to facilitate" explicitly recognizes the need for a proactive approach to effectively manage the transportation system.
- 3 The "movement of people and goods" rather than vehicles is the major focus.
- 4 To provide "efficient movement" supports efforts to maximize the capability of transportation facilities to carry more people in fewer vehicles.
- 5 To move people and goods "in a cost effective manner" recognizes the high cost of transportation facilities and the need to get the most transportation benefit for public expenditures.
- 6 To ensure that on balance, the provision of mobility "enhances" rather than degrades "the environment and livability of the community".
- 7 To ensure that the transportation system is developed to maximize the benefits "for the entire community" while ensuring that impacts on affected local residents are minimized.

Transportation Goals

The strategy defines seven Transportation Goals which support the Transportation Vision.

The Transportation Goals represent the fundamental principles to guide all actions in transportation in Burnaby. The Goals reflect the basic conclusions of the technical work as well as overall issues identified by the community.

1 Move People Efficiently by Road

While rail transportation has a significant role in the movement of people, the road network will remain the workhorse of the transportation system in the nineties accommodating 95 percent of all travel in Burnaby, including trips by private vehicle, bus, trucking, cycling, and walking. During a period of rapid growth, however, it will not be possible or cost effective to maintain an efficient road system by constructing new roads or expanding existing roads solely to meet the escalating demand for travel by single occupant vehicles. Improvements to the road system need to emphasize carrying more people in fewer vehicles and making optimal use of existing road facilities.

2 Move Goods Efficiently

An efficient and reliable system for the transportation of goods by road and rail is necessary to support economic activities in the City. Trucking, as the predominant mode for movement of goods, relies on the development of a continuous and evenly spaced network of arterial and major collector road serving all areas of the City and providing access between industrial areas and regional highways. Developing a continuous arterial road network therefore, not only provides for the movement of goods, but also protects residential neighbourhoods by ensuring that trucks are maintained on streets designed to accommodate them.

3 Reduce the Need for Travel

As the Region and the City grow and commuter travel increases, it is more critical that development, and the transportation systems which support development, be planned together rather than as separate elements. Land use and transportation must be developed based on the fundamental concept of providing opportunities for people to live close to work, shopping and recreational facilities. This can be achieved through the development of town centre areas throughout the Region linked by rapid transit.

4 Promote Alternative Modes

Recognizing that the road network during peak periods may be unable to keep pace with the inevitable increase in demand for travel from single occupant private vehicles, greater efforts must be made to promote alternative modes of transportation which make more efficient use of road space to carry more people in fewer vehicles (transit, carpools), or in vehicles which occupy less road space (bicycles), or as pedestrians.

5 Protect the Livability and Environment of the Community

While transportation can enhance the livability of a community by expanding opportunities for access to jobs, shopping and recreation, it can also adversely affect the environment and livability for those directly affected by transportation improvements. As fossil fuel powered vehicles are major contributors to the degradation of the air and water, these problems may be most effectively handled through existing and new, less polluting, technologies.

Transportation Demand Management (TDM) measures to reduce vehicular use, however, can also play a significant role in also addressing the environmental impacts of transportation and the impacts of unwanted traffic in residential neighbourhoods.

6 Manage the Transportation System

Implementing the transportation strategy will require new approaches to actively manage and direct the development of the transportation system. The City will need to clearly define transportation needs and develop a transportation program reflecting those needs while working closely with other public and private agencies.

7 Inform and Educate the Community

As the transportation problem is a product of scores of individual choices about personal transportation, changes in the transportation system will require changes in travel behavior. A key component of the Burnaby Transportation Plan Strategy includes measures to educate the community about the need to use alternative modes and to inform the public about the transportation decisions at the local, regional, and provincial level which affect their lives.



Transportation Policies

Moving People Efficiently By Road

Future Direction

To transport people efficiently in the coming years will require a more efficient use of the road system. Constructing new roads or expanding existing ones simply to keep pace with ever increasing peak period travel by car is no longer acceptable. Rather it is costly and environmentally inappropriate during a period of rapid growth in Greater Vancouver. The expansion of the road system in the nineties must therefore emphasize projects which either carry more people rather than more vehicles or maximize the use of the existing road system during peak periods. The people moving capacity of a road can be increased by giving priority to high occupancy vehicles including transit and carpools and accommodating cyclists while the efficiency of the existing road system can be improved through the application of traffic operational improvements.

Road Policies

1. That the arterial road system in the City be developed to emphasize the movement of more people in fewer vehicles during peak periods.
2. That a road network plan for the City be developed reflecting a hierarchical classification of roads and appropriate design standards.
3. That a traffic operations strategy be developed to maximize the efficient and safe movement of vehicles and pedestrians on existing roads in the City.
4. That except in designated commercial areas, the City ensure that the provision for parking on arterial and major collector streets in commercial and industrial areas during peak periods reflects the need to maximize mobility.



Moving Goods Efficiently

Future Direction

A viable regional and municipal economy relies on an efficient system for the transportation of goods. Burnaby plays a key role in the transportation of goods due to its location at the centre of the Region and its traversal by major highways and rail lines. While trucking has become the predominant mode for the transportation of goods, rail retains a major role in the transportation of bulk commodities to and from the Port of Vancouver.

A continuous network of highways and municipal arterials is required to accommodate truck movements in the City while ensuring that trucks do not use local residential streets. Further improvement of the arterial system in the City to move goods efficiently is therefore compatible with the need to protect residential areas. The location of truck routes away from residential areas also improves safety for the transport of hazardous goods.

Goods Movement Policies

5. That the City accommodate truck movements by the development of a continuous and evenly spaced network of arterial and major industrial collector roads.
6. That truck routes be designed and improved to accommodate the transportation of hazardous goods in a safe manner.
7. That the City support the continued development and use of the rail system for the transportation of bulk commodities.
8. That the City, in consultation with businesses in Burnaby, work to ensure the efficient movement of goods.

Reducing The Need For Travel

Future Direction

The need to travel results from the separation of places where people live, work, shop, learn and recreate. Reducing the separation between these centers of activity is, therefore, an effective approach to manage the overall need to travel from place to place.

The concept of regional and municipal town centre areas envisions places where employment areas, shopping facilities and residences can be located in walking distance of each other. To reduce the dependence on the private vehicle, however, town centers must have high accessibility by transit to other town centers and to surrounding lower density employment and residential areas.

The focus of the Burnaby Transportation Plan is to encourage the creation of a regional land use and transportation strategy, and to support the development of regional and municipal town centres by the provision of rapid transit, appropriate road facilities and cycling networks to serve these centres.

Travel Reduction Policies

Regional Planning

9. That the City support enhanced responsibilities at the regional level to coordinate regional land use and transportation planning.
10. That the City support the development of a clearly defined and workable strategy to manage regional growth and transportation.

City Planning

11. That the City support the continued development of its town centre areas with the provision of efficient transit linking these town centre areas with other town centers and road facilities linking town centers with surrounding areas.
12. That the City work with the Provincial government and Translink to reserve rights-of-way for high occupancy vehicle lanes and rapid transit linking town centers.
13. That the City promote appropriate high density development along existing and proposed major transit facilities.

Promoting Alternative Modes of Transportation

Future Direction

To fully address the problems of traffic congestion and the environmental impacts of transportation will require individuals to reduce their use of the private vehicle, especially during peak periods. To support this change in travel behavior will take a concerted effort at all levels of government and society. The greater use of alternative modes also complements the strategy of moving people efficiently by road as alternative modes permit the road network to carry more people in fewer vehicles.

Transit must develop as an attractive transportation mode for those with access to a private vehicle. To fulfil these expectations will require substantial improvements to the transit system to enhance the speed, convenience and comfort of transit relative to the automobile. While the major responsibility for these initiatives is with TransLink, the City has a major role by providing guidance and assistance to TransLink in ensuring that transit meets the needs of this community, and by actively promoting policies which enhance the attractiveness of transit as an alternative transportation mode.

Carpooling addresses the need for more efficient use of road facilities to carry more people rather than more vehicles. This is especially important during peak periods when road capacity is less available. The City has a major role to play in encouraging carpools through its role as a provider of transportation, through the control of development and parking and as a major employer.

Cycling also has a significant role as an alternative mode of transportation other than just for recreation. Facilitating the greater use of cycling will require policies which provide a range of facilities to support this mode of travel during the trip and at the end of the trip.

Similarly, pedestrians must be accommodated, not only as an alternative mode of travel, but also to support transit usage. Sidewalks and other walkways must be provided to permit safe pedestrian movements and convenient access to transit stops, notably for the mobility impaired.



Alternative Mode Policies

Transit System

14. That the City develop an overall transit concept plan which provides efficient mobility to town centers within Burnaby and major centers outside the City.
15. That the City work with TransLink to ensure the provision of efficient, convenient, and reliable public transit service.
16. That the City ensure that land development and the road network are designed to facilitate transit.
17. That the City support the development of appropriately located park-ride facilities to help divert through commuter trips to transit.

Carpooling

18. That the City pursue the development of programs in Burnaby designed to encourage carpooling as a mode of travel during peak periods.
19. That the City seek the support of other agencies in encouraging carpooling on a coordinated regional basis.
20. That the City in conjunction with the Ministry of Transportation and Translink, develop a High Occupancy Vehicle Road Network which will designate roads for use by carpools and buses during peak periods.

Cycling

21. That safe and convenient cycling facilities be provided as an alternative to the use of private vehicles.
22. That a cycle road network be prepared which ensures that arterials and major collector roads are designed to facilitate cycling.

Pedestrian Facilities

23. That safe and comfortable pedestrian facilities be provided on City roads and in street-oriented commercial areas.
24. That town centre areas be developed as pedestrian-oriented centers.
25. That the City develop pedestrian facilities with full access for the mobility impaired.

Protecting Livability and the Environment

Future Direction

While transportation can greatly enhance the life of a community and the well being of its citizens, it can also contribute to the degradation of the environment and reduce the livability of residential areas in the community. As continued development of the transportation system will be required to move people and goods efficiently, greater efforts will be required to reduce the undesirable impacts of transportation on people's lives.

Continued efforts must therefore be made to ensure that transportation systems, particularly the road network, are developed to reduce traffic in residential areas. Expansion of the road network should emphasize arterial road improvements which attract traffic away from residential neighbourhood while at the same time introducing specific traffic calming measures in neighbourhoods to discourage through traffic on local streets.

Urban transportation is a major contributor to the degradation of the environment particularly through its impacts on air quality. While air pollution is currently being addressed by federal, provincial and regional agencies, the City can assist efforts to reduce overall harmful vehicle emissions. As a provider of transportation services, the City can work towards reducing the traffic congestion which increases the production of air pollutants and can also develop facilities for less polluting alternative modes. As a regulatory authority over development, the City can determine development patterns which influence the level of trip making and thus the volume of pollution. Finally, the City can show leadership to the community through the active promotion of low-emission or zero-emission vehicles.

Livability and Environment Policies

Neighbourhood Livability

26. That the City develop a continuous arterial road system to attract through traffic away from local collector and local residential streets.
27. That the City develop community transportation plans to reduce through traffic in residential neighbourhoods while maintaining access for local residents.
28. That the City develop the street network in new residential areas to discourage through traffic.
29. That arterial road improvements be designed to buffer adjacent residential areas from traffic noise and visual intrusion.



Environment

30. That the City promote the use of low-emission and zero-emission vehicles in Burnaby.
31. That the City seek the cooperation of provincial and regional agencies to improve air quality in the Lower Mainland.

Managing The Transportation System

Future Direction

In the past, the transportation system in Burnaby has developed to respond to growth in the community and the travel desires and mode choices of its residents. As Burnaby changed from a rural district to a city, new highways were constructed and streets were expanded to accommodate the rapid growth in automobile travel to jobs in the City of Vancouver.

As Burnaby moves into the nineties and develops into a city, it has become more apparent that new approaches are required to address the long-standing transportation problems created by continued growth. Reacting to traffic congestion by building more roads without managing their use is no longer affordable, and the impacts of this reactive approach on the environment and residential neighbourhoods are no longer acceptable to residents.

The new approaches required to implement the transportation strategy focus on policies to manage the transportation system. These are policies which define specific means to modify travel behavior rather than react to it, to reduce the impact of transportation on the air and water rather than accept it, and to develop transportation modes which enhance rather than degrade neighbourhoods.

Transportation Management Policies

Communicating Transportation Policies

32. That the City develop positions on major transportation initiatives for discussion with the Province.

Inter-municipal Coordination

33. That the City take the lead in seeking a coordinated position on transportation matters of relevance to Burnaby and its neighbouring municipalities.

Transportation Programming and Budgeting

34. That a Five Year Burnaby Transportation Program, including Transportation Status Report, and Capital Budget be prepared annually as part of the Annual Capital Budget Process.

Cooperation of Other Agencies

35. That the City develop network plans for major roads, high occupancy vehicle lanes, transit truck routes, and cycling in collaboration with the Province, TransLink and adjacent Municipalities.

Informing And Educating The Public

Future Direction

The transportation strategy in the Burnaby Transportation Plan is founded upon the support of a community whose residents are well informed about transportation plans, issues, and the need for efforts to establish new directions for transportation in the future. In terms of information, the public has a right to be kept fully informed about the transportation plans which can directly affect their lives, including major road and transit developments, truck routes, traffic operations measures, and local community transportation improvements.

At a broader level, the initiatives in the Burnaby Transportation Plan represent a significant change in direction, requiring the support of the community for their implementation. To effect changes in the transportation system will require changes in the individual's use of transportation, especially with regard to alternative modes. An educated public is required to make informed choices about transportation.

Transportation Information Policies

Information

36. That the City ensure that residents of Burnaby directly affected by arterial road improvements, major transit facilities, truck routes, traffic operations measures, and community transportation plans are made aware of these plans on an ongoing basis.

Education

37. That the City educate the public and foster public awareness of programs to promote alternative modes and reduce the environmental impacts of transportation.





Action Plan for Transportation

The Strategy for Transportation, outlined in the previous section, sets out the broad directions for transportation in Burnaby and defines goals and specific policies to move transportation in Burnaby in that direction. The Action Plan for Transportation in this section is the engine of the Burnaby Transportation Plan which translates the policies into specific actions into programs and projects to move the transportation system forward into the nineties and beyond.

The Action Plan for Transportation proposes specific action programs, projects and initiatives to be undertaken by the City of Burnaby itself or in conjunction with other agencies responsible for transportation in Burnaby in support of each of the seven goals.

The individual action programs consist of the following elements:

- (i) Supporting policies - the policies in the Strategy for Transportation which support the Action Program.
- (ii) Objectives - the desired and measurable ends the program strives to achieve.
- (iii) Actions - specific tasks to be completed as part of the program.



Action Plan to Move People Efficiently by Road

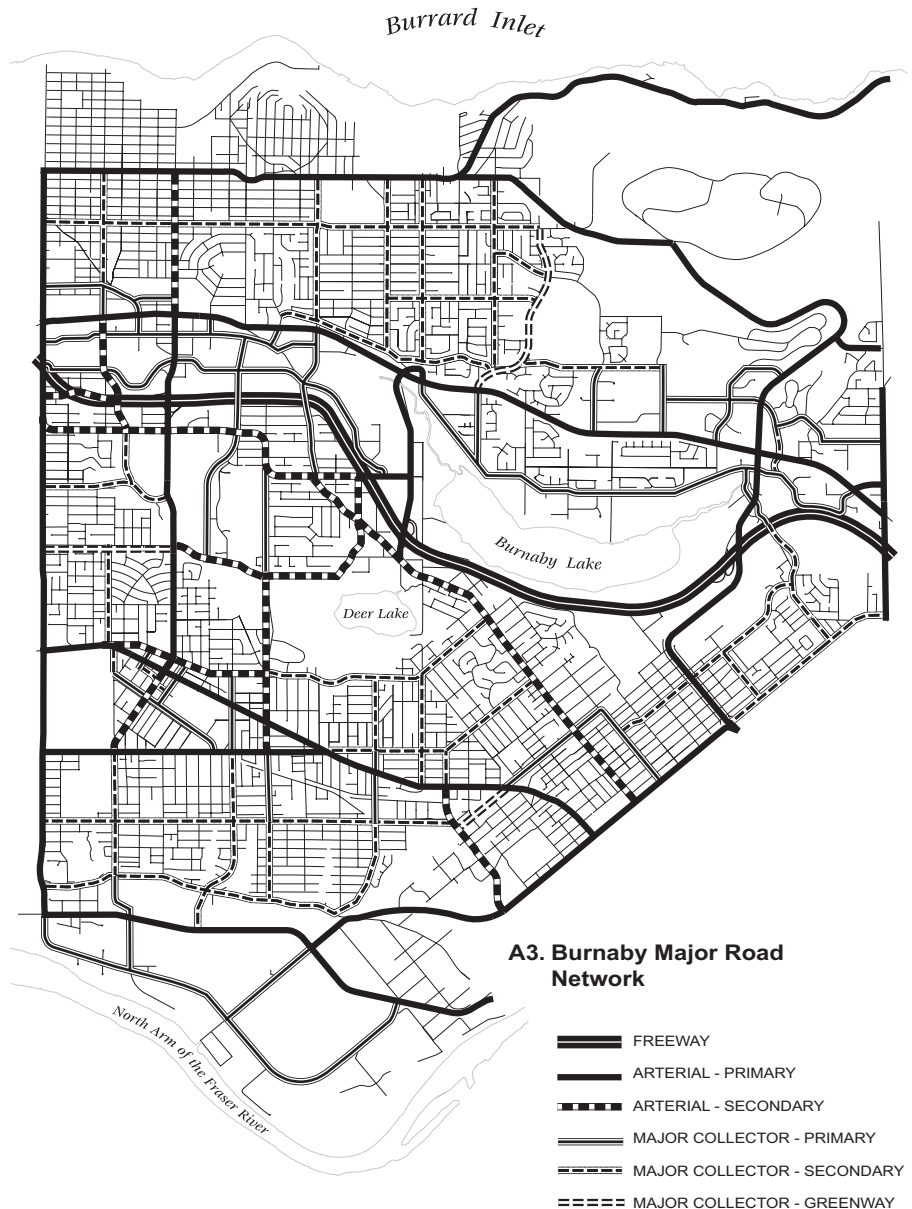
Action Program 1 Road System Supporting Policies

Policy 2

That a road network plan for the City be developed reflecting a hierarchical classification of roads and appropriate design standards.

Objectives

An efficiently functioning road system is essential both to provide mobility for private vehicles, transit buses, trucks, and bicycles, and to provide access to town centers, shopping, parks, and neighbourhoods throughout Burnaby. To meet these basic needs, the road system provides a range of different facilities emphasizing either mobility, or access to land uses. The road network hierarchy ranges from freeways and arterials (which emphasize mobility over providing access to adjacent land uses) to local residential and collector streets (which provide access to and within neighbourhoods in Burnaby). Reflecting the need to accommodate a multiplicity of modes the road network should make provision for private vehicles, trucks, buses, cycling, pedestrians, and possibly rapid transit on some corridors.



A3. Burnaby Major Road Network

	FREEWAY
	ARTERIAL - PRIMARY
	ARTERIAL - SECONDARY
	MAJOR COLLECTOR - PRIMARY
	MAJOR COLLECTOR - SECONDARY
	MAJOR COLLECTOR - GREENWAY

Actions

Section 8A defines the major road network for the City including a hierarchical classification of roads appropriate to their function and usage. Roads are to be developed in accordance with the design standards in Section 8A. Implementation would occur through a Long Range Transportation Program (15 years) and a Five Year Burnaby Transportation Program, both included as components of the Burnaby Transportation Plan.

**Action Program 2
High Occupancy
Vehicle (HOV) Lanes
Supporting Policies**

Policy 1

That the arterial road system in the City be designed to emphasize the movement of more people in fewer vehicles during peak periods.

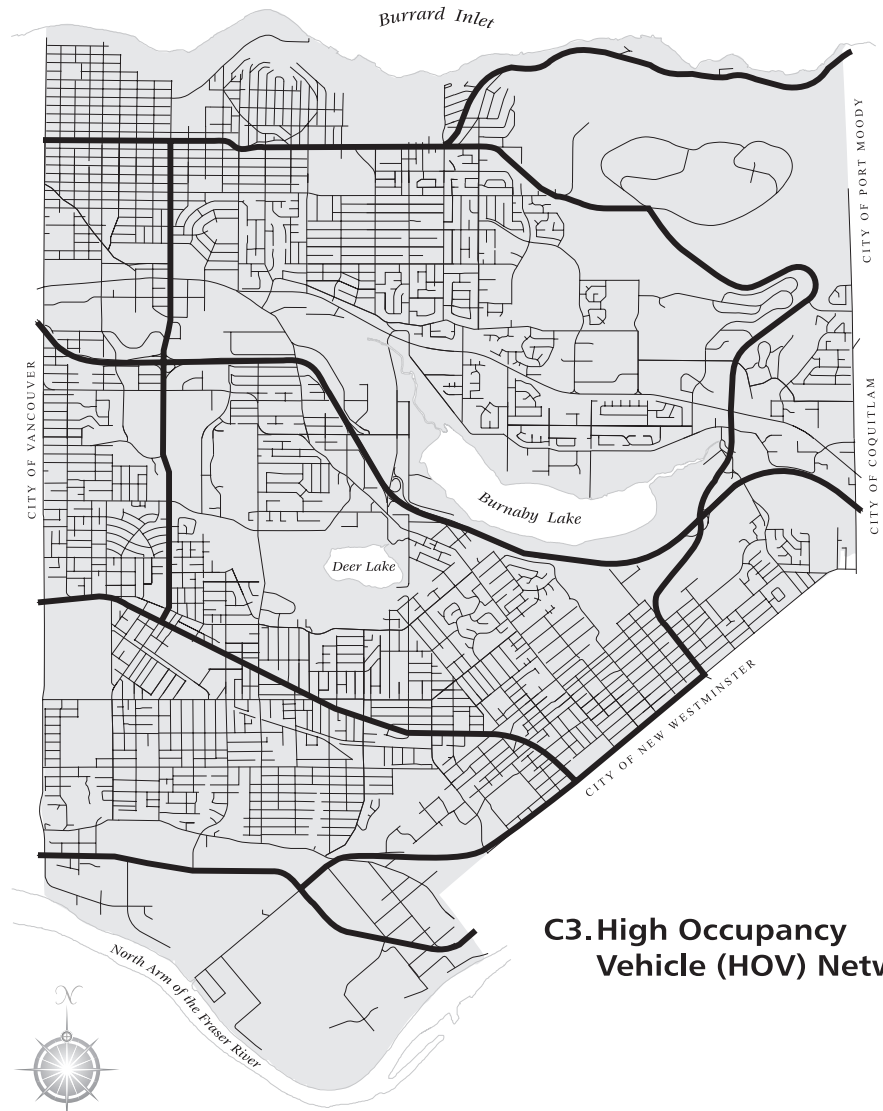
Policy 20

That the City in conjunction with the Translink develop a High Occupancy Vehicle Road Network which will designate roads for use by carpools and buses during peak periods.

Objectives

The provision of separate lanes on arterial roads in the City to accommodate High Occupancy Vehicles (HOV), including buses and carpools is essential to promote transit use and encourage commuters to carry more people in private vehicles. By reducing travel time for buses and carpools relative to the single occupant in a private vehicle, HOV lanes offer an additional incentive for commuters to use alternative modes during peak periods. High occupancy vehicle lanes also increase the efficiency of transit by yielding operating cost savings which can then be applied to increase bus service.

In Burnaby, HOV lanes are in place on the Barnet Highway and Hastings Street and Highway 1, and Willingdon between Sanderson and Highway 1. Other HOV lanes are currently in place in the form of reserved lanes for buses such as Highway 99 and Georgia Street.



**C3. High Occupancy
Vehicle (HOV) Network**

Actions

The Burnaby Transportation Plan proposes more extensive development of HOV lanes in the City of Burnaby primarily focusing on major east west travel corridors with regional continuity, as shown in Section 8C. Development of HOV lanes in these corridors would shift some of the expected growth in commuter trips by single occupant private vehicles to multi-occupant vehicles including buses and carpools.

**Action Program 3
Traffic Operations Plan
Supporting Policies**

Policy 3

That a traffic operations strategy be developed to maximize the efficient and safe movement of vehicles and pedestrians on existing roads in the City.

Objectives

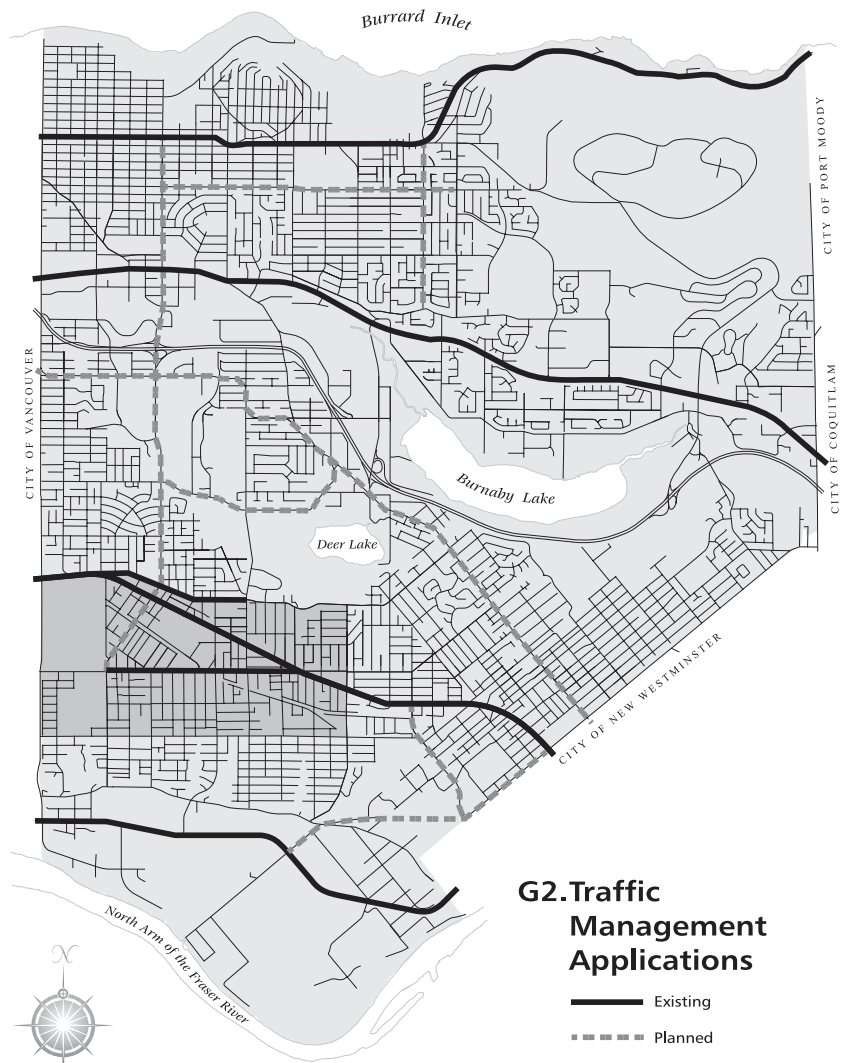
The assessment of regional travel demands forecast the need for major improvements to the road network particularly over the next thirty years from the north east sector of the Region into Burnaby and through Burnaby to Vancouver. As there is limited capacity to expand the road system to accommodate increased travel to meet demand by private vehicles, transit, and trucks, there is a need to ensure that existing road facilities are operating to maximum efficiency. Application of traffic signal technologies, etc., can increase the capacity and facilitate traffic flow on urban arterials. On freeways, ramp metering signals and other technologies can also be applied.

On city streets, a traffic operations strategy could be applied to address traffic issues within town centre areas and in local neighbourhoods. Signal coordination can control traffic flow and speeds and improve pedestrian safety.

Actions

Section 8G shows the provincial highways and City arterials which could be subject to application of more advanced signal systems.

Assist the Province in the development of a traffic operations plan for Provincial highways.



G2. Traffic Management Applications

- Existing
- - - - - Planned
- Area Traffic Operations Plan

Action Program 4 On-Street Parking Supporting Policies

Policy 4

That except in designated commercial areas the City ensure that the provision for parking on arterial and major collector streets in commercial and industrial areas during peak periods reflects the need to maximize mobility.

Objectives

The use of City streets for parking is a privilege which can readily be accorded to adjacent property owners on most streets in Burnaby at most times of the day. On major roads in the City of Burnaby, however, which are designed to emphasize providing mobility for people rather than access to adjacent land uses, the rights of the public for mobility should prevail over the parking privileges of adjacent property owners. On major roads during peak periods therefore, the City should retain and, if necessary, exercise the option of restricting on-street parking to facilitate the operation of buses in the curb lane and to provide additional traffic capacity.

On streets designated and finished to an arterial or major collector-primary standard, the City should restrict on-street parking during peak periods. Parking restrictions would only be introduced on the basis of an assessment of traffic conditions and with full notification and input from affected property owners. Some commercial areas could be considered for exemption from this on-street parking policy.



Actions

The development of arterial and major collector-primary streets for increased mobility will be undertaken "as needed" in response to the need to facilitate transit operations and respond to other traffic demands. Commercial areas which may be sensitive to the removal of on-street parking may be exempted from consideration for peak period parking prohibitions until sufficient off-street parking is developed.

Conduct initial review of arterial and major collector-primary streets to assess parking needs.

Implement peak period parking prohibitions as required.

Action Plan to Move Goods Efficiently

Action Program 5 Truck Network Supporting Policies

Policy 5

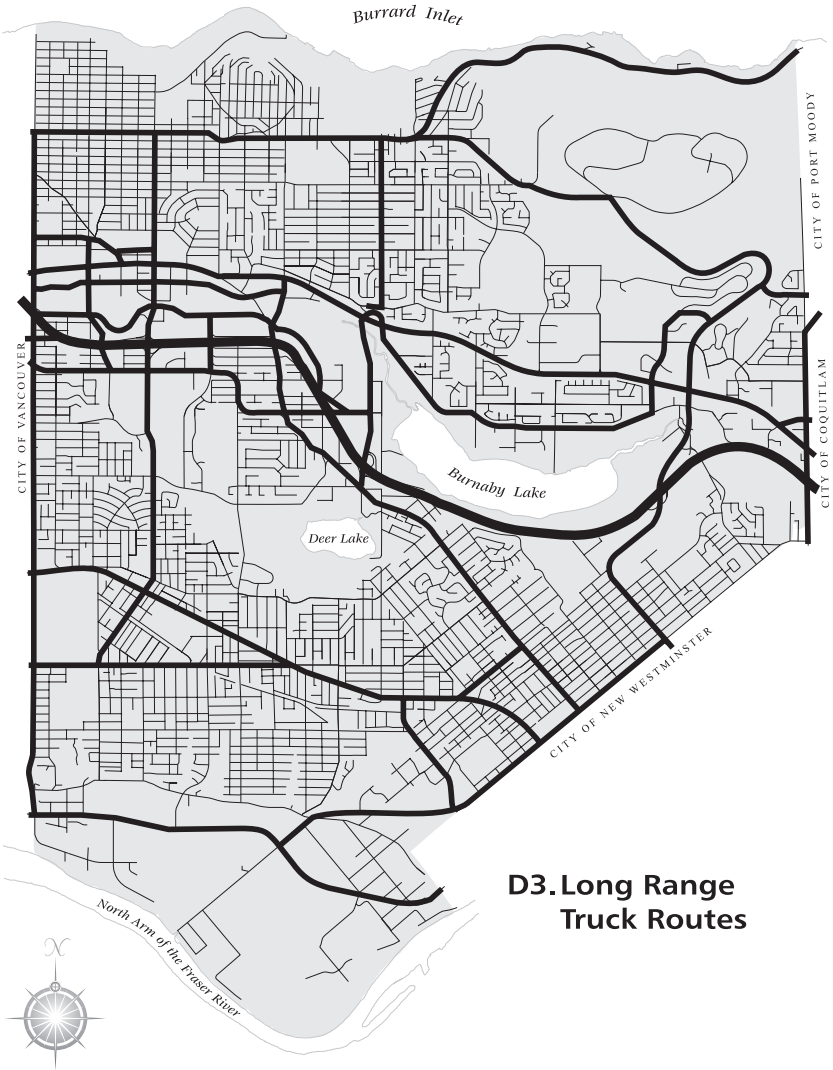
That the City accommodate truck movements by the development of a continuous and evenly spaced network of Arterial and Major Collector Primary Roads.

Objectives

The efficient movement of goods by truck is a key component of the effort to maintain a sound economy in the Region and the City of Burnaby. With its central location and access to major provincial highways, Burnaby accommodates a large proportion of truck trips in the Region. In addition, the industrial areas of the city, including the Central Valley, southeast Burnaby, and the Big Bend are major generators and attractors of both heavy and light truck trips.

Actions

The current truck route network, shown in Section 8D, comprising provincial highways and city streets, exhibits some discontinuity and uneven spacing throughout the City. However, the long range truck route network, also shown in Section 8D, incorporates existing and future arterial major collector roads to provide better connectivity across municipal boundaries and a more even spacing within the City. The long range truck network would be developed as new arterial roads are constructed in the future. To ensure these roads ad-



**D3. Long Range
Truck Routes**

equately accommodate trucks, appropriate design standards are defined in Section 8D.

Bring Burnaby truck route bylaw map into conformance with existing roads shown in long range truck network. The long range truck network would be developed over time as specific roads in the network are added or existing roads upgraded to appropriate standards for trucks.

Action Program 6
Hazardous Goods
 Supporting Policies

Policy 6

That truck routes be designed and improved to accommodate the transportation of hazardous goods in a safe manner.

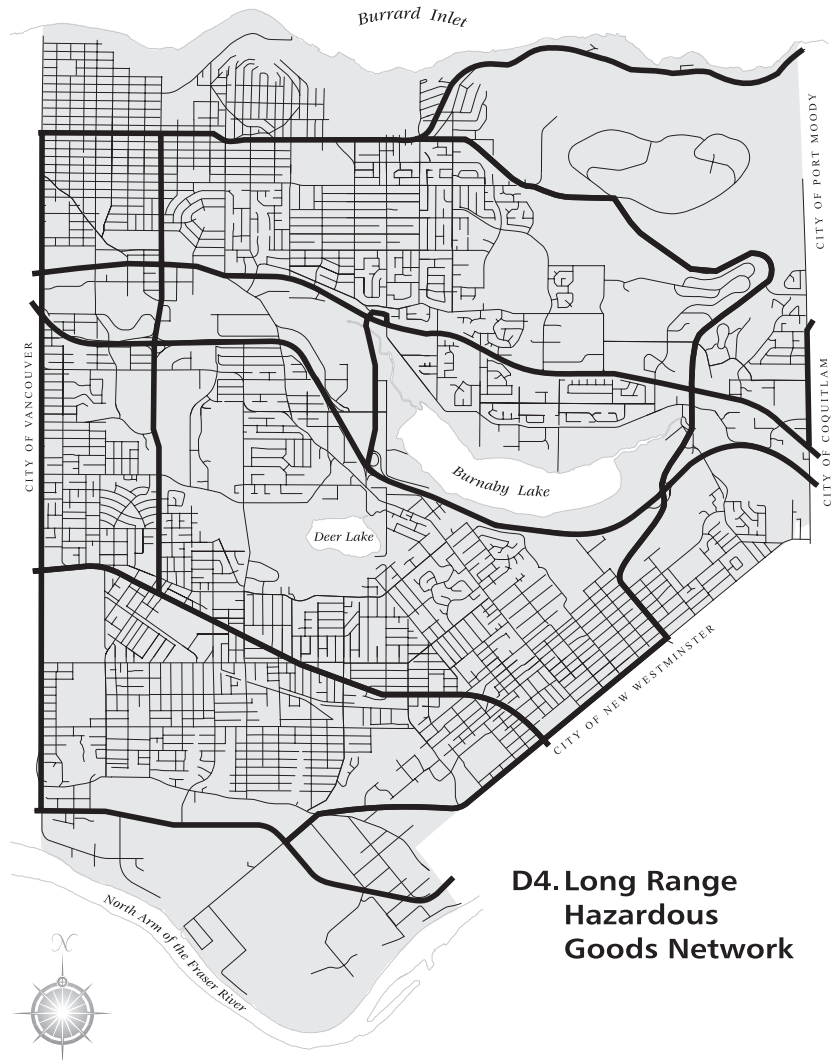
Objectives

As a major industrial centre of the Region and the focus of the Provincial highway system and rail network, the transportation system in Burnaby is required to accommodate the transport of hazardous goods. In this regard, it is important that the City, in its role as both a provider of transportation services and as a protector of the community interest, ensure that hazardous goods are transported by road in safe and efficient manner.

Actions

The Hazardous Goods Truck Network, shown in Section 8D4, reflects the need to ensure that transportation of dangerous goods avoid residential areas. The network also defines design standards to not only ensure the safe movement of hazardous goods, but also to ensure the availability of emergency equipment.

Develop appropriate signing and safety equipment standards for Hazardous Goods Network roads in conjunction with Ministry of Transportation and Highways and the GVRD.



**D4. Long Range
 Hazardous
 Goods Network**

**Action Program 7
Regional Planning
Supporting Policies**

Policy 9

That the City support enhanced responsibilities at the regional level to coordinate regional land use and transportation planning.

Policy 10

That the City support the development of a clearly defined and workable strategy to manage regional growth and transportation.

Objectives

Transportation in Burnaby will be impacted by the growth of population and employment in other municipalities in the Lower Mainland. The capability of the City of Burnaby to manage the transportation system within its boundaries will therefore require that Burnaby support a regional growth strategy and the development of appropriate means to implement the strategy. In view of the implications of regional growth for Burnaby, it is critical that the City take a leadership role at the regional level.

**Action Program 8
Town Centre
Transportation Plans
Supporting Policies**

Policy 11

That the City support the continued development of its town centre areas with the provision of rapid transit linking these town centre areas with other town centres and road facilities linking town centres with surrounding areas.

Policy 24

That town centre areas be developed as pedestrian oriented centres.

Objectives

The growth and development of the town centre areas in Burnaby, including Metrotown, Edmonds Town Centre, Brentwood Town Centre, and Lougheed Town Centre, are necessary

to provide opportunities for people to live close to work, shopping, recreation, etc. Linking these town centre areas by rapid transit allows residents of one town centre fast and convenient access to another town centre without using a private vehicle. In this way, the town centres program promotes a development strategy which fosters the use of alternate modes, including transit, carpool, cycling, and walking.

Actions

To provide a transportation system which supports town centers in Burnaby. The City has undertaken Town Centre Transportation Plans for Brentwood, Edmonds and Lougheed Town Centres. These transportation plans have been developed to define road, transit, cycling and pedestrian networks for each town centre area.



**Action Program 9
Rapid Transit and High
Occupancy Vehicle
(HOV Rights of Way)
Supporting Policies**

Policy 12

That the City work with the Province and Translink to reserve rights of way for high occupancy vehicle lanes and rapid transit.

Objectives

Rapid transit, like a road facility, must be developed with a sensitivity to the potential disruption to the community and the costs of property acquisition. Similar to the road network which is the basis to define right-of-way requirements for provincial highways and city streets in advance of development, it will be necessary to also define and reserve rapid transit rights of way. Reserving rights of way ensures that sufficient dedication and setback is acquired in conjunction with redevelopment to provide space for rapid transit and separation between the rapid transit line and adjacent development.

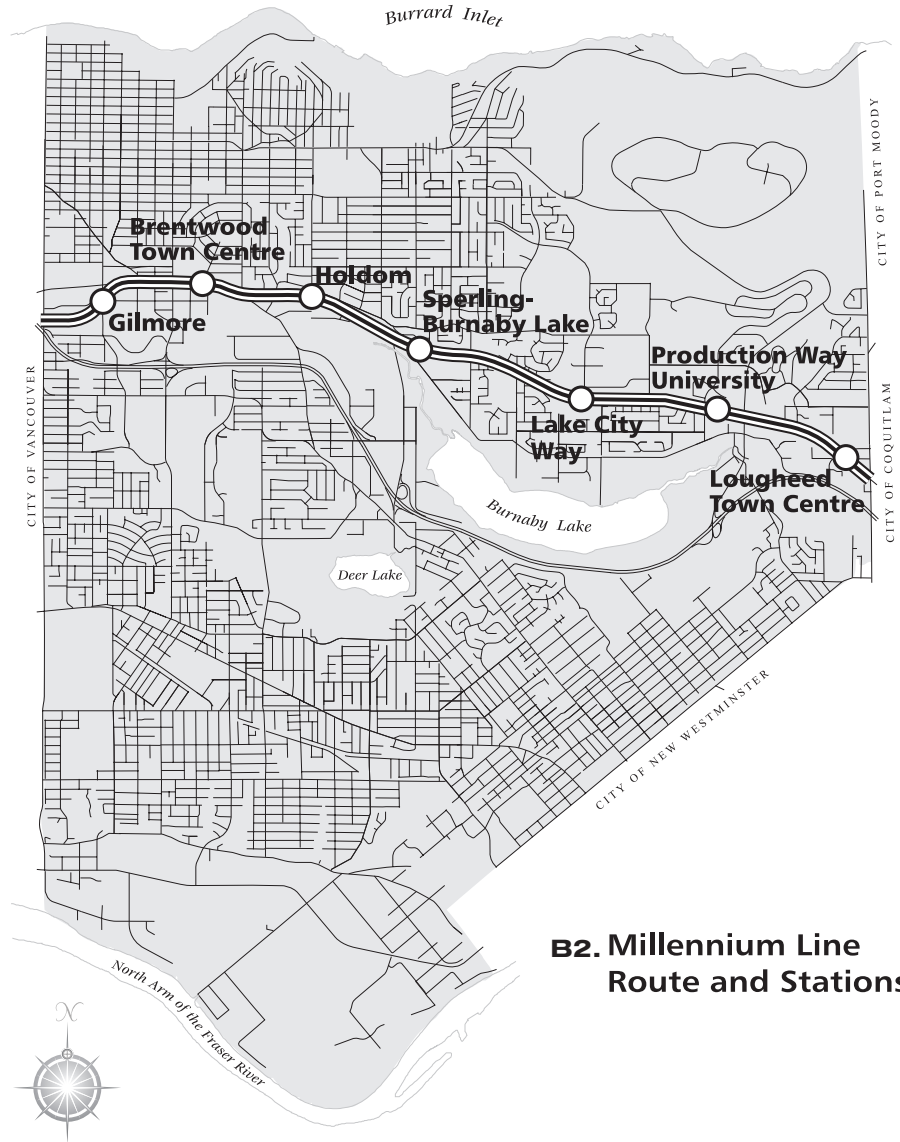
And as rapid transit stations typically have greater property requirements for rights of way and space for bus integration and vehicle access, station areas will also need to be identified in advance of major development.

Similarly, as the Burnaby Transportation Plan identifies the need for widening of Provincial highways to accommodate High Occupancy Vehicles (HOV's) during peak periods, additional right of way must be acquired for these facilities.

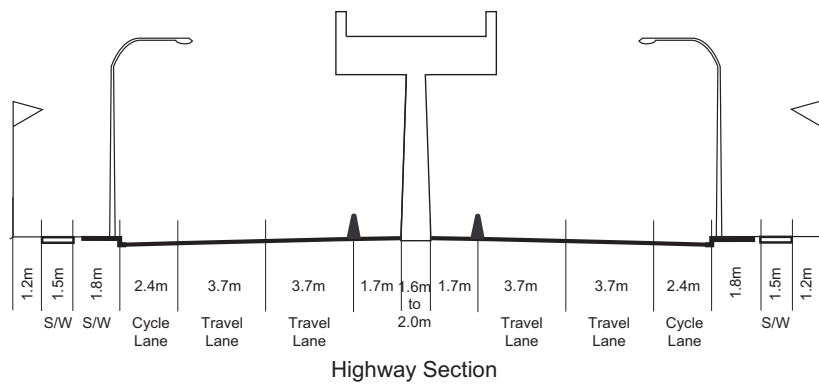
Actions

Section 8B defines a route and stations for a rapid transit line using the Lougheed Highway.

Continue the current process of reserving rights of way for rapid transit on Lougheed Highway based on the design concept noted in Section 8B3.



**B2. Millennium Line
Route and Stations**



**B3. Lougheed Highway Multi-Modal Corridor
Typical Cross Section**

Action Program 10
Station Area Development Plans Supporting Policies

Policy 13

That the City promote appropriate high density development along existing and proposed major transit routes.

Objectives

Rapid transit is a transportation mode designed to carry large volumes of people between major centers of activity in the community. To access a rapid transit line, people must either walk, take a bus or drive, and to complete their trip from transit to their destination they have the option of walking or taking a bus. For a commuter, the choice of whether to use rapid transit will largely be based on the comparative travel time from home to workplace by private vehicle or the combined travel time from home to rapid transit station, from station to station by rapid transit and from station to workplace. Clearly, the competitiveness of rapid transit versus private vehicle will depend on the proximity of residential origins and employment destinations within walking distance of rapid transit stations. This conclusion has been borne out by studies of cities worldwide which have shown that transit ridership increases with the density of development.

Actions

To ensure that development supports rapid transit, station area plans will be developed identifying the station area and defining the appropriate scale and type of development in each area.

Define station areas based on the preliminary alignment for the Millennium SkyTrain line.

Action Plan to Promote Alternative Modes of Transportation

Action Program 11
Transit Planning Supporting Policies

Policy 14

That the City develop an overall transit concept plan which provides efficient mobility to town centres within Burnaby and to major centres outside the City.

Objectives

As outlined in the Strategy for Transportation in Burnaby, transit must play a more important role in the future in accommodating commuter trips during peak periods and to provide local circulation within Burnaby.

The forecasts of regional travel, outlined in Section 3 "Outlook for Transportation in Burnaby", identified three major commuter travel demands to be recognized in the provision of transit facilities in Burnaby. The largest and fastest growing is the commuter movement which exerts the most pressure on the road network between the northeast sector (Coquitlam, Port Coquitlam, Port Moody) and Burnaby. As there is limited opportunity to provide sufficient road capacity to meet this demand, a transit alternative is critical in the corridor. Transit improvements in the northeast sector to Burnaby corridor must also accommodate the other major travel flows between Burnaby and Vancouver, and from the northeast sector through Burnaby to Vancouver.

Actions

Complete a preliminary design for the Lougheed Rapid Transit line including bus integration plan.

Develop transit improvements for South Burnaby, including improved service to Big Bend Area and the Edmonds Town Centre.

The Transit Concept Plan incorporates a rapid transit line from the northeast sector via the Lougheed Highway corridor to Vancouver. The Lougheed route for rapid transit provides a transit alternative to the private vehicle serving all these major commuter travel flows. The transit concept also emphasizes the provision of direct express service to downtown Vancouver and local service linking town centers, rapid transit stations, and other activity centers in the City.



Action Program 12
Transit Priority Measures
Supporting Policies

Policy 1

That the arterial road system be designed to emphasize the movement of more people in fewer vehicles during peak periods.

Policy 16

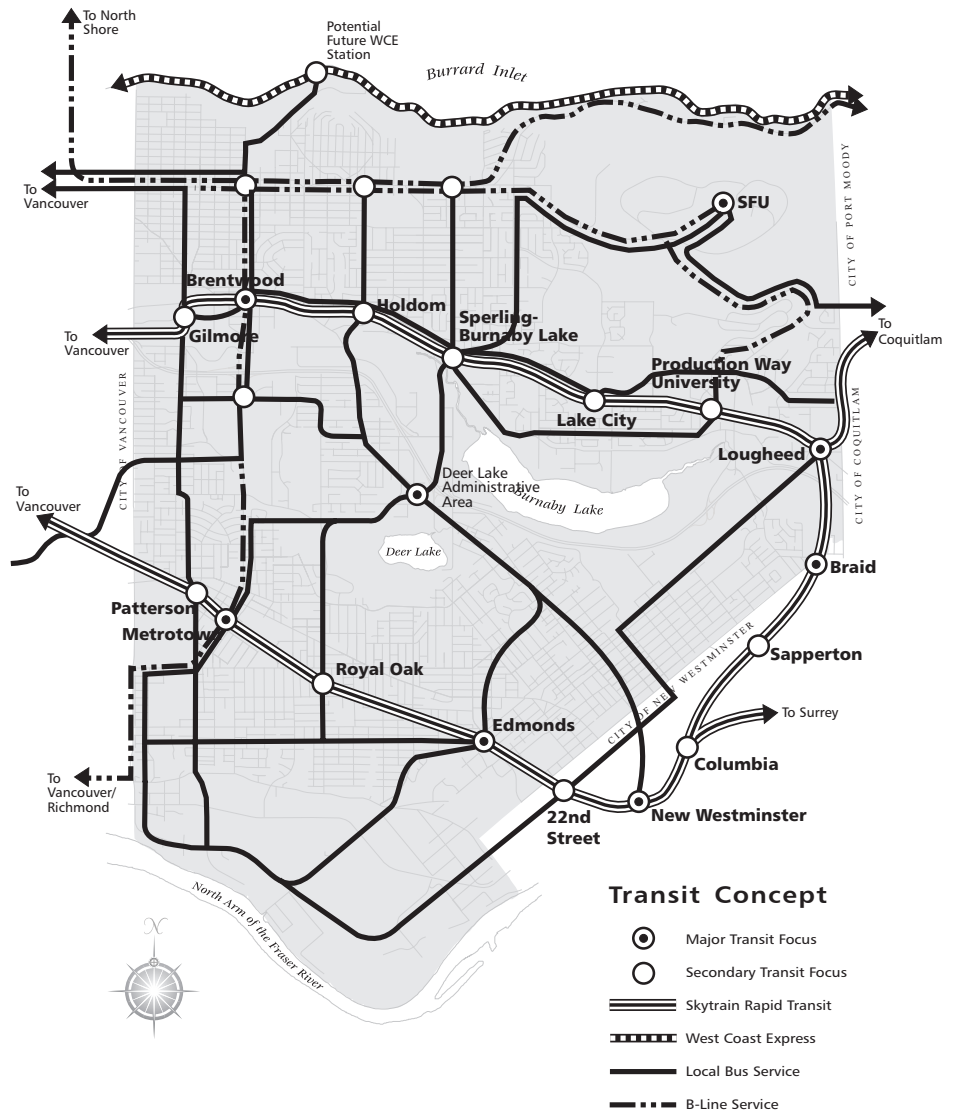
That the City ensure that land development and the road network are designed to facilitate transit.

Objectives

While SkyTrain offers a superior transit service which is competitive to the private vehicle, 80% of all transit trips are taken in buses operating on roads which are subject to increasing traffic congestion during peak periods. Transit Priority Measures enhance the attractiveness of transit by giving priority to buses to bypass traffic queues on the road system through the application of exclusive bus lanes, bus queue jumpers, bus priority signalization, parking lanes, etc. The application of these measures emphasize the need to give priority to the movement of people rather than the movement of vehicles.

Actions

The City will continue to work with TransLink to assess transit operations issues and identify required measures to facilitate bus movements.



Action Program 13 Park-Ride Facilities Supporting Policies

Policy 17

That the City support the development of appropriately located park-ride facilities to help direct through commuter trips to transit.

Objectives

The provision of park-ride facilities in Burnaby is an integral component of the strategy to increase the attractiveness of transit relative to the private vehicle. Park-ride offers more competitive travel times to attract more auto drivers to transit by eliminating the slower local bus connection to express bus services or to rapid transit.

Park-ride facilities must, however, be appropriately located to attract private vehicle commuters while avoiding undesirable impacts on the local street system and the community.

Actions

To attract private vehicle commuters and cyclists, park-ride facilities should be located adjacent to transit exchanges or rapid transit stations and provide secure bicycle storage. Efficient road access and a location away from residential areas is also important to minimize impacts on the community.

Undertake study of park-ride sites in conjunction with TransLink and the Ministry of Transportation and Highways.

Action Program 14 Employer Trip Reduction Programs Supporting Policies

Policy 18

That the City pursue the development of programs in Burnaby to encourage carpooling as a mode of travel during peak periods.

Objectives

Trip reduction programs, as enacted in many U.S. urban areas, place responsibility on employers to develop and implement trip reduction plans at their workplaces.

Trip reduction programs require employers to reduce the number of vehicles generated by a workplace through incentives to use alternative modes and encouragement of flexible working hours, telecommuting, etc. As part of an overall strategy to support commuting by carpool, transit and cycling, trip reduction programs can be implemented by local government through a cooperative agreement with employers within its jurisdiction or through the development review process.

Actions

Often implemented through local by-laws, trip reduction programs could require employers to submit plans to achieve appropriate reductions in trips by vehicles generated to and from their workplaces. A trip reduction bylaw could specify targets and establish fines for noncompliance.

Trip reduction programs could also be implemented in conjunction with development cost charges applied to developers to cover the costs of road and transit improvements necessary to serve their developments.

Coordinate with the Go Green program to assist existing major employers to create trip reduction programs at work sites or to enrol in Provincially sponsored programs.

Action Program 15 Carpooling Programs Supporting Policies

Policy 18

That the City pursue the development of programs in Burnaby to encourage carpooling as a mode of travel during peak periods.

Policy 19

That the City seek the support of other agencies in encouraging carpooling on a coordinated regional basis.

Objectives

Carpooling and vanpooling provide alternative transit modes to carry more people in fewer vehicles on the road network. Currently, only 10% of all private vehicles carry two or more passengers. Encouraging greater use of carpooling will involve programs to reduce travel times for carpools (eg. HOV lanes), provide financial disincentives to travel alone by car (eg. road tolls, parking charges), and increase convenience (eg. employer trip reduction programs).

Actions

The City can support and advance carpooling, in its role as a provider of transportation, through the development review process and parking bylaws. As a major employer the City of Burnaby has implemented carpooling programs for its employees. It is proposed that carpooling incentives be initiated and fostered on a city wide basis with TransLink and Province through implementation of Transportation Demand Management (TDM) Programs.

Action Program 16 Cycling Facilities Supporting Policies

Policy 21

That safe and convenient cycling facilities be provided as an alternative to the use of private vehicles.

Objectives

A primary objective of the Burnaby Transportation Plan is to encourage the use of cycling as an alternative mode of transportation. Cycling can be an attractive mode of transportation which can play a significant role in reducing vehicular use of the street system. Currently, it is estimated that cycling constitutes approximately 3% of all trips taken in Greater Vancouver. Further growth in cycling, however, will be dependent on measures to increase the safety and convenience of the mode.

Programs to encourage cycling should focus not only on providing safe cycling routes, but also appropriate support facilities at the destination end of the trip. The provision of cycle facilities including storage lockers, cycle racks, shower and changing facilities, etc., can dramatically increase the attractiveness of cycling for commuters wishing an environmentally appropriate and fitness-promoting mode of transportation but do not want to sacrifice safety and convenience.

Actions

Cycle storage lockers, and shower and changing facilities can be implemented through trip reduction programs and the development review process in a cooperative relationship with employees and developers.

Assist TransLink in implementing a cycle locker program for transit exchanges and SkyTrain stations. Incorporate the provision of locker room facilities in major office/industrial developments through the rezoning process.

Action Program 17 Cycle Roads Supporting Policies

Policy 22

That a Cycle Road network be prepared which ensures that arterial and major collector roads are designed to facilitate cycling.

Objectives

Providing a transportation system for the commuter cyclist requires streets which accommodate longer distance, higher speed travel to a specific location. Integration of cycling on an existing street requires the provision of wider curb lanes to provide an additional measure of safety and comfort to the cyclist with appropriate signage and facilities.

Actions

A Cycle Road is a arterial or major collector road designated for use by commuter cyclists. A continuous network of commuter cycle roads is shown in Section 8E2. Cycle Roads indicate highways and streets which will be developed to a wider standard, as indicated in Section 8E3, to accommodate cyclists in conjunction with road improvement programs undertaken by the Ministry of Transportation and Highways, TransLink, and the City of Burnaby.

Develop signing program for Cycle Roads.

Develop design plans for implementation of Alternate Cycle Routes.

**Action Program 18
Pedestrian Facilities
Supporting Policies**

Policy 23

That a safe and comfortable pedestrian facilities be provided on City roads and in street oriented commercial areas.

Policy 24

That town centre areas be developed as pedestrian-oriented centers.

Policy 25

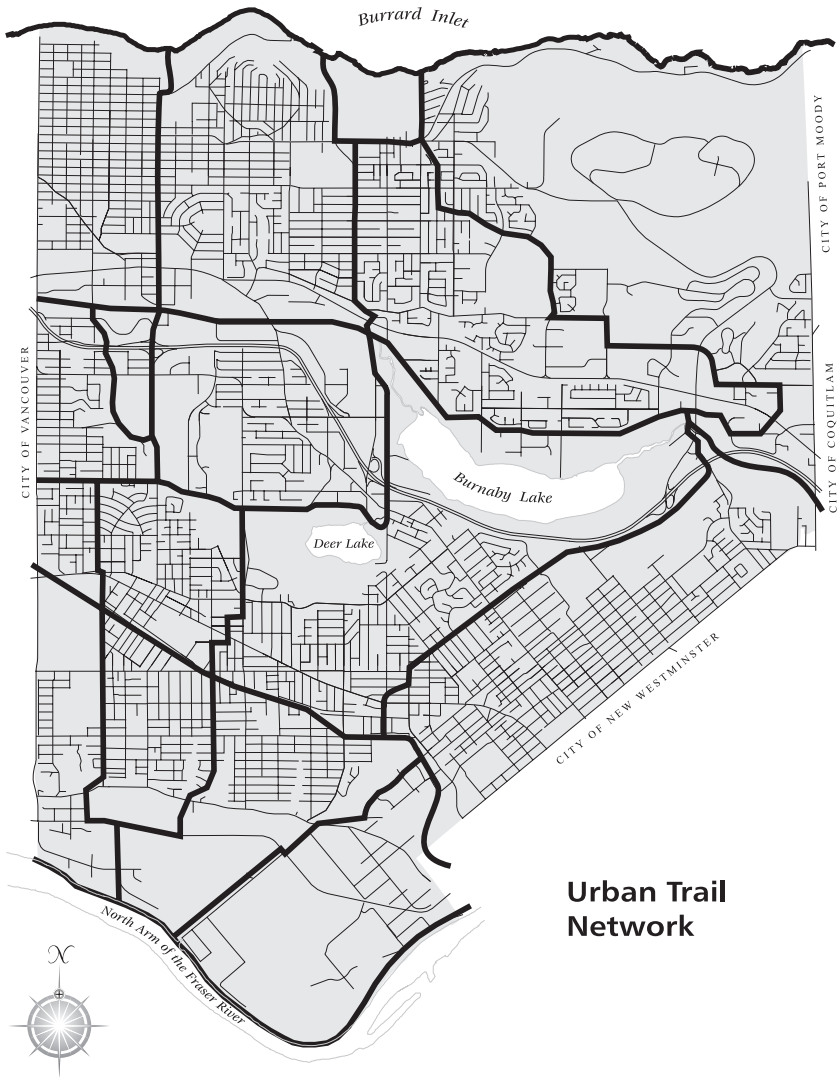
That the City develop pedestrian facilities with full access for the mobility impaired.

Objectives

Pedestrian facilities including sidewalks, overpasses, and pedestrian signals are required to support a number of other policies in the Burnaby Transportation Strategy.

As the majority of transit users access the transit system as pedestrians, the attractiveness of transit as an alternative mode is largely dependent on the safety and convenience provided to pedestrians in an urban environment. Walking can also compete as a primary mode of travel for short distance trips between home and workplace, and shopping or recreation in town centre areas where the density and diversity of activities support short distance trips. Currently, for example, almost half of all trips from the West End of Vancouver to downtown are walk trips. A safe pedestrian environment is also required for the protection of those with reduced access to an automobile, including schoolchildren, seniors, and the handicapped.

Based on these considerations, the provision of pedestrian facilities must be an integral part of the planning and design of street and highway improvements. Separated sidewalks



Urban Trail Network

are to be provided where feasible on all road improvements in the City while pedestrian crossings (signalized or grade separated) are to be provided where warranted.

Actions

Appropriate pedestrian facilities are to be implemented in conjunction with major road improvements, local improvement programs and the Urban Trail Program. The Urban Trail Network is shown in the Section 8E6. Design standards for pedestrian facilities are defined in Section 8F.



Action Plan to Protect Livability and the Environment

Action Program 19 Community Transportation Plans Supporting Policies

Policy 26

That the City develop a continuous arterial road system to attract through traffic away from local collector and local residential streets.

Policy 27

That the City develop Community Transportation Plans to reduce through traffic in residential neighbourhoods while maintaining access for local residents.

Objectives

A significant threat to the livability of neighbourhoods in Burnaby is traffic infiltration from congested arterial roads to local residential and local collector streets. Unwanted traffic onto residential streets could be addressed through a combination of measures to improve arterial roads and to discourage through traffic on neighbourhood streets. A Community Transportation Plan process is designed to involve residents of an area in developing plans to meet these objectives.

Often the development of a Community Transportation Plan will involve striking a balance between discouraging traffic through the use of "traffic calming" measures while maintain access to and from the neighbourhood for local residents. Projects included within a Community Transportation Plan can involve both major road improvements and "traffic calming" measures on local streets. Traffic calming measures would accommodate

cyclists, but would discourage use of local streets by private vehicle traffic.

Actions

Section 8H2 shows the areas developing or completing Community Transportation Plans. Protecting the livability of residential areas in Burnaby will require application of both approaches, as warranted by specific circumstances.

Action Program 20 Residential Development Plan Review Supporting Policies

Policy 28

That the City develop the local street network in new residential areas to discourage through traffic.

Objectives

To support the livability of neighbour-

hoods in Burnaby, the development of Community Plans for town centre areas and single family residential areas must recognize the issues of traffic infiltration in the street planning, layout, and design of new developments. The street system should incorporate a functional hierarchy ranging from local collector to local residential streets in a layout design to accommodate local traffic and discourage through traffic. Transportation Planning will be required to review community plans, rezonings and subdivisions with a view to anticipating potential problems and taking action to ensure traffic infiltration issues are addressed.

Actions

The review of residential subdivision plans will be undertaken through the development review process administered by the Approving Officer. Specific issues may be brought forward to the attention of the Traffic and Transportation Committee and Council.

Action Program 21 Arterial Road Treatments Supporting Policies

Policy 29

That arterial road improvements be designed to buffer adjacent residential areas from traffic noise and visual intrusion.

Objectives

The Major Road Network defined in the Burnaby Transportation Plan identifies a number of roads to be upgraded to arterial standards. As these roads would be developed to accommodate additional traffic with possible increased noise and visual intrusion, consideration of appropriate treatment to buffer adjacent residential areas is required.

Actions

Standards for arterial treatments are to be developed through the Environmental Review Process of the Burnaby State of the Environment Report (SOER).

Treatments would be incorporated in the design of arterial roads which abut residences, subject to the results of a public input process. In the case of Provincial highway improvements the City would work with the Ministry of Transportation and Highways to ensure neighbourhood impacts are addressed.

Action Program 22 Low and Zero Emission Motor Vehicles Supporting Policies

Policy 30

That the City promote the use of low emission and zero emission vehicles in Burnaby.

Policy 31

That the City support provincial and regional agencies in efforts to reduce vehicle emissions and improve the air quality in the Lower Mainland.

Objectives

Transportation sources are the major cause of air pollution in the Lower Mainland. Reducing emissions from transportation services, largely the private vehicle, could require either a reduction in the number of vehicles or trips or a reduction in the volume of pollutants produced by vehicles. Major advances have been made in the past fifteen years in technologies to make the internal combustion engine more efficient and cleaner burning so that fewer emissions are produced by each vehicle in the automobile fleet. Up to this point, however, these gains have been balanced by major increases in the numbers of vehicles, thus limiting the overall reduction in total emissions.

In the future, continuing improvements in engine technologies are expected to result in substantial reductions in engine emissions. Paralleling these developments will be the continued introduction of zero-emission electric powered vehicles in 2003 beginning with the California auto market.

Actions

As improvements in vehicle technology and monitoring of vehicle emissions are outside municipal jurisdiction, the City of Burnaby has a minor role in the reduction of motor vehicle emissions. Whenever and wherever possible, however, the City of Burnaby should position itself at the forefront in promoting low emission vehicles and adopting new emissions technology in city vehicles.

Action Program to Manage the Transportation System

Action Program 23 Municipal Relations Supporting Policies

Policy 33

That the City take the lead in seeking a coordinated position on transportation matters of relevance to Burnaby and adjacent municipalities.

Objectives

Transportation does not stop at municipal boundaries nor do the issues arising from the use of transportation facilities. Municipalities throughout the Lower Mainland face common transportation problems and can benefit from a sharing of information and concerns between adjacent municipalities.

The development of transportation facilities spanning municipal boundaries is often an issue which can be addressed through direct contact and sharing of ideas between respective Councils. As the City of Burnaby shares boundaries with other municipalities, and is the recipient of traffic from throughout the Region, it is important that the City maintain an ongoing dialogue with adjacent municipalities in areas of common concern in transportation.

Actions

It is suggested that the Traffic and Transportation Committee meet as necessary with its counterparts in other municipalities, as required, to discuss matters of common concern.

Action Program to Inform and Educate the Public

Action Program 24 Five Year Burnaby Transportation Program Supporting Policies

Policy 34

That a Five Year Burnaby Transportation Program, including a Status Report and Capital Budget, be prepared annually as part of the Annual Capital Budgeting process.

Objectives

Ongoing management of transportation in the City of Burnaby will require the approach for capital improvements to the transportation system. The Burnaby Transportation Plan defines a Strategy for Transportation and an Action Plan to implement the Strategy. The setting of capital spending priorities should be compatible with the policies of the Transportation Plan.

Actions

The Traffic and Transportation Committee would be responsible for review of a Five Year Burnaby Transportation Program submitted by staff. The Program would include a Status Report on Transportation in the City, a list of transportation priorities, and a capital budget for transportation.

Action Program 25 Public Information on Transportation Supporting Policies

Policy 36

That the City ensure that residents of Burnaby directly affected by arterial road improvements, major transit facilities, truck routes, traffic operation measures, and Community Transportation Plans are made aware of these plans on an ongoing basis.

Objectives

The Burnaby Transportation Plan has been developed through dialogue and input from the residents of Burnaby. This process, however, must not end with the completion of the Plan but must continue as an ongoing process throughout the implementation of the Plan. Residents of the City have a right to know about the transportation decisions which affect their lives and the City has an obligation to inform its residents. An informed public is better equipped to make a meaningful and helpful contribution to the development of transportation in the community.

Actions

Periodically, the City must take the initiative in informing affected residents of specific projects which directly affect them.

- Inform public of future transportation plans.
- Implement information programs as needed.



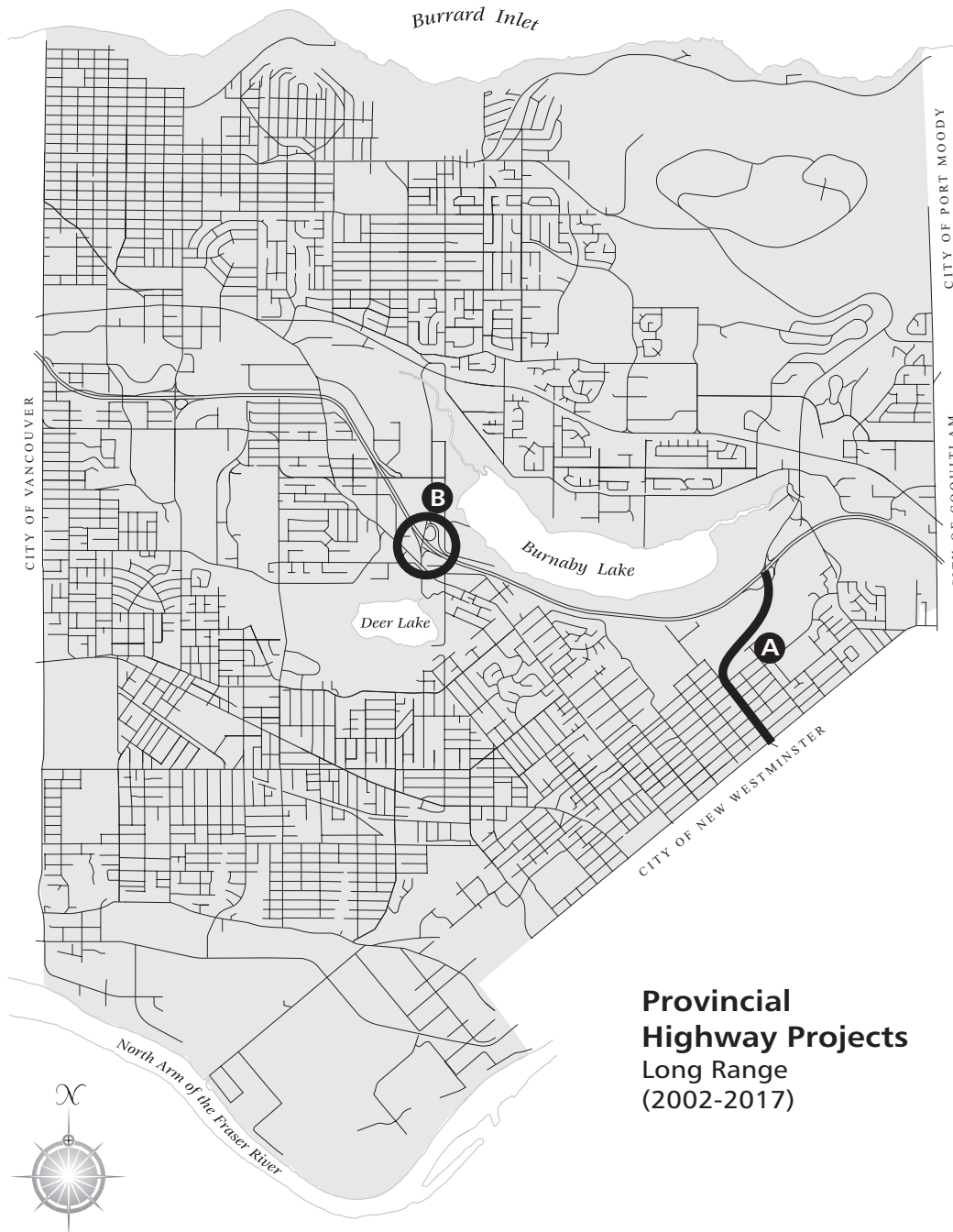




Burnaby Long Range Transportation Program to 2021

The Long Range Burnaby Transportation Program follows from the Action Plan for Transportation and identifies the improvements to the transportation system in Burnaby covering a the period to the year 2021 . The Long Range Program specifies the road improvements undertaken by Provincial transportation agencies, including the Ministry of Transportation, road and transit projects funded by TransLink (the Greater Vancouver Transportation Authority) and road and cycling projects undertaken by the City of Burnaby. It identifies a number of projects needed to advance towards completion of the major road network in Burnaby but is not intended as a long range roads capital program.





**Provincial
Highway Projects
Long Range
(2002-2017)**

Province/Translink Road and Transit Projects

The Ministry of Transportation and Highways is responsible for the planning and implementation of improvements to the provincial highway system within Burnaby, which (as a result of the devolution of most of the former provincial highway network in Greater Vancouver to TransLink) is currently limited to Highway 1 (the Trans-Canada Highway). The Province is also involved in the financing of new highway and rapid transit facilities in conjunction

with TransLink.

TransLink and the individual municipalities are responsible for capital improvements, maintenance and operation of those roads in Greater Vancouver designated as elements of the Major Roads Network (MRN). Improvements to the MRN in Burnaby would be undertaken by the City with cost sharing from TransLink.

**A Kensington/Sprott Intersection (2005-2010)
Provincial Project**

The intersection of Kensington Avenue and Sprott Street accommodates access to the Deer Lake Administrative and Cultural Centre, Highway 1 and the Burnaby Lake Sports Complex. Sprott from the freeway to Kensington and Kensington from the freeway to Sprott remain as provincial highways supporting the Kensington Interchange. Upgrading this intersection of two arterial roads would also facilitate transit movements on Kensington and incorporate an Urban Trail for cyclists and pedestrians.

As an important link in the truck route network reconstruction of this intersection would support Goal 2 Moving Goods Efficiently and, as a major link to the Sperling SkyTrain station, Goal 4 to Promote the Use of Alternate Modes.

**B Stormont-McBride Connector (2010-2015)
Province/TransLink Project**

During the original construction of Highway 1 in 1959, the Stormont interchange was constructed but the highway connections north to the Lougheed Highway and south to New Westminster and the Pattullo Bridge were not completed. The Stormont-McBride Connector would link Highway 1 to McBride Avenue in New Westminster. The Stormont-McBride Connector would be constructed by the Province, with some funding from TransLink, on right-of-way that has been acquired by the City of Burnaby along Newcombe Street from Tenth Avenue to Seventeenth Avenue. Council has emphasized that its support for the Connector is contingent on provincial agreement to cut and cover construction. No access between the Connector and the city street system would be provided between Tenth Avenue and the Stormont Interchange.

The Stormont-McBride Connector, would be constructed to a minimum four lane standard. By providing a direct connection from the Patullo Bridge to Highway 1, the Stormont-McBride Connector would divert traffic from the McBride Avenue/Tenth Avenue/ 6th Street/Canada Way corridor that is now used as a route to Highway 1 (via the Kensington Interchange) from south of the Fraser River. Forecasts of traffic volumes indicate that the Stormont McBride Connector could carry peak directional volumes of 2500 vehicles per hour upon completion. With the Connector in place, AM peak hour traffic volumes on Canada Way in 2006 could be reduced by approximately 30% while other City streets, including Cariboo Road and 16th Avenue, could experience reductions in AM peak

hour traffic of up to 70%.

The Stormont-McBride Connector is supportive of Goal 2, moving goods efficiently, and is a necessary component of the effort to protect the livability and environment of the community (Goal 5) by reducing traffic traveling through southeast Burnaby neighbourhoods.

**C Westminster Connector (2010-2015)
Province/City Project**

The Westminster Connector extends Westminster Avenue across an overpass of Highway 1 then via Delta Avenue to Dawson Street just south of Lougheed Highway. The Connector would be constructed as a Major Collector - Primary road from Canada Way to Dawson with an overpass of Highway 1. It would provide a continuous north/south route providing access to office/industrial areas both north and south of the freeway as a bypass to Willingdon Avenue and the Highway 1 interchange.

As a supplementary Major Collector-Primary road to Willingdon the major north/south arterial in Burnaby, the development of the Westminster Connector could reduce two way traffic volumes on Willingdon Avenue between Lougheed Highway and the freeway by approximately 800 vehicles per hour over what they would be in 2006 without the Connector.

The Westminster Connector supports Goal 2 Moving Goods Efficiently and Goal 4 Promoting Alternative Modes by accommodating transit and cycling .

**D Douglas-Holdom Connector (2010-2015)
Province/TransLink/City Project**

The Douglas-Holdom Connector extends Douglas Road at Norland north over the Burlington Northern/Santa Fe Rail Line to the Lougheed Highway at Holdom Avenue. This four lane arterial is needed to connect the developing Holdom Business Centre to South Burnaby

The Douglas-Holdom Connector supports Goal 2 Moving Goods Efficiently, Goal 3 Reducing the Need for Travel by supporting the development of the Holdom Business Centre as a major residential and employment destination and Goal 4 Promoting Alternative Modes by accommodating transit and cycling .

**E North East Sector Line (2011)
Province/TransLink**

TransLink is currently studying a number of technology and route alternatives for a rapid transit line from Burnaby to the Coquitlam Town Centre by 2011. The North East Sector Line is required to provide needed transit capacity to accommodate growth in travel from residences in the Northeast Sector to jobs in Burnaby. This heavy traffic flow is currently taxing the capacity of road corridors in the area such as North Road, Broadway Avenue in Burnaby and Clarke Road, Como Lake and Austin Avenues in Coquitlam.

City of Burnaby Projects

E Phillips Bainbridge Extension to Lougheed Highway (2005-2010)

An extension of Phillips Street via Bainbridge to the Lougheed Highway was identified in the 1980 Conceptual Transportation Plan as a Major Collector road required to provide access to the developing Montecito area. Lacking this access, local traffic to and from the Montecito area has placed increased traffic stress on Duthie Avenue to the detriment of the surrounding residential neighbourhood.

Phillips Avenue has been designated as a Major Collector-Greenway route reflecting its high standard of design with separated sidewalks and a landscaped raised median. The extension of Phillips will continue this standard and will add provision for cyclists through wider curb lanes.

The Phillips Extension supports Goal 4 Promoting Alternative Modes by accommodating cycling and Goal 5, Enhancing the Livability of Residential Neighbourhoods by accommodating traffic to and from Montecito on Phillips instead of Duthie Avenue.

F Eastlake Extension (2010-2015)

The extension of Eastlake from Bell Park to Government Street was identified in the Lougheed Town Centre Plan. The project would involve provision of a two lane road (without parking) approximately 7 metres wide with an urban trail on one side within the Burlington Northern Santa Fe rail right of way. The road would be constructed with minimal impact on the environment particularly the crossing of Stoney Creek.

The Eastlake Extension could be developed as a route for bus transit and cycling only. In this operational mode the extension of Eastlake would support Goal 4 Promoting Alternative Modes by accommodating more efficient transit circulation within the town centre and by transit and cycling to the Burnaby Mountain High School from the south half of the Town Centre.



Five Year Burnaby Transportation Program 2004-2008

2003 Status Report

The City of Burnaby completed a number of roads and cycling projects in 2003 which were part of the previous 2003-2007 Capital program including the following:

Southridge Drive completion to a finished four lane standard of the section from Southpoint Drive to the intersection of 20th Street and 10th Avenue.

Byrne Road (South of Marine Way) widening to a four lane standard continued with the provision of drainage and relocation of utilities from Fraser Park Drive to Wiggins

Gaglardi Way reconstructed and resurfaced from Broadway Avenue to the SFU Ring Road (including a bike lane)

Lougheed Highway and Barnet Highway - provided marked bike lanes in both directions



Major Roads Component 2004-2008

Criteria Used to Determine Priorities

The priority and the timing of projects in the Five Year Burnaby Transportation Program was developed by applying a number of criteria. In order to ensure that the projects included in the Burnaby Transportation Program reflect the directions in the Burnaby Transportation Plan, these criteria are based on the goals in the Strategy for Transportation (Section 4) as indicated below.

The Five Year Burnaby Transportation Program is developed by applying these criteria to assign a score for each potential project in the Five Year Burnaby Transportation Program. These scores determine the placement of projects in the program with the projects with the highest score in the earlier years of the Program and the project.

Goal

Move People Efficiently by Road

- Efficiency Criteria - improves the capability of the road network to carry more people.
- Traffic Safety Criteria - the degree to which the project promotes efficient and safe operation of traffic on City streets.

Goal

Moving Goods Efficiently

- Goods Movement Criteria - the degree to which the project enhances truck movements through the development of a continuous and evenly spaced road network.

Goal

Reducing the Need for Travel

- Town Centre Criteria - the degree to which the project accommodates the development of the four Burnaby Town Centres.
- Office/Industrial Criteria - the degree to which the project supports the economy of Burnaby and brings employment destinations closer to Burnaby residents.

Goal

Promoting Alternative Modes of Transportation

- Transit/HOV Criteria - the degree to which the project accommodates the transportation of people by transit or other high occupancy vehicles (HOV) such as carpools or van pools.
- Cycling/Pedestrian Criteria - the degree to which the project promotes travel by bicycle and accommodates pedestrians.

Goal

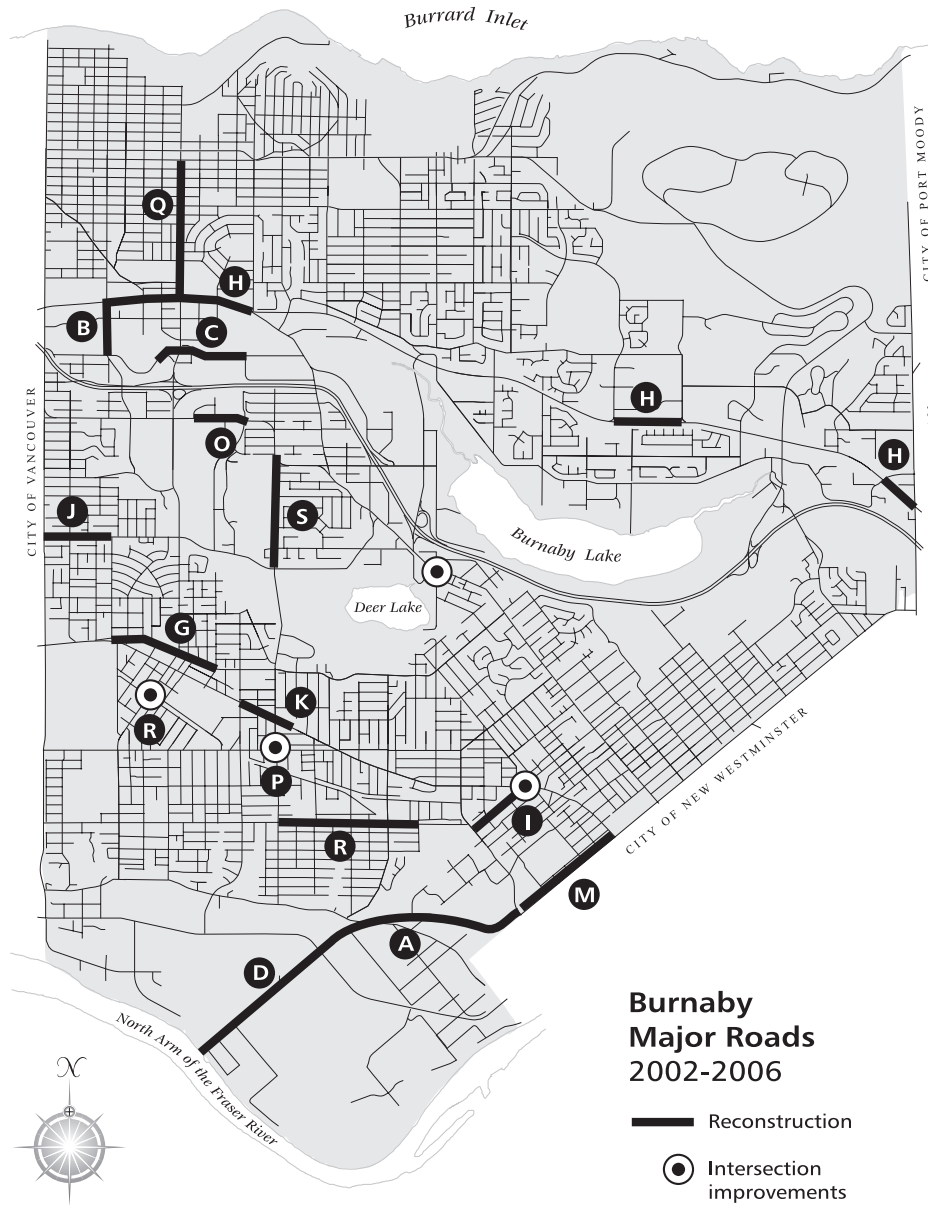
Protect the Environment and Livability of the Community

- Community Transportation Plans Criteria - the degree to which the project supports the intent of the Community Transportation Planning process to reduce traffic infiltration in residential areas.
- Network Continuity Criteria - the degree to which the project promotes the continuity of the major road network.

Goal

Managing the Transportation System

- Pavement Condition Criteria - the degree to which the project would involve rehabilitation of deteriorating pavements or renewal of utilities.



Projects

A Gaglardi Way Improvements
City-Translink Project 2004

Improvements to Gaglardi Way are proposed to address vehicle and pedestrian safety issues. Extension of the median barrier on Gaglardi Way to south of Broadway Avenue, provision of a southbound to westbound right turn lane at Broadway and enclosing the existing pedestrian overpass would improve driver safety. Since the development of the Burnaby Mountain Secondary School, a sidewalk on the east side of

Gaglardi Way from Broadway to the overpass of Eastlake Drive has been needed to accommodate students walking to and from the school

B Gilmore Avenue (Lougheed Highway to Still Creek Avenue)
City Project 2004

Reconstruction of Gilmore Avenue to a four-lane standard between Lougheed Highway and Still Creek Avenue is required to accommodate Gilmore SkyTrain Station and development in the Brentwood Town Centre area.

C Still Creek Avenue Extension
Developer Project 2004

The extension of Still Creek Drive (west of Willingdon) under the BN Rail overpass to connect with Eastbrook Parkway on the east side of Willingdon will be constructed in conjunction with the further development in the area. Completion of this road will improve safety by permitting the closure of Willingdon and Still Creek Avenue to left turn movements.



D Byrne Road (Fraser Park Drive to Wiggins)

City Project 2004

As one of the three major access routes, the reconstruction of Byrne Road is essential for the continued development of the Big Bend area. A phased program of reconstruction is currently underway.

E Central Boulevard (Willingdon Avenue to Kathleen Avenue)

Developer Funded 2004

The extension of Central Boulevard from Willingdon Avenue to Kathleen Avenue was identified as necessary to provide access to the retail precinct of Metrotown from the multi-family residential area west of Willingdon.

F Deer Lake Parkway

Greentree to Wayburne

(City Project 2005)

Royal Oak to west of Gilpin

(City Project 2006-2008)

Provision of a right turn lane on Deer Lake Parkway westbound to Wayburne Drive is required to accommodate this high volume of right turn movements. This project will be the precursor to the upgrading of Deer Lake Parkway to provide a four lane standard including increased provision for left turning movements at Royal Oak.

H Moscrop Street (Huxley to Smith)

City Project 2005

This section of Moscrop Street would be developed to a Major Collector - Greenway standard of design as an entrance to Burnaby and the Deer Lake Administrative and Cultural Complex. The Greenway standard incorporates one travel lane in each direction, two parking lanes, an Urban Trail and a landscaped median.

I Marine Way Byrne Road Intersection

City/Developer Project 2005/2006

Upgrading the intersection of Marine Way and Byrne Road is necessary to accommodate travel to/from future

commercial development in the vicinity of the intersection expected over the next ten years. The City, with co-funding from TransLink, would be responsible for upgrading the intersection to accommodate future traffic on Marine Way and on Byrne Road, while adjacent developers will be responsible for the provision of any new roads or traffic signals required to serve their development and the urban treatments such as curbs, Urban Trails, sidewalks, landscaping and street lighting.

J Cariboo Road (Gaglardi Way to east of Stormont Avenue)

City Project 2005/2006

Widening of Cariboo Road to improve vehicle safety and to accommodate increased access to and from the intersection at Gaglardi Way which leads to the Highway 1 on and off ramps. The Ministry of Transportation may be involved in the upgrading of the Gaglardi/Cariboo intersection.

K Tenth Avenue (20th Street to Kingsway)

City-Translink Project 2005/2006

Tenth Avenue, as a Secondary Arterial, is to be developed to a minimum four lane standard from 20th Street to McBride Avenue. Most of Tenth Avenue, except for the section between Griffiths Avenue and Kingsway, is currently four lanes. Completion of Southridge Drive has increased traffic volumes on Tenth Avenue, prompting the need to reconstruct this road to an arterial standard capable of accommodating this increased traffic more efficiently and safely with reduced impact on adjacent residents.

L Willingdon High Occupancy Vehicle Lanes (Brentlawn to Pender)

City/TransLink Project 2005/2006

To develop Willingdon as a transit corridor between Metrotown and North Vancouver this extension of the Willingdon HOV will reduce delays for buses accommodate the needs of

cyclists and pedestrians in this major north-south travel corridor in Burnaby and provide increased capacity for general traffic. The City has acquired property to provide left turn bays at key intersections for access into adjacent neighbourhood, to complete the planned Urban Trail along Willingdon and to provide increased width in the curb lane for cyclists

M North Fraser Way (Byrne Road to Tillicum)

City/Developer funded 2005/2006

Extension of North Fraser Way east of Byrne Road to Wiggins in conjunction with development in the eastern portion of the Big Bend area

N Canada Way Gilmore Intersection (City/Developer Project 2005)

Willingdon to Wayburne (City/Developer Project 2007/2008)

The development of office/industrial parks in the Canada Way/Willingdon area and the future development of BCIT will place increased traffic stress on Canada Way between Willingdon and Westminster. Plans for expansion of this section to a six-lane standard have been developed as a basis to acquire right-of-way and continue construction.

O Edmonds Street (16th Street to Griffiths Drive)

City/Developer funded 2005/2006

This project involves the development of this section of Edmonds to a Major Collector-Greenway standard which would include one travel lane and one parking lane in each direction with wider curb lanes for cyclists and a landscaped centre raised median.

P Kingsway Corridor Intersection Improvements

City/TransLink Projects 2006 to 2008

Based on a corridor and functional design study the City will be undertaking in 2005, a number of



intersections may be identified for upgrading including Royal Oak, Patterson and others. These works would be undertaken during the latter three years of the program.

Q Royal Oak Avenue (Deer Lake Parkway to Canada Way)
City Project 2006-2008

Royal Oak would be finished to a three to four lane standard to accommodate vehicles, cyclists and pedestrians more safely and efficiently.

R Dover Street (Royal Oak to Nelson)
City Project 2007/2008

The Oakland/Dover/Grange corridor is designated as a Secondary Arterial in the Burnaby Transportation Plan based on a basic design standard of four lanes including a raised median to channel traffic movements. Upgrading of this section of Dover Street would improve the safety of vehicle and pedestrian access to the Marlborough School.

S Phillips Bainbridge Connector
City Project 2007/2008

Design and construction of a Major Collector-Greenway connection from the south end of Phillips to Bainbridge at Broadway Avenue and south to the Lougheed Highway. This connection would provide access to/from the south to the Montecito area of Burnaby and would be developed to a greenway standard of design with two travel lanes two parking lanes , wider curb lanes for cyclists and a landscaped median similar to the existing section of Phillips Avenue.

T Imperial Street/Nelson Avenue Intersection
City Project 2008

Upgrading of this intersection will be necessary to serve the developing Metrotown area.

U Rumble Street (Gilley to Royal Oak)
City Project 2008

The Royal Oak Community Plan identified the need of the area to upgrade the unfinished section of Rumble between Gilley and Royal Oak to a final Major Collector - Greenway standard including two travel lanes, on-street parking, a cycle path and landscaped boulevards.

V Lougheed/Production Way Intersection
City Project 2008

This project will involve upgrading the intersection to add left turn capacity and finish the opposing left turn lanes on Lougheed Highway at Production Way/Brighton

Cycling Component 2004-2008

A Central Valley Greenway

The Central Valley Greenway (CVG) has been a goal for the City of Burnaby for the past quarter of a century. In its current proposed form, the Greenway would extend from False Creek in Vancouver to the Fraser River in New Westminster. The most significant section is in the Burnaby's Central Valley. Following the course of Still Creek as it crosses Boundary Road into Burnaby from Vancouver, the trail heads east to the shores of Burnaby Lake where it follows the shoreline to the headwaters of the Brunette River and then follows the Brunette River until it reaches North Road on its way to the Fraser River. Among the many advantages, this alinement offers a flat route in an otherwise hilly metropolis and a safe off-road cycling/pedestrian routing for the majority of its length.

The Central Valley Greenway would be funded by the Federal government, TransLink and the municipalities of Vancouver, Burnaby and New Westminster under the Urban

Transportation Showcase Program a program to encourage projects which would help meet the Kyoto Accord greenhouse gas emission standards.

B Gilmore Bikeway

Add text

C SE Burnaby Bikeway

Add text

D Burnaby Mtn Urban Trail

Add text

E Rivers lakes and Mountains Urban Trail

Add text

Any Other Bikeways or Urban Trails 2004 to 2008?







Transportation Networks

- A Road Network**
- B Transit System**
- C High Occupancy Vehicle Network**
- D Truck Routes**
- E Bike Routes**
- F Pedestrian Network**
- G Traffic Operations Measures**
- H Community Transportation Plans**



Road Network

A1. Road Network Concept

- A1. Road Network Concept
- A2. Road Network Design Standards and Classification
- A3. Burnaby Major Roads Network
- A4. Burnaby Minor Roads - Local Collectors
- A5. Translink Major Roads Network (MRN)

The road network in the City of Burnaby is based on a hierarchy of streets differing in function, traffic service, land access, traffic volumes and provision for on-street parking. The road network includes both Major Roads and Minor Roads under the jurisdiction of the City of Burnaby including the following road classifications:

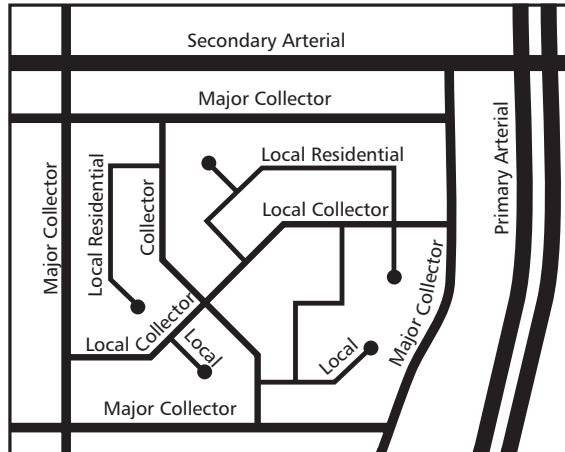
Burnaby Major Roads (Section A3)

- Freeway
- Arterial Primary
- Arterial Secondary
- Major Collector - Primary
- Major Collector - Greenway
- Major Collector - Secondary

Burnaby Minor Roads (Section A4)

- Local Collector
- Local Residential

Designated Burnaby Major Roads (Section A5) which perform a regional travel function are included by TransLink in the TransLink Major Roads Network (MRN). The TransLink MRN generally includes all Burnaby roads classified as Arterial-Primary or Arterial-Secondary. MRN roads are eligible for TransLink funding of capital and maintenance costs.



A.2 Road Network Design Standards

Classification	Minimum Right-of-way Width	Minimum Pavement Width	Minimum Travel Lanes	Maximum Grade	Design Speed (kph)
Local Residential Collector	20m	8.5m	1	12%	Up to 50 50
	20m	11.0m	2	12%	
Major Collector	Secondary	11.0m	2	12%	50
	Greenway	26.2m	2	12%	50
	Primary	23.2m	4	12%	50
Arterial	Secondary	18.3m	4	10%	60
	Primary	25.6m	6	8%	70
Freeway	Varies according to design			8%	90 minimum

*includes raised median

A2. Road Network Classification

Local Street

Local Residential

- **Function**
 - To provide direct access to individual residential properties.
- **Traffic Service**
 - Primarily carries traffic with an origin or destination along its length.
 - Buses sometimes permitted.
 - Large trucks not permitted.
- **Land Access**
 - Direct access permitted to all abutting properties greater than 12m in frontage.
- **Traffic Volume**
 - Less than 3,000 vehicles per day.
- **On-Street Parking**
 - Permitted at all times.

Local Collector

- **Function**
 - To provide access to and from a residential area.
- **Traffic Service**
 - Carries traffic between Local Residential streets and Major Roads.
 - Buses sometimes permitted.
 - Large trucks not permitted.
- **Land Access**
 - Direct access permitted to all abutting properties greater than 12m in width.
- **Traffic Volume**
 - 1,000 - 5,000 vehicles per day.
- **On-Street Parking**
 - Permitted at all times.

Major Collector - Secondary

- **Function**
 - To provide mobility and access between single family residential areas and major activity centres in the City.
- **Traffic Service**
 - Carries traffic between Minor Roads and Arterial streets.
 - Accommodates up to 50% non-local traffic
- **Land Access**
 - Primarily serves abutting single family residential areas.

- Direct access should not be permitted except in circumstances where rear access is not available.
- Buses permitted.
- Large trucks sometimes permitted.
- **Traffic Volume**
 - 5,000 - 12,000 vehicles per day.
- **On-Street Parking**
 - Permitted on both sides of the street at all times.

Major Collector - Greenway

- **Function**
 - To provide mobility and access as "entrance ways" to Town Centres and to the Deer Lake Civic Centre incorporating an enhanced standard of design and provision for cyclists and pedestrians.
- **Traffic Service**
 - Carries traffic from local streets to arterial streets.
 - Accommodates up to 50% non-local traffic.
- **Land Access**
 - Right turn only access except at intersections.
 - Direct access should not be permitted except in circumstances where rear access is not available.
 - Buses permitted.
 - Large trucks not permitted.
- **Traffic Volume**
 - 5,000 - 12,000 vehicles per day.
- **On-Street Parking**
 - Permitted on both sides of the street at all times.

Major Collector - Primary

- **Function**
 - To provide mobility and access between major industrial, commercial and high density residential areas and major activity centres.
- **Traffic Service**
 - Carries traffic between local streets and arterial streets.
- **Land Access**
 - Primarily serves commercial, industrial and high density residential areas.
 - Direct access can be permitted but should be consolidated.
 - Buses permitted.

- Large trucks usually permitted.
- **Traffic Volumes**
 - 5,000 - 20,000 vehicles per day.
- **On-Street Parking**
 - May be prohibited during peak periods or at other times depending on traffic demands.

Arterial

Arterial - Secondary

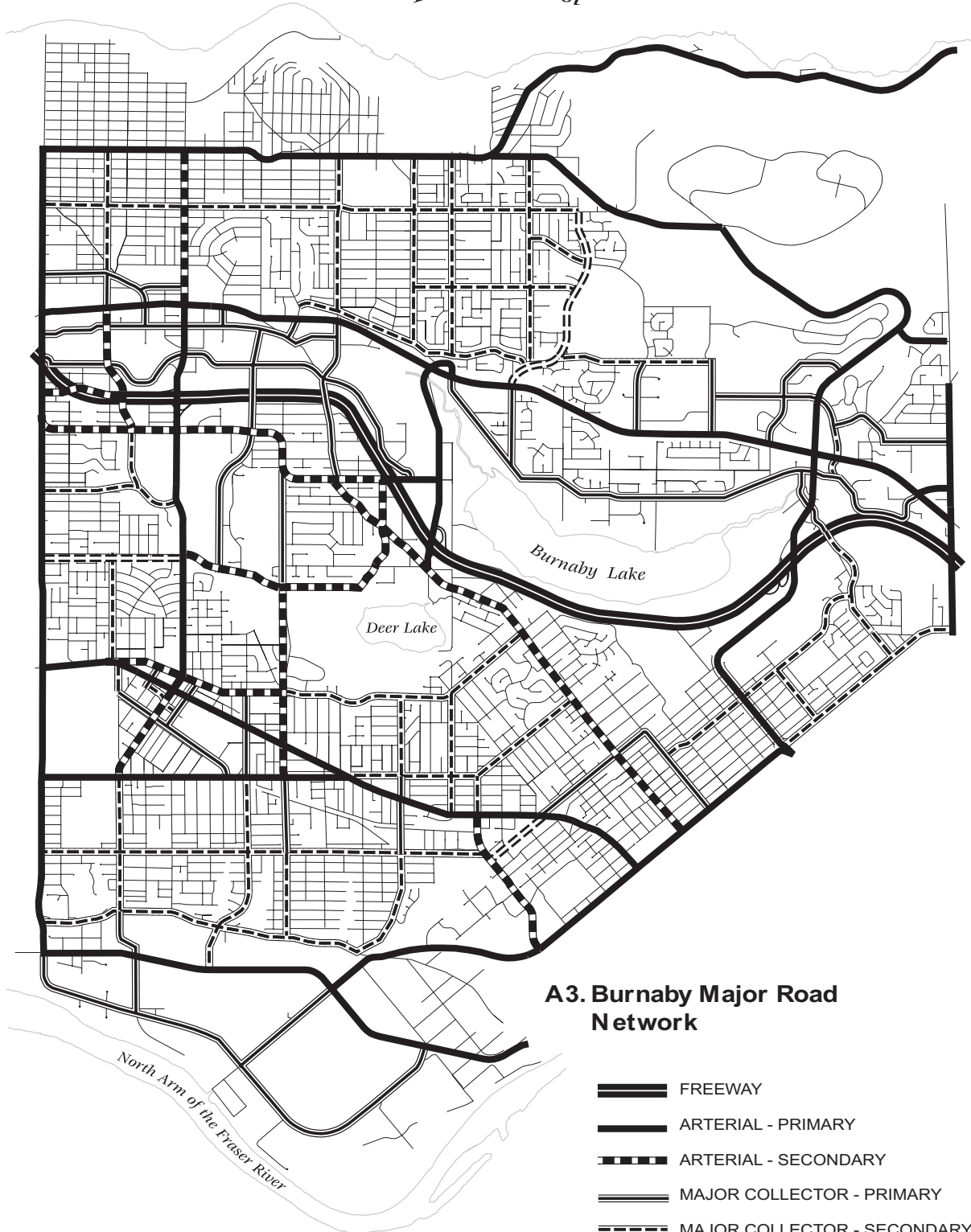
- **Function**
 - To provide mobility between major activity centres in the City.
- **Traffic Service**
 - Carries inter-municipal and local traffic between Major Roads and freeways.
 - Primarily accommodates non-local traffic.
 - Large trucks and Buses permitted.
- **Land Access**
 - No direct access to abutting land uses except where consolidated to large sites.
 - Right turn only access where permitted.
- **Traffic Volume**
 - 12,000 - 40,000 vehicles per day.
- **On-Street Parking**
 - Prohibited during peak periods and at other times depending on traffic demands.

Arterial - Primary







- **Function**
 - To provide mobility for traffic through the City and between Town Centres.
- **Traffic Service**
 - Carries inter-regional and inter-municipal traffic
 - Primarily accommodates non-local traffic.
 - Buses and large trucks permitted.
- **Land Access**
 - No direct access to abutting land uses except where consolidated to large sites.
 - Right turn only access where permitted.
 - Access to be accommodated by an auxiliary traffic lane.
- **Traffic Volume**
 - 20,000 - 60,000 vehicles per day
- **On-Street Parking**
 - Prohibited except in emergencies.

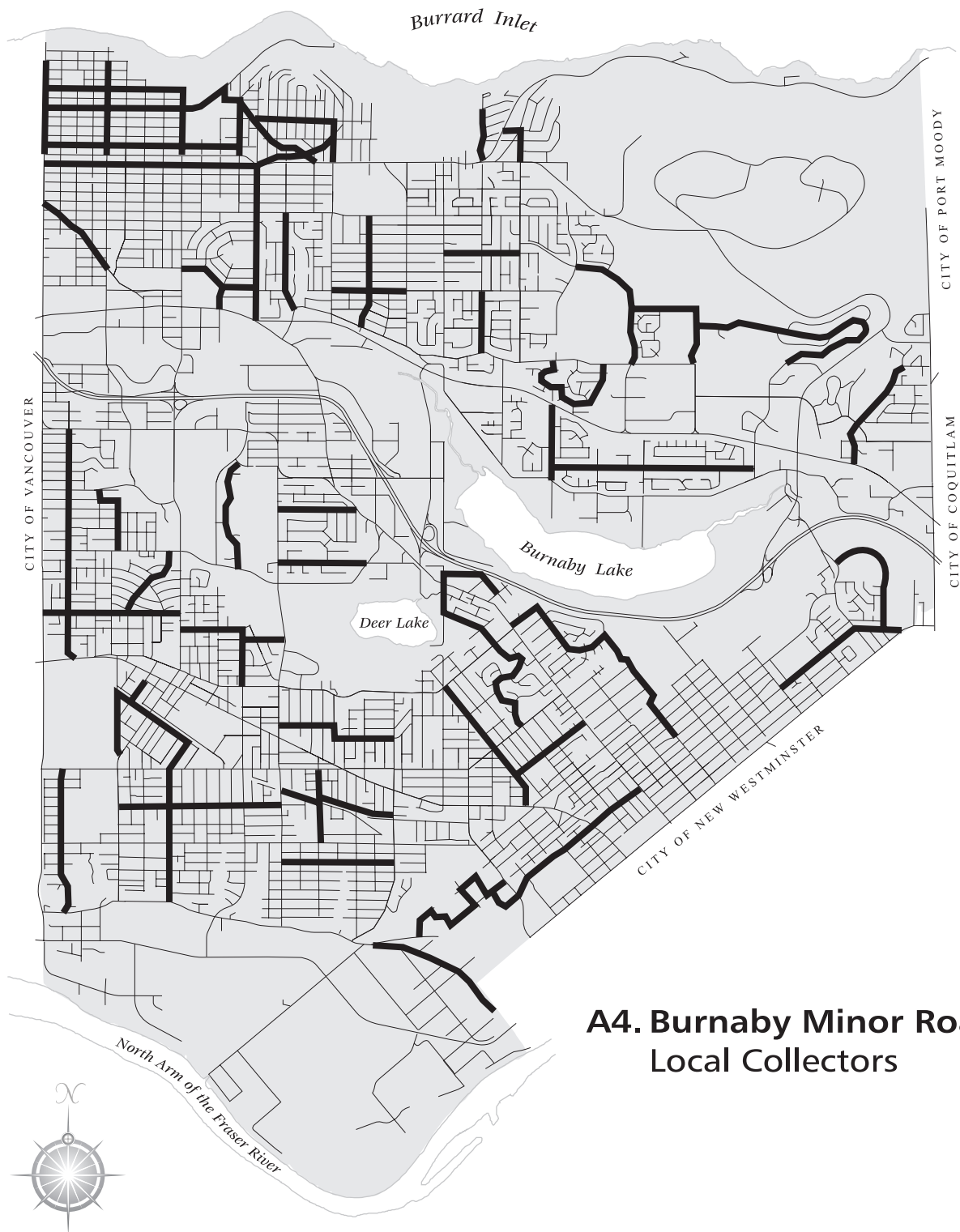


Burrard Inlet

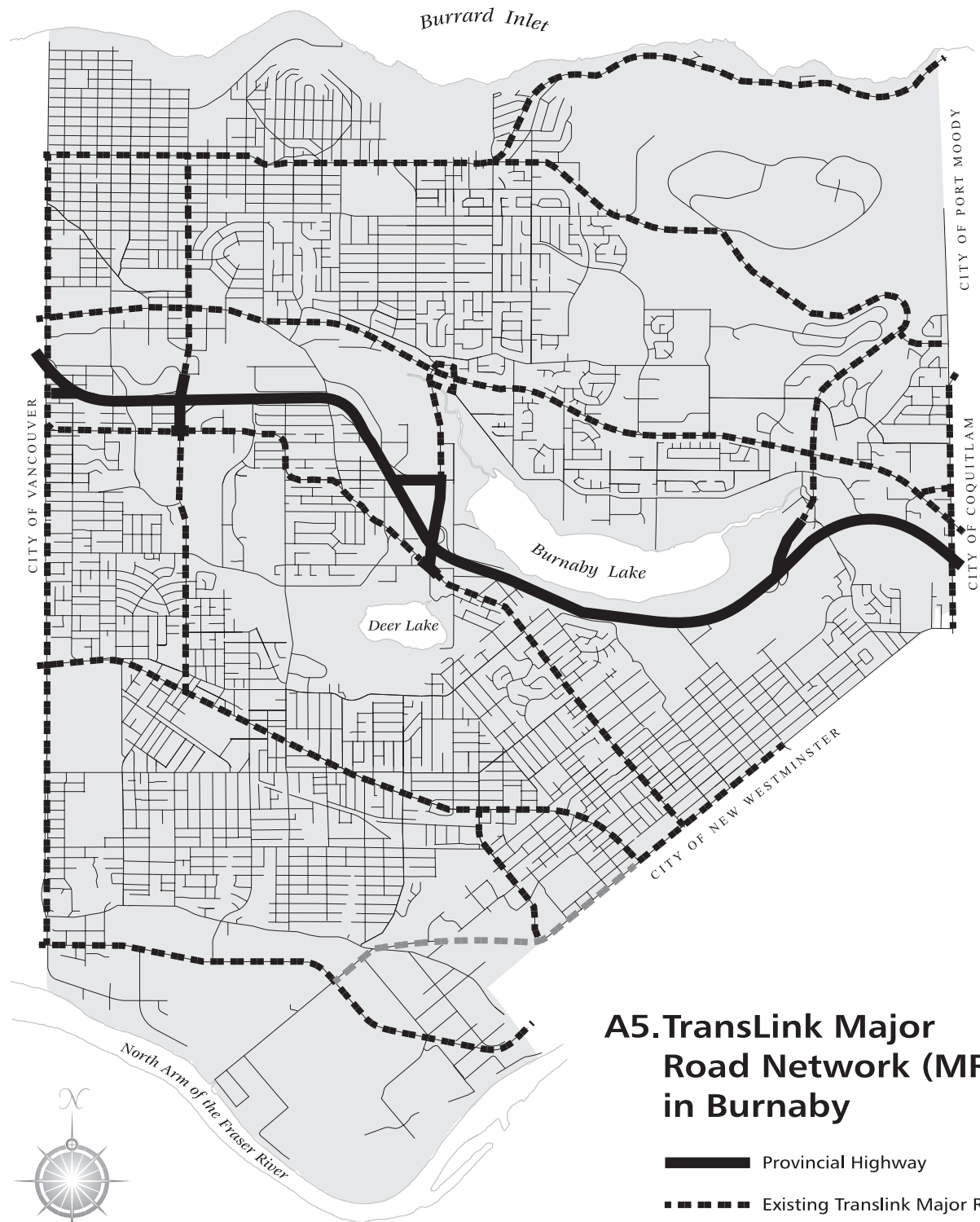


A3. Burnaby Major Road Network

-  FREEWAY
-  ARTERIAL - PRIMARY
-  ARTERIAL - SECONDARY
-  MAJOR COLLECTOR - PRIMARY
-  MAJOR COLLECTOR - SECONDARY
-  MAJOR COLLECTOR - GREENWAY



A4. Burnaby Minor Roads Local Collectors



A5. TransLink Major Road Network (MRN) in Burnaby

- Provincial Highway
- - - - -** Existing Translink Major Road
- · · · ·** Future Translink Major Road

- B1. Transit System Concept
- B2. Millennium Line Route and Stations
- B3. Lougheed Highway Multi Modal Corridor

Transit System

B1. Transit System Concept

The transit system in the City of Burnaby is based on the concept of a family of fixed route transit

services performing different functions.

Local Bus Services

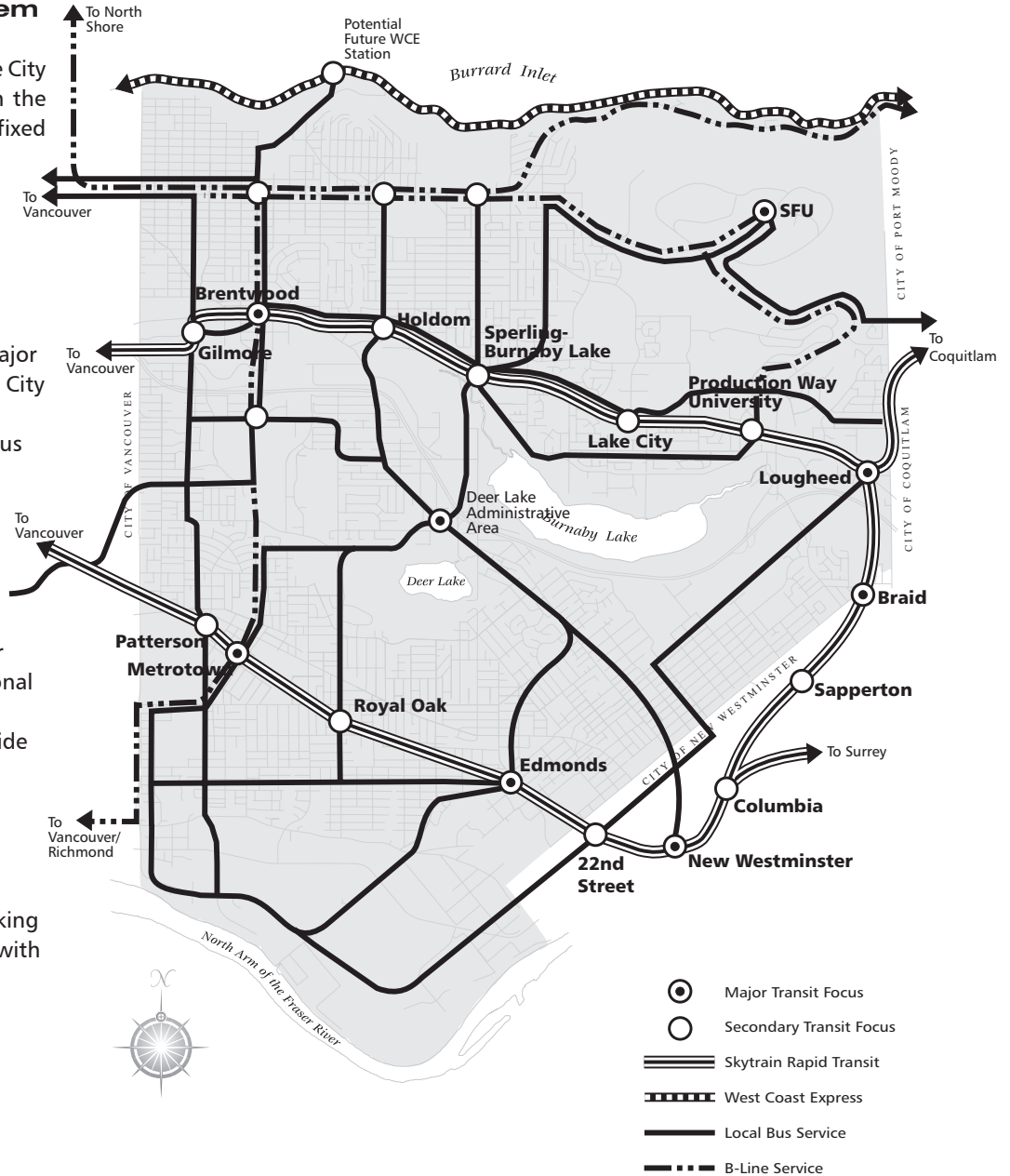
Bus routes which link neighbourhoods and major activity centres within a City and provide transfer connections to B-Line Bus Services and SkyTrain.

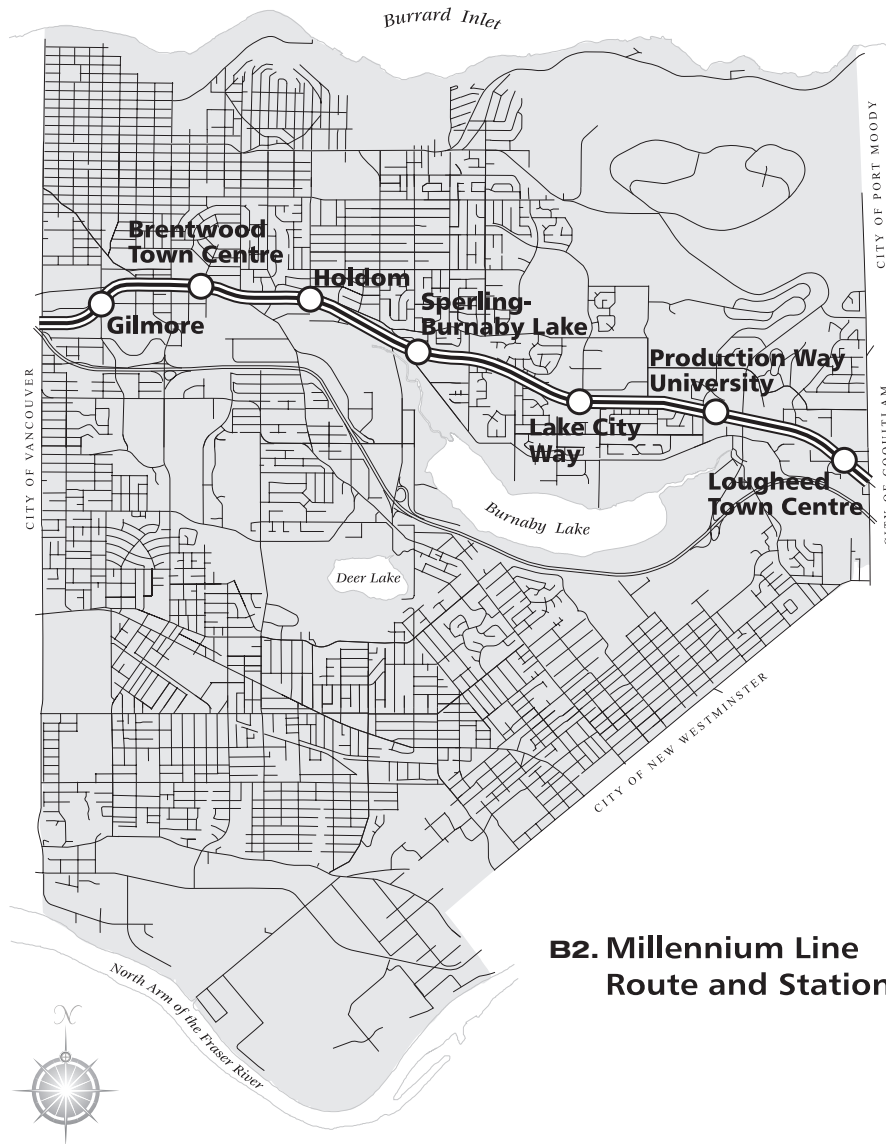
B-Line Services

Limited stop higher-capacity bus service linking Burnaby Town Centres and other major activity centres to Regional Town Centres in other municipalities and provide transfer connections to other B-Line Routes or SkyTrain.

SkyTrain

Rapid Transit service linking Regional Town Centres with Burnaby Town Centres.





B2. Millennium Line Route and Stations

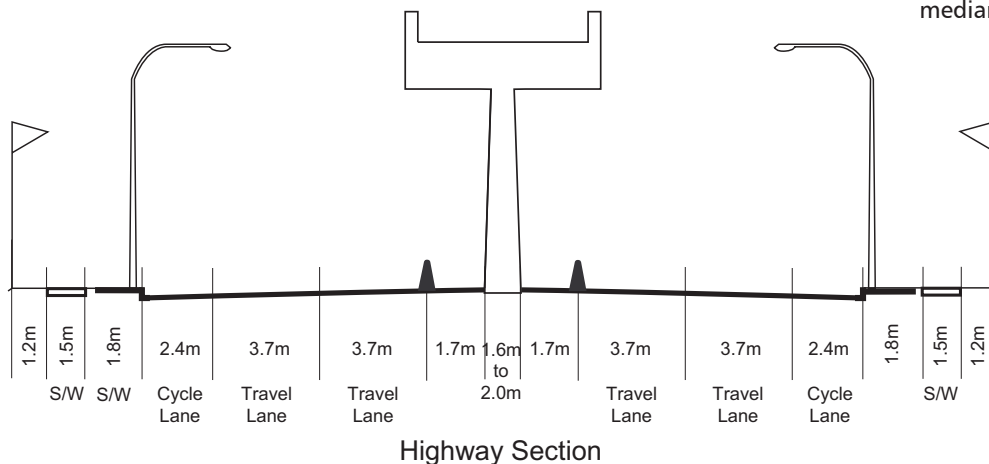
B3. Lougheed Multi-Modal Corridor

The Lougheed Multi-Modal Corridor has been developed based on a design concept which includes the following features:

- (i) two directional SkyTrain Line in the centre median or on the north or south sides
- (ii) minimum four travel lanes except six travel lanes in Burnaby Town Centres (Brentwood and Lougheed)
- (iii) two marked bicycle lanes
- (iv) separated sidewalks with landscaped boulevards

This design maintains four general traffic lanes accommodating alternative modes including transit, cycling. The right-of-way requirements to support a multi-modal corridor are based on a typical cross-section as shown opposite.

This cross-section applies to all sections of the Lougheed corridor with SkyTrain in the median.



B3. Lougheed Highway Multi-Modal Corridor Typical Cross Section



- C1. High Occupancy Vehicle Network
- C2. High Occupancy Vehicle Classification
- C3. High Occupancy Vehicle Network

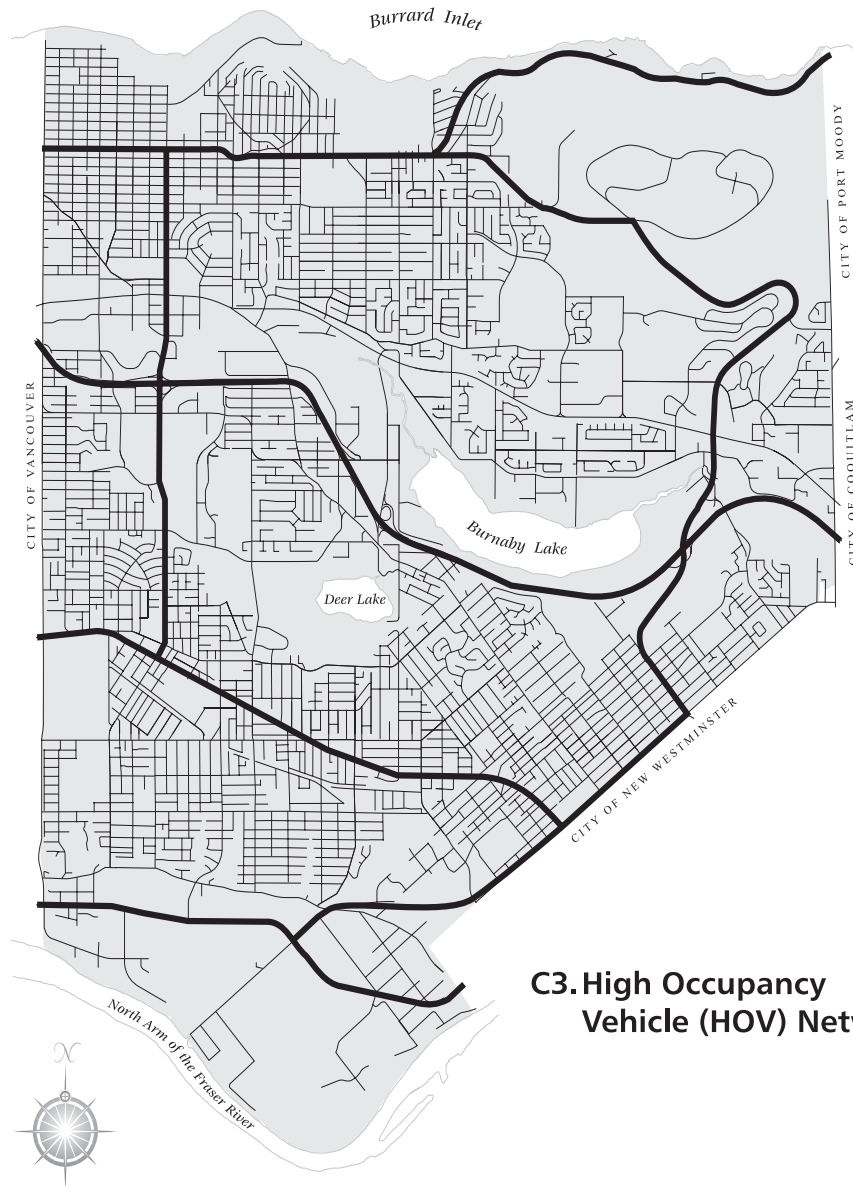
High Occupancy Vehicle (HOV) Network

C1. High Occupancy Vehicle Network

The High Occupancy Vehicle (HOV) Network defines existing and proposed roads incorporating special lanes to accommodate vehicles carrying more than one person during peak periods. HOV lanes can vary from an occupancy of a minimum of two people per vehicle to a minimum 6 or more persons per vehicle bus lanes.

C2. High Occupancy Vehicle Classification

The HOV network (Section C.3) primarily consists of arterial roads providing a regional travel function including both Provincial highways and City Arterial Primary and Secondary Roads which are part of the TransLink MRN.



C3. High Occupancy Vehicle (HOV) Network

- D1. Truck Route Network
- D2. Truck Route Design Standards
- D3. Long Range Truck Routes
- D4. Hazardous Goods Network

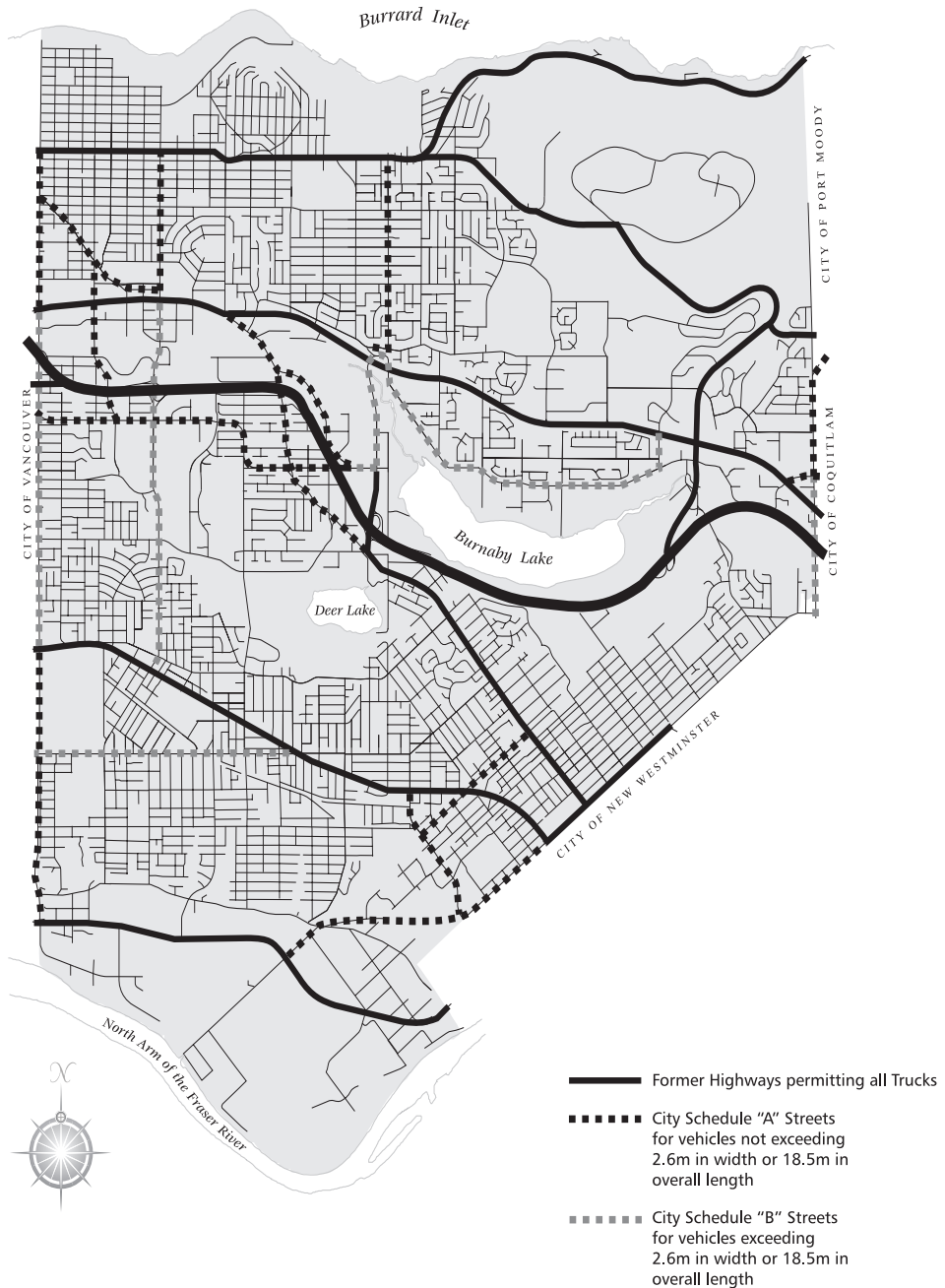
Truck Routes

D1. Truck Route Network

The truck route network provides for the movement of goods by road in the City of Burnaby. The truck route network includes two classes of roads:

- (i) **Highways permitting all Trucks.** These Former Provincial Highways - which permit all trucks without limitation on length or width.
- (ii) **City Schedule A and B Truck Routes** - permit trucks up to a size of 20m in length and 2.6m in width as defined by the Burnaby Truck Bylaw.

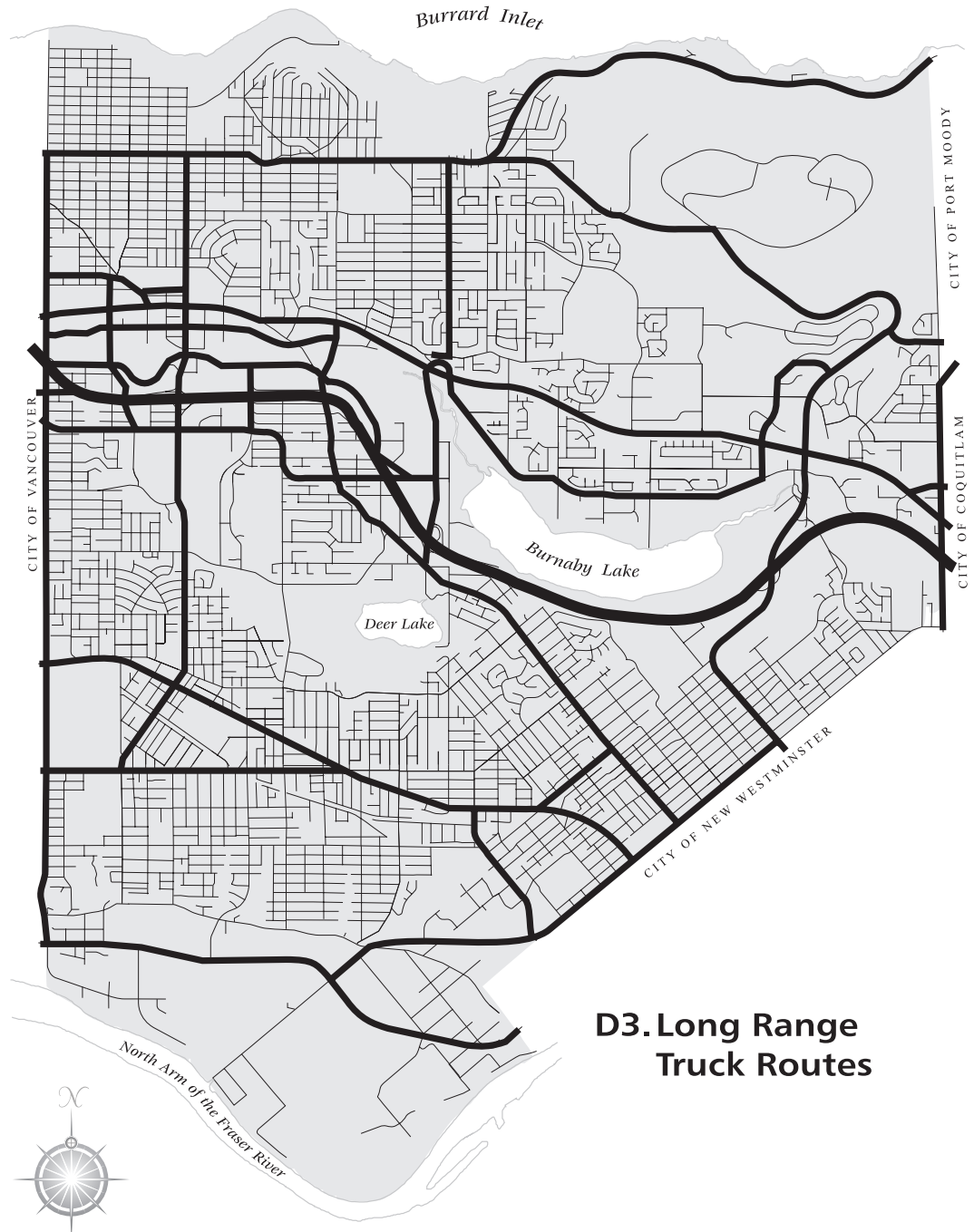
Section D2 opposite shows existing roads governed by the Burnaby Truck Bylaw. Section D3 shows the Long Range Truck Routes, an ultimate truck route network including future roads. Section D4 shows the truck routes in the City of Burnaby identified for the transport of hazardous goods.



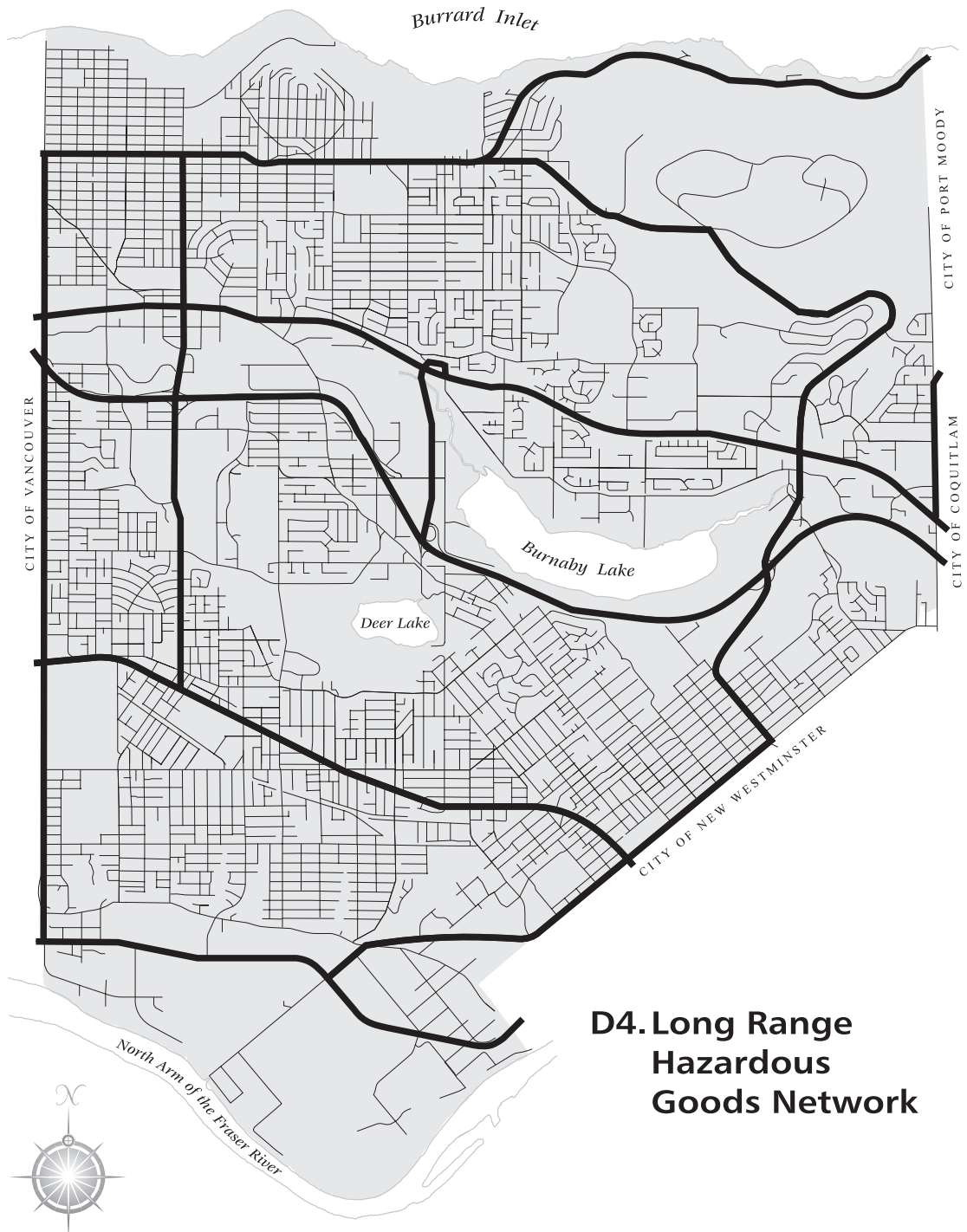
D2. Truck Route Design Standards*

Road Class	Minimum Lane Width	Maximum Grade	Minimum Intersection Curb Radius
Arterial	3.7m	8%	21.0m
Major Collector	Primary	8%	9.0m
	Secondary	8%	9.0m

*Does not include Highway/and interchange roads which are governed by Provincial design standards



D3. Long Range Truck Routes



D4. Long Range Hazardous Goods Network

- E1. Bike Route Concept
- E2. Bike Route Network
- E3. Cycle Roads
- E4. Cycle Road Design Standards
- E5. Cycle Roads Network
- E6. Urban Trail Network

- E7. Urban Trail Classification
- E8. Urban Trail Design Standards

Bike Routes

E1. Bike Route Network Concept

The Bike Route Network provides for a range of cycling facilities to meet various needs including mobility, access to land uses and recreation. Three types of Bike Routes are identified including Cycle Roads, Urban Trails and BikeWays. Cycle Roads accommodate the mobility needs of the regular cyclist for whom cycling is a primary transportation mode. Urban Trails are a separate system of paths for both regular and recreational cycling and walking. BikeWays are on-street routes providing cycling opportunities for both regular and recreational cyclists.

E3. Cycle Road

Definition

Integrated with the road network, a Cycle Road is a road which accommodates cycling through the provision of wider curb lanes and appropriate signage.

Mobility Function

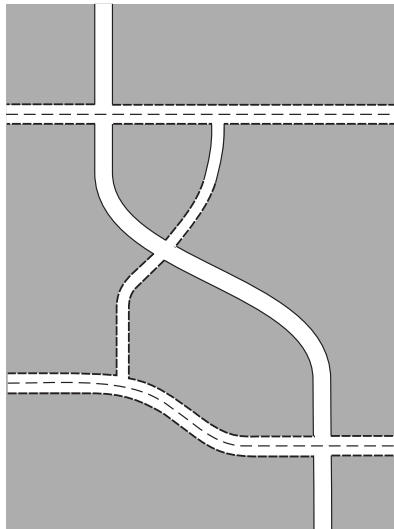
Accommodates longer distance and regular cycle travel within Burnaby and between Burnaby and adjoining municipalities.

Access Function

Provides access to town centres and other employment areas within Burnaby.

Provides access to activity centres in other municipalities.

E4. Cycle Road Design Standards

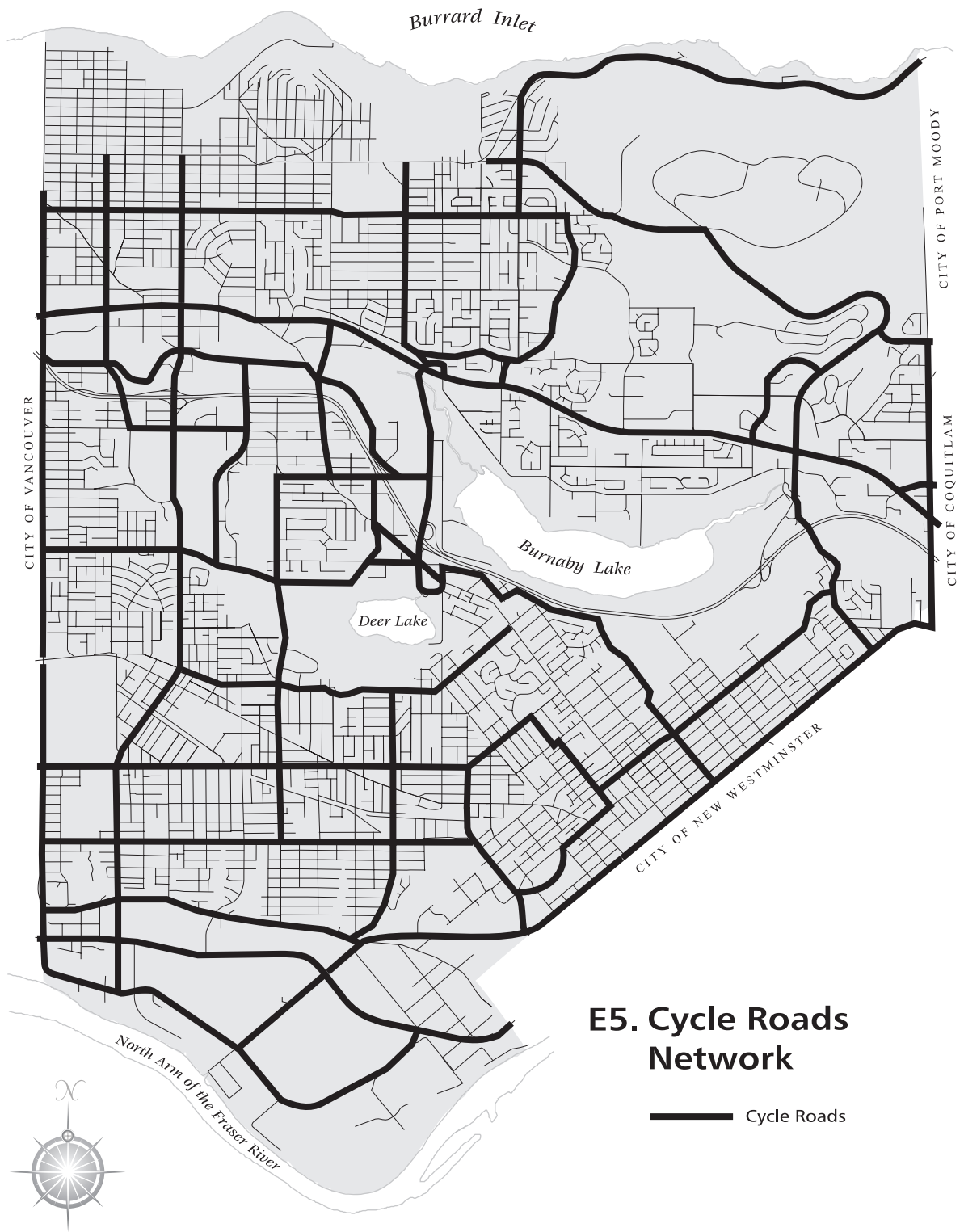


Bike Route Concept

- Cycle Road
- Urban Trail
- BikeWays

Cycle Road Class	Curb to Curb Pavement Width	Minimum Curb Lane Width
Major Collector		
Secondary	12.2m	4.3m
Greenway	16.5m	
Primary	15.2m	
Arterial		
Secondary	19.5m	4.3m
Primary	26.8m	2.4m marked Bike Lane





E5. Cycle Roads Network

— Cycle Roads

E6. Urban Trail Network

Definition

An Urban Trail is a Bike Route separated from existing roads and traffic designed specifically for cyclists and pedestrians. An Urban Trail may provide cycle paths separated from pedestrian walkways (i.e. twin paths) or a single path to be shared by pedestrians and cyclists (joint use trail).

Mobility Function

Accommodates shorter- distance cycle and pedestrian movements within Burnaby.

Recreation Function

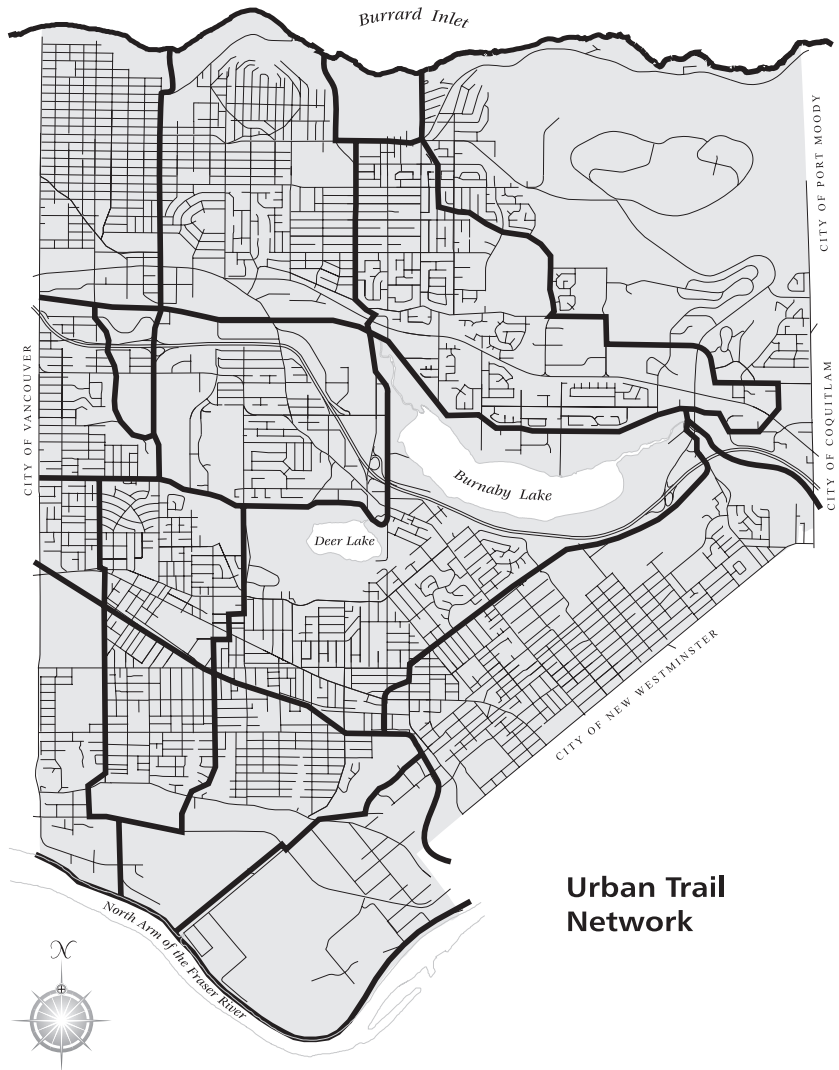
Promotes enjoyment of outdoor environment by providing “greenway” corridors.

Complements and extends the park trail system.

Access Function

Provides access to Burnaby Town Centres, community facilities, parks and foreshore areas.

Links neighbourhoods within Burnaby.



Urban Trail Network

E8. Urban Trail Design Standards

Urban Trail Type	Cycle Portion Minimum Width	Pedestrian Portion Minimum Width	Minimum Combined Width
Separated Trails			
Twin Paths	2.4m	1.5m	4.5m (includes 0.6m separation)
Joint Use Trail	not applicable	not applicable	not applicable
Combined Trails	not applicable	not applicable	4m

- F1. Pedestrian Concept
- F2. Sidewalk Standards
- F3. Sidewalk Provision

Pedestrian System

F1. Pedestrian Concept

Pedestrians in the City are accommodated either on sidewalks within road rights-of-way and on the pedestrian component of the Urban Trail Network.

F2. Sidewalk Standards

Road Class	Sidewalk Type	Sidewalk Width	Front Boulevard Width	Rear Boulevard Width
Local Residential Collector	abutting or separated	1.5m	1.8m	1.2m
Major Collector Secondary Greenway Primary	separated	1.5m	1.8m	1.2m
Arterial Secondary Primary	separated	1.5m	1.8m	1.2m

F3. Sidewalk Provision

Separated sidewalks (with boulevard) are to be provided on both sides of the street in all new road construction especially on Arterial or Major Collector Roads with traffic operating in the curb lane. Abutting sidewalks can be substituted under the following conditions:

1. The section to be constructed is less than one block and the existing pattern in the area is abutting walk.
2. An abutting walk is necessary to preserve existing good quality trees.
3. Steep topography makes separated walks difficult or costly to construct.
4. Right-of-way is not available to accommodate separated sidewalks.

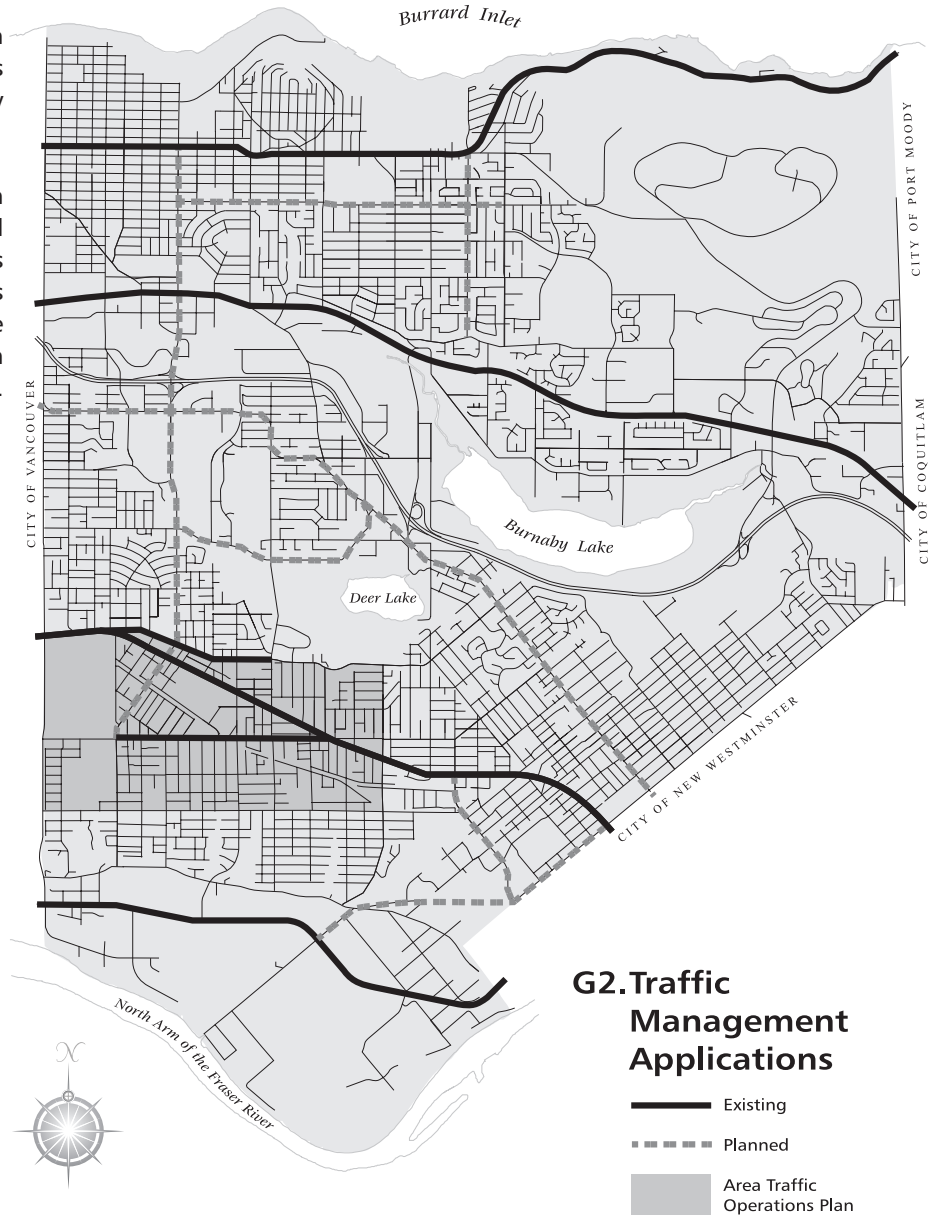


Traffic Management Measures

G1. Concept

Traffic Management involves a range of traffic control measures applied to increase the efficiency of the road network.

Traffic management measures in Burnaby have ranged from signal coordination on Major Arterials to area wide traffic operations plans. Section G2 shows the existing and planned application of Traffic Management Measures.

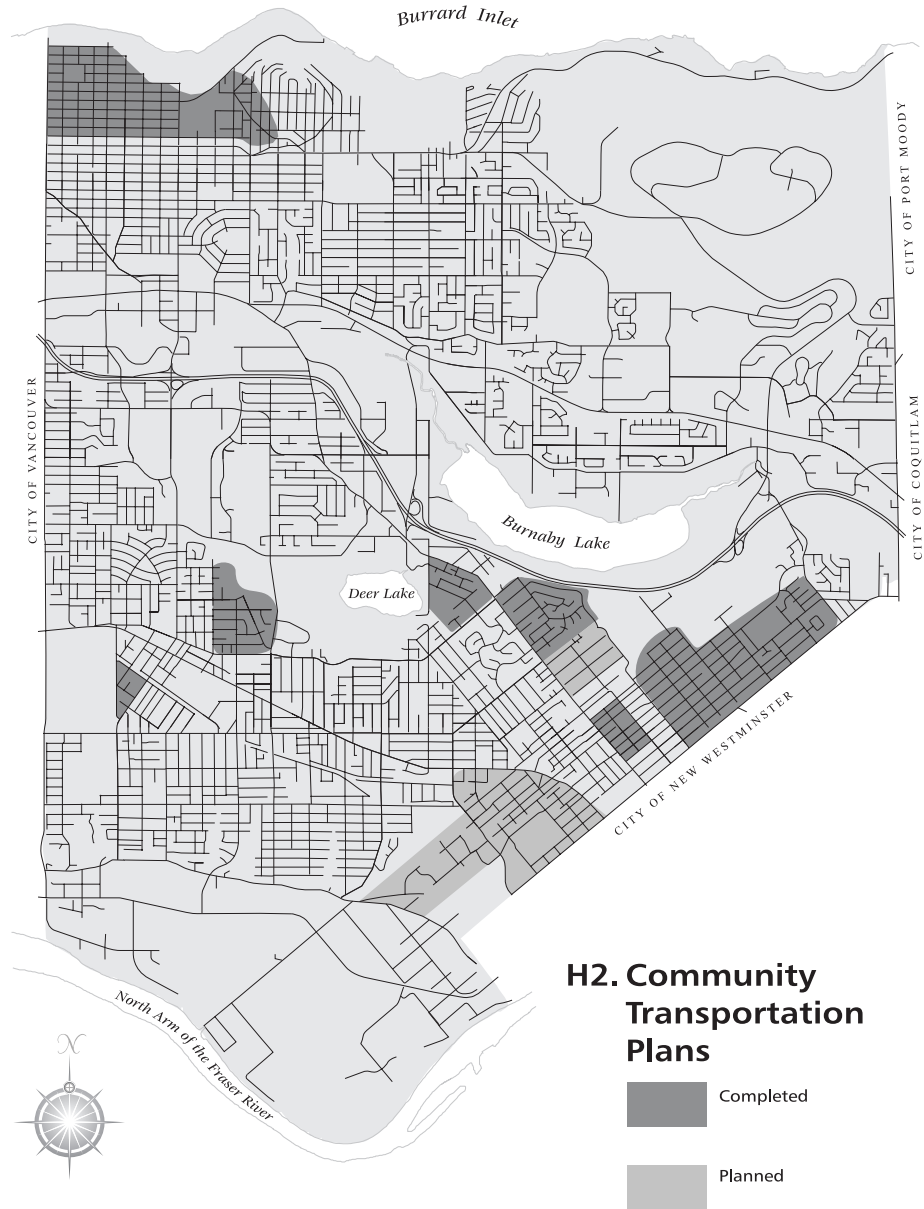


- H1. Process
- H2. Community Transportation Plans
- H3. Traffic Calming Measures

Community Transportation Plans

H1. Process

Community Transportation Plans provide a process to involve residents of an area in developing measures to reduce through traffic in neighbourhoods while maintaining access for local residents. Community Transportation Plans can include a mix of road improvements to encourage traffic to use the major road system and traffic calming measures (Section H3) to discourage traffic from using local neighbourhood streets.



H3. Traffic Calming/ Control Measures

Traffic Calming/Control Measures
Community Transportation Plans can apply a range of measures to calm or control traffic diverting through residential areas. The following outlines a range of measures which have been commonly applied in Burnaby neighbourhoods.

Measure	Advantages	Disadvantages
Signage (e.g. turn restrictions)	<ul style="list-style-type: none"> easily installed 	<ul style="list-style-type: none"> enforcement restricts access for residents no speed restrictions
Stop Signs	<ul style="list-style-type: none"> easily installed provides traffic control at intersections reduces speeds 	<ul style="list-style-type: none"> enforcement appropriate for grid road network
Speed humps and speed bumps	<ul style="list-style-type: none"> easily installed reduces speeds discourages through traffic 	<ul style="list-style-type: none"> inconvenient for residents
Traffic circles (roundabouts)	<ul style="list-style-type: none"> provides traffic control at intersections reduces speeds can be attractively landscaped 	<ul style="list-style-type: none"> high costs most effective when combined with other measures
Diagonal diverters	<ul style="list-style-type: none"> increases inconvenience for short-cutting traffic 	<ul style="list-style-type: none"> inconvenient for residents no speed reduction appropriate for grid network
Delta islands (right in/right out)	<ul style="list-style-type: none"> reduces traffic flow at entrances and exits to neighbourhoods reduces short-cutting traffic 	<ul style="list-style-type: none"> high costs restricts access for residents no speed reduction
Street closures	<ul style="list-style-type: none"> prevents short-cutting can be easily installed 	<ul style="list-style-type: none"> restricts access for residents no speed reductions