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BC Transit

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Ron Bedard
Chief Administrative Officer
District of Port Edward
Box 1100
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Dear Ms. Ferguson and Mr. Bedard:

SUBJECT: Prince Rupert Transit System Service Options

As requested, the following report provides service change options for the Prince Rupert Conventional transit system to reduce the City's transit costs. Specifically, the following issues are addressed:

1. Options to reduce costs for the Prince Rupert Conventional Transit System.
2. Analysis of opportunities to save costs by further combining the Prince Rupert and Port Edward Transit Systems.

The options are general and broad in nature and are meant to give an overview of the range of impact.

Information in this report is based on input from municipal staff and the staff of Coastal Bus Lines Ltd., the transit management company which operates the Prince Rupert and Port Edward systems. The report also makes use of information from two-week passenger counts (2004), historical ridership and revenue information (1993 – 2004), and current operational details and annual operating agreements.

The Prince Rupert Transit System includes both conventional fixed route, fixed schedule service and custom "handyDART" service. This document focuses on the conventional portion of the Prince Rupert Transit System for the following reasons:

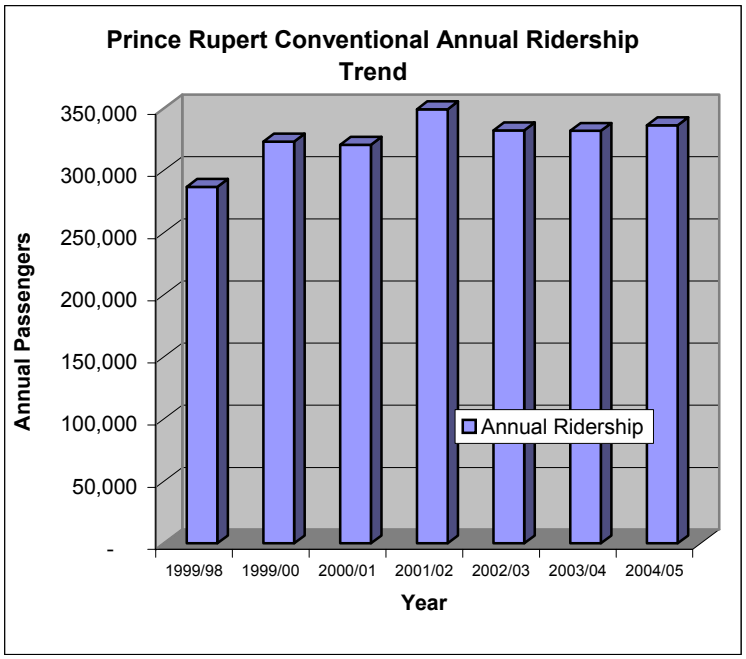
- The City funds 53.31% of conventional service but only 33.31% of custom transit service. Therefore, changes to conventional service offer a higher return on the municipal share of costs.
- Hours of service on the custom system are already comparatively low.
- The lack of accessible taxis in Prince Rupert means that there are less alternatives for people who use wheelchairs and scooters if custom service is reduced.

1.0 Prince Rupert Conventional Transit Service Background

The Prince Rupert conventional system has been in operation since 1977. Recent system changes have included a fare increase and service expansion in January 2003, followed by a small reduction in service to meet municipal budget targets in July 2004. The 2003 service expansion also included some service reallocations to make the system more efficient.

The **current service:**

- Operates Monday to Saturday daytime until 6:40pm, with evening service on Friday nights until 10:05pm.
- Provides half-hourly service at most times of the day, although the two less-used routes drop to hourly service between 9:00am and noon. Three school special trips also operate during the commuter period.
- Carries approximately 1,200 passengers per weekday and 750 passengers per Saturday.
    - 1,200 passengers translates into approximately 900 individuals using the system each day. This means that roughly 6 out of every 100 Prince Rupert residents use the service daily.
- Serves the following markets:
    - Adults: 46% of total ridership.
        - This is a much higher proportion than is usually expected in a community the size of Prince Rupert.
        - 2001 Statistics Canada information showed that Prince Rupert had a higher ratio of people using transit to commute to work than even larger centres like Kelowna, Nanaimo, and Abbotsford.
    - Students: 35% of total ridership.
    - Seniors: 10% of total ridership
    - Adults with a disability: 9% of total ridership.



Ridership Trend: Annual ridership on the transit system has been more or less level over the past six years. Information from BC Statistics indicates an overall 9% drop in population during the past seven years

In general, ridership shows:

- A 13% ridership increase in 1999/2000, coinciding with the first introduction of low floor vehicles on some trips.
- A 9% increase in 2001/02, coinciding with the full implementation of low floor buses on all trips.
- A 5% drop in ridership in 2002/03 coinciding with the system's first fare increase since 1991.
- A small (1%) gain in ridership is forecast for 2004/05.

Comparison to Similar Systems: The following table compares the Prince Rupert Conventional Transit System with BC systems serving communities of a similar size. Kitimat is also included here due to its proximity and similar regional context even though it is somewhat smaller. Similar efficiency and productivity information for all BC Transit Municipal Systems Program systems can be found online at http://www.busonline.ca/corporate/munsys/fast_facts.cfm.

Comparison to Similar Conventional Transit Systems*

	Service Area Pop.	# of Buses in Service	Total Service Hours	Total Ridership	Net Municipal Share of Costs	Operating Cost per Service Hour	Municipal Cost per Service Hour	Cost Recovery	Rides per Service Hour
Kitimat	10,400	5	11,962	170,000	$390,683	$67	$33	19%	14.2
Powell River	13,600	3	7,822	121,700	$233,947	$76	$30	22%	15.6
Nelson	13,700	5	11,800	271,000	$289,901	$79	$25	25%	23.0
Squamish	13,700	2	6,900	130,000	$169,941	$76	$25	28%	18.8
Prince Rupert	14,300	4	10,100	331,000	$114,654	$60	$11	43%	32.8
Terrace Regional	15,000	2	7,203	16,500	$138,040	$59	$19	27%	2.3
Fort St. John	15,500	3	8,009	115,000	$305,680	$78	$38	14%	14.4
Port Alberni	18,500	4	11,205	207,000	$273,277	$69	$24	24%	18.5

* Information is based on 2004/05 Annual Operating Agreements

The information in the table shows that the Prince Rupert Transit System:

- Has by far the highest level of cost recovery from passenger fares in its peer group and has the fifth best cost recovery in the province.[1]
- Has one of the lowest operating costs per hour of service.
- Has a net municipal cost that is half that of its peers and among the lowest in the province.
- Carries almost double the number of passengers per hour of service than its peers and has the second highest ridership productivity in the Municipal Systems Program.

1.1 Prince Rupert Conventional Transit Service Background: Summary

The system carries twice the ridership of its peers at half the cost to the municipality. This fact—plus the fact that the provincial share of funding reduces in tandem with municipal share—is the core challenge in further reducing the City's transit costs by reducing service. For instance:

- The City's gross cost per service hour for the system is $45.
- For each service hour reduced by the City, the system loses two (one from the City, one from the province).
- Every two hours of service lost equals on average 66 rides or $62 of revenue.
- On average, this means that every $45 of gross cost saved by the municipality costs it $62 in lost revenue, resulting in further required cuts to make up for losses.

Of course, some service hours are less productive than others. But this is meant to illustrate the overall multiplying effect that happens in the specific case of Prince Rupert.

[1] Top four cost-recovery locations: Vancouver's Translink (59%); Victoria Regional (53%); Sunshine Coast (50%); Whistler (44%).

2.0 Service Level Reduction Options

The following section provides a look at options to reduce service on the Prince Rupert Conventional Transit System in order to reduce the City's transit costs. The options are general and broad in nature and are meant to give an overview of the range of impact.

Rather than working to specific budget amounts, the options provided here are based on changes to service level and impact on specific markets. A detailed service plan could be produced once the City has provided feedback and direction.

All cost impacts shown are annual figures and they are based on anticipated 2005/06 Annual Operating Agreement budget costs. Ridership impact is based on the actual average rides per specific trip, as recorded in the November 2004 two-week ridership count, adjusted for the likelihood that passengers will take an alternate trip if available. As most destinations in Prince Rupert can be reached on foot within an hour, the chances that passengers will opt for alternate trips goes down as trip frequency declines.

1a) Hourly Service Midday Mornings, Monday to Saturday – This option would reduce service frequencies to hourly service on all routes between 9:00am and noon, Monday to Saturday. This is one of Prince Rupert's lowest ridership periods and would have the least impact on commuters.

Summary Information: Hourly Service Midday Mornings, Monday to Saturday	
Service Hour Savings: 900	Revenue Impact: -$7,900
Ridership Impact: -8,900	Total System Savings: $46,800
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $17,000

1b) Hourly Service Weekday Midday Mornings, All Day Saturdays – Like option 1a, this option would reduce service frequencies to hourly service on all routes between 9:00am and noon, Monday to Friday. In addition, all Saturday service except for the 53 Crestview in the afternoon would become hourly.

Summary Information: Hourly Service Weekday Midday Mornings, All Day Saturday	
NOTE: These costs include those for option 1a.	
Service Hour Savings: 1,200	Revenue Impact: -$12,200
Ridership Impact: -13,800	Total System Savings: $62,400
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $21,000

1c) Hourly Service Most Routes, Weekday Middays, All Day Saturday – This option builds on option 1b. It would reduce service frequencies to hourly service on all routes between 9:00am and 3:00pm, weekdays and all day on Saturdays. The 53 Crestview would be the exception from this and would continue to operate half-hourly service in the afternoons. This is exception is based on ridership, important destinations on the route, and operational considerations.

Summary Information: Hourly Service Weekday Middays, All Day Saturday	
NOTE: These costs include those for options 1a and 1b.	
Service Hour Savings: 1,900	Revenue Impact: -$27,100
Ridership Impact: -30,600	Total System Savings: $98,900
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $25,600

2) Deletion of Friday Night Service – This options would remove all Friday evening service.

Summary Information: Deletion of Friday Night Service	
Service Hour Savings: 300	Revenue Impact: -$6,200
Ridership Impact: -7,000	Total System Savings: $15,600
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $2,100

3a) Reduced Weekday Commuter Service (6 trips) – This option would reduce weekday service in the afternoon commuter period by six trips or approximately 3 hours. Trips with the least ridership would be selected; however, ridership impact is higher than the other options because these trips are still quite productive and commuters tend to have less flexible schedules.

Summary Information: Reduced Weekday Commuter Service (6 trips)	
Service Hour Savings: 800	Revenue Impact: -$15,900
Ridership Impact: -18,000	Total System Savings: $41,600
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $6,300

3b) Reduced Weekday Commuter Service (12 trips) – This option would build on option 3a but would also delete 4 more afternoon commuter trips and 2 morning commuter trips.

Summary Information Reduced Weekday Commuter Service (12 trips)	
NOTE: These costs include those for option 3a.	
Service Hour Savings: 1,500	Revenue Impact: -$31,900
Ridership Impact: -36,000	Total System Savings: $78,100
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $9,700

3c) Hourly Weekday Commuter Service (16 trips) – This option would build on option 3b but essentially reduces service all day on all routes to hourly service, with slightly better than hourly frequency on the 53 Crestview during commuter times.

Summary Information Reduced Weekday Commuter Service (16 trips)	
NOTE: These costs include those for option 3a and 3b.	
Service Hour Savings: 2,000	Revenue Impact: -$51,200
Ridership Impact: -57,800	Total System Savings: $132,300
Reduction of In Service Vehicles: **1**	Total Net Municipal Savings: $19,300

2.1 Service Level Reduction Options: Summary

A range of service reduction options are possible. However, it is wise to use service reductions cautiously because they have a dispropotionately high impact on service levels.

For example, saving $47,000 of net municipal share (by implementing options 1c, 2, and 3c), would require deleting $250,000 worth of service (-35%) and losing 95,000 passengers (-29%) and $84,500 in passenger revenue (-27%). Additionally, an overall service reduction of this magnitude would likely result in further revenue and ridership decreases in subsequent years.

3.0 Other Cost Reduction Options

The options presented in section 2.0 looked at the impact of scheduling changes on net municipal transit costs. They assume that the basic system design and fare structure would remain intact. The following section looks at fares or route structure redesign might be used to reduce municipal transit costs.

3.1 Other Cost Reduction Options: Fare Increase – Increasing passenger revenue directly reduces net municipal cost. The best option for minimizing passenger loss while increasing fares would be as follows:

- Increase all cash fares by $0.25 to $1.50 for adults and $1.25 for seniors/students.
- Increase tickets in concert with cash fares to $13.50 for adults, $11.25 for students for a book of 10 tickets.
- Make no changes to monthly pass and day pass costs to retain and build regular customer base.
- Implement changes in July when they will have least long-term impact on ridership. The trade off is less savings within this calendar year.

Normally handyDART fares would increase in tandem to conventional increases, in this case increasing to $1.75 per trip. Keeping a disparity between handyDART and conventional fares is wise as a way of encouraging as many people as possible to use the accessible conventional service rather than the much costlier handyDART.

Summary Information: Conventional Fare Increase (Annual Impact)

Service Hour Savings: 0	Revenue Impact: +$21,600
Ridership Impact: -9,800	Total System Savings: $0
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $21,600

Summary Information: handyDART Fare Increase (Annual Impact)

Service Hour Savings: 0	Revenue Impact: +$1,000
Ridership Impact: -100	Total System Savings: $0
Reduction of In Service Vehicles: 0	Total Net Municipal Savings: $1,000

3.2 Other Cost Reduction Options: Route Restructuring – Prince Rupert already uses some combined routings on a select number of trips. Combining routes on a more formal and long term basis could offer a means to preserve trip frequency while creating operating savings. There are a number of different routing possibilities, but they are <u>not</u> recommended for the following reasons:

- Prince Rupert's linear form and street network make the creation of larger loop routes less efficient.
- Travel times would double for most passengers, an important consideration given the comparative ease to walk to destinations.
- It would reduce service area coverage.
- The location of key destinations means that not all could be served by the new routes. For instance, combining routes on the north side of the City would involve choosing between serving Kaien Senior's House and Cow Bay / Atlin Terminal.

3.3 Other Cost Reduction Options: Summary

- A cash and ticket fare increase would offer good savings to the municipality with comparatively less impact on ridership and revenue than service reduction options.
- Restructuring routes to gain operations efficiencies is not recommended.

4.0 Analysis of Further Transit Collaboration

The following looks at how the Prince Rupert and Port Edward Transit Systems currently share operations and whether combining the two systems further—either through increased collaboration or through merger into a single entity--would provide opportunities to save costs or improve service within existing budgets.

4.1 Current Joint Operations

While the names of the two transit systems are different, they already derive considerable savings through shared infrastructure, operations, and marketing capacity. The following table describes key shared aspects, the portion of total costs represented by each area, and direct savings to be gained through increased collaboration. Savings related to service reductions and fleet changes are presented in the next section.

Prince Rupert and Port Edward Transit Systems: Currently Shared Aspects

Aspect	% of Total Costs	Items Already Shared by the Two Systems	Direct Savings through Increased Collaboration?
Driver Wages & Benefits	42%	Driver shifts: Shifts already combine transit services, as well as airport transportation operations.	Negligible.
System Administration	16%	Manager Dispatcher Operations Centre Office Overhead	Minor reduction in end of month paperwork (one invoice, not two), but detail would still need collection.
Maintenance	10%	Maintenance Staff & Facility Cleaning Staff & Materials Parts Inventory & Storage Maintenance Record Keeping In essence, the systems share a spare bus.	Negligible.
Fuel & Tires	8%	Shared fuel location and bulk fuel contract.	Negligible.
Marketing	1%	Printed Rider's Guide Transit website Telephone information line Information Posters System promotion in local media and on board buses.	If fare structure more integrated, would reduce production costs for separate tickets, passes, and fare posters for vehicles. ($100 savings / year).
Contract Administration	n/a	Systems already go out for Requests for Proposals together.	None.

4.2 Possible Collaborative Savings: Fleet Integration - A slight service reduction and a number of schedule adjustments to Prince Rupert service may enable the schedules of both systems to be blended. As a result, the Port Edward bus would be available to operate a handfull of Prince Rupert trips and Prince Rupert could give up one of its five low-floor vehicles. This would **save the system a bus** and reduce its vehicle lease, maintenance, and insurance costs[2].

- For the **City**, this change would provide an estimated **$23,400** in savings ($25,200 in reduced vehicle costs, offset by about $1,800 in lost passenger revenue due to cut trips and loss of accessibility.)
- For the **District**, the Port Edward vehicle would still be available to perform a possible 9:10am trip on weekdays. However, implementing that trip would still cost about $5,500 in additional operating costs.
    - One possible low cost solution to implement this trip would be for the City to delete the 8:55am and 12:00pm 53 Crestview trips and show the first portion of these trips (Downtown to Charles Hays Secondary) as being operated by the corresponding Port Edward service. Essentially this trades service hours for use of the vehicle.
    - It is expected that ridership loss from this change would further reduce the City's savings by about $800.
- **Benefits** of this option include:
    - Offers good cost savings for a relatively small loss in service hours.
    - Makes better use of capital investments.
- **Possible disadvantages** include:
    - Reduces the accessibility of the Prince Rupert system.
    - While the Port Edward bus is wheelchair accessible, it has steps and is therefore less accessible to parents with strollers and people with mobility disabilities. These groups are a significant segment of Prince Rupert's ridership.
    - Passenger boarding times would increase and this may cause possible schedule delays.
    - Has impacts on the Port Edward schedule as well since eisting trip times would change slightly. It would also make the door-to-door service for people with disabilities in Port Edward less efficient and less customer responsive, and may make it hard to adapt to North Pacific schedule changes.
    - Vehicle spare ratio would decrease, meaning higher risk of service, interruptions due to maintenance issues. Before proceeding with such an option it is highly recommended that Coastal Bus Lines Ltd. be drawn into the discussion to gage impact on maintenance and the possibility and cost for using one of their school buses as an emergency spare.

4.3 Possible Collaborative Savings: Routes and Schedules Integration - Further combining the Port Edward and 53 Crestview routes is not recommended for the reasons listed in section 3.2. However, it would make sense to show the partial service offered by the Port Edward trips within the 53 Crestview published schedule.

- This change would provide increased ridership at no additional cost.
- The change would not necessarily require systems to be combined into one identity. However, farebox splits would need to be determined if they remain separate.

[2] Low floor buses must travel extremely slowly on the road to North Pacific Historic Fishing Village. That is why it is suggested that Prince Rupert give up a low floor vehicle, rather than Port Edward give up its bus.

- Adjustments to the published fare zone boundary would be required and an integrated fare policy is recommended.

If the ideas presented section 4.2 (above) are implemented and a schedule revamp is necessary, it would also make sense to evaluate the feasibility of serving the Prince Rupert Industrial Park as part of the Port Edward service. Impact on local partners for serving the Industrial Park cannot be determined until more detailed work is performed.

4.4 Possible Collaborative Savings: Fare Structure Integration - If schedules for the two systems become increasing integrated, it makes sense to integrate how the fares are portrayed on buses and in public information. It is suggested that:

- A fare zone boundary be placed east of Legiac Road. (The existing fare zone boundary in Port Edward south of Hillcrest would be retained).
- That the separate Prince Rupert and Port Edward fare structures be merged into a three zone system as follows:
  Zone 1: Travel within Prince Rupert, to Legiac Road
  Zone 2: Travel between Prince Rupert and Port Edward
  Zone 3: Travel between Prince Rupert and North Pacific Historic

1. This change would make the regional fare structure easier to understand and more transparent for customers.
2. Related to fares, merging the two systems may create small municipal administration efficiencies through merged cash fare collection.

4.5 Models for Increased Collaboration

None of the items presented in sections 4.2 to 4.4 require the systems to be blended into one identity. However, if the City and District wish to pursue merging the two transit systems into one, there are a number of different partnership models to accommodate this:

1. Separate Annual Operating Agreements (AOA's) with BC Transit, separate budgets, systems appearing as a united entity in public information only.
   - **Example: Powell River Regional Transit System**, which blends the two systems routes, schedules and fare structures but which retains separate AOA's, budgets, and local government control.
2. Separate AOA's with BC Transit but a single budget with costs allocated between partners based on service and revenue allocated based on ridership.
   - **Example: Central Fraser Valley Transit System**, where BC Transit retains a separate AOA with the City of Abbotsford and District of Mission but where a single budget guides the transit system.
3. Single AOA and budget between one municipality and BC Transit, with the other local government contributing funds to the AOA municipal partner under a separate local transit agreement.
   - **Example: Terrace Regional Transit System,** where the City of Terrace is the AOA partner and has "official" approval over budgets, routes, schedules and fare structure but where the Regional District of Kitimat-Stikine funds a portion of the transit costs to the City for service within Thornhill. A joint transit committee provides the Regional District with an opportunity to provide input on changes.

4.6 Analysis of Further Transit Collaboration: Summary

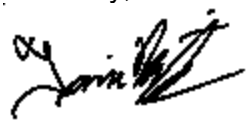
- The two systems already derive considerable savings through shared infrastructure, operations, and marketing capacity.
- Blending the schedules may provide an opportunity to reduce one vehicle from the Prince Rupert fleet. In return, the District of Port Edward may be able to gain increased service. Loss of some accessibility and potential increase to maintenance-related service disruptions are among the possible disadvantages to this.
- There are opportunitys to blend routes and fares.
- There are a number of different models for increased collaboration.

5.0 Conclusions

This report is meant to give an overview of cost reduction possibilities. I would be happy to work further with the City and District to develop some of these concepts more fully and/or create hybrids or additional options.

I look forward to meeting with you on February 1, 2005 to discuss these items further. Please call if you have any immediate questions.

Sincerely,



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