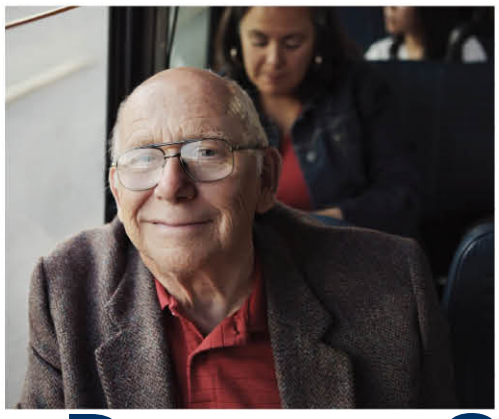
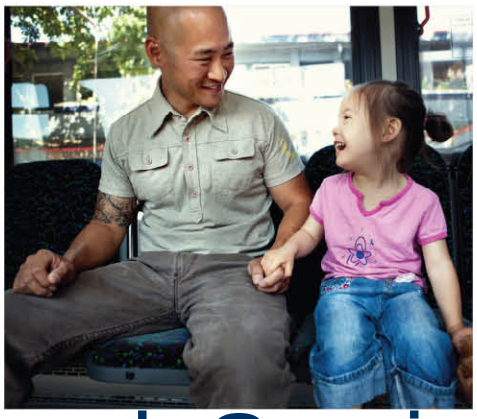




Dawson Creek Service Review

Final Report

October 17, 2011

Dawson Creek
BRITISH COLUMBIA

BC Transit

Index

Executive Summary

In November 2010, the City of Dawson Creek requested that BC Transit implement adjustments to the transit system in order to provide service to Driver House – a new residential development located on 17th Street. Three system changes were implemented in April 2011:

- service to Driver House by both the Northside and Southside routes,
- service to the residential development in the vicinity of Canalta school, and
- the elimination of the Multiplex route as the majority of the route was a duplication of the Southside route and subsequently was performing poorly in terms of ridership.

In accommodating these service improvements, the Dawson Creek Transit System evolved from a "one seat" ride to one where transfers would be required to complete certain trips. As a result of these changes, and primarily due to the elimination of a single route, there was a net reduction of annual service hours from approximately 9,300 to 6,800 hours.

This service change adversely affected many passengers and generated multiple complaints, particularly among seniors. In response to passenger complaints BC Transit conducted public consultation sessions in Dawson Creek during May 2011 to listen to the concerns and suggestions from the public. An online survey was also posted for those who were unable to attend the open houses.

The issues and concerns identified through public consultation included:

- increased trip times,
- poor connections for transfers,
- reduced service for seniors, and
- complicated routing when school trips are accommodated.

BC Transit undertook a review of the current system that included consultations with the operating company as to ways to find cost savings. Through these consultations, BC Transit and the operating company were able find efficiencies resulting in an annual saving of $150,000 in the fixed cost structure of the operator. These savings will contribute to offset most of the cost of implementing expanded service with the result that local property taxpayers are not likely to incur any significant costs to implement the expansions proposed within this report.

Following the system analysis, two service options have been developed for consideration by the City:

- **Option 1: Short Term Restructuring to Maintain Ridership**: this option maintains the basic route structure that exists but adds an additional route focussed on improving service between 13th Street (concentration of seniors) and the malls, reduce the length of time between transfers at the Co-Op Mall (especially for students) and provide two-way service between the Co-Op Mall and the Dawson Mall. This option will respond to the majority of needs of those impacted by the reduced service levels earlier in the year and introduce some additional improvements such as evening service. Ridership is unlikely to grow as strongly in the long term with this option when compared to Option 2 due to the nature of retaining one-way routes that are indirect and circuitous.

- **Option 2: Medium Term – Promoting Ridership Growth**: this option, which is based on the survey results that asked for a faster, more direct style service, takes a different approach and creates a new system based on two-way direct service corridors. Although transit coverage is reduced, trip times become more comparable to car trips and thus this option is more likely to attract regular riders whilst providing existing riders with fast and direct trips to their destinations. A system structure such as this should benefit Dawson Creek better in the long term than Option 1 but requires considerable public consultation, given the high percentage of seniors using the system and challenging winter conditions, due to the significant changes that would be made to the existing system. In addition this option will be easier to expand to accommodate neighbourhood developments without incurring a complete transit system transformation.

BC Transit recommends a phased approach to improve the transit system:

- Implementing Option 1 in the short term (2 to 3 years) to improve the transit system by addressing existing customer concerns to maintain existing ridership, introduce some new services and regain lost ridership due to the recent changes in service. We also recommend the development of customer information for seniors and students as well as providing a "sneak peak preview" of the new routes and detailed schedules on the City and BC Transit websites.
- Conducting a series of open houses toward the latter part of 2012 to obtain public and municipal input on Option 2 to work towards finalizing a long term transit structure that allows for future growth in the system and is sustainable in terms of local affordability.

1. Background

In November 2010, the City of Dawson Creek requested that BC Transit consider improvements to the transit system in order to provide service to Driver House - a recently completed residential development on 17th Street. This initial review recommended the elimination of Route 3 (Multiplex) as it yielded low ridership due to it essentially being a duplication of a portion of Route 2. The review also recommended serving Driver House with both Routes 1 and 2 as well as adding an extension to Route 2 to serve the new residential development west of 17th Street which includes the Canalta school.

Changes to the transit system were implemented in April 2011. In accommodating these service improvements, the Dawson Creek Transit System evolved from a "one seat" ride to one where transfers would be required to complete certain trips. As a result of these changes, and primarily due to the elimination of a single route, there was a net reduction of annual service hours from approximately 9,300 to 6,800 hours.

This service change did however affect a number of passengers due to route transfer requirements to complete trips and generated multiple complaints.

As a result of customer feedback and at the request of the City of Dawson Creek, BC Transit committed to undertaking a Service Review of the transit system to resolve the issues created by the April 2011 service changes. In May 2011, a public consultation effort was initiated that consisted of open houses in Dawson Creek. BC Transit representatives were in attendance to listen to what local riders had to say and wanted from the transit system. An online survey was also posted for those members of the public unable to attend the open houses. The survey yielded 58 responses.

2. Scope of the Review

Members of Council and city staff of Dawson Creek indicated that they wanted so see an improvement of the transit system to address the multiple concerns that had been raised by existing riders. In addition, the challenges placed on riders due to the extreme winter weather conditions of Dawson Creek was raised as a factor that needed to be considered in the development of service plans.

From a BC Transit perspective, this service review and its subsequent recommendations are focussed on both short and medium term improvements that would improve the efficiency of the transit system and promote ridership:

- **Short term**: to improve the transit system to address the needs of existing riders as well as regain the ridership that was lost prior to the service changes implemented in April, 2011. In addition, to work with the operating company to explore the potential of finding internal cost efficiencies without impacting local service.
- **Medium term**: to develop a transit system that will increase the efficiency of the system, provide more direct 2-way routing to destinations and attract new ridership.

3. Public Consultation

BC Transit staff traveled to Dawson Creek in order to ride a number of in-service buses in an effort to connect with riders to solicit their input on the transit system. Open houses were held in the morning and afternoon on May 18, 2011 at the Co-Op mall. Apart from specific comments that were communicated verbally to representatives of the City, BC Transit and Diversified Transportation, attendees were also requested to fill out the posted online questionnaire.

3.1 Survey Results

The online transit survey was completed by 58 respondents and the detailed results are contained in the Appendix. A summary of results are as follows:

- The majority of the ridership on the Dawson Creek Transit System is made up of seniors and students.
- Riders originate from all over the city. The heaviest concentrations of demand are in the 13th Street area near the Seniors' Centre and 3rd Street in the east of the City.
- About three quarters (76%) of respondents were over 40 years old. This supports the need to for transit beyond school specific trips, despite that only 5 students completed the survey, thus skewing the results to the older riders.
- The majority (83%) of survey respondents ride the bus daily or weekly. Most riders have consistent trip making patterns. This was confirmed by the operator who pointed out that the majority of passengers are well known to drivers.
- Recognizing that the number of student responses was low, shopping and work was cited as the main purposes for taking transit. Despite low student feedback, discussions with City staff and the operator indicated that school trips are considered a significant trip purpose. Trip making for medical purposes were less common, but make up a secondary trip purpose.
- Major destinations were identified as the Co-Op Mall, Dawson Mall and Walmart. Other important destinations include No Frills, the Community Multiplex and the Seniors' Centre
- The major school destinations are the high and middle schools as well as the Northern Lights College. Ecole Frank Ross was also identified as a popular destination.
- Convenience and cost are the main reasons Dawson Creek residents take transit. Only 15% of respondents said they didn't have a vehicle or couldn't drive.
- 53% of respondents said that existing service was not satisfactory. 27% found service to be very good or excellent and 15% found service to be average with the remaining 5% reporting not to use transit.
- Approximately half of respondents that reported the transit service was not satisfactory cited inadequate service schedules. Their complaints relate specifically to trip times and trip connections to make transfers. Only 14% indicated that routing was the primary cause of poor service.
- Trip frequency (number of trips per day) and the length of the service day were also identified as major concerns.
- Approximately 37% of respondents would like to see more direct trips, improved trip frequency and better connections. 25% of respondents indicated a desire to return to a similar level of service that existed prior to the April 2011.

3.2 Summary

The issues and concerns identified through public consultation can be summarized as follows:

- trip times have increased primarily due to transfers,
- transit connections are not always seamless due to buses being late/early,
- seniors currently have a more difficult time getting to and from the Co-Op Mall due to circuitous routes, and;
- students have longer trips home in the afternoons.

4. System Analysis

4.1 Ridership

Ridership and rides per hour on the Dawson Creek Transit System is below other similar sized BC Transit systems (Table 1). Ridership data has historically been estimated based upon revenue models. However, with the recent implementation of the new farebox technology, more accurate revenue and ridership data by route will be forthcoming once the system stabilizes.

Table 1: System Comparison – 2010/11 Actual Performance Reporting

	Population Served*	Total Rev Hours	Revenue Passengers	Cost Recovery	Rides/Hour	Rides per Capita
Dawson Creek	**10,800**	**9,071**	**137,068**	**11.5%**	**15.1**	**12.7**
Fort St. John	17,700	11,086	129,201	7.8%	11.7	7.3
Kitimat	9,600	10,343	143,616	13.9%	13.9	14.9
Nelson	14,000	12,013	273,117	26.8%	22.7	19.5
Port Alberni	18,500	12,289	311,546	19.2%	25.4	16.8
Powell River	13,900	10,813	200,590	19.4%	18.5	14.4
Terrace	14,300	8,374	199,267	24.9%	23.8	13.9
Squamish	16,200	10,586	202,558	24.0%	19.1	12.5
Average	**14,375**	**10,572**	**199,620**	**18%**	**18.8**	**14.0**

*this is an estimate of population served which is defined as the population within 400m of transit routes. Actual population of Dawson Creek is 11,600.

Based on the last full year of data, the Dawson Creek annual performance (2010/11) shows estimated ridership of 137,000 and produces 15.1 rides per revenue hour. This is below the average of 18.8 rides per hour of similar sized systems. Based on the information gathered through surveys and other forms of public consultation, one of the reasons for the lower ridership relates to the fact that few riders use the system for commuting to work. Like other northern communities, Agriculture and the Oil & Gas industries are major employers in the area and public transit does not normally meet the commuting needs for these workers as their work is in most cases outside the transit service areas. Additionally, given the large coverage area of the system and circuitous routing needed to service such an area, people frequently choose to use their vehicles as the trip times are shorter by vehicle. The use of personal vehicles can also be more likely in winter months where walking and waiting at bus stops is not convenient due to cold weather conditions. It should be noted that ridership is based on 9,100 actual annual service hours – before the service reduction was implemented (April 2011).

4.2 School Services

Fare product statistics and driver interviews indicate that approximately 40% of the current ridership is made up of students. Trips are timed for school bell times in the morning and afternoon. These school trips require other trips to be adjusted to accommodate the extra time required to deliver school services which result in less efficient schedules.

Feedback from students highlighted long trip times due to unsatisfactory connection to transfer at the Co-Op mall, especially in the afternoons.

In discussions with City staff, it was determined that the needs of students should continue to be made one of the priorities in addition to other priorities like supporting seniors who rely on transit as their primary transportation . However, the emphasis on student specific schedules has a direct impact on non-student riders that affects the level of service the system is able to deliver for other trip purposes. As there are currently only two buses in service, the needs of students and other users cannot always be best met at the same time.

As noted previously, the survey results emphasized non-student ridership needs. While the needs of students are important, the city should be aware of the adverse impacts on ridership, convenience and scheduling for the majority of non-student riders. Improvements to the schedule and routes should aim to meet the non-student needs in order to improve ridership.

When schedule adjustments are required to meet new bell times, BC Transit requires 3 months advance notice to undertake system rescheduling and the printing and distribution of updated Rider's Guides. Bell time adjustments should be kept to a minimum due to the impacts it can have in terms of additional costs and inconvenience to other riders due to changes in the transit schedules.

4.3 Seniors Service

Seniors comprise approximately 40% of the ridership. Seniors ride the bus for a variety of trip purposes such as shopping, medical appointments, social visits, casino trips and recreation. According to them, their needs were better met prior to April 2011. The subsequent changes to the system resulted in fewer direct connections between their various destinations (especially Co-Op Mall, Dawson Mall, Walmart and the Recreation Centre). The changes also reduced the number of trips traveling via 13th Street. This street has a concentration of seniors' residences as well as the Seniors' Centre.

During the open houses, the majority of seniors indicated a desire to return to the previous service that provided more trips per day in the 13th Street area that enabled seniors to travel to their main destinations without transferring. Currently, only the southern route services 13th Street and only during school trips. These trips, which are heavily utilized by students, frequently result in some seniors having to stand in often crowded buses.

4.4 Service requirements

The survey results indicate that there are some important characteristics to be considered in considering the improvement of service delivery:

- Over half (58%) of respondents were under the age of 60.
- Riders were split evenly on their reasons for riding transit: 34% mainly used transit for shopping, and 34% mainly used transit for work trips. Other sources indicated that the remainder was largely used for school trips as student participation in actual surveys was low.
- The major destinations, at about 22% each, were the Co-Op Mall, Dawson Mall and Walmart;
- The majority of customers ride for the convenience or to save money.
- Just over half of respondents do not find the current system satisfactory. The reasons cited for this relate to inconvenient schedules, routes and availability.
- While 26% of survey respondents requested a return to the old system, more people asked for better solutions. It is likely that respondents who requested a return to the old system preferred specific trips or destinations that the routes served previously. For those requesting better solutions, there was an understanding that overall improvements could be made to the current system while incorporating certain characteristics of the old system.
- The following aspects of better service were the most requested

    + more direct and faster trips - 22%
    + improved scheduling of the current system - 12%
    + longer service day (earlier morning, later evening) - 10%
    + increased frequency - 10%.

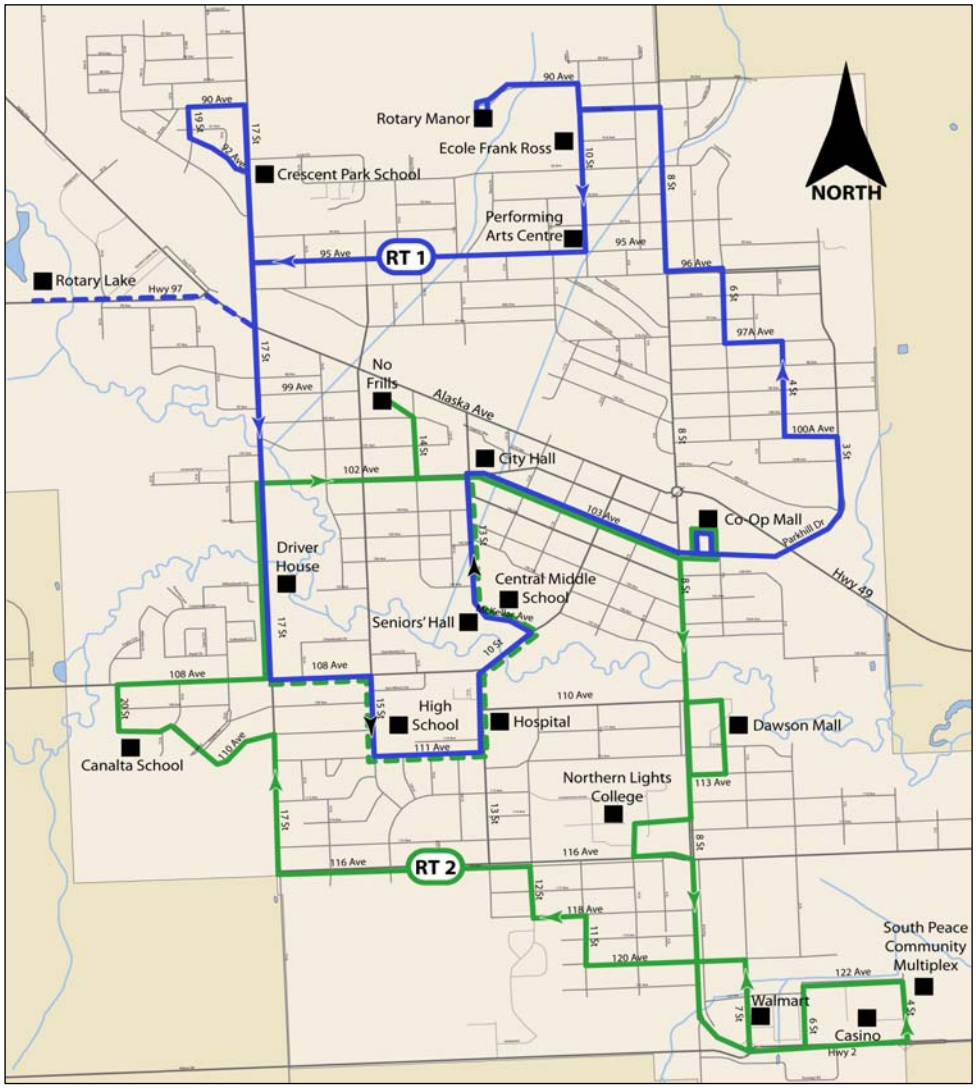
Based on this feedback, reverting back to the exact previous system structure is not proposed as an option. However, some characteristics of that system, such as regular routing past the high school, middle school and 13th Street, are incorporated in the service options presented in the following section.

5. System Structure Options

5.1. Existing System Structure

The existing system consists of two routes as depicted below:

Map 1: Existing System



Route 1 (Northside): Provides service to the northern half of Dawson Creek. Starting and finishing at the Co-Op Mall, this service routes in a counter-clockwise direction. Service starts at 7:40am and finishes at 6:41pm. There are 19 trips per day on the weekdays and 16 trips on Saturdays. The blue dotted line indicates summer service to Rotary Lake.

Route 2 (Southside): Starting and finishing at the Co-Op Mall, this service routes in a clockwise direction serving the southern half of Dawson Creek. Service starts at 7:30am and finishes at 6:56pm. There are 20 trips per day on the weekdays and 16 trips on Saturdays. This route deviates to provide a school routing as shown by the green dotted line that runs twice per day to meet bell times of the High and Central Middle School.

It should be noted that this service change reduced annual service levels by approximately 33% of revenue hours. As expected, revenue and thus ridership did show a decline - but only in the order of 20% in comparison to the same period last year.

Advantages and Disadvantages of the Existing System:

Advantages	Disadvantages
Good coverage	Long trips (circuitous one-way loops)
Acceptable trip frequencies	Indirect trips (transfers required)
Short walking distances to transit stops	Poor connections at certain times of day
Works well for high school students during mornings	Trip times do not work for all students especially in the afternoon
Good level of service to Driver House	Difficult to get between major destinations (e.g. malls)

5.2 Service Options

As mentioned previously, two service options have been developed that address immediate short term needs as well as a longer term option to serve future demand:

Option 1 addresses short term transit system improvements for existing riders based on the feedback that was collected during public consultation and the online survey. System improvements are designed to improve the current system while incorporating previous system characteristics with a view to address the main concerns created as a result of the April 2011 change and regain ridership that was lost since the last service changes were introduced in April 2011.

This option essentially retains loop alignments and explicitly addresses:

- connection times to improve transfers between routes and minimise travel time
- improved service for seniors along 13th Street to major destinations
- improved scheduling to accommodate students.

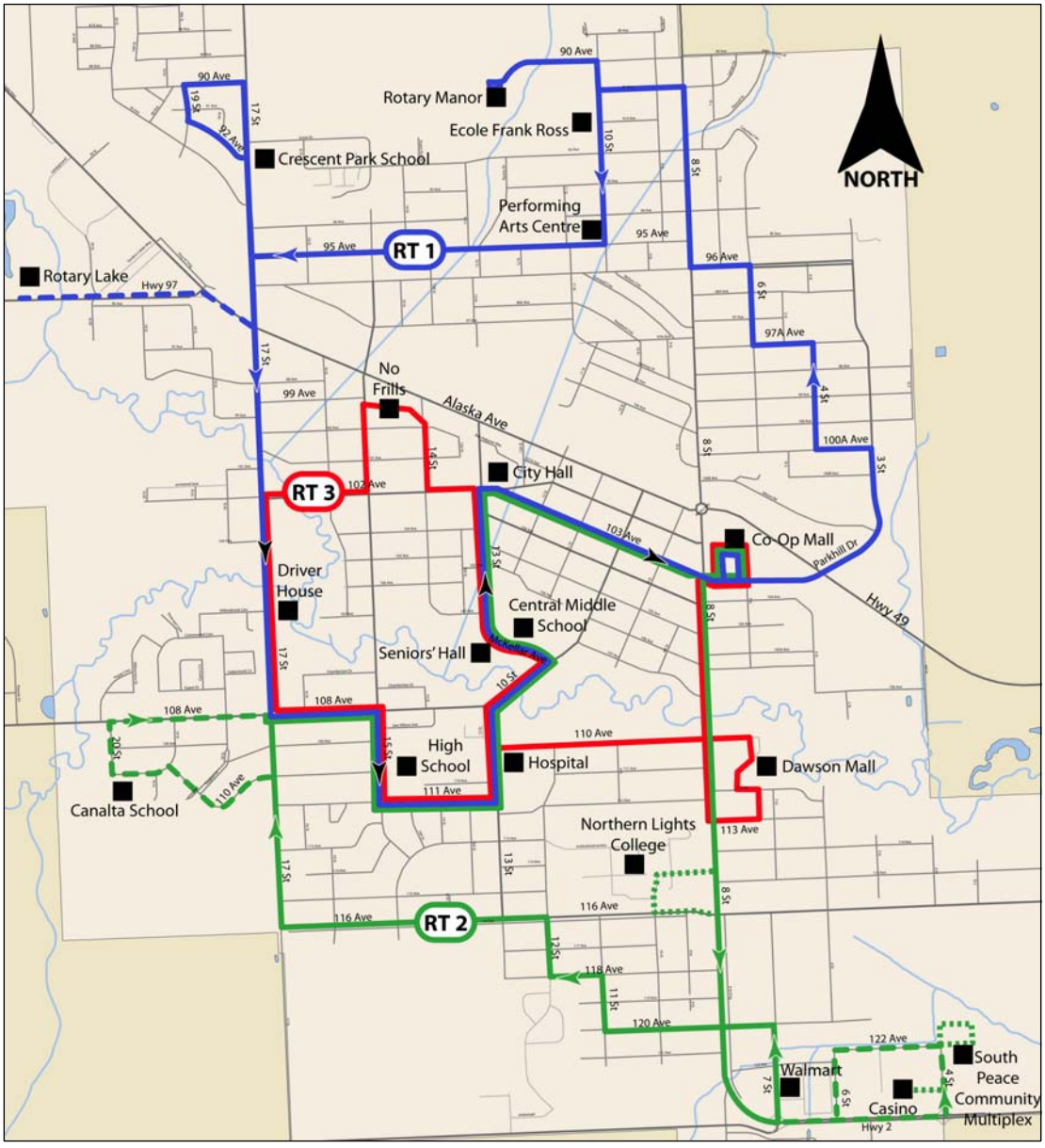
Option 2 addresses a medium/longer term system structure that is geared towards attracting new riders. This structure improves the efficiency of the transit system by simplifying circuitous routes into shorter, direct corridors that serve major destinations in the City. This reduces travel time and improves the attractiveness of transit as an alternative travel option.

The fundamental principles of one-way loops versus two-way service is provided in Appendix A.

5.3. Option 1 – Short Term Restructuring to Maintain/Restore Ridership

This short term (2 to 3 year) option adds an additional loop route (#3 Central) to the transit system. Routes 1 and 2 are based on the existing route structure while incorporating relevant public comments that include elements of the previous system. The system structure is depicted in Map 2:

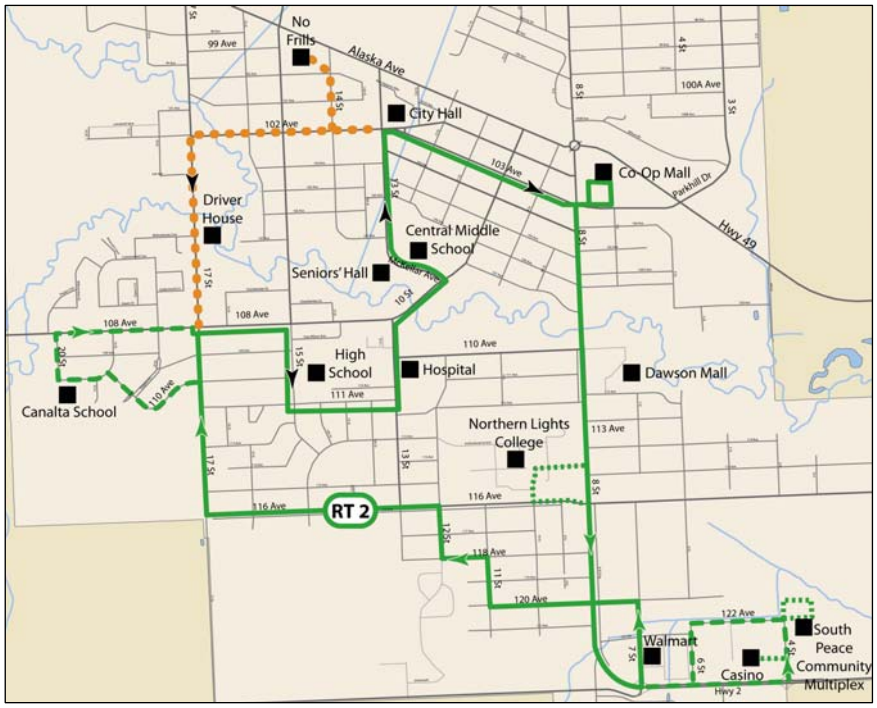
Map 2: Option 1 (Existing System plus Route 2 refinements and Route 3 addition)



Route 1: No route changes are proposed to the Northside route. The Rotary Lake extension is retained as a summer only routing.

Route 2: Five refinements are proposed to the Southside route which are shown in Map 3 below. The orange dotted lines shown in the map below depicts where the route currently travels.

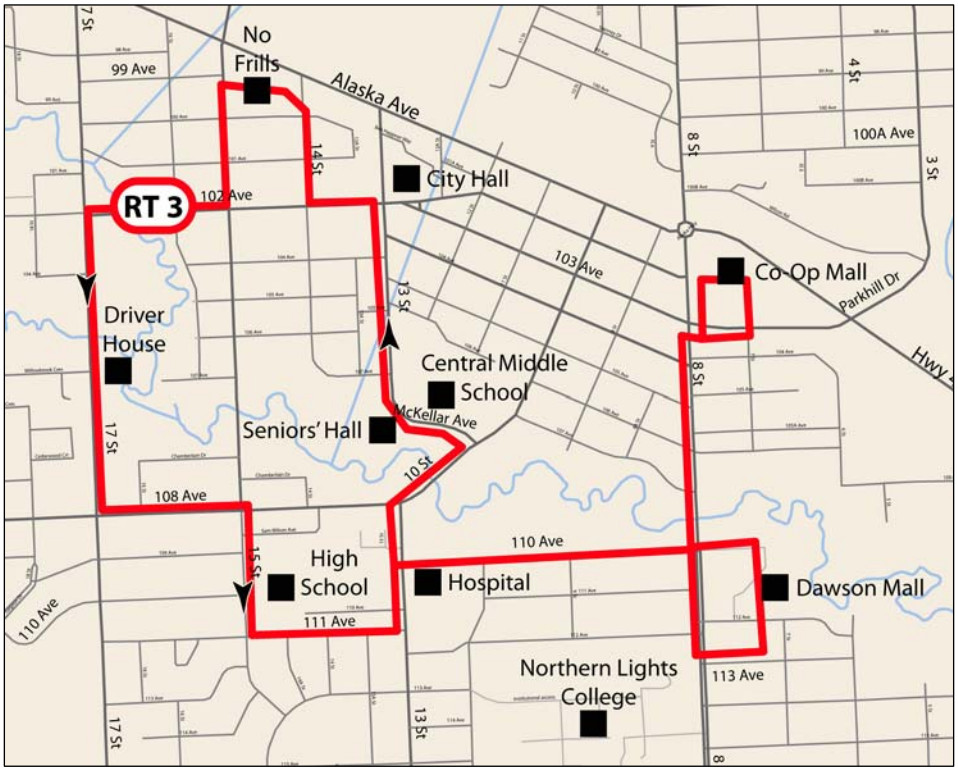
Map 3: Route 2: Proposed Refinements



- This route will revert mostly to its former (pre-April 2011) form. It will route past the high school, hospital and seniors' hall on every trip;
- School trips will route past Canalta school (green dotted line) and all other trips will alternate between serving the Multiplex and the Canalta School area. This arrangement is proposed for two reasons:
  - + To maintain equivalent trip run times to those on Route 1 to ensure seamless transfers between the two routes on every trip.
  - + Discussions with the transit manager and drivers have indicated that demand and ridership in these two areas is low. Therefore, this reduction in service would still meet existing demand.
- It should be noted that this trip will keep routing into Northern Lights College entrance off 8th Street due to the local winter conditions.
- Similarly, service to the Casino will route to the entrance off 4th Street due to the high incidence of senior riders to this destination and local weather conditions.
- With respect to service to the Multiplex, we do however propose that the route no longer route into the rear of the Multiplex parking lot due to safety concerns relating to the significant risk associated with vehicular conflicts by routing through parking lots as well as to maintain to schedule reliability. To serve the Multiplex, we propose the location of a bus stop on the corner of 4th Street and 122 Ave which provides easy access to both the main entrance and the pool entrance to the recreation centre. Further, we recommend the installation of a bus shelter to mitigate the weather conditions at this stop.

Route 3: This #3 Central route has been added and designed to address many of the existing concerns voiced by existing riders. This route, depicted in Map 4 below, starts and ends at the Co-Op Mall. From the Co-Op Mall it routes to the Dawson Mall, the Hospital, northbound on 13th Street, No Frills, Driver House, the High School, back to the Hospital, Dawson Mall and returning to the Co-Op Mall. The one way portion of this loop is run in a counter-clockwise direction.

Map 4: Route 3 – Proposed Addition of Route 3 (Central)



Issues that are addressed by this route include:

- providing more service between 13th Street and both malls,
- reducing the length of time between transfers at the Co-Op Mall (especially for students) to routes 1 and 2, and;
- providing two-way service between the Co-Op Mall and the Dawson Mall.

Advantages and Disadvantages of Option 1 to Existing Service (Short Term Restructuring to Maintain Ridership):

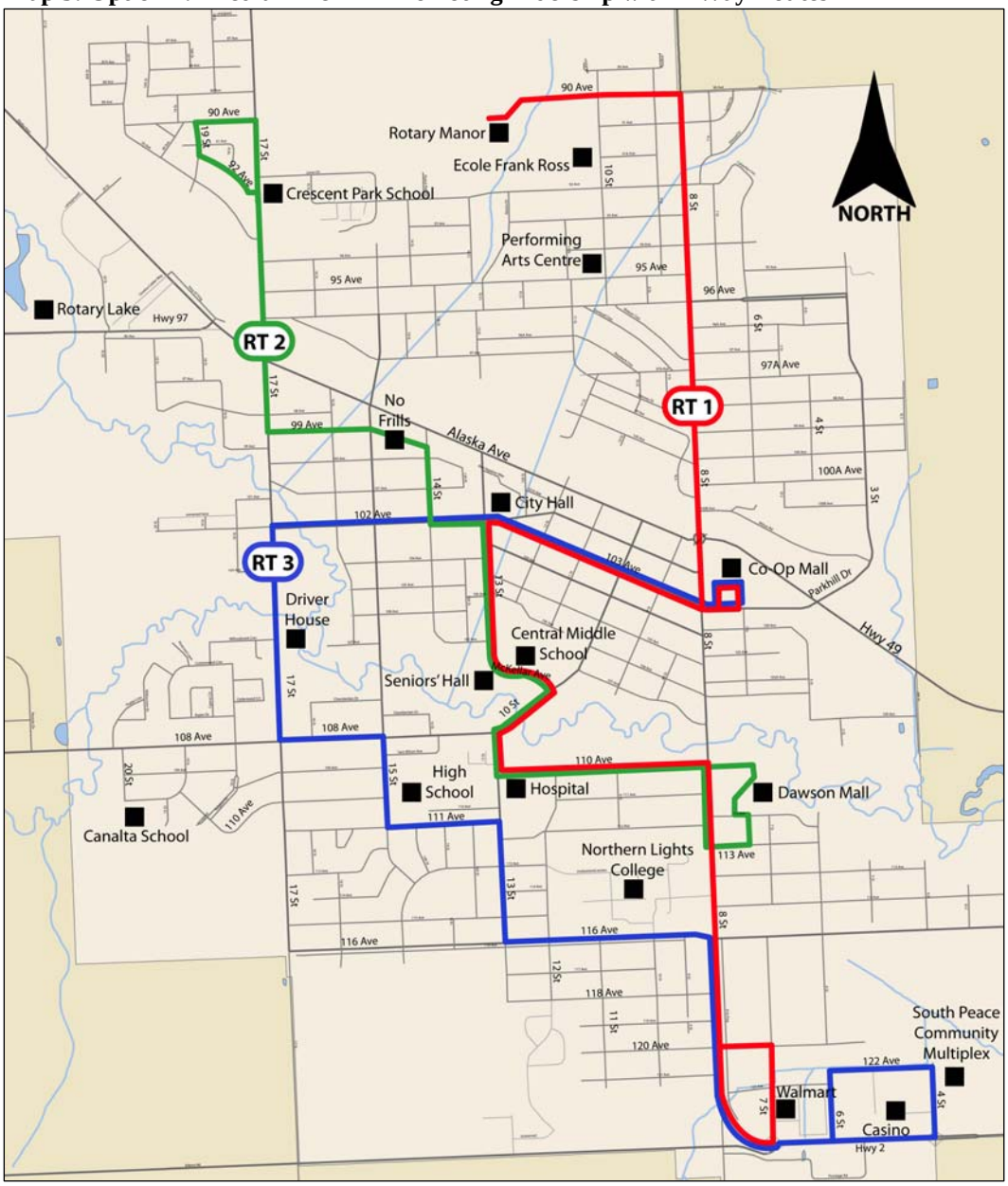
Advantages	Disadvantages
Maintain wider coverage area	Maintaining current circuitous routing results in longer and indirect trips
Provide acceptable frequencies	
Short walk distance to transit stops	More hours required to provide service Ease of transfers can be affected by service reliability
Works well for students to high school	
Maintain service levels to Driver House	Ease of transfers can be affected by service reliability
Increased and better service for seniors	
Easier access to the south for seniors	
Requires adding route without significant changes to the existing system structure	
Improved and more transfer options	
Potential to expand the service day	

5.4 Option 2: Medium Term – Promoting Ridership Growth with 2-way Routes

This option proposes a system structure that would benefit Dawson Creek in the longer term. This option would replace existing long and circuitous one-way loops with direct two-way routes that link major destinations to reduce trip times, improve efficiency and promote the attractiveness of transit as an alternative travel option. Trip length and therefore coverage is reduced so that trip times become more comparable to car trips. A system such like this is more likely to attract choice riders, thereby building ridership on an ongoing basis. It is focussed on concentrations of potential riders and linking them with major destinations. However, it should be noted however that the design of this system is a significant change in the way the existing system operates. This option moves away from the current coverage model to a direct routing model of service delivery and improving efficiency does have an impact on overall coverage. By implementing frequent and direct routes, the level of overall coverage is reduced resulting in increased walking distances for riders to access the main two-way routes especially in the northeast and southwest.

Routes proposed in this option are described in more detail below.

Map 5: Option 2: Medium Term – Promoting Ridership with 2-Way Routes

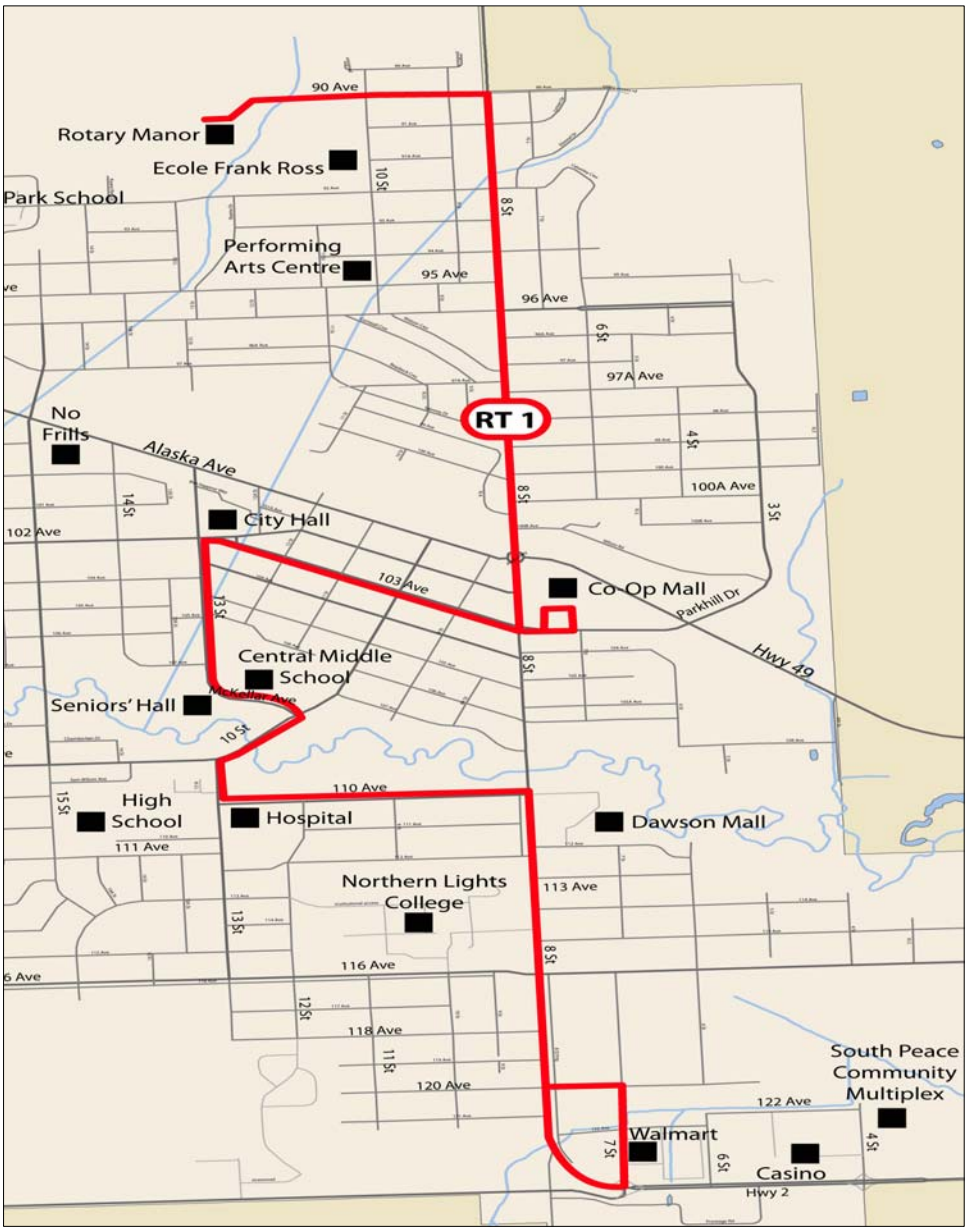


Route 1

This route is designed to be the main north-south corridor on the east side of town. It covers the 13th Street corridor, connecting it with the Co-Op and Dawson malls, Walmart, the hospital and High School. This route will not provide many transfers to the other two routes, as most passengers using this route will be heading to destinations that it serves.

The route will loop into the Co-Op Mall, Dawson Mall and Walmart.

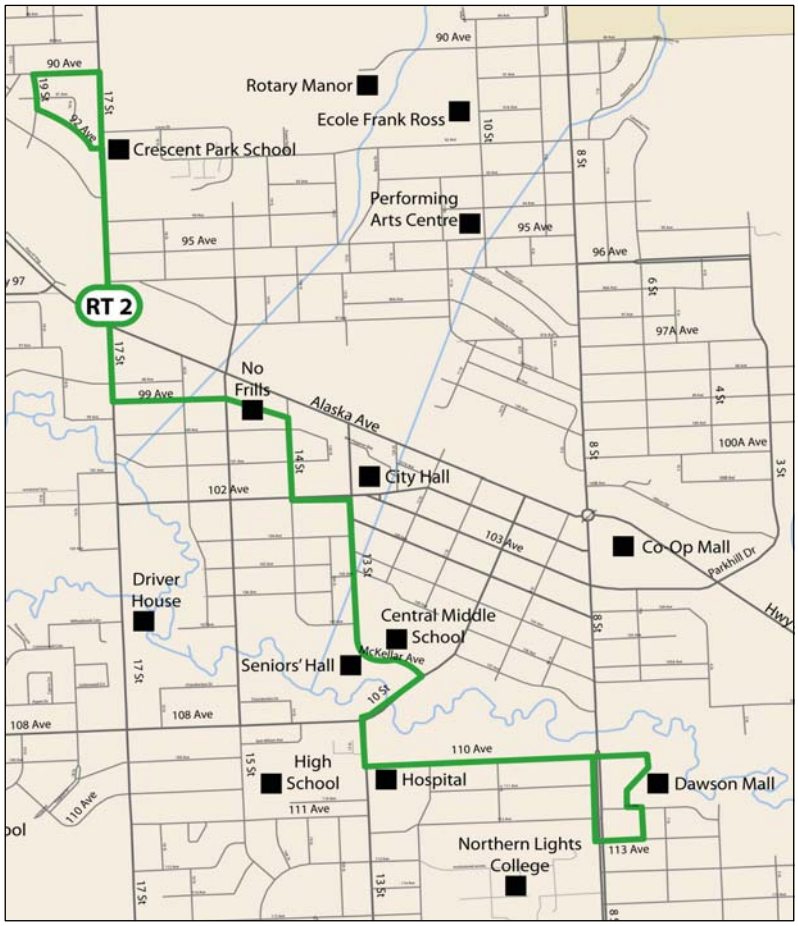
Map 6: Route 1: Two-Way service



It should be noted that residents on Parkhill Drive, 3rd and 4th Streets will be required to walk further to make use of transit route along 8th Street. Although this becomes a longer walk by locating the transit route on 8th Street provides increased coverage to residents located west of 8th Street.

Route 2

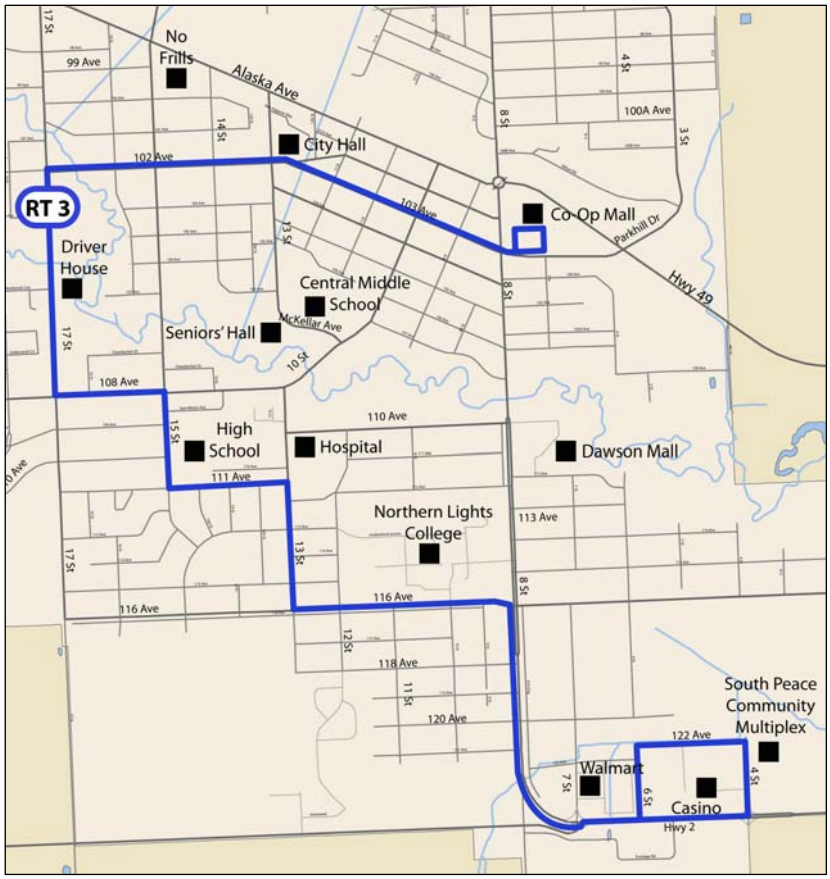
This route as shown below, is designed to connect riders on the northwest side of town with No Frills, the 13th Street corridor, High school, Hospital and the Dawson and Co-Op malls. Transfers to the Route 1 and 3 will provide service to Walmart and the Multiplex.



This route will route into No Frills and Dawson Malls to provide a higher level of service to shoppers. For people traveling to the Co-Op Mall, Walmart and the Multiplex, will be able to transfer to Route 1 on 102 Ave

Route 3

This route is designed to provide service to the southern half of Dawson Creek. While it has lower coverage than the existing routes, it provides service to some of the denser nodes of development and higher trip generators. It also contributes in providing 2-way service to Driver House and the High school. This is the only route providing direct access to the Multiplex and the Casino.



Advantages and Disadvantages of Option 2 to Existing Service (Medium Term – Promoting Ridership Growth)

Advantages	Disadvantages
More direct routes and shorter (faster) trips	Less coverage area
Easier to understand	More hours required to run 2 way routes
More likely to attract new riders	More walking required of some riders
Faster trips for students to/from school	Additional stops required for 2 way service
Better service for seniors in the central core	Significant change to the existing transit system can result in issues for some riders

5.5. Bus Stop Implications

In evolving to a new route structure, existing bus stops may potentially need to be moved/removed and new bus stops may be required. Option 1 will require moving a few bus stops. Option 2 will require more bus stops as two-way service requires stops along both sides of the street

6. Service Profiles and Costs

Service profiles are provided to provide an indication of levels of service (number of trips per day), annual service hours and financial implications. Existing service is provided as a baseline for comparison to the two proposed options. It should be noted that these cost estimations are high level estimates only. Only once final detail schedules have been developed, will we be in a position to provide actual revenue hours and associated costs

6.1. Existing Service Profile

The existing service requires approximately 6,800 annual service hours and two buses in service (7:30am - 7pm Monday to Friday, and 9:30am - 7pm on Saturdays). The table below provides an indication of the number of existing trip frequency by route and annual revenue hours:

	Service Start	Service End	Weekday Round Trips	Saturday Round Trips	Annual Service Hours
Route 1 Northside	7:40 am	6:41pm	19	16	3,350
Route 2 Southside	7:30 am	6:56 pm	20	17	3,450
Total					6,800

6.2. Proposed Service Profiles

Option 1 – Short Term Restructuring to Maintain/Restore Ridership

Within Option 1, three different service profiles have been developed. The highest service profile (9,100 hours) would return Dawson Creek back to the level the service prior to the April 2011 refinements.

Base Level (7,000 annual service hours)

Scenario 1	Service Start	Service End	Weekday Round Trips	Saturday Round Trips	Annual Service Hours
Route 1 Northside	7:30 am	6:40 pm	15	13	2,900
Route 2 Southside	7:30 am	6:40 pm	14	12	2,500
Route 3 – 13th St	9:50 am	3:05 pm	9	9	1,600
Total					**7,000**

This service profile provides service within the confines of the existing number of service hours. Trips on the routes 1 and 2 (Northside and Southside) run every 35 minutes from 7:30 – 10:00 am and 3:00 – 6:40 pm. On Saturdays, trips run every 70 minutes between 10 am and 3 pm. Route 3 has trips every 35 minutes from 9:50 am until 3:05 pm weekdays and on Saturdays. The service day is not expanded with this service level.

Base Level plus four additional daily trips (8,000 annual service hours)

Scenario 2	Service Start	Service End	Weekday Round Trips	Saturday Round Trips	Annual Service Hours
Route 1 Northside	7:30 am	6:40 pm	15	13	2,850
Route 2 Southside	7:30 am	6:40 pm	15	13	2,850
Route 3 – 13th St	10:00 am	5:00 pm	12	12	2,300
Total					**8,000**

This service profile increases annual service hours by about 1,200 over the existing number of hours. These extra hours would provide extra trips on the route 3 on weekdays and weekends. One extra trip could be provided on the Southside route 2 as well. This would deliver more service during the afternoon peak hours. Trip frequency would remain the same as in the 7,000 annual service hour profile. The service day for Route 3 would be expanded from 3:05pm to 5pm.

Base Level plus 10 additional daily trips (9,100 annual service hours)

Scenario 3	Service Start	Service End	Weekday Round Trips	Saturday Round Trips	Annual Service Hours
Route 1 Northside	7:00 am	8:30 pm	15	12	2,900
Route 2 Southside	7:00 am	9:00 pm	17	13	3,150
Route 3 – 13th St	9:20 am	8:15 pm	22	14	3,050
Total					**9,100**

This service profile increases annual service hours by approximately 2,300 over the existing number of hours and returns to the same number of hours the system previously prior had to April 2011; albeit delivered in a improved manner. These extra hours should be used to provide a longer service day, from 7am until 9 pm on weekdays and 9 am to 9 pm on Saturdays. Extending into evening service could provide an opportunity to expand into new ridership markets for individuals, couples and families who can now use transit as a safe way to attend evening social outings or students requiring transportation for after school activities. Later service can also support service sectors like restaurants and pubs where recent drinking and driving enforcement measures have resulted in reduced business as people are reluctant to drive. Trips would run every 35 minutes on routes 1 and 2 during the peak hours from 7 – 10am and 2:30 – 5:30 pm. Outside of these times, trips will run every 80 minutes. Route 3 will run every 35 minutes from 9:20 am until 8.15 pm (Saturdays: 10.50 am to 5.45 pm).

Option 2 – Medium Term – Promoting Ridership Growth

For Option 2, only one service profile has been created. This service level of 9,100 annual service hours is the recommended minimum amount of service required to make this service option viable. At the 9,100 annual hour level, trip frequency is approximately hourly. This is the lowest level of service recommended under this type of direct route service model. Any fewer hours would provide fewer trips and/or a shorter service day. The 9,100 hour service level would bring Dawson Creek back to the same level of service hours prior to the April 2011 service change.

9,100 Annual Service Hours

	Service Start	Service End	Weekday Round Trips	Saturday Round Trips	Annual Service Hours
Route 1 Westside	7:30 am	6:30 pm	15	12	3,050
Route 2 Northwest	7:30 am	6:30 pm	15	12	3,050
Route 3 Southside	7:30 am	6:30 pm	15	12	3,000
Total					**9,100**

6.3. Financial Implications

As mentioned previously, as part of this service review BC Transit has worked closely with the senior management of the operating company to review processes and costs associated in their northern operations. The goal of this was to work together to identify efficiencies that would result in cost savings without impacting local service quality. BC Transit is pleased to report that, with the operating company's cooperation, we have identified savings that will result in a reduction of $150,000 in annual fixed cost charged by the operator. Taking these savings into account, the impact to local taxpayers in implementing the expansions proposed (resulting in an additional 2,300 hours or 30% of service) is almost negligible. To illustrate the effect of the cost saving, it is only applied to proposed service scenarios in the table below. These savings will go into effect January 1, 2012 and will apply regardless of the service choice made under this review. Costs and revenues are based on the 2011/12 Annual Operating Agreement and should be seen as order of magnitude amounts.

	Existing Service	**Proposed service**		
	2011/12 AOA 6724 hours	**Scenario 1 7,000 hours**	**Scenario 2 8,000 hours**	**Scenario 3 9,100 hours**
Operating Cost	$1,078,844	$1,100,181	$1,177,622	$1,262,807
Less: Fixed Costs Savings		$150,000	$150,000	$150,000
Debt Service (Local Share)	$144,620	$144,620	$144,620	$144,620
Total Cost	**$1,223,465**	**$1,094,801**	**$1,172,242**	**$1,257,427**
Less Revenue	$107,948	$109,526	$115,256	$121,558
Net Municipal Share	**$593,548**	**$523,379**	**$558,934**	**$598,044**
Provincial Share	$503,712	$443,639	$479,797	$519,569
Net Municipal Share/revenue hour	$88.27	$74.77	$69.87	$65.72
Provincial Share/revenue hour	$74.91	$63.38	$59.97	$57.10

7. Analysis

Option 1 (Restore & Maintain Ridership)

This option will satisfy most of the complaints of existing riders about the current system by re-creating the one seat trip to Co-Op and Dawson Malls for residents along 13th Street as well as continue service in the Parkhill area. Ridership is unlikely to grow as strongly in the long term with this option due to the nature of one-way loop service that currently exists. One-way loops mean that trips are indirect and take longer than necessary in at least one direction. This style of system is more challenging to allow for changes in the community because any alteration in the route structure typically means longer trips for passengers or the removal of service in one area to benefit another.

If Option 1 is selected, we recommend implementing service at the 9,100 annual service hour level. This will bring the transit system back to the level it was at before April 2011. This level of service will provide improvements including a longer service day and address the majority of the concerns that were brought to the attention of the City and BC Transit over the past couple of months with respect to student trip times and seniors' ability to travel to major destinations.

Option 2 (Promoting Ridership Growth)

This option focuses on creating the attributes that many respondents felt lacking in the one-way loop system, e.g. directness, simplicity etc. This option would, given sufficient frequency, likely begin to attract those who have a choice in their transportation trip mode by providing faster and direct trips to their destinations. Moreover, as the city continues to grow in the coming years, this option will be easier to expand to accommodate neighbourhood developments without incurring a complete transit system transformation.

Both options will accommodate students and seniors well. Schedules will be developed to meet middle and high school bell times. Both options provide significantly improved service to the 13th Street corridor. In both options this area is served by 3 routes. This means there will be over 30 trips per day (at the 9,100 hour level) between 13th Street and the Co-Op and Dawson Malls no matter which option is selected.

While BC Transit favours Option 2 in the long term, this option is a significant change to the way the transit system has been operating since its inception and what local riders are accustomed to. The movement to a direct routing design from the current coverage model would have some potential negative effects on some riders who would now be required to walk longer distances than they currently do to board buses. Given the high number of seniors who utilize the system and winter conditions, it is important to ensure significant consultation with all the riding public and municipal staff is done before such a change is implemented to ensure the system best fits the local conditions.

The preferred approach would be to implement Option 1 as soon as possible at the 9,100 service level to address the immediate issues and introduce some new system improvements such evening service. While these system changes mature, BC Transit could undertake additional public consultation on the longer term Option 2 to better understand potential local issues and determine ways these could be addressed if this option were to be implemented in the future. Consultation would also involve municipal council and staff to ensure the system design evolves to best support future areas of development in city and is sustainable in terms of local affordability. Lastly, by implementing a phased approach it would also allow sufficient time to evaluate some of the systems improvements such as the evening service to determine whether demand warrants it continuing in the future.

8. Recommendations

In conclusion, BC Transit recommends:

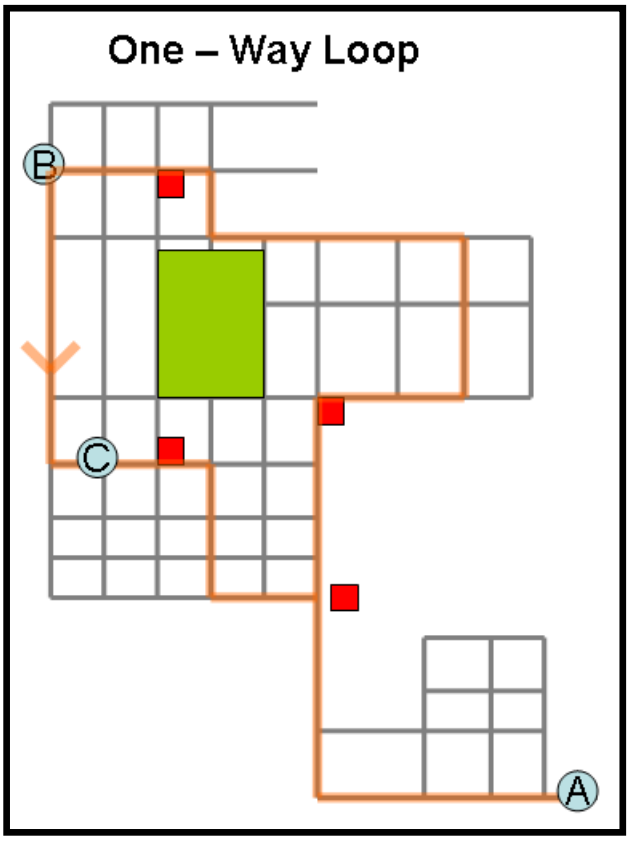
1. The implementation of Option 1 at the 9,100 service hour level that addresses current concerns to stabilize ridership and resolve the issues that exist within the central part of town.

2. Undertaking a public consultation exercise by posting maps and schedules at the Senior Centre and senior homes as well as Middle and Secondary schools in the City. In addition we recommend providing a "sneak peak" of the new system via the City and BC Transit websites in order to inform the public appropriately.

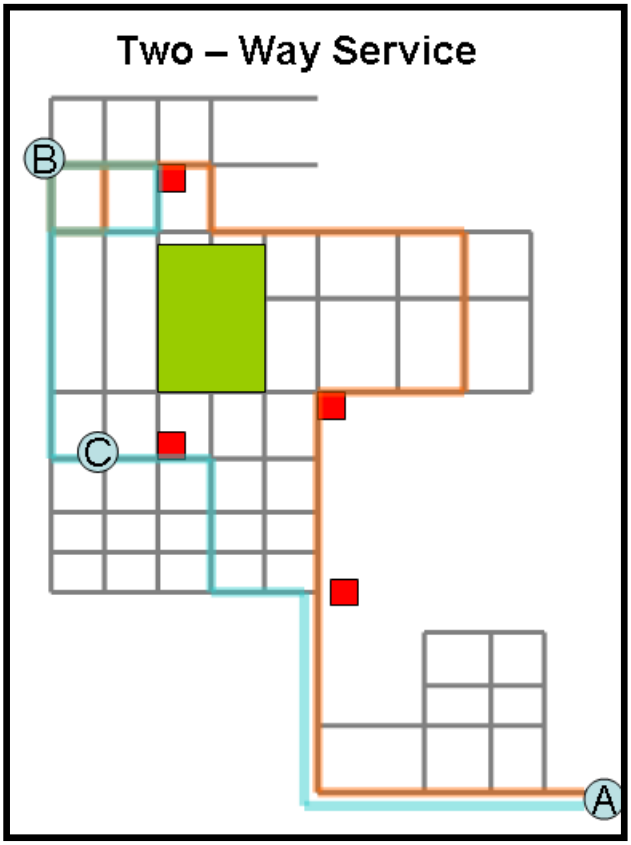
3. Conducting a series of open houses toward the latter part of 2012 to obtain sufficient public input on Option 2 to work towards finalizing a long term transit structure that allows for future growth in the system. Open houses can be supplemented with online surveys to maximise public input. Consecutively, working with city staff to ensure the long term structure supports future development goals of the city.

4. In terms of timing, BC Transit would require a total of 14 weeks (6 weeks for scheduling and a further 8 weeks to develop, print and distribute customer information and Riders Guide). An implementation date in February 2012 can be achieved provided a decision is made by Council no later than 31 October 2011.

Appendix A: Service Delivery Models



- Moving from Point A to Point B is reasonably direct.
- If someone at Point C wants to go to Point A, they have a direct trip but returning back to Point C requires travelling around the entire loop, making it relatively inconvenient in one direction.
- This service delivery method is an inexpensive way to serve a large area though it is not attractive if time is a constraint.

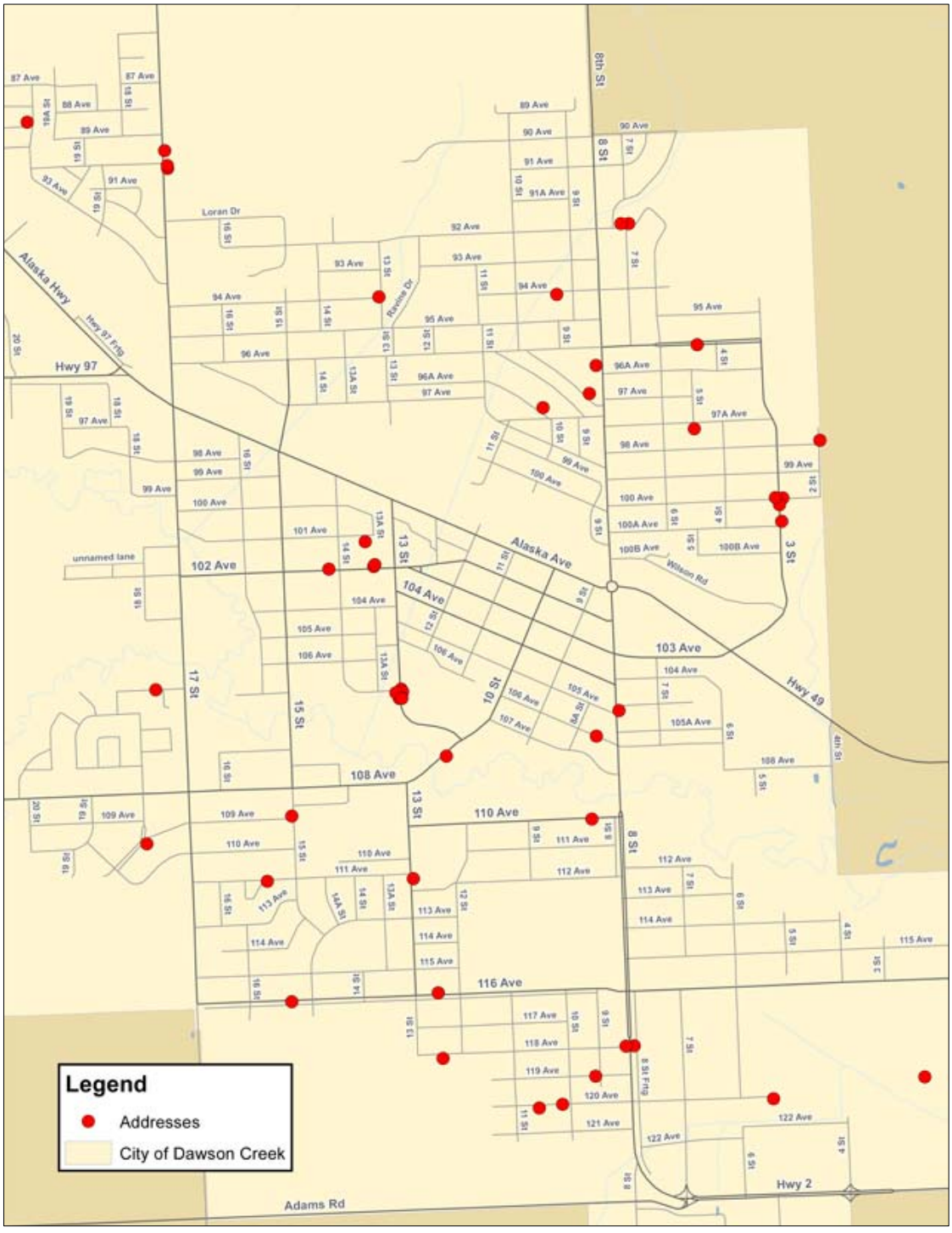


- Moving from Point A to Point B is reasonably direct.
- The improvement is for someone who is not at the endpoint of a route.
- A person at Point C can get to Point A or B with a direct service or can transfer at two points to go elsewhere on the orange route.
- This is more expensive because it requires more service per corridor but can attract passengers who value travel time.

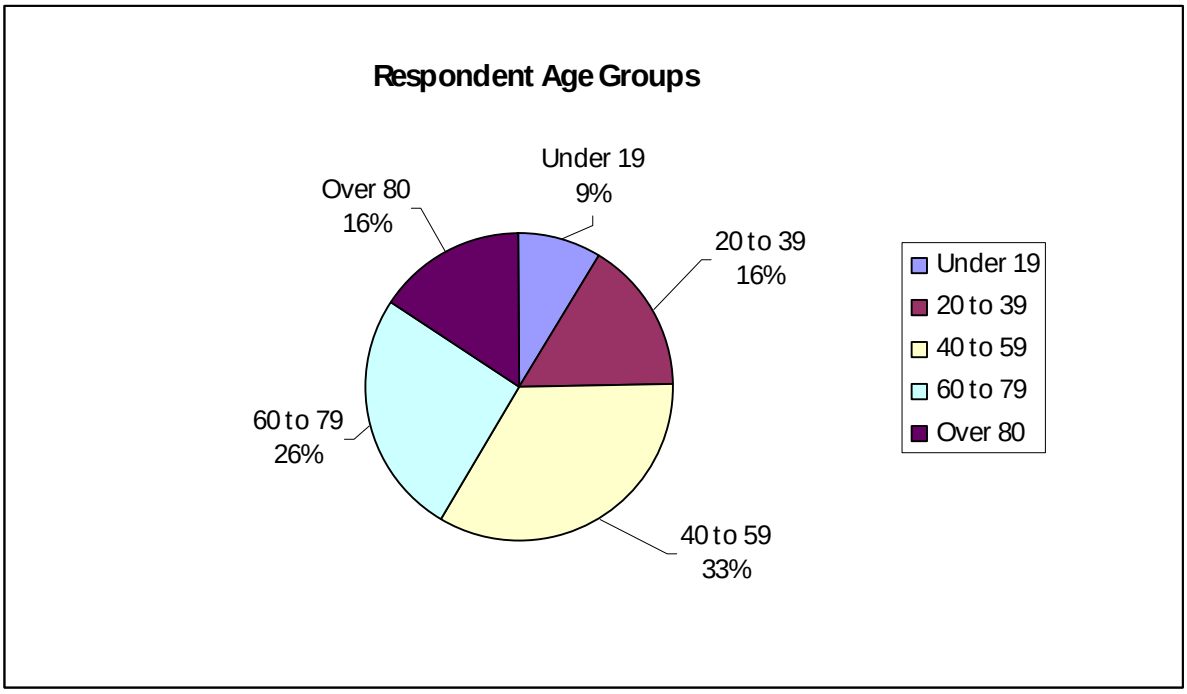
Appendix B: Survey Results

The survey asked 10 questions which was completer by 58 respondents.

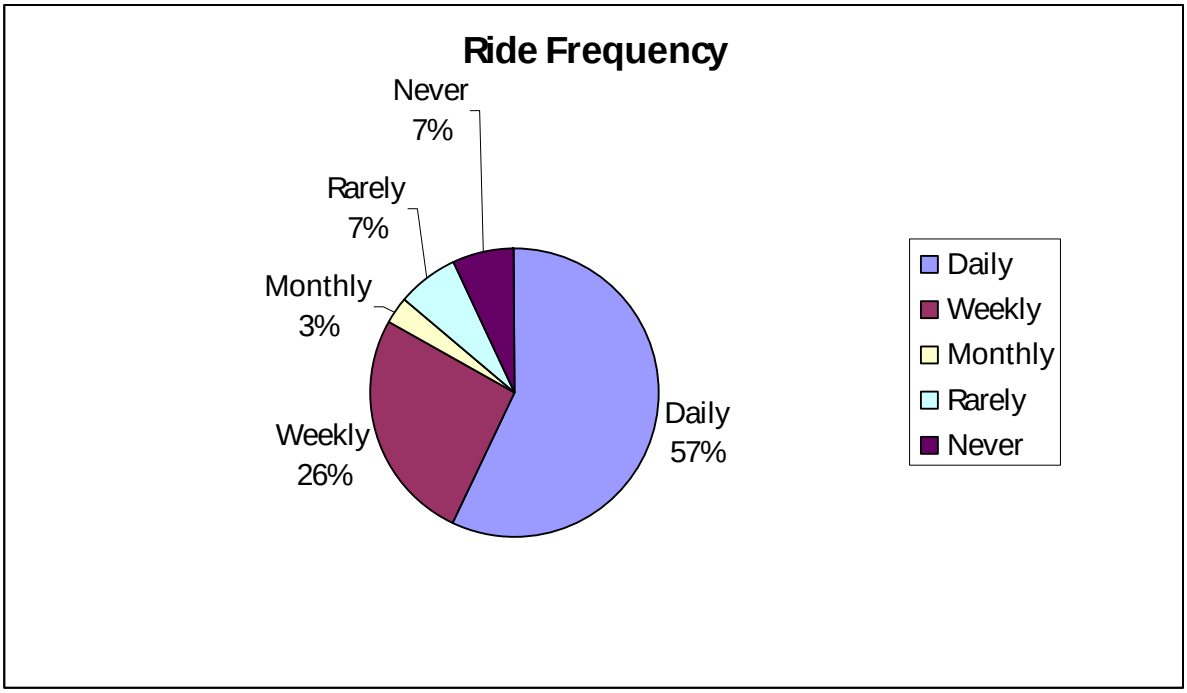
1. Where do you live?



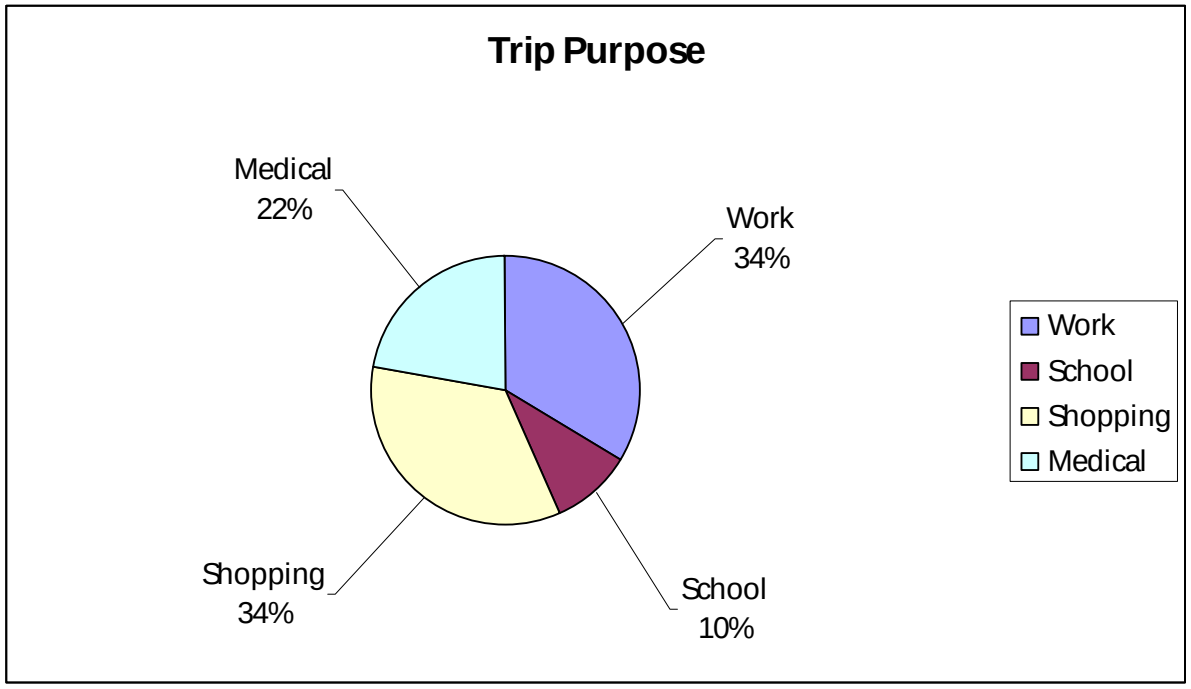
2. Which age group do you belong to?



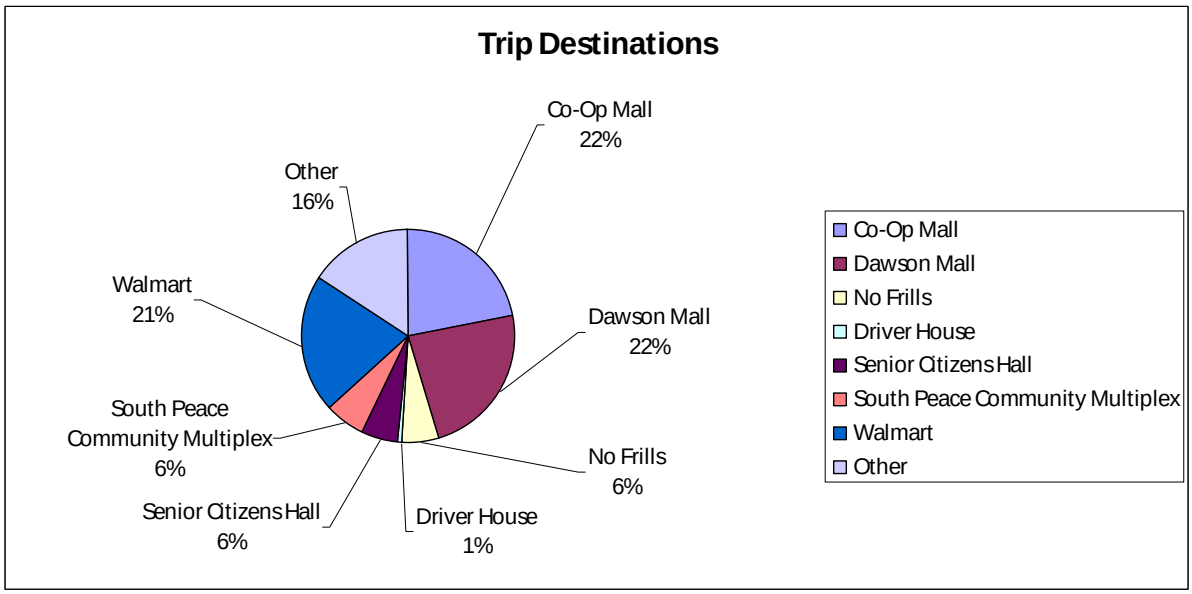
3. In the last three months, how often did you take transit?



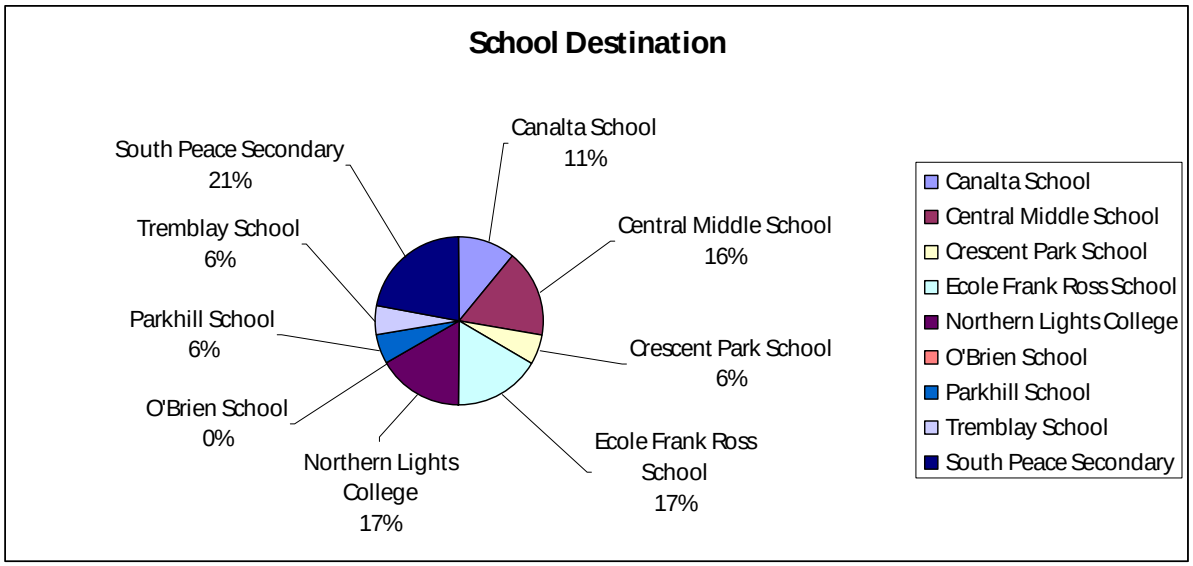
4. What is the main purpose of your trip?



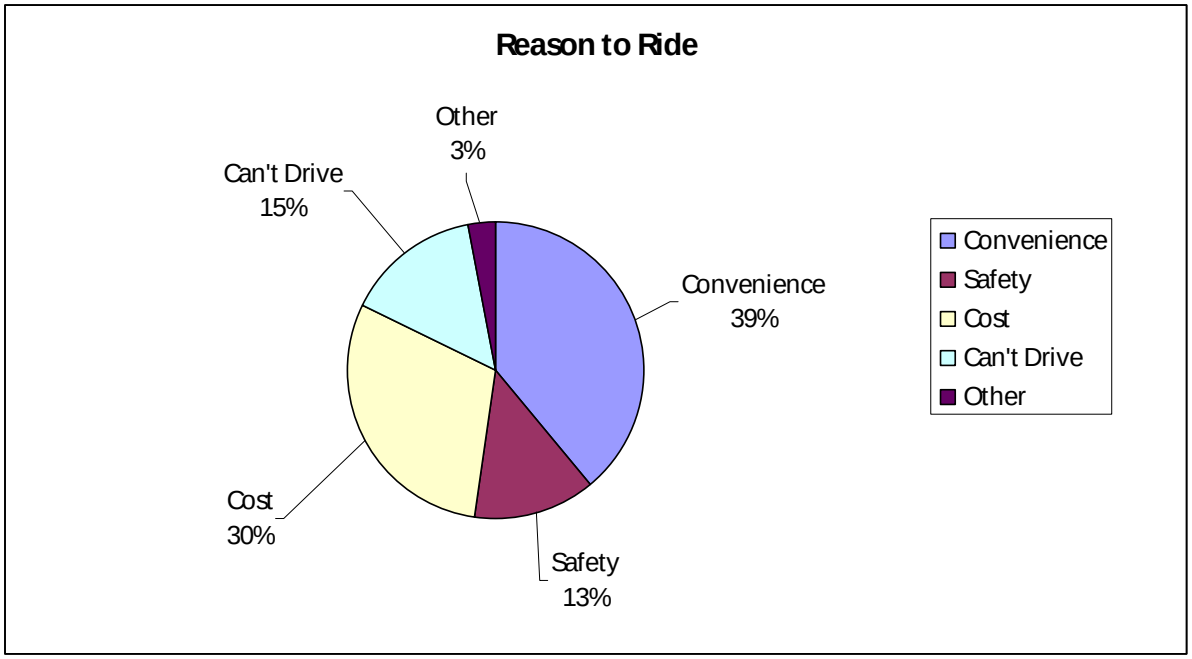
5. When using transit, what are the usual destinations other than schools that you travel to and from?



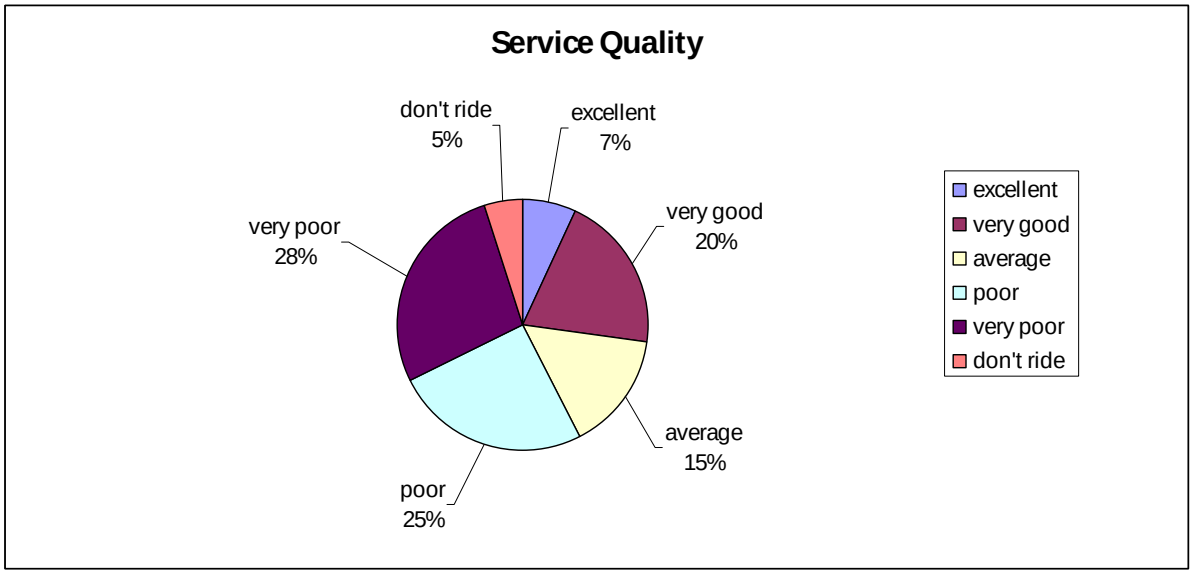
6. When using transit to school, which school do you travel to and from?



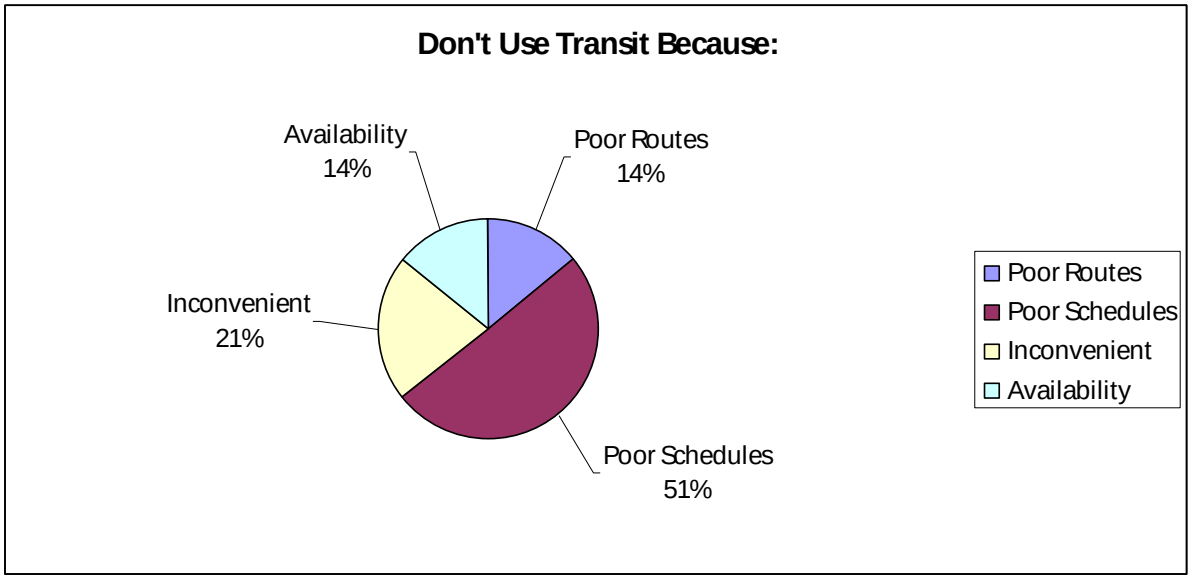
7. Why do you choose to ride Dawson Creek Transit?



8. Based on your own experience, how would you rate the overall current service provided by the Dawson Creek Transit service?



9. If you do not use transit, please tell us why.



10. How could the current transit service be improved for you?