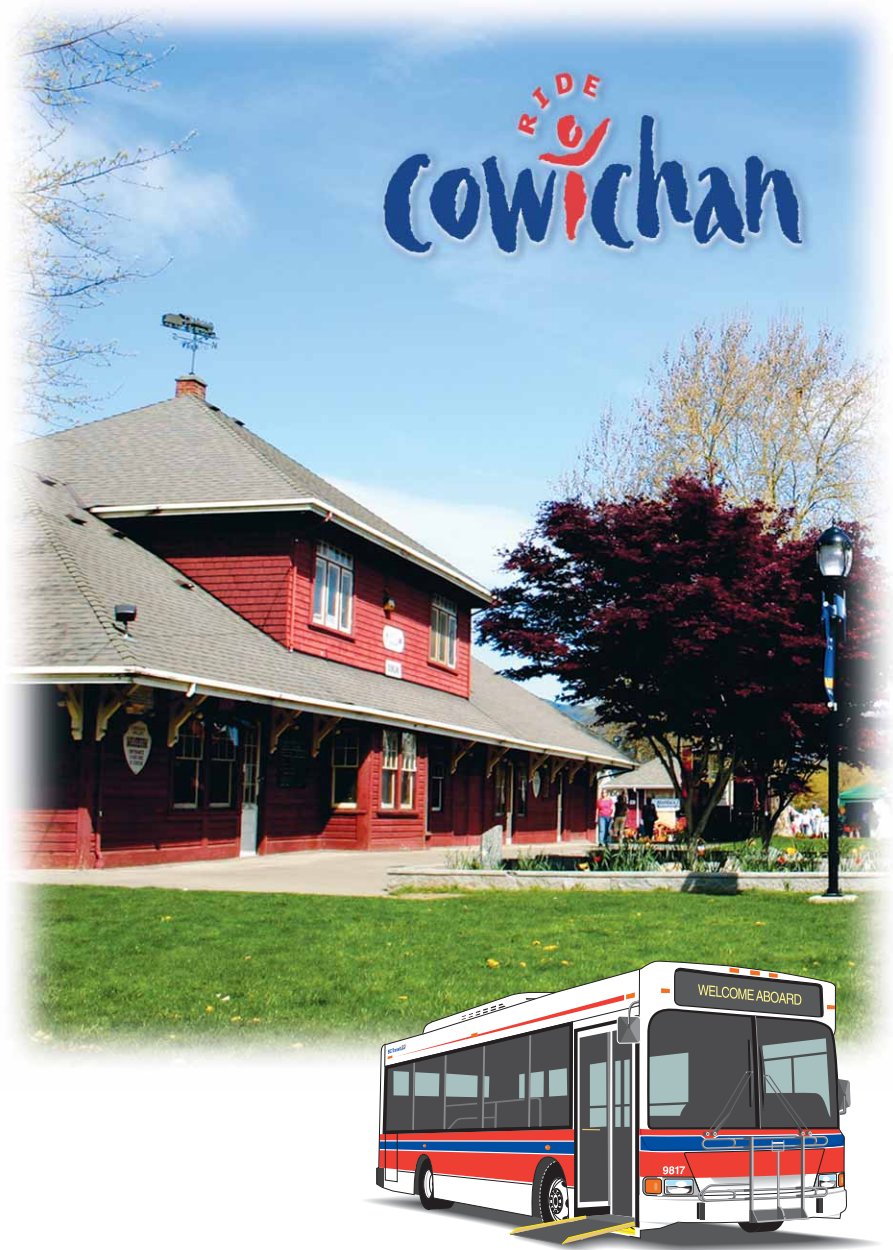


Transit Business Plan for the Cowichan Valley



September 2005

**COWICHAN VALLEY TRANSIT BUSINESS PLAN
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EXECUTIVE SUMMARY

COWICHAN VALLEY TRANSIT BUSINESS PLAN

1.0 INTRODUCTION

The Cowichan Valley Transit Business Plan is a comprehensive and long range plan prepared by BC Transit under the approval of the Cowichan Valley Regional District. The plan is intended to act as a guide for transit service planning and delivery in the Cowichan Valley over the next 5-10 years.

2.0 GUIDING PRINCIPLES AND OBJECTIVES

The primary goal of the Transit Business Plan is to encourage greater transit ridership in the Cowichan Valley by providing transit service and other transportation options that improve mobility for people who have few other transportation options and also offer an attractive alternative for automobile drivers. The objectives for the Cowichan Valley Transit Business Plan can be grouped into three broad categories:

1. **Community Objectives** describe how transit relates to other aspects of the community, such as closer integration between land use and transportation planning:
2. **Passenger Service Objectives** Provide an attractive alternative to driving with transit service that is frequent, direct, and convenient, and by providing a safe and pleasant environment for the transit user
3. **Financial and Passenger Performance Objectives** involve setting specific targets for transit system performance using Key Performance Indicators

3.0 COMMUNITY BENEFITS OF TRANSIT

Transit provides some key benefits to the communities it serves:

- Reduced infrastructure and congestion costs
- Reduced environmental costs
- Supports community development
- Improved mobility for all residents

4.0 POPULATION AND LAND USE

Population and land use trends indicate increased demand for transit over the next decade, but also significant challenges in providing the service:

- The overall population of the Cowichan Valley is forecast to increase 12% over the next decade.
- Youth (aged 15-24) and older seniors (aged 80 & over) are two key transit markets. The youth market is forecast to decrease over the next decade, while the older seniors market will grow much faster than the overall population.

- Population and development in the Cowichan Valley is highly dispersed and multi-nodal, and there are strong linkages with adjacent regions, creating significant challenges in providing transit service.

5.0 REVIEW OF EXISTING TRANSIT SERVICE

A review of the existing transit service, along with historical trends and comparisons with other similar communities, was used to identify key market opportunities and needed transit service changes.

6.0 KEY PERFORMANCE INDICATORS (KPIs)

Key Performance Indicators will be used to monitor transit system performance over time and to compare the Cowichan Valley with other communities

7.0 SERVICE AND CAPITAL PLAN

Recommended service changes are outlined in the table below. In addition, key issues to be addressed include closer integration between transit and school bus service, and improving transportation links to adjacent regions.

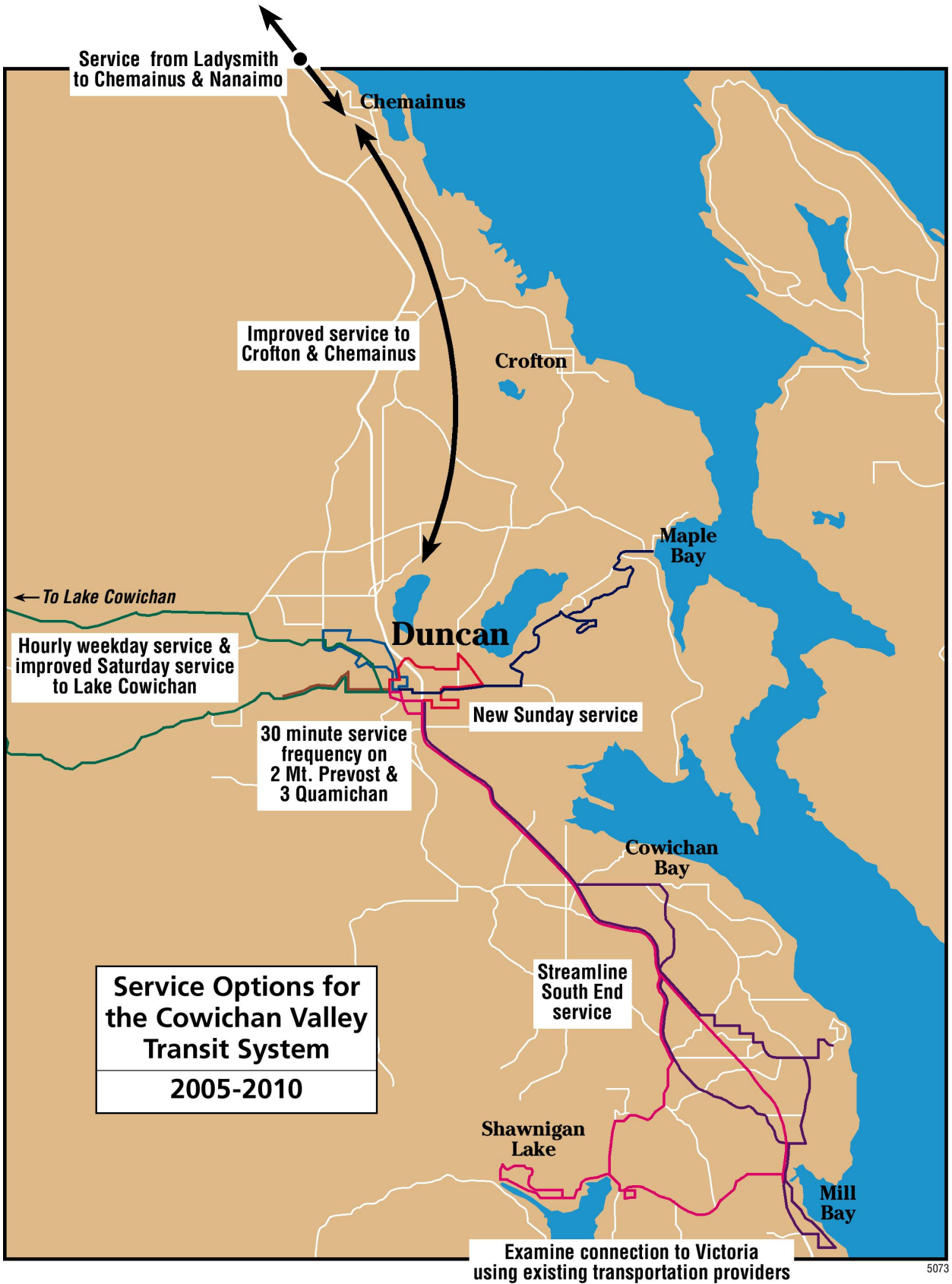
Summary of Short and Medium Range Service Options, 2005-10

Description of Service Options	Vehicles	Service Hours	Total Cost
Short Range			
<i>Conventional Transit</i>			
Crofton/Chemainus service	1	2,000	\$165,000
Reallocated paratransit service	--	400	--
Medium Range			
<i>Conventional Transit</i>			
Mt. Prevost/Quamichan peak period 30 min service (Option 1)	1	1,800	\$146,000
Mt. Prevost/Quamichan midday & Saturday 30 min service (Option 2)	--	2,200	\$149,000
Lake Cowichan – hourly service	1	2,400	\$188,000
Sunday Service	--	1,200	\$109,000
South end service	1	2,400	\$188,000
<i>Paratransit</i>			
Introduction of Ladysmith service	1	2,400	\$168,000
Additional paratransit service	1	2,200	\$90,000
Introduction of taxi supplement	--	--	\$8,400

8.0 SUPPORTING STRATEGIES

There is a range of strategies which can be used to support the service plan and improve transit system performance:

- Fare strategies – target key market groups and encourage greater transit ridership primarily through the use of prepaid fare products.
- On-street facilities – develop bus stop signage, benches, shelters, and transit exchanges that provide safety, convenience, and comfort for users.



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- Transportation Demand Management – encourage more efficient use of the transportation system, primarily by promoting a range of alternatives to single occupant automobile travel at peak times, including transit, ridesharing, and cycling.
- Marketing strategies – identify key transit markets and raise the profile of transit through public information and promotion.

9.0 IMPLEMENTATION PROCESS

Specific service changes outlined in the Transit Business Plan will be reviewed on an annual basis and, following more detailed planning work, will be approved and implemented through the annual budget development process.

The plan will be updated on an annual basis to reflect actual service implementation to date, and to respond to changes in transit performance levels, markets, and demand.

10.0 RECOMMENDATIONS

It is recommended that:

The Cowichan Valley Regional District Board approve this Plan as a guide for transit service planning and delivery in the Cowichan Valley; and

The Cowichan Valley Regional District Board approve the following specific recommendations:

1. *Use Key Performance Indicators to track system performance and to guide annual budget development.*
2. *Approve in principle the service expansion to Crofton and Chemainus*
3. *Direct staff to proceed with more detailed planning work on the Crofton/Chemainus service..*
4. *Continue to work with the School District for further integration with student transportation.*
5. *Approve in principle the medium range service options. These will be evaluated further as part of the annual budget development process.*
6. *Maintain the fare structure guidelines for development of future tariff changes.*
7. *Introduce a semester pass for high school students.*
8. *Develop an on-street facility plan to establish, upgrade, and maintain on-street facilities.*
9. *Develop a Transportation Demand Management Program for the CVRD.*

COWICHAN VALLEY TRANSIT BUSINESS PLAN

1.0 INTRODUCTION

The Cowichan Valley Transit Business Plan is a comprehensive and long range plan prepared by BC Transit under the approval of the Cowichan Valley Regional District. This plan updates a previous plan that was completed in 2000. The plan is intended to act as a guide for transit service planning and delivery in the Cowichan Valley over the next 5-10 years.

2.0 GUIDING PRINCIPLES AND OBJECTIVES

The primary goal of the Transit Business Plan is to encourage greater transit ridership in the Cowichan Valley by providing transit service and other transportation options that improve mobility for people who have few other transportation options and also offer an attractive alternative for automobile drivers. The objectives for the Cowichan Valley Transit Business Plan can be grouped into three broad categories: community objectives, passenger service objectives, and financial and performance objectives.

Community Objectives

Community objectives describe how transit relates to other aspects of the community, such as closer integration between land use and transportation planning:

Coordinate transit and land use planning to make the transit system more effective:

- The transit system should be developed to complement and strengthen local and regional land use plans. Transit service should focus primarily on built up areas with transit-supportive land uses.
- The entire Cowichan Valley Regional District will be examined to determine those areas where current or future demand is sufficient to support transit service. The potential for regional transit connections to Victoria and Nanaimo will also be investigated.

Provide a range of transit service options, including linkages with other modes:

- Transit service levels, delivery method, and vehicle types should be tailored to specific markets and to the level of demand.
- The transit system should continue to provide a basic level of mobility for those who have no alternative means of transportation.
- New transit services should focus on the peak period school and work commuters where transit can best compete with the automobile.
- Make it easier for passengers to transfer between transit and other modes, including cycling, intercity bus, trains, and ferries.

- Provide greater integration between the conventional transit and paratransit.
- Provide a range of options for persons with mobility difficulties, including handyDART service, taxi programs, and fully accessible conventional service.
- Reduce duplication and improve travel options for students through greater cooperation between public transit and school district transportation.

Use supporting strategies to encourage greater transit ridership and target key markets:

- Use Transportation Demand Management (TDM) strategies to encourage alternatives to driving single occupant vehicles.
- Improve fare options for passengers and encourage the use of prepaid fares targeted at key markets such as students and commuters.
- Develop marketing strategies to identify and target key markets, and to promote transit as an alternative.

Passenger Service Objectives

Provide an attractive alternative to driving with transit service that is frequent, direct, and convenient, and by providing a safe and pleasant environment for the transit user

- Reduce the need for transferring by providing more direct service between major activity centres.
- Provide more frequent service on existing corridors in order to reduce waiting and transfer times.
- Make using transit easier, safer, and more comfortable by improving passenger facilities including bus shelters, lighting, information signs, and transit exchanges.

Financial and Passenger Performance Objectives

Financial and passenger performance objectives involve setting specific targets for transit system performance:

- Use Key Performance Indicators to monitor transit system performance. This will help to ensure that efficient use is made of resources in order to maximize customer service and community benefits. The Key Performance Indicators will measure both financial performance and ridership performance.

To some degree, the community, passenger service, and financial and performance objectives all counterbalance one another. Future decisions on transit service changes will need to weigh these sometimes competing objectives. Thus, while the financial and performance objectives would exclusively favor services which lead to improvements in Key Performance

Indicators (improved productivity and cost-effectiveness), service changes which do not strictly meet these criteria may still be considered if they help to achieve key community and passenger service objectives.

3.0 COMMUNITY BENEFITS OF TRANSIT

Why should the continued provision and expansion of transit service be supported, given the limited resources faced by all levels of government? As outlined below, transit provides a number of benefits to the communities it serves. It provides mobility to those segments of the population which have no alternative means of transportation, while it provides additional transportation options for other groups. When all costs are considered, transit is a very efficient mode of transportation compared with the automobile, in terms of energy consumed, space required, and the amount of pollution produced. From a fiscal perspective, one of the key overall benefits of increased transit use is the reduction in other public and private costs that results from reduced automobile traffic.

While issues such as traffic congestion and air pollution may not yet have reached a critical stage in the Cowichan Valley, it is still important to plan and develop a successful transit system now. The region is growing and as this growth continues, transit will play an increasing role in the transportation system. Over the next ten years, the transit system will evolve from one providing a basic level of mobility to a more commuter oriented system with broader market appeal. Developing a successful transit system and the community form which will support it takes time, so it is important that the region starts this process now.

Some of the key benefits of public transit are:

Reduced Infrastructure and Congestion Costs

As the Cowichan Valley continues to grow, it faces major infrastructure and congestion costs associated with rapidly increasing automobile use. Infrastructure costs include land, construction, and maintenance costs for expanded roadways and parking facilities, as well as traffic control and enforcement costs. Congestion costs relate to lost time and productivity which results from longer travel times due to delays. If some of the growth in automobile traffic can be diverted to transit, significant savings could be realized. The greatest impact would result from traffic diverted at peak travel times, since capacity requirements for the transportation system are based on these times of peak demand. Currently, even during peak periods, transit carries a relatively small number of people in the Cowichan Valley. However, as the transit system grows over the next twenty years, there could be a significant reduction in automobile traffic resulting from people that are being carried on transit. Carrying these same people in single occupancy vehicles (which take up roughly 20 times as much road space) would result in much greater traffic congestion and would require significant investment in roads, parking facilities, and other infrastructure.

Reduced Environmental Costs

An average transit trip requires less than one quarter of the energy use per person than the same trip made in a single occupancy private vehicle. The transit trip also results in a 65% reduction in greenhouse gases produced, and a 20-90% reduction in other pollutants. Transit trips also require less land consumption, as the same number of people can be carried on less road space and there are reduced parking requirements. Indirectly, transit can also encourage more efficient land use patterns that further reduce land consumption, the total amount of travel in a region, and thus, the total amount of energy that is consumed.

Community Development

As transit plays an increasingly important role in the transportation system, it can be a very effective means of shaping community development. For example, transit could play a key role in encouraging the development of regional centres in the Cowichan Valley. By reducing reliance on the automobile, transit can also help the community to develop in a more pedestrian-friendly manner.

Improved Mobility

For many people who do not have access to other modes of transportation due to age, disability, or income, transit provides mobility and freedom to travel without relying on others. Increasingly, this includes the growing elderly population for whom driving may pose a safety problem for themselves and for others. For the elderly, students, persons with disabilities, and single parents caring for children, transit often provides the only viable access to health and social services and to work and recreational opportunities. Transit may also allow people wider access to jobs and employers wider access to the regional labor force, providing important economic benefits for both groups.

Custom transit (handyDART) in particular, provides increased mobility that permits the elderly and persons with disabilities to live independently and still have good access to essential activities (such as employment, health care, education and shopping) as well as discretionary activities (such as social events and recreation). If transit service were not available, the costs of providing alternative services might be very high. Many people would be forced to live in institutions at a far higher public cost than provision of the transit service.

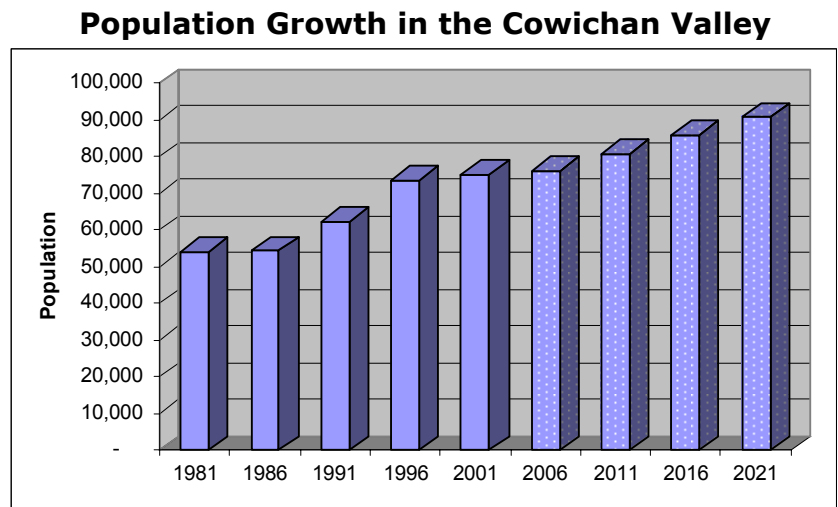
4.0 POPULATION AND LAND USE

This section looks at population distribution and trends, and land use patterns in the Cowichan Valley as background to determining patterns of transit demand in the region. Population and land use are key variables affecting transit demand. The distribution of population and other land use patterns can greatly affect transit performance since this will determine the number of potential transit riders along a given route. Changes in the size and characteristics of a population over time result in changes to key markets that can also greatly influence transit use.

4.1 Population Change

General Population Trends

The population of the Cowichan Valley Regional District was estimated at 77,300 in 2004. Following an 18% increase in population between 1991 and 1996, the Cowichan Valley grew by only 2.2% between 1996 and 2001. More recently, growth has been slightly greater, with a 5% increase forecast between 2001 and 2006. After 2006, growth is forecast to resume, but still at a more moderate pace than during 1986-96. While the 2000 Transit Business Plan was based on the population of the Cowichan Valley reaching over 100,000 by 2016, the more recent BC Stats forecast is for a population of about 86,000 by 2016 and 91,000 by 2021.



Source: BC Stats PEOPLE 29

Population Change by Age

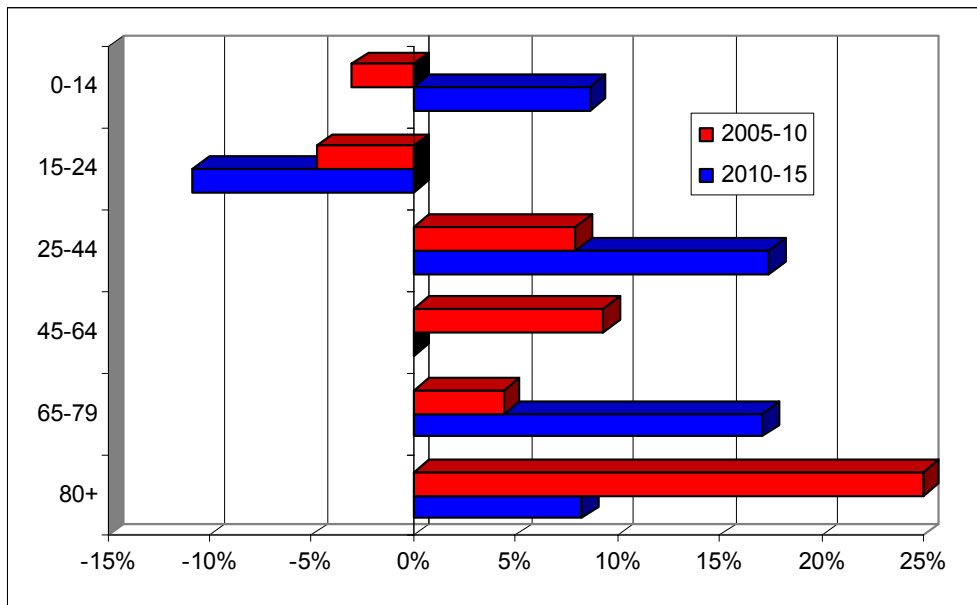
While the overall population of the Cowichan Valley is forecast to increase by 12% over the next decade, the rate of growth will vary considerably among different age groups. The propensity to use transit varies with age; therefore changes in key age groups can have a much greater impact on future transit use than overall population changes. The following changes are forecast for two key market groups:

- *Students and Young Adults (aged 15-24)* - This group has the highest rate of transit use among all age groups, and students form a key transit market in the Cowichan Valley. However, in the population of this group is forecast to decrease 5% during 2005-10 and decline a further 11% during

2010-15. This is mostly the result of the baby boom echo generation moving out of this age group. Since the overall size of this market is not growing, transit must capture a greater share of this market in order to see student ridership growth over the next decade.

- *Older Seniors (aged 80 and over)* - This group also has high transit use and they tend to be more dependent on transit than other groups. This will be the fastest growing segment of the population over the next five years, with a 25% increase forecast for 2005-10. Growth in this group is forecast to slow during 2010-15, but it will still grow faster than the overall population. This will result in increased demand for transit service, particularly accessible conventional and custom transit. This trend will be even more prominent in those areas of the Cowichan Valley which currently have a large population of younger seniors with a relatively low propensity for transit use. As this large group ages, growth in the older seniors group will be very rapid, resulting in a large increase in demand for transit service.

Population Growth in the Cowichan Valley by Age, 2005-2015



The chart above shows the rate of population growth by age group for the next two decades. Along with the key market groups discussed above, the other groups to experience above average rates of growth are the 25-44 year old group and the 65-79 year old group during 2010-15. This is a result of the baby boom and the baby boom echo generation moving into these age groups. Both of these age groups tend to have lower than average rates of transit use.

4.2 Population distribution

Population distribution has a significant impact on transit system performance. With a total population of 75,000 the Cowichan Valley is comparable in size with a community such as Kamloops which supports a much more comprehensive transit system. However, Kamloops has a more traditional compact community form with corridors of development extending from a single large core area. In contrast, population in the Cowichan Valley is highly dispersed, with a number of different areas of development. The table to the right shows the 2001 population by municipality and electoral area.

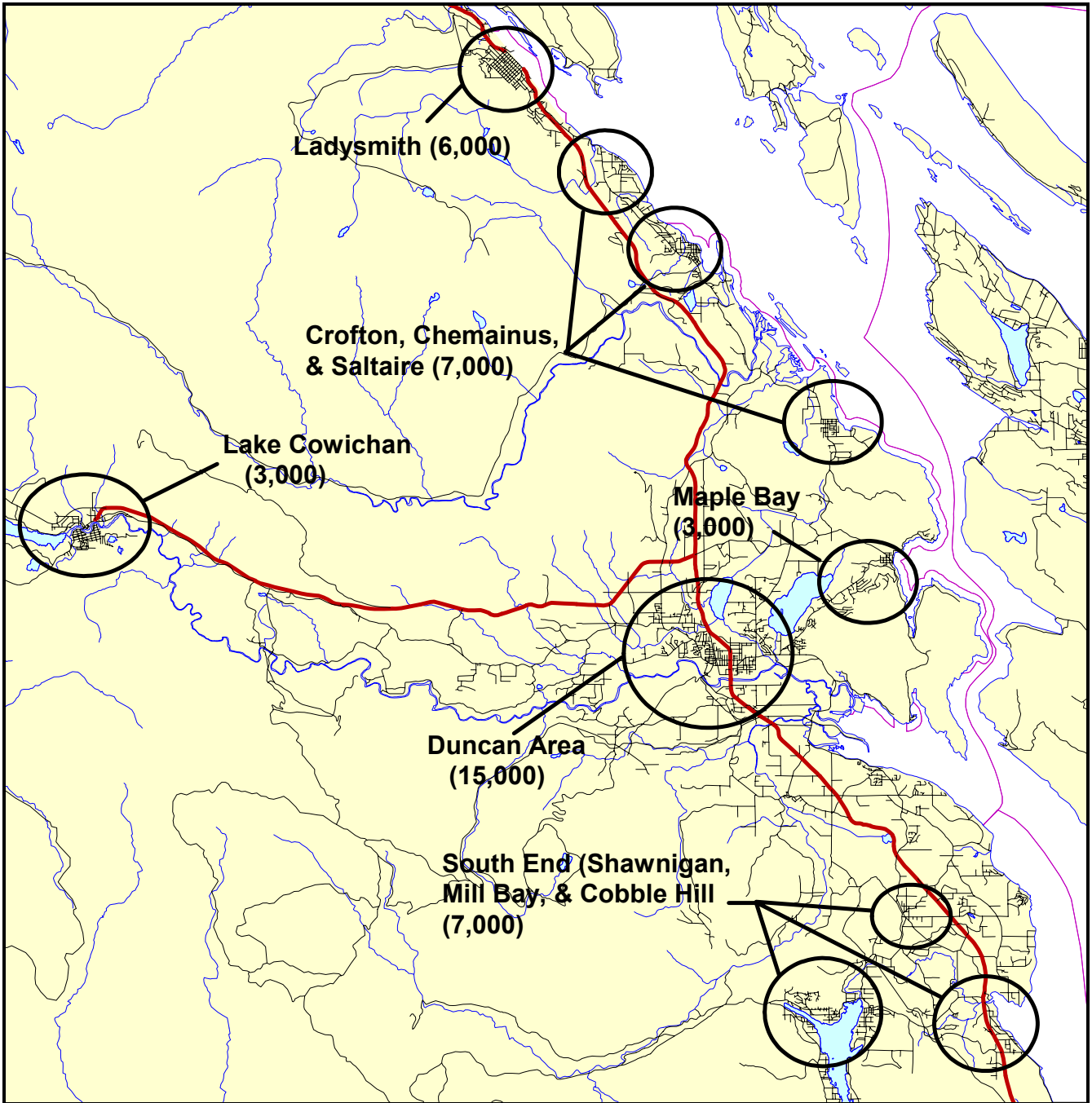
2001 Population by area in the Cowichan Valley

City of Duncan	4,909
District of North Cowichan	27,276
Town of Ladysmith	6,871
Town of Lake Cowichan	2,951
A-Mill Bay/Malahat	3,559
B-Shawnigan Lake	7,378
C-Cobble Hill	4,736
D-Cowichan Bay	2,802
E-Cowichan Station/ Sahtlam/Glenora	3,965
F-Cowichan Lake South/ Skutz Falls	1,837
G-Saltair/Gulf Islands	2,457
H-North Oyster/Diamond	2,345
I-Youbou/Meade Creek	1,197
Indian Reserves	2,794
Total CVRD	75,077

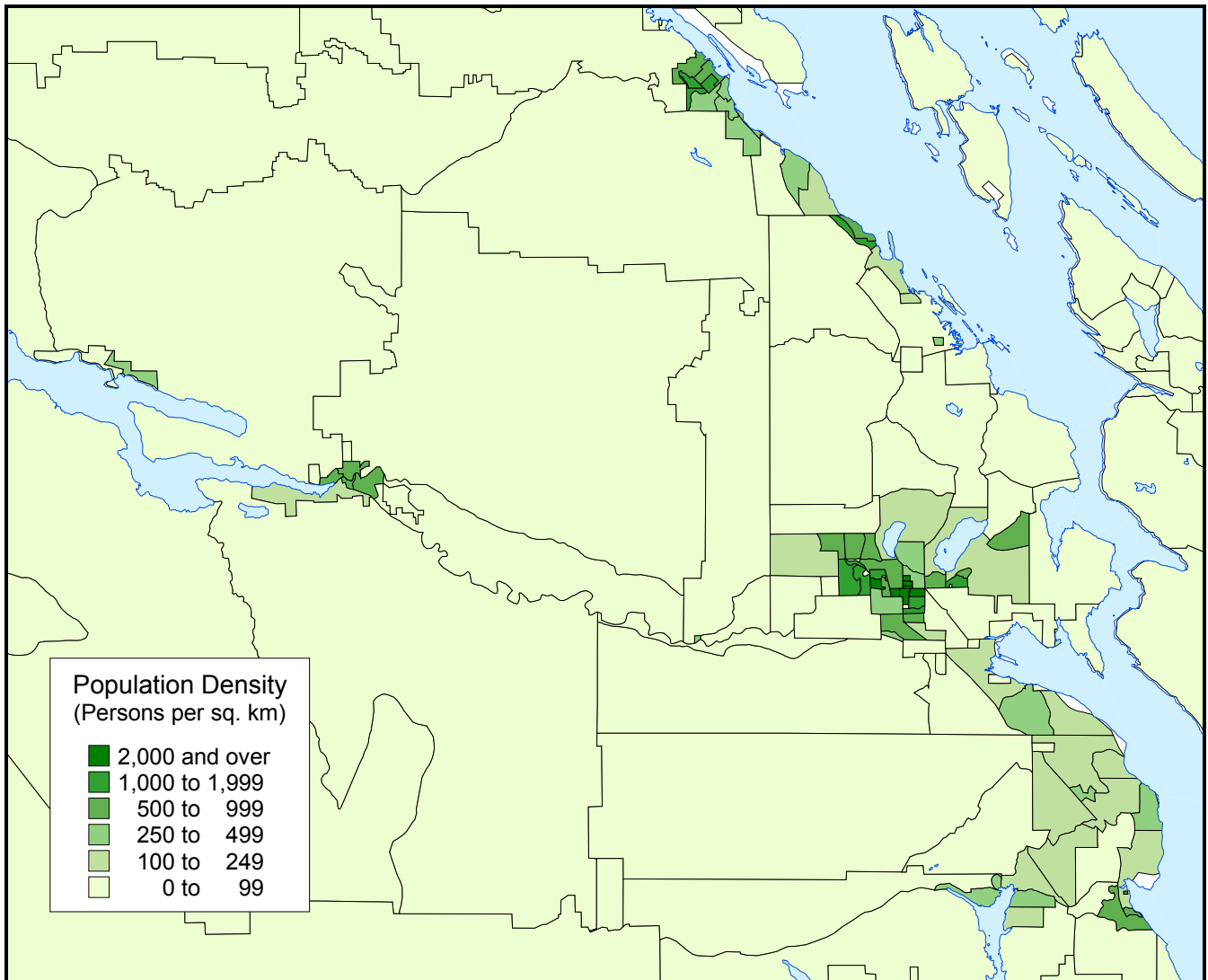
Although the population of the Cowichan Valley is quite dispersed, there are some concentrations or nodes of development. These have generally formed around original settlements in the Valley and they often contain traditional town centres at their cores. These major concentrations are shown on the accompanying map. The largest concentration is around the City of Duncan and adjacent areas, with about 15,000 people, of which only about 5,000 actually live in the City of Duncan. While this is the main urban focus of the Cowichan Valley, it is less dominant than the core of a more traditional urban region. There are three nodes in the South End (Shawnigan Lake, Mill Bay and Cobble Hill) which contain about 7,000 residents in total. There are about 3,000 in the Lake Cowichan node and 3,000 in the Maple Bay node. To the north, the Chemainus, Crofton, and Saltaire nodes contain a total of about 7,000 residents, and there are about 6,000 in Ladysmith.

The second map shows population density in the Cowichan Valley. Most rural areas in the Valley have a population density of less than 100 persons/km², and there are only a few small nodes with densities greater than 1000 persons/km². As a very rough guideline (there are numerous other factors involved), a population density of 1000 persons/km² is considered the minimum level required to support conventional transit, so this highlights the challenge of providing transit service in the Cowichan Valley.

Built Up Areas in the Cowichan Valley with 2001 Populations



Population Density in the Cowichan Valley, 2001



4.3 Land Use

Transit and land use are closely inter-related, so it is useful to examine the land use patterns in the Cowichan Valley to understand the opportunities and the challenges they present for a successful transit system. In general, transit performs better when densities are higher and when there is a mix of land uses, since this results in a larger number of potential riders along a given route. Even when overall densities in a region are low, transit can be successful if development is concentrated into nodes or corridors rather than scattered throughout the region. The design of a particular development can also make it more transit supportive. For example, locating a shopping mall close to the street with parking in behind can result in greatly improved access for customers arriving by transit.

Development densities in the Cowichan Valley are generally low, even in those areas considered to be “built up”. In 2001, for example, 76% of private dwellings in the Cowichan Valley were single family houses. In communities such as Kamloops, Kelowna, or Nanaimo, the figure is closer to 65%.

Non-residential Development Patterns

Commercial development in the Cowichan Valley is concentrated in the Duncan area and along the Island Highway corridor. These areas will be major trip generators for work and shopping trips. Other major trip generators include Cowichan District Hospital, Cowichan Community Centre, Malaspina University College, and Cowichan Senior Secondary, all of which are located in the Duncan area. Elsewhere, major trip generators include Frances Kelsey Secondary School and Kerry Park Arena in the South End, Providence Farm to the east of Duncan, and Chemainus Secondary and the North Cowichan Recreation Centre to the north.

Land Use Planning

The Cowichan Valley consists of a number of separate jurisdictions, so coordination of land use planning can be difficult. The Regional District is considering developing a Regional Growth Strategy, which would provide an opportunity to improve this coordination and promote policies that will encourage more transit-supportive development. There are several strategies which can be used to reduce dependence on automobiles and promote greater use of alternative transportation modes such as transit; this has been a common theme in many of the growth strategies in other parts of the province developed to date. As noted previously, higher population densities can improve transit performance. However, transit does not require uniformly high densities throughout the region; encouraging the creation of higher-density nodes and corridors in those areas served by transit can be just as effective. Such a land use pattern can be achieved using urban containment boundaries and designating village or town centres where mixed-use, higher density development is encouraged. Transit must also be

considered when planning the region's transportation system. For example, road systems should be designed so that bus routes can be developed that will serve neighborhoods in an efficient manner.

A further challenge in the Cowichan Valley is the need for coordination with adjacent regions, since there are strong ties to communities outside the Regional District. This will be particularly important from a transportation perspective.

References to Transit in Current Land-use Plans

A survey of references to transit in local land-use plans found these to be quite general in nature. This presents a relatively clean slate for the incorporation of transit related objectives coordinated with the Transit Business Plan as these land-use plans are updated. The following references were found:

- City of Duncan - The current OCP contains a small section on public transit. It states that the City will encourage the enhanced operation of the Cowichan Valley Transit System, and will encourage other options such as inter-city bus and trains.
- District of North Cowichan - The current OCP (2002) includes several references to public transit. Although the transportation section deals primarily with the road system, there is a section on transit. The OCP encourages coordination of transportation planning with other municipalities and with BC Transit, transit-oriented development, the incorporation of transit into neighborhood plans, and consideration of on-street facilities and pedestrian access to bus stops.
- Town of Lake Cowichan - The 1999 OCP supports the expansion of the transit system in Lake Cowichan and adjacent communities as well as improved service to Duncan.
- CVRD Area "E" (Cowichan-Koksilah) - The current OCP states that Area "E"'s participation in the transit system will be reviewed.
- CVRD Area "A" (Mill Bay-Malahat) - The new draft OCP states that bus and rail service to Nanaimo and Victoria at regular convenient intervals could encourage commuters who presently drive on the Trans-Canada Highway to use transit. Carpools should also be encouraged.

4.4 Transportation & Existing Travel Patterns

The Island Highway is the key transportation corridor in the Cowichan Valley and most development is along this corridor. The Cowichan Valley Highway connects the Duncan area with Lake Cowichan. The E&N Railway also links most major nodes in the Cowichan Valley. Currently it has limited use for daily passenger service between Victoria and Courtenay, along with some freight service. However, there may be potential for the E&N as a future transit corridor for travel both within the region and to adjacent regions. Ferry service to the mainland operates from the Duke Point Ferry Terminal, which is north of Ladysmith. There are also smaller ferry services operating

to the Gulf Islands and the Saanich Peninsula. These include connections between Crofton and Salt Spring Island, Chemainus and Thetis/Kuper Islands, and between Mill Bay and Brentwood Bay.

E & N Railway

The E & N Railway provides daily service between Victoria and Courtenay, passing through the Cowichan Valley.

Victoria to Courtenay (Northbound)			Courtenay to Victoria (Southbound)		
Location	Mon-Sat	Sun	Location	Mon-Sat	Sun
Victoria	8:15	12:00	Courtenay	1:30	5:15
Shawnigan	9:13	12:58	Nanaimo	3:37	7:17
Duncan	9:37	1:22	Ladysmith	4:03	7:43
Chemainus	9:57	1:42	Chemainus	4:16	7:56
Ladysmith	10:10	1:55	Duncan	4:40	8:20
Nanaimo	10:40	2:25	Shawnigan	5:03	8:43
Courtenay	12:50	4:25	Arr. Victoria	6:00	9:40

The current schedule is not very useful to most commuters in the Cowichan Valley since the train leaves Duncan northbound to Nanaimo at 9:37 am and southbound to Victoria at 4:40 pm. The train is also quite slow, taking an hour and twenty minutes to travel between Duncan and Victoria – longer than driving or taking the intercity bus.

Private intercity bus service

Island Coach Lines (Laidlaw) provides intercity bus service linking the Cowichan Valley with Victoria, Nanaimo, and points north. The schedule is shown below.

Victoria to Nanaimo (Northbound)							
Location	Daily	Daily	Daily	Daily	F-SN	Daily	Daily
Victoria	5:40	9:20	11:45	1:45	4:15	4:45	7:20
Mill Bay	6:28	10:05	12:30	2:30		5:40	7:55
Arr. Duncan	6:45	10:20	12:50	2:50		5:55	-
Lv. Duncan	6:50	10:25	1:00	3:00	5:25	6:00	8:15
Chemainus	7:05	10:42	1:25	3:25		6:30	-
Ladysmith	7:15	10:50	1:35	3:35		6:45	8:40
Arr. Nanaimo	7:50	11:30	2:10	4:10	6:10	7:20	9:05

Nanaimo to Victoria (Southbound)

Location	Daily	Daily	Daily	Daily	Daily	F-SN	Daily
Nanaimo	7:30	10:30	12:30	2:30	4:50	7:00	9:15
Ladysmith	8:00	11:00	1:02	3:02	5:20	7:35	9:35
Chemainus	8:15	11:15	1:15	3:17	-	7:45	9:40
Arr. Duncan	8:40	11:45	1:35	3:45	5:50	8:05	10:00
Lv. Duncan	8:45	11:50	1:43	3:50	5:55	8:10	10:05
Mill Bay	9:10	12:05	1:58	4:15	6:10	8:25	10:20
Arr. Victoria	9:55	12:55	2:55	5:05	6:55	9:10	10:55

There may be some potential to integrate transit service with this private service, as will be discussed below.

Commuting Patterns

The 2001 Census included questions on travel to work. The results provide a picture of the commuting pattern in the Cowichan Valley.

The table summarizes the mode split for work trips in the Cowichan Valley. Automobile trips predominate: nearly 84% of commuters are automobile drivers, and a further 7% travel to work as passengers in an automobile. Transit accounts for just 0.7% of work trips among Cowichan Valley residents. That is lower than the transit share in other comparable communities in B.C. Walking and cycling account for another 7% of work trips.

Mode split for work trips in the Cowichan Valley, 2001

Auto driver	23,170	83.8%
Auto passenger	1,985	7.2%
Transit	180	0.7%
Walk	1,580	5.7%
Cycle	385	1.4%
Other	365	1.3%
Total	27,660	100.0%

The region has been divided into 4 zones to examine commuting patterns based on 2001 Census data: Duncan/North Cowichan (including Area E & the Cowichan Reserve), South End (Areas A, B, C, & D), North End (Ladysmith, Area G, and Area H), and Lake Cowichan (Areas F & I).

Duncan/North Cowichan – This is the core area of the Cowichan Valley, with just over 50% of the region’s population and almost 70% of the jobs. More than 80% of Duncan/North Cowichan residents work within the same area, and commuting within this area accounts for 40% of all work trips in the region. The most important destinations for commuters from

Place of work for Duncan/N. Cowichan residents

	Number	Percent
Duncan/N. Cowichan	9,045	81%
Lake Cowichan	295	3%
South End	600	5%
North End	125	1%
Greater Victoria	730	7%
Nanaimo Region	370	3%
Total	11,165	100%

this region are Greater Victoria (7%) and the South End (5%).

South End – This area has just over 25% of Cowichan Valley residents and about 14% of the jobs. Residents of the South End are most likely to commute to another region, with only 30% living and working in the South End. The largest group (39%) commutes to Greater Victoria, while a further 31% commutes to Duncan/North Cowichan.

Place of work for South End residents

	Number	Percent
Duncan/N. Cowichan	1,730	31%
South End	1,690	30%
Greater Victoria	2,170	39%
Total	5,620	100%

North End – This area has about 14% of the region’s residents and about 12% of the jobs. Nearly half of North End residents also work in the North End. The next largest group (29%) commutes to Duncan/North Cowichan, while most of the remainder (22%) commutes to the Nanaimo Region.

Place of work for North End residents

	Number	Percent
Duncan/N. Cowichan	885	29%
North End	1,460	48%
Nanaimo Region	675	22%
Total	3,070	100%

Lake Cowichan – This area has the smallest share of both population (7%) and jobs (6%). Just over half of residents also work in the Lake Cowichan area. Most of the rest (42%) work in Duncan/North Cowichan, and a further 6% work in the Nanaimo Region.

Place of work for Lake Cowichan residents

	Number	Percent
Duncan/N. Cowichan	610	42%
Lake Cowichan	730	51%
Nanaimo Region	80	6%
Total	1,445	100%

5.0 REVIEW OF EXISTING TRANSIT SERVICE

This section examines the existing transit service and patterns of transit demand in the Cowichan Valley. It uses historical service level and ridership data, along with the most recent passenger counts and on-board passenger survey.

5.1 Comparison with Other Systems

The table below compares the Cowichan Valley Conventional Transit System with other transit systems serving populations of 20,000 to 50,000. The Cowichan Valley has the highest amount of transit service among this group, and ranks second on a per capita basis. However this calculation is based on the service area population (those living within 400 m of a bus route), which accounts for less than half of the total population of the Cowichan Valley. This proportion of population served to total population is lower for the Cowichan Valley than for the other communities in this group. In terms of ridership, the Cowichan Valley is in the lower half of the group, and it has the lowest productivity in terms of passengers per hour of service. This reflects some of the land use issues discussed in the previous section. Cowichan Valley also ranks lowest in cost recovery.

Comparison of Conventional Transit Performance Measures, 2003/04

	Population Served*	Hours of Service	Revenue Passengers	Hours/ Capita	Rides/ Hour	Cost per Ride	Cost Recovery
Cowichan Valley	29,900	17,722	252,600	0.59	14.3	\$4.58	20.2%
Campbell River	28,200	17,114	320,700	0.61	18.7	\$3.85	40.3%
Chilliwack	43,600	16,607	358,700	0.38	21.6	\$3.12	34.5%
Comox Valley	35,700	16,895	271,500	0.47	16.1	\$4.48	24.5%
Penticton	27,400	15,776	318,900	0.58	20.2	\$3.37	39.9%
Vernon Regional	33,600	13,517	238,900	0.40	17.7	\$4.29	32.6%
Total - Tier 2	198,400	97,631	1,761,300	0.49	18.0	\$3.88	28.2%

*Population within 400m of a transit route only

The second table below compares the Cowichan Valley Paratransit System with those in similar-sized communities. The Cowichan Valley has the second lowest amount of service and passengers among these systems. Productivity is somewhat below average for the group while cost per ride is close to average.

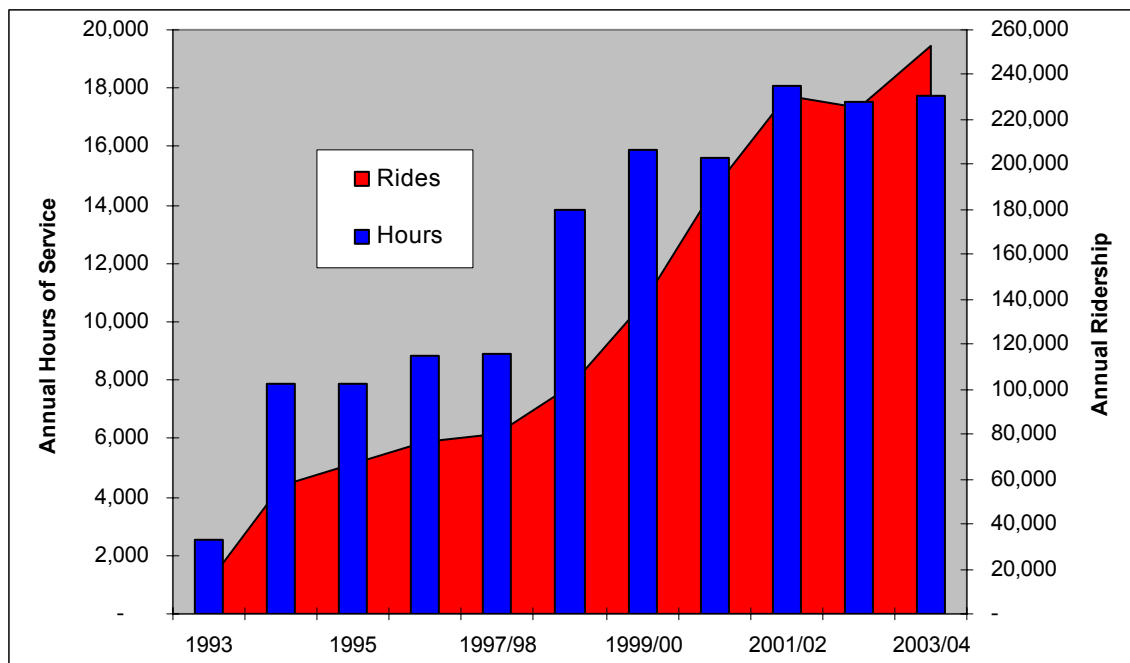
Comparison of Custom Transit Performance Measures, 2003/04

	Municipal Population	Hours of Service	Revenue Passengers	Rides/ Hour	Cost per Ride
Cowichan Valley	32,400	2,272	6,288	2.8	\$17.58
Campbell River	34,700	5,443	21,356	3.5	\$14.60
Chilliwack	66,200	8,375	36,886	3.5	\$11.94
Comox Valley	52,600	6,738	26,004	3.5	\$15.46
Penticton	32,600	1,992	10,660	2.7	\$9.85
Vernon Regional	45,100	10,113	63,455	5.5	\$8.44
Total - Tier 2	263,600	34,933	164,649	4.0	\$11.57

5.2 Historical Trends

The conventional transit component of the Cowichan Valley Transit System has been in operation since 1993. The following chart illustrates the growth in service levels and ridership since that time. Following the initial start-up, growth was quite slow until 1998, when significant expansion in North Cowichan and the South End occurred. The system experienced strong ridership growth between 1998 and 2001 as a result of this service increase and the fare reduction that was implemented in 1999.

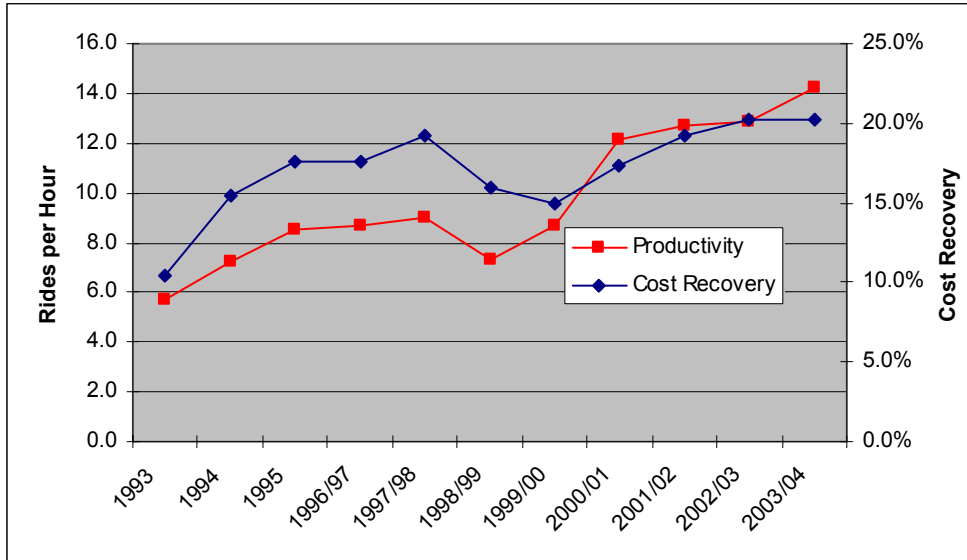
Transit Service and Ridership in the Cowichan Valley, 1993-2004



The chart below shows the trend in two key transit system performance measures: productivity and cost recovery. Productivity (rides per hour of service) increased sharply during the first two years of operation, and remained relatively constant until 1998. There was a drop after service expansion in 1998, followed by an increase due to increased ridership in 1999. This shows that ridership has responded to the increase in service

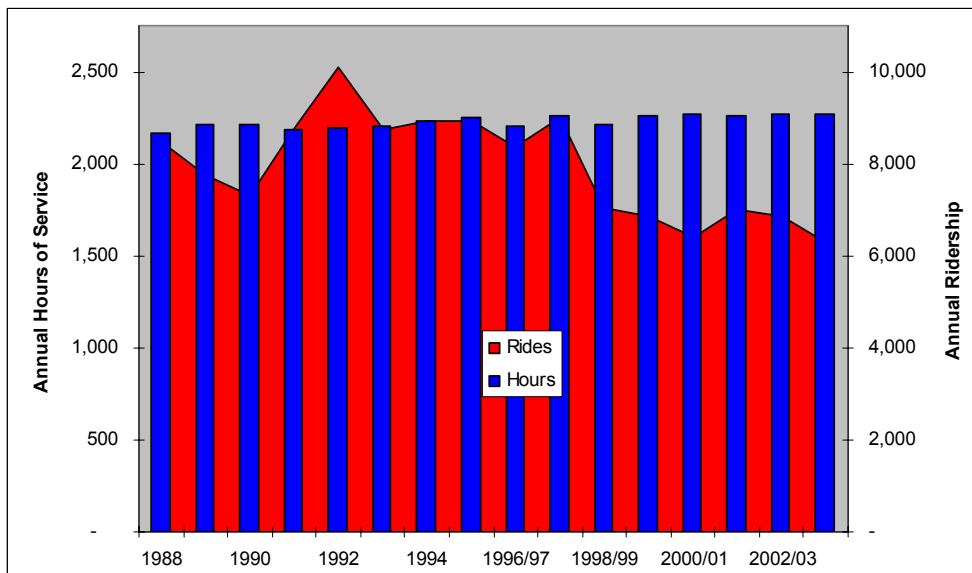
levels and to lower fares which were introduced in 1999. Cost recovery steadily improved from about 10% to 19% in 1997. Cost recovery initially dropped when fares were reduced in 1999, but as ridership increased cost recovery rebounded to around 20%.

Conventional Transit System Performance in the Cowichan Valley



The paratransit system in the Cowichan Valley has been in operation significantly longer than conventional transit. There has been little change in service level throughout this period. Ridership peaked in 1992, then dropped somewhat with the introduction of conventional transit. The chart below shows these trends.

Paratransit Service and Ridership in the Cowichan Valley, 1988-2004



5.3 Existing Service

The Cowichan Valley Transit System operates from 6 AM to 8 PM Monday to Thursday, 6 AM to 11 PM on Fridays, and 9 AM to 8 PM on Saturdays. However, there is considerable variation in operating hours from route to route. The transit system consists of eight routes:

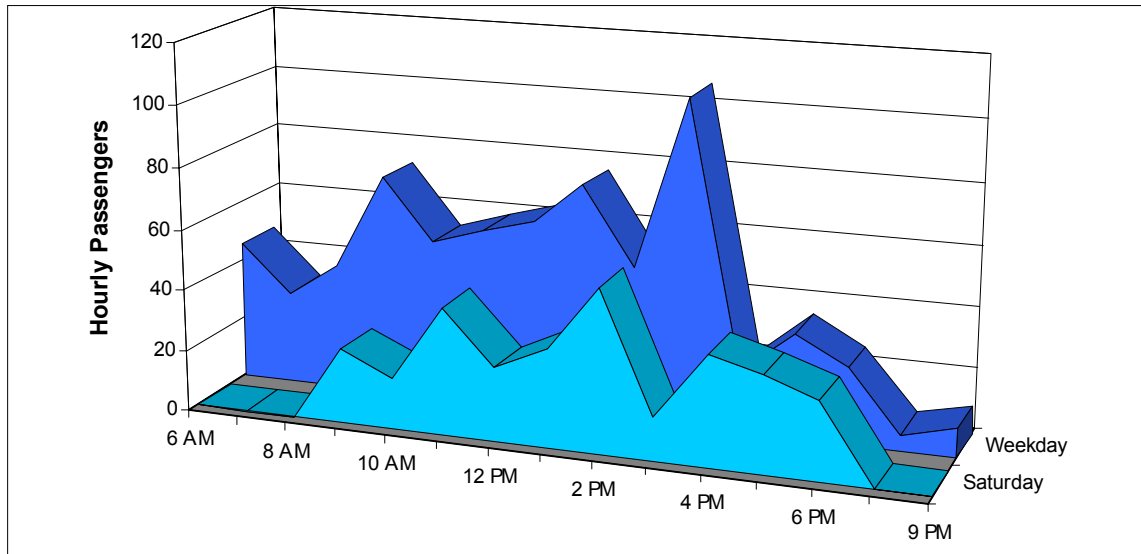
- **1-Gibbins** - This route operates along Gibbins Road between downtown Duncan and the Vimy Community Hall. Service is approximately every hour from 7:30 am to 6:30 PM Monday to Friday, and from 9:00 AM to 6:30 PM on Saturday.
- **2-Mt. Prevost** - This route has the highest productivity of all the routes. It operates between downtown Duncan and Mt. Prevost Middle School, northwest of downtown. It operates hourly from 7 AM to 6 PM, Monday through Friday and from 9 AM until 6 PM on Saturday. The last trip of the day is provided using a combined 2-Mt Prevost/3-Quamichan routing, which also operates on Friday evenings until 9:30 PM.
- **3-Quamichan** - This route serves the area of Duncan east of the Trans-Canada Highway. Service is hourly from 8:30 AM to 6 PM, Monday to Friday and from 9:30 AM to 6 PM on Saturday.
- **4-Maple Bay** - This route operates between downtown Duncan and Maple Bay. Service is every one to two hours from 8 AM to 6:30 PM, Monday to Thursday, 8 AM to 9 PM on Friday, and 9:30 AM to 6 PM on Saturday. There is also an 8 PM trip on Friday evenings.
- **7-Cowichan Lake and Youbou Connector** - This route operates between downtown Duncan, Lake Cowichan, and Honeymoon Bay. Service is roughly every one to two hours between 6 AM and 8 PM Monday to Thursday, with two additional trips on Friday evenings. There are three trips on Saturday between 10 AM and 8 PM. The Youbou Connector provides round trip service between Lake Cowichan and Youbou, meeting all Cowichan Lake trips.
- **8-Shawnigan Lake/9-Kerry Park** - These routes operate between downtown Duncan, Shawnigan Lake and the Mill Bay area. The routes travel in opposite directions on the same loop. Together, the routes operate approximately once per hour from 6 AM to 7 PM Monday to Thursday, 6 AM to 10 PM on Friday, and 10 AM to 7 PM on Saturday.
- **10-Cobble Hill/11-Mill Bay** - These routes operate between Duncan, Cowichan Bay, Cobble Hill and the Mill Bay area. The routes travel in opposite directions on the same loop. Together, the routes operate approximately once per hour from 7 AM to 7 PM Monday to Thursday, 7 AM to 11 PM on Friday. On Saturdays, there are three trips between 10 AM and 7 PM.

Expanded service to the Cowichan Reserve lands south of Duncan is planned for 2005. This area has a population of about 1,200, along with significant commercial development. It is likely that Providence Farm will also be served by this new service. Several Cowichan Valley Transit routes pass through the

reserve, but many areas are beyond walking distance of a transit route. The Cowichan Tribes will fund this improved service.

5.4 Trip Profile

Hourly Ridership on the Cowichan Valley Transit System

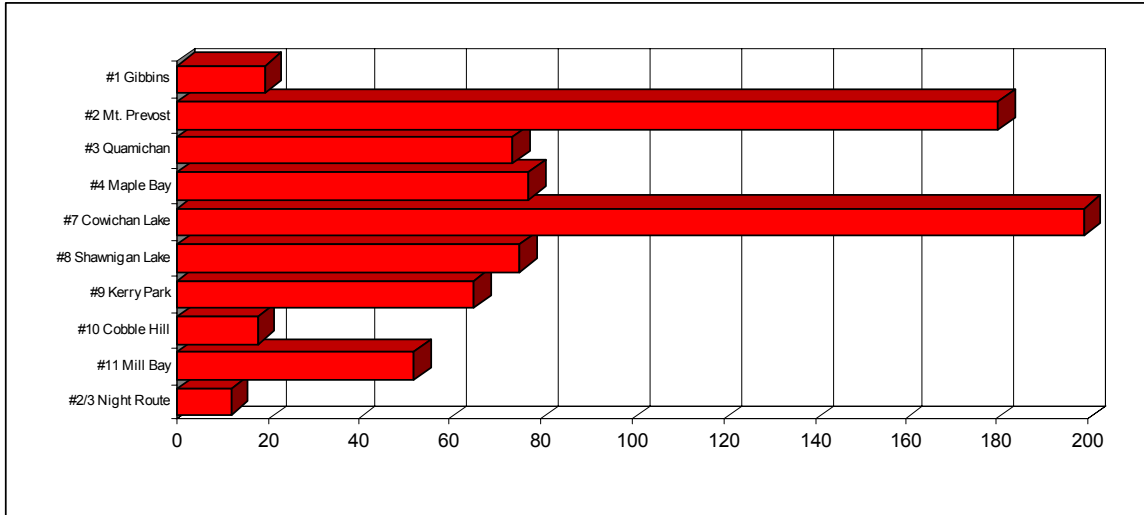


The Cowichan Valley Transit System carried an average of 690 passengers each weekday according to passenger counts taken in March 2003. This is roughly double the level of five years ago. More than half of ridership occurs during the midday period (from 9 AM to 3 PM). Most of the remaining ridership is during the peak periods, with the AM peak (7 to 9 AM) accounting for 17% of daily ridership and the PM peak (3 to 6 PM) accounting for 23%. The chart above shows hourly ridership on the Cowichan Valley Transit System. Ridership is highest during the afternoon, with a peak of more than 100 passengers carried between 3 and 4 PM. In a system with a strong commuter market, there are typically sharp ridership peaks during the AM and PM rush periods. A system with a large midday ridership is typically more oriented toward shopping and other non-commuting trips. Over the past five years, peak period ridership in the Cowichan Valley has grown faster than overall ridership as the system has begun to develop more of a commuter market (especially students). Saturday ridership is under half the level of weekday ridership, although the pattern is similar with the greatest use during the middle of the day.

The first chart on the following page shows weekday ridership by route for the Cowichan Valley Transit System based on the March 2003 passenger count. Two routes account for half of the total ridership. The 7 Cowichan Lake route carries about 200 passengers per day, more than any other route, and 26% of total system ridership. This route has also experienced the greatest increase in ridership over the past five years, with almost four times

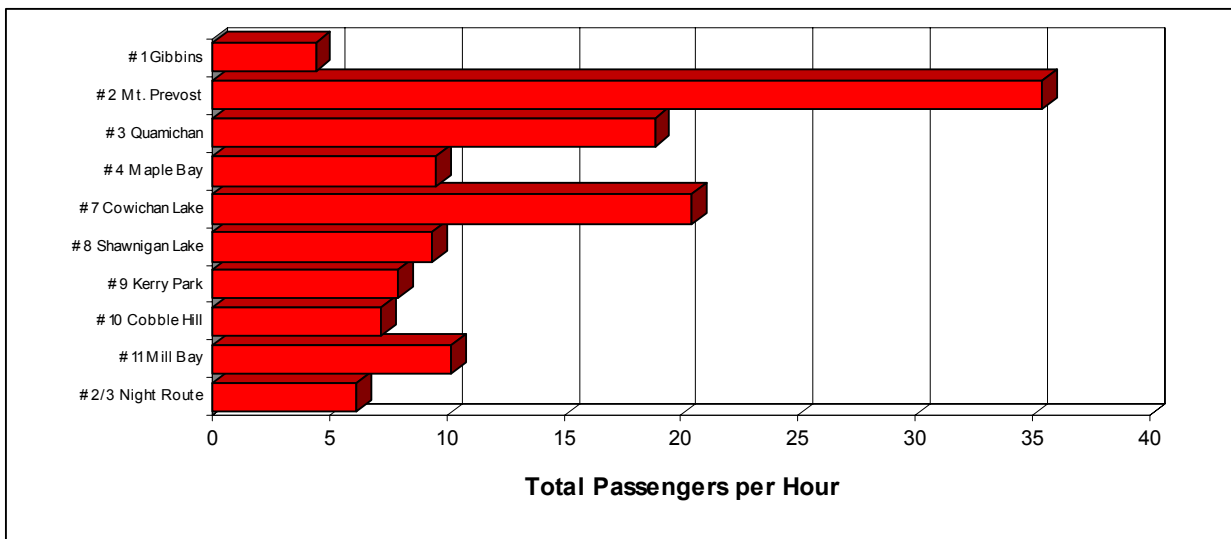
as many passengers as were carried in 1999. The 2-Mt. Prevost is the next busiest route, carrying about 180 passengers per day, about 23% of total ridership. The four South End routes carry a total of about 210 passengers per day, up from an average 80 passengers per day in February 1998.

Average Weekday Ridership by Route



Rides per hour of service is a measure of productivity in the transit system. The second chart compares the productivity of each route. The 2-Mt. Prevost, serving the core Duncan area, has the highest productivity at about 35 rides per hour. There are two other routes with productivity levels above the system average of 14 rides per hour: the 7 Cowichan Lake route (21 rides per hour) and the 3-Quamichan route (19 rides per hour). The other routes are generally in the range of 5-10 rides per hour. The rural or semi-rural nature of much of the Cowichan Valley Transit service area clearly has significant impacts on overall performance.

Average Productivity by Route

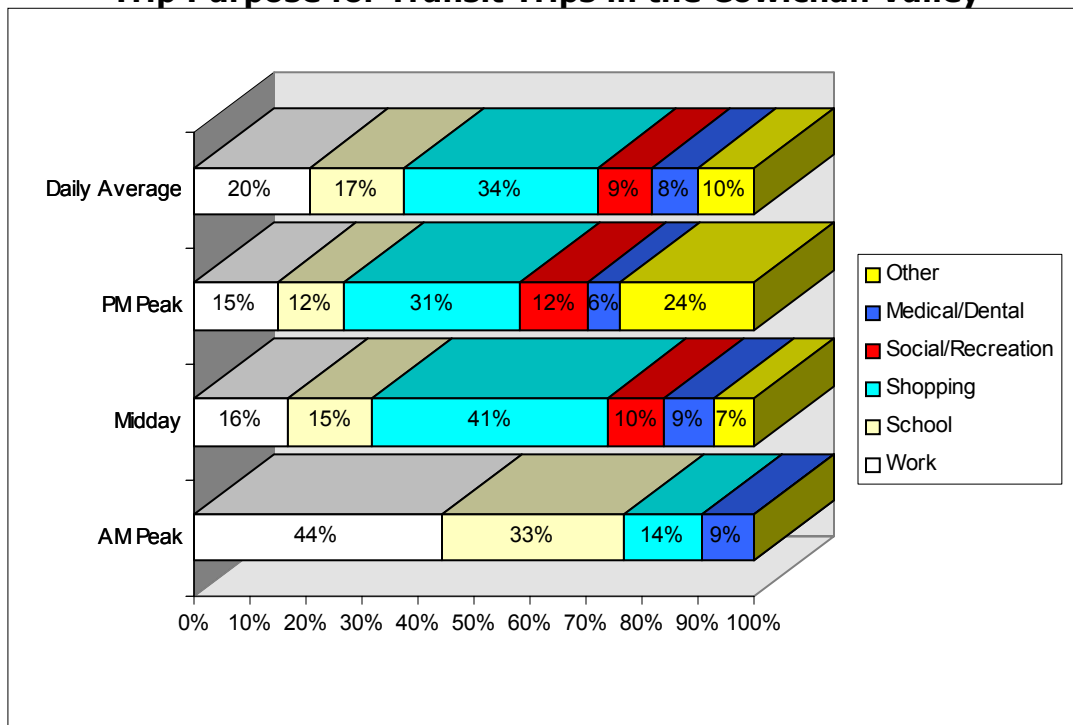


Trip Purpose

The chart below shows trip purpose for trips made on the Cowichan Valley Transit System. Shopping trips are the most common trip purpose, making up about one third of all trips. This is followed by work trips (about 20% of the total) and school trips (17%). The remaining 27% of trips was made up of social/recreation, medical/dental, and other trips. These numbers likely understate the importance of school trips due to strong student ridership growth since this survey was conducted. This distribution supports the conclusion made previously that the Cowichan Valley Transit System is still primarily a shopper oriented system. However, there is a significant commuter market (for both work and school), and this market is growing.

Trip purpose varies considerably by time of day. During the AM Peak period (7 AM to 9 AM), commuting trips dominate, with school and work trips accounting for 77% of the total. Shopping dominates the midday period, making up 41% of trips at this time versus 31% for work and school trips. The PM Peak period (3 PM to 6 PM), not surprisingly, has the greatest mix of trip types. Shopping trips are the most common (31% of the total), while work and school trips make up 27% of the total. Social/recreation, medical/dental, and other trips account for 42% of trips during this period.

Trip Purpose for Transit Trips in the Cowichan Valley



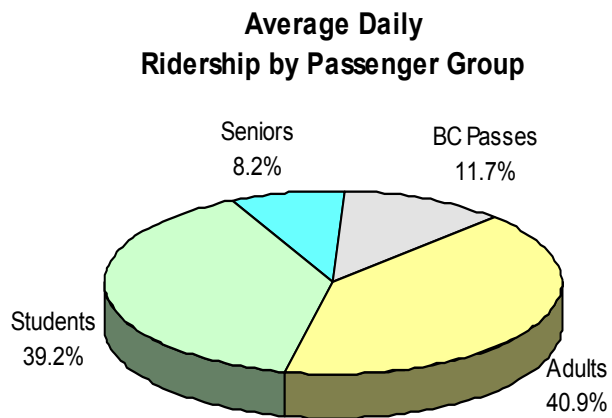
Origins/Destinations

Analysis of the origin/destination patterns, shows that downtown Duncan is a strong focus for the system. Downtown Duncan is the most common origin, accounting for 38% of trips. West Duncan was the second most common origin (13%), followed by Lake Cowichan (12%) and Shawnigan Lake (9%). Downtown Duncan was also the most common destination, accounting for 42% of trips. This was followed by West Duncan (12%), East Duncan (6%), Lake Cowichan (6%), and Shawnigan Lake (6%).

Just 19% of trips involved transfers. Just over half of transfers were made in downtown Duncan. Most remaining transfers were made in Lake Cowichan (onto the Youbou Connector service).

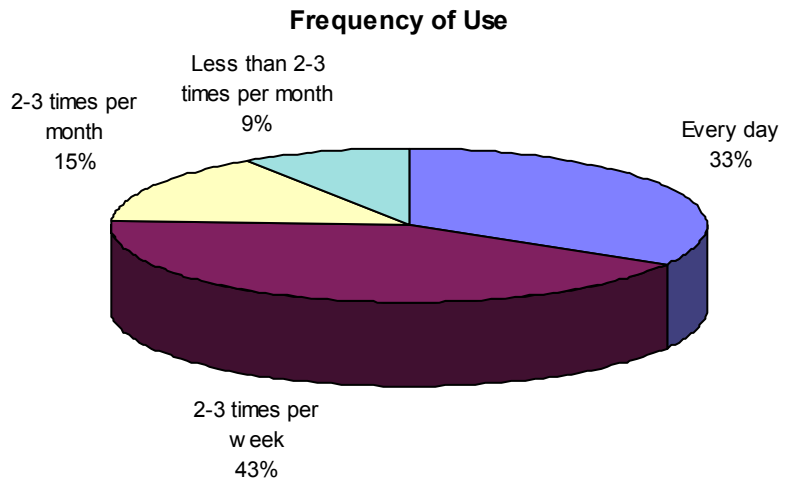
5.5 Passenger Profile

The chart to the right shows transit ridership in the Cowichan Valley by passenger group. The most significant change over the last five years has been the increase in the student share of ridership, from 25% to the current 39%. Over the same period, the seniors/BC Bus pass share of ridership has decreased from 32% to 20%. The adult share of ridership has remained almost constant. These changes reflect how the system is beginning to evolve from a shopper oriented service to a more commuter oriented service, with a strong focus on school commuters.



Frequency of Transit Use

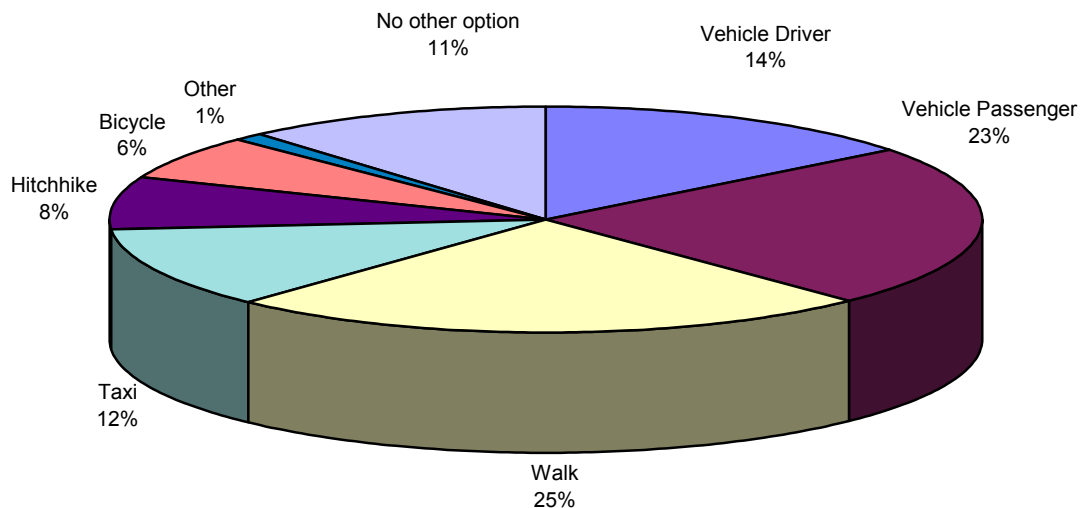
As the chart below indicates, the largest group of transit riders in the Cowichan Valley (43%) use the system 2-3 times per week. This would be quite typical of a shopper oriented service. About one third of transit riders are regular users or commuters who use the system every day. Just under one quarter of transit riders used the system 2-3 times per month or less.



Alternative Transportation Options

Transit passengers can be divided into two groups depending on the other transportation options that they have available. Those that have no or few other transportation options are termed "transit dependent". Those who have other options (in particular the use of a private automobile) but choose to use transit are termed "choice riders".

Alternative Transportation Options



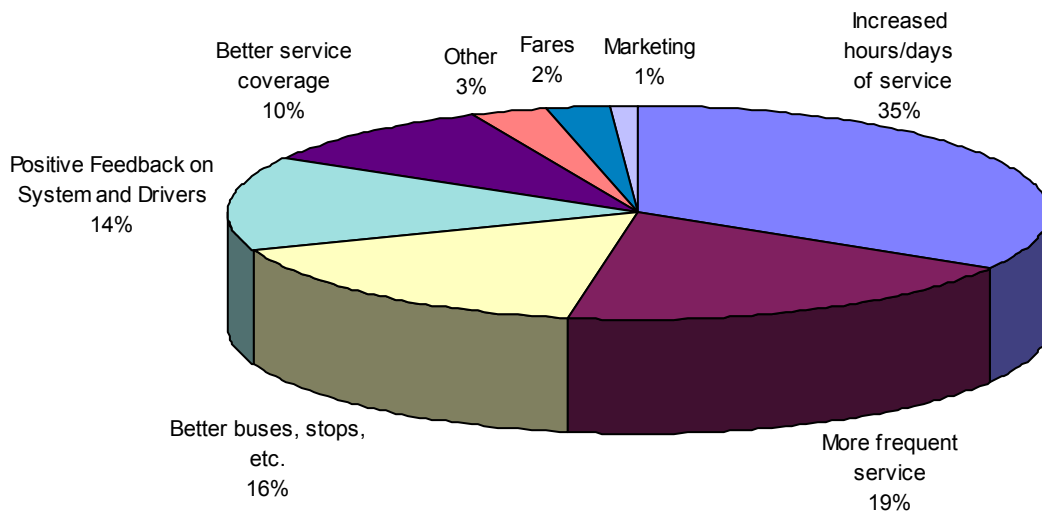
The chart above outlines the alternative transportation options available to users of the Cowichan Valley Transit System. Eleven percent of transit riders, representing the core transit-dependent group, reported that they had

no other transportation options available. Those stating they would drive their own vehicle as an alternative (14%) represent the core choice rider group. Those reporting other transportation options typically include both transit dependent and choice riders. Walk (25%) and vehicle passenger (23%) were the most common transportation alternatives, accounting for about half of the total. Most in this group would be classified as transit dependent.

Passenger Comments

In the On Board Survey, passengers were asked what could be done to improve the Cowichan Valley Transit System. While attracting new markets is critical, it is also important that current passengers are satisfied with the service. The results of the survey are summarized in the chart below. The most frequent responses, accounting for 35% of the total, related to extending the hours or days of service: requests for Sunday service and/or more Saturday service was the most common response, followed by requests for more evening service. This was followed by requests for more frequent service (19%), improved buses and bus stops (16%), and new routes or extend existing routes (10%).

Passenger Comments



Cowichan Visions public survey

The Cowichan Visions process included a public survey on attitudes related to growth and development in the Cowichan Valley. Although this was not a scientific survey, it did provide concerned citizens with an opportunity to provide input on how the Cowichan Valley is going to develop in the future. Transportation was one of the key issues covered in the survey. When people were asked to comment on the current transportation system in the Cowichan Valley, the lack of transit service was the most frequent response.

When participants were asked if they had identified any transportation concerns, more than one third of respondents mentioned the need for more transit service. Of those who responded to the survey, only about 2% were current transit users. When asked what was preventing them from using alternative transportation, the largest group (27%) said there was no transit service in their neighborhood. The next largest group (22%) said that they did not use alternative transportation due to the convenience and time savings associated with driving. These responses show the need for improved service coverage and for more frequent and direct service, in order to improve convenience and attract choice transit riders.

Public Open Houses

A series of open houses were held in February 2005 to allow members of the public to comment on the draft Transit Business Plan and provide additional input on transit service in the Cowichan Valley. These open houses, which were attended by CVRD and BC Transit staff, were held in Duncan, Chemainus, Lake Cowichan, and Mill Bay. A total of 67 people attended these sessions. There was interest in service to Chemainus/Crofton. Other issues raised included improved Saturday service to Lake Cowichan, better connections to the ferry terminals, and a link to Greater Victoria.

6.0 KEY PERFORMANCE INDICATORS (KPIs)

As stated in the objectives, Key Performance Indicators will be used to monitor transit system performance. The most commonly used KPI is passengers per hour of service, a measure of productivity. Two KPIs with a financial component are cost recovery (total revenue as a percent of total costs) and cost per trip. KPIs can be used to track the transit system's performance over time and to compare the actual performance with the budgeted amounts. These comparisons can be made on a regular basis (annually, quarterly, etc.).

The KPIs can also be used to compare the Cowichan Valley with other communities in terms of transit system performance. The tables in section 5.1 compare a number of KPIs for Cowichan Valley and transit systems in similar sized communities. While the Cowichan Valley is a unique community, Comox Valley and Chilliwack would be the most comparable in terms of community form. Communities with the highest KPIs can be identified as performance leaders and used as a benchmark.

Recommendation

- 1. Use Key Performance Indicators to track system performance and to guide annual budget development.*

7.0 SERVICE AND CAPITAL PLAN

This section updates the transit service proposals for the Cowichan Valley, covering both the conventional and the paratransit components of the system. The service plan is organized into three time frames. For the Short Range Period, specific service proposals for the next year (2005/06) are outlined. For the Medium Range Period, somewhat more conceptual service proposals for 2006-10 are outlined. Finally, there is some general discussion around forecast demand for transit and projected service levels for the Long Range Period, from 2010-15. The capital requirements needed to support the service plan are also outlined in this section. This involves both vehicles and major on-street facilities.

7.1 Short Range Service Proposals (2005/06)

These are specific service changes that are planned for the next year. Other issues to be investigated during this period have also been included.

Conventional Transit:

For conventional transit, expansion of service to Crofton and Chemainus is proposed. In addition, a review of student transportation and transit has been identified for further investigation during this period.

Crofton-Chemainus Service

Annual Impact:

Service hours: 2,000

Total cost: \$165,000

Additional in-service vehicles: 1

Additional ridership: 22,000

There are approximately 8,000 residents in the Crofton-Chemainus corridor. Currently, this area is served by a limited paratransit service, with two scheduled round trips between Duncan and Chemainus via Crofton on Tuesdays and Fridays. This service carries about 70-80 passengers per month. Public awareness of this service seems to be quite low, however; many potential passengers view the service as a handyDART service and are not aware that it is available to all residents. Enhancement to the schedule is needed. For passengers originating from Crofton or Chemainus, there is only one round trip to Duncan on each day and many residents complain that the current schedule does not allow them enough time to complete errands or appointments while in Duncan.

It is proposed that this service be upgraded to 4 round trips per day, Monday through Saturday, with each round trip requiring approximately 90 minutes. This would require one additional vehicle to operate.

Routing would likely be along Lakes Road, Herd Road, and Osborne Bay Road to Crofton, then along Chemainus Road to Chemainus, similar to the existing paratransit service. However, routing would likely be more direct within the Crofton and Chemainus town centres than is the case for the paratransit route. The exact routing would be determined following more detailed planning work that would be undertaken if this service was approved.

The additional number of trips each day, as well as the expansion from 2 to 6 days per week service, would allow for much greater travel choice and flexibility, especially for Crofton and Chemainus residents travelling to and from Duncan for medical, shopping, and other trips. Students form a key market group for transit in the Cowichan Valley and the expanded schedule would make the service more attractive for students living in the Crofton/Chemainus area who want to travel into Duncan or to other parts of the Cowichan Valley. The enhanced service would also allow for better connections to both the Salt Spring Island ferry in Crofton and the Thetis/Kuper Island ferry in Chemainus, and it would provide a way for both Cowichan Valley residents and visitors to travel to Crofton or Chemainus without an automobile.

It is projected that the service would carry 22,000 passengers annually. This compares with about 1,000 passengers annually on the existing paratransit service to Crofton/Chemainus.

While the current limited service to Crofton and Chemainus is provided as part of the paratransit system (which is funded by the City of Duncan and the District of North Cowichan), it is proposed that this upgraded service would be part of the conventional transit system, with the CVRD as the local government partner. This would allow for better integration with other parts of the transit system. This service could be provided using the community bus concept. Community bus is often used to serve areas where population density and transit demand might not justify regular conventional transit service. Typically, community bus uses a smaller, more neighborhood friendly minibus, such as the one already used for some conventional transit service in the Cowichan Valley. Community bus may also use flexible routing, where the bus deviates between stops from its set route to drop off or pick up passengers who live beyond walking distance from the route. Use of the community bus concept will be investigated as part of the more detailed planning for this service if it is approved.

Paratransit:

The introduction of conventional service to Crofton and Chemainus will allow for the current scheduled paratransit service to Crofton/Chemainus (approximately 400 hours annually) to be reallocated for general paratransit/handyDART service. There would be no additional cost to reallocate this service.

Key issue: Integration of Transit Service and School District Busing

High school students form a key market for transit. In the Cowichan Valley, students make up about 40% of transit riders. As was noted earlier, the student share of ridership has increased significantly from 25% in 1999. Overall ridership has doubled in the past five years, as has adult ridership. However, student ridership in the Cowichan Valley has tripled over the same period, accounting for more than half of all ridership growth. Clearly, this is a key market, and there is still potential for more growth.

There are several initiatives, already used by many communities around B.C., which could be implemented in the Cowichan Valley to encourage students to use transit, and to reduce the overlap in service between transit and school district busing. With changes to Provincial funding for student transportation in recent years, there is greater incentive for cooperation between the school district and transit.

- Several school districts have eliminated some school bus routes, which have been replaced with transit.
- In the Central Fraser Valley, Kamloops, and the Trail area, school districts purchase or subsidize monthly passes for students who live outside the walk limits (4.8 km for Grades 8-12).
- An Ambassador program, where bus drivers or other transit staff visit area schools, can be used to teach students about the transit system and encourage them to use it.
- The Cowichan Valley already has a student monthly pass. Some communities offer semester passes for high school students by selling a bundle of 4 monthly passes at a further discount. This encourages longer term transit use by students.

The process for reducing the overlap in service between school buses and transit follows three steps:

- The first priority, and the easiest, is to replace school bus service in those areas where students can be easily accommodated on the existing transit service without having to make any changes. There is no additional cost to the transit system and no impact on the existing service.
- The second priority is to replace school bus service in areas where students can be accommodated with minor schedule and routing changes to the existing transit service. This would have minimal to no impact on transit costs or on other aspects of the transit service.
- Finally, in some cases entirely new transit service may be required to replace some school bus trips. This will be the case if the area to be served is outside the current transit service area, or if the trip is at a peak time when all existing transit buses are in use. This is a more costly change to make, and the benefits would need to be examined more closely.

Encouraging greater integration of transit and school busing provides benefits to the school district, the transit system, and to students:

- Transit productivity increases as a result of increased student ridership without any need for significant increases in service. The transit system also receives more revenue.
- The school district can save money since the cost of providing students with transit passes is generally less than the cost of providing school bus service.
- Eliminating the service overlap means that there is a reduction in the overall taxpayer supported cost of providing transportation in the community.
- Transit provides students with a much more flexible service than the regular school buses. Students can choose from a number of trip times to and from school and they can use the transit passes to travel throughout the system at any time. This also encourages students to use transit for other trips in addition to the daily school commute.

Recommendation:

- 1. Approve in principle expansion to Crofton and Chemainus.*
- 2. Direct staff to proceed with more detailed planning work on the Crofton/Chemainus service.*
- 3. Continue to work with the School District for further integration with student transportation.*

7.2 Medium Range Service Options (2006-10)

This section outlines a number of service options with the potential for implementation in 2 to 5 years. For each service option, an estimate of the annual impact in terms of cost, service hours, vehicle requirements, and ridership has been developed. Specific service details and implementation dates will be determined at a later point. In addition, there is a list of other issues that will need to be addressed during this period.

Conventional Transit:

Improved Frequency on Routes 2-Mt. Prevost and 3-Quamichan

Option 1 – 30 minute frequency peak periods Mon-Fri.

Annual Impact

Service hours: 1,800

Additional in-service vehicles: 1

Total cost: \$146,000

Additional ridership: 45,000

Option 2 – 30 minute frequency all day Mon-Sat.

Annual Impact

Service hours: 2,200

Additional in-service vehicles: none

Total cost: \$149,000

Additional ridership: 35,000

The 2-Mt. Prevost and the 3-Quamichan serve the built-up urban core area around Duncan, and together they carry about one third of total system ridership. The 2-Mt. Prevost has the highest productivity of all routes in the Cowichan Valley Transit System, and the 3-Quamichan route also has well above average productivity. It is proposed to double the existing hourly frequency on these two routes and to extend the service day, resulting in 30 minute service frequencies on both routes from 6:30 am to 6:30 pm on weekdays and from 8:30 am to 6:30 pm on Saturdays. Most comparable transit systems have thirty minute service frequencies on at least some major routes. Given the current high ridership and productivity on the 2-Mt. Prevost and 3-Quamichan routes, they are the most obvious candidates for 30 minute service.

These routes serve several key destinations including Cowichan Senior Secondary, Malaspina University College, the Cowichan Community Centre and the Cowichan District Hospital. Increased service frequencies will provide for more flexible travel options for all market groups. In particular, the greater convenience will encourage more choice transit riders – those with other transportation options such as driving – to use the system. The greater travel choices, along with the extended service hours, will also make the service more attractive for commuters.

This proposal has been separated into two options. The first option would be to provide 30 minute service during weekday peak periods only (6:30 to 9:30

am and 2:30 to 6:30 pm), with 60 minute service remaining in the middle of the day and on Saturdays. This would provide the increased service when demand is the highest. It would be aimed primarily at school and work commuters, although other markets would benefit, especially from the increased service frequencies in the afternoon period. This option would require 7 hours of additional service per weekday or about 1,800 hours annually. One additional vehicle would be required. The total cost for this option is estimated at \$146,000.

The second option would be to provide 30 minute service throughout the day on weekdays and on Saturdays. This would build on the service already outlined in Option 1, and would require an additional 6.5 hours of service each weekday and an additional 12 hours on Saturday, or 2,200 hours annually. No additional vehicles would be required beyond the 1 vehicle already noted for Option 1. The cost of providing this service is estimated at an additional \$149,000 annually. It is projected that this service would attract an additional 35,000 riders annually.

A decision on whether to implement Option 1 or Option 2 would be made based on the level of demand and the availability of funding.

Improved Frequency to Lake Cowichan	
Annual Impact	
Service hours: 2,400	Additional in-service vehicles: 1
Total cost: \$188,000	Additional ridership: 48,000

The 7-Lake Cowichan route carries more than one quarter of total system ridership, and more than any other route. It also has the second highest productivity after the 2-Mt. Prevost. Currently the service operates roughly every 2 hours. It is proposed to increase the weekday service frequency to at least every hour throughout the day and to increase the Saturday service from 3 trips to 7 trips daily. Lake Cowichan residents have expressed a strong desire for improved Saturday service.

These improvements would provide Lake Cowichan residents with a greater choice of travel times, and would improve connections with other routes in the system. Students will be a key market for this increased service. As was discussed in section 7.1, closer integration between transit and student transportation will be an important trend over the next 5 years, and improved service frequency between Lake Cowichan and Duncan is critical to effectively serve this growing market.

This service would require 1 additional bus operating 8 hours per day, Monday to Saturday, providing 4 additional round trips each day. This results in 2,400 hours annually at a projected cost of \$188,000. The service is forecast to carry 48,000 passengers annually.

Currently, the Lake Cowichan route extends to Honeymoon Bay, while Youbou is served by a separate minibus service. With the introduction of increased service on the Lake Cowichan route, restructuring of the service should also be examined. Both Youbou and Honeymoon Bay might be more effectively served by a community bus service, possibly using some flexible routing. If the 7-Lake Cowichan route only went as far as Lake Cowichan, it could be provided within a one hour cycle, resulting in improved efficiency for the transit system. A community bus would connect with the conventional route in Lake Cowichan and would likely alternate between Youbou and Honeymoon Bay, depending on the level of demand.

Sunday Service

Annual Impact

Service hours: 1,200

Total cost: \$109,000

Additional in-service vehicles: none

Additional ridership: 22,000

Sunday service was the most frequently requested service in the last on-board passenger survey. Key markets served include shoppers, service industry workers, and people attending church. Sunday service also provides a transit option for recreation trips by residents and visitors to the Cowichan Valley. The system would operate at a lower level of service on Sundays compared with other days, with service every 1-2 hours on most routes. This level of service could be provided with 3 vehicles each operating for 8 hours per day each Sunday. The estimated cost of providing this service is \$109,000 and ridership is projected at 22,000 annually.

South End Service

Annual Impact

Service hours: 2,400

Total cost: \$188,000

Additional in-service vehicles: 1

Additional ridership: 36,000

The South End contains about one third of the Cowichan Valley's population, but densities are low making it very challenging to serve with transit. The South End contains some of the fastest growing areas in the CVRD, and additional service will be required to effectively serve this growing population. As with Lake Cowichan, students will form a key market as the transit system plays a larger role in student transportation. Frances Kelsey, with 1,150 students, is the largest secondary school in the region and it will be an important focus for additional service.

The current transit service in the South End essentially involves two large loops. The 8-Shawnigan Lake and 9-Kerry Park provide service in each

direction on one loop while the 10-Cobble Hill and 11-Mill Bay provide service in each direction on the second loop. However, many trips involve combinations of two different routes/loops. These combinations can be confusing for passengers and often result in long circuitous routing for many trips. It is proposed to streamline the South End service to provide more direct routings and reduce or eliminate the confusing combined routes. Simpler, more direct routing will better meet the needs of key markets including students, seniors, and shoppers. Improvements to the Cowichan Bay service and a possible extension to the Mill Bay Ferry terminal will also be examined.

As is discussed further below under key issues, improvements to the E&N rail service to make it more viable for commuters could have a significant impact on transit service in the South End. Routes and schedules would likely be adjusted during the peak times to feed into rail stations at Duncan, Cobble Hill, and Shawnigan Lake. Should the rail service be upgraded, these changes would be part of the South End service review.

It is estimated that one additional vehicle and 8 hours of service per day, Monday through Saturday, would be required in order to streamline and improve the South End service. This additional service would be primarily focused on the peak periods in order to serve the student market. This service has an estimated annual cost of \$188,000 and would attract an additional 36,000 passengers.

Many parts of the South End, with their relatively low densities, would be good candidates for community bus, and this will be considered as part of the service review. Community bus, using flexible routing in some cases, would be an effective way of improving service coverage while streamlining the transit routes serving the area. For example, routes might be made more direct, but buses would occasionally deviate from these routes if required to drop off or pick up a passenger. One candidate for community bus would be the Shawnigan Lake area. Currently, transit serves only the north part of Shawnigan Lake. Community bus could be used to serve both the west and east sides of the Lake, areas with 600 and 1,000 residents respectively who are beyond walking distance of the current transit route. This service would likely be on a request basis. Smaller buses also tend to be more neighborhood friendly in semi-rural areas such as this.

Paratransit:

Ladysmith Service

Annual Impact

Service hours: 2,400

Total cost: \$168,000

Additional in-service vehicles: 1

Additional ridership: 10,000

Ladysmith has a population of 7,000 making it one of the largest communities in the province without transit service. Key markets for transit include seniors and youth. Although Ladysmith is relatively compact, it is also quite hilly, so many residents – especially seniors and people with disabilities – would benefit from a local paratransit system. There is also strong demand for regional travel north to Nanaimo and south to Duncan and other parts of the Cowichan Valley.

Ladysmith residents have several transportation options for regional travel. As was noted in section 4.4, there is private bus service connecting Ladysmith with Duncan and Nanaimo, with 6 round trips per day. The cost for this service is \$4.00 each way between Ladysmith and Nanaimo. The E&N Railway provides service to both Duncan and Nanaimo, but the schedule is very limited, and a same day round trip to Duncan is not possible. The Town of Ladysmith Department of Parks, Recreation & Culture operates a transportation service for special needs children and seniors using a donated vehicle and volunteer drivers. Trips are provided to schools, medical appointments, and special events. Travel is as far as Nanaimo and Duncan, with a small number of medical trips to Victoria. The Town would be interested in having a local transit operation take over some aspects this service.

The proposed service would include both a local and a regional component. The local service can be provided using community bus with flexible routing between designated stops. A regional component would provide a connections to both the north and the south. Service to the South Plaza Parkway in Nanaimo (about 18 km) would allow passengers to connect to the Nanaimo Regional Transit System. Service to Chemainus (about 12 km) could be timed to allow for connections to other parts of the Cowichan Valley. This service would also provide transit to about 2,000 residents in the Saltair area between Chemainus and Ladysmith. This service would require 1 vehicle operating 8 hours per day, Monday through Saturday. Four round trips to both Nanaimo and Chemainus, along with 4-6 local paratransit trips, could be provided each day. Providing a user subsidy for passengers to use the existing private bus service to Nanaimo and Duncan should also be examined. A user subsidy would have a relatively low cost per trip, and it would provide residents with a wider choice of travel times using either transit trips or private bus trips.

Increased Paratransit Service

Annual Impact

Service hours: 2,200

Total cost: \$90,000

Additional in-service vehicles: 1

Additional ridership: 6,600

The Cowichan Valley has less paratransit service than most other comparable communities. For example, it has about one third the level of paratransit service found in the Comox Valley. Currently, paratransit only operates in the City of Duncan and the District of North Cowichan. This service consists primarily of door-to-door service for people with disabilities, although there are scheduled trips that are available to the general public.

One additional paratransit vehicle providing 2,200 annual hours of service is proposed. This would essentially double the service level, and allow paratransit to be extended to other areas of the Cowichan Valley Regional District, including Lake Cowichan and the South End. If this expansion is undertaken, it would likely make more sense to make the CVRD the primary local government partner for the paratransit service, as is already the case for the conventional service.

This service expansion will help to address the increased demand for door-to-door custom transit service likely to accompany the rapid growth of the older seniors population in the Cowichan Valley over the next decade. Some of this service increase might also be used to provide community bus-style service in some parts of the region.

Introduction of Taxi Supplement

Annual Impact

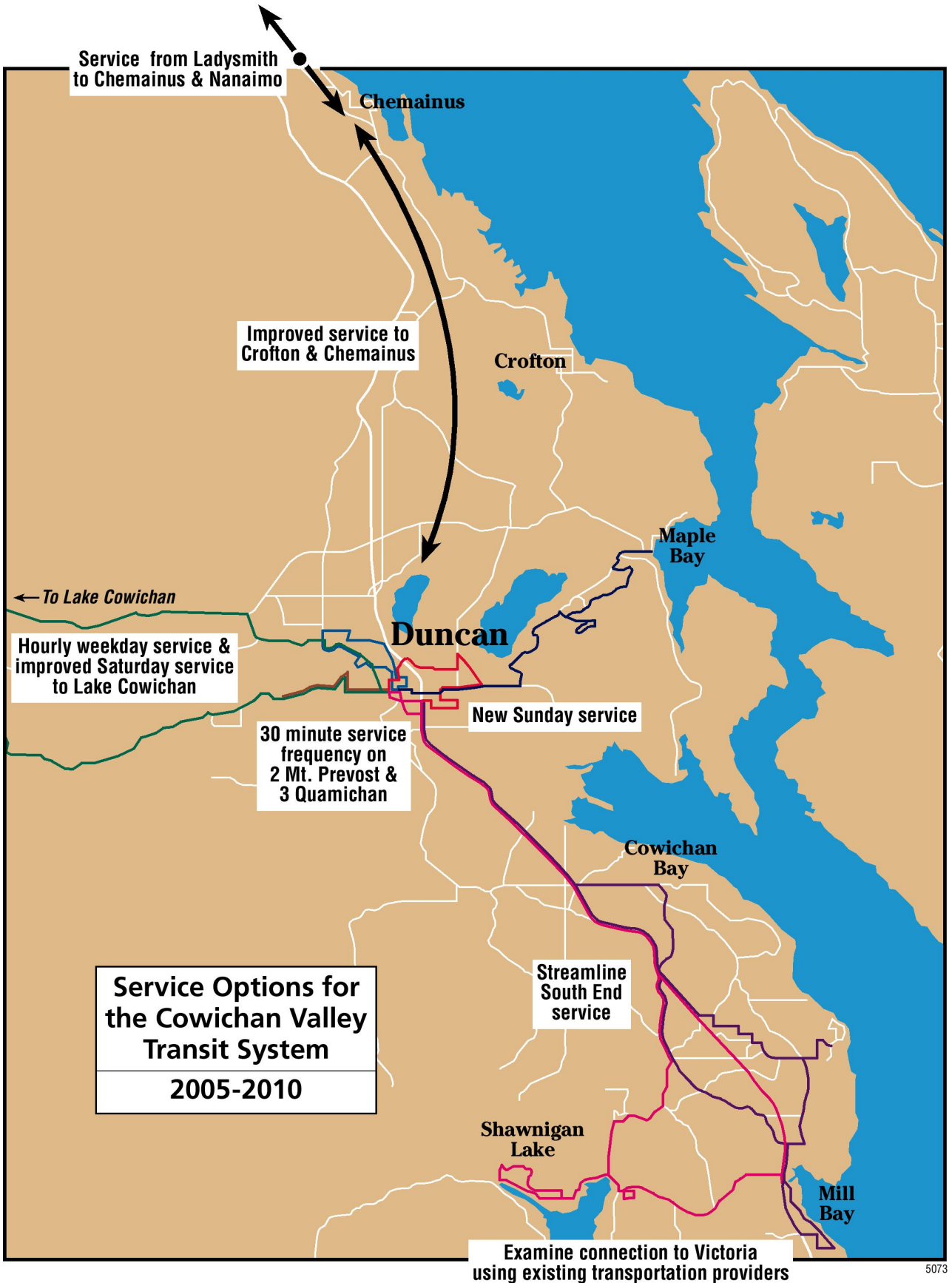
Service hours: none

Total cost: \$8,400

Additional in-service vehicles: none

Additional ridership: 1,400

Taxi supplement is a program that operates in conjunction with paratransit service and allows some door-to-door trips to be dispatched to taxis when the paratransit vehicle is fully booked for a particular time slot. Taxi supplement is a good way to increase capacity for providing door-to-door trips without taking the major step of adding a new vehicle. The cost per trip is generally lower than for paratransit trips. Currently, the availability of taxis to provide this service is limited in the Cowichan Valley, and there are no accessible taxis. However, the presence of a program such as this might encourage local taxi companies to purchase an appropriate vehicle.



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Summary of Short and Medium Range Service Options

The table below summarizes the service enhancements proposed for the Cowichan Valley Transit System during the short and medium range period (2005-10). The phasing for implementation of these services will be determined following more detailed market research and planning, and through annual budget approval.

Summary of Short and Medium Range Service Options, 2005-10

Description of Service Options	Vehicles	Service Hours	Total Cost
Short Range			
<i>Conventional Transit</i>			
Crofton/Chemainus service	1	2,000	\$165,000
Reallocated paratransit service	--	400	--
Medium Range			
<i>Conventional Transit</i>			
Mt. Prevost/Quamichan peak period 30 min service (Option 1)	1	1,800	\$146,000
Mt. Prevost/Quamichan midday & Saturday 30 min service (Option 2)	--	2,200	\$149,000
Lake Cowichan – hourly service	1	2,400	\$188,000
Sunday Service	--	1,200	\$109,000
South end service	1	2,400	\$188,000
<i>Paratransit</i>			
Introduction of Ladysmith service	1	2,400	\$168,000
Additional paratransit service	1	2,200	\$90,000
Introduction of taxi supplement	--	--	\$8,400

Key issue: Links to Other Regions

Improving regional links will be a key issue for the transit system in the medium range period. As noted earlier, there are important transportation and commuting links between the Cowichan Valley and adjacent regions. Roughly one in five Cowichan Valley residents work outside of the region, with 14% working in Greater Victoria and 6% working in the Nanaimo Region. Within certain parts of the Cowichan Valley, these commuting links are even more important, with 39% of South End residents working in Greater Victoria and 22% of North End residents working in Nanaimo.

The proposed Ladysmith service would include a limited regional link to Nanaimo. Improving this link and the connection to Victoria will need to be considered over the next five years. Service delivery options will be a key question to be addressed. Providing a regional commuter service such as this with a transit bus would be quite expensive, and each trip that is provided during the peak commuting times would require an additional vehicle. Another option would be for local transit service to feed into the existing regional services, including Vancouver Island Coach Lines and the

E&N Railroad. However, in order for this to work, the schedules for these services would have to be adjusted to better meet the needs of commuters.

User subsidies might also be examined as a means of making the existing bus and rail services more affordable for commuters. Such subsidies are typically less expensive than actually providing the trips with public transit. Island Coach Lines discontinued its early morning commuter run from Duncan to Victoria a few years ago due to lack of demand. A user subsidy would help to boost demand, which in turn could make this service viable.

The Island Corridor Foundation (ICF) is a partnership of local governments and First Nations on Vancouver Island which owns and manages the E&N rail corridor. The ICF will not actually operate the rail service and it is currently in discussions with potential operating companies. The ICF would like to see rail service between the Cowichan Valley and Victoria that better meets the needs of commuters, and it is expected that such improvements will be made within the next 2-3 years. Initially, this would likely involve one train from Duncan to Victoria in the morning, returning to Duncan in the afternoon. Once established, the service would be expanded in the future to provide additional frequencies using commuter trains. If commuter service on the E&N is introduced, changes in local transit service to better serve stations at Shawnigan Lake, Cowichan Station, Duncan, and Ladysmith would be required. This could likely be accomplished through readjustment and reallocation of existing service rather than a service expansion. At its southern end, the commuter rail service would be integrated with the Victoria Regional Transit System.

Recommendation

- 1. Approve in principle the medium range service options. These will be evaluated further as part of the annual budget development process.*

7.3 Long Range Service Forecast (2010-15)

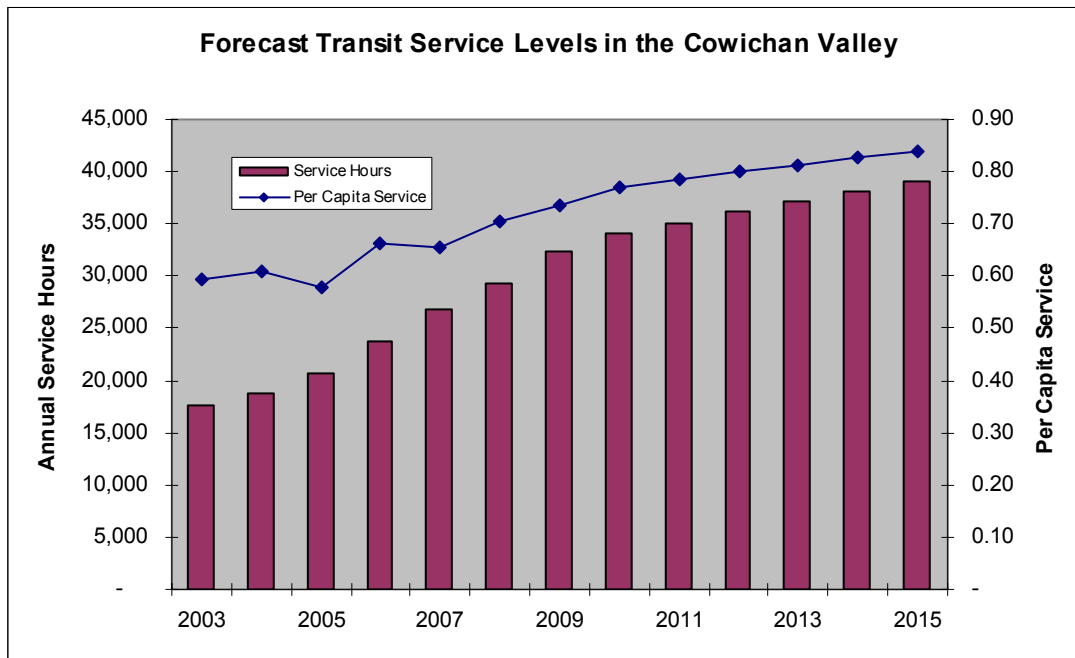
This section of the Plan looks at the period from five to ten years in the future. Planning for this period is generally quite conceptual in nature, evaluating future service requirements based on long-range demographic and land-use changes. A forecast of future service requirements has been developed based on target per capita service levels. This enables planning for future expenses.

Transit Service Requirements

Service hours per capita is a measure of the level of service being provided, and this can be used as a guide to estimate future transit service requirements. Currently, there is 0.59 hours of transit service per capita in the Cowichan Valley. Although this is above average for similar sized communities in B.C., this is based on the population served which represents

only about 40% of total population in the region. In most other communities the population served is a much higher proportion of the total population. A survey of similar-sized communities elsewhere in Canada found that those communities considered to be industry leaders (based on transit system performance) had per capita service levels in the range of 1.0-1.2 hours per capita. However, these communities typically have a more compact and traditional urban form.

Based on service changes proposed in the short and medium range periods, transit service levels will increase to about 0.77 hours per capita by 2010. As a general guide for estimating long range service needs in the Cowichan Valley, it will be assumed that service per capita will gradually increase to 0.85 over the following five years to 2015. This represents the bottom range of the industry leaders with an adjustment for the difference in urban form. It will also be assumed that over this period, the population served as a proportion of the total population will increase to 55% from 40% currently. In general, 0.85 hours per capita translates into 30-60 minute service on major routes. The chart below shows forecast transit service requirements and per capita service levels over the next twenty years based on these assumptions.



7.4 Capital Plan

Vehicle Plan

Currently, there are 8 vehicles in the Cowichan Valley conventional transit fleet. In addition, there is one paratransit vehicle and one vehicle for the Youbou service. If all the medium range service enhancements outlined above are implemented, the total conventional fleet would increase to 13 vehicles by 2010 (including an additional vehicle for the Cowichan Tribes service planned for implementation in 2005). The paratransit fleet would increase from 1 to 3 vehicles over the same period, for a total combined fleet of 16 vehicles. A further 4 expansion vehicles would be required by 2015, bringing the total combined fleet size to 20. In addition, 2 vehicle replacements would be required during this period, based on an 18 year life span for buses.

Facility Plan

In addition to vehicles, the capital plan must also consider the need for other major facilities. During the 10 years covered by this plan, these facilities might include a new operating centre and new off-street transit exchanges.

As the fleet grows to a projected 20 vehicles over the next 10 years, a new operating centre may be required. Currently, buses are stored and serviced at a facility that the operating company contracts from another firm.

A new or upgraded downtown transit exchange will be required during the next 10 years as the service expands. This could be an off-street facility with 6-8 bus bays. There has been some preliminary discussion on this issue, and a site to the east of the current exchange in downtown Duncan is one possible candidate for a new upgraded transit exchange.

8.0 SUPPORTING STRATEGIES

The service plan is only one element - although a critical one - of a successful transit system. Supporting strategies can be used to encourage greater ridership and improve transit system performance. Fares, on-street facilities, marketing, and transportation demand management (TDM) strategies can all be a very effective promoting greater transit use and supporting the service plan.

8.1 Fare Strategies

There are a number of strategies which can be used when setting transit fares to encourage greater ridership, target key market groups, and meet cost recovery targets. The development of fare products which are convenient for passengers is also important. The use of prepaid fares, particularly passes, is a key component of the fare strategy. Monthly passes are a convenient option for passengers and they are sold at a discount compared with the price of individual cash fares, giving commuters and other regular transit users a price break and encouraging more frequent transit use. Students represent a critical market that can be targeted with further discounts using special monthly or semester passes. Adult commuters and seniors are other potential target markets.

Prepaid fares currently account for nearly half of transit ridership in the Cowichan Valley, which is lower than in most other similar-sized communities. Use of prepaid fares should be encouraged since it provides a number of advantages for both passengers and the transit system:

- prepaid fares are convenient since exact change is not required each time the passenger boards the bus;
- there are no direct, out of pocket costs to use the bus which puts transit on more equal footing with the private automobile;
- regular users receive a price break which encourages greater commuter travel on transit;
- since prepaid fares are paid up front they encourage passengers, who typically buy passes for commuting, to use transit for other non-commuting trips as well

Use of prepaid fares can be encouraged by discounting the cost compared with the equivalent cash fare. Books of 10 tickets are usually sold for the price of 9 cash fares. Monthly passes are typically set at no more than 30 times the cash fare in order to provide regular users with a discount and provide an incentive for using the pass. This can have very positive impacts on ridership. In many communities, reductions in the cost of monthly passes relative to the cash fare over the past decade have resulted in increased pass use accompanied by large increases in overall ridership.

The Cowichan Valley Transit System has a single fare zone, and passengers pay the same fare regardless of how far they travel. This fare structure is

much simpler for passengers to understand. On a relatively small transit system such as the Cowichan Valley a multi-zone fare structure would add needless complexity, greatly increasing the number of different fares, without significantly adding to revenue. Charging higher fares to outlying areas also tends to negatively impact ridership on those routes, making them less viable. Prior to 1999, the Cowichan Valley Transit System had a multi-zone fare structure. Following the change to a single zone system with lower fares, passenger revenue actually increased due to a sharp increase in ridership, particularly on routes where the multi-zone fares had previously been in effect.

Fare Structure:

A recommended fare structure has been developed as a guideline for setting fares. This fare structure encourages the use of prepaid fares and should increase ridership among target markets including students, adult commuters, and seniors. Fares in the Cowichan Valley already follow this fare structure, and it is recommended that any future fare changes continue to follow it, along with the enhancements outlined below.

These guidelines use the adult cash fare as a base and relate all other fare types to this using a series of ratios:

1. Student and senior cash fares are set at approximately 80% of the adult cash fare.
2. Monthly passes are set at a maximum of 30 times the single cash fare.
3. Monthly passes for college students are set at 80% of the adult monthly pass price.
4. Semester passes for students are set at 80% of the cost of 4 monthly passes.
5. Day passes are set at 2.5 times the single cash fare.
6. Tickets (books of 10) are sold for 90% of the cost of 10 cash fares.

Fare Structure for the Cowichan Valley Transit System

	Current Fares
Cash Fares	
Adult	\$1.25
Student/Senior	\$1.00
Monthly Passes	
Adult	\$37
Student/Senior	\$29
College Student	\$29
Semester Pass (4 months)	
College Student	\$92
Day Pass	
Adult	\$3.00
Student/Senior	\$2.50
Tickets (books of 10)	
Adult	\$11.50
Student/Senior	\$9.00

Given the growing importance of the student market, it is recommended that a semester pass also be introduced for high school students. Similar to the current college student semester pass, this would consist of a bundle of 4 monthly student passes that could be purchased for a discount, typically 20% off the cost of 4 individual passes. This would be a price of \$92.

Outlets for Prepaid Fares

Convenience is key in encouraging greater use of prepaid fares. This means that they should be available for purchase at a variety of outlets including municipal run facilities, corner stores, pharmacies, postal/lottery outlets, banks, and colleges.

Recommendation

- 1. Maintain the fare structure guidelines for development of future tariff changes.*
- 2. Introduce a semester pass for high school students*

8.2 On-street Facilities

On-street facilities form a critical component of the transit system. They are highly visible and are usually the first points of contact that people have with the system. For both users and non-users, on-street facilities help to project the overall image of the transit system, and the community's level of commitment and support for transit.

On-street facilities include bus stop signs, benches, shelters, and transit exchanges. Good facilities help to make the overall experience of using transit safer, more convenient, and more comfortable. Transit stops or exchanges that are perceived as unsafe or uncomfortable (for example, having to wait in the rain with no shelter) can be barriers that prevent potential customers from using transit, so developing good quality facilities can encourage greater use of the system.

Local governments are responsible for on-street facilities. The Regional District and local municipalities should work together to develop an on-going plan for maintaining and upgrading on-street facilities. Ensuring a safe environment at all transit stops is a priority. Improving comfort for transit passengers through the addition of benches and shelters, particularly at well-used stops, should also be pursued. The main transit exchange in Duncan is the hub for the transit system, and it requires special attention. As was discussed in section 7.4 a new or expanded transit exchange will be required at some point during the next ten years to handle the increased service that is planned.

Recommendation

- 1. Develop an on-street facility plan to establish, upgrade, and maintain on-street facilities.*

8.3 TDM Strategy

Transportation Demand Management (TDM) measures are used to encourage people to make more efficient use of the transportation system. This is achieved by reducing the number of trips, shifting the time of travel, and (most relevant to the discussion here) shifting the demand to other modes of travel by making these other modes more attractive relative to the automobile. By encouraging greater transit ridership, TDM could be a very effective means of improving transit performance in the Cowichan Valley. Promotion of TDM is a key way that transit can broaden its role in the region's transportation system, which is one of the community objectives of the Business Plan.

While TDM measures could play a key role in reducing dependence on single occupant private vehicles in the Cowichan Valley, implementation can often be difficult. TDM can involve a large number of players including different levels of government and government agencies, along with institutions, major employers, and major property owners. There are no clearly defined roles concerning which of these groups provides the different components of a TDM strategy and who pays for these components. This requires discussion among these groups to determine how the various strategies should be administered. Although many TDM strategies can be implemented with little or no cost, the issue of funding for those strategies, where it is required, must also be addressed. Funding should be pursued with a number of public and private sector groups in the region with an interest in efficient transportation system use.

Inventory of Common TDM Measures

TDM measures can either be punitive "sticks" that discourage automobile use or "carrots" which encourage use of alternative transportation modes. Examples of common TDM measures are listed in the table below.

Transportation Demand Management Measures	
HOV Priority Measures	<i>Facilities to encourage the use of high occupancy vehicles</i>
Signal priority measures	Priority for transit vehicles at signalized intersections.
Queue jumper lanes	Allow HOV's to bypass congestion at traffic bottlenecks.
HOV lanes	Highway or arterial lanes that are dedicated for HOV use only.
HOV toll exemption	Exemption from tolls for HOV's.
Ridesharing	<i>Measures to increase average vehicle occupancy</i>
Car pools	Ridesharing in private vehicles.
Van pools	Ridesharing in van provided by employer or agency.

Intermodal Trips	<i>Provide flexibility to use transit for part of trip</i>
Park-and-Ride	People drive and park at transit stops at key feeder locations.
Bike-and-Ride	People cycle to transit stops provided with bicycle storage.
Parking Management	<i>Measures to manage supply and demand for parking</i>
Reduced requirements	Reduces the supply of parking in town centres.
Increased parking costs	Reduce current subsidy for parking and apply to other modes.
Preferential parking for HOV's	Reserve the most desirable parking spaces for car and van pools.
Promotion of Cycling	<i>Measures to promote cycling as an alternative to driving</i>
Bicycle facilities at destination	Provide secure storage, showers, and changing facilities.
Bicycle racks on buses	Gives cyclists the choice of taking bikes on the bus.
Employer Programs	<i>Measures administrated by employers or institutions</i>
Employee Transportation Administrator	Coordinates all TDM programs to reduce single occupant vehicle trips to the work site or institution.
Employee transportation allowance	Employer provides transportation allowance (for any mode) to all employees to replace free parking.
Employer bus passes	Annual bus passes purchased through payroll deduction.
Guaranteed ride home	Employee is guaranteed a ride home when leaving early or late.
Flexible work hours	Allows employees to adjust schedule to car pool or transit.
Telecommuting	Allows employees to work at home one or more days per week.

TDM Measures for the Cowichan Valley

Not all TDM measures are suitable for the Cowichan Valley region. For example, many strategies such as HOV lanes require a high level of traffic congestion in the region as an incentive for drivers to abandon their cars. Currently, there is relatively little traffic congestion in the Cowichan Valley. The following measures are most likely to succeed given the conditions in the Cowichan Valley. Some of these measures, as indicated, will become more viable as the Cowichan Valley Transit System develops.

Promotion of cycling - the Cowichan Valley is well-suited to the promotion of cycling, given the climate and geography. This can be accomplished by providing cyclists with the proper facilities including safe and convenient cycling routes, secure storage areas, showers, and changing rooms at their destinations. Cowichan Valley Transit vehicles are equipped with bike racks. Providing bicycle storage facilities at major transit exchanges can also encourage greater integration of transit and cycling. This strategy should be coordinated with the development of cycling trails in the Cowichan Valley.

Park & Ride facilities - Park & Ride is typically best suited to serving low density areas where there is a relatively long commute into a major centre. Since the commuters start their trips in automobiles, there needs to be some disincentive that discourages commuters from completing the trip by car - typically a very long and expensive commute, or congestion or high parking costs at the destination. This situation generally does not exist within the Cowichan Valley: there are no strong disincentives that would discourage commuters from driving all the way into Duncan or other employment nodes in the region. The most likely role for Park & Ride in the Cowichan Valley would be in combination with regional service to Victoria or possibly Nanaimo. For example, if improvements are made to the E&N service to make it more viable for commuters, a Park & Ride facility at one or more of the stations in the Cowichan Valley might be an option.

Van pool programs - Van pools can be a good option for commuters with regular work hours and long commutes, especially if the trip they are making is not served by transit. There is a van pool program in the Cowichan Valley operated by the Jack Bell Foundation in partnership with BC Transit. As of March 2005, the program includes 24 vanpools and 4 carpools operating between the Cowichan Valley and the Victoria area. Vans are provided to groups of 7-8 commuters, with each passenger paying a flat monthly fee based on distance travelled which is used to cover the operating expenses. The fare for the driver is reduced. There is potential for further expansion of this program

Employer/Institution Programs - Although there are not a lot of really large employers in the Cowichan Valley, employer/institution programs could still be an effective means of promoting TDM. The most likely candidates would be institutions such as the Cowichan District Hospital or Malaspina University College. The first step would be to designate a Employee Transportation

Administrator (ETA) to develop a trip reduction plan to reduce the number of single occupant vehicles generated at the site. BC Transit has developed a certification program for ETAs which has been held in several communities throughout the province.

Recommendation

1. *Develop a Transportation Demand Management Program for the CVRD.*

8.4 Marketing Strategies

Marketing strategies can be used to identify and target key transit markets, and raise the profile of transit in the region through enhanced public information and promotion. The components of a Marketing Strategy include market research, public information, education, public awareness and promotions.

Market Research:

This is a critical component of the marketing strategy that involves gathering information about the market. This information is used to determine who rides the system, how the system is being used, and what can be done to make the system more attractive for non-users. Market research is required to determine how best to position other components of the marketing strategy.

The sources used to gather market information include the following:

- Demographic data from the Census and other sources
- Passenger counts
- On board passenger surveys
- Stakeholder meetings
- Focus groups - potential for future use
- Consumer attitude surveys - potential for future use

Public Information:

This is information required to allow the public to use the transit system. Lack of knowledge about the system and how to use it is often a major barrier that prevents people from using transit, a barrier which public information can help to overcome. Public information is a non-discretionary component of the marketing strategy that must be developed and maintained on an on-going basis. Components of public information include:

- Riders guides - which provide route, schedule, and other information
- Signage for bus stops, kiosks, bus interiors
- Website (www.busonline.ca) and Telephone information

Education:

This involves telling the public about the community benefits of transit, including environmental and accessibility benefits. It is aimed at raising awareness about these issues and changing attitudes so that people are more likely to support and to use transit. The “Go Green” campaign, which has been used in various parts of the province, is an example of this.

Special promotions:

These promotions are used to raise local awareness of the transit system. These can take the form of special events or on-going campaigns. Partnerships with public or private groups can be important in these types of promotions. For example, the event or promotion may focus on specific partner such as a recreation or shopping centre. Examples of special promotions include the following:

- Anniversaries and ridership milestones can be celebrated with special events that involve the public in order to raise awareness.
- Special fare discount promotions such as 2 for 1 Tuesdays or weekend family passes can be used to encourage new users to try out the system.
- Holiday promotions such as Santa bus and free New Years Eve service can also encourage new users.
- The McGruff safety program is a partnership with the RCMP.

9.0 IMPLEMENTATION PROCESS

9.1 The Funding Challenge

The most significant issue facing the Regional District and BC Transit will be finding the funding resources to protect core transit service levels and expand to meet community needs.

Provincial funding for transit has been restricted for the past several years, and there has been no Provincial funding available for expanding transit service since 2001. However, there has been some supplementary funding to maintain core services in the face of rising costs. According to BC Transit's 3-year service plan for the period April 2005 – March 2008, the Provincial contribution to BC Transit is maintained at approximately the 2005/06 level for 2006/07 and 2007/08. Cost pressures will result in a provincial funding shortfall for existing service under historic cost-sharing assumptions. In addition, there is currently no provincial funding available for the operating cost portion of any new expanded service.

BC Transit legislation specifies cost sharing for transit between the Authority and its municipal partners. Beginning in May 2003, the province initiated "flexible funding" by offering local government partners the option of electing to fund a higher share of costs in order to meet local needs. The CVRD was one of the local government partners that agreed to flexible funding in order to avoid cutting transit service. The need for the CVRD to flex fund was eliminated in 2004/05 as a result of the elimination of GST costs. However, the CVRD may want to consider flex funding and new community partnerships to fund service expansion in the future

The Board of Directors of BC Transit is actively working with the Ministry of Transportation to support the work of the provincial government in developing new, sustainable long-term funding and governance structure for public transit in BC.

9.2 Service Implementation

Once the Transit Business Plan has been approved, it becomes a guiding document for making future transit decisions in the Cowichan Valley. The specific service changes outlined in the Transit Business Plan will be reviewed on an annual basis. If the Regional District decides to proceed with a specific service improvement, detailed planning work will be undertaken to further refine the service plan, and a public consultation process may be conducted. The final detailed service proposal would then be approved as part of the annual budget development process.

9.3 Update Process

The Transit Business Plan is not a static document. The plan will be updated on an annual basis to reflect actual service implementation to date, and to

respond to changes in transit performance levels, markets, and demand. Adjustments to future service expansions may be made each year to reflect these changes in market demand and to reflect changes in local priorities.

Market Research and Monitoring

Many of the service proposals and strategies included in this plan are based on an assessment of key transit markets. On-going market research will ensure that these strategies continue to meet the market demand and will respond to changes in key markets. Passenger counts, on-board passenger surveys, public opinion surveys, and population forecasts can all be used to monitor performance and assess the changing transit market. This information allows the market profile and the overall market trends for the Cowichan Valley to be updated annually.

Key Performance Indicators

Key Performance Indicators (KPIs) are used to monitor implementation of new services and overall system performance. KPIs can be used to assess the viability of individual service proposals, aiding in the decision-making around implementation of these services. KPIs can also be used to compare the Cowichan Valley Transit System with other benchmark communities. Passengers per hour of service (productivity), cost per passenger, and cost recovery are commonly used KPIs.

10.0 RECOMMENDATIONS

It is recommended that:

The Cowichan Valley Regional District Board approve this Plan as a guide for transit service planning and delivery in the Cowichan Valley; and

The Cowichan Valley Regional District Board approve the following specific recommendations:

- 10. Use Key Performance Indicators to track system performance and to guide annual budget development.*
- 11. Approve in principle the service expansion to Crofton and Chemainus*
- 12. Direct staff to proceed with more detailed planning work on the Crofton/Chemainus service..*
- 13. Continue to work with the School District for further integration with student transportation.*
- 14. Approve in principle the medium range service options. These will be evaluated further as part of the annual budget development process.*
- 15. Maintain the fare structure guidelines for development of future tariff changes.*
- 16. Introduce a semester pass for high school students.*
- 17. Develop an on-street facility plan to establish, upgrade, and maintain on-street facilities.*
- 18. Develop a Transportation Demand Management Program for the CVRD.*