

Using Transit AVL/APC System Data to Monitor and Improve Schedule Adherence

by

Michael Mandelzys

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## **Authors Declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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## Abstract

The implementation of automatic transit data collection via Automatic Vehicle Location (AVL) and Automatic Passenger Counting (APC) systems provides an opportunity to create large, detailed datasets of transit operations. These datasets are valuable because they provide an opportunity to evaluate and optimize transit operations using methods that were previously infeasible and without the need for expensive manual data collection.

This thesis develops a methodology to utilize data collected by typical AVL/APC system installations in order to (a) develop advanced performance measures to quantify schedule adherence and (b) automatically determine the causes of poor schedule adherence. The methodology addresses the difficulty that many small to medium sized transit agencies have in utilizing the data being collected by proposing a methodology that can be automated, thereby reducing resource and expertise requirements and allowing the data to be more effectively utilized.

The ultimate output of the proposed methodology includes the following:

1. A ranked list of routes by direction (for a given time period) that identifies routes with the poorest schedule adherence performance.
2. Performance measures within any given route, direction, and time period that identify which timepoints are contributing most to poor schedule adherence.
3. Statistics indicating identified causes of poor schedule adherence at individual timepoints.
4. A visualization aid to be used in conjunction with the cause statistics generated in Step 3 in order to develop an effective strategy for improving schedule adherence issues.

With this information, transit agencies will be able to act proactively to improve their transit system, rather than wait until they discover problems on their own or hear complaints from passengers and drivers.

The methodology is tested and demonstrated through application to AVL/APC system data from Grand River Transit, a public transit agency serving Waterloo Region in Ontario, Canada.

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## List of Symbols

$i$	=	Timepoint $i$ (from 1 to $N$ )
$j$	=	Trip $j$ (from 1 to $M$ )
$N$	=	Total number of timepoints on the route and direction of interest
$M_i$	=	Total number of trips recorded at timepoint $i$ during the study period
$D_{a_{i,j}}$	=	Schedule deviation measured based on arrival time at timepoint $i$ on trip $j$
$D_{d_{i,j}}$	=	Schedule deviation measured based on departure time at timepoint $i$ on trip $j$
$A_{a_{i,j}}$	=	Actual arrival time at timepoint $i$ on trip $j$
$A_{d_{i,j}}$	=	Actual departure time at timepoint $i$ on trip $j$
$S_{a_{i,j}}$	=	Scheduled arrival time at timepoint $i$ on trip $j$
$S_{d_{i,j}}$	=	Scheduled departure time timepoint $i$ on trip $j$
$e$	=	Early threshold (bus early if more than $e$ units of time early)
$l$	=	Late threshold (bus late if more than $l$ units of time late)
$L_{i,j}$	=	Binary value of 1 when bus arrives late and 0 otherwise at timepoint $i$ on trip $j$
$E_{i,j}$	=	Binary value of 1 when bus departs early and 0 otherwise at timepoint $i$ on trip $j$
$P_{B_{i,j}}$	=	Passengers boarding at timepoint $i$ on trip $j$
$P_{A_{i,j}}$	=	Passengers alighting at timepoint $i$ on trip $j$

## **Glossary**

Arrival Time, Actual – the time that a bus arrives at a timepoint, transit stop, or unscheduled stop.

Arrival Time, Scheduled – the time that a bus is scheduled to arrive at a timepoint.

Departure Time, Actual – the time that a bus departs a timepoint, transit stop, or unscheduled stop.

Departure Time, Scheduled – the time that a bus is scheduled to depart from a timepoint.

Headway – The amount of time between the passing of two consecutive buses on the same route in the same direction (also referred to as service frequency).

Headway Management – Managing the operation of buses by focusing on maintaining a specific headway between buses on the route, rather than adhering to a timetable.

Mismatched Data – records in an AVL/APC database where observed data is incorrectly matched with schedule data for a different trip.

Route – a designated, specified path that a bus is assigned to; a route travels between two terminals.

Running Time, Scheduled – the amount of time scheduled for a bus to move from one point to another

Schedule – a listing of arrival and/or departure times at each timepoint for each trip along a route.

Schedule Adherence – the difference between the scheduled arrival time and actual arrival time at a timepoint, and the difference between scheduled departure and actual departure at a timepoint.

Terminal – the transit stop at the beginning or end of a route.

Timepoint – any transit stop along a route at which an arrival time and/or departure time is scheduled; schedule adherence can only be measured at timepoints, and timepoints are a subset of transit stops.

Transit stop – any designated location along a route where a passenger can board or alight the bus.

Unscheduled Stop – a stop made by a bus that is not a transit stop, may be due to traffic signals, congestion, yielding right-of-way, passenger request due to safety, etc.



# 1 Introduction

## 1.1 Background

Planning and operating a transit system requires transit agencies to balance a variety of objectives, including maximizing mobility and service for users while simultaneously maximizing efficiency and cost-effectiveness. A variety of tools, including route design, scheduling, and infrastructure are used to help meet these objectives.

Improving and optimizing transit service requires data, and traditionally, collecting data on transit system performance has been done manually. This is problematic because the significant cost and complexity of manual transit data collection has forced many agencies to make do with limited datasets for operating, planning and evaluating their networks (Bertini and El-Geneidy 2003). However, many transit agencies have begun implementing (or are considering implementing) automated transit data collection. This automated transit data collection is usually in the form of Automatic Vehicle Location (AVL) systems, Automatic Passenger Counting (APC) systems, or both.

Transit data, both manually and automatically collected, are used in two quality improvement loops as illustrated in Figure 1. The off-line loop utilizes data to analyze transit performance in order to evaluate and optimize the transit service plan (i.e. the schedule). The real-time loop uses data to improve operational control of the transit system by allowing the transit agency to detect and respond to deviations from the operational plan (Furth et al. 2003). Good transit system performance requires both a good transit service plan and good operational control. Improved operational control through real-time data has been a major motivator for implementing automatic data collection at many transit agencies, but agencies are beginning to realize that automatic data collection is also a rich potential source of off-line data which can benefit transit service planning when effectively archived and utilized.

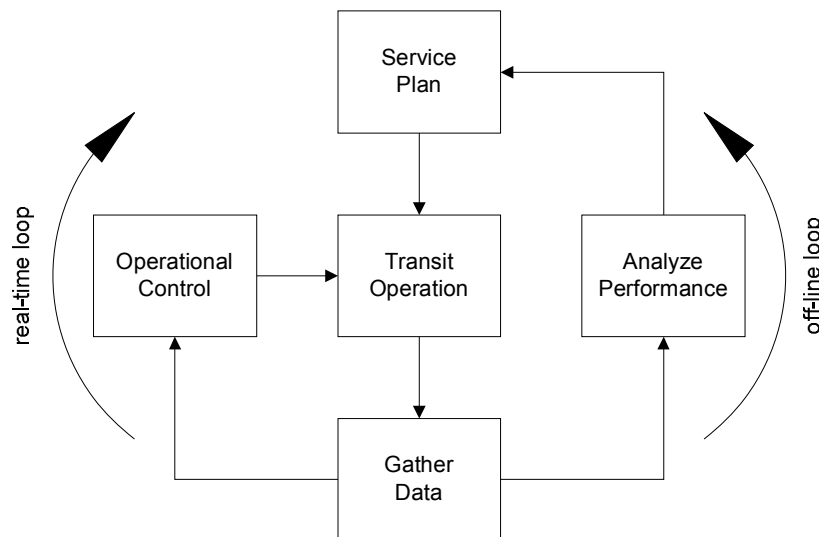


Figure 1. Quality improvement loops (Furth and Muller 2000)

AVL systems wirelessly transmit real-time location information, and have historically been designed for operational control (Furth 2000). Since offline analysis was not a primary goal, many historical AVL systems were designed to report “location-at-time” data (for example, where a transit vehicle is located at a given time), rather than “time-at-location” data (for example, when a transit vehicle arrives at particular stop). Although either “location-at-time” or “time-at-location” data may be sufficient for tracking a bus, “time-at-location” is required for most offline analysis (Furth et al. 2006). As well, historical AVL systems were commonly designed to record data only when buses are operating outside of normal ranges (such as when a bus is behind schedule). This data recording scheme, often referred to as “exception” data, is insufficient for offline analysis (Furth et al. 2006). More recent AVL system installations are more likely to address some of the deficiencies of older systems by recording “time-at-location” data, reporting data even when it is within normal ranges, and providing better integration with archiving systems.

APC systems have, unlike AVL systems, historically been used for offline analysis. They typically record “time-at-location” data as well as passenger counts for boarding and alighting at each stop. Since the focus of APC systems has never been real-time operation control, most systems do not include a wireless link to transmit the collected data. Instead, the data is stored on-board the transit unit, collected, and downloaded at a later time. Historically, APC systems have been adopted in much more limited numbers than AVL systems (Furth et al. 2006).

Although AVL and APC systems have historically been implemented independently, it has become more common to implement them together in hybrid AVL/APC systems. With a hybrid setup, the records for every stop are stored onboard the transit vehicle by the APC system, and information important for real-time monitoring and operational control are transmitted wirelessly back to the transit agency control centre. A hybrid setup also reduces the cost of adding an APC system since they no longer require their own location systems; instead they are able rely on the location data provided by the AVL system (Furth et al. 2006).

A typical modern AVL/APC system is illustrated in Figure 2. The system consists of sensors at each door to count passengers getting on and off, a GPS antenna in order to determine position and velocity, an on-board computer to process and store the data, and a wireless link for transmitting the data from the on-board computer to a central system.

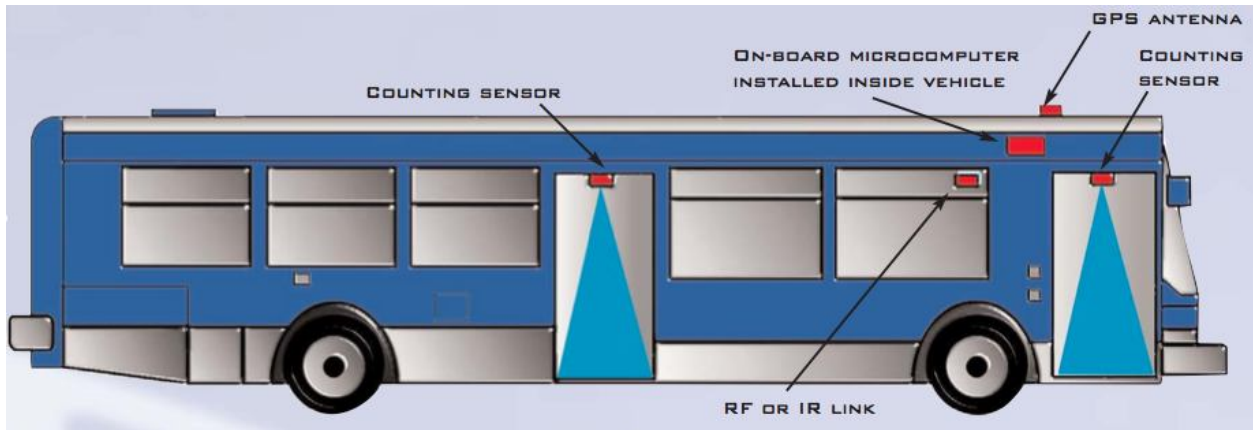


Figure 2. Typical AVL/APC system hardware (Infodev EDI inc. 2002)

When triggered by specific events, AVL/APC systems generate records that are recorded in an off-line database. The events that lead to a record being generated vary from system to system, but often include such triggers as the bus opening and closing its doors or passing by a transit stop. The specific data contained within a record also varies depending on the system, but often contain information on location, arrival and departure time, passengers getting on and off, and more. As the result of this, detailed operational data is collected and archived from any AVL/APC equipped buses as they travel along their routes.

For a specific example of the events that lead to records being generated by a modern AVL/APC system employed by Grand River Transit (GRT) in the Region of Waterloo, as well as a description of the fields contained within these records, refer to Section 4.1.

AVL and APC systems have the potential to create rich operational and passenger activity databases (Furth et al. 2004). The rich databases that are created by AVL and APC systems provide opportunities for transit agencies to monitor and plan their transit system in ways that were impossible when relying on a limited volume of manually collected data.

## 1.2 Motivation

Transit data has typically been processed via ad hoc manual methods of manipulating and visualizing data. Though these methods are adequate for the relatively small datasets obtained through manual data collection, they are impractical for identifying and extracting meaningful results from the much larger datasets obtained from AVL/APC systems. Consequently, **the full potential of AVL/APC system data is not exploited by these manual methods.**

In order to effectively utilize the large datasets obtained from AVL/APC systems, it is necessary to compile and summarize the data such that meaningful conclusions can be drawn. This can be done via the creation of performance measures, which identify where the transit system is not performing acceptably and where improvement efforts should focus. The large and detailed datasets provided by AVL/APC systems provide the opportunity to **develop improved performance measures that were previously infeasible.** In addition to using performance measures to identify where the transit system is not performing acceptably, the data from AVL/APC systems can be used to **provide information on the**

**causes of poor performance.** Identifying the location and cause of poor performance would facilitate effective decision making on how to improve transit system performance.

Because AVL/APC systems have the potential to provide large volumes of data, and to constantly be updating data with newer information, the ability to **automate the process of calculating performance measures and determining the causes of poor performance** is of great benefit. Automated methodologies significantly lower the resource requirements of utilizing AVL/APC system data.

The benefits of an automated methodology are especially significant at small to medium sized transit agencies, which are deploying AVL/APC systems but often lack the resources and expertise to effectively utilize the data being collected. Automating the process of compiling and interpreting the data reduces the resource and expertise barrier and can **allow AVL/APC system data to be more effectively utilized by small to medium sized transit agencies.**

### 1.3 Scope and Objectives

Archived data from AVL/APC systems can support a wide range of potential uses including metrics associated with:

- Schedule adherence
- Passenger loads
- Travel times
- Dwell times
- Intersection delays
- Stop locations

This research focuses on using archived data available from a typical AVL/APC installation to **develop performance measures to quantify schedule adherence.** The selection of appropriate performance measures is an important step, as the rich dataset available from AVL/APC systems permits the computation of performance measures that were previously infeasible.

Once performance measures have been developed, timepoints with poor performance are highlighted and a methodology is developed to **automatically determine the causes of the poor performance.** Visualization tools are also developed, and the identified causes are used in conjunction with these summary figures to determine strategies to improve transit system performance.

The methodology is designed for routes where service is based on maintaining a specified schedule, rather than routes that are based on maintaining specified time headway between successive buses. Headway management, which is typically utilized only on routes with short headways ( $\leq 5$  minutes) experience a different set of challenges than this methodology is designed to address.

The methodology developed in this thesis has been designed with automation in mind. It is expected that ultimately, transit agencies will be able to automate the methodology to receive the following data:

1. A ranked list of routes by direction (for a given time period) that identifies routes with the poorest schedule adherence performance.
2. Performance measures within any given route, direction, and time period that identifies which timepoints are contributing most to poor schedule adherence.
3. Statistics indicating identified causes of poor schedule adherence at individual timepoints.
4. A visualization aid to be used in conjunction with the cause statistics generated in Step 3 in order to develop an effective strategy for improving schedule adherence issues.

The data provided by the proposed methodology will allow agencies to act proactively to improve their transit system, rather than wait until they discover problems on their own or hear complaints from passengers and drivers. It does this by providing a methodology that enables transit agencies to:

1. Quantify quality of service delivery on the basis of schedule adherence
2. Automatically identify routes and timepoints that have the greatest contribution to poor schedule adherence
3. Automatically identify potential causes of poor schedule adherence

## **1.4 Thesis Organization**

This thesis has been organized into five chapters. The contents of Chapters 2 through 5 can be summarized as follows:

**Chapter 2** reviews previous work in developing schedule adherence performance measures and utilizing data collected from AVL and APC systems.

**Chapter 3** develops the proposed methodology for identifying poor schedule adherence using traditional and proposed performance measures and for determining the cause(s) of poor performance.

**Chapter 4** applies the proposed methodology to four months of AVL and APC system data from Grand River Transit and discusses the findings.

**Chapter 5** presents the conclusions and recommendations.

## 2 Literature Review

This chapter reviews previous work in developing schedule adherence performance measures and in utilizing data collected by AVL and APC systems.

Schedule adherence within a transit system has typically been gauged using schedule adherence performance measures. Performance measures are valuable for both (a) understanding how well a transit system is doing in meeting its performance goals, and (b) identifying where improvement efforts should focus. Section 2.1 consists of a review of previous work in developing traditional schedule adherence performance measures. Section 2.2 summarizes previous research in how data from AVL/APC systems can be used to evaluate schedule adherence.

### 2.1 Traditional Schedule Adherence Performance Measures

Traditional schedule adherence performance measures are based on defining an “on-time” threshold, and then evaluating the percentage of time that a transit vehicle is “on-time”. This measure is usually termed “on-time performance”.

The definition of “on-time” varies between transit systems. A 1994 survey of 86 American transit agencies reported a range of definitions, with the most common threshold being not more than five minutes late or one or more minutes early (Penn 1995).

In Canada, transit agencies tend to have a more stringent definition of “on-time”. A survey of 17 Canadian transit agencies by the Canadian Urban Transit Association found that 11 of the agencies would not define a bus as “on-time” when it was more than 3 or 4 minutes late, and 15 of the agencies would not consider a bus “on-time” if it was early by any amount of time (Canadian Urban Transit Association 2001).

The traditional performance measure does not consider arrivals and departures separately. They cannot report, for example, that a bus “arrives early” but “departs on-time”. Instead, a bus either is “on-time” or it is not “on-time”. This raises the question of whether schedule deviation should be measured relative to arrival time (Equation 1) or relative to departure time (Equation 2)?

$$D_{a_{i,j}} = A_{a_{i,j}} - S_{a_{i,j}}; \text{ “on-time” if } -e \leq D_{a_{i,j}} \leq l \quad (1)$$

$$D_{d_{i,j}} = A_{d_{i,j}} - S_{d_{i,j}}; \text{ “on-time” if } -e \leq D_{d_{i,j}} \leq l \quad (2)$$

where

- $i$  = Timepoint  $i$  (from 1 to  $N$ )
- $j$  = Trip  $j$  (from 1 to  $M$ )
- $N$  = Total number of timepoints on the route and direction of interest
- $M_i$  = Total number of trips recorded at timepoint  $i$  during the study period
- $D_{a_{i,j}}$  = Schedule deviation measured based on arrival time at timepoint  $i$  on trip  $j$
- $D_{d_{i,j}}$  = Schedule deviation measured based on departure time at timepoint  $i$  on trip  $j$
- $A_{a_{i,j}}$  = Actual arrival time at timepoint  $i$  on trip  $j$
- $A_{d_{i,j}}$  = Actual departure time at timepoint  $i$  on trip  $j$
- $S_{a_{i,j}}$  = Scheduled arrival time at timepoint  $i$  on trip  $j$
- $S_{d_{i,j}}$  = Scheduled departure time timepoint  $i$  on trip  $j$

- $e$  = Early threshold (bus early if more than  $e$  early)
- $l$  = Late threshold (bus late if more than  $l$  late)

Most agencies inherently recognize that schedule deviation relative to departure time (i.e. Equation 2) is more likely to be important where passengers are boarding, and that schedule deviation relative to arrival time (i.e. Equation 1) is more likely to be important where passengers are alighting, but when to measure relative to departures and when to measure relative to arrivals is not specified in the literature. Indeed, it is commonly recommended that the analyst should take the boarding and alighting into account when choosing to measure relative to departures or arrivals, but how to do this has not been clearly defined (Transportation Research Board and Kittelson and Associates Incorporated 2003). In practice, many transit agencies pick either Equation 1 or 2 and apply it for all schedule deviation analyses.

In addition to the “on-time” threshold, the acceptable percentage of “on-time” performance also varies among agencies. The 1994 survey of American transit agencies discussed above (Penn 1995) found a range of acceptable “on-time” performance standards, which is summarized in Table 1. The most common standards for “on-time” performance were between 90% and 97%.

Table 1. "On-Time" Performance Standards of Surveyed American Transit Agencies (Penn 1995)

Acceptable “On-Time” Frequency	Fraction of Respondents Selecting Performance Standard	
	Peak Period	Off-Peak Period
98-100%	14%	17%
95-97%	20%	35%
90-94%	29%	24%
85-89%	10%	8%
80-84%	11%	5%
75-79%	8%	5%
70-74%	5%	4%
<70%	2%	2%

In this aspect, Canadian agencies are also typically more stringent than their American equivalents. Of the 17 Canadian transit agencies surveyed by the Canadian Urban Transit Association (2001), 11 used a 95% “on-time” performance standard and the remaining six used standards between 80% and 95%. No Canadian agencies used standards less than 80%.

The Transit Capacity and Quality of Service Manual, 2<sup>nd</sup> Edition (Transportation Research Board and Kittelson and Associates Incorporated 2003), or TCQSM, reviewed the above work and recommended an “on-time” definition of between zero and five minutes late. In terms of whether times should be measured against bus arrivals or departures, the TCQSM suggests that it depends on the situation, with departures being more important where passengers are mostly boarding and arrivals being more important where passengers are mostly alighting. For acceptable “on-time” performance the TCQSM utilizes level of service (LOS) letter grades based on how frequently a bus is “on-time”, rather than a strict threshold. The TCQSM grading is presented in Table 2.

Table 2. “On-Time” Performance LOS (Transportation Research Board and Kittelson and Associates Incorporated 2003)

LOS	“On-Time” Percentage
A	95.0-100.0%
B	90.0-94.9%
C	85.0-89.9%
D	80.0-84.9%
E	75.0-79.9%
F	<75.0%

The above methodology forms the traditional method of evaluating schedule adherence along a route. At Grand River Transit in Waterloo Region, this method is utilized with a zero minutes early to three minutes late definition of “on-time”, and an “on-time” performance standard of 95%.

## 2.2 Utilization of AVL/APC System Data in Evaluating Schedule Adherence

The traditional schedule adherence performance measure can be easily calculated using data collected from most modern AVL/APC systems. However, due to the rich datasets provided by AVL/APC systems, it is possible to move beyond a simple “on-time” percentage in evaluating schedule adherence by incorporating information on the number of riders affected by poor schedule adherence. This recognizes that good schedule adherence is most important at timepoints where more passengers are affected. Further, AVL/APC system information can be used to differentiate between boarding passengers, who are more impacted by early departures, and alighting passengers, who are more impacted by late arrivals.

Several researchers have investigated utilizing AVL/APC system data to evaluate schedule adherence. The research, which has mostly occurred in the past decade, has mainly focused on evaluating schedule adherence with performance measures, summary tables, and visualization aids.

Bertini and El-Geneidy (2003) discussed how manual data collection meant that large amounts of resources were required to collect small amounts of transit data, and noted how AVL/APC systems have the ability to provide large datasets using limited resources. To utilize these large datasets, Bertini and El-Geneidy suggest summarizing them into transit performance measures, and note that these datasets provide an opportunity to calculate and utilize previously infeasible performance measures to assist transit agencies in improving the quality and reliability of their service. Bertini and El-Geneidy discuss many possible performance measures, and demonstrate how data from a system in Portland, Oregon can be used to create interesting tables and figures summarizing aspects of system performance. Schedule adherence measures and figures that were presented include a histogram of schedule adherence on a route over the course of a day (Figure 3), a figure comparing scheduled and actual arrivals at a single stop over several hours (Figure 4), and an analysis of the percent of time that buses were late, early, and “on-time” over the route. Bertini and El-Geneidy conclude that the measures they discuss can be generated automatically and can be used to improve transit service, although exactly how they should be used is not discussed.



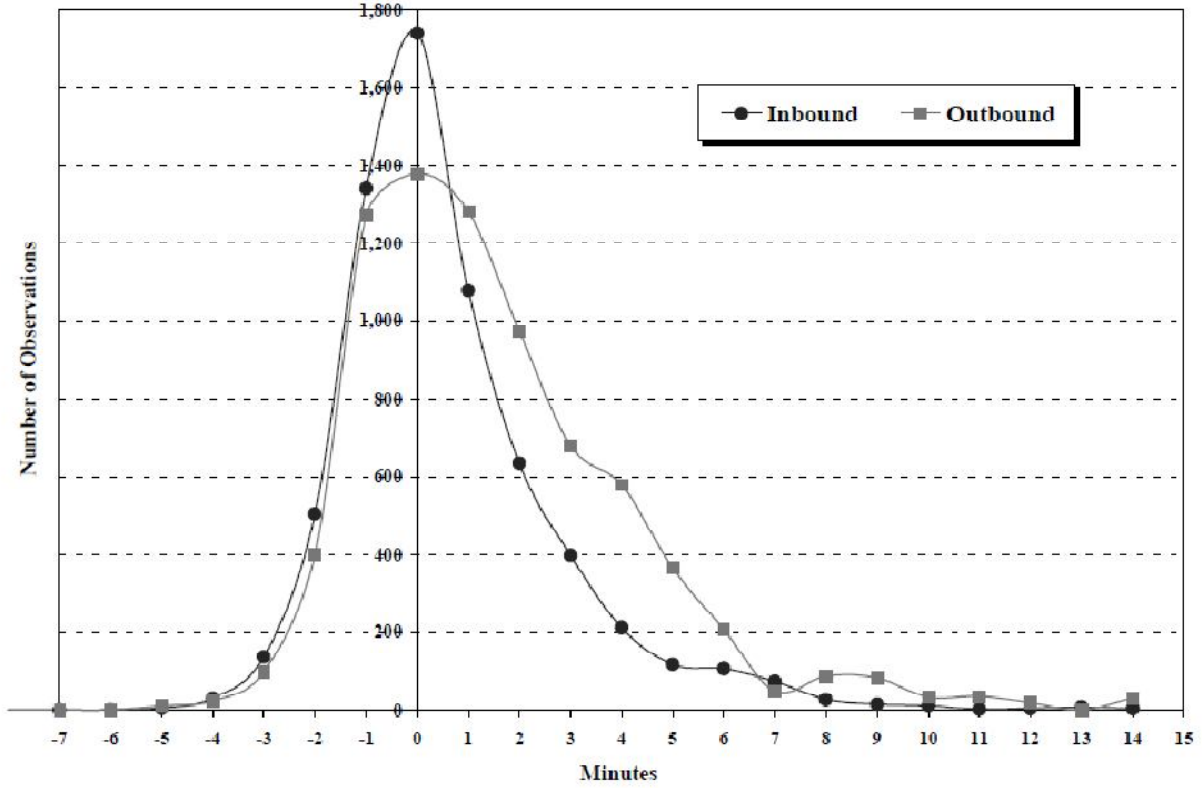


Figure 3. Schedule adherence during one day of service on a route (Bertini and El-Geneidy 2003)

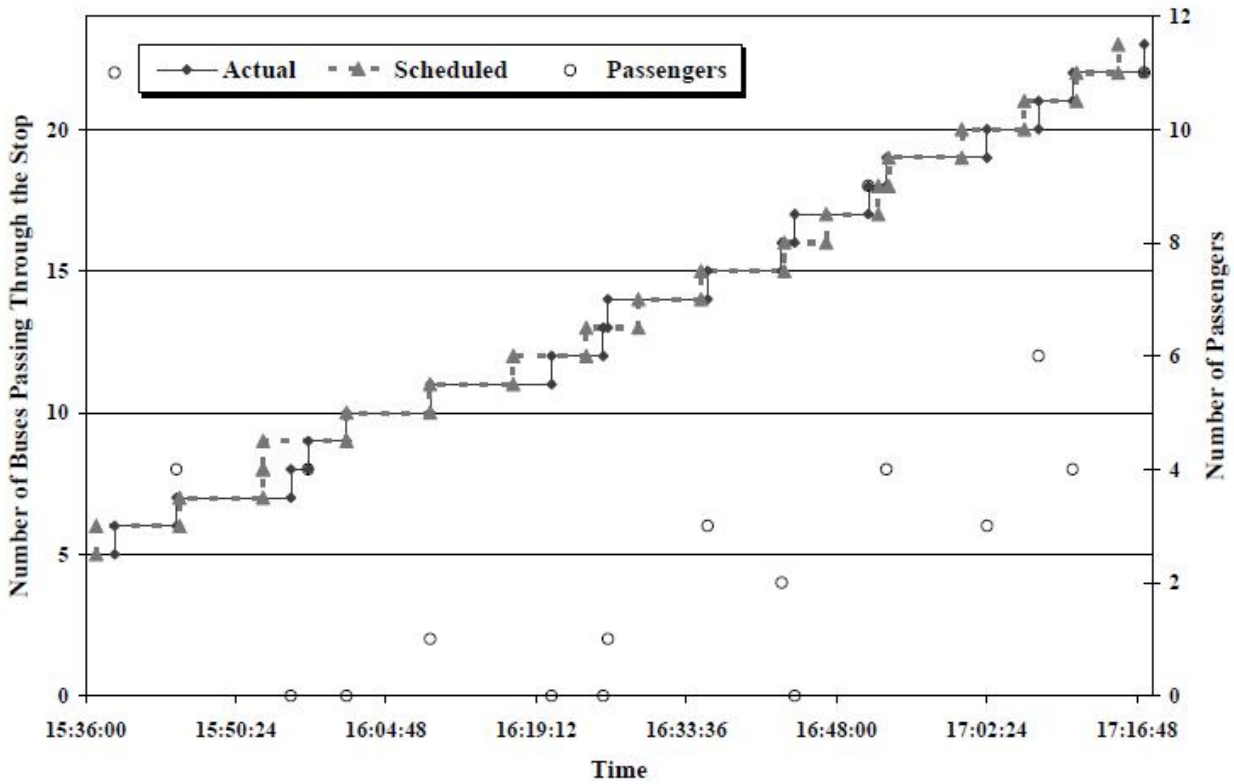


Figure 4. "On-Time" performance at a single stop (Bertini and El-Geneidy 2003)

TCRP Web Document 23 (Furth et al. 2003) reviews the uses of archived AVL/APC system data in transit performance and suggests (but does not design or implement) several measures and figures that can be created in order to utilize the data to support analysis and decision making with respect to schedule adherence.

One suggestion involves calculating a measure showing the percentage of timepoint departures that are early/"on-time"/late, which Furth et al. suggest is adequate for monitoring service quality (this is very similar to the traditional "on-time" performance measure that was discussed in Section 2.1).

A second suggestion involves creating performance measures that go beyond traditional early/late definitions and provide a distribution of schedule deviation. For example, Furth et. al. suggest that "3 minutes late might be the threshold for an analysis of good service; 5 minutes late the threshold for adequate service; and 7 minutes late the threshold for alerting dispatchers"; the broadness of schedule deviation could be represented by the standard deviation of the schedule deviation.

Thirdly, it is suggested that a graph of schedule deviation along a route can be created using AVL/APC system data. Furth et al. suggest that this graph is a valuable tool to improve scheduling, since patterns become easy to spot.

A final measure that is suggested involves weighting schedule deviation by passenger boarding and alighting counts to estimate experienced lateness and earliness. It is suggested that the analysis should recognize, for example, that departing early is not a problem for passengers alighting the transit vehicle, but can have significant consequences for those who are boarding (since an early departing bus could be interpreted as lateness by some passengers who miss the bus and have to wait a full headway for the next bus). Furth et al. note that they are not currently aware of any routing data analysis program that conducts this sort of analysis.

TCRP Web Document 23 does not get into the specific details of how the above suggestions would be implemented, but instead limits its scope to suggesting that they could be valuable and are worth considering.

Furth et al. (2004) utilizes case studies to identify what aspects of automated data collection system design are required in order to provide useful data for off-line data analysis. It is suggested that at a minimum, automated data collection systems should be capable of reporting and storing timepoint-level records in order to be used for quality of service analysis. Additional analysis capabilities are possible with higher levels of detail such as stop-level records. To create time-at-location records at a timepoint level or better, the bus must be able to determine its current location and match it against known timepoints and/or bus stops. Furth et al. note the challenge of moving from well-entrenched methodologies designed for a data-poor environment to new methods to utilize the rich-data provided by AVL/APC systems.

Hammerle, Haynes, and McNeil (2005) used a small subset of data collected over three days from a Chicago Transit Authority AVL/APC implementation to compute various service reliability indicators. Schedule adherence was investigated by finding the deviation from the scheduled time at each

timepoint for each trip. This was used to plot the percentile deviation at each stop (Figure 5) and also to calculate the “on-time” performance, the traditional schedule adherence performance measure discussed in Section 2.1. Hammerle, Haynes, and McNeil use the figure they created to draw conclusions on where/how often the buses were early and late, changes in schedule adherence over a route, and variability in schedule adherence. They conclude that the analysis methods they have applied are valuable and would be improved by applying to more days of data and more time periods.

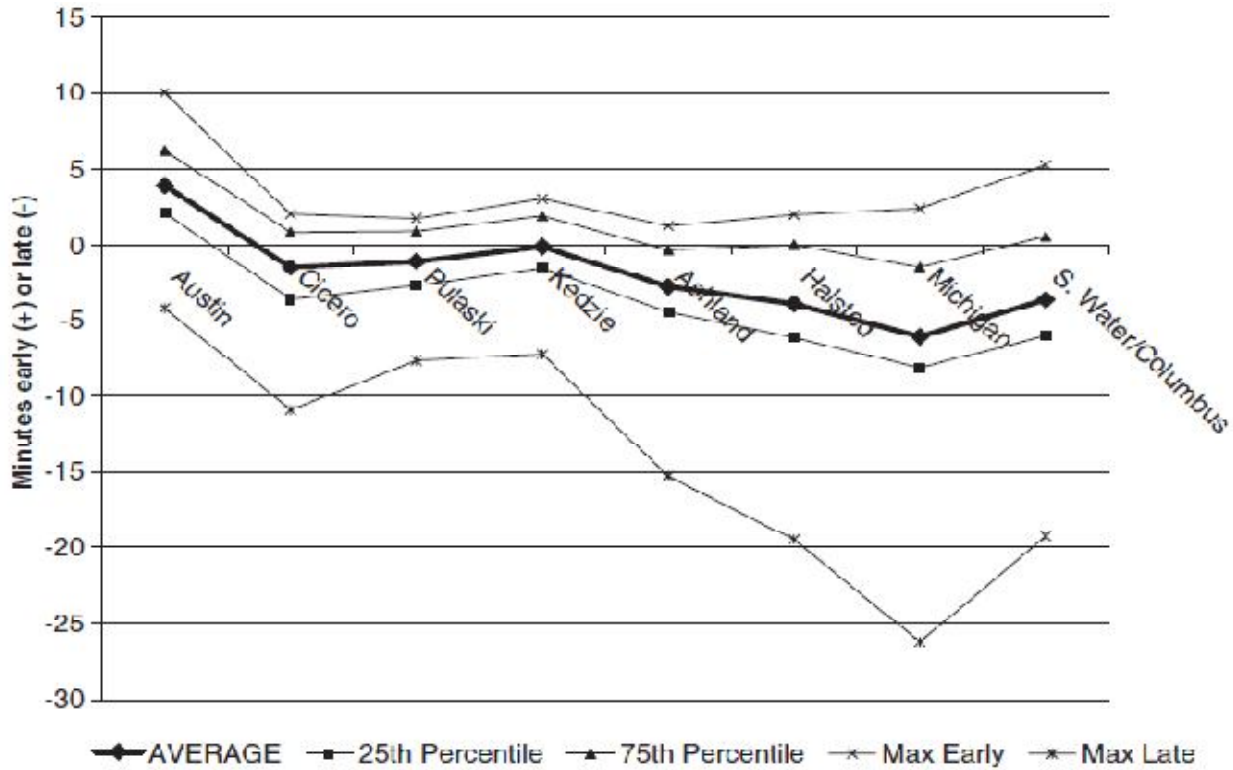


Figure 5. Aggregate schedule adherence at timepoints for the morning peak operating period (Hammerle, Haynes, and McNeil 2005)

TCRP Report 113 (Furth et al. 2006) provides guidance on the “effective collection, archiving, and use of AVL/APC data to improve the performance and management of transit systems” and revisits and expands on much of the information found in TCRP Web Document 23. In this report, Furth et al. note that many planning functions are oriented around analysis of extreme values, and these require large datasets. Schedule adherence performance monitoring is one of these functions that is based around extreme values (goals are often based on 95<sup>th</sup> percentile or other extreme percentiles), and therefore it benefits considerably from AVL/APC system data.

A schedule adherence analysis tool recommended in TCRP Report 113 involves a profile showing the schedule deviation along a route, including 15<sup>th</sup> and 85<sup>th</sup> percentile deviations. Information that can be interpreted from this form of plot include whether the scheduled running time is realistic (sudden jumps in the mean of the deviation indicate unrealistic scheduled running time) and the quality of operational control (a large spread in deviation, especially if it increases along the line, indicates poor operational

control). A sample of the profile recommended in this report is presented in Figure 6, showing a poorly scheduled and poorly controlled route.

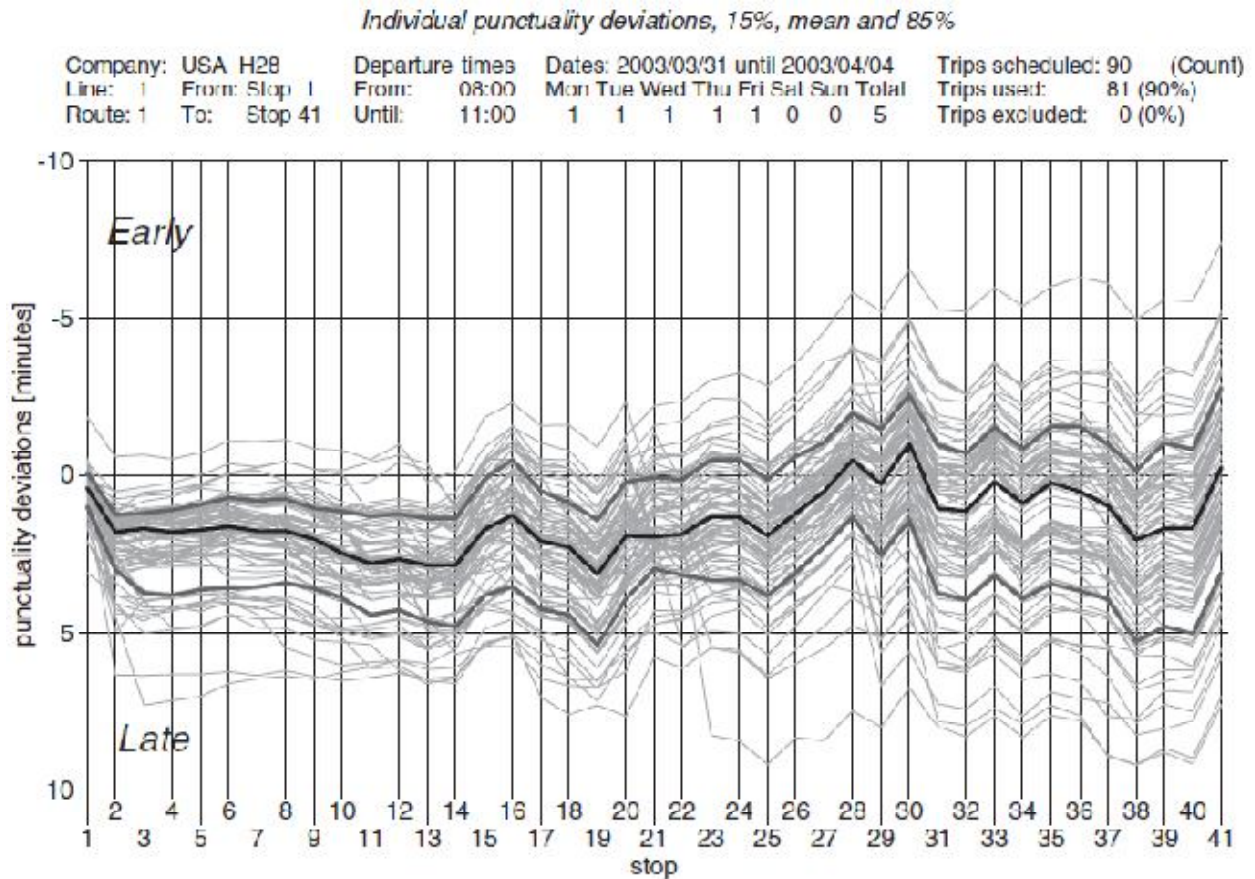


Figure 6. Schedule deviation along a line, showing strong random systematic deviation (Furth et al. 2006)

Kimpel, Strathman, and Callas (2008) reviewed a variety of historical literature and highlighted uses of AVL/APC system data from TriMet in Portland, Oregon. They also investigate TriMet’s efforts to use the data to improve bus schedules. Currently AVL/APC system data is used to compute the traditional schedule adherence measure, “on-time performance”, in order to determine which TriMet routes need changes in scheduling. TriMet goals for “on-time” performance is 75%, with on-time defined as no more than 5 minutes late or 1 minute early. A variety of tabular reports are presented that can be used to aggregate and summarize AVL/APC data such that various aspects of system performance can be analyzed. Kimpel, Strathman, and Callas also present figures (Figure 7) that summarize the run-time between timepoints over the course of a day and suggest that it can be used for scheduling purposes.

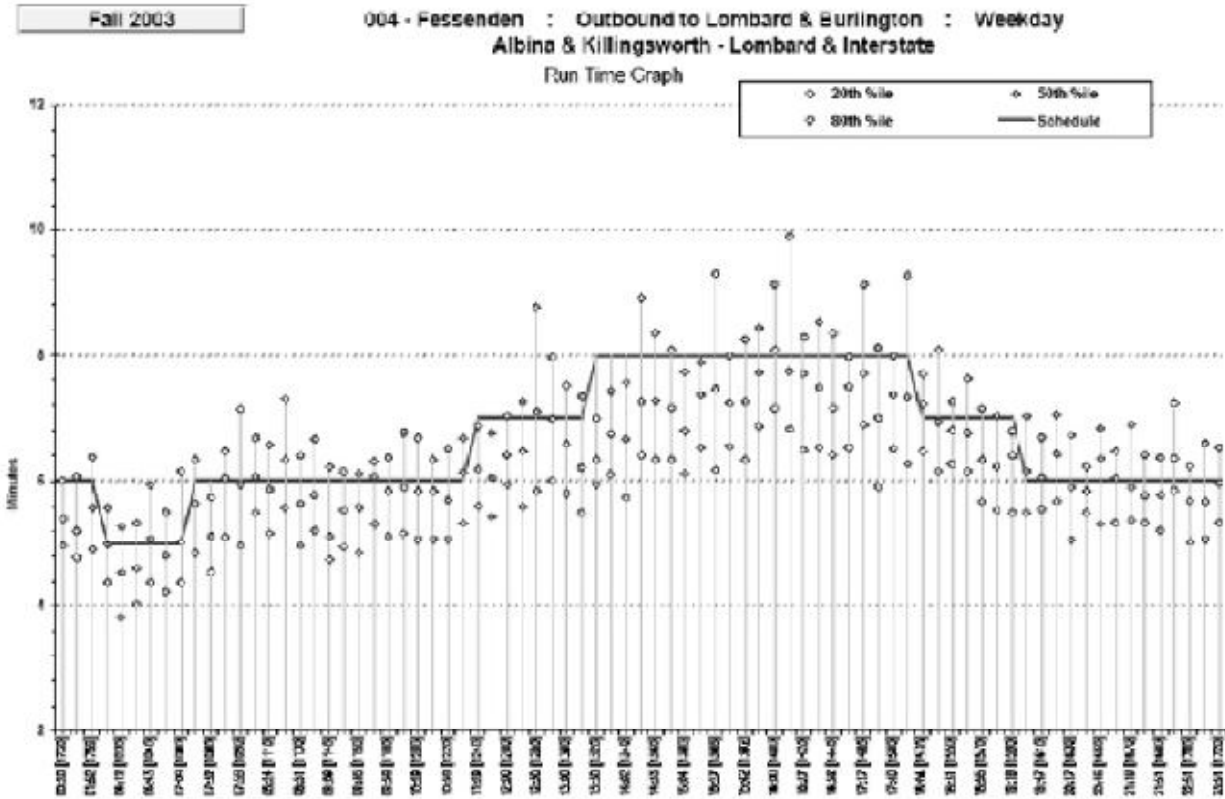


Figure 7. Run time graph (Kimpel, Strathman, and Callas 2008)

Berkow et al. (2009) suggested that the quantity of data being archived is too much for an analyst to understand and use without summarization or visualization aids. One year of archived data from TriMet was used to present various ways that large, detailed AVL/APC datasets could be summarized visually. Visualizations are first presented at a system level, and then move down to a route level, segment level, and finally point level analysis. As well, the data is used to create statistical models including run-time and dwell time models. Schedule adherence is investigated through a histogram showing schedule deviation at individual timepoints (Figure 8), however beyond this figure the research presented by Berkow et al. focuses on aspects of transit performance other than schedule adherence.

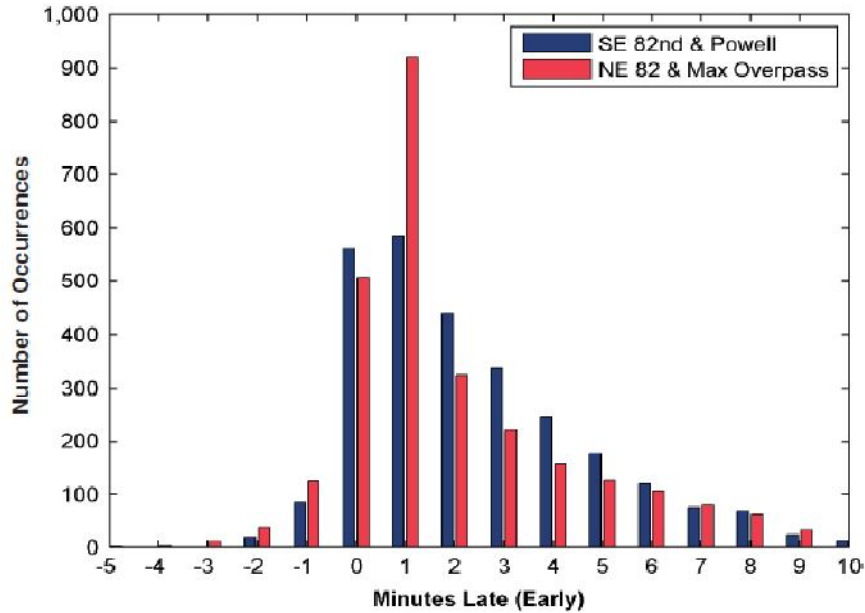


Figure 8. Late and early status at successive timepoints (Berkow et al. 2009)

Liao and Liu (2010) discuss a framework for processing large volumes of automatically collected data. The framework is designed to support calculation of performance measures to support transit planning decision making. The framework proposed by Liao and Liu is summarized in Figure 9 and involves taking automatically collected data, pre-processing it to improve quality, transferring it into a database with other relevant data, and then using the database to generate performance measures (only some of which are presented in Figure 9). Liao and Liu suggest that these performance measures can be used to identify problems with transit service delivery, and may someday be used to predict potential transit service problems.

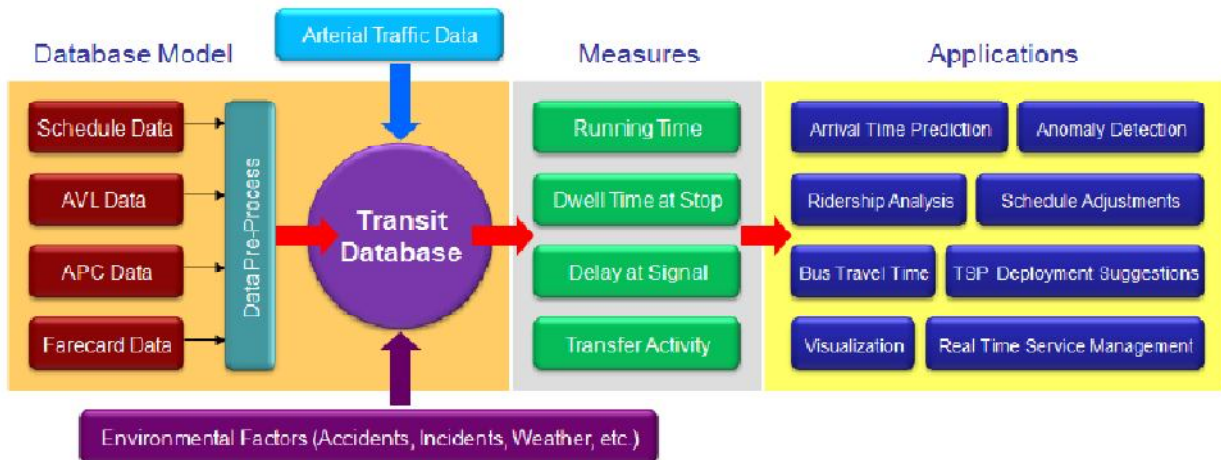


Figure 9. Transit performance data processing framework (Liao and Liu 2010)

Liao and Liu apply their framework to one month of archived data from Metro Transit in Minneapolis-St. Paul, Minnesota. Schedule adherence performance measures investigated in this paper include



departure adherence and arrival adherence, which are variations of the traditional “on-time performance” measure, and create statistics one of which compares scheduled and actual arrival time (Equation 3) and the other which compares the scheduled and actual departure times (Equation 4). Liao and Liu also create a space-time diagram that plots the trajectory of each bus servicing a specified route over the course of a day (Figure 10), which they suggest can be used to help identify any unusual running characteristics on the day being investigated.

$$T_{Bus\_arrival\_time\_at\_timepoint} - T_{Bus\_schedule} > 0; \text{Late arrival bus at Timepoint} \quad (3)$$

$$T_{Bus\_schedule} - T_{Bus\_departure\_time\_at\_timepoint} > 0; \text{Early departure bus at Timepoint} \quad (4)$$

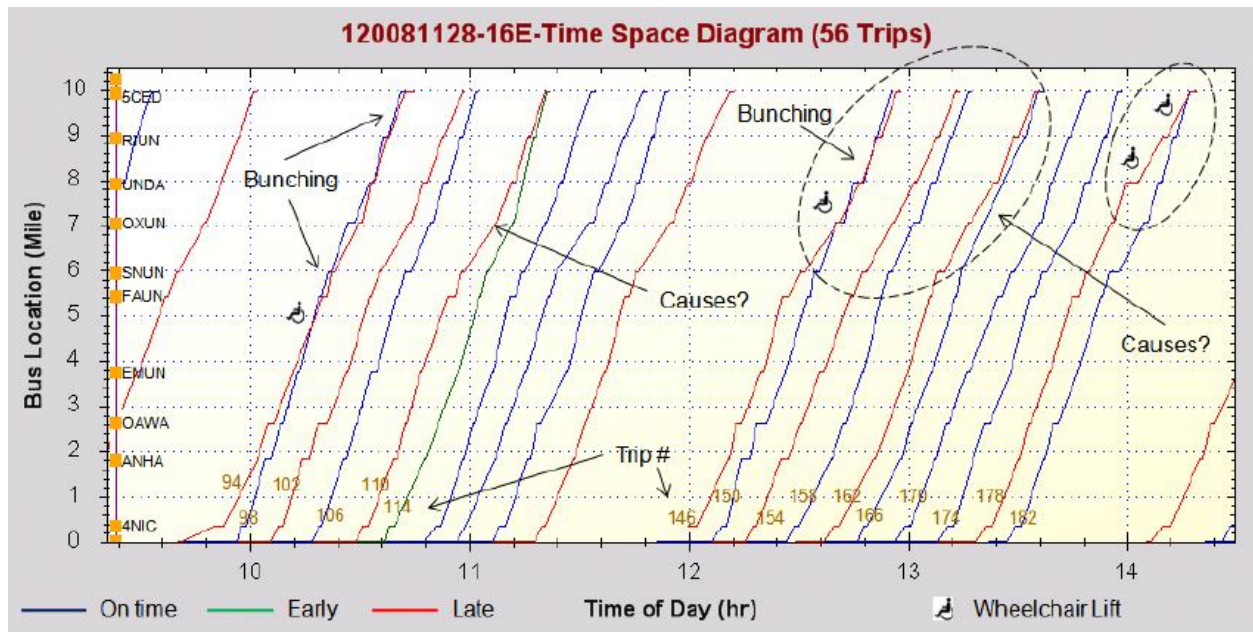


Figure 10. Space-time diagram of all trips on a single route and single day (Liao and Liu 2010)

Cevallos et al. (2010) investigate an approach to improve on-time performance using automatically collected data. The methodology works by modifying the scheduled time for trips in order to maximize the number of trips that fall within the specified “on-time” definition. Cevallos et al. do not attempt to use performance measures or any other methodology to determine where schedule adherence is poor. Instead their methodology is designed to be applied to any route, regardless of the quality of the schedule adherence. It can be expected that if schedule adherence is already good, their methodology would suggest a more limited change in schedule than if the schedule adherence is poor. One drawback of the methodology is that it can suggest only one solution to poor schedule adherence – changes to the schedule. Other solutions, including operational or infrastructure solutions, are not considered.

Overall, previous research has used AVL/APC system data to calculate the traditional schedule adherence performance measure, and has suggested qualitatively how new performance measures might look. However, the specifics of how these new performance measures would be calculated from AVL/APC system data have not been developed, nor have they been tested on any real data. Instead, previous research has added to the traditional schedule adherence performance measure by also

proposing new visualization aids and summary table formats that compile the large volumes of data collected.

Recent research has also begun to investigate how AVL/APC system data can be used to modify transit schedules in order to improve schedule adherence. While valuable, there are other potential solutions to improve schedule adherence that could be considered. No research has looked into using AVL/APC system data to automatically identify the causes of poor schedule adherence, information that would be extremely valuable when choosing among possible strategies to improve schedule adherence along a route. This automatically created cause data could be used in conjunction with visualization aids, as has been suggested by many researchers, in order to develop a strategy to improve schedule adherence.



### 3 Methodology

The proposed methodology utilizes AVL and APC system data and aims to address two problems:

1. Identify and rank portions of the transit system that are exhibiting unsatisfactory schedule adherence performance.
2. Provide information on the cause of the unsatisfactory schedule performance, both as numerical statistics and graphically, in order to facilitate decision making on how to improve performance.

The general framework of the schedule adherence methodology is presented in Figure 11, and attempts to address each problem through a separate methodology component.

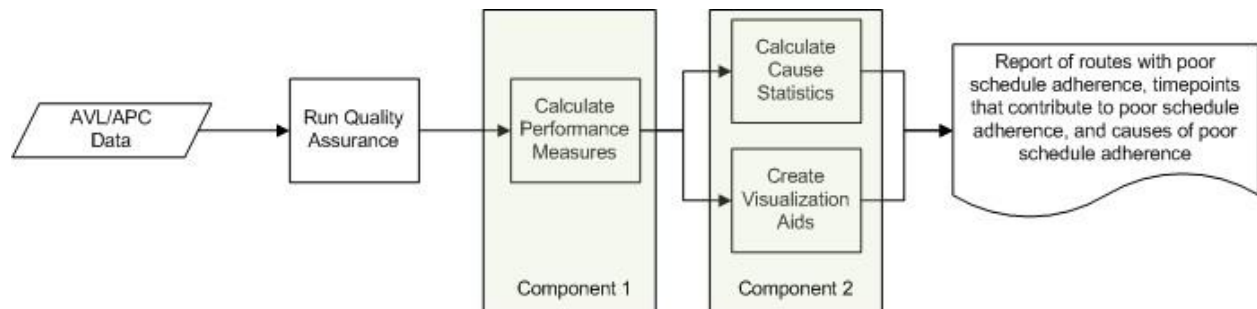


Figure 11. General methodology framework

The methodology is designed for “clean” AVL and APC system data, that is, the dataset should not contain incorrectly recorded data that does not represent “real-world” occurrences. Incorrectly recorded or mismatched data is assumed to be removed from the dataset – this is not a trivial assumption, and AVL/APC system data may need to be pre-processed to “clean” the data prior to being used in this methodology. However, the development of quality assurance methods is outside of the scope of this thesis.

The quality of the reported AVL/APC data is discussed in Section 3.1, and the individual methodology components are discussed in Sections 3.2 and 3.3, respectively.

#### 3.1 Quality of Reported AVL/APC Data

AVL and APC systems involve the collection and recording of large volumes of data, and although data collected via these systems has generally been found to be more accurate than data collected by manual methods (Strathman et al. 2001; Kimpel et al. 2003), there remain many opportunities for errors to inadvertently be introduced in the process. Common sources of error include:

- Mismatch errors (attributing a data record to the wrong timepoint, trip, or route)
- Passenger count errors (miscounting the number of passengers boarding or alighting the bus)
- Location errors (incorrect bus location recorded)

AVL/APC systems often include a post-collection processing step in which data with errors are corrected or removed, however our own experience working with AVL/APC system data indicates that these steps are likely insufficient in fully addressing errors in data. It is important that data quality be as high as

possible, because poor data leads to poor results. Although not within the scope of this thesis, further work is being conducted to develop automated methods of checking and “cleaning” AVL/APC system data by Marian Saavedra, a fellow graduate student at the University of Waterloo.

The methodology presented in the following sections assumes that the data being utilized is of good quality.

### 3.2 Component 1: Performance Measures

Traditional schedule adherence performance measures are based on defining an “on-time” threshold, and then evaluating the percentage of time that a transit vehicle is “on-time”, as per Equations 1 and 2 in Section 2.1. AVL/APC data is well suited to calculating this measure.

However, the rich datasets provided by AVL/APC systems make it possible to utilize schedule adherence performance measures that move beyond the traditional measure and incorporate information on the number of riders affected by poor schedule adherence. This allows us to recognize that it is boarding passengers who are most affected by early departures, and alighting passengers who are most affected by late arrivals.

As such, three potential schedule adherence performance measures are proposed in order to identify routes and stops that are exhibiting poor schedule adherence. The use of each measure has its own particular pros and cons that make each measure suitable for particular conditions or agency goals. The three performance measures are discussed in Subsections 3.2.1 through 3.2.3.

All three performance measures require that “late” and “early” be defined for an individual bus. The definition takes the form of “a bus is considered late if it arrives more than  $x$  minutes late and early if it departs more than  $y$  minutes early” (Equation 5 and 6). This definition clarifies whether schedule adherence should be measured relative to arrivals or departures; lateness will be measured against arrivals and earliness will be measured against departures. The results are quite sensitive to the chosen thresholds of late and early (i.e.  $l$  and  $e$ ) and therefore it is important that the thresholds be appropriate. The sensitivity is more pronounced when using AVL/APC system data as opposed to manually collected data because AVL/APC systems typically report times to the nearest second.

$$\text{if } (D_{a_{i,j}} > l) \text{ then } L_{i,j} = 1 \text{ else } L_{i,j} = 0 \quad (5)$$

$$\text{if } (D_{d_{i,j}} < -e) \text{ then } E_{i,j} = 1 \text{ else } E_{i,j} = 0 \quad (6)$$

where  $L_{i,j}$  = Binary value of 1 when bus arrives late and 0 otherwise at timepoint  $i$  on trip  $j^1$   
 $E_{i,j}$  = Binary value of 1 when bus departs early and 0 otherwise at timepoint  $i$  on trip  $j^2$

#### 3.2.1 Schedule Adherence Measure 1 (SA<sub>1</sub>): “Not On-Time” Percentage (Bus Perspective)

This measure represents the percentage of time that a bus is not “on-time” along a given route or at a given timepoint. It is nearly the same as the traditional schedule adherence performance measure (“on-

<sup>1</sup> Bus never considered to arrive late at first timepoint of route (beginning terminal) ( $L_{1,j} = 0$ )

<sup>2</sup> Bus never considered to depart early from final timepoint of route (end terminal) ( $E_{N,j} = 0$ )

time performance”), except it is expressed in terms of “not on-time” instead of “on-time”. This is done to make it more comparable with the other two proposed methodologies and because we are really trying to identify where service should/could be improved, not where service is already meeting service standards. The formula for calculating Schedule Adherence Measure 1 ( $SA_1$ ) is presented in Equation 7.

$$SA_1 = \frac{\sum_{i=1}^N \sum_{j=1}^{M_i} (\max(E_{i,j}, L_{i,j}))}{\sum_{i=1}^N M_i} \quad (7)$$

The numerator in Equation 7 represents the total number of timepoints along a route at which a bus was observed to depart early and/or leave late. The  $\max()$  construct is used to prevent counting a bus twice if it arrives late and departs early from a timepoint. The denominator represents the total observations (i.e. bus trips at timepoints) along a route.

This schedule adherence measure has two desirable characteristics: First, the meaning of the output (percentage of time that a bus is “not on-time”) is intuitive and easy to understand. Second, the method is consistent with common practice at many transit agencies and with the recommended practice in the TCQSM 2<sup>nd</sup> Edition.

The biggest drawback of this measure, however, is that it ignores the number of passengers affected by buses that are “not on-time”. This is an important factor, because the impact of an early departure is much greater at stops where there are significant boardings, and the impact of a late arrival is much greater at stops with significant alightings.

If we are simply trying to evaluate how well a transit system’s performance goals are being met, the main drawback of this measure may not be a significant concern; performance goals for schedule adherence should be strived for regardless of the number of passengers boarding/alighting. However, if we are looking at where improvements should be focused, the drawback is significant. The benefits are greater when improvements are made to locations where more passengers are affected.

The schedule adherence measures in the following two sections attempt to account for affected passengers within the measure.

### 3.2.2 Schedule Adherence Measure 2 ( $SA_2$ ): “Not On-Time” Percentage (Passenger Perspective)

This measure represents the percentage of riders who experience a bus that is “not on-time” along a given route or at a given timepoint. The formula for calculating Schedule Adherence Measure 2 ( $SA_2$ ) is presented in Equation 8.

$$SA_2 = \frac{\sum_{i=1}^N \left( \frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i} \right)}{\sum_{i=1}^N \left( \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i} \right)} \quad (8)$$

where  $P_{B_{i,j}}$  = Passengers boarding at timepoint  $i$  on trip  $j$   
 $P_{A_{i,j}}$  = Passengers alighting at timepoint  $i$  on trip  $j$

A limitation of using AVL/APC system data is that we cannot truly know the number of passengers affected when a bus is early or late. We know how many passengers boarded and alighted from the bus, but this is not necessarily the same as the true number of passengers affected. For example, we may observe that three passengers boarded a bus that departed early. However, it is possible that more passengers wanted to board the bus but missed it because the bus departed early. This problem is addressed by making the assumption that the passengers affected by a “not on-time” bus is equal to the average number of passengers boarding or alighting at a timepoint over the analysis period. Practically, this means that  $SA_2$  can only be used to summarize data over a time period in which boarding and alighting patterns are relatively consistent, such as during a morning or afternoon peak period.

The  $\sum_{j=1}^{M_i} E_{i,j}/M_i$  portion of Equation 8 represents the fraction of bus trips that depart early at stop  $i$ , while the  $\sum_{j=1}^{M_i} P_{B_{i,j}}/M_i$  portion represents the average number of passengers boarding at stop  $i$ . The product of these two items is the number of passengers affected by an early departure at this stop on an average trip. Similarly, the second part of the numerator in Equation 8 gives the number of passengers affected by a late arrival at this stop on an average trip. As a whole, the numerator represents the number of passengers affected by a “not on-time” bus on an average trip. The denominator represents the total passengers boarding and alighting on an average trip. Consequently,  $SA_2$  represents the proportion of passengers using the route that are affected by “not on-time” service.

As an example of applying this measure, imagine a single timepoint at which 100 bus trips are observed, with 50% of the trips departing early and 0% arriving late. On average, 10 passengers board at the timepoint and 20 passengers alight. For simplicity and ease of illustration this example investigates a single timepoint, although the equations presented so far have shown how to calculate performance measures for routes as whole. The equations can be modified to calculate schedule adherence performance measures at a single timepoint, however, by removing the portion of the equation that combines all the timepoints along the route. This is discussed in more detail within Section 3.2.5. The traditional schedule adherence performance measure ( $SA_1$ ), for the single timepoint discussed in this example, is calculated as follows:

$$SA_{1,i} = \frac{\sum_{j=1}^{M_i} (\max(E_{i,j}, L_{i,j}))}{M_i} = \frac{50}{100} = 50\%$$

However, using  $SA_2$  at this timepoint results in:

$$SA_{2,i} = \frac{\frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}}{\frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}} = \frac{\frac{50}{100} \times 10 + \frac{0}{100} \times 20}{10 + 20} = \frac{5}{30} = 16.7\%$$

$SA_2$  is much lower than  $SA_1$  since (a) when a bus departs early it only affects passengers who are *boarding*, and (b) a relatively large fraction of passenger activity at this timepoint is associated with *alighting*.

The advantages of this schedule adherence measure is that its meaning (percentage of time that a passenger experiences a “not on-time” bus) is relatively easy to understand; it accounts for the fraction of passengers affected when a bus is “not on-time”; and the form of the output (a “not on-time” percentage) is similar to the form of traditional schedule adherence measures (e.g.  $SA_1$ ) that transit agencies are familiar with and that are presented in the TCQSM 2<sup>nd</sup> Edition.

The biggest drawbacks are that this measure can only be applied over time periods which experience relatively consistent passenger activity profiles, and it ignores the absolute number of passengers affected by focusing on the percentage affected. This means, for example, that a route with 10 passengers in which 80% experience a “not on-time” bus would be rated as worse than a route with 100 passengers in which 20% experience a “not on-time” bus.

### 3.2.3 Schedule Adherence Measure 3 (SA<sub>3</sub>): Number of Passengers Affected

This measure represents the average number of passengers, rather than the proportion of passengers (as does SA<sub>2</sub>), who experience a bus that is “not on-time” along a given route or at a given timepoint. The formula for calculating Schedule Adherence Measure 3 (SA<sub>3</sub>) is presented in Equation 9.

$$SA_3 = \sum_{i=1}^N \left( \frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i} \right) \quad (9)$$

Equation 3 is the same as just the numerator from Equation 8. As such, this measure relies on the same assumption as SA<sub>2</sub>; when a bus is early or late, the number of passengers affected is equal to the average number of passengers that board or alight at that timepoint.

SA<sub>3</sub> may result in a different ranking from SA<sub>2</sub> since this measure would prioritize routes with a larger number of passengers, even if the percentage of riders affected was relatively less.

The advantages of SA<sub>3</sub> are that the meaning of the output is very intuitive (average number of passengers who are affected by a “not on-time” bus), and that the number of passengers affected is fully accounted for.

The main drawbacks of this measure are that it can only be applied over time periods which experience relatively consistent passenger activity profiles; routes with high passenger volumes may be ranked worse no matter what corrective actions are taken (because high passenger volume can contribute to a high passenger ranking even if schedule adherence is relatively better than lower volume routes); and its form is not easily comparable with the percentage form of the more traditional schedule adherence measures (e.g. SA<sub>1</sub>).

### 3.2.4 Choosing the Appropriate Performance Measure

Each of the above measures can be automatically calculated for a specified route, direction, and time period. The value of the measure allows ranking such that routes with the poorest schedule adherence can be easily identified.

The choice of which schedule adherence measure should be used depends on the end purpose of the analysis, the consistency of the data, and the preferences of the transit agency.

If the purpose is to identify how well performance goals are being met, or passenger activity profiles are very inconsistent even over shorter time periods, it may be appropriate to use SA<sub>1</sub>. However, if the analysis is being conducted in order to determine where schedule adherence should be improved, it is beneficial to use SA<sub>2</sub> or SA<sub>3</sub>.

Both SA<sub>2</sub> and SA<sub>3</sub> have advantages and drawbacks, and one is not recommended as being 'superior' to the other at present. The choice may rest with the preferences of the transit agency, and it may in fact be beneficial to compute both measures in determining where improvements should focus.

### **3.2.5 Using Schedule Adherence Performance Measures**

The schedule adherence performance measures are designed to be applied both at a route level and at a timepoint level.

How to apply each performance measure at the route level was illustrated in Equations 7 to 9, but these equations can be modified to investigate individual timepoints in addition to routes. To investigate individual timepoints, the portion of the equation that combines all the timepoints along the route (via a summation term) is removed. As well, Equations 7 to 9 combined early departures and late arrivals within the measure of schedule adherence. The equations can be modified to examine late arrivals and early departures separately by isolating and calculating the relevant portion of the equation. The modified forms of each schedule adherence performance measure are presented in Table 3.

Table 3. Schedule Adherence Performance Measures (modified forms)

<b>SA<sub>1</sub>: Not "On-Time" Percentage (Bus Perspective)</b>	
<i>time period/ route / direction</i>	$SA_1 = \frac{\sum_{i=1}^N \sum_{j=1}^{M_i} (\max (E_{i,j}, L_{i,j}))}{\sum_{i=1}^N M_i}$
<i>individual timepoint i</i>	$SA_{1,i} = \frac{\sum_{j=1}^{M_i} (\max (E_{i,j}, L_{i,j}))}{M_i}$
<i>late arrivals only (timepoint i)</i>	$SA_{1L,i} = \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i}$
<i>early departures only (timepoint i)</i>	$SA_{1E,i} = \frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i}$
<b>SA<sub>2</sub>: Not "On-Time" Percentage (Passenger Perspective)</b>	
<i>time period/ route / direction</i>	$SA_2 = \frac{\sum_{i=1}^N \left( \frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i} \right)}{\sum_{i=1}^N \left( \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i} \right)}$
<i>individual timepoint i</i>	$SA_{2,i} = \frac{\frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}}{\frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}}$
<i>late arrivals only (timepoint i)</i>	$SA_{2L,i} = \frac{\frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}}{\frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}}$
<i>early departures only (timepoint i)</i>	$SA_{2E,i} = \frac{\frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i}}{\frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i}}$
<b>SA<sub>3</sub>: Number of Passengers Affected</b>	
<i>time period/ route / direction</i>	$SA_3 = \sum_{i=1}^N \left( \frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i} \right)$
<i>individual timepoint i</i>	$SA_{3,i} = \frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i} + \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}$
<i>late arrivals only (timepoint i)</i>	$SA_{3L,i} = \frac{\sum_{j=1}^{M_i} L_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{A_{i,j}}}{M_i}$
<i>early departures only (timepoint i)</i>	$SA_{3E,i} = \frac{\sum_{j=1}^{M_i} E_{i,j}}{M_i} \times \frac{\sum_{j=1}^{M_i} P_{B_{i,j}}}{M_i}$

In order to apply the desired schedule adherence measure, the archived AVL/APC data is divided into time periods, and data within each time period are further subdivided by route, direction, and finally by timepoint. This forms the basic unit of analysis for the methodology.

Once the data has been divided, the desired schedule adherence performance measure can be calculated. The performance measures are first calculated at a time period/route/direction level and the results are ranked from worst to best. A transit agency may wish to specify a schedule adherence performance measure threshold above which a route/direction is considered to be performing unacceptably poor and below which the route/direction is considered to be performing acceptably (and consequently these data are not considered further).

Once performance measures are calculated for each route and direction, they can then be calculated for specific timepoints within a given time period, route, and direction. It is also helpful to calculate performance measures for late arrivals and early departures separately at the timepoint level, because the next component of the methodology involves determining why a bus is experiencing poor schedule adherence at a timepoint level, and the causes that are investigated differ depending on if the bus is arriving late or departing early.

The final output of Component 1 provides the user with the following:

- A ranked list of routes and directions that are exhibiting substandard schedule adherence,
- information on which timepoints within a given route and direction are contributing to the poor schedule adherence, and
- an understanding as to whether those timepoints are contributing because buses are too frequently arriving late, too frequently departing early, or both.

### **3.3 Component 2: Cause Statistics and Visualization Aids**

The second component of the methodology is designed to provide information as to the cause of poor schedule adherence. The information is presented as “cause statistics” which numerically represent reasons that buses are late or early, and through the use of appropriate visualization aids.

#### **3.3.1 Forms of Poor Schedule Adherence**

There are four ways that a bus can exhibit poor schedule adherence. These consist of:

- Early Arrival
- *Late Arrival*
- *Early Departure*
- Late Departure

In this methodology, only late arrivals and early departures are identified and investigated.

Early arrivals are not considered because they do not have a significant effect on passengers. The greatest potential for early arrivals to affect passengers is when they lead to early departures, and early departures are considered by the proposed methodology.



Late departures are an irritant for passengers, but it is hypothesized that most of this irritation occurs because passengers know that when they leave their origin late they are more likely to arrive at the destination late as well. Late arrivals are identified by the proposed methodology and therefore this impact is captured at this point. As well, since we reasonably expect that late arrivals can contribute to late departures from a timepoint, we can expect to lower the frequency of late departures by improving the schedule to correct for late arrivals.

### **3.3.2 Cause Statistics**

Cause statistics identify general causes of poor schedule adherence (arriving late or early) at a timepoint.

Possible causes include travel time causes (not enough/too much travel time in the preceding segment), dwell time causes (the bus is dwelling longer/shorter than scheduled at the previous/current timepoint), and upstream causes (the bus was already late/early at the upstream timepoint, indicating the cause is occurring upstream). These causes, while general in nature, relate back to “real-world” reasons that a bus is late or early. Correcting these “real-world” reasons provides a way to address and correct areas of poor schedule adherence. Table 4 lists each general cause and gives examples of “real-world” reasons that poor schedule adherence may have occurred. It is possible for multiple causes to be identified at a single timepoint, since in reality several causes may combine to result in a late or early bus.

Table 4. Possible Causes for Late Arrivals and Early Departures

Problem	Possible Causes	Potential “Real-World” Reasons
<b>Late Arrival</b>	Travel time from previous stop took longer than scheduled and $\left(L_{i,j} = 1, \left(A_{a_{i,j}} - A_{d_{i-1,j}}\right) > \left(S_{a_{i,j}} - S_{d_{i-1,j}}\right)\right)$	<ul style="list-style-type: none"> <li>• Traffic reasons (congestion, inclement weather, signal timing, etc.)</li> <li>• High demand for intermediate (non-timepoint) stops</li> <li>• Unscheduled stops</li> <li>• Etc.</li> </ul>
	Dwell time at previous stop was longer than scheduled and $\left(L_{i,j} = 1, \left(A_{d_{i-1,j}} - A_{a_{i-1,j}}\right) > \max\left(\left(S_{d_{i-1,j}} - S_{a_{i-1,j}}\right), D_t\right)\right)^3$	<ul style="list-style-type: none"> <li>• High passenger activity (on/off)</li> <li>• Difficulty rejoining traffic stream</li> <li>• Lift/ramp use</li> <li>• Etc.</li> </ul>
	Arrived at previous stop late and $\left(L_{i,j} = 1, \left(A_{a_{i-1,j}}\right) > \left(S_{a_{i-1,j}}\right)\right)$	<ul style="list-style-type: none"> <li>• Upstream causes</li> </ul>
<b>Early Departure</b>	Dwell time at current stop was less than scheduled and $\left(E_{i,j} = 1, \left(A_{d_{i,j}} - A_{a_{i,j}}\right) < \left(S_{d_{i,j}} - S_{a_{i,j}}\right)\right)$	<ul style="list-style-type: none"> <li>• Low passenger activity (on/off)</li> </ul>
	Travel time from previous stop was lower than scheduled and $\left(E_{i,j} = 1, \left(A_{a_{i,j}} - A_{d_{i-1,j}}\right) < \left(S_{a_{i,j}} - S_{d_{i-1,j}}\right)\right)$	<ul style="list-style-type: none"> <li>• Traffic reasons (lower than expected congestion, etc.)</li> <li>• Low demand at intermediate (non-timepoint stops)</li> <li>• Etc.</li> </ul>
	Departed previous stop early and $\left(E_{i,j} = 1, \left(A_{d_{i-1,j}}\right) < \left(S_{d_{i-1,j}}\right)\right)$	<ul style="list-style-type: none"> <li>• Upstream causes</li> </ul>

Cause statistics represent the percentage of time that each possible cause was found to be a factor at a given timepoint when a bus is late or early. Separate cause statistics are calculated for late and early buses.

The process for calculating cause statistics for late arrivals at a given timepoint is illustrated in Figure 12. The final result is the percent of time that being late can be attributable to travel time issues (abbreviated as L1), the percent of time that being late can be attributable to dwell time at the previous stop (abbreviated as L2), and the percent of time that being late can be attributable to issues upstream of the previous stop segment (abbreviated as L3). The sum of these three percentages can be greater than 100% since it is possible for multiple causes to combine and result in a late bus.

<sup>3</sup>  $D_t$  represents the minimum dwell time that a bus must exceed at a timepoint before dwell time at the previous timepoint is considered a possible cause of late arrivals, regardless of the amount time specified in the schedule. This term is important because in practice many transit agencies do not schedule any dwell time at some timepoints, yet some dwell time will occur if the bus stops to board or alight passengers. If  $D_t$  is set to zero, this term ceases to have an effect.

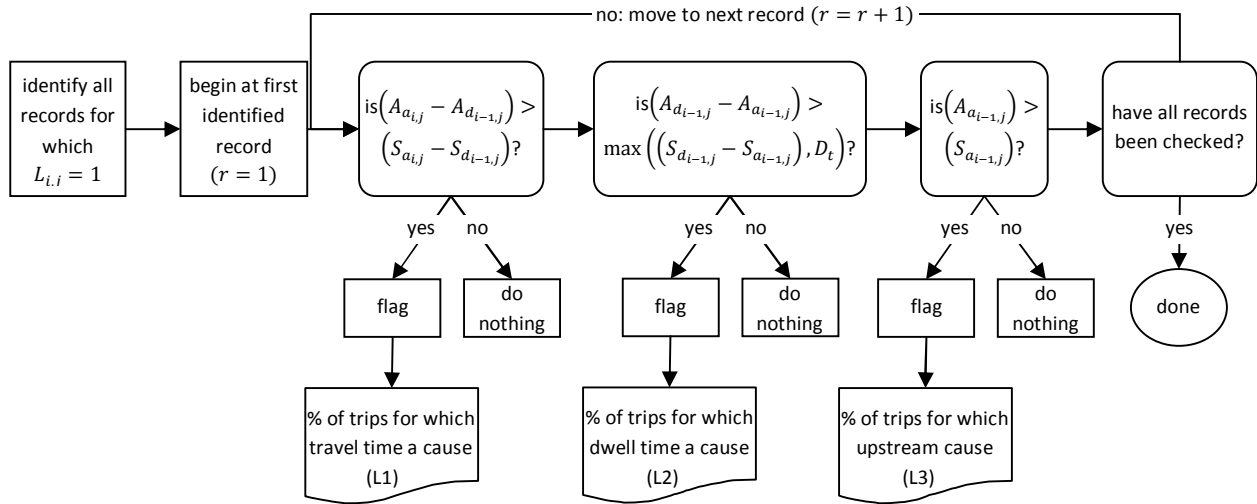


Figure 12. Method to calculate late arrivals and cause statistics

The process for calculating the cause statistics for early buses is similar and is presented in Figure 13.

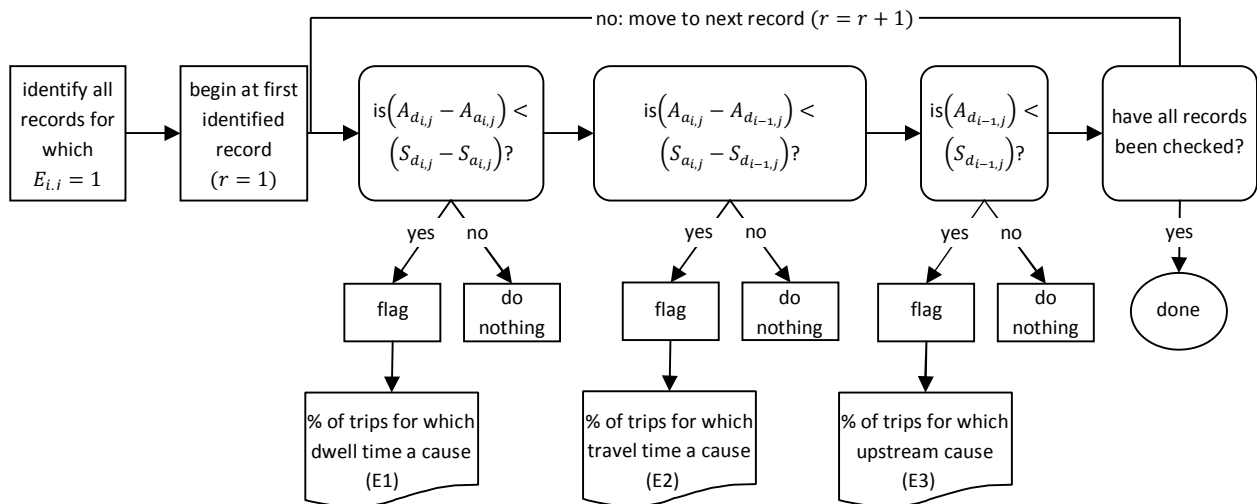


Figure 13. Method to calculate early departure cause statistics

Using the cause statistics, a practitioner can identify why poor schedule adherence is being encountered at a timepoint. The cause statistics give this information generally, and they can be used in conjunction with visualization aids to provide more detailed information and to decide on a strategy for corrective action.

### 3.3.3 Visualization Aids

A valuable way to visualize the data collected by AVL/APC systems is through a time-space diagram. A suggested format for this sort of visualization aid is presented in Figure 14. The figure presents the scheduled trajectory between a given pair of timepoints and the true trajectories of each observed trip between the same pair of timepoints. The trajectories are plotted using the most detailed resolution of the AVL/APC system data possible, which means that information may be provided even between timepoints. Combining all the true trajectories into an *average* true trajectory permits identification of

where delays are occurring (such as at intermediate stops or intersections); where the bus is going faster or slower than scheduled (by comparing the slope of the average and scheduled trajectories); variation in trip travel times (by looking at the spread of the trips); etc. This form of diagram provides additional data that can be used to confirm the cause statistics and help develop an appropriate strategy to address any issues that had been previously identified.

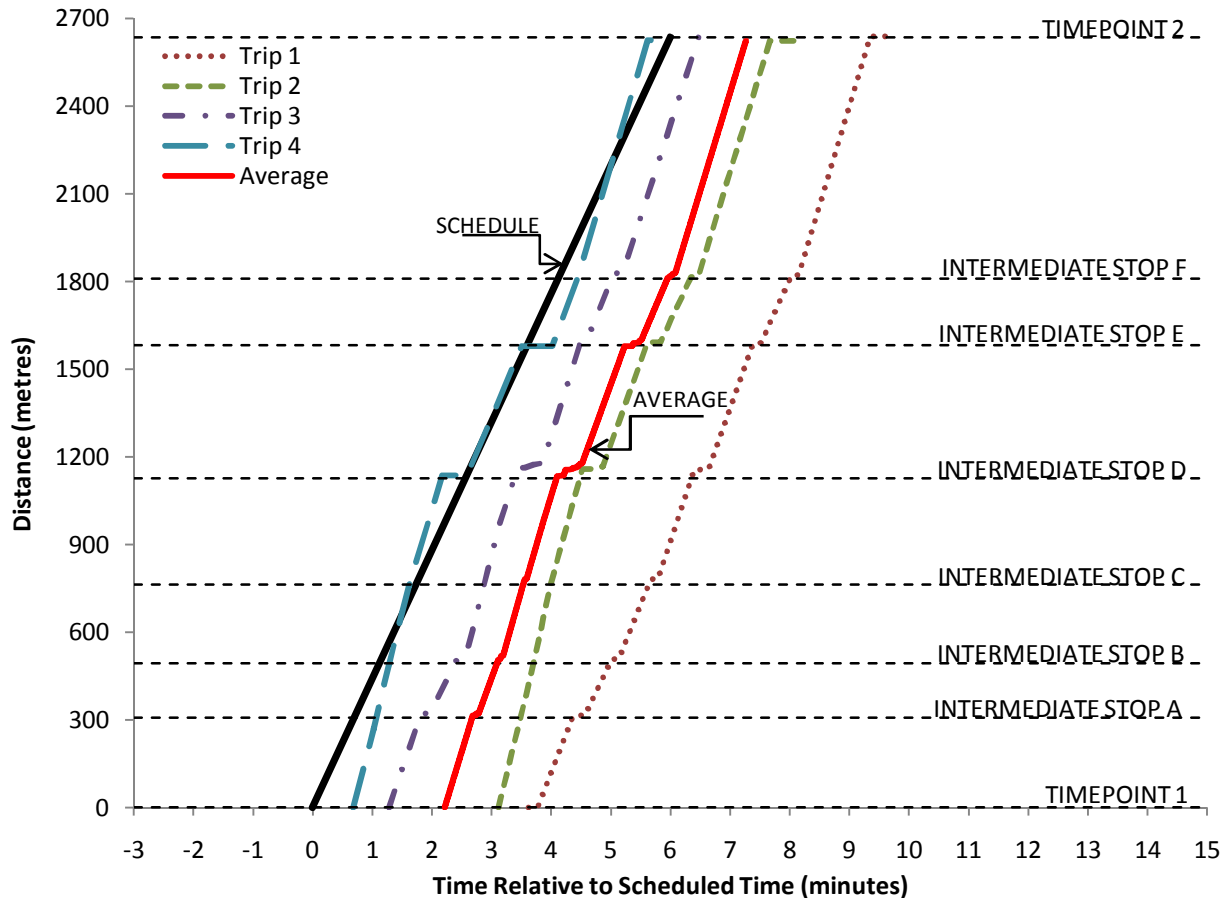


Figure 14. Potential format for automatically created visualization aid

### 3.3.4 Using Cause Statistics and Visualization Aids

The methodology calculates performance measures for each route/direction; identifies routes in which service did not meet schedule adherence service standards; and ranks routes to prioritize where schedule adherence improvements should focus. Within each route/direction, performance measures are also calculated for individual timepoints in order to determine which timepoints have the greatest contribution to any schedule adherence issues. At the timepoint level, cause statistics are calculated in order to understand the cause of poor schedule adherence. The performance measures and cause statistics are used in conjunction with other visualization and summarization aids in order to help select appropriate strategies to improve service.

To illustrate how the proposed methodology is used to calculate cause statistics, imagine a single trip on a hypothetical six-timepoint route as illustrated in Figure 15. In this figure, the solid black line represents the scheduled trip, and the dashed line represents the actual trip. At all timepoints, it is

possible that the bus is “on-time” (which is an ideal situation for service providers). However, at the first timepoint it is also possible for the bus to depart early; at the last timepoint it is also possible for the bus to arrive late; and at all other timepoints it is possible for the bus to depart early, arrive late, or both.

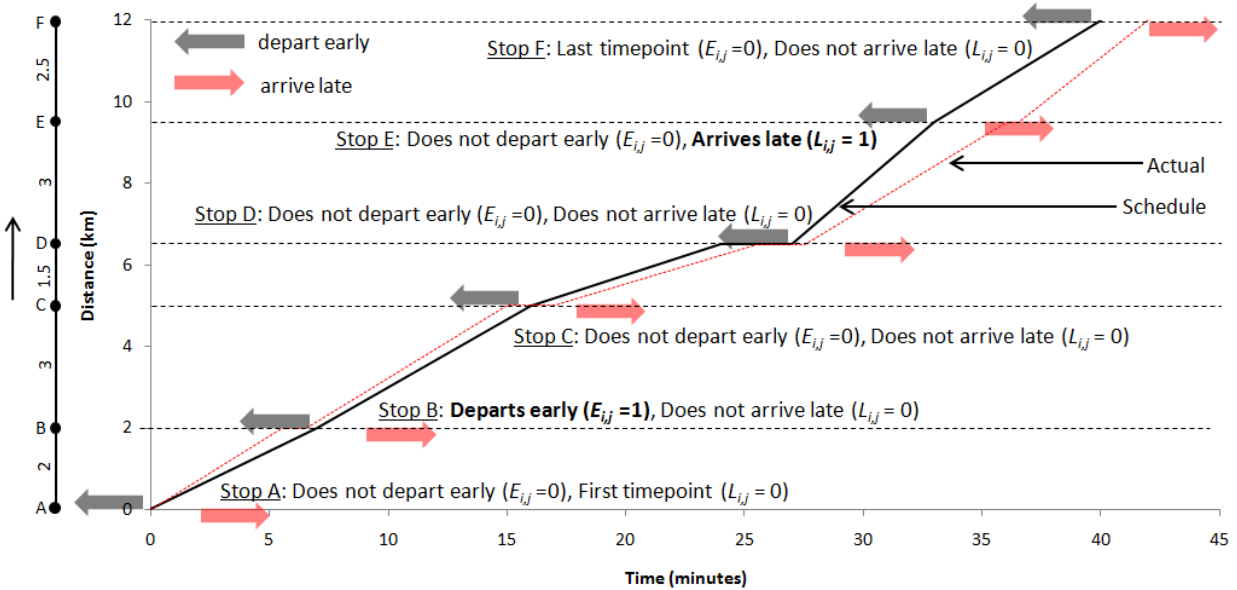


Figure 15. Cause statistic example, single trip, entire route

In the hypothetical route presented in Figure 15, an early departure is defined as leaving departing more than half a minute ahead of schedule (i.e.  $e = 30$  seconds) and a late arrival is defined as arriving more than two minutes behind schedule (i.e.  $l = 120$  seconds). This definition is selected for the purpose of illustration and other definitions are possible. At each timepoint, the actual arrival and departure times are compared to the scheduled arrival and departure times to determine whether the bus was “on-time”, arrived late (as per equation 5), or departed early (as per equation 6). The bus in Figure 15 left Timepoint A “on-time”, but travelled to Timepoint B quicker than scheduled. The bus then departed Timepoint B early, and although it arrived at Timepoint C ahead of schedule, it held there for several minutes and departed “on-time”. Following through the rest of the route we find that the bus was “on-time” at Timepoint D, arrived late at Timepoint E, and was “on-time” at Timepoint F.

The timepoints at which the bus was late and early have now been identified for a given route/direction. This information is combined with similar information and passenger boarding/alighting data from many other buses that ran the same route/direction during the same time period in order to calculate performance measures for the route/direction and for each individual timepoints.

To find the cause statistics, each timepoint that was identified as late or early in Figure 15 is investigated to determine why they the bus was late or early.

Figure 16 zooms in on Timepoint E, at which the bus arrived late. Three possible causes for a bus arriving late are investigated.

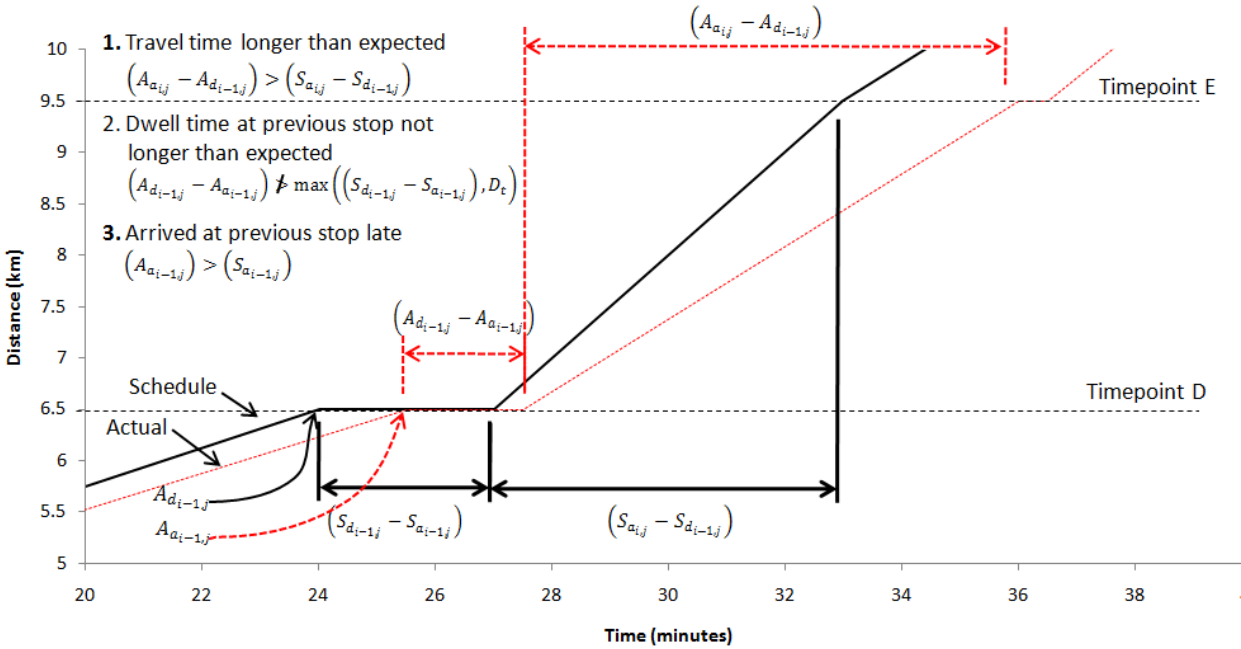


Figure 16. Timepoint E, late arrival causes

The first possible cause of a late arrival is travel time issues in the preceding segment, which would mean that the bus is taking longer than scheduled to complete travel from the previous timepoint to the current timepoint. Travel time issues could be caused by a number of reasons such as traffic congestion, inclement weather, inefficient signal timing, high demand for inter-timepoint stops, unscheduled stops, etc. In Figure 15, the actual travel time from the preceding timepoint was longer than scheduled. Therefore, we conclude that one cause of this bus arriving late at Timepoint E is insufficient travel time being provided in the schedule.

The second possible cause of a bus arriving late at Timepoint E is that the bus dwelled longer than scheduled at the preceding timepoint (Timepoint D). This can be corrected by scheduling more dwell time at the timepoint, or by addressing issues that lead to longer dwell times. Possible reasons for longer dwell times include large passenger on/off activity at the timepoint, difficulty rejoining the traffic stream, lift use, etc. As indicated in Figure 16, dwell time at the preceding timepoint was not a cause of this bus's late arrival at Timepoint E.

The third possible cause for a bus arriving late at Timepoint E is due to the bus arriving late at the preceding timepoint (Timepoint D). From Figure 16, it is evident that this bus had also arrived late at Timepoint D, and therefore arriving late at Timepoint D is a contributing cause to the bus arriving late at Timepoint E.

In this hypothetical example, two causes have been identified that combine to explain the late arrival of this bus at Timepoint E. Firstly, the bus took longer to travel through the route segment between D and E than was scheduled, and secondly, it had already left the preceding timepoint (D) late. There are numerous strategies that could be employed to improve the schedule adherence of this bus:

- Make changes upstream so the bus does not arrive at Timepoint D late
- Increase the scheduled time to travel the route segment between Timepoint D and Timepoint E
- Increase the speed of the bus in the preceding segment through measures including:
  - Add traffic capacity to the road or dedicated transit lanes
  - Modify signal timing or provide transit signal priority
  - Decrease the number of intermediate stops

The visualization aid provides additional information to help determine which strategies should be selected and if they would be effective. For example, since it shows inter-timepoint travel it allows the user to determine at which intersections a bus is being delayed, if there are certain sections where the bus is especially slow, etc.

Figure 17 zooms in on Timepoint B, at which the bus departed early. Three possible causes for a bus departing early are investigated.

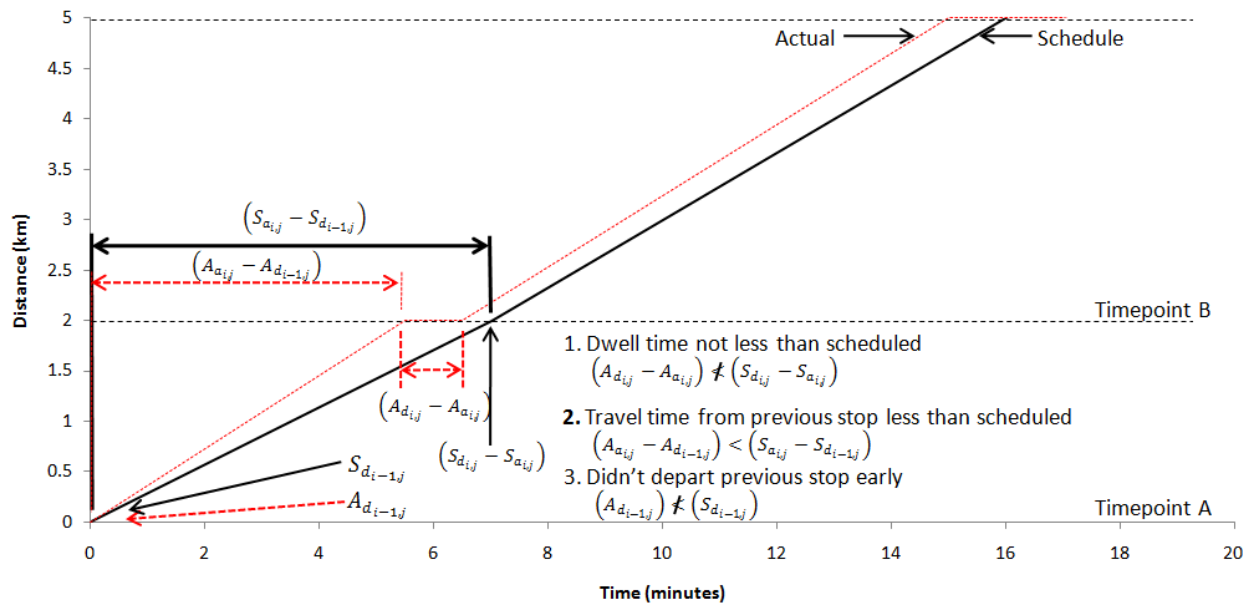


Figure 17. Timepoint B, early departure causes

Determining the causes of early departures is different from late arrivals, because in the case of early departures there is always one simple correction available to the bus driver: he/she could simply wait longer before departing from the timepoint. However, some situations increase the pressure on a bus driver to depart early, such as excessive dwell time scheduled at a timepoint, or arriving early at a timepoint. When looking for causes of early departures, we look for the causes of these situations since by decreasing pressure to depart early we will have a more efficient schedule that should lower the frequency of early departures.

The first possible cause of early departures is dwell time at the current timepoint. In Figure 17, we see that the dwell time provided in the schedule was not greater than what was required. In fact, there is no dwell time in the schedule at Timepoint B. Therefore, too much dwell time being provided in the schedule at Timepoint B is not a cause of this bus departing early from the timepoint.

The second possible cause of an early departure is the bus arriving early at the given timepoint because its travel time in the preceding segment was shorter than scheduled. There are many reasons this can occur including an overly generous schedule, better than planned traffic conditions, lower than expected passenger boarding and alighting activity at intermediate transit stops, etc. For the bus shown in Figure 17, travel time was shorter than scheduled and this is identified as one cause of this bus’s early departure.

The third possible cause of an early departure is that the bus arrived early at the given timepoint because it departed early from the previous timepoint. If this is a cause, the solution may involve making changes upstream of the preceding segment. However, for the trip illustrated in Figure 17, the preceding timepoint (Timepoint A) was the terminal and the bus did not depart the terminal early.

Overall, we have identified one cause for this bus departing early from Timepoint B, which was that the bus travelled more quickly than expected through the preceding segment. The most likely strategy to address this would involve tightening up the schedule by providing less time for the bus to travel from the preceding timepoint to Timepoint B.

The above example represents how the methodology would be applied to a single bus trip. In reality, the methodology would be applied to a much larger sample of bus trips for each route/direction and timepoint. Causes would be identified for each individual trip and then aggregated across all trips such that the cause statistics would represent the percentage of observations (i.e. individual bus trips) for which each cause was identified as contributing to a late arriving bus or an early departing bus. A separate set of cause statistics are calculated for late arrivals and for early departures, and the performance measures guide the analyst as to which set of cause statistics he/she should be interested in.

A hypothetical example of cause statistics for a late arriving bus is presented in Table 5.

Table 5. Hypothetical Cause Statistics for a Single Timepoint

Cause	Frequency
<b>Travel time in prior segment longer than scheduled</b>	71%
<b>Dwell time at previous stop longer than scheduled</b>	18%
<b>Late arrival at previous timepoint</b>	88%

The cause statistics indicated in Table 5 would be interpreted to mean that when a bus is late at the timepoint (i.e.  $D_{a_{i,j}} > l$ ), in 71% of cases travel time in the preceding segment was longer than scheduled  $\left( (A_{a_{i,j}} - A_{d_{i-1,j}}) > (S_{a_{i,j}} - S_{d_{i-1,j}}) \right)$ ; in 18% of cases the bus dwelled for longer at the previous



stop than scheduled  $\left( (A_{d_{i-1,j}} - A_{a_{i-1,j}}) > \max \left( (S_{d_{i-1,j}} - S_{a_{i-1,j}}), D_t \right) \right)$ ; and in 88% of cases the bus was also late arriving at the preceding timepoint  $\left( (A_{a_{i-1,j}}) > (S_{a_{i-1,j}}) \right)$ .

The final output of Component 2 provides the analyst with the following:

- Cause statistics for any given timepoint indicating how frequently a given cause is responsible for late buses being late and early buses being early
- A visualization aid showing scheduled and actual trajectories of trips that can be used to confirm cause statistics and develop an appropriate strategy

## 4 Application to Grand River Transit System

The proposed methodology is tested and demonstrated through application to AVL/APC system data from Grand River Transit (GRT), a public transit service serving the cities of Waterloo, Kitchener, and Cambridge within Waterloo Region, Ontario, Canada (Figure 18). GRT serves approximately 15.8 million annual trips on over 60 routes, with a fleet of 208 buses. Ridership has grown by 53% over the past 8 years.



Figure 18. Location of Waterloo Region

All of the routes operated by GRT are operated based on maintaining a schedule rather than headway management. Route maps for each regular route operated by GRT are provided in Appendix A.

A total of 34 GRT buses are outfitted with an AVL/APC system. Fifteen of these buses are permanently assigned to GRT's iXpress route, which is a high-frequency (15 minute headways during peak hours), limited-stop express bus service running through much of GRT's service area. The other 19 buses are rotated among the remaining bus routes.

### 4.1 Grand River Transit AVL/APC System Description

The AVL/APC system employed by GRT consists of passenger counting sensors at the bus doors and a GPS antenna to monitor the buses position, both of which are connected to an on-board computer. A record is generated at the beginning of each trip containing information about the trip as whole, including the date, route number, direction of travel, trip start time, and more. Once the route has

begun, there are six different events that cause a record to be generated and stored within the on-board computer. These events are summarized in Table 6. Note that a transit stop represents any designated location where a bus passenger can board or alight the bus, while a transit timepoint represents a subset of transit stops for which a scheduled arrival/departure time is provided.

Table 6. Events that Generate Records in Grand River Transit AVL/APC Database

<b>Event</b>	<b>Transit Stop?</b>	<b>Transit Timepoint?</b>	<b>Doors Opened?</b>	<b>Event Trigger</b>	<b>Possible Cause</b>
<b>Stop with schedule time</b>	Yes	Yes	Yes	when the vehicle stops at a designated stop location with a scheduled timepoint and the doors are opened	passenger boarding or alighting requested
<b>Drive through with schedule time</b>	Yes	Yes	No	when the vehicle passes a designated stop location with a scheduled timepoint and the doors do not open	no passenger boarding or alighting requested
<b>Stop without schedule time</b>	Yes	No	Yes	when the vehicle stops at a designated stop location without a scheduled timepoint and the doors are opened	passenger boarding or alighting requested
<b>Drive through without schedule time</b>	Yes	No	No	when the vehicle passes a designated stop location without a scheduled timepoint and the doors do not open	no passenger boarding or alighting requested
<b>Stop without doors</b>	No	No	No	when the vehicle stops at an un-designated stop location without a scheduled timepoint and the doors are not opened	vehicle delayed by traffic signals, congestion, yielding right-of-way, etc
<b>Stop with doors</b>	No	No	Yes	when the vehicle stops at an un-designated stop location without a scheduled timepoint and the doors are opened	passenger request due to safety, accessibility, etc

As indicated in Table 6, the AVL/APC system employed by GRT generates a record whenever the bus stops at or passes by a transit stop, and also whenever a bus comes to a full stop, regardless of the location along the route. This level of detail is more than sufficient for the proposed methodology. A record generated by GRT's AVL/APC system contains numerous fields, the most important of which (for the purpose of this methodology) are:

- Location
- Arrival Time
- Departure Time
- Number of Passengers Boarding
- Number of Passengers Alighting

When the outfitted bus returns to the garage at the end of its run, these records are downloaded via a Wi-Fi link, matched with the associated schedule data, and stored in an ORACLE database for later analysis. The structure of the ORACLE database is presented Figure 19.

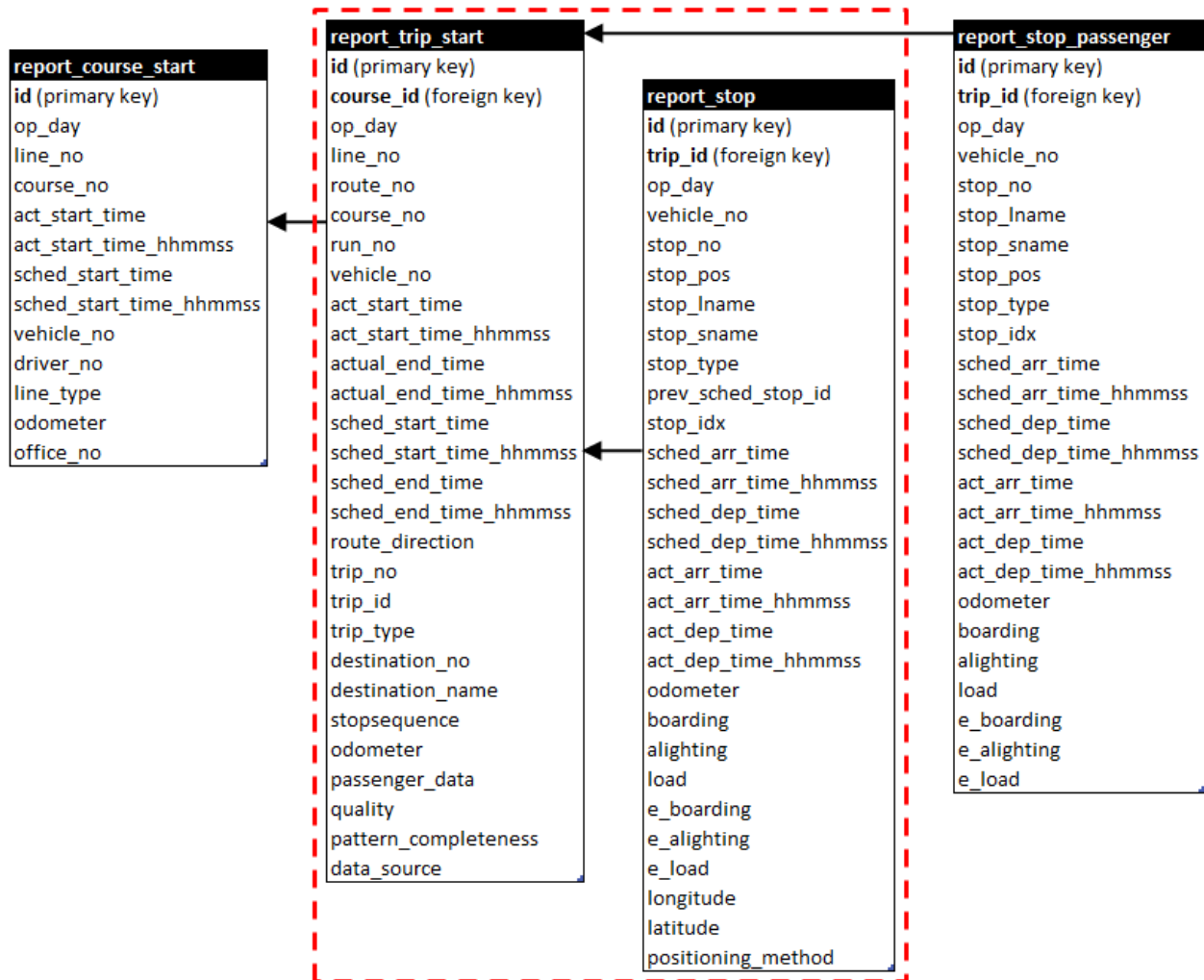


Figure 19. Structure of ORACLE database

The most important tables for the offline data analysis are the *report\_trip\_start* table, which contains records generated at the beginning of each trip, and the *report\_stop* table, which contains records generated whenever a designated event occurs during the trip. These tables are highlighted by the dashed line in Figure 19. A more detailed description of all the fields within these two tables is presented in Table 7 and Table 8. A sample of records from *report\_trip\_start* and *report\_stop* tables are shown in Table 9 and Table 10, respectively.

Table 7. Fields in the report\_trip\_start Table

Fields	Type	Description
<b>id</b>	Number	Index (Primary Key)
<b>course_id</b>	Number	Reference to the course (Foreign Key for report_course_start.id)
<b>op_day</b>	Date	Operation date
<b>line_no</b>	Number	Line number (transit route number)
<b>route_no</b>	Number	Route number
<b>course_no</b>	Number	Course number
<b>run_no</b>	Number	Block index
<b>vehicle_no</b>	Number	Vehicle number
<b>act_start_time</b>	Number	Actual start time
<b>act_start_time_hhmmss</b>	String	Actual start time (as string)
<b>actual_end_time</b>	Number	Actual start time at the final recorded stop of trip (seconds past midnight)
<b>actual_end_time_hhmmss</b>	String	Actual start time at the final recorded stop of trip (as string)
<b>sched_start_time</b>	Number	Scheduled start time (seconds past midnight)
<b>sched_start_time_hhmmss</b>	String	Scheduled start time (as string)
<b>sched_end_time</b>	Number	Scheduled start time at the final recorded stop of trip (seconds past midnight)
<b>sched_end_time_hhmmss</b>	String	Scheduled start time at the final recorded stop of trip (as string)
<b>route_direction</b>	String	Route direction – no validation check
<b>trip_no</b>	Number	Trip number – no validation check
<b>trip_id</b>	Number	Reference to the ID in report_definition_trip
<b>trip_type</b>	Number	Trip type – no validation check 0 = Service Journey 1 = Unspecified Dead Run 2 = Outgoing Dead Run 3 = Interlink (Dead Run) 4 = Incoming Dead Run
<b>destination_no</b>	Number	Destination number – not utilized
<b>destination_name</b>	String	Destination name – not utilized
<b>stopsequence</b>	String	Stop sequence (lists the stop numbers on the trip)
<b>odometer</b>	Number	Odometer (m)
<b>passenger_data</b>	Number	Status of passenger counters 1 = At least one observation recorded
<b>quality</b>	Number	Percentage of scheduled stops versus actual stops recorded
<b>pattern_completeness</b>	Number	Same as quality field
<b>data_source</b>	Number	Code indicating data source

Table 8. Fields in the report\_stop Table

Fields	Type	Description
<b>id</b>	Number	Index (Primary Key)
<b>trip_id</b>	Number	Reference to the trip (Foreign Key for report_trip_start.id)
<b>op_day</b>	Date	Operation day
<b>vehicle_no</b>	Number	Vehicle number
<b>stop_no</b>	Number	Stop number
<b>stop_lname</b>	String	Stop long name
<b>stop_sname</b>	String	Stop short name
<b>stop_pos</b>	Number	Stop position (i.e. nearside, farside, etc.) – not utilized
<b>stop_type</b>	Number	Stop type (refer to Table 6) 0 = Stop with schedule time 2 = Stop with doors 3 = Stop without doors 4 = Drive through with schedule time 5 = Stop without schedule time 6 = Drive through without schedule time
<b>prev_sched_stop_id</b>	Number	Reference to the id of the previous record
<b>stop_idx</b>	Number	Index of stop on the pattern (report_definition_route)
<b>sched_arr_time</b>	Number	Scheduled arrival time (seconds past midnight)
<b>sched_arr_time_hhmmss</b>	String	Scheduled arrival time (as string)
<b>sched_dep_time</b>	Number	Scheduled departure time (seconds past midnight)
<b>sched_dep_time_hhmmss</b>	String	Scheduled departure time (as string)
<b>act_arr_time</b>	Number	Actual arrival time (seconds past midnight)
<b>act_arr_time_hhmmss</b>	String	Actual arrival time (as string)
<b>act_dep_time</b>	Number	Actual departure time (seconds past midnight)
<b>act_dep_time_hhmmss</b>	String	Actual departure time (as string)
<b>odometer</b>	Number	Odometer (m)
<b>boarding</b>	Number	Number of passengers boarding
<b>alighting</b>	Number	Number of passengers alighting
<b>load</b>	Number	Load (number of passengers)
<b>e_boarding</b>	Number	Boardings from extra stops
<b>e_alighting</b>	Number	Alightings from extra stops
<b>e_load</b>	Number	Load from extra stops
<b>longitude</b>	Number	Longitude GPS (WGS 84)
<b>latitude</b>	Number	Latitude GPS (WGS 84)
<b>positioning_method</b>	Number	Positioning method of the vehicle 0 = Real position 1 = Plan position

Table 9. Sample Records from report\_trip\_start Table

Field	Record A	Record B	Record C
ID	4352466	4352485	4352577
OP_DAY	04/09/2008	04/09/2008	04/09/2008
LINE_NO	27	12	14
ROUTE_NO	1002237	1023006	1023017
COURSE_NO	1003652	1003652	1003652
COURSE_ID	4351421	4351421	4351421
RUN_NO	1003650	1003650	1003650
VEHICLE_NO	1000922	1000922	1000922
ACT_START_TIME	76366	77376	81620
ACT_START_TIME_HHMMSS	21:12:46	21:29:36	22:40:20
ACT_END_TIME	77376	81620	82314
ACT_END_TIME_HHMMSS	21:29:36	22:40:20	22:51:54
SCHED_START_TIME	76140	77400	81600
SCHED_START_TIME_HHMMSS	21:09:00	21:30:00	22:40:00
SCHED_END_TIME	76620	81480	82260
SCHED_END_TIME_HHMMSS	21:17:00	22:38:00	22:51:00
ROUTE_DIRECTION	2	Upward	1
TRIP_NO	1003673	1024746	1024747
TRIP_ID	194050	193510	198665
TRIP_TYPE	0	0	0
DESTINATION_NO	0	0	0
QUALITY	100	100	100
DESTINATION_NAME	0 (0)	0 (0)	0 (0)
STOPSEQUENCS	*	**	***
ODOMETER	290591	294350	322317
PASSENGER_DATA	1	1	1
PATTERN_COMPLETENESS	100	100	100
DATA_SOURCE	4	4	4

\*,180 1,747 1,748 1,749 1,750 1,751 1,752 1,753 1,754 1,755 1,120 1,294 1,295 1,296 1,88 9,

\*\*,88 9,671 1,908 1,909 1,910 1,911 1,912 1,913 1,914 1,915 1,2304 1,916 1,917 1,918 1,919 1,71 8,185  
1,1747 1,1748 1,1749 1,1998 1,1999 1,2000 1,2001 1,166 5,2002 1,2003 1,2004 1,2005 1,2006 1,2007  
1,2008 1,2275 1,2009 1,107 6,1955 1,1957 1,1958 1,1959 1,7

\*\*\*,41 2,412 1,413 1,414 1,415 1,416 1,417 1,2400 1,18 1,418 1,23 1,422 1,423 1,424 1,425 1,256 1,

Table 10. Sample Records from report\_stop Table

Field	Record A	Record B	Record C	Record D	Record E
ID	4352586	4352587	4352588	4352593	4352594
TRIP_ID	4352577	4352577	4352577	4352577	4352577
OP_DAY	04/09/2008	04/09/2008	04/09/2008	04/09/2008	04/09/2008
VEHICLE_NO	1000922	1000922	1000922	1000922	1000922
STOP_NO	18	418	23		256
STOP_LNAME	BRIDGE / FROBISHER	BATHURST / BRIDGE	BATHURST / MCMURRAY		WYMAN / COLBY
STOP_SNAME	BFB	null	BMM		WYC
STOP_POS	1	1	1	0	1
STOP_TYPE	0	6	4	3	4
STOP_IDX	8	9	10		15
SCHED_ARR_TIME	81900		82020		82260
SCHED_ARR_TIME_HHMMSS	22:45:00		22:47:00		22:51:00
SCHED_DEP_TIME	81900		82020		82260
SCHED_DEP_TIME_HHMMSS	22:45:00		22:47:00		22:51:00
ACT_ARR_TIME	81977	82028	82116	82272	82314
ACT_ARR_TIME_HHMMSS	22:46:17	22:47:08	22:48:36	22:51:12	22:51:54
ACT_DEP_TIME	82006	82028	82116	82290	82314
ACT_DEP_TIME_HHMMSS	22:46:46	22:47:08	22:48:36	22:51:30	22:51:54
ODOMETER	324491	324632	325293	326349	326459
BOARDING	0	0	0	0	0
ALIGHTING	0	0	0	0	0
LOAD	0	0	0	0	0
E_BOARDING	0	0	0	0	0
E_ALIGHTING	0	0	0	0	0
E_LOAD	0	0	0	0	0
PREV_SCHED_STOP_ID	4352585	4352586	4352587	4352592	4352593
LONGITUDE	-80.5233	-80.5246	-80.5317	-80.5369	-80.5380
LATITUDE	43.5126	43.5136	43.5110	43.5051	43.5044
POSITIONING_METHOD	0	0	0	0	0

To illustrate how the report\_trip\_start table is read, consider 'Record C' in Table 9. This record contains information about a single trip. The ID field tells us the trip number, 4352577, which is a number created internally by the AVL/APC system. The trip took place on September 4, 2008 (OP\_DAY field) and ran GRT Route 14 (LINE\_NO field). The next several fields (ROUTE\_NO, COURSE\_NO, COURSE\_ID, RUN\_NO) contain information important to the database structure but not relevant to the user. The VEHICLE\_NO field tells us the vehicle number, 1000922, which is also created internally by the AVL/APC system. The trip left the first terminal at 10:40:20 p.m. (ACT\_START\_TIME field) and arrived at the end of the route at 10:51:44 p.m. (ACT\_END\_TIME field), and was scheduled to run from 10:40:00 p.m. (SCHED\_START\_TIME field) to 10:51:00 p.m. (SCHED\_END\_TIME field). The trip ran in direction '1', as defined by GRT (ROUTE\_DIRECTION field) and was a service journey (TRIP\_TYPE field).



To illustrate how the `report_stop` table is read, consider ‘Record A’ in Table 10. This record contains information about a single observation along a given trip. The ID field tells us the observation number 4352586, which is a number created internally by the AVL/APC system. The `TRIP_ID` field allows us to link this observation with data about the trip it was a part of. This record was part of trip 4352577, the same trip we discussed as ‘Record C’ in Table 9. This record was observed at stop 18 (`STOP_NO` field), which is an internal GRT stop number corresponding to the transit timepoint at Bridge/Frobisher (`STOP_LNAME` field). This record was created when the bus made a stop at the timepoint (`STOP_TYPE` field). The bus was scheduled to arrive at the timepoint at 10:45:00 p.m. (`SCHED_ARR_TIME` field) and also to depart from this timepoint at 10:45:00 p.m. (`SCHED_DEP_TIME` field); it actually arrived at 10:46:17 p.m. (`ACT_ARR_TIME` field) and departed at 10:46:46 p.m. (`ACT_DEP_TIME` field). The relative odometer reading for this bus when this record was generated was 324,491 meters (`ODOMETER` field). No passengers boarded or alighted the bus at this timepoint, and no passengers were on the bus when it arrived (`BOARDING`, `ALIGHTING`, and `LOAD` fields). The bus was located at longitude -80.5233 (`LONGITUDE` field) and latitude 43.5126 (`LATITUDE` field) when this record was generated.

To implement the methodology in an automated fashion, the `report_trip_start` table and the `report_stop` table were imported from the ORACLE database into Microsoft Access database software, where macros were used to compile and summarize the data into the relevant performance measures and cause statistics, as well as to create the visualization aids. For the purpose of calculating performance measures and cause statistics using this methodology, only timepoint level records are required. For creating the visualization aids, however, all event-generated records are utilized.

## 4.2 Data Collection Period

A four-month sample (September 2, 2008 to December 31, 2008) of data from the entire GRT system was obtained from GRT. As the iXpress route was fully outfitted with AVL/APC equipped buses, its operations are fully documented during the sample period (with the exception of runs and timepoints not captured due to miscellaneous data recovery and archiving issues). For all other routes, sample availability is dependant up on the deployment of the remaining 19 buses outfitted with AVL/APC equipment.

Grand River Transit divides the operation day into five time periods as indicated in Table 11.

Table 11. Grand River Transit Time Period Definitions

<b>Period</b>	<b>Definition</b>
<b>A.M. Period</b>	Start of Service – 9:00 AM
<b>Midday Period</b>	9:00 AM – 2:30 PM
<b>P.M. Period</b>	2:30 PM – 6:00 PM
<b>Evening Period</b>	6:00 PM – 10:00 PM
<b>Late Evening Period</b>	10:00 PM – End of Service

The time periods cover a relatively large amount of time, and it is unlikely that conditions (i.e. traffic conditions and passenger demand) are constant for an entire time period. Accordingly, this thesis investigates system performance during shorter time periods than those defined by GRT.

The main body of this thesis applies the methodology to an assumed “p.m. peak period” running from 4:30 p.m. until 6:00 p.m. (based on scheduled trip start time). Full output of the methodology can be found in Appendix B. The methodology is also applied to an assumed “a.m. peak period” running from 7:30 a.m. until 9:00 a.m., the full output of which can be found in Appendix C.

### 4.3 Sample Size

When conclusions are made based on AVL/APC system data, the level of confidence in those conclusions will clearly be impacted by sample size. Conclusions about the mean (for example, average schedule deviation) can generally be made with smaller sample sizes. However, schedule adherence measures mostly involve making conclusions about extreme values (for example, what percentage of bus arrivals/departures fall outside a given range). Conclusions about extreme values generally require a much larger sample size. Furth et al. (2003) suggests that for the traditional schedule adherence performance measure, “on-time performance”, a sample of at least 200 observations is required. It is not unreasonable to conclude that a similar sample size would be ideal for the proposed performance measures as well. Currently, GRT has about 10% of its non-iXpress bus fleet (i.e.  $19/(208-34)=10.9\%$ ) outfitted with AVL/APC systems. In a 4-month period containing 87 weekdays, 17 Saturdays, and 17 Sundays, the average number of AVL/APC observations per timepoint during the a.m. or p.m. peak period assuming an average headway of 15 minutes would be 52 ( $87 \times 4 \text{ trips/hour} \times 1.5 \text{ hours} \times 10\% \text{ sampling rate} = 52$ ) on weekdays and 10 on Saturday and Sunday, well short of the ideal of 200 observations.

The number of observations along many routes in the four-month GRT dataset (see Appendix D) is much less than calculated above, indicating that: (a) not all data is being recovered; or (b) that AVL/APC equipped buses are not being deployed systematically across all routes; or (c) bus headways on some route are longer than 15 minutes. For the above example, 40% of the GRT fleet would need to be equipped with AVL/APC in order to obtain 200 observations. The percentage would increase if the headways were longer and decrease if the headways were shorter, and would also change accordingly if the aggregation period were altered. In the following sections, performance measures are displayed along with sample size even when the number of observations is below two hundred. However, consider that the level of confidence in projected performance measures on routes with fewer observations will be lower, and that these routes may have more extreme variation between the projected performance measure and the true performance measure.

For estimating cause statistics, the available sample size is smaller still. For example, imagine that there are 50 observations at a timepoint and 20% of observations are “late”. In this situation, there would be only 10 observations on which to base the cause statistics. Clearly, it is very beneficial for the entire transit fleet to be outfitted with AVL/APC systems for the calculation of cause statistics. As such, cause statistics are demonstrated on data from the iXpress route, as all buses on this route are equipped with AVL/APC.

#### 4.4 “On-Time” Definition

The proposed methodology requires a definition of “on-time”. A review of various “on-time” definitions across North America was provided in Section 2.1. At Grand River Transit, an “on-time” definition of zero minutes early ( $e = 0$  seconds) to three minutes late ( $l = 180$  seconds) has traditionally been used.

Because AVL/APC systems typically report times to the nearest second, choosing an appropriate “on-time” definition is of critical importance. Agencies utilizing a stringent “on-time” definition that defines a bus as “not on-time” when it leaves more than zero seconds early may report very poor schedule adherence when evaluating their transit system using AVL/APC system data because a bus that leaves even one second early will not be recorded as “on-time”. However, one second, or even 15 or 30 seconds, could represent the minor differences in synchronization between a bus driver’s watch and the system time. Further, it is unlikely that a bus leaving just a few seconds early is leaving passengers behind, since approaching passengers could be seen by the driver. Because of these reasons, it is likely that many departures that are just slightly early would not be recorded as early if data collection had been done by a person rather than an automated system, since there is some judgement involved in what truly represents an early departure.

Data from the entire four months of AVL/APC system observations at Grand River Transit demonstrate the significant impact of the “on-time” definition on the number of buses reported as departing early (Figure 20). With a zero second definition ( $e = 0$  seconds), 18.8% of departures (representing approximately 24,000 departures) were defined as departing early. With a 15 second definition ( $e = 15$  seconds) this number decreased to about 18,400 and with a 30 second definition ( $e = 30$  seconds) the number dropped to 13,700. This indicates that an agency’s ability to meet performance goals, and the results of their performance measures, are extremely sensitive to the choice of “on-time” definition.

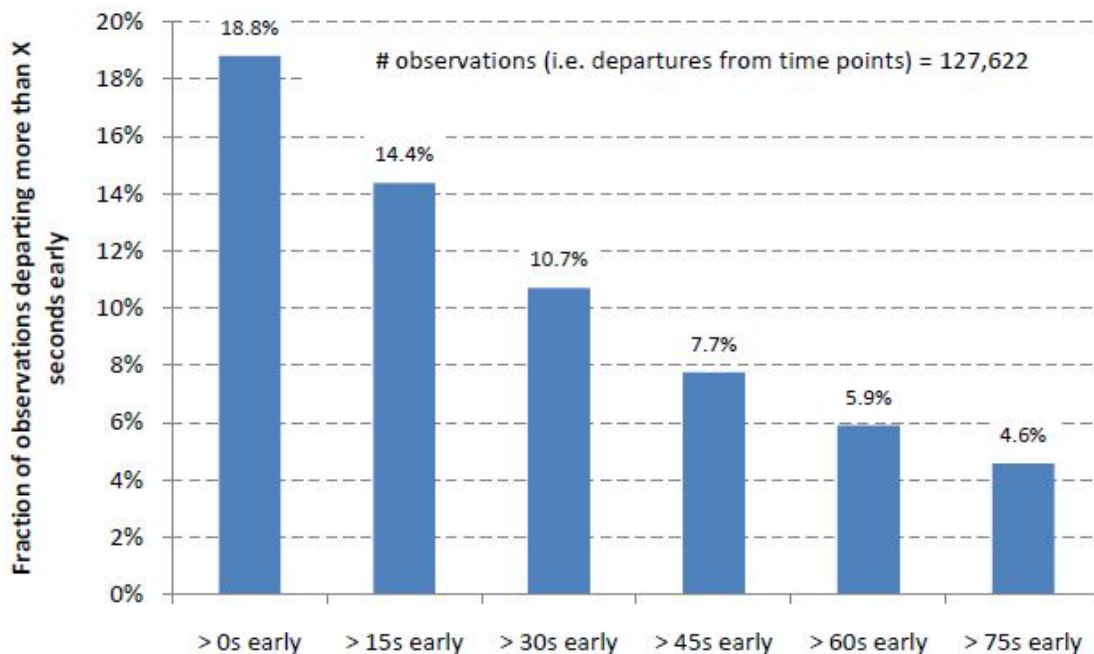


Figure 20. Effect of "on-time" definition on early departures

Based on the findings above, the “on-time” definition used for the analysis of Grand River Transit’s AVL/APC system data has been modified somewhat from Grand River Transit’s traditional definition. The modified definition defines “on-time” as anywhere from 30 seconds early ( $e = 30$  seconds) to 3 minutes late ( $l = 180$  seconds). It is recommended that for any schedule adherence analysis using AVL/APC data, a zero second early “on-time” definition should not be used.

## **4.5 PM Peak Period Application**

The methodology is designed to work in several steps. In the first step, performance measures are calculated for each route by direction (for a given time period) and a ranked list is presented in order to show the routes/directions with the poorest schedule adherence performance. In the second step, performance measures are calculated and presented for the individual timepoints within any selected route/direction in order to identify which timepoints are contributing most to poor schedule adherence. In the third and fourth steps, cause statistics are calculated and visualization aids are presented in order to help determine the causes of any identified poor performance, and to help develop an effective strategy for improving schedule adherence. Each of the above steps was carried out on the sample AVL/APC system data from Grand River Transit and is described in the following sections.

### **4.5.1 Performance Measures by Route/Direction**

Performance measures for each route/direction were calculated based on  $SA_1$ , which represent the “not on-time percentage” from a bus perspective. The results, for the poorest 15 routes/directions, are summarized and ranked in Table 12. The results for all routes/directions can be found in Appendix B.

The listed “direction” in the following tables are as given in the GRT database. The approximate sampling rate is also shown, and is calculated as the number of observations divided by the maximum possible observations (i.e.  $(\text{no. of observations}) / (87 \text{ days} \times \text{average headway} \times 90 \text{ minutes} \times \text{no. of timepoints})$ ). Because buses sometimes run different patterns of the same route (occasionally with different timepoints); the AVL/APC systems do not have a perfect recovery rates; and the headways are an estimated average of headways along a route as of March 2010 (since September – December 2008 schedule information was not available), the approximate sampling rate remains an estimate.

Table 12. Routes/Directions with Poorest Schedule Adherence during P.M. Peak Period, Based on SA<sub>1</sub>

Route	Direction*	Observations	Approx. Sampling Rate (%)	SA <sub>1</sub> (%)	SA <sub>1</sub> Rank
53	Inbound	40	3.1	65.0	1
57	West	173	16.6	54.3	2
32	2	22	2.1	50.0	3
65	North	85	8.1	48.2	4
9	Downward	195	5.3	47.7	5
53	Outbound	40	3.1	47.5	6
71	East	72	9.2	47.2	7
52	South	142	6.8	45.8	8
6	Downward	46	3.5	45.7	9
35	1	95	5.2	45.3	10
51	Inbound	144	6.9	45.1	11
33	2	20	2.6	45.0	12
24	1	47	4.5	44.7	13
2	Downward	56	5.4	44.6	14
19	1	162	10.3	44.4	15

\*As given in GRT database

Based on Schedule Adherence Measure 1, the route/direction with the poorest performance is Route 53 inbound, which is “not on-time” for 65.0% of observations during the 4:30 p.m. to 6:00 p.m. period (i.e. 26 of 40 observations were “not on-time”). This is equivalent to an “on-time” percentage of just 35.0%.

The next performance measure, SA<sub>2</sub>, represents the “not on-time percentage” from a passenger perspective and is calculated and presented for the poorest 15 routes/directions in Table 13. For comparison, the SA<sub>1</sub> measure and rank for each route/direction are also presented in the table.

Table 13. Routes/Directions with Poorest Schedule Adherence during P.M. Peak Period, Based on SA<sub>2</sub>

Route	Direction*	Observations	Approx. Sampling Rate (%)	SA <sub>1</sub> (%)	SA <sub>2</sub> (%)	SA <sub>1</sub> Rank	SA <sub>2</sub> Rank
5	2	63	4.8	41.3	33.3	20	1
20	2	84	8.0	36.9	30.7	36	2
67	North	21	4.0	42.9	28.9	17	3
6	Downward	46	3.5	45.7	28.4	9	4
18	Downward	39	2.5	35.9	27.8	37	5
51	Inbound	144	6.9	45.1	27.4	11	6
2	Downward	56	5.4	44.6	27.3	14	7
24	1	47	4.5	44.7	25.5	13	8
24	2	54	5.2	38.9	24.9	29	9
15	West	80	5.1	31.3	24.5	52	10
8	South	278	4.1	40.6	23.7	24	11
9	Upward	226	6.2	40.7	23.6	23	12
13	1	78	5.0	32.1	23.5	50	13
5	1	60	5.7	25.0	23.3	62	14
51	Outbound	176	8.4	38.1	23.0	31	15

\*As given in GRT database

The routes/directions with the poorest schedule adherence as identified by SA<sub>2</sub> are very different from those identified using SA<sub>1</sub>. In addition, the “not on-time” percentage from a passenger perspective is generally lower than it is from a bus perspective.

To understand why the values are so different, consider that a key difference between looking at “not on-time percentage” from a passenger perspective as opposed to a bus perspective is that from a passenger perspective, being “not on-time” is only considered a problem where passengers are affected. To illustrate, consider a sample situation in which a bus never arrived late but departed early 100% of the time. At this sample timepoint, we would say that the bus is “not on-time” 100% of the time. However, if there are 2 passengers boarding and 8 passengers alighting at this sample timepoint, we would say that only 20% of passengers experience a “not on-time” bus. In this example, most passengers are not affected by the early departure because most passengers are alighting. In practice, as in this example, the location of “not on-time” buses and the location of significant passenger activity do not always coincide. This is especially true since only boarding passengers are considered to be affected by an early bus and only alighting passengers are considered to be affected by a late bus. This difference explains why there is often a significant difference between SA<sub>1</sub> and SA<sub>2</sub>. When using SA<sub>2</sub>, the route with the poorest schedule adherence is route 5 in direction 2.

To illustrate with a real example, during the p.m. peak period on route 5 in direction 2, at the Erb Street/Fischer-Hallman Road timepoint, buses were recorded as departing ‘early’ for 58.33% of observations and arriving ‘late’ for 16.67% of observations, with a total “not on-time” percentage of 75% at this timepoint. The average boardings at the timepoint were 1.33 passengers and the average

alightings were 0.33 passengers. Accordingly, the percentage of passengers affected by “not on-time” bus’s can be calculated as:

$$SA_{2,Erb/Fischer-Hallman} = \frac{58.33\% \times 1.33 + 16.67\% \times 0.33}{1.33 + 0.33} = 50.0\%$$

Again, the “not on-time” percentage is different from a passenger perspective than it is from a bus perspective, as locations where the bus is “not on-time” do not coincide perfectly with locations of passenger activity.

The final performance measure, SA<sub>3</sub>, represents the total number of passengers affected by “not on-time” buses on an average trip. Rather than a percentage, the unit of this measure is “number of passengers”. The fifteen routes/directions with the poorest schedule adherence are calculated using SA<sub>3</sub> and presented in Table 14. Performance measures and ranks for SA<sub>1</sub> and SA<sub>2</sub> are also presented for comparison.

Table 14. Routes/Directions with Poorest Schedule Adherence during P.M. Peak Period, Based on SA<sub>3</sub>

Route	Direction*	Obs.	Approx. Sampling Rate (%)	Avg. Ridership (/trip)	SA <sub>1</sub> (%)	SA <sub>2</sub> (%)	SA <sub>3</sub> (pass./trip)	SA <sub>1</sub> Rank	SA <sub>2</sub> Rank	SA <sub>3</sub> Rank
<b>iXpress</b>	<b>Upward</b>	5779	85.2	89	33.7	19.1	34.6	45	24	1
<b>iXpress</b>	<b>Downward</b>	6469	95.3	95	30.1	15.1	29.3	57	37	2
<b>7</b>	<b>Upward</b>	317	1.8	92	39.1	18.7	20.3	28	25	3
<b>12</b>	<b>Upward</b>	169	4.0	101	34.3	13.6	17.7	43	43	4
<b>12</b>	<b>Downward</b>	248	6.8	99	32.7	14.8	16.5	48	38	5
<b>7</b>	<b>Downward</b>	303	1.8	93	32.3	15.8	14.6	49	35	6
<b>8</b>	<b>South</b>	278	4.1	79	40.6	23.7	12.2	24	11	7
<b>9</b>	<b>Upward</b>	226	6.2	46	40.7	23.6	9.3	23	12	8
<b>24</b>	<b>1</b>	47	4.5	20	44.7	25.5	8.8	13	8	9
<b>51</b>	<b>Inbound</b>	144	6.9	23	45.1	27.4	8.1	11	6	10
<b>51</b>	<b>Outbound</b>	176	8.4	26	38.1	23.0	8	31	15	11
<b>8</b>	<b>North</b>	261	3.8	88	31.0	9.5	7.6	53	53	12
<b>9</b>	<b>Downward</b>	195	5.3	28	47.7	20.9	6.1	5	18	13
<b>13</b>	<b>1</b>	78	5.0	22	32.1	23.5	6	50	13	14
<b>110</b>	<b>Upward</b>	39	7.5	28	28.2	15.9	5.6	60	34	15

\*As given in GRT database

When using SA<sub>3</sub>, it is interesting to note that the top ranked routes represent some of GRT’s most heavily used routes, including iXpress, Route 7, Route 12, and Route 8. This is not unexpected, because even though these routes have better schedule adherence than other routes when measured using SA<sub>1</sub> or SA<sub>2</sub>, the higher volume of passengers that utilize these routes means that even if a few buses are “not on-time”, a large number of passengers are affected. The top ranked route/direction using SA<sub>3</sub> is iXpress in the upward direction. This is one of GRT’s busiest routes, and on this route/direction almost 35 passengers experience a bus that is “not on-time” on an average trip.

Clearly, each of the three performance measures provides very different rankings as to which routes/directions have the poorest schedule adherence, which makes “which measure to use?” an important question.

Schedule Adherence Measure 1 is very similar to the traditional performance measure of “on-time performance”. Since this is how agencies often set schedule adherence goals, SA<sub>1</sub> can be useful in quantifying how well these goals are being met. For the goal of determining where to focus efforts on improving schedule adherence, however, SA<sub>2</sub> and SA<sub>3</sub> have an advantage. This is because only these two measures account for how passengers are affected by “not on-time” buses. There is very little practical benefit in devoting resources to improving schedule adherence at timepoints where passengers are not boarding or alighting. In choosing between SA<sub>2</sub> and SA<sub>3</sub>, both have advantages and drawbacks and the ultimate choice may rest with the preferences of the transit agency. It may be beneficial to calculate both measures and begin by focusing efforts on the worst routes from each measure.

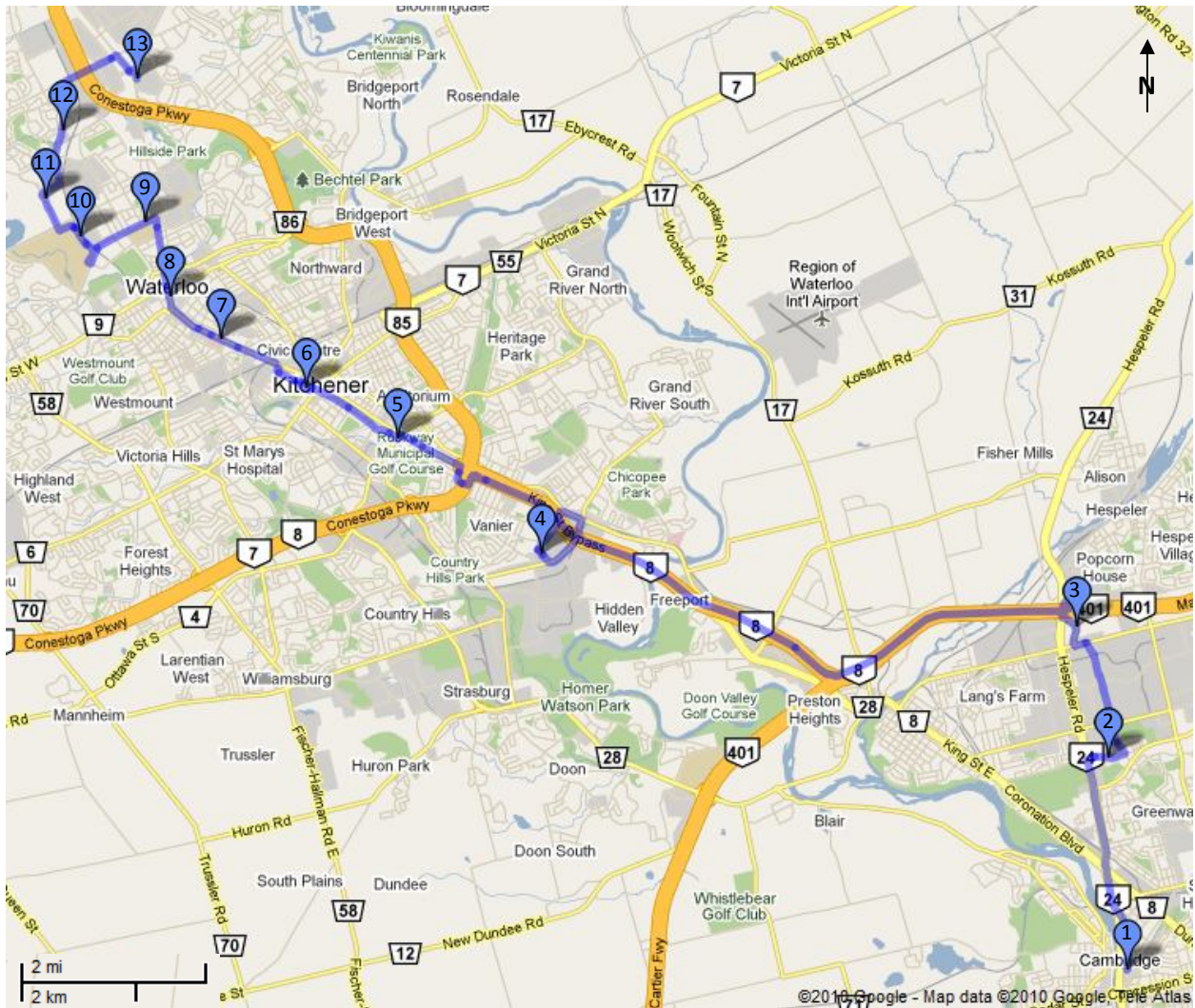
The next steps of the methodology are designed to provide additional information within individual routes/directions via the calculation of performance measures by timepoint, cause statistics, and visualization aids. They can be calculated for any route/direction, but in this thesis they are demonstrated on the iXpress route in the upward direction. This route and direction was chosen for the following reasons:

- The iXpress route in the upward direction was the route/direction at which the greatest number of passengers experienced a “not on-time” bus according to SA<sub>3</sub>, and it is also one of GRTs busiest routes. Grand River Transit has indicated a preference towards using SA<sub>3</sub> as their preferred performance measure.
- The iXpress route is the only route that is fully outfitted with AVL/APC systems. As such, the number of observations along this route is significantly larger than on any of the other routes. A high number of observations are very beneficial when moving from performance measures for routes/directions to performance measures for timepoints, and are a necessity when looking at cause statistics.

#### **4.5.2 Performance Measures by Timepoint (P.M. Peak Period, iXpress Route, Upward Direction)**

Each of the three performance measures can be calculated at a timepoint level as well as at a route/direction level. The performance measures for each timepoint along iXpress in the upward direction (Figure 21) are presented in Table 15 and duplicated graphically in Figure 22. The iXpress route is a limited-stop route and only has transit stops at the timepoints listed; this means that all transit stops on the route are timepoints.





Timepoint Legend

- |                            |                         |                    |
|----------------------------|-------------------------|--------------------|
| 1. Ainslie Street Terminal | 6. Charles Terminal     | 11. R & T Park     |
| 2. Cambridge Centre        | 7. Grand River Hospital | 12. McCormick      |
| 3. Smart!Centres Cambridge | 8. Uptown Waterloo      | 13. Conestoga Mall |
| 4. Fairview                | 9. Laurier              |                    |
| 5. Ottawa                  | 10. U Waterloo          |                    |

Figure 21. iXpress route map, upward direction

Table 15. Performance Measures by Timepoint during P.M. Peak Period, iXpress, Upward Direction

Timepoint	Observations	Avg. Boarding (/trip)	Avg. Alighting (/trip)	SA <sub>1</sub> (%)	SA <sub>2</sub> (%)	SA <sub>3</sub> (/trip)
AINSLIE STREET TERMINAL	450	14	0	2.0%	2.0%	0.3
CAMBRIDGE CENTRE	448	8	8	19.6%	9.8%	1.5
SMART!CENTRES CAMBRIDGE	447	4	2	25.7%	11.6%	0.7
FAIRVIEW	447	20	9	21.3%	8.5%	2.5
OTTAWA	449	1	1	29.6%	15.4%	0.3
CHARLES TERMINAL	448	12	14	29.7%	15.4%	4.1
GRAND RIVER HOSPITAL	444	1	1	37.8%	18.8%	0.5
UPTOWN WATERLOO	445	4	5	36.0%	19.8%	1.8
LAURIER	444	3	7	42.8%	28.4%	2.8
U WATERLOO	444	18	11	47.3%	18.2%	5.5
R & T PARK	444	1	1	52.3%	29.8%	0.5
McCORMICK	444	2	12	51.1%	38.0%	5.7
CONESTOGA MALL	425	0	18	44.0%	44.0%	8.5

The results of SA<sub>1</sub> indicate that schedule adherence is becoming poorer as the iXpress bus travels further along the route. This finding is not unreasonable, as schedule adherence issues earlier in the route can compound schedule adherence issues later in the route if the bus cannot get back on schedule. SA<sub>2</sub> shows a similar trend, with the exception of a noticeable improvement at the University of Waterloo timepoint. When using SA<sub>3</sub>, we find that the passengers affected at timepoints does not show an increasing trend along the route, but rather spikes at timepoints with high passenger activity and falls at timepoints with low passenger activity.

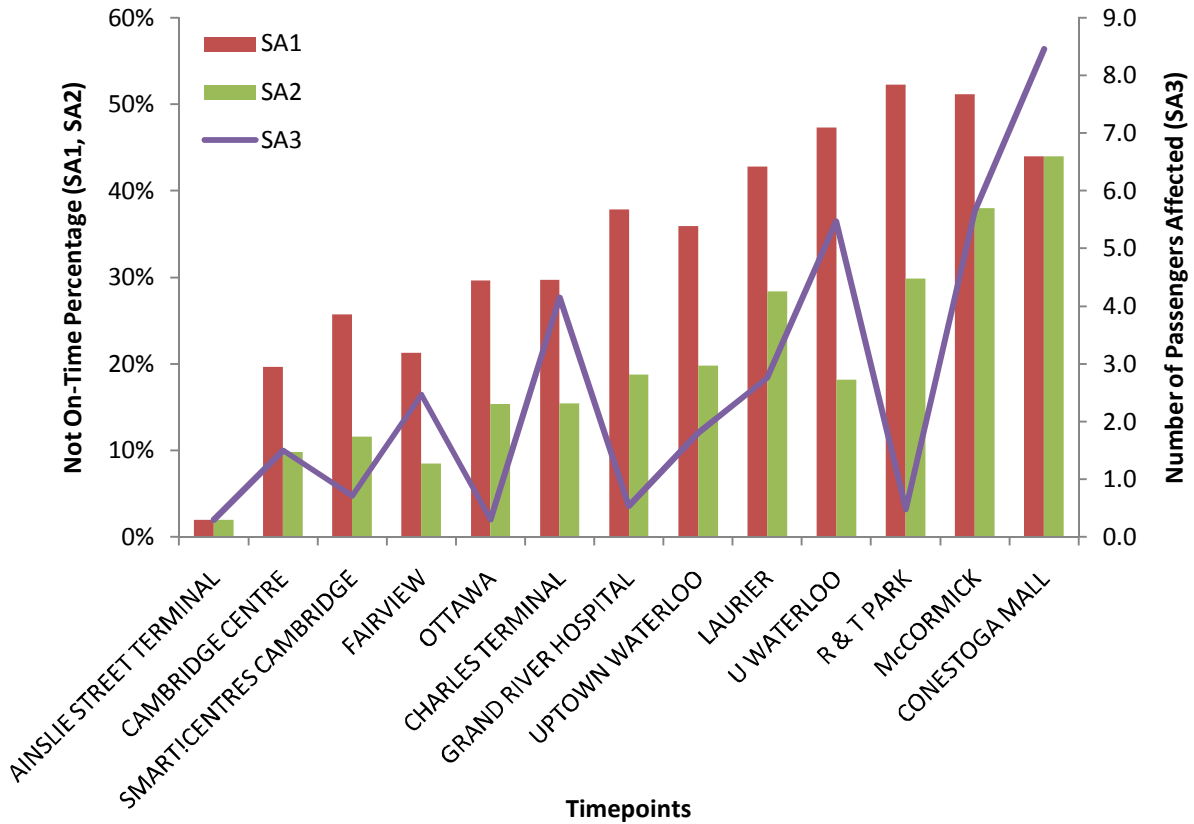


Figure 22. Performance measures by timepoint during P.M. Peak Period, iXpress, upward direction

We can also investigate whether poor schedule adherence is due to buses arriving late or buses departing early, which is an important differentiation when we want to determine the cause of being “not on-time”. The percentage of buses that were late and early at each timepoint is summarized in Table 16.

Table 16. Early/Late Percentages by Timepoint during P.M. Peak Period, iXpress, Upward Direction

<b>Timepoint</b>	<b>Observations</b>	<b>Early Departure*</b>	<b>Late Arrival**</b>
<b>AINSLIE STREET TERMINAL</b>	450	2.0%	-
<b>CAMBRIDGE CENTRE</b>	448	6.5%	13.2%
<b>SMART!CENTRES CAMBRIDGE</b>	447	10.1%	15.7%
<b>FAIRVIEW</b>	447	5.4%	15.9%
<b>OTTAWA</b>	449	0.0%	29.6%
<b>CHARLES TERMINAL</b>	448	4.5%	25.2%
<b>GRAND RIVER HOSPITAL</b>	444	2.3%	35.6%
<b>UPTOWN WATERLOO</b>	445	1.8%	34.2%
<b>LAURIER</b>	444	3.6%	39.2%
<b>U WATERLOO</b>	444	1.8%	45.5%
<b>R &amp; T PARK</b>	444	5.2%	47.1%
<b>McCORMICK</b>	444	9.0%	42.1%
<b>CONESTOGA MALL</b>	425	-	44.0%

\*depart more than 30 seconds early

\*\*arrive more than 3 minutes late

The data in Table 16 indicates that the main reason that buses are “not on-time” along the iXpress route during this time period is due to late arrivals, which represent the majority of “not on-time” buses at all timepoints. The percentage of buses running late increases as the route progresses, indicating that the problems leading to late arrivals are building upon each other as the bus travels along the route.

Cause statistics and visualization aids are used to determine why buses are arriving late and what to do about it.

#### 4.5.3 Cause Statistics and Visualization Aids

Cause statistics were calculated for each timepoint and are presented in Table 17. The abbreviations used for each cause are summarized in Table 18. The methods used to compute the cause statistics have been defined and described in Section 3.3.2. The late cause statistics indicate how often a given cause occurred when a bus was late at the given timepoint. The early cause statistics indicate how often a given cause occurred when a bus was early at the given timepoint. Therefore, each set of cause statistics represents information on a different subset of buses. In the iXpress example presented here, the main schedule adherence issue had to do with buses being late; therefore, it makes sense to focus on these cause statistics in the effort to improve schedule adherence. If the performance measures had indicated that the cause of “not on-time” buses was due to them departing early, we would focus on the early cause statistics instead.

Table 17. Cause Statistics during P.M. Peak Period, iXpress, Upward Direction

Timepoint	# of Trips Late	Late Cause Statistics			# of Trips Early	Early Cause Statistics		
		L1	L2*	L3		E1	E2	E3
AINSLIE STREET TERMINAL	-	-	-	-	9	0%	**	**
CAMBRIDGE CENTRE	59	57%	100%	-	29	0%	100%	50%
SMART!CENTRES CAMBRIDGE	70	25%	50%	100%	45	0%	100%	100%
FAIRVIEW	71	76%	46%	92%	24	0%	100%	46%
OTTAWA	133	86%	92%	89%	0	-	-	-
CHARLES TERMINAL	113	23%	4%	100%	20	55%	90%	20%
GRAND RIVER HOSPITAL	158	92%	33%	93%	10	0%	100%	100%
UPTOWN WATERLOO	152	32%	16%	100%	8	0%	100%	100%
LAURIER	174	50%	17%	100%	16	0%	100%	100%
U WATERLOO	202	67%	22%	100%	8	0%	-	-
R & T PARK	209	12%	91%	100%	23	0%	100%	61%
McCORMICK	187	5%	2%	100%	40	0%	100%	88%
CONESTOGA MALL	187	56%	31%	100%	-	-	-	-

\* $D_t = 30$  seconds

\*\*not calculated at first timepoint since E2 and E3 look at the previous segment and previous timepoint, respectively, and the first timepoint does not have a previous segment or previous timepoint

Table 18. Cause Statistic Abbreviations

Late Arrival Case Statistics	
L1	Travel time in prior segment longer than scheduled
L2	Dwell time at previous timepoint longer than scheduled
L3	Late arrival at previous timepoint
Early Departure Cause Statistics	
E1	Dwell time at current timepoint shorter than scheduled
E2	Travel time in prior segment less than scheduled
E3	Early departure from previous timepoint

We can begin by looking at the cause statistics of the final timepoint, and work back along the route to Ainslie Street Terminal, the start of the route. We will focus on the late cause statistics since the main schedule adherence issue on this route, direction, and time period has to do with late arrivals.

At **Conestoga Mall** we observe that in 100% of cases (L3) where a bus is late, the same bus was also late at the previous timepoint. In 31% of cases (L2), a late bus also dwelled too long at the previous timepoint and in 56% of cases (L1) the bus took longer than scheduled to travel from the preceding timepoint to Conestoga Mall. However, we can also read from the cause statistics that in 69% (100% - 31%) of cases when a bus is late, the dwell time scheduled at the previous timepoint was sufficient, and in 46% of cases (almost half the time) the scheduled travel time was sufficient. Therefore, it appears that the main reason for late arrivals at Conestoga Mall is due to upstream issues. If we want to improve schedule adherence at Conestoga Mall, we should make changes upstream.

Moving upstream to the **McCormick** timepoint, we again find that in 100% of cases where a bus is late at this timepoint, the same bus was also late at the previous timepoint. However, longer than scheduled travel time in the preceding segment and longer than scheduled dwell time at the previous segment were culprits in just 5% and 2% of cases, respectively. Therefore, we can again conclude that to improve schedule adherence at this timepoint, we should make changes upstream.

At the **R & T Park** timepoint, we still find that 100% of buses arriving late also arrived late at the previous timepoint. We also find that in 91% of cases, the bus dwelled longer than scheduled at the previous timepoint (U Waterloo). However, in only 12% of cases was the scheduled travel time in the preceding segment insufficient. Therefore, in order to improve schedule adherence it may be appropriate to add dwell time to the schedule at the U Waterloo timepoint (or find ways to decrease the actual dwell time), and also to keep looking upstream for where improvements should focus.

At the **U Waterloo** timepoint, once again 100% of buses arriving late have arrived late at the previous timepoint (this trend continues for most of the timepoints). Further, in 67% of cases the bus took longer to travel through the previous segment than scheduled. Dwell time at the previous timepoint, however, was an issue for only 17% of the late buses. The cause statistics at the U Waterloo timepoint indicate that the travel time scheduled for the Laurier to U Waterloo segment may be insufficient and should be investigated, and also that we should continue to look upstream for areas to improve schedule adherence.

The cause statistics at the **Laurier** and **Uptown Waterloo** timepoints are very similar to the cause statistics at Conestoga Mall. They both indicate that we should continue to look upstream as we search for the cause of poor schedule adherence, and that excessive dwell time at the preceding stops and long travel times in the preceding segment are not an issue in the majority of cases where a bus is late in arriving at these timepoints.

At **Grand River Hospital**, we continue to find that that a high proportion of late buses (93%) were also late at the previous timepoint. However, we also find that almost all buses (92%) that arrived late at this timepoint took longer to travel from the previous timepoint (Charles Terminal) to this timepoint than was provided in the schedule. However, dwell time at the previous timepoint was an issue in only 33% of cases. These cause statistics indicate that the travel time scheduled from Charles Terminal to Grand River Hospital is insufficient, and that options to increase the scheduled travel time and/or to decrease the actual travel time in this segment should be investigated. Further, we should continue to look upstream for other areas to improve schedule adherence.

The **Charles Terminal** cause statistics are very similar to the cause statistics at McCormick, and from them we can conclude that to improve schedule adherence at this timepoint, we should make focus on changes upstream.

At **Ottawa**, the cause statistics indicate that almost all late buses are taking longer than scheduled to travel through the preceding segment (86%), dwelling too long at the previous timepoint (92%), and arriving at the previous timepoint late (89%). This indicates that several changes should be investigated here. First, scheduled travel time through the preceding segment is often insufficient and methods to

decrease travel time or an increase in the scheduled time should be investigated. Second, late buses are dwelling too long at the previous timepoint, Fairview, and an increase in scheduled dwell time or ways to decrease actual dwell time should be investigated. Third, most late buses are already somewhat late arriving at the previous stop, indicating that upstream issues are compounding the problem.

By **Fairview**, the percent of buses that are arriving late has fallen significantly when compared to downstream timepoints along the route, and may be closer to acceptable levels, indicating that the need to implement changes at this and preceding timepoints may not be as significant. Nonetheless, we do find that in many cases (76%) late buses at this timepoint need more travel time in the previous segment, and therefore scheduled travel time could be increased or methods to decrease actual travel time could be implemented. Further, late buses are frequently (92%) also late at the previous timepoint, indicating upstream changes should be considered.

The cause statistics at the **Smart!Centres Cambridge** timepoint indicate that 100% of late buses also arrived late at the previous timepoint, therefore to improve schedule adherence here we should investigate changes upstream.

The **Cambridge Centre** timepoint is the second timepoint on the iXpress route. The preceding timepoint, Ainslie Street Terminal, is the beginning of the route and we do not calculate a cause statistic for how frequently the bus arrived late at the beginning of the route. This is because a late arrival at the Ainslie Street Terminal would represent information from a previous trip, and since there is recovery time built into the schedule to allow a bus to get back on schedule between trips, arriving late at Ainslie Street Terminal does not necessarily have an effect on whether the bus is late at this timepoint. Further, due to the way the data is structured, what is recorded as a late arrival at Ainslie Street Terminal sometimes represents the time that the bus arrived at Ainslie Street Terminal from the garage in order to begin a block of trips, rather than the previous service trip. In this situation, the arrival time recorded in the database is essentially meaningless. The other two late cause statistics are calculated for Cambridge Centre, and we find that 100% of late buses dwelled at the preceding timepoint for longer than scheduled and 57% of late buses took longer to travel from the preceding timepoint than what was provided in the schedule. This means that in almost half the cases where a bus was late, scheduled travel time was sufficient and travel time changes are not likely required. However, as the preceding timepoint is a terminal, we should investigate whether the long dwell time is due to buses leaving the preceding timepoint late. If this is the case, we can improve schedule adherence by making changes to the scheduled dwell time, implementing measures to decrease dwell time, or improving adherence to scheduled departure times. If this is not the case, there is no benefit to making changes.

No cause statistics are calculated for late arrivals at **Ainslie Street Terminal**, as this is the beginning of the route.

We can use the visualization aid in order to confirm and expand on the information provided by the cause statistics, and to further assist in developing a strategy to improve schedule adherence. The visualization aid for this route is presented in Figure 23. A zoom-in on the figure is presented in Appendix E to provide a greater level of detail.

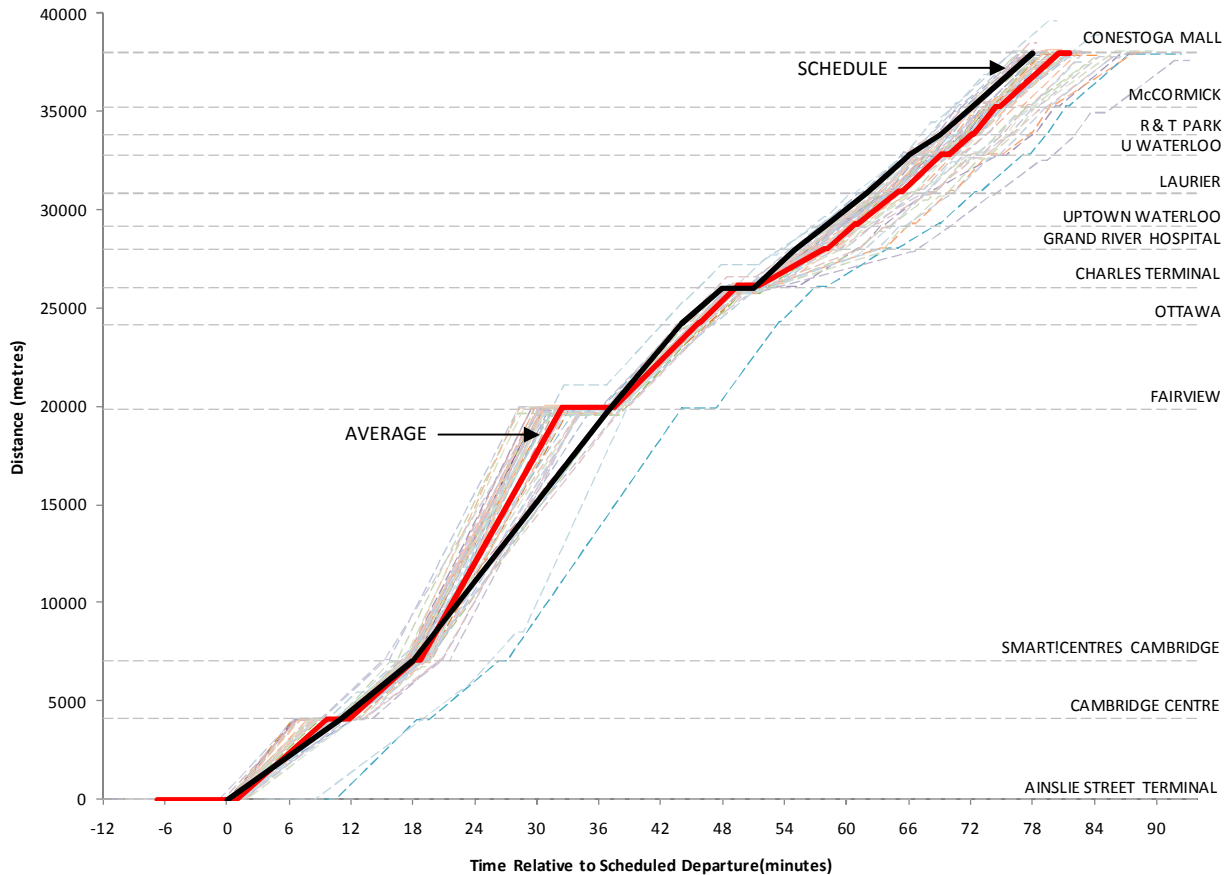


Figure 23. Visualization aid for iXpress, upward direction, 4:30 p.m. to 6:00 p.m.

The visualization aid presents the scheduled and average actual operation for 228 trips in the 4:30 p.m. to 6:00 p.m. time period. Individual trips are also indicated by the light dashed lines. Although there were approximately 450 total iXpress trips in the upward direction during the p.m. peak period, the data some trips had missing timepoints (do to incomplete data recovery) or different schedules, and only trips with identical timepoints and schedules are aggregated together into this visualization aid. Looking at Figure 23, we can see operation falls noticeably behind schedule between Charles Street Terminal and Grand River Hospital. After Grand River Hospital, many buses are not able to make up the time and remain behind schedule for the remainder of the route. This confirms our conclusions from the cause statistics. We can also see in the figure the extra dwell time that we noted was occurring at U Waterloo.

The Fairview to Ottawa segment is another area where we noted that provided travel time was insufficient, provided dwell time at Fairview was being exceeded, and that late buses at Ottawa were arriving late at Fairview too. We also noted that at Fairview, the frequency of buses arriving late was significantly smaller than at downstream timepoints. We can confirm all this information and learn more about the situation from Figure 23. First, the figure confirms that on average buses are taking longer to travel through this segment than is provided by the schedule (on average, about one minute longer). We also see that no dwell time is scheduled at Fairview, but most buses are dwelling for a significant amount of time (on average, about three and a half minutes). This often appears to be



because many buses arrive early at Fairview and must wait there to ensure they do not depart early. However some buses are not arriving early and are still dwelling longer than scheduled (since no dwell time is provided and Fairview is a busy stop). When combined with the typical longer than scheduled travel time from Fairview to Ottawa, these buses are often arriving late at Ottawa. When we compare our analysis of the visualization aid to our conclusions from the cause statistics, we confirm our findings that the scheduled travel time is insufficient. We also previously concluded that buses were dwelling longer than scheduled and that we should consider increasing the scheduled dwell time (or finding ways to lower actual dwell time) at Fairview. We now see that high dwell time is often because buses are arriving early and are waiting in order to get back on schedule. Therefore, we could shorten dwell time by reducing the scheduled travel time in the Smart!Centres Cambridge to Fairview segment, thereby keeping buses from arriving early and having to wait. The majority of trips appear to travelling through this segment quicker than scheduled (the average scheduled travel time for this segment, the longest on the route, is 18 minutes, while the average actual travel time is just under 15 minutes). However, this change will compound and add to the problems of the 15.9% of trips that are already arriving late at Fairview. This situation occurs because there is a high variability in travel time in the Smart!Centres Cambridge to Fairview segment, and improvements to reduce variability (such as transit signal priority, queue jump lanes, dedicated bus lanes, etc.) would be especially beneficial here. Regardless of the strategy decided on to address the dwell time issues, it would be prudent to add at least some dwell time to the schedule at Fairview. This is because even buses that do not arrive early at Fairview are dwelling longer than scheduled, which compounds their late arrival at Ottawa and further downstream. Note that for our analysis, when no dwell time is provided in the schedule, we do not consider actual dwell time to exceed scheduled dwell time unless the actual dwell time is larger than a minimum value ( $D_t = 30$  seconds). This is because Grand River Transit creates their schedule to the nearest minute. The methodology, however, can be utilized with whatever minimum actual dwell time value a user wishes and is not constrained to the value used in this application.

We can zoom in on specific timepoint pairs in our visualization aid, such as in Figure 24 which shows just the Charles Terminal to Grand River Hospital segment of the iXpress route. Zooming in like this allows us to refine our analysis by getting a better view of what is going on between timepoints.

Note that in Figure 24, it is clear to see that some buses appear to be stopping upstream or downstream of the timepoints instead of at the timepoints. There are several reasons that this may be occurring. In some cases, buses are legitimately stopping at locations other than where expected; the location of the timepoint in the database does not always perfectly coincide with the true location on the road network, and buses sometimes have to stop slightly before or after the timepoint location due to traffic conditions or due to other buses already filling the bus bay at the timepoint. Research by Steve Robinson has actually looked at how AVL/APC data could be used to improve the data about true stop locations for a transit agency (2008). In other cases, data problems are the cause of the apparent unexpected stop locations. The visualization aids are created based on odometer readings. This is not completely accurate, and errors in odometer readings can build upon each other and increase along a route. Further, any unplanned detours will result in inaccurate position data for the remainder of the route. Significant errors and detours should not be included in the dataset for planning purposes, and

this is part of the work that was discussed in Section 3.1. However, data quality checks to identify these problems are not currently implemented and are not within the scope of this thesis; they remain as future work. Smaller errors have the potential to be “corrected” by “recalibrating” odometer readings mid-route based on known timepoint locations, and also by integrating odometer readings with GPS readings to provide increased accuracy. This would be very beneficial and would further improve the usefulness of the visualization aid, but is beyond the scope of this thesis.

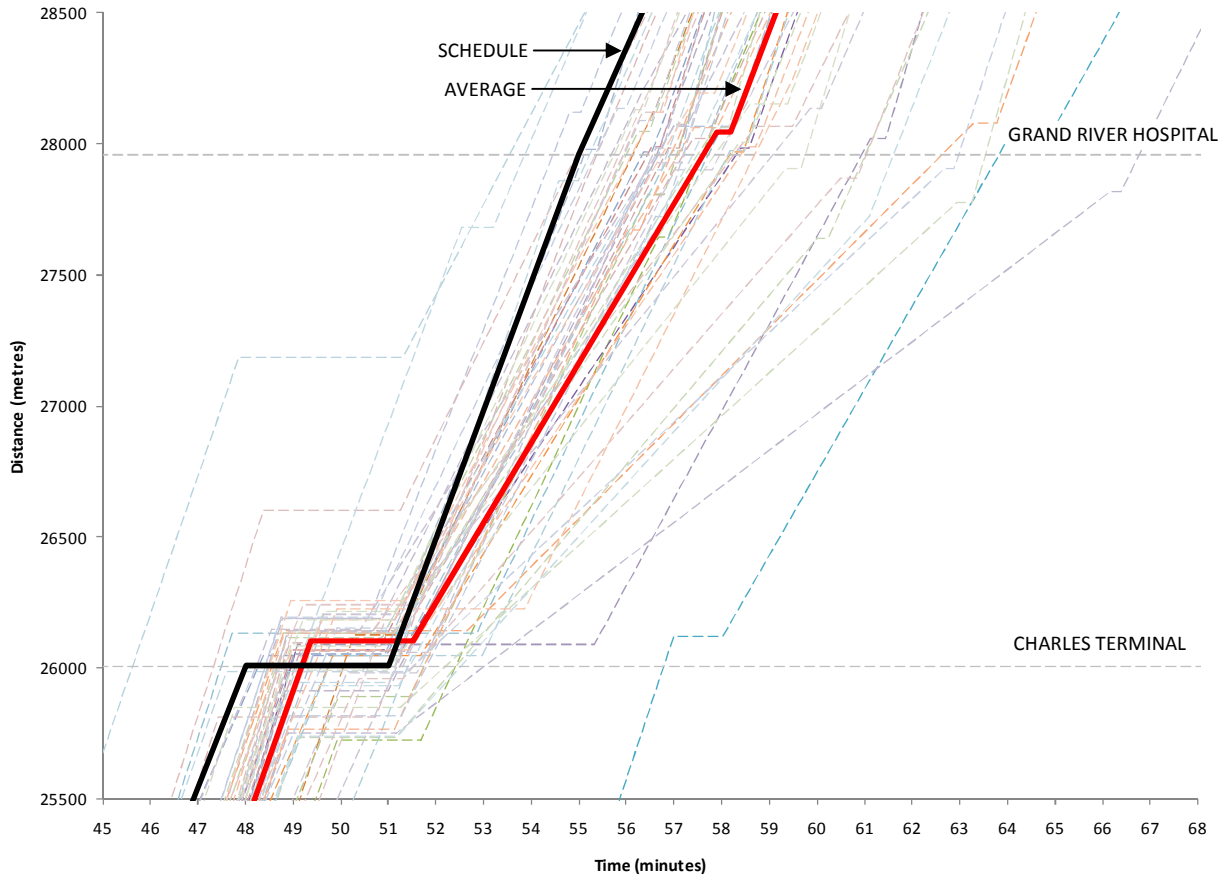


Figure 24. Visualization aid for iXpress, Charles Terminal to Grand River Hospital, upward direction, 4:30 p.m. to 6:00 p.m.

We had noted that a significant cause of late arrivals in the latter half of the iXpress route was the longer than scheduled travel time from Charles Terminal to Grand River Hospital. This long travel time results in buses falling behind schedule which they are typically not able to make up and therefore remain behind schedule at downstream stops. The visual aids contain inter-timepoint data, which are not utilized in the cause statistics. This data can show us where slowdowns are occurring, such as in specific segments or specific intersections. These inter-timepoint slowdowns would be visible in the visualization aids as flat plateaus (for stops) and changes in the slope (for changes in speed) of the trip lines. Looking at Figure 24, we do not see significant stops or changes in speeds over the Charles Terminal to Grand River Hospital segment. This seems to indicate that there are no specific locations that are leading to the slowdown, but rather that the whole segment is slower than expected. This leads to two obvious options to improve schedule adherence. The first option is to implement measures

to increase speed along much of the length of the Charles Terminal to Grand River Hospital segment. Because there is no single bottleneck to fix, improvements will need to cover much of the length of this segment and may be very costly and time-consuming to implement. The second option is to increase the amount of time provided in the schedule for a bus to travel through this segment. This has a lower upfront capital cost and is a quicker option to implement, although it does not have the long term dis-benefit of increased running times and therefore increased cost to GRT.

Note that it is possible that there are specific locations where slowdowns are occurring between Charles Terminal and Grand River Hospital, but if the bus does not come to a full stop a data record is not created so these locations would not be visible in the visualization aid. It is hoped that with records from many buses, slowdowns will cause full stops for some of them and the trend can be seen, but this is not guaranteed. If slowdowns are occurring at specific locations along the route and buses are not coming to full stops, there is no way of knowing this without higher resolution data than what is being provided by the GRT AVL/APC system.

Ultimately, analysis of the cause statistics and visualization aids have led to several recommended strategies for improving schedule adherence on the iXpress route in the upward direction during the 4:30 p.m. to 6:00 p.m. time period. These strategies are summarized in Table 19.

Table 19. Strategies for Improving Schedule Adherence on iXpress, Upward Direction

<b>Segment</b>	<b>Strategy</b>
<b>McCormick to Conestoga Mall</b>	<ul style="list-style-type: none"> <li>• no changes</li> </ul>
<b>R &amp; T Park to McCormick</b>	<ul style="list-style-type: none"> <li>• no changes</li> </ul>
<b>U Waterloo to R &amp; T Park</b>	<ul style="list-style-type: none"> <li>• increase scheduled dwell time at U Waterloo or find strategy to decrease actual dwell time</li> </ul>
<b>Laurier to U Waterloo</b>	<ul style="list-style-type: none"> <li>• increase scheduled travel time or investigate methods to decrease actual travel time slightly</li> </ul>
<b>Uptown Waterloo to Laurier</b>	<ul style="list-style-type: none"> <li>• no changes</li> </ul>
<b>Grand River Hospital to Uptown Waterloo</b>	<ul style="list-style-type: none"> <li>• no changes</li> </ul>
<b>Charles Terminal to Grand River Hospital</b>	<ul style="list-style-type: none"> <li>• increase scheduled travel time or investigate methods to decrease actual travel time</li> </ul>
<b>Ottawa to Charles Terminal</b>	<ul style="list-style-type: none"> <li>• no changes</li> </ul>
<b>Fairview to Ottawa</b>	<ul style="list-style-type: none"> <li>• increase scheduled travel time or investigate methods to decrease actual travel time</li> <li>• increase scheduled dwell time at Fairview</li> </ul>
<b>Smart!Centres Cambridge to Fairview</b>	<ul style="list-style-type: none"> <li>• implement measures to decrease running time variability</li> <li>• schedule options: <ul style="list-style-type: none"> <li>○ increase scheduled travel time (will lower % late arrivals but will compound long dwells at Fairview)</li> <li>○ decrease scheduled travel time (will reduce long dwells but compound late arrivals at Fairview)</li> <li>○ no changes</li> </ul> </li> </ul>
<b>Cambridge Centre to Smart!Centres Cambridge</b>	<ul style="list-style-type: none"> <li>• no changes</li> </ul>
<b>Ainslie Street Terminal to Cambridge Centre</b>	<ul style="list-style-type: none"> <li>• no changes</li> </ul>

The above example demonstrates how cause statistics and visualization aids can be used to determine why poor schedule adherence is occurring and to develop strategies to improve schedule adherence. The same thought process and methodology could be used to analyze any other route/direction or the problem of early departures.

The recommendations are qualitative in nature. It is expected that quantifying the strategies, such as how much time to give or take from the schedule, would be determined using traditional transit planning methods. However, these traditional planning methods will be enhanced by the improved data made available by AVL/APC systems. For example, detailed information can be calculated on average and percentile running times (average and 85<sup>th</sup> percentile running times can be found for every segment during the p.m. and a.m. peak period in Appendix B and C, respectively). By knowing the areas that need improvement and the problems that are causing poor schedule adherence, applying traditional transit planning methods to decide on improvement strategies will be more focused and efficient.

Ultimately, the methodology has the potential to be enhanced by automatically recommending and quantifying strategies as well. Once strategies are recommended, it will be beneficial to analyze the impact of suggested changes on bus operations using the archived data (i.e. prior to implementing).

This could be done by assuming that buses depart on time from the first timepoint on-time and then finding out how schedule adherence performance is affected if all other bus operating characteristics (i.e. travel times and dwell times where improvements are not made) remain unchanged.

## 5 Conclusions and Recommendations

The data provided by AVL/APC systems provide an incredible opportunity for transit service providers to monitor and improve transit system performance. This thesis developed a methodology to use archived data from a typical AVL/APC system in order to monitor and improve one aspect of system performance, schedule adherence.

The proposed methodology utilizes performance measures to monitor schedule adherence and to prioritize where schedule adherence improvement efforts should focus. Routes and timepoints with poor schedule adherence are highlighted and the causes of the poor performance are identified. The performance measures and cause information can then be used in conjunction with visualization aids to develop strategies for improving transit system performance.

The ultimate output of the methodology developed in this thesis consists of the following:

1. A ranked list of routes by direction (for a given time period) that identifies routes with the poorest schedule adherence performance.
2. Performance measures within any given route, direction, and time period that identifies which timepoints are contributing most to poor schedule adherence.
3. Statistics indicating identified causes of poor schedule adherence at individual timepoints.
4. A visualization aid to be used in conjunction with the cause statistics generated in Step 3 in order to develop an effective strategy for improving schedule adherence issues.

The methodology allows for the calculation of the above output automatically, which significantly lowers the resource requirements of using archived AVL/APC system data by transit agencies. The output will allow agencies to act proactively to improve their transit system, rather than wait until they discover problems on their own or hear complaints from passengers and drivers. Further, it provides a framework for agencies to objectively rank and decide where to prioritize their resources such that improvements to the system yield the greatest gain.

The development and testing of this methodology has resulted in several findings:

- The methodology benefits significantly from having a large portion of the transit fleet outfitted with AVL/APC systems. This allows a sampling size adequate for the calculation of performance measures to be obtained over a relatively short time period. For the calculation of cause statistics, sampling of a large fraction of trips is necessary.
- Selecting an appropriate definition of “on-time” is of critical importance when using AVL/APC system data for the purpose of measuring schedule adherence. Defining early as “leaving greater than zero seconds early” should not be used.
- The high volume, precision, and types of data provided by AVL/APC systems provide an opportunity to improve on the traditional schedule adherence performance measures by accounting for how passengers are affected by “not on-time” buses. These new performance measures should be used to determine where improvement efforts should focus.

- Cause statistics and visualization aids can be utilized to determine why poor schedule adherence is occurring and to develop strategies for improving schedule adherence; because these cause statistics and visualization aids are automatically created, the resources required to carry out these tasks are greatly reduced.

The methodology and findings presented in this thesis naturally lead to several opportunities and questions that can be considered in future research:

- The proposed methodology utilizes AVL/APC system data and schedule data. However, a variety of other data sources are often collected but not integrated. These data sources can include GIS data, operations data, farebox data, weather data, and more. Opportunities to incorporate these data sources and use them to improve the process could be investigated.
- The cause statistics may benefit from further refinement in order to provide more detail than is provided by the method proposed in this thesis. This may involve using inter-timepoint AVL/APC system data.
- Current practice generally involves creating performance measures to identify problems and then manually compiling data to learn more about the problems and to develop a strategy to address the problems. The methodology presented in this thesis advances current practice by proposing improved performance measures that take advantage of new data sources in order to identify problems from a new perspective, and then automatically creating statistics and figures that indicate why the problems are occurring. These statistics and figures are analyzed to develop a strategy to address the problems. This significantly lowers the workload as compared to current practice, but can be taken a step further. Ultimately, it would be beneficial to have a methodology that can be automated throughout the entire process, including the development of strategies to address identified problems. Such a methodology would utilize the AVL/APC system data to create performance measures that indicate where problems are occurring, automatically develop optimal strategies to improve performance, and push this information to the transit agency. Future research on how to automatically develop and decide among solutions to schedule adherence problems would be valuable.
- To systematically evaluate recommended strategies, their impact could be analyzed prior to implementation using the archived data. This could be done by developing an analysis tool that assumes that buses in the dataset depart on-time from the first timepoint and then calculates the schedule adherence performance measures based on combination of observed operating characteristics (i.e. travel times and dwell times), the new proposed schedule, and proposed changes in operating characteristics (where applicable) due to proposed improvements (such as bus lanes, transit signal priority, etc.).

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## **Appendix A. Grand River Transit Maps**

(103 pages)

# SATURDAY SERVICE

TO: Stanley Park TO: Downtown

TIMEPOINT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Map Reference
CHARLES ST. - Depart																											
BECKER at BELLEVIEW																											
LORRAINNE at RIVER																											
LORRAINNE at LACKNER																											
STANLEY PARK MALL - Depart																											
STANLEY PARK MALL - Arrive																											
CHARLES ST. - Arrive																											

# SUNDAY SERVICE

TO: Stanley Park TO: Downtown

TIMEPOINT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Map Reference
CHARLES ST. - Depart																											
BECKER at BELLEVIEW																											
LORRAINNE at RIVER																											
LORRAINNE at LACKNER																											
STANLEY PARK MALL - Depart																											
STANLEY PARK MALL - Arrive																											
CHARLES ST. - Arrive																											



All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.



Fares and schedules are subject to change without notice.

**How to use this schedule...**Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

# 1

## Stanley Park

Summer service changes included

### Year-round Schedule

Effective: September 1, 2008

Kindly reuse this timetable

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

# MONDAY TO FRIDAY SERVICE

TO: Stanley Park

TO: Downtown

# SUMMER RUSH-HOUR SERVICE

TO: Stanley Park

TO: Downtown

# Summer Schedule Late June to Labour Day

Service will be reduced in the weekday rush-hour periods during the summer.  
For schedule information in the time periods denoted by a ❖ please refer to the schedule titled "Summer Rush-hour Service" located beside this note.

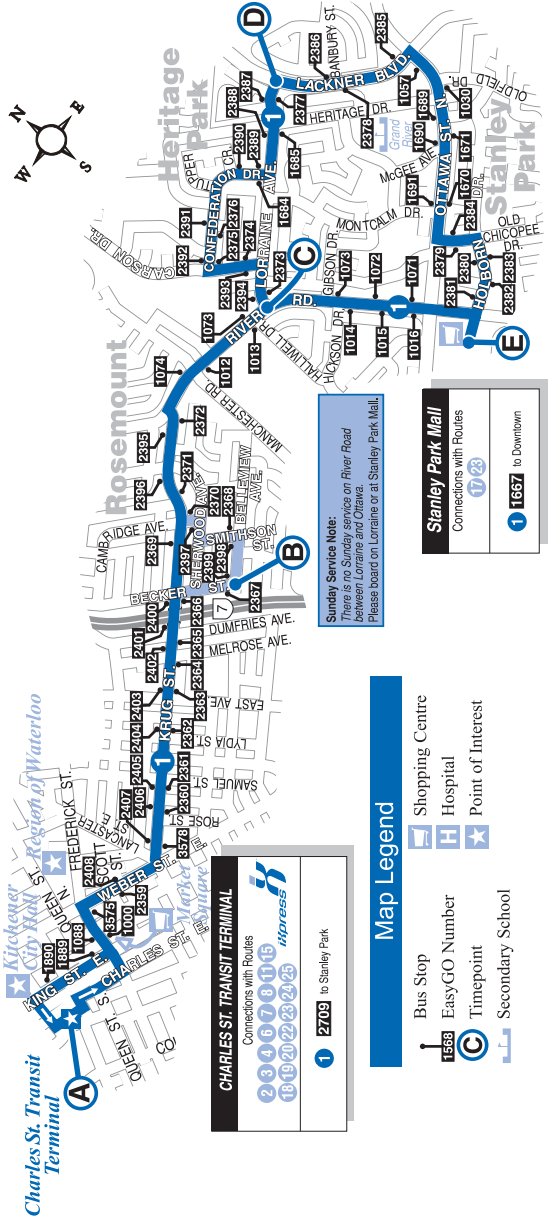


CALL 519-586-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.  
24 hrs/day 7 days/week

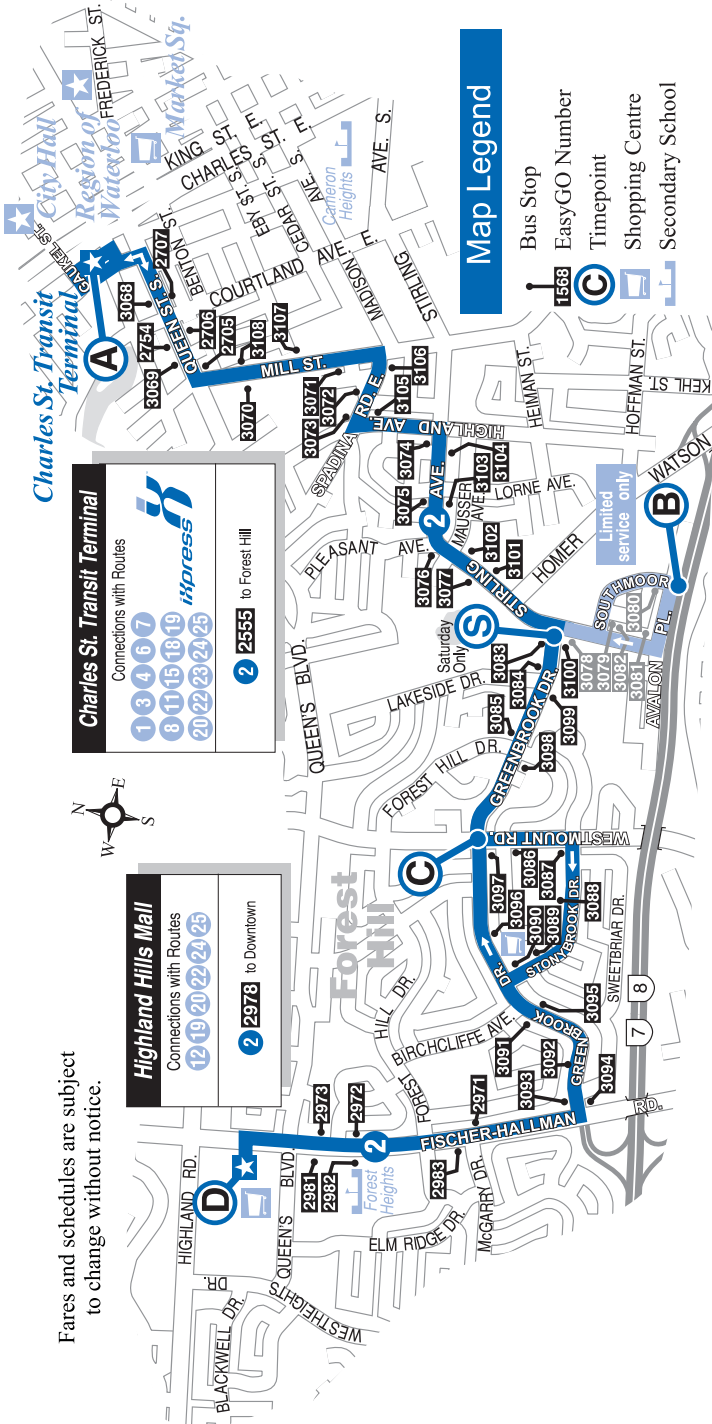
TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	(A)	(B)	(C)	(D)	(E)	Map Reference
CHARLES ST. TERMINAL - Depart	BECKER at BELLEVUE	LORRAINE at RIVER	LORRAINE at LACKNER	STANLEY PARK MALL - Depart	STANLEY PARK MALL - Arrive	STANLEY PARK MALL - Depart	BECKER at BELLEVUE	LORRAINE at RIVER	LORRAINE at LACKNER	STANLEY PARK MALL - Depart	STANLEY PARK MALL - Arrive
6:15	6:22	6:27	6:31	6:36	6:38	6:41	6:45	6:55	7:07	7:15	7:25
6:45	6:52	6:57	7:00	7:02	7:05	7:07	7:11	7:15	7:25	7:31	7:38
7:15	7:22	7:27	7:31	7:36	7:38	7:41	7:45	7:57	8:07	8:11	8:27
7:45	7:52	7:57	8:00	8:02	8:05	8:07	8:11	8:15	8:27	8:31	8:45
8:15	8:22	8:27	8:31	8:36	8:38	8:41	8:45	8:55	9:07	9:11	9:25
8:45	8:52	8:57	9:00	9:02	9:05	9:07	9:11	9:15	9:25	9:31	9:38
9:15	9:22	9:27	9:31	9:36	9:38	9:41	9:45	9:55	10:07	10:11	10:25
9:45	9:52	9:57	10:00	10:02	10:05	10:07	10:11	10:15	10:25	10:31	10:38
10:15	10:22	10:27	10:31	10:36	10:38	10:41	10:45	10:55	11:07	11:11	11:25
10:45	10:52	10:57	11:00	11:02	11:05	11:07	11:11	11:15	11:25	11:31	11:38
11:15	11:22	11:27	11:31	11:36	11:38	11:41	11:45	11:55	12:07	12:11	12:25
11:45	11:52	11:57	12:00	12:02	12:05	12:07	12:11	12:15	12:25	12:31	12:38
12:15	12:22	12:27	12:31	12:36	12:38	12:41	12:45	12:55	1:07	1:11	1:25
12:45	12:52	12:57	1:00	1:02	1:05	1:07	1:11	1:15	1:25	1:31	1:38
1:15	1:22	1:27	1:31	1:36	1:38	1:41	1:45	1:55	2:07	2:11	2:25
1:45	1:52	1:57	2:00	2:02	2:05	2:07	2:11	2:15	2:25	2:31	2:38
2:15	2:22	2:27	2:31	2:36	2:38	2:41	2:45	2:55	3:07	3:11	3:25
2:45	2:52	2:57	3:00	3:02	3:05	3:07	3:11	3:15	3:25	3:31	3:38
3:00	3:07	3:12	3:16	3:21	3:23	3:26	3:30	3:40	3:52	3:56	4:10
3:15	3:22	3:27	3:31	3:36	3:38	3:41	3:45	3:55	4:07	4:11	4:25
3:30	3:37	3:42	3:46	3:51	3:53	3:56	4:00	4:10	4:22	4:26	4:40
3:45	3:52	3:57	4:00	4:03	4:06	4:09	4:13	4:23	4:35	4:39	4:53
4:00	4:07	4:12	4:16	4:21	4:23	4:26	4:30	4:40	4:52	4:56	5:10
4:15	4:22	4:27	4:31	4:36	4:38	4:41	4:45	4:55	5:07	5:11	5:25
4:30	4:37	4:42	4:46	4:51	4:53	4:56	5:00	5:10	5:22	5:26	5:40
4:45	4:52	4:57	5:00	5:03	5:06	5:09	5:13	5:23	5:35	5:39	5:53
5:00	5:07	5:12	5:16	5:21	5:23	5:26	5:30	5:40	5:52	5:56	6:10
5:15	5:22	5:27	5:31	5:36	5:38	5:41	5:45	5:55	6:07	6:11	6:25
5:30	5:37	5:42	5:46	5:51	5:53	5:56	6:00	6:10	6:22	6:26	6:40
5:45	5:52	5:57	6:00	6:02	6:05	6:08	6:12	6:22	6:34	6:38	6:52
6:00	6:07	6:12	6:16	6:21	6:23	6:26	6:30	6:40	6:52	6:56	7:10
6:15	6:22	6:27	6:31	6:36	6:38	6:41	6:45	6:55	7:07	7:11	7:25
6:45	6:52	6:57	7:00	7:02	7:05	7:07	7:11	7:15	7:25	7:31	7:38
7:30	7:37	7:42	7:46	7:51	7:53	7:56	8:00	8:10	8:22	8:26	8:40
8:15	8:22	8:27	8:31	8:36	8:38	8:41	8:45	8:55	9:07	9:11	9:25
9:00	9:07	9:12	9:16	9:21	9:23	9:26	9:30	9:40	9:52	9:56	10:10
9:45	9:52	9:57	10:00	10:02	10:05	10:07	10:11	10:21	10:33	10:37	10:51
10:30	10:37	10:42	10:46	10:51	10:53	10:56	11:00	11:10	11:22	11:26	11:40
11:15	11:22	11:27	11:31	11:36	11:38	11:41	11:45	11:55	12:07	12:11	12:25
12:00	12:07	12:12	12:16	12:21	12:23	12:26	12:30	12:40	12:52	12:56	1:10

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	(A)	(B)	(C)	(D)	(E)	Map Reference
CHARLES ST. TERMINAL - Depart	BECKER at BELLEVUE	LORRAINE at RIVER	LORRAINE at LACKNER	STANLEY PARK MALL - Depart	STANLEY PARK MALL - Arrive	STANLEY PARK MALL - Depart	BECKER at BELLEVUE	LORRAINE at RIVER	LORRAINE at LACKNER	STANLEY PARK MALL - Depart	STANLEY PARK MALL - Arrive
6:15	6:22	6:27	6:31	6:36	6:38	6:41	6:45	6:55	7:07	7:15	7:25
6:45	6:52	6:57	7:00	7:02	7:05	7:07	7:11	7:15	7:25	7:31	7:38
7:15	7:22	7:27	7:31	7:36	7:38	7:41	7:45	7:57	8:07	8:11	8:27
7:45	7:52	7:57	8:00	8:02	8:05	8:07	8:11	8:15	8:27	8:31	8:45
8:15	8:22	8:27	8:31	8:36	8:38	8:41	8:45	8:55	9:07	9:11	9:25
8:45	8:52	8:57	9:00	9:02	9:05	9:07	9:11	9:15	9:25	9:31	9:38
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9:45	9:52	9:57	10:00	10:02	10:05	10:07	10:11	10:15	10:25	10:31	10:38
10:15	10:22	10:27	10:31	10:36	10:38	10:41	10:45	10:55	11:07	11:11	11:25
10:45	10:52	10:57	11:00	11:02	11:05	11:07	11:11	11:15	11:25	11:31	11:38
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11:45	11:52	11:57	12:00	12:02	12:05	12:07	12:11	12:15	12:25	12:31	12:38
12:15	12:22	12:27	12:31	12:36	12:38	12:41	12:45	12:55	1:07	1:11	1:25
12:45	12:52	12:57	1:00	1:02	1:05	1:07	1:11	1:15	1:25	1:31	1:38
1:15	1:22	1:27	1:31	1:36	1:38	1:41	1:45	1:55	2:07	2:11	2:25
1:45	1:52	1:57	2:00	2:02	2:05	2:07	2:11	2:15	2:25	2:31	2:38
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2:45	2:52	2:57	3:00	3:02	3:05	3:07	3:11	3:15	3:25	3:31	3:38
3:00	3:07	3:12	3:16	3:21	3:23	3:26	3:30	3:40	3:52	3:56	4:10
3:15	3:22	3:27	3:31	3:36	3:38	3:41	3:45	3:55	4:07	4:11	4:25
3:30	3:37	3:42	3:46	3:51	3:53	3:56	4:00	4:10	4:22	4:26	4:40
3:45	3:52	3:57	4:00	4:03	4:06	4:09	4:13	4:23	4:35	4:39	4:53
4:00	4:07	4:12	4:16	4:21	4:23	4:26	4:30	4:40	4:52	4:56	5:10
4:15	4:22	4:27	4:31	4:36	4:38	4:41	4:45	4:55	5:07	5:11	5:25
4:30	4:37	4:42	4:46	4:51	4:53	4:56	5:00	5:10	5:22	5:26	5:40
4:45	4:52	4:57	5:00	5:03	5:06	5:09	5:13	5:23	5:35	5:39	5:53
5:00	5:07	5:12	5:16	5:21	5:23	5:26	5:30	5:40	5:52	5:56	6:10
5:15	5:22	5:27	5:31	5:36	5:38	5:41	5:45	5:55	6:07	6:11	6:25
5:30	5:37	5:42	5:46	5:51	5:53	5:56	6:00	6:10	6:22	6:26	6:40
5:45	5:52	5:57	6:00	6:02	6:05	6:08	6:12	6:22	6:34	6:38	6:52
6:00	6:07	6:12	6:16	6:21	6:23	6:26	6:30	6:40	6:52	6:56	7:10
6:15	6:22	6:27	6:31	6:36	6:38	6:41	6:45	6:55	7:07	7:11	7:25
6:45	6:52	6:57	7:00	7:02	7:05	7:07	7:11	7:15	7:25	7:31	7:38
7:30	7:37	7:42	7:46	7:51	7:53	7:56	8:00	8:10	8:22	8:26	8:40
8:15	8:22	8:27	8:31	8:36	8:38	8:41	8:45	8:55	9:07	9:11	9:25
9:00	9:07	9:12	9:16	9:21	9:23	9:26	9:30	9:40	9:52	9:56	10:10
9:45	9:52	9:57	10:00	10:02	10:05	10:07	10:11	10:21	10:33	10:37	10:51
10:30	10:37	10:42	10:46	10:51	10:53	10:56	11:00	11:10	11:22	11:26	11:40
11:15	11:22	11:27	11:31	11:36	11:38	11:41	11:45	11:55	12:07	12:11	12:25
12:00	12:07	12:12	12:16	12:21	12:23	12:26	12:30	12:40	12:52	12:56	1:10

Note: Weather conditions, construction, accidents etc. may cause schedule delays.



Fares and schedules are subject to change without notice.



**easyGO**  
CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.  
24 hrs/day 7 days/week

# 2

## Forest Hill

Summer service changes included



**Year-round Schedule**  
Effective: September 7, 2009



Kindly reuse this timetable



**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)



# MONDAY TO FRIDAY SERVICE

TO: Forest Hill → TO: Downtown →

	TIMEPOINT:							Map Reference
	CHARLES ST. TERMINAL - Depart	SOUTHMOOR at AVALON	GREENBROOK at WESTMOUNT	HIGHLAND HILLS MALL - Depart	GREENBROOK at WESTMOUNT	SOUTHMOOR at AVALON	CHARLES ST. TERMINAL - Arrive	
	(A)	(B)	(C)	(D)	(C)	(B)	(A)	
<b>A</b> <b>M</b>			● 6:02	6:08	6:12	6:22		
			● 6:32	6:38	6:42	6:52		
	6:45		6:55	7:02	7:08	7:12	7:22	
	7:15		7:25	7:32	7:38	7:42	7:52	
	7:45		7:55	8:02	8:08	8:12	8:22	
	8:15		8:25	8:32	8:38	8:42	8:52	
	8:45		8:55	9:02	9:07	9:11	9:21	❖
	9:15		9:25	9:32	9:37	9:41	9:51	❖
	9:45	9:54	9:58	10:04	10:09		10:20	❖
	10:15		10:25	10:32	10:37	10:41	10:51	❖
	10:45	10:54	10:58	11:04	11:09		11:20	❖
	11:15		11:25	11:32	11:37	11:41	11:51	❖
11:45	11:54	11:58	12:04	12:09		12:20	❖	
12:15		12:25	12:32	12:37	12:41	12:51	❖	
12:45	12:54	12:58	1:04	1:09		1:20	❖	
1:15		1:25	1:32	1:37	1:41	1:51	❖	
1:45	1:54	1:58	2:05	2:11		2:22	❖	
2:15		2:25	2:32	2:38	2:42	2:52	❖	
<b>P</b> <b>M</b>	2:45	2:54	2:58	3:05	3:11	3:22		
	3:15	3:24	3:28	3:35	3:41	3:52		
	3:45	3:54	3:58	4:05	4:11	4:22		
	4:15	4:24	4:28	4:35	4:41	4:52		
	4:45	4:54	4:58	5:05	5:11	5:22		
	5:15	5:24	5:28	5:35	5:41	5:52		
	5:45	5:54	5:58	6:04	arrival only/bus to garage			
	6:15	6:24	6:28	6:34	arrival only/bus to garage			
6:45	6:54	6:58	7:04	arrival only/bus to garage				

● Service begins at Westmount/Stoneybrook

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

### How to use this schedule...

Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

# SATURDAY SERVICE

TO: Forest Hill → TO: Downtown →

	TIMEPOINT:					Map Reference
	CHARLES ST. TERMINAL - Depart	GREENBROOK at STIRLING	HIGHLAND HILLS MALL - Depart	GREENBROOK at STIRLING	CHARLES ST. TERMINAL - Arrive	
	(A)	(S)	(D)	(S)	(A)	
<b>A</b> <b>M</b>			● 6:35	6:42*	6:54	
	7:15*	7:25	7:35	7:42	7:51	
	8:15	8:23	8:35	8:42*	8:54	
	9:15*	9:25	9:35	9:43	9:52	
	10:15	10:23	10:35	10:43*	10:55	
	11:15*	11:25	11:35	11:43	11:52	
	12:15	12:23	12:35	12:43*	12:55	
	1:15*	1:25	1:35	1:43	1:52	
	2:15	2:23	2:35	2:43*	2:55	
	3:15*	3:25	3:35	3:43	3:52	
	4:15	4:23	4:35	4:43*	4:55	
	5:15*	5:25	5:35	5:43	5:52	
<b>P</b> <b>M</b>	6:05	6:13	6:21	6:29*	6:41	
	6:45*	6:55	7:03	bus to garage		

★ via Southmoor and Avalon

# SUMMER MIDDAY SERVICE

TO: Forest Hill → TO: Downtown →

	TIMEPOINT:							Map Reference	
	CHARLES ST. TERMINAL - Depart	SOUTHMOOR at AVALON	GREENBROOK at WESTMOUNT	HIGHLAND HILLS MALL - Depart	GREENBROOK at WESTMOUNT	SOUTHMOOR at AVALON	CHARLES ST. TERMINAL - Arrive		
	(A)	(B)	(C)	(D)	(C)	(B)	(A)		
<b>A</b> <b>M</b>	9:00	9:09	9:13	9:20	9:25	9:29	9:39		
	9:45	9:54	9:58	10:05	10:10	10:14	10:24		
	10:30	10:39	10:43	10:50	10:55	10:59	11:09		
	11:15	11:24	11:28	11:35	11:40	11:44	11:54		
	12:00	12:09	12:13	12:20	12:25	12:29	12:39		
	12:45	12:54	12:58	1:05	1:10	1:14	1:24		
	1:30	1:39	1:43	1:50	1:55	1:59	2:09		
	2:15	2:24	2:28	2:35	2:41	2:45	2:55		
	<b>P</b> <b>M</b>	2:15	2:24	2:28	2:35	2:41	2:45	2:55	

### SUMMER SCHEDULE PERIOD Late June to Labour Day

Service will be reduced in the weekday midday period during the summer.

For schedule information for the trips denoted by a ↺ please refer to the schedule above.

# Christmas and Summer Schedule

December 21st, 2009 to January 3rd, 2010  
Late June to Labour Day

During the summer and Christmas holiday seasons, service will be reduced in the weekday rush-hour periods.

**Charles St. Transit Terminal**

Connections with Routes

1	2	4	6	7
8	11	15	18	19
20	22	23	24	25

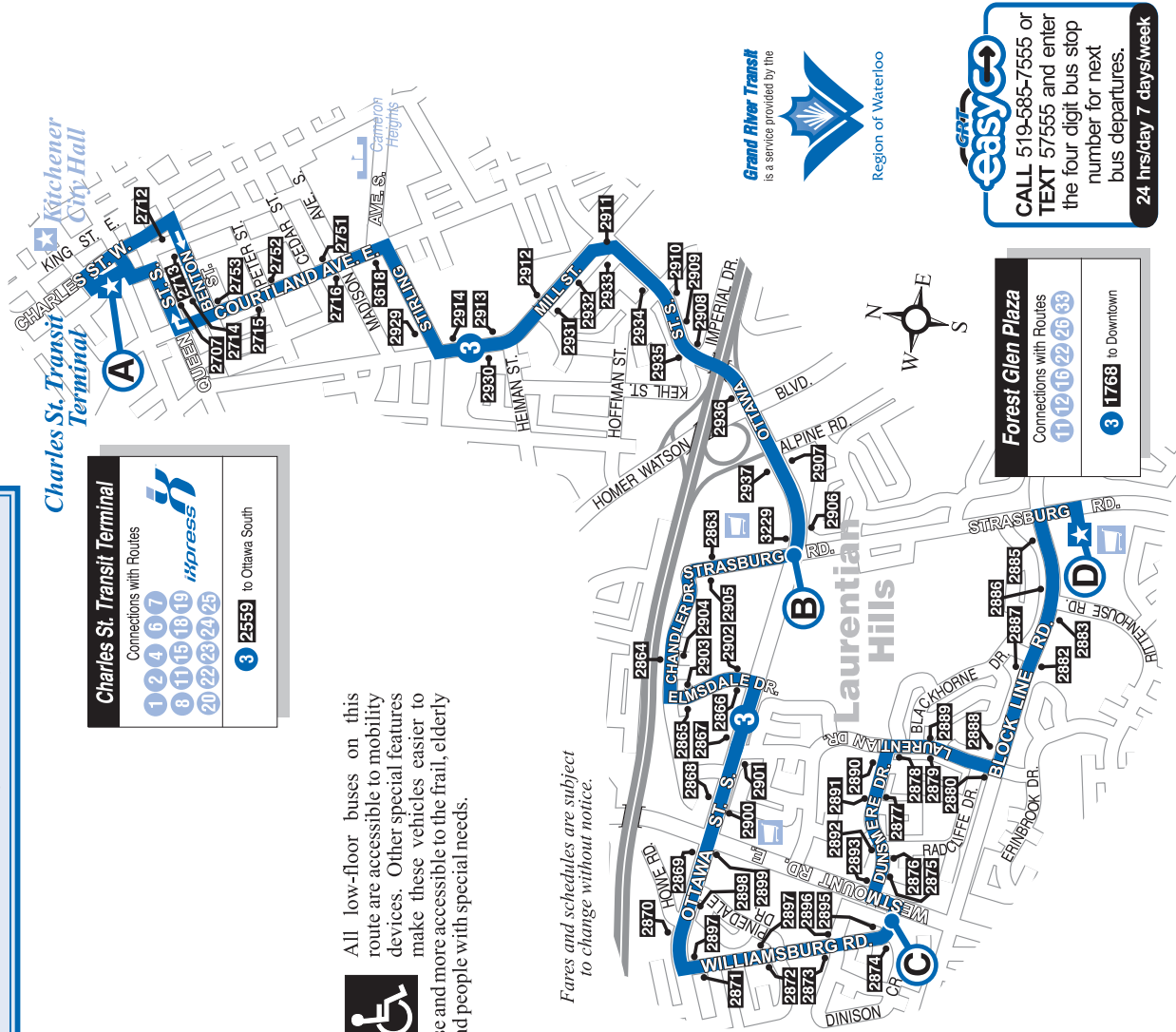
**3** 2559 to Ottawa South

*Express*

All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.



Fares and schedules are subject to change without notice.



# 3

## Ottawa South

Summer and Christmas service changes included

**Year-round Schedule**  
Effective: June 23, 2008

Kindly reuse this timetable

**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**  
TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)

# WEEKDAY SERVICE

TO: Ottawa South → TO: Downtown →

TIMEPOINT:	TO: Ottawa South				TO: Downtown				Map Reference
	A	B	C	D	C	B	A		
CHARLES ST. TERMINAL - Depart					5:45	5:51	5:59	6:12	
OTTAWA at STRASBURG					6:00	6:06	6:14	6:27	
WILLIAMSBURG at WESTMOUNT					6:15	6:21	6:29	6:42	
FOREST GLEN PLAZA - Arrive					6:30	6:36	6:44	6:57	☀️ ❄️
FOREST GLEN PLAZA - Depart					6:45	6:51	6:59	7:12	
WILLIAMSBURG at WESTMOUNT					7:00	7:06	7:14	7:27	☀️ ❄️
OTTAWA at STRASBURG					7:15	7:21	7:29	7:42	
CHARLES ST. TERMINAL - Arrive					7:30	7:36	7:44	7:57	☀️ ❄️
					7:45	7:51	7:59	8:12	☀️ ❄️ ●
					8:00	8:06	8:14	8:27	☀️ ❄️
					8:15	8:21	8:29	8:42	☀️ ❄️
					8:30	8:36	8:44	8:57	☀️ ❄️
					8:45	8:51	8:59	9:12	
					9:15	9:21	9:29	9:42	
					9:45	9:51	9:59	10:12	
					10:15	10:21	10:29	10:42	
					10:45	10:51	10:59	11:12	
					11:15	11:21	11:29	11:42	
					11:45	11:51	11:59	12:12	
					12:15	12:21	12:29	12:42	
					12:45	12:51	12:59	1:12	
					1:15	1:21	1:29	1:42	
					1:45	1:51	1:59	2:12	
					2:15	2:21	2:29	2:42	
					2:45	2:51	3:00	3:13	
					3:15	3:21	3:30	3:43	
					3:00	3:12	3:20	3:33	☀️ ❄️
					3:15	3:27	3:35	3:48	☀️ ❄️
					3:30	3:42	3:50	4:03	☀️ ❄️
					3:45	3:57	4:05	4:18	☀️ ❄️
					4:00	4:12	4:20	4:33	☀️ ❄️
					4:15	4:27	4:35	4:48	☀️ ❄️
					4:30	4:42	4:50	5:03	☀️ ❄️
					4:45	4:57	5:05	5:18	☀️ ❄️
					5:00	5:12	5:20	5:33	☀️ ❄️
					5:15	5:27	5:35	5:48	☀️ ❄️
					5:30	5:42	5:50	6:03	☀️ ❄️
					5:45	5:57	6:05	6:18	
					6:15	6:27	6:35	6:48	
					6:45	6:57	7:05	7:18	
					7:15	7:27	7:35	7:48	
					7:45	7:57	8:05	8:18	
					8:15	8:27	8:35	8:48	
					8:45	8:57	9:05	9:18	
					9:15	9:27	9:35	9:48	
					10:15	10:27	10:35	10:48	
					11:15	11:27	11:35	11:48	
					12:15	12:27	12:35	12:48	

- ☀️ ❄️ These trips do not operate during the Summer (late-June to Labour Day) or Christmas schedule periods
- ☀️ This trip does not operate during the Summer schedule period
- Low floor buses are not available for marked trips

**How to use this schedule...** Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

# SATURDAY SERVICE

TO: Ottawa South → TO: Downtown →

TIMEPOINT:	TO: Ottawa South				TO: Downtown				Map Reference		
	A	B	C	D	C	B	A				
CHARLES ST. TERMINAL - Depart					6:26	6:33	6:40	6:00	6:06	6:13	6:25
OTTAWA at STRASBURG					6:56	7:03	7:10	6:45	6:51	6:58	7:10
WILLIAMSBURG at WESTMOUNT					7:15	7:26	7:33	7:40	7:45	7:51	7:58
FOREST GLEN PLAZA - Arrive					7:45	7:56	8:03	8:10	8:15	8:21	8:28
FOREST GLEN PLAZA - Depart					8:15	8:26	8:33	8:40	8:45	8:51	8:59
WILLIAMSBURG at WESTMOUNT					8:45	8:57	9:05	9:12	9:15	9:21	9:29
OTTAWA at STRASBURG					9:15	9:27	9:35	9:42	9:45	9:51	9:59
CHARLES ST. TERMINAL - Arrive					9:45	9:57	10:05	10:12	10:15	10:21	10:29
					10:15	10:27	10:35	10:42	10:45	10:51	10:59
					10:45	10:57	11:05	11:12	11:15	11:21	11:29
					11:15	11:27	11:35	11:42	11:45	11:51	11:59
					11:45	11:57	12:05	12:12	12:15	12:21	12:29
					12:15	12:27	12:35	12:42	12:45	12:51	12:59
					12:45	12:57	1:05	1:12	1:15	1:21	1:29
					1:15	1:27	1:35	1:42	1:45	1:51	1:59
					1:45	1:57	2:05	2:12	2:15	2:21	2:29
					2:15	2:27	2:35	2:42	2:45	2:51	2:59
					2:45	2:57	3:05	3:12	3:15	3:21	3:29
					3:15	3:27	3:35	3:42	3:45	3:51	3:59
					3:45	3:57	4:05	4:12	4:15	4:21	4:29
					4:15	4:27	4:35	4:42	4:45	4:51	4:59
					4:45	4:57	5:05	5:12	5:15	5:21	5:29
					5:15	5:27	5:35	5:42	5:45	5:51	5:59
					5:45	5:57	6:05	6:12	6:15	6:21	6:28
					6:15	6:27	6:35	6:42	6:45	6:51	6:58
					6:45	6:57	7:05	7:12	7:15	7:21	7:28
					7:15	7:27	7:35	7:42	7:45	7:51	7:58
					7:45	7:57	8:05	8:12	8:15	8:21	8:28
					8:15	8:27	8:35	8:42	8:45	8:51	8:58
					8:45	8:57	9:05	9:12	9:15	9:21	9:28
					9:15	9:27	9:35	9:42	9:45	9:51	9:58
					10:15	10:27	10:35	10:42	10:45	10:51	10:58
					11:15	11:27	11:35	11:42	11:45	11:51	11:58
					12:15	12:27	12:35	12:42	12:45	12:51	12:58

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

# SUNDAY SERVICE

TO: Ottawa South → TO: Downtown →

TIMEPOINT:	TO: Ottawa South				TO: Downtown				Map Reference		
	A	B	C	D	C	B	A				
CHARLES ST. TERMINAL - Depart					9:45	9:51	9:59	10:11			
OTTAWA at STRASBURG					10:15	10:26	10:33	10:40	10:45	10:51	10:59
WILLIAMSBURG at WESTMOUNT					11:15	11:26	11:33	11:40	11:45	11:51	11:59
FOREST GLEN PLAZA - Arrive					12:15	12:26	12:33	12:40	12:45	12:51	12:59
FOREST GLEN PLAZA - Depart					1:15	1:26	1:33	1:40	1:45	1:51	1:59
WILLIAMSBURG at WESTMOUNT					2:15	2:26	2:33	2:40	2:45	2:51	2:59
OTTAWA at STRASBURG					3:15	3:26	3:33	3:40	3:45	3:51	3:59
CHARLES ST. TERMINAL - Arrive					4:15	4:26	4:33	4:40	4:45	4:51	4:59
					5:15	5:26	5:33	5:40	5:45	5:51	5:59
					6:15	6:26	6:33	6:40	6:45	6:51	6:59



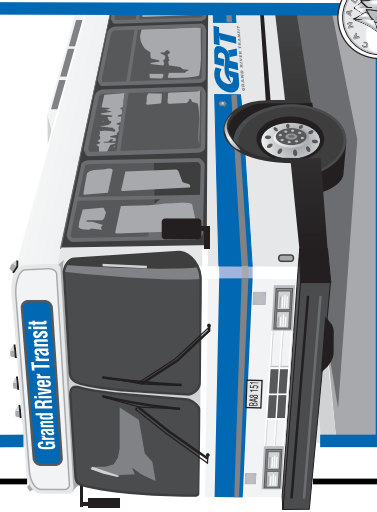
# 4

## Glasgow



**Year-round Schedule**

**Effective: September 7, 2009**



Kindly reuse this timetable



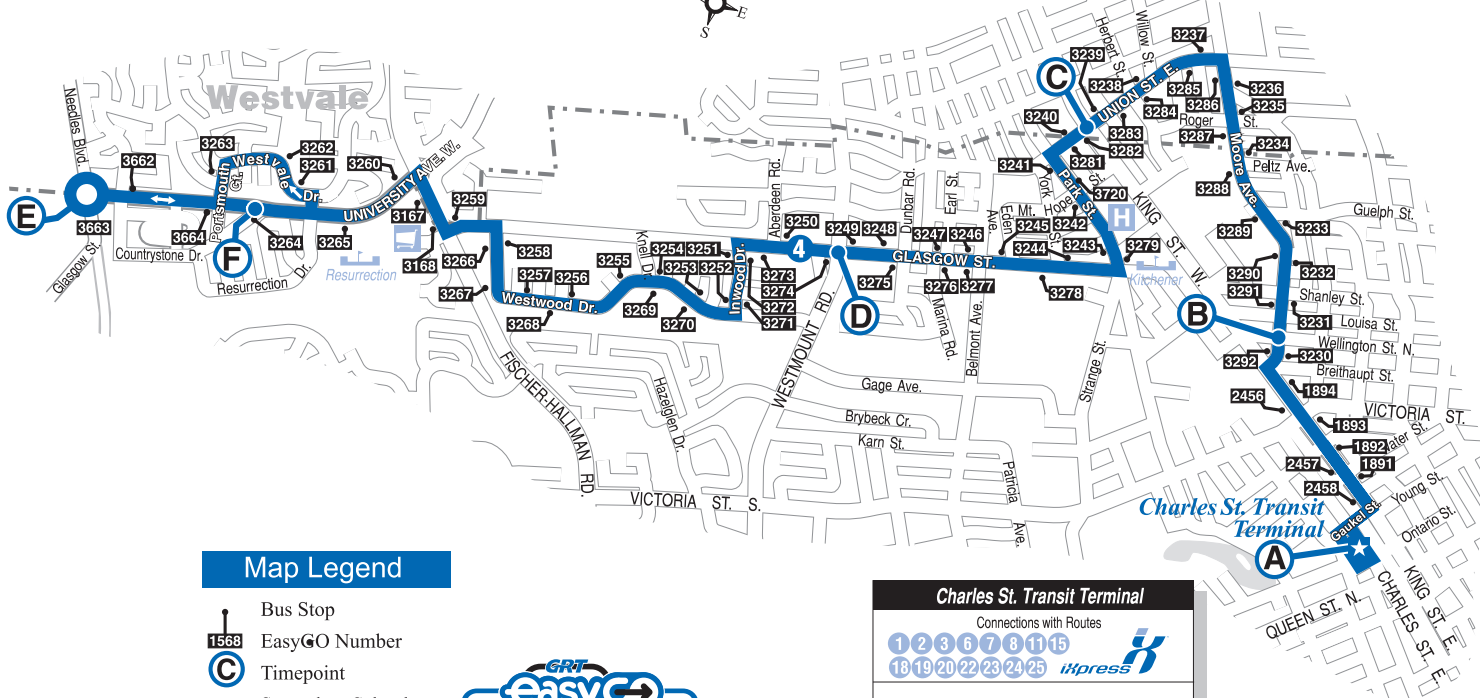
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

Fares and schedules are subject to change without notice.



### Map Legend

- Bus Stop
- EasyGO Number
- Timepoint
- Secondary School
- Shopping Centre
- Hospital
- Point of Interest

**easyGO**

CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.

**24 hrs/day 7 days/week**

**Charles St. Transit Terminal**

Connections with Routes

1 2 3 6 7 8 11 15  
18 19 20 22 23 24 25 **ikpress**

**4 2711** to Glasgow St.



All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.





# SUNDAY SERVICE

To: Erb West

To: Uptown

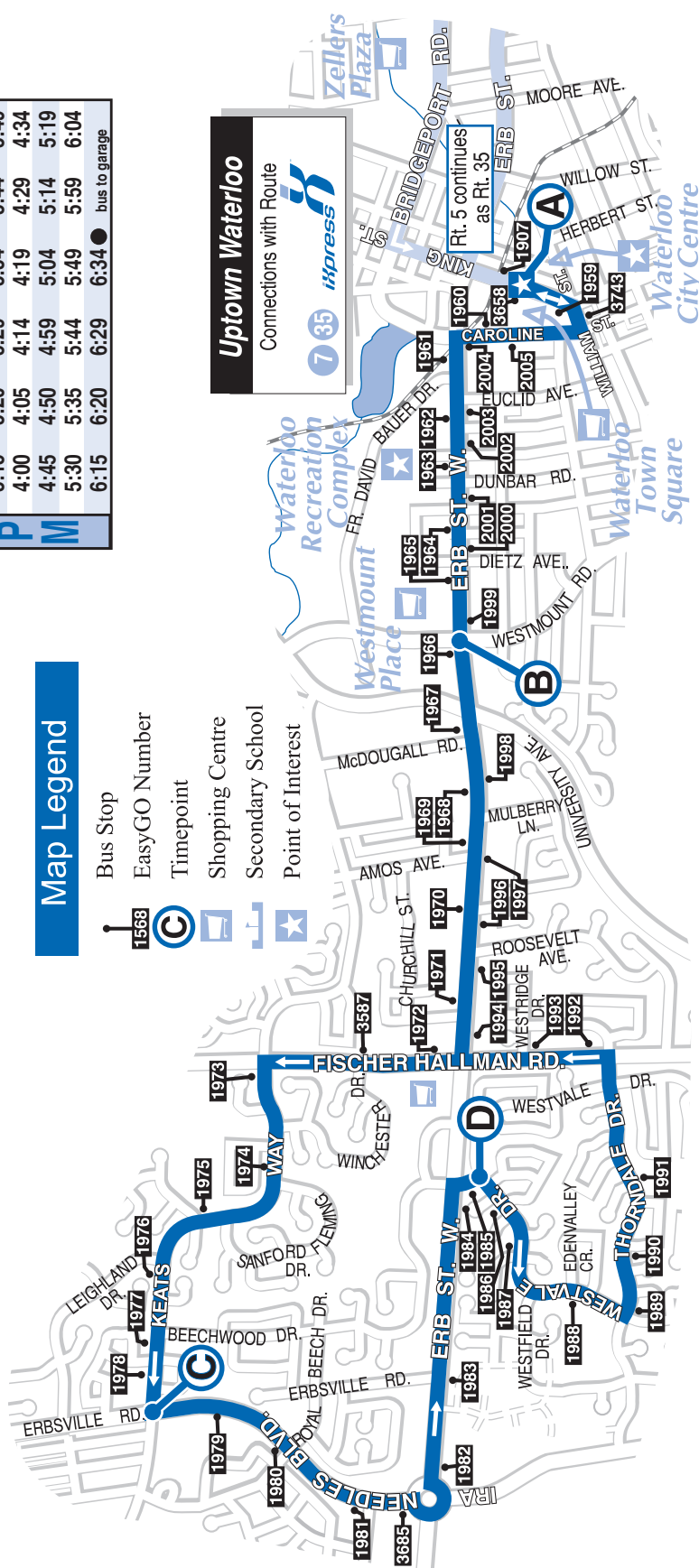
TIMEPOINT:	A	B	C	D	E	F
KING at WATERLOO SQUARE - Depart	10:45	10:50	10:59	11:04	11:14	11:19
ERB at WESTMOUNT	11:30	11:35	11:44	11:49	11:59	12:04
GATEVIEW at WESTVALE	12:15	12:20	12:29	12:34	12:44	12:49
KEATS WAY at ERBSVILLE	1:00	1:05	1:14	1:19	1:29	1:34
ERB at WESTMOUNT	1:45	1:50	1:59	2:04	2:14	2:19
KING at WILLIS WAY Arrive	2:30	2:35	2:44	2:49	2:59	3:04
	3:15	3:20	3:29	3:34	3:44	3:49
	4:00	4:05	4:14	4:19	4:29	4:34
	4:45	4:50	4:59	5:04	5:14	5:19
	5:30	5:35	5:44	5:49	5:59	6:04
	6:15	6:20	6:29	6:34	6:34	6:34

**easyGO**  
 CALL 519-585-7555 or  
 TEXT 57555 and enter  
 the four digit bus stop  
 number for next  
 bus departures.  
 24 hrs/day 7 days/week



## Map Legend

- Bus Stop
- EasyGO Number
- Timepoint
- Shopping Centre
- Secondary School
- Point of Interest



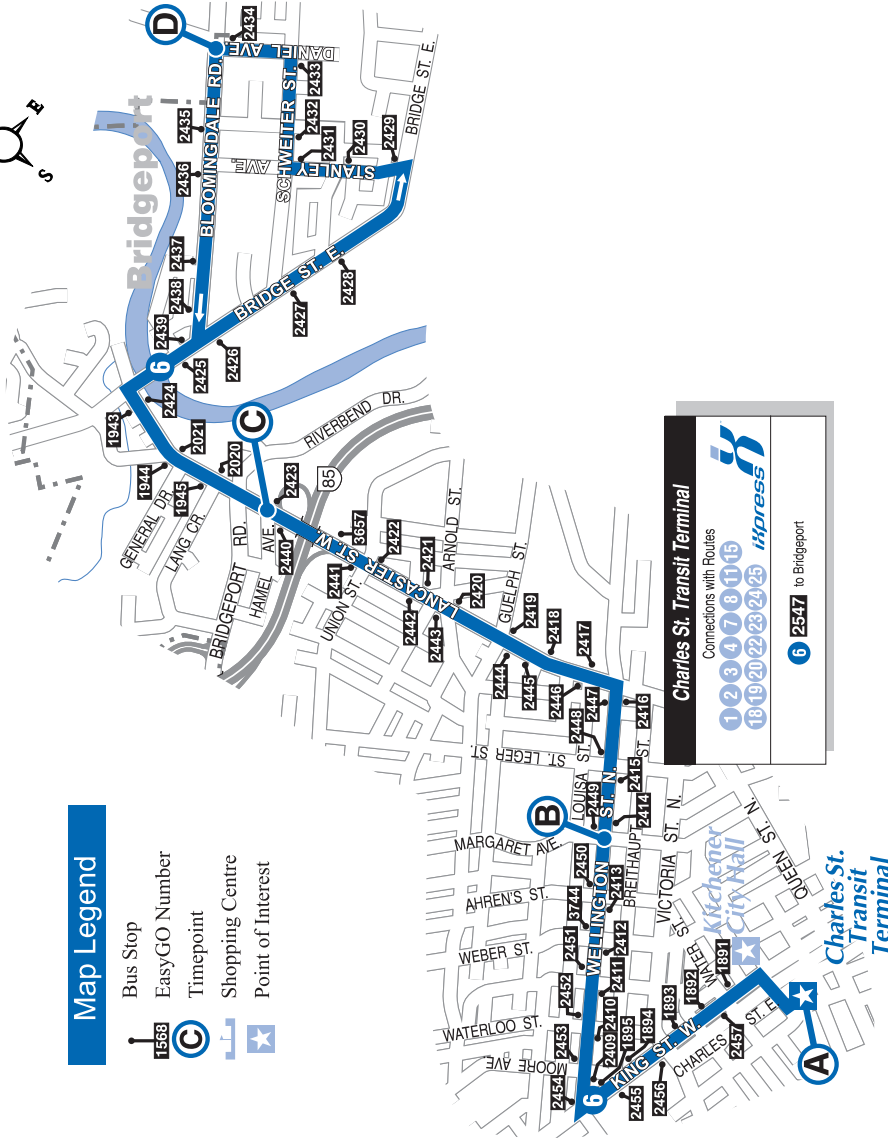
**Uptown Waterloo**  
 Connections with Route  
**735** **ixpress**


Note: Weather conditions, construction, accidents etc. may cause schedule delays.



### Map Legend

-  Bus Stop
-  EasyGO Number
-  Timepoint
-  Shopping Centre
-  Point of Interest



 All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.

 CALL 519-585-7555 or TEXT 57555 and enter the four digit bus stop number for next bus departures.  
24 hrs/day 7 days/week

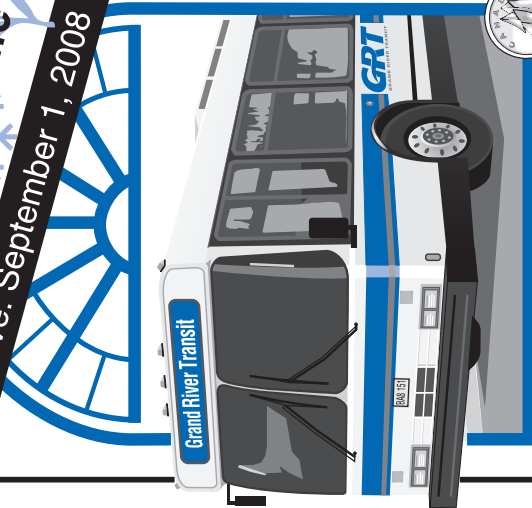
Fares and schedules are subject to change without notice.

# 6

## Bridgeport



**Year-round Schedule**  
Effective: September 1, 2008



Kindly reuse this timetable



GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)



## MONDAY to FRIDAY SERVICE

To: Bridgeport To: Downtown

TIMEPOINT:	A	B	C	D	C	B	A	Map Reference
CHARLES ST TERMINAL - Depart	5:54	6:00	6:04	6:09	6:16			
WELLINGTON at DANIEL at HAMMEL	6:21	6:26	6:34	6:40	6:46	6:55		
MARGARET at LANGCASTER at DANIEL at HAMMEL	6:36	6:41	6:49	6:55	7:01	7:10		
WELLINGTON at MARGARET at LANGCASTER at DANIEL at HAMMEL	7:15	7:21	7:26	7:34	7:40	7:46	7:55	
CHARLES ST TERMINAL - Arrive	7:45	7:51	7:56	8:04	8:10	8:16	8:25	
	8:15	8:21	8:26	8:34	8:40	8:46	8:55	
	8:45	8:51	8:56	9:04	9:10	9:16	9:25	
	9:15	9:22	9:27	9:35	9:41	9:47	9:56	
	9:45	9:52	9:57	10:05	10:11	10:17	10:26	
	10:15	10:22	10:27	10:35	10:41	10:47	10:56	
	10:45	10:52	10:57	11:05	11:11	11:17	11:26	
	11:15	11:22	11:27	11:35	11:41	11:47	11:56	
	11:45	11:52	11:57	12:05	12:11	12:17	12:26	
	12:15	12:22	12:27	12:35	12:41	12:47	12:56	
	12:45	12:52	12:57	1:05	1:11	1:17	1:26	
	1:15	1:22	1:27	1:35	1:41	1:47	1:56	
	1:45	1:52	1:57	2:05	2:11	2:17	2:26	
	2:15	2:22	2:27	2:35	2:42	2:49	2:58	
	2:45	2:53	2:59	3:08	3:15	3:22	3:31	
	3:15	3:23	3:29	3:38	3:45	3:52	4:01	
	3:45	3:53	3:59	4:08	4:15	4:22	4:31	
	4:15	4:23	4:29	4:38	4:45	4:52	5:01	
	4:45	4:53	4:59	5:08	5:15	5:22	5:31	
	5:15	5:23	5:29	5:38	5:45	5:52	6:01	
	5:45	5:53	5:59	6:07	6:12	6:17	6:25	
	6:05	6:11	6:16	6:23	6:28	6:33	6:41	
	6:45	6:51	6:56	7:03	7:08	7:13	7:21	
	7:30	7:36	7:41	7:48	7:53	7:58	8:06	
	8:15	8:21	8:26	8:33	8:38	8:43	8:51	
	9:00	9:06	9:11	9:18	9:23	9:28	9:36	
	9:45	9:51	9:56	10:03	10:08	10:13	10:21	
	10:30	10:36	10:41	10:47	10:52	10:57	11:05	
	11:15	11:21	11:26	11:32	11:37	11:42	11:50	

## SATURDAY SERVICE

To: Bridgeport To: Downtown

TIMEPOINT:	A	B	C	D	C	B	A	Map Reference
CHARLES ST TERMINAL - Depart	6:15	6:21	6:26	6:34	6:40	6:45	6:54	
WELLINGTON at MARGARET at LANGCASTER at DANIEL at HAMMEL	6:45	7:51	6:56	7:04	7:10	7:15	7:24	
MARGARET at LANGCASTER at DANIEL at HAMMEL	7:15	7:21	7:26	7:34	7:40	7:45	7:54	
WELLINGTON at MARGARET at LANGCASTER at DANIEL at HAMMEL	7:45	7:51	7:56	8:04	8:10	8:15	8:24	
CHARLES ST TERMINAL - Arrive	8:15	8:21	8:26	8:34	8:40	8:45	8:54	
	8:45	8:52	8:57	9:05	9:11	9:17	9:26	
	9:15	9:22	9:27	9:35	9:41	9:47	9:56	
	9:45	9:52	9:57	10:05	10:11	10:17	10:26	
	10:15	10:22	10:27	10:35	10:41	10:47	10:56	
	10:45	10:52	10:57	11:05	11:11	11:17	11:26	
	11:15	11:22	11:27	11:35	11:41	11:47	11:56	
	11:45	11:52	11:57	12:05	12:11	12:17	12:26	
	12:15	12:22	12:27	12:35	12:41	12:47	12:56	
	12:45	12:52	12:57	1:05	1:11	1:17	1:26	
	1:15	1:22	1:27	1:35	1:41	1:47	1:56	
	1:45	1:52	1:57	2:05	2:11	2:17	2:26	
	2:15	2:22	2:27	2:35	2:41	2:47	2:56	
	2:45	2:52	2:57	3:05	3:11	3:17	3:26	
	3:15	3:22	3:27	3:35	3:41	3:47	3:56	
	3:45	3:52	3:57	4:05	4:11	4:17	4:26	
	4:15	4:22	4:27	4:35	4:41	4:47	4:56	
	4:45	4:52	4:57	5:05	5:11	5:17	5:26	
	5:15	5:22	5:27	5:35	5:41	5:47	5:56	
	5:45	5:52	5:57	6:05	6:10	6:15	6:23	
	6:05	6:11	6:16	6:23	6:28	6:33	6:41	
	6:45	6:51	6:56	7:03	7:08	7:13	7:21	
	7:30	7:36	7:41	7:48	7:53	7:58	8:06	
	8:15	8:21	8:26	8:33	8:38	8:43	8:51	
	9:00	9:06	9:11	9:18	9:23	9:28	9:36	
	9:45	9:51	9:56	10:03	10:08	10:13	10:21	
	10:30	10:36	10:41	10:47	10:52	10:57	11:05	

● Service begins at Lancaster at Guelph

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

## Transit Fares

You may pay your transit fare by:

- Cash
- Monthly Pass
- Sunday/Holiday Family Pass
- Ticket
- Day Pass
- Children under 5 ride for free

Tickets and passes are available at 100+ locations throughout Cambridge, Kitchener and Waterloo. Check [www.grt.ca](http://www.grt.ca) for fare agent locations.

## 90 Minute Free Transfer

Request a free transfer from your operator when you board and it will give you 90 minutes of free travel from the time you board the bus. You may travel in any direction, on any route.

You can make short round trips with only one fare as long as you board the return bus before your transfer expires. For example, say you are taking the bus to the bank on your lunch hour. Get off the bus, do your banking, then get back on the bus to return to work by showing your transfer.

Remember, a transfer is valid only on the day it is issued and is not transferable.

## Transit Information

# 519-585-7555

[www.grt.ca](http://www.grt.ca)

**Grand River Transit**

250 Strasburg Road,  
Kitchener, Ontario  
N2E 3M6

A service provided by the



Region of Waterloo

### How to use this schedule...

Read across for times from beginning to end of route and down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.





**MONDAY TO FRIDAY SERVICE**

	FROM: Fairview Park				TO: Waterloo				TO: Fairview Park											
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
5:20	5:28	5:37	5:45	5:53	6:01	6:10	6:18	6:27	6:35	6:44	6:52	7:01	7:09	7:18	7:26	7:35	7:43	7:52	8:00	8:09
5:55	5:59	6:08	6:16	6:25	6:33	6:42	6:50	6:59	7:07	7:16	7:24	7:33	7:41	7:50	7:58	8:07	8:15	8:24	8:32	8:41
6:00	6:04	6:08	6:12	6:15	6:23	6:30	6:36	6:43	6:50	6:57	7:04	7:11	7:18	7:25	7:32	7:39	7:46	7:53	8:00	8:08
6:30	6:34	6:38	6:42	6:45	6:50	6:55	7:00	7:05	7:10	7:15	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:08
6:45	6:49	6:53	6:57	7:00	7:05	7:10	7:15	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05	8:10	8:15	8:20
7:00	7:04	7:08	7:12	7:15	7:20	7:25	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05	8:10	8:15	8:20	8:25	8:30	8:35
7:15	7:19	7:23	7:27	7:30	7:35	7:40	7:45	7:50	7:55	8:00	8:05	8:10	8:15	8:20	8:25	8:30	8:35	8:40	8:45	8:50
7:30	7:34	7:38	7:42	7:45	7:50	7:55	8:00	8:05	8:10	8:15	8:20	8:25	8:30	8:35	8:40	8:45	8:50	8:55	9:00	9:05
7:45	7:49	7:53	7:57	8:00	8:05	8:10	8:15	8:20	8:25	8:30	8:35	8:40	8:45	8:50	8:55	9:00	9:05	9:10	9:15	9:20
8:00	8:04	8:08	8:12	8:15	8:20	8:25	8:30	8:35	8:40	8:45	8:50	8:55	9:00	9:05	9:10	9:15	9:20	9:25	9:30	9:35
8:15	8:19	8:23	8:27	8:30	8:35	8:40	8:45	8:50	8:55	9:00	9:05	9:10	9:15	9:20	9:25	9:30	9:35	9:40	9:45	9:50
8:30	8:34	8:38	8:42	8:45	8:50	8:55	9:00	9:05	9:10	9:15	9:20	9:25	9:30	9:35	9:40	9:45	9:50	9:55	10:00	10:05
8:45	8:49	8:53	8:57	9:00	9:05	9:10	9:15	9:20	9:25	9:30	9:35	9:40	9:45	9:50	9:55	10:00	10:05	10:10	10:15	10:20
9:00	9:04	9:08	9:12	9:15	9:20	9:25	9:30	9:35	9:40	9:45	9:50	9:55	10:00	10:05	10:10	10:15	10:20	10:25	10:30	10:35
9:15	9:19	9:23	9:27	9:30	9:35	9:40	9:45	9:50	9:55	10:00	10:05	10:10	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50
9:30	9:34	9:38	9:42	9:45	9:50	9:55	10:00	10:05	10:10	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05
9:45	9:49	9:53	9:57	10:00	10:05	10:10	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05	11:10	11:15	11:20
10:00	10:04	10:08	10:12	10:15	10:20	10:25	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35
10:15	10:19	10:23	10:27	10:30	10:35	10:40	10:45	10:50	10:55	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50
10:30	10:34	10:38	10:42	10:45	10:50	10:55	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50	11:55	12:00	12:05
10:45	10:49	10:53	10:57	11:00	11:05	11:10	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20
11:00	11:04	11:08	11:12	11:15	11:20	11:25	11:30	11:35	11:40	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25	12:30	12:35
11:15	11:19	11:23	11:27	11:30	11:35	11:40	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25	12:30	12:35	12:40	12:45	12:50
11:30	11:34	11:38	11:42	11:45	11:50	11:55	12:00	12:05	12:10	12:15	12:20	12:25	12:30	12:35	12:40	12:45	12:50	12:55	13:00	13:05
11:45	11:49	11:53	11:57	12:00	12:05	12:10	12:15	12:20	12:25	12:30	12:35	12:40	12:45	12:50	12:55	13:00	13:05	13:10	13:15	13:20
12:00	12:04	12:08	12:12	12:15	12:20	12:25	12:30	12:35	12:40	12:45	12:50	12:55	13:00	13:05	13:10	13:15	13:20	13:25	13:30	13:35
12:15	12:19	12:23	12:27	12:30	12:35	12:40	12:45	12:50	12:55	13:00	13:05	13:10	13:15	13:20	13:25	13:30	13:35	13:40	13:45	13:50
12:30	12:34	12:38	12:42	12:45	12:50	12:55	13:00	13:05	13:10	13:15	13:20	13:25	13:30	13:35	13:40	13:45	13:50	13:55	14:00	14:05
12:45	12:49	12:53	12:57	13:00	13:05	13:10	13:15	13:20	13:25	13:30	13:35	13:40	13:45	13:50	13:55	14:00	14:05	14:10	14:15	14:20
13:00	13:04	13:08	13:12	13:15	13:20	13:25	13:30	13:35	13:40	13:45	13:50	13:55	14:00	14:05	14:10	14:15	14:20	14:25	14:30	14:35
13:15	13:19	13:23	13:27	13:30	13:35	13:40	13:45	13:50	13:55	14:00	14:05	14:10	14:15	14:20	14:25	14:30	14:35	14:40	14:45	14:50
13:30	13:34	13:38	13:42	13:45	13:50	13:55	14:00	14:05	14:10	14:15	14:20	14:25	14:30	14:35	14:40	14:45	14:50	14:55	15:00	15:05
13:45	13:49	13:53	13:57	14:00	14:05	14:10	14:15	14:20	14:25	14:30	14:35	14:40	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20
14:00	14:04	14:08	14:12	14:15	14:20	14:25	14:30	14:35	14:40	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20	15:25	15:30	15:35
14:15	14:19	14:23	14:27	14:30	14:35	14:40	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20	15:25	15:30	15:35	15:40	15:45	15:50
14:30	14:34	14:38	14:42	14:45	14:50	14:55	15:00	15:05	15:10	15:15	15:20	15:25	15:30	15:35	15:40	15:45	15:50	15:55	16:00	16:05
14:45	14:49	14:53	14:57	15:00	15:05	15:10	15:15	15:20	15:25	15:30	15:35	15:40	15:45	15:50	15:55	16:00	16:05	16:10	16:15	16:20
15:00	15:04	15:08	15:12	15:15	15:20	15:25	15:30	15:35	15:40	15:45	15:50	15:55	16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35
15:15	15:19	15:23	15:27	15:30	15:35	15:40	15:45	15:50	15:55	16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50
15:30	15:34	15:38	15:42	15:45	15:50	15:55	16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50	16:55	17:00	17:05
15:45	15:49	15:53	15:57	16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50	16:55	17:00	17:05	17:10	17:15	17:20
16:00	16:04	16:08	16:12	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50	16:55	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35
16:15	16:19	16:23	16:27	16:30	16:35	16:40	16:45	16:50	16:55	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50
16:30	16:34	16:38	16:42	16:45	16:50	16:55	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05
16:45	16:49	16:53	16:57	17:00	17:05	17:10	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20
17:00	17:04	17:08	17:12	17:15	17:20	17:25	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20	18:25	18:30	18:35
17:15	17:19	17:23	17:27	17:30	17:35	17:40	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20	18:25	18:30	18:35	18:40	18:45	18:50
17:30	17:34	17:38	17:42	17:45	17:50	17:55	18:00	18:05	18:10	18:15	18:20	18:25	18:30	18:35	18:40	18:45	18:50	18:55	19:00	19:05
17:45	17:49	17:53	17:57	18:00	18:05	18:10	18:15	18:20	18:25	18:30	18:35	18:40	18:45	18:50	18:55	19:00	19:05	19:10	19:15	19:20
18:00	18:04	18:08	18:12	18:15	18:20	18:25	18:30	18:35	18:40	18:45	18:50	18:55	19:00	19:05	19:10	19:15	19:20	19:25	19:30	19:35
18:15	18:19	18:23	18:27	18:30	18:35	18:40	18:45	18:50	18:55	19:00	19:05	19:10	19:15	19:20	19:25	19:30	19:35	19:40	19:45	19:50
18:30	18:34	18:38	18:42	18:45	18:50	18:55	19:00	19:05	19:10	19:15	19:20	19:25	19:30	19:35	19:40	19:45	19:50	19:55	20:00	20:05
18:45	18:49	18:53	18:57	19:00	19:05	19:10	19:15	19:20	19:25	19:30	19:35	19:40	19:45	19:50	19:55	20:00	20:05	20:10	20:15	20:20
19:00	19:04	19:08	19:12	19:15	19:20	19:25	19:30	19:35	19:40	19:45	19:50	19:55	20:00	20:05	20:10	20:15	20:20	20:25	20:30	20:35
19:15	19:19	19:23	19:27	19:30	19:35	19:40	19:45	19:50	19:55	20:00	20:05	20:10	20:15	20:20	20:25	20:30	20:35	20:40	20:45	20:50
19:30	19:34	19:38	19:42	19:45	19:50	19:55	20:00	20:05	20:10	20:15	20:20	20:25	20:30	20:35	20:40	20:45	20:50	20:55	21:00	21








9

## Lakeshore

Summer and Christmas service changes included

Year-round Schedule

Effective: January 4, 2010




Grand River Transit

Kindly reuse this timetable

**GRT**  
GRAND RIVER TRANSIT

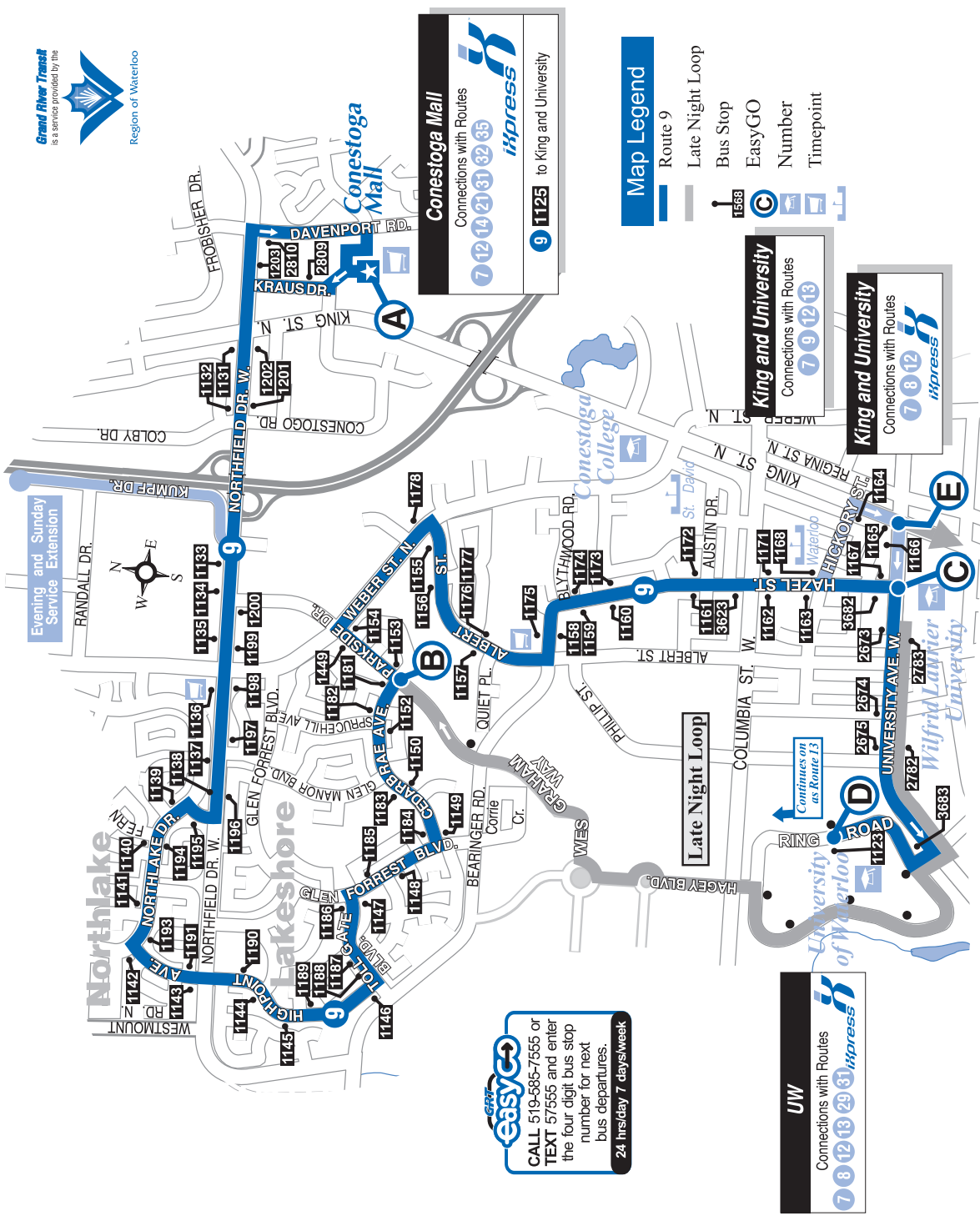
**519-585-7555**  
TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)



Grand River Transit is a service provided by the Region of Waterloo

Evening and Sunday Service Extension



easyGO

CALL: 519-585-7555 or  
TEXT: 57555 and enter  
the four digit bus stop  
number for next  
bus departures.  
24 hrs/day 7 days/week

UW

Connections with Routes  
**7 8 12 13 29 31**

Conestoga Mall

Connections with Routes  
**7 12 14 21 31 32 35**

**9 1125** to King and University

Map Legend

- Route 9
- Late Night Loop
- Bus Stop
- EasyGO
- Number
- Timepoint



# MONDAY to FRIDAY SERVICE

TO: University at King

TIMEPOINT:	CONESTOGA MALL - Depart	PARKSIDE at CEDARBRAE	UNIVERSITY at HAZEL	UW at DAVIS CENTRE	KING at UNIVERSITY
A	B	C	D	E	
5:25	5:41			5:51	
5:40	5:54	6:03	6:09		
6:10	6:26	6:35	6:41		
6:40	6:56	7:05	7:11		
6:55	7:11	7:20	7:26		
7:10	7:26	7:35	7:41		
7:25	7:41	7:50	7:56		
7:40	7:56	8:05	8:11		
7:55	8:11	8:20	8:26		
8:10	8:26	8:35	8:41		
8:25	8:41	8:50	8:56		
8:40	8:56	9:05	9:11		
8:55	9:11	9:20	9:26		
9:10	9:26	9:35	9:41		
9:25	9:41	9:50	9:56		
9:40	9:56	10:05	10:11		
10:05	10:15	10:20			
10:10	10:26	10:35	10:41		
10:53	11:03	11:08			
10:40	10:56	11:05	11:11		
11:10	11:26	11:35	11:41		
11:40	11:56	12:05	12:11		
12:10	12:26	12:35	12:41		
12:40	12:56	1:05	1:11		
1:10	1:26	1:35	1:41		
1:40	1:56	2:05	2:11		
2:10	2:26	2:35	2:41		
2:40	2:56	3:05	3:11		
	3:26	3:32			
3:15	3:31	3:40	3:46		
3:30	3:46	3:55	4:01		
3:45	4:01	4:10	4:16		
4:00	4:16	4:25	4:31		
4:15	4:31	4:40	4:46		
4:30	4:46	4:55	5:01		
4:45	5:01	5:10	5:16		
5:00	5:16	5:25	5:31		
5:15	5:31	5:40	5:46		
5:30	5:46	5:55	6:01		
5:45	6:01	6:10	6:16		
6:20	6:29	6:35			
6:13	6:29	6:38	6:44		
6:43	6:59	7:07	7:13		
7:13	7:29	7:37	7:43		
7:43	7:59	8:07	8:13		
8:13	8:29	8:37	8:43		
8:43	8:59	9:07	9:13		
9:13	9:32	9:40	9:46		
9:45	10:01	10:09	10:15		
10:15	10:31	10:39	10:45		
11:15	11:31		11:41		
12:10	12:26		12:36		

TO: Conestoga Mall

TIMEPOINT:	KING at UNIVERSITY	UW at DAVIS CENTRE	HAZEL	PARKSIDE at CEDARBRAE	CONESTOGA MALL - Depart
E	D	C	B	A	
5:55	5:56	6:05	6:21		
6:01	6:10	6:20	6:36		
6:35	6:41	6:51	7:07		
6:55	6:56	7:06	7:22		
7:11	7:17	7:27	7:43		
7:41	7:47	7:57	8:13		
7:56	8:02	8:12	8:28		
8:11	8:17	8:27	8:43		
8:26	8:32	8:42	8:58		
8:41	8:47	8:57	9:13		
8:55	9:01*				
9:10	9:16	9:26	9:42		
9:24	9:30*				
9:37	9:43	9:53	10:10		
9:52	9:58*				
10:07	10:13	10:23	10:40		
10:22	10:28	10:38			
10:37	10:43	10:53	11:10		
11:07	11:13	11:23	11:40		
11:37	11:43	11:53	12:10		
12:07	12:13	12:23	12:40		
12:37	12:43	12:53	1:10		
1:07	1:13	1:23	1:40		
1:37	1:43	1:53	2:10		
2:07	2:13	2:23	2:41		
2:30	2:36	2:46			
2:35	2:42	2:52	3:10		
2:55	3:02	3:12	3:30		
3:12	3:19	3:29	3:47		
3:30	3:37	3:47	4:05		
3:45	3:52	4:02	4:20		
4:03	4:10	4:20	4:38		
4:18	4:25	4:35	4:53		
4:33	4:40	4:50	5:08		
4:48	4:55	5:05	5:23		
5:03	5:10	5:20	5:38		
5:18	5:25	5:35	5:53		
5:33	5:40	5:50	6:07		
5:50	5:57	6:06	6:22		
6:13	6:19	6:28	6:44		
6:42	6:48	6:57	7:13		
7:09	7:15	7:24	7:40		
7:38	7:44	7:53	8:09		
8:08	8:14	8:23	8:39		
8:38	8:44	8:53	9:09		
9:08	9:14	9:23	9:39		
9:38	9:44	9:53	10:09		
10:10	10:16	10:25	10:41		
10:40	10:46	10:55	11:11		
11:45	11:46	11:54	12:09		
12:50	12:51	12:59	1:14		

# SATURDAY SERVICE

TO: University at King

TIMEPOINT:	CONESTOGA MALL - Depart	PARKSIDE at CEDARBRAE	UNIVERSITY at HAZEL	UW at DAVIS CENTRE	KING at UNIVERSITY
A	B	C	D	E	
6:10	6:26			6:36	
7:10	7:26	7:34	7:40		
8:10	8:26	8:34	8:40		
8:40	8:56	9:04	9:10		
9:10	9:26	9:34	9:40		
9:40	9:56	10:05	10:11		
10:10	10:26	10:35	10:41		
10:40	10:56	11:05	11:11		
11:10	11:26	11:35	11:41		
11:40	11:56	12:05	12:11		
12:10	12:26	12:35	12:41		
12:40	12:56	1:05	1:11		
1:10	1:26	1:35	1:41		
1:40	1:56	2:05	2:11		
2:10	2:26	2:35	2:41		
2:40	2:56	3:05	3:11		
3:10	3:26	3:35	3:41		
3:40	3:56	4:05	4:11		
4:10	4:26	4:35	4:41		
4:40	4:56	5:05	5:11		
5:10	5:26	5:35	5:41		
5:40	5:56	6:04	6:10		
6:10	6:26			6:36	
6:45	7:01			7:11	
7:15	7:31			7:41	
7:45	8:01			8:11	
8:15	8:31			8:41	
8:45	9:01			9:11	
9:15	9:31			9:41	
9:45	10:01			10:11	
10:15	10:21			10:41	
11:15	11:21			11:41	
12:10	12:26			12:36	

TO: Conestoga Mall

TIMEPOINT:	KING at UNIVERSITY	UW at DAVIS CENTRE	HAZEL	PARKSIDE at CEDARBRAE	CONESTOGA MALL - Depart
E	D	C	B	A	Map Reference
6:40	6:41	6:49	7:04		
7:40	7:41	7:49	8:04		
	8:06	8:12	8:22	8:38	
	8:36	8:42	8:52	9:08	
	9:06	9:12	9:22	9:38	
	9:36	9:42	9:52	10:08	
	10:06	10:12	10:22	10:38	
	10:36	10:42	10:52	11:08	
	11:06	11:12	11:22	11:38	
	11:36	11:42	11:52	12:08	
	12:06	12:12	12:22	12:38	
	12:36	12:42	12:52	1:08	
	1:06	1:12	1:22	1:38	
	1:36	1:42	1:52	2:08	
	2:06	2:12	2:22	2:38	
	2:36	2:42	2:52	3:08	
	3:06	3:12	3:22	3:38	
	3:36	3:42	3:52	4:08	
	4:06	4:12	4:22	4:38	
	4:36	4:42	4:52	5:08	
	5:06	5:12	5:22	5:38	
	5:36	5:42	5:52	6:08	
	6:06	6:12	6:21	6:37	
	6:36	6:42	6:51	7:07	
	7:15	7:16	7:24	7:39	
	7:45	7:46	7:54	8:09	
	8:15	8:16	8:24	8:39	
	8:45	8:46	8:54	9:09	
	9:15	9:16	9:24	9:39	
	9:45	9:46	9:54	10:09	
	10:15	10:16	10:24	10:39	
	10:45	10:46	10:54	11:09	
	11:45	11:46	11:54	12:09	
	12:50	12:51	12:59	1:14	

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

- 3:33 These trips do not operate during the Summer (late-June to Labour Day) or Christmas schedule periods
- 3:33 These trips operate from September to April only (except for the two week Christmas period)

# SUNDAY SERVICE

TO: University at King

TIMEPOINT:	CONESTOGA MALL - Depart	PARKSIDE at CEDARBRAE	UNIVERSITY at HAZEL	UW at DAVIS CENTRE	KING at UNIVERSITY
A	B	C	D	E	
8:15	8:29	8:38	8:43		
9:15	9:29	9:38	9:43		
10:15	10:29	10:38	10:43		
11:15	11:29	11:38	11:43		
12:15	12:29	12:38	12:43		
1:15	1:29	1:38	1:43		
2:15	2:29	2:38	2:43		
3:15	3:29	3:38	3:43		
4:15	4:29	4:38	4:43		
5:15	5:29	5:38	5:43		
6:15	6:29	6:38	6:43		
7:15	7:29	7:38	7:43		
8:15	8:29			8:40	
9:15	9:29			9:43	
10:15	10:29			10:40	
11:15	11:29			11:40	
12:15	12:29			12:40	

TO: Conestoga Mall

TIMEPOINT:	KING at UNIVERSITY	UW at DAVIS CENTRE	HAZEL	PARKSIDE at CEDARBRAE	CONESTOGA MALL - Depart
E	D	C	B	A	Map Reference
8:13	8:19	8:27	8:41		
9:13	9:19	9:27	9:41		
10:13	10:19	10:27	10:41		
11:13	11:19	11:27	11:41		
12:13	12:19	12:27	12:41		
1:13	1:19	1:27	1:41		
2:13	2:19	2:27	2:41		
3:13	3:19	3:27	3:41		
4:13	4:19	4:27	4:41		
5:13	5:19	5:27	5:41		
6:13	6:19	6:27	6:41		
7:13	7:19	7:27	7:41		
7:50	7:51	7:59	8:13		
8:45	8:46	8:54	9:08		
9:45	9:46	9:54	10:08		
10:45	10:46	10:54	11:08		
11:45	11:46	11:54	12:08		
12:45	12:46	12:54	1:08		

- ★ To King at University only
- Extension to Kumpf industrial area

### Late Night Loop...

Going out Thursday, Friday or Saturday evening?

Extra trips depart the Charles Street Terminal every 30 minutes from 12:30am until 2:00am. The routing follows Route 7 to U of W, a modified Route 9 service through Lakeshore, and returns via King Street (see map on opposite side).

Service is provided from September to June with the exception of the two-week Christmas schedule period.

**Fairview Park**

# 10

**Conestoga College**

Route 10  
Only

**110 Express ROUTE**

**Year-round Schedule**  
Effective: January 5, 2009

Kindly reuse this timetable

**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**  
TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)

**110 Express ROUTE**

**MONDAY TO FRIDAY EXPRESS SERVICE**

TIMEPOINT	CONESTOGA COLLEGE - Depart	FAIRVIEW PARK - Arrive	FAIRVIEW PARK - Depart	POWERS AT HOMER WATSON	CONESTOGA COLLEGE - Arrive	Map Reference
<b>A</b>	7:25	7:30	7:40	7:28	7:42	7-29
<b>M</b>	7:55	8:00	8:10	7:57	8:12	7-58
<b>A</b>	8:25	8:30	8:40	8:28	8:43	8-43
<b>M</b>	8:55	9:00	9:10	8:48	8:58	8-58
<b>P</b>	9:25	9:30	9:40	9:15	9:28	9-28
<b>M</b>	9:55	10:00	10:10	9:45	9:58	10-28
<b>A</b>	10:25	10:30	10:40	10:15	10:28	10-28
<b>M</b>	10:55	11:00	11:10	10:45	10:58	10-58
<b>P</b>	11:25	11:30	11:40	11:15	11:28	11-28
<b>M</b>	11:55	12:00	12:10	12:15	12:25	12-30
<b>A</b>	12:25	12:37	12:45	12:55	1:00	12-55
<b>M</b>	1:25	1:37	1:45	1:25	1:30	1-30
<b>P</b>	1:55	2:07	2:15	1:55	2:00	2-00
<b>M</b>	2:25	2:37	2:45	2:25	2:30	2-30
<b>A</b>	2:55	3:08	3:15	3:25	3:30	3-30
<b>M</b>	3:25	3:38	3:45	3:35	3:40	3-40
<b>P</b>	3:55	4:08	4:15	4:25	4:31	4-31
<b>M</b>	4:25	4:38	4:45	4:55	5:01	4-55
<b>A</b>	4:55	5:08	5:15	5:25	5:31	5-31
<b>M</b>	5:25	5:38	5:45	5:55	6:01	5-55

Route 110 provides a direct link between Fairview Park and Conestoga College. An additional midway stop at Pioneer Park Plaza is added during most trips.

This service operates from September to April excluding the two week Christmas period.

❖ **Evening, Saturday and Sunday extension to Conestoga College residence**

**SUNDAY SERVICE**

TO: Conestoga College

TIMEPOINT	FAIRVIEW PARK - Depart	MANITOU at WABANAKI	POWERS at BLACK WALNUT	POWERS at HOMER WATSON	CONESTOGA COLLEGE - Arrive	Map Reference
<b>A</b>	8:30	8:36	8:41	8:45	9:00	8-21
<b>M</b>	9:30	9:36	9:41	9:45	10:00	9-22
<b>A</b>	10:30	10:36	10:41	10:45	11:00	10-22
<b>M</b>	11:30	11:36	11:41	11:45	12:00	11-22
<b>P</b>	12:30	12:36	12:41	12:45	1:00	12-22
<b>M</b>	1:30	1:36	1:41	1:45	2:00	1-22
<b>A</b>	2:30	2:36	2:41	2:45	3:00	2-22
<b>M</b>	3:30	3:36	3:41	3:45	4:00	3-22
<b>P</b>	4:30	4:36	4:41	4:45	5:00	4-22
<b>M</b>	5:30	5:36	5:41	5:45	6:00	5-22
<b>A</b>	6:30	6:36	6:41	6:45	7:00	6-22
<b>M</b>	7:30	7:36	7:41	7:45	8:00	7-22
<b>P</b>	8:30	8:36	8:41	8:45	9:00	8-22
<b>M</b>	9:30	9:36	9:41	9:45	10:00	9-22
<b>A</b>	10:30	10:36	10:41	10:45	11:00	10-22
<b>M</b>	11:35	11:41	11:46	11:50	12:00	11-22

TO: Fairview Park

TIMEPOINT	CONESTOGA COLLEGE - Depart	POWERS at HOMER WATSON	MANITOU at BLACK WALNUT	FAIRVIEW PARK - Arrive	Map Reference
<b>E</b>	7:50	8:07	8:10	8:15	8-21
<b>M</b>	9:00	9:08	9:11	9:16	9-22
<b>A</b>	10:00	10:08	10:11	10:16	10-22
<b>M</b>	11:00	11:08	11:11	11:16	11-22
<b>P</b>	12:00	12:08	12:11	12:16	12-22
<b>M</b>	1:00	1:08	1:11	1:16	1-22
<b>A</b>	2:00	2:08	2:11	2:16	2-22
<b>M</b>	3:00	3:08	3:11	3:16	3-22
<b>P</b>	4:00	4:08	4:11	4:16	4-22
<b>M</b>	5:00	5:08	5:11	5:16	5-22
<b>A</b>	6:00	6:08	6:11	6:16	6-22
<b>M</b>	7:00	7:08	7:11	7:16	7-22
<b>P</b>	8:00	8:08	8:11	8:16	8-22
<b>M</b>	9:00	9:08	9:11	9:16	9-22
<b>A</b>	10:00	10:08	10:11	10:16	10-22
<b>M</b>	11:00	11:08	11:11	11:16	11-22

**easyGO**  
CALL 519-585-7555 or TEXT 57555 and enter the four digit bus stop number for next bus departures.  
24 hrs/day, 7 days/week

**Route 110**  
Fairview Park  
Conestoga College

**Map Legend**

- Bus Stop
- EasyGO number
- Timepoint
- Secondary School
- Shopping Centre
- Hospital
- Point of Interest

Fares and schedules are subject to change without notice.

# MONDAY TO FRIDAY SERVICE

To: Conestoga College

To: Fairview Park

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	Map Reference
FAIRVIEW PARK - Depart	6:00	6:09	6:13	6:20	6:26	
FAIRVIEW PARK - Arrive	6:30	6:39	6:43	6:50	6:56	
MANITOU at WABANAKI	7:00	7:09	7:14	7:23	7:33	
MANITOU at BLACK WALNUT	8:00	8:09	8:14	8:23	8:33	
MANITOU at PIONEER at WABANAKI	8:30	8:39	8:44	8:53	9:03	
MANITOU at PIONEER at BLACK WALNUT	9:00	9:09	9:14	9:22	9:32	
MANITOU at PIONEER at HOMER WATSON	9:30	9:39	9:44	9:52	10:02	
CONESTOGA COLLEGE - Depart	10:00	10:09	10:14	10:22	10:32	
CONESTOGA COLLEGE - Arrive	11:00	11:09	11:13	11:22	11:32	
FAIRVIEW PARK - Depart	12:00	12:07	12:11	12:15	12:22	
FAIRVIEW PARK - Arrive	13:00	13:09	13:14	13:23	13:33	
MANITOU at WABANAKI	14:00	14:09	14:14	14:23	14:33	
MANITOU at BLACK WALNUT	15:00	15:09	15:14	15:23	15:33	
MANITOU at PIONEER at WABANAKI	16:00	16:09	16:14	16:23	16:33	
MANITOU at PIONEER at BLACK WALNUT	17:00	17:09	17:14	17:23	17:33	
MANITOU at PIONEER at HOMER WATSON	18:00	18:09	18:14	18:23	18:33	
CONESTOGA COLLEGE - Depart	19:00	19:09	19:14	19:22	19:32	
CONESTOGA COLLEGE - Arrive	20:00	20:09	20:14	20:22	20:32	
FAIRVIEW PARK - Depart	21:00	21:07	21:11	21:15	21:22	
FAIRVIEW PARK - Arrive	22:00	22:07	22:11	22:15	22:22	

# SUMMER MID-DAY SERVICE

To: Conestoga College

To: Fairview Park

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	Map Reference
FAIRVIEW PARK - Depart	9:30	9:39	9:43	9:50	9:56	
FAIRVIEW PARK - Arrive	10:00	10:09	10:13	10:20	10:26	
MANITOU at WABANAKI	10:30	10:39	10:43	10:50	10:56	
MANITOU at BLACK WALNUT	11:00	11:09	11:13	11:20	11:26	
MANITOU at PIONEER at WABANAKI	11:30	11:39	11:43	11:50	11:56	
MANITOU at PIONEER at BLACK WALNUT	12:00	12:09	12:13	12:20	12:26	
MANITOU at PIONEER at HOMER WATSON	12:30	12:39	12:43	12:50	12:56	
CONESTOGA COLLEGE - Depart	1:00	1:09	1:13	1:20	1:26	
CONESTOGA COLLEGE - Arrive	1:30	1:39	1:43	1:50	1:56	
FAIRVIEW PARK - Depart	2:00	2:09	2:13	2:20	2:26	
FAIRVIEW PARK - Arrive	2:30	2:39	2:43	2:50	2:56	
MANITOU at WABANAKI	3:00	3:09	3:14	3:23	3:33	
MANITOU at BLACK WALNUT	3:30	3:39	3:44	3:53	4:03	
MANITOU at PIONEER at WABANAKI	4:00	4:09	4:14	4:23	4:33	
MANITOU at PIONEER at BLACK WALNUT	4:30	4:39	4:44	4:53	5:03	
MANITOU at PIONEER at HOMER WATSON	5:00	5:09	5:14	5:23	5:33	
CONESTOGA COLLEGE - Depart	6:00	6:09	6:14	6:23	6:33	
CONESTOGA COLLEGE - Arrive	7:00	7:07	7:11	7:15	7:22	
FAIRVIEW PARK - Depart	8:00	8:07	8:11	8:15	8:22	
FAIRVIEW PARK - Arrive	9:00	9:07	9:11	9:15	9:22	
MANITOU at WABANAKI	10:00	10:07	10:11	10:15	10:22	
MANITOU at BLACK WALNUT	10:30	10:37	10:41	10:45	10:52	
MANITOU at PIONEER at WABANAKI	11:00	11:07	11:11	11:15	11:22	
MANITOU at PIONEER at BLACK WALNUT	11:30	11:37	11:41	11:45	11:52	
MANITOU at PIONEER at HOMER WATSON	12:00	12:07	12:11	12:15	12:22	



Note: Weather conditions, construction, accidents etc. may cause schedule delays.

# SATURDAY SERVICE

To: Conestoga College

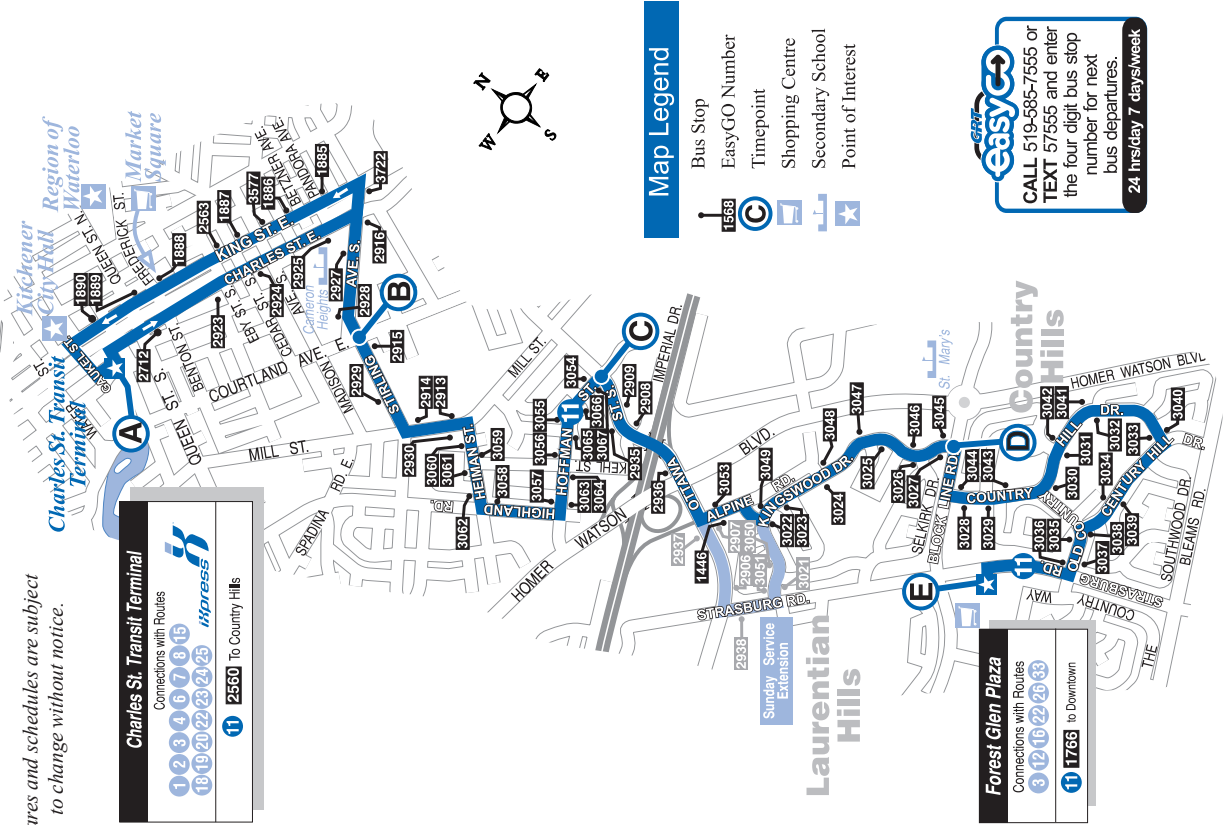
To: Fairview Park

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	Map Reference
FAIRVIEW PARK - Depart	6:00	6:09	6:13	6:20	6:26	
FAIRVIEW PARK - Arrive	6:30	6:39	6:43	6:50	6:56	
MANITOU at WABANAKI	7:00	7:09	7:14	7:23	7:33	
MANITOU at BLACK WALNUT	8:00	8:09	8:14	8:23	8:33	
MANITOU at PIONEER at WABANAKI	8:30	8:39	8:44	8:53	9:03	
MANITOU at PIONEER at BLACK WALNUT	9:00	9:09	9:14	9:22	9:32	
MANITOU at PIONEER at HOMER WATSON	9:30	9:39	9:44	9:52	10:02	
CONESTOGA COLLEGE - Depart	10:00	10:09	10:14	10:22	10:32	
CONESTOGA COLLEGE - Arrive	11:00	11:09	11:13	11:22	11:32	
FAIRVIEW PARK - Depart	12:00	12:07	12:11	12:15	12:22	
FAIRVIEW PARK - Arrive	13:00	13:09	13:14	13:23	13:33	
MANITOU at WABANAKI	14:00	14:09	14:14	14:23	14:33	
MANITOU at BLACK WALNUT	15:00	15:09	15:14	15:23	15:33	
MANITOU at PIONEER at WABANAKI	16:00	16:09	16:14	16:23	16:33	
MANITOU at PIONEER at BLACK WALNUT	17:00	17:09	17:14	17:23	17:33	
MANITOU at PIONEER at HOMER WATSON	18:00	18:09	18:14	18:23	18:33	
CONESTOGA COLLEGE - Depart	19:00	19:09	19:14	19:22	19:32	
CONESTOGA COLLEGE - Arrive	20:00	20:09	20:14	20:22	20:32	
FAIRVIEW PARK - Depart	21:00	21:07	21:11	21:15	21:22	
FAIRVIEW PARK - Arrive	22:00	22:07	22:11	22:15	22:22	

How to use this schedule... Read across for times from beginning to end of route and down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

Evening, Saturday and Sunday extension to Conestoga College residence

Fares and schedules are subject to change without notice.



### Transit Fares

You may pay your transit fare by:

- Cash
- Monthly Pass
- Sunday/Holiday Family Pass
- Ticket
- Day Pass
- Children under 5 ride for free

Tickets and passes are available at 100+ locations throughout Cambridge, Kitchener and Waterloo. Check [www.grt.ca](http://www.grt.ca) for fare agent locations.

### 90 Minute Free Transfer

Request a free transfer from your operator when you board and it will give you 90 minutes of free travel from the time you board the bus. You may travel in any direction, on any route.

You can make short round trips with only one fare as long as you board the return bus before your transfer expires. For example, say you are taking the bus to the bank on your lunch hour. Get off the bus, do your banking, then get back on the bus to return to work by showing your transfer.

Remember, a transfer is valid only on the day it is issued and is not transferable.

### Transit Information

# 519-585-7555

[www.grt.ca](http://www.grt.ca)

**Grand River Transit**  
250 Straszburg Road,  
Kitchener, Ontario  
N2E 3M6

A service provided by the



Region of Waterloo

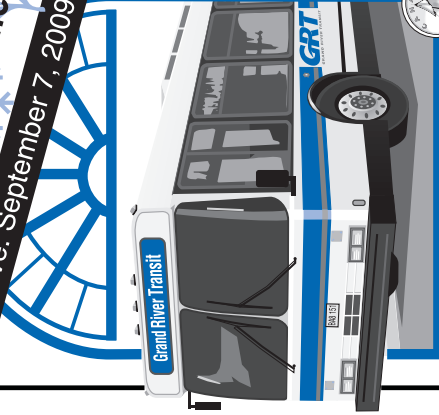
# 111

## Country Hills



### Year-round Schedule

Effective: September 7, 2009



Kindly reuse this timetable



**GRIT**  
GRAND RIVER TRANSIT  
**519-585-7555**  
TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)



# MONDAY TO FRIDAY SERVICE

To: Country Hills To: Downtown

TIMEPOINT:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
CHARLES ST. TERMINAL - Depart																										
COURTLAND at																										
HOFMAN at																										
BLOCK LINE at																										
KINGSWOOD at																										
BLOCK LINE at																										
PLAZA - Depart																										
FOREST GLEN at																										
PLAZA - Arrive																										
FOREST GLEN at																										
CHARLES ST. TERMINAL - Arrive																										

# SATURDAY SERVICE

To: Country Hills To: Downtown

TIMEPOINT:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
CHARLES ST. TERMINAL - Depart																										
COURTLAND at																										
HOFMAN at																										
BLOCK LINE at																										
KINGSWOOD at																										
BLOCK LINE at																										
PLAZA - Depart																										
FOREST GLEN at																										
PLAZA - Arrive																										
FOREST GLEN at																										
CHARLES ST. TERMINAL - Arrive																										

# SUNDAY SERVICE

To: Country Hills To: Downtown

TIMEPOINT:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
CHARLES ST. TERMINAL - Depart																										
COURTLAND at																										
HOFMAN at																										
BLOCK LINE at																										
KINGSWOOD at																										
BLOCK LINE at																										
PLAZA - Depart																										
FOREST GLEN at																										
PLAZA - Arrive																										
FOREST GLEN at																										
CHARLES ST. TERMINAL - Arrive																										

Map Reference	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
8:45	8:50	8:54	9:01	9:08	9:15	9:21	9:28	9:33	9:41																	
9:45	9:50	9:54	10:01	10:08	10:15	10:21	10:28	10:33	10:41																	
10:45	10:50	10:54	11:01	11:08	11:15	11:21	11:28	11:33	11:41																	
11:45	11:50	11:54	12:01	12:08	12:15	12:21	12:28	12:33	12:41																	
12:45	12:50	12:54	1:01	1:08	1:15	1:21	1:28	1:33	1:41																	
1:45	1:50	1:54	2:01	2:08	2:15	2:21	2:28	2:33	2:41																	
2:45	2:50	2:54	3:01	3:08	3:15	3:21	3:28	3:33	3:41																	
3:45	3:50	3:54	4:01	4:08	4:15	4:21	4:28	4:33	4:41																	
4:45	4:50	4:54	5:01	5:08	5:15	5:21	5:28	5:33	5:41																	
5:45	5:50	5:54	6:01	6:08	6:15	6:21	6:28	6:33	6:40																	
6:45	6:50	6:54	7:01	7:08	7:15	7:21	7:28	7:33	7:40																	
7:45	7:50	7:54	8:01	8:08	8:15	8:21	8:28	8:33	8:40																	
8:45	8:50	8:54	9:01	9:08	9:15	9:21	9:28	9:33	9:40																	
9:45	9:50	9:54	10:01	10:08	10:15	10:21	10:28	10:33	10:40																	
10:45	10:50	10:54	11:01	11:08	11:15	11:21	11:28	11:33	11:40																	
11:45	11:50	11:54	12:01	12:08	12:15	12:21	12:28	12:33	12:40																	
12:45	12:50	12:54	1:01	1:08	1:15	1:21	1:28	1:33	1:40																	
1:45	1:50	1:54	2:01	2:08	2:15	2:21	2:28	2:33	2:40																	
2:45	2:50	2:54	3:01	3:08	3:15	3:21	3:28	3:33	3:40																	
3:45	3:50	3:54	4:01	4:08	4:15	4:21	4:28	4:33	4:40																	
4:45	4:50	4:54	5:01	5:08	5:15	5:21	5:28	5:33	5:40																	
5:45	5:50	5:54	6:01	6:08	6:15	6:21	6:28	6:33	6:40																	
6:45	6:50	6:54	7:01	7:08	7:15	7:21	7:28	7:33	7:40																	
7:45	7:50	7:54	8:01	8:08	8:15	8:21	8:28	8:33	8:40																	
8:45	8:50	8:54	9:01	9:08	9:15	9:21	9:28	9:33	9:40																	
9:45	9:50	9:54	10:01	10:08	10:15	10:21	10:28	10:33	10:40																	
10:45	10:50	10:54	11:01	11:08	11:15	11:21	11:28	11:33	11:40																	
11:45	11:50	11:54	12:01	12:08	12:15	12:21	12:28	12:33	12:40																	
12:45	12:50	12:54	1:01	1:08	1:15	1:21	1:28	1:33	1:40																	
1:45	1:50	1:54	2:01	2:08	2:15	2:21	2:28	2:33	2:40																	
2:45	2:50	2:54	3:01	3:08	3:15	3:21	3:28	3:33	3:40																	
3:45	3:50	3:54	4:01	4:08	4:15	4:21	4:28	4:33	4:40																	
4:45	4:50	4:54	5:01	5:08	5:15	5:21	5:28	5:33	5																	





# MONDAY to FRIDAY SERVICE

To: Conestoga Mall												To: Fairview Park																
TIMEPOINT	FAIRVIEW PARK											TIMEPOINT	CONESTOGA MALL															
FAIRVIEW PARK	DEPART	FORREST GLEN	WESTMINA	OTTAWA	HIGHLAND HILLS MALL	FISCHER-HALLMAN	UNIVERSITY	UNIV. OF WATERLOO	UNIVERSITY at KING	BRIDGE	CONESTOGA MALL	ARRIVE	CONESTOGA MALL	ARRIVE	BRIDGE	UNIVERSITY	UNIV. OF WATERLOO	UNIVERSITY at KING	SEAGRAM	FISCHER-HALLMAN	HIGHLAND HILLS MALL	OTTAWA	WESTMINA	FORREST GLEN	FAIRVIEW PARK	ARRIVE		
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(K)	(J)	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)	(G)	(F)	(E)	(D)	(C)	(B)	(A)	(Map Reference)		
5:15	5:21	5:30	5:36	5:44	5:49	5:55	6:07																					
5:45	5:51	6:00	6:06	6:14	6:19	6:25	6:37																					
6:00	6:15	6:21	6:30	6:37	6:47	6:58	7:05																					
6:30	6:45	6:51	7:00	7:07	7:17	7:28	7:35																					
6:58	7:04	7:16	7:23	7:33	7:40	7:48	7:50																					
7:00	7:13	7:19	7:31	7:38	7:48	7:58	8:05																					
7:15	7:28	7:34	7:46	7:53	8:03	8:08	8:15																					
7:30	7:43	7:49	8:01	8:08	8:18	8:28	8:35																					
7:45	7:58	8:04	8:16	8:23	8:33	8:38	8:45																					
8:00	8:13	8:19	8:31	8:38	8:48	8:58	9:04																					
8:15	8:28	8:34	8:46	8:53	9:03	9:08	9:15																					
8:30	8:43	8:49	8:61	8:67	8:78	8:84	8:91																					
9:00	9:15	9:21	9:33	9:39	9:49	9:58	10:04																					
9:30	9:45	9:51	10:03	10:09	10:19	10:28	10:34																					
10:00	10:15	10:21	10:33	10:39	10:49	10:58	11:04																					
10:30	10:45	10:51	11:03	11:09	11:19	11:28	11:34																					
11:00	11:15	11:21	11:33	11:39	11:49	11:58	12:04																					
11:30	11:45	11:51	12:03	12:09	12:19	12:28	12:34																					
12:00	12:15	12:21	12:33	12:39	12:49	12:58	1:04																					
12:30	12:45	12:51	1:03	1:09	1:19	1:28	1:34																					
1:00	1:15	1:21	1:33	1:39	1:49	1:58	2:04																					
1:30	1:45	1:51	2:02	2:09	2:19	2:25	2:32																					
2:00	2:15	2:21	2:32	2:39	2:49	2:58	3:04																					
2:30	2:45	2:51	3:02	3:09	3:19	3:30	3:37																					
2:45	3:00	3:06	3:17	3:24	3:34	3:40	3:47																					
3:00	3:15	3:21	3:32	3:39	3:49	4:00	4:07																					
3:15	3:30	3:36	3:47	3:54	4:04	4:10	4:17																					
3:30	3:45	3:51	4:02	4:09	4:19	4:30	4:37																					
3:45	4:00	4:06	4:17	4:24	4:34	4:40	4:47																					
4:00	4:15	4:21	4:32	4:39	4:49	5:00	5:07																					
4:15	4:30	4:36	4:47	4:54	5:04	5:15	5:22																					
4:30	4:45	4:51	5:02	5:09	5:19	5:30	5:37																					
4:45	5:00	5:06	5:17	5:24	5:34	5:41	5:48																					
5:00	5:15	5:21	5:32	5:39	5:49	6:00	6:07																					
5:15	5:31	5:37	5:47	5:54	6:04	6:11	6:18																					
5:30	5:45	5:51	6:01	6:07	6:16	6:22	6:28																					
6:00	6:15	6:21	6:31	6:37	6:46	6:52	6:58																					
6:30	6:45	6:51	7:00	7:05	7:14	7:20	7:26																					
7:00	7:15	7:21	7:30	7:35	7:44	7:50	7:56																					
7:30	7:45	7:51	8:00	8:05	8:14	8:20	8:26																					
8:00	8:15	8:21	8:30	8:35	8:44	8:50	8:56																					
8:30	8:45	8:51	9:00	9:05	9:14	9:20	9:26																					
9:00	9:15	9:21	9:30	9:35	9:44	9:50	9:56																					
9:30	9:45	9:51	10:00	10:05	10:14	10:20	10:26																					
10:00	10:15	10:21	10:30	10:35	10:44	10:50	10:56																					
10:30	10:42	to Route 33																										
11:00	11:15	11:21	11:30	11:35	11:44	11:50	11:56																					
12:00	12:15	12:21	12:30	12:35	12:44	12:50	12:56																					

- Short-turn via University, Lincoln, Marshall and Carleton
  - Bus is in service to King and University only
  - Low floor buses are not available for marked trips
- 3333 These trips do not operate during the Christmas period
- 2445 These trips operate only during the Christmas period

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

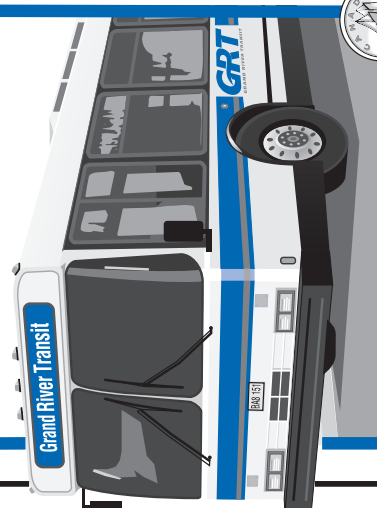
# SATURDAY SERVICE

To: Conestoga Mall												To: Fairview Park															
TIMEPOINT	FAIRVIEW PARK											TIMEPOINT	CONESTOGA MALL														
FAIRVIEW PARK	DEPART	FORREST GLEN	WESTMINA	OTTAWA	HIGHLAND HILLS MALL	FISCHER-HALLMAN	UNIVERSITY	UNIV. OF WATERLOO	UNIVERSITY at KING	BRIDGE	CONESTOGA MALL	ARRIVE	CONESTOGA MALL	ARRIVE	BRIDGE	UNIVERSITY	UNIV. OF WATERLOO	UNIVERSITY at KING	SEAGRAM	FISCHER-HALLMAN	HIGHLAND HILLS MALL	OTTAWA	WESTMINA	FORREST GLEN	FAIRVIEW PARK	ARRIVE	
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)	(G)	(F)	(E)	(D)	(C)	(B)	(A)	(Map Reference)	
6:45	6:50	7:00	7:05	7:15	7:20	7:29	7:38																				
7:00	7:15	7:20	7:30	7:35	7:45	7:50	7:59																				
7:30	7:45	7:50	8:00	8:05	8:15	8:20	8:30																				
8:00	8:15	8:20	8:30	8:35	8:45	8:50	8:59																				
8:30	8:45	8:50	9:00	9:05	9:15	9:20	9:29																				
9:00	9:15	9:20	9:30	9:35	9:45	9:50	9:59																				
9:30	9:45	9:50	10:00	10:05	10:15	10:20	10:29																				
Every 30 minutes												Every 30 minutes															
7:00	7:15	7:20	7:30	7:35	7:44	7:50	7:59																				
7:30	7:45	7:50	8:00	8:05	8:14	8:20	8:29																				

# 13

**Laurelwood**  
**Summer and Christmas**  
 service changes included

**Year-round Schedule**  
 Effective: April 6, 2009

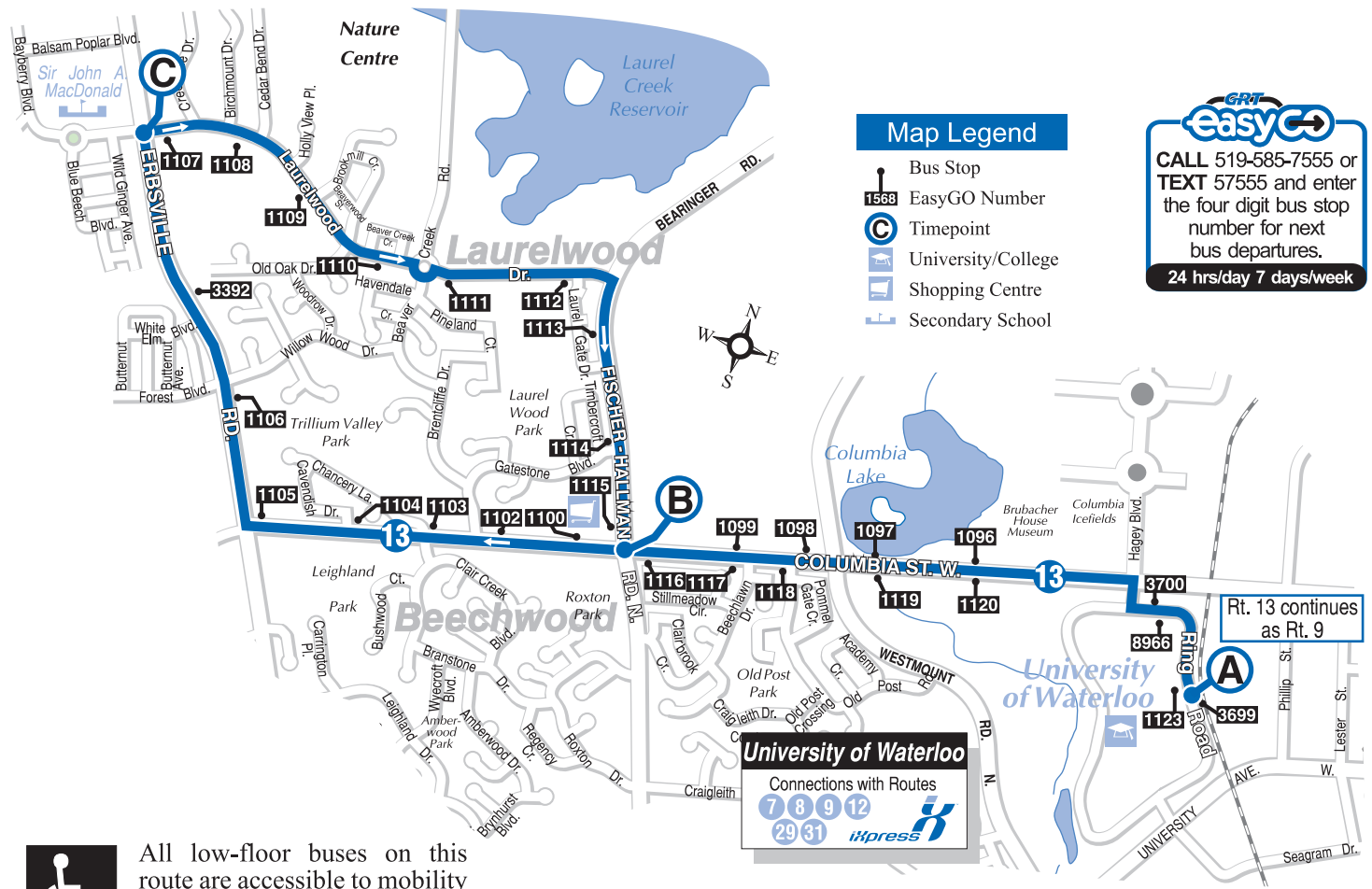


Kindly reuse this timetable



GRAND RIVER TRANSIT

**519-585-7555**  
 TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)



All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.

*Fares and schedules are subject to change without notice.*

# WEEKDAY SERVICE

	TIMEPOINT:					Map Reference
	UW at Davis Centre Depart	COLUMBIA at FISCHER-HALLMAN	ERBSVILLE at LAURELWOOD	FISCHER-HALLMAN at COLUMBIA	UW at Davis Centre Arrive	
A M	(A)	(B)	(C)	(B)	(A)	
		5:40	5:46	5:52	5:58	
		6:10	6:15	6:21	6:27	6:33
		6:44	6:49	6:55	7:01	7:07
		7:14	7:19	7:25	7:31	7:37
		7:29	7:34	7:40	7:46	7:52 ☀ ❄
		7:44	7:49	7:55	8:01	8:07
		7:59	8:04	8:10	8:16	8:22 ☀ ❄
		8:14	8:19	8:25	8:31	8:37
		8:29	8:34	8:40	8:46	8:52 ☀ ❄
		8:44	8:49	8:55	9:01	9:07
		8:59	9:04	9:09	9:15	9:21 ☀ ❄
		9:14	9:19	9:24	9:30	9:35
		9:28	9:33	9:38	9:44	9:49 ☀ ❄
		9:43	9:48	9:53	9:59	10:04
		9:58	10:03	10:08	10:14	10:19 ☀ ❄
		10:13	10:18	10:23	10:29	10:34
		10:43	10:48	10:53	10:59	11:04
	11:13	11:18	11:23	11:29	11:34	
	11:43	11:48	11:53	11:59	12:04	
	12:13	12:18	12:23	12:29	12:34	
	12:43	12:48	12:53	12:59	1:04	
	1:13	1:18	1:23	1:29	1:34	
	1:43	1:48	1:53	1:59	2:04	
	2:13	2:18	2:23	2:29	2:34	
	2:43	2:49	2:55	3:03	3:08	
	3:00	3:06	3:12	3:21	3:26 ☀ ❄	
	3:15	3:21	3:27	3:34	3:39	
	3:35	3:41	3:47	3:54	3:59 ☀ ❄	
	3:50	3:56	4:02	4:09	4:14	
	4:05	4:11	4:17	4:24	4:29 ☀ ❄	
	4:20	4:26	4:32	4:39	4:44	
	4:35	4:41	4:47	4:54	4:59 ☀ ❄	
	4:50	4:56	5:02	5:09	5:14	
	5:05	5:11	5:17	5:24	5:29 ☀ ❄	
	5:20	5:26	5:32	5:39	5:44	
	5:35	5:41	5:47	5:54	5:59 ☀ ❄	
	5:48	5:54	6:00	6:06	6:11	
	6:18	6:23	6:29	6:35	6:40	
	6:45	6:50	6:59	7:01	7:06	
	7:14	7:19	7:24	7:30	7:35	
	7:44	7:49	7:54	8:00	8:05	
	8:14	8:19	8:24	8:30	8:35	
	8:44	8:49	8:54	9:00	9:05	
	9:14	9:19	9:24	9:30	9:35	
	9:47	9:52	9:57	10:03	10:08	
	10:16	10:21	10:26	10:32	10:37	
	10:46	10:51	10:56	11:02	11:07	

**3:33** ☀ ❄

These trips do not operate during the Summer (late-June to Labour Day) or Christmas schedule periods



# SATURDAY SERVICE

	TIMEPOINT:					Map Reference
	UW at Davis Centre Depart	COLUMBIA at FISCHER-HALLMAN	ERBSVILLE at LAURELWOOD	FISCHER-HALLMAN at COLUMBIA	UW at Davis Centre Arrive	
A M	(A)	(B)	(C)	(B)	(A)	
		7:41	7:46	7:51	7:57	8:03
			8:16	8:21	8:27	8:33
		8:41	8:46	8:51	8:57	9:03
		9:11	9:16	9:21	9:27	9:33
		9:41	9:46	9:51	9:57	10:03
		10:11	10:16	10:21	10:27	10:33
		10:41	10:46	10:51	10:57	11:03
		11:11	11:16	11:21	11:27	11:33
		11:41	11:46	11:51	11:57	12:03
		12:11	12:16	12:21	12:27	12:33
		12:41	12:46	12:51	12:57	1:03
		1:11	1:16	1:21	1:27	1:33
		1:41	1:46	1:51	1:57	2:03
		2:11	2:16	2:21	2:27	2:33
		2:41	2:46	2:51	2:57	3:03
		3:11	3:16	3:21	3:27	3:33
		3:41	3:46	3:51	3:57	4:03
	4:11	4:16	4:21	4:27	4:33	
	4:41	4:46	4:51	4:57	5:03	
	5:11	5:16	5:21	5:27	5:33	
	5:41	5:46	5:51	5:57	6:03	
	6:11	6:16	6:21	6:27	6:33	

# SUNDAY SERVICE

	TIMEPOINT:					Map Reference
	UW at Davis Centre Depart	COLUMBIA at FISCHER-HALLMAN	ERBSVILLE at LAURELWOOD	FISCHER-HALLMAN at COLUMBIA	UW at Davis Centre Arrive	
A M	(A)	(B)	(C)	(B)	(A)	
		7:50	7:55	8:01	8:07	
		8:45	8:50	8:55	9:01	9:07
		9:45	9:50	9:55	10:01	10:07
		10:45	10:50	10:55	11:01	11:07
		11:45	11:50	11:55	12:01	12:07
		12:45	12:50	12:55	1:01	1:07
		1:45	1:50	1:55	2:01	2:07
		2:45	2:50	2:55	3:01	3:07
		3:45	3:50	3:55	4:01	4:07
		4:45	4:50	4:55	5:01	5:07
		5:45	5:50	5:55	6:01	6:07
		6:45	6:50	6:55	7:01	7:07
		7:45	7:50	7:55	8:01	8:07

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

### How to use this schedule...

Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.



## Transit Fares

You may pay your transit fare by:

- Cash
  - Ticket
  - Monthly Pass
  - Day Pass
  - Sunday/Holiday Family Pass
- Children under 5 ride for free*

Tickets and passes are available at 100+ locations throughout Cambridge, Kitchener and Waterloo. Check [www.grt.ca](http://www.grt.ca) for fare agent locations.

## 90 Minute Free Transfer

Request a free transfer from your operator when you board and it will give you 90 minutes of free travel from the time you board the bus. You may travel in any direction, on any route.

You can make short round trips with only one fare as long as you board the return bus before your transfer expires. For example, say you are taking the bus to the bank on your lunch hour. Get off the bus, do your banking, then get back on the bus to return to work by showing your transfer.

Remember, a transfer is valid only on the day it is issued and is not transferable.

## Transit Information

# 519-585-7555

[www.grt.ca](http://www.grt.ca)

**Grand River Transit**

250 Strasburg Road,  
Kitchener, Ontario  
N2E 3M6

A service provided by the



Region of Waterloo

# 14

## Bathurst



**Evening, Saturday and Sunday  
industrial specials included**

Monday to Friday Rush-hour Service

**Year-round Schedule**

Effective: September 7, 2009



Kindly reuse this timetable



**GRT**  
GRAND RIVER TRANSIT

# 519-585-7555

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

# WEEKDAY SERVICE

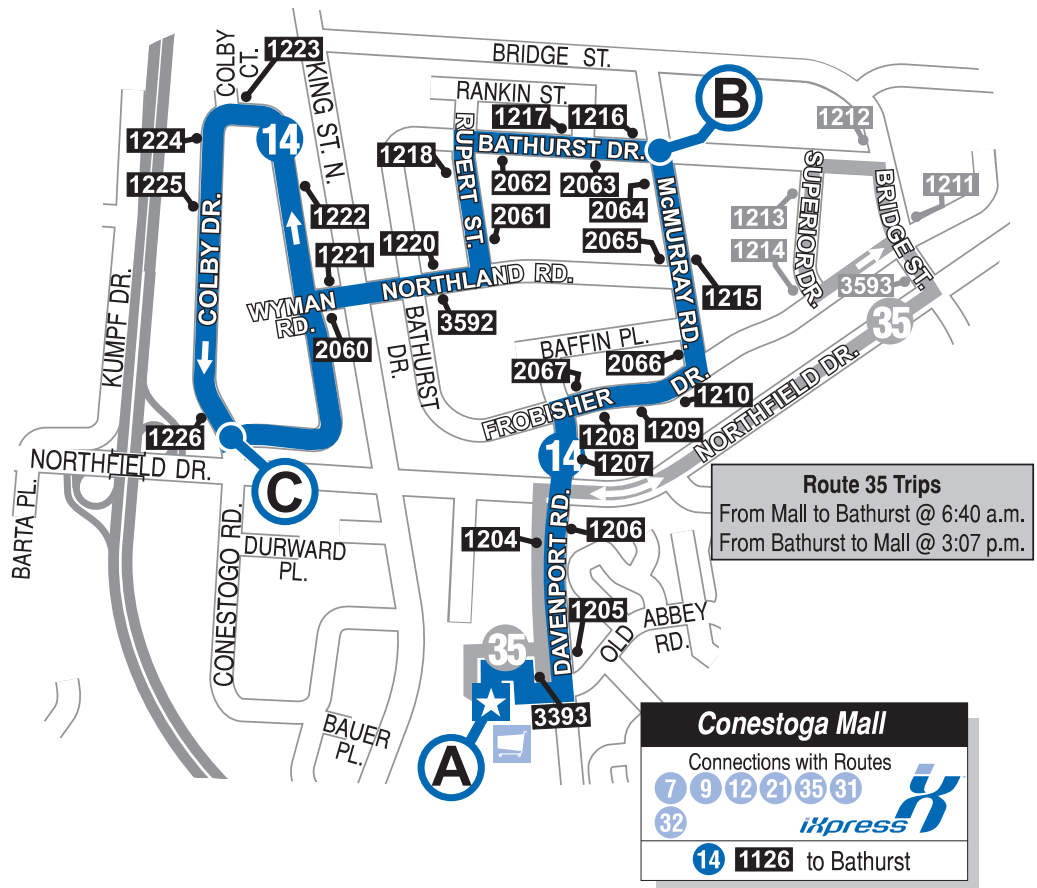
	TIMEPOINT: CONESTOGA MALL Depart	BATHURST at McMURRAY	WYMAN at COLBY	BATHURST at McMURRAY	CONESTOGA MALL Arrive	Map Reference
<b>A</b> <b>M</b>	(A) 6:23	(B) 6:27	(C) 6:31	(B) 7:00	(A) 7:07	
	6:40	6:46	6:51	7:30	7:37	
	7:10	7:16	7:21	8:00	8:07	
	7:40	7:46	7:51	8:30	8:37	
	8:10	8:16	8:21	8:30	8:37	
<b>P</b> <b>M</b>	8:40	8:46	8:51	9:00	9:07	
	2:30	2:36	2:41	2:50	2:57	
	3:00	3:06	3:11	3:20	3:27	
	3:30	3:36	3:41	3:50	3:57	
	4:00	4:06	4:11	4:20	4:27	
	4:30	4:36	4:41	4:50	4:57	
	5:00	5:06	5:11	5:20	5:27	
5:30	5:36	5:41	5:50	5:57		
	11:15	11:22	11:26			

## Waterloo Industrial Area Specials (year-round service)

On Saturday at 6:30 a.m. the Route 7C bus departs the Charles St. Terminal for the Industrial area. It services the area east of King St. only.

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

**easyGO**  
CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.  
24 hrs/day 7 days/week



# 15

## Frederick



Year-round Schedule

Effective: April 7, 2008



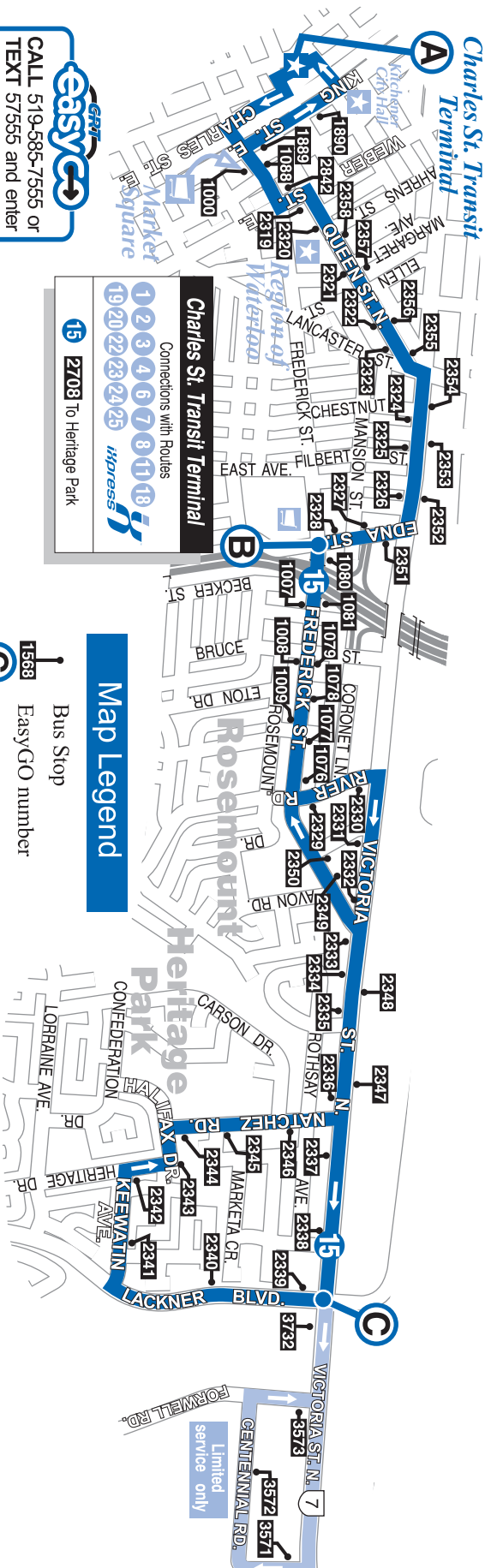
Kindly reuse this timetable

**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)



**Charles St. Transit Terminal**

Connections with Routes

1 2 3 4 6 7 8 11 18

19 20 22 23 24 25

**Express**

**15** 2708 To Heritage Park

### Map Legend

- Bus Stop
- EasyGO number
- Timepoint
- Shopping Centre
- Point of Interest

**easyGO**

CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.

24 hrs/day 7 days/week

*Fares and schedules are subject  
to change without notice.*

# MONDAY to FRIDAY SERVICE



	TIMEPOINT: CHARLES ST. TERMINAL - Depart	FREDERICK at EDNA	LACKNER at VICTORIA	FREDERICK at EDNA	CHARLES ST. TERMINAL - Arrive
A M	(A) 5:50	(B) 5:58	(C) 6:05	(B) 6:15	(A) 6:25
	6:30	6:38	● 6:52	7:02	7:12
	7:00	7:09	7:18	7:28	7:40
	7:30	7:39	7:48	7:58	8:10
	8:00	8:09	8:18	8:28	8:40
	8:30	8:39	8:48	8:58	9:10
	9:00	9:09	9:18	9:28	9:38
	9:30	9:39	9:48	9:58	10:08
	10:00	10:09	10:18	10:28	10:38
	10:30	10:39	10:48	10:58	11:08
	11:00	11:09	11:18	11:28	11:38
	11:30	11:39	11:48	11:58	12:08
P M	12:00	12:09	12:18	12:28	12:38
	12:30	12:39	12:48	12:58	1:08
	1:00	1:09	1:18	1:28	1:38
	1:30	1:39	1:48	1:58	2:08
	2:00	2:09	2:18	2:28	2:38
	2:30	2:39	2:48	2:58	3:10
	3:00	3:10	3:20	3:30	3:42
	3:30	3:40	3:50	4:00	4:12
	4:00	4:10	4:20	4:30	4:42
	4:30	4:40	4:50	5:00	5:12
	5:00	5:10	5:20	5:30	5:42
	5:30	5:40	5:50	6:00	6:12
	6:00	6:09	6:18	6:28	6:38
	6:30	6:39	6:48	6:58	7:08
	7:00	7:08	7:16	7:26	7:35
	8:00	8:08	8:16	8:26	8:35
	9:00	9:08	9:16	9:26	9:35
	10:00	10:08	● 10:18	10:28	10:37
11:00	11:08	● 11:18	11:28	11:37	

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

● Extension to Centennial Rd. industrial area

# SATURDAY SERVICE



	TIMEPOINT: CHARLES ST. TERMINAL - Depart	FREDERICK at EDNA	LACKNER at VICTORIA	FREDERICK at EDNA	CHARLES ST. TERMINAL - Arrive	Map Reference
A M	(A) 5:50	(B) 5:58	(C) 6:05	(B) 6:15	(A) 6:25	
	6:30	6:38	6:47	6:57	7:07	
	7:00	7:08	7:17	7:27	7:37	
	7:30	7:38	7:47	7:57	8:07	
	8:00	8:08	8:17	8:27	8:37	
	8:30	8:38	8:47	8:57	9:07	
	9:00	9:09	9:19	9:29	9:40	
	9:30	9:39	9:49	9:59	10:10	
	10:00	10:09	10:19	10:29	10:40	
	10:30	10:39	10:49	10:59	11:10	
	11:00	11:09	11:19	11:29	11:40	
	11:30	11:39	11:49	11:59	12:10	
P M	12:00	12:09	12:19	12:29	12:40	
	12:30	12:39	12:49	12:59	1:10	
	1:00	1:09	1:19	1:29	1:40	
	1:30	1:39	1:49	1:59	2:10	
	2:00	2:09	2:19	2:29	2:40	
	2:30	2:39	2:49	2:59	3:10	
	3:00	3:09	3:19	3:29	3:40	
	3:30	3:39	3:49	3:59	4:10	
	4:00	4:09	4:19	4:29	4:40	
	4:30	4:39	4:49	4:59	5:10	
	5:00	5:09	5:19	5:29	5:40	
	5:30	5:39	5:48	5:58	6:07	
	6:10	6:18	6:25	6:35	6:44	
	6:45	6:53	7:01	7:11	7:20	
	7:30	7:38	7:46	7:56	8:05	
	8:15	8:23	8:31	8:41	8:50	
	9:00	9:08	9:16	9:26	9:35	
	9:45	9:53	10:01	10:11	10:20	
10:30	10:38	10:46	bus to garage			

**How to use this schedule...** Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.





# MONDAY to FRIDAY SERVICE

To: Forest Glen

To: Conestoga College

TIMEPOINT	A	B	C	D	E	D	C	B	A	Map Reference
CONESTOGA COLLEGE Depart	6:20	6:26	6:35	6:40	6:45	6:48	6:56	7:05	7:05	A
DOON-PIONEER PARK COMMUNITY CENTRE	6:50	6:56	7:05	7:10	7:15	7:19	7:28	7:37	7:37	B
DOON-PIONEER PARK COMMUNITY CENTRE	7:15	7:22	7:31	7:36	7:45	7:49	7:58	8:07	8:07	C
BIENH at KILKERRAN	7:45	7:52	8:01	8:06	8:15	8:19	8:28	8:40	8:40	D
STRASBURG at TRILLIUM	8:15	8:22	8:31	8:36	8:45	8:49	8:58	9:07	9:07	E
STRASBURG at TRILLIUM	8:45	8:52	9:01	9:06	9:15	9:18	9:26	9:32	9:40	D
BIENH at KILKERRAN	9:15	9:21	9:27	9:35	9:40	9:45	9:56	10:02	10:10	C
DOON-PIONEER PARK COMMUNITY CENTRE	9:45	9:51	9:57	10:05	10:10	10:15	10:18	10:26	10:32	B
DOON-PIONEER PARK COMMUNITY CENTRE	10:15	10:21	10:27	10:35	10:40	10:45	10:56	11:02	11:10	A
DOON-PIONEER PARK COMMUNITY CENTRE	10:45	10:51	10:57	11:05	11:10	11:15	11:18	11:26	11:32	B
DOON-PIONEER PARK COMMUNITY CENTRE	11:15	11:21	11:27	11:35	11:40	11:45	11:56	12:02	12:10	C
DOON-PIONEER PARK COMMUNITY CENTRE	11:45	11:51	11:57	12:05	12:10	12:15	12:18	12:26	12:32	D
DOON-PIONEER PARK COMMUNITY CENTRE	12:15	12:21	12:27	12:35	12:40	12:45	12:48	12:56	1:02	E
DOON-PIONEER PARK COMMUNITY CENTRE	12:45	12:51	12:57	1:05	1:10	1:15	1:18	1:32	1:40	D
DOON-PIONEER PARK COMMUNITY CENTRE	1:15	1:21	1:27	1:35	1:40	1:45	1:56	2:02	2:10	C
DOON-PIONEER PARK COMMUNITY CENTRE	1:45	1:51	1:57	2:05	2:10	2:15	2:19	2:28	2:37	B
DOON-PIONEER PARK COMMUNITY CENTRE	2:15	2:22	2:31	2:36	2:45	2:49	2:58	3:07	3:07	A
DOON-PIONEER PARK COMMUNITY CENTRE	2:45	2:52	3:01	3:06	3:15	3:19	3:28	3:37	3:37	B
DOON-PIONEER PARK COMMUNITY CENTRE	3:10	3:21	3:30	3:35	3:45	3:49	3:58	4:07	4:07	C
DOON-PIONEER PARK COMMUNITY CENTRE	3:45	3:52	4:01	4:06	4:15	4:19	4:28	4:37	4:37	D
DOON-PIONEER PARK COMMUNITY CENTRE	4:15	4:22	4:31	4:36	4:45	4:49	4:58	5:07	5:07	E
DOON-PIONEER PARK COMMUNITY CENTRE	4:45	4:52	5:01	5:06	5:15	5:18	5:27	5:36	5:36	D
DOON-PIONEER PARK COMMUNITY CENTRE	5:15	5:22	5:31	5:36	5:45	5:48	5:57	6:05	6:05	C
DOON-PIONEER PARK COMMUNITY CENTRE	5:50	5:56	6:05	6:10	6:15	6:18	6:26	6:34	6:34	B
DOON-PIONEER PARK COMMUNITY CENTRE	6:20	6:26	6:35	6:40	6:40	6:40	6:40	6:40	6:40	A

★ Service extension to Doon Public School on school days only

Refer to the Route 10 schedule for evening, Saturday and Sunday service in the Pioneer Park area.

# SUMMER MID-DAY SERVICE

To: Forest Glen

To: Conestoga College

TIMEPOINT	A	B	C	D	E	D	C	B	A	Map Reference
CONESTOGA COLLEGE Depart	7:45	7:52	8:01	8:06	8:15	8:19	8:28	8:37	8:37	A
DOON-PIONEER PARK COMMUNITY CENTRE	8:15	8:22	8:31	8:36	8:45	8:49	8:58	9:07	9:07	B
DOON-PIONEER PARK COMMUNITY CENTRE	8:45	8:52	9:01	9:06	9:15	9:18	9:24	9:30	9:37	C
DOON-PIONEER PARK COMMUNITY CENTRE	9:15	9:21	9:27	9:35	9:40	9:45	9:54	10:00	10:07	D
DOON-PIONEER PARK COMMUNITY CENTRE	9:50	9:55	10:01	10:08	10:12	10:15	10:24	10:30	10:37	E
DOON-PIONEER PARK COMMUNITY CENTRE	10:20	10:25	10:31	10:38	10:42	10:45	10:54	11:00	11:07	D
DOON-PIONEER PARK COMMUNITY CENTRE	10:50	10:55	11:01	11:08	11:12	11:15	11:24	11:30	11:37	C
DOON-PIONEER PARK COMMUNITY CENTRE	11:20	11:25	11:31	11:38	11:42	11:45	11:54	12:00	12:01	B
DOON-PIONEER PARK COMMUNITY CENTRE	11:50	11:55	12:01	12:08	12:12	12:15	12:18	12:24	12:30	A
DOON-PIONEER PARK COMMUNITY CENTRE	12:20	12:25	12:31	12:38	12:42	12:45	12:48	12:54	1:00	B
DOON-PIONEER PARK COMMUNITY CENTRE	12:50	12:55	1:01	1:08	1:12	1:15	1:18	1:24	1:30	C
DOON-PIONEER PARK COMMUNITY CENTRE	1:20	1:25	1:31	1:38	1:42	1:45	1:54	2:00	2:07	D
DOON-PIONEER PARK COMMUNITY CENTRE	1:50	1:55	2:01	2:08	2:12	2:15	2:19	2:28	2:37	E
DOON-PIONEER PARK COMMUNITY CENTRE	2:20	2:27	2:36	2:41	2:45	2:49	2:58	3:07	3:07	D
DOON-PIONEER PARK COMMUNITY CENTRE	2:45	2:52	3:01	3:06	3:15	3:19	3:28	3:37	3:37	C
DOON-PIONEER PARK COMMUNITY CENTRE	3:15	3:22	3:31	3:36	3:45	3:49	3:58	4:07	4:07	B

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

### How to use this schedule...

Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

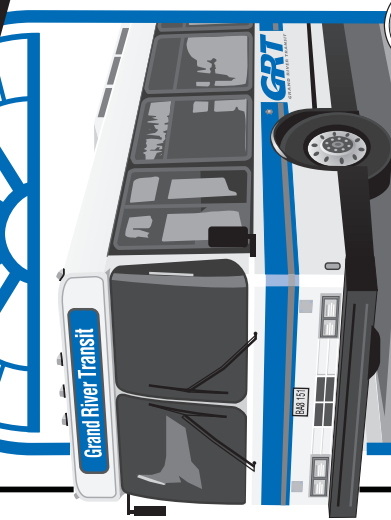
# Heritage Park

# 17

# Fairview Park



**Year-round Schedule**  
**Effective: September 7, 2009**



Kindly reuse this timetable



GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

## Transit Fares

You may pay your transit fare by:

- Cash
- **STUDENT** Ticket
- Monthly Pass
- Day Pass
- Sunday/Holiday Family Pass
- *Children under 5 ride for free*

Tickets and passes are available at 100+ locations throughout Cambridge, Kitchener and Waterloo. Check [www.grt.ca](http://www.grt.ca) for fare agent locations.

## 90 Minute Free Transfer

Request a free transfer from your operator when you board and it will give you 90 minutes of free travel from the time you board the bus. You may travel in any direction, on any route.

You can make short round trips with only one fare as long as you board the return bus before your transfer expires. For example, say you are taking the bus to the bank on your lunch hour. Get off the bus, do your banking, then get back on the bus to return to work by showing your transfer.

Remember, a transfer is valid only on the day it is issued and is not transferable.

## Transit Information



**519-585-7555**

[www.grt.ca](http://www.grt.ca)

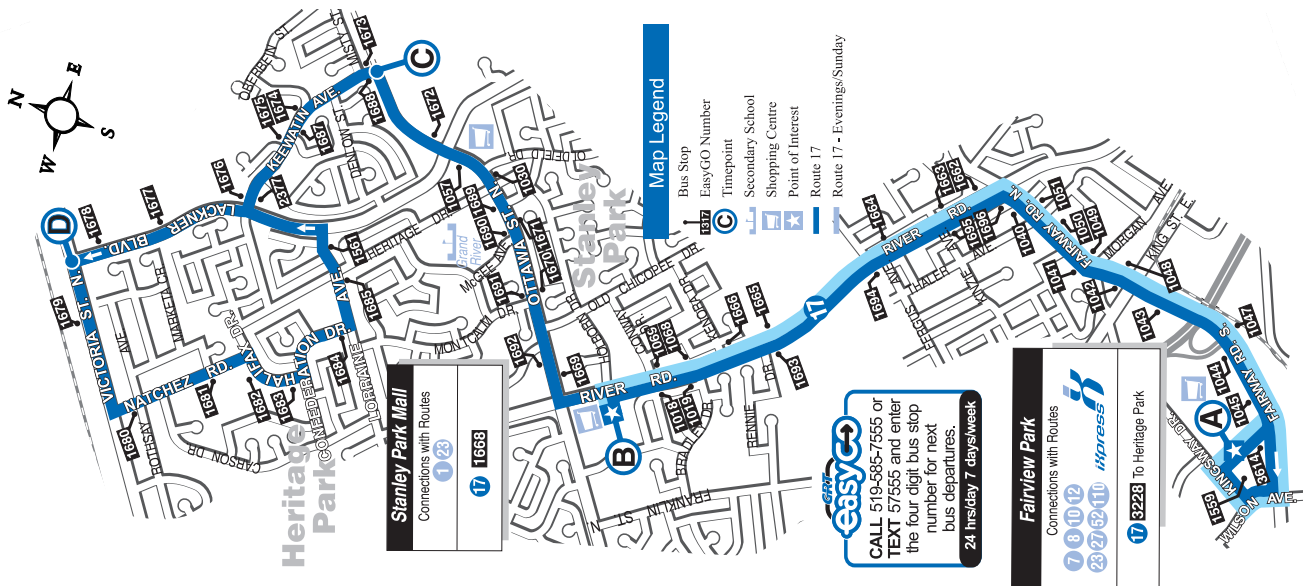
**Grand River Transit**

250 Strasburg Road,  
 Kitchener, Ontario  
 N2E 3M6

A service provided by the



Region of Waterloo



Fares and schedules are subject to change without notice.

# MONDAY to FRIDAY SERVICE

TO: Heritage Park

TO: Fairview

TIMEPOINT:	A	B	C	D	C	B	A	Map Reference
FAIRVIEW PARK MALL - Depart -	6:30	6:45	6:50	6:00	6:07	6:15	6:25	A
STANLEY PARK MALL - Depart -				6:55	7:02	7:10	7:20	B
KEEWATIN at OTTAWA								C
LACKNER at VICTORIA								D
KEEWATIN at OTTAWA								C
STANLEY PARK MALL - Depart -								B
FAIRVIEW PARK MALL - Arrive -								A
FAIRVIEW PARK MALL - Depart -	7:30	7:45	7:50	7:55	8:02	8:10	8:20	A
STANLEY PARK MALL - Depart -	8:30	8:45	8:50	8:55	9:02	9:10	9:20	B
KEEWATIN at OTTAWA	9:30	9:45	9:50	9:55	10:02	10:10	10:20	C
LACKNER at VICTORIA	10:30	10:45	10:50	10:55	11:02	11:10	11:20	D
KEEWATIN at OTTAWA	11:30	11:45	11:50	11:55	12:02	12:10	12:20	C
STANLEY PARK MALL - Depart -	12:30	12:45	12:50	12:55	1:02	1:10	1:20	B
FAIRVIEW PARK MALL - Arrive -	1:30	1:45	1:50	1:55	2:02	2:10	2:20	A
FAIRVIEW PARK MALL - Depart -	2:30	2:45	2:50	3:00	3:07	3:15	3:25	B
STANLEY PARK MALL - Depart -	3:30	3:45	3:50	3:55	4:02	4:10	4:20	C
KEEWATIN at OTTAWA	4:30	4:45	4:50	4:55	5:02	5:10	5:20	D
LACKNER at VICTORIA	5:30	5:45	5:50	5:55	6:02	6:10	6:20	C
KEEWATIN at OTTAWA	6:30	6:45	6:50	6:55	7:02	7:10	7:20	B
STANLEY PARK MALL - Depart -	7:30	7:41				7:45	7:55	A
FAIRVIEW PARK MALL - Arrive -	8:30	8:41				8:45	8:55	B
FAIRVIEW PARK MALL - Depart -	9:30	9:41				9:45	9:55	C
STANLEY PARK MALL - Depart -	10:30	10:41				10:45	10:55	D
FAIRVIEW PARK MALL - Arrive -	11:30	11:41				11:45	11:55	C



# SATURDAY SERVICE

TO: Heritage Park

TO: Fairview

TIMEPOINT:	A	B	C	D	C	B	A	Map Reference
FAIRVIEW PARK MALL - Depart -	8:30	8:45	8:50	8:00	8:07	8:15	8:25	A
STANLEY PARK MALL - Depart -	9:30	9:45	9:50	8:55	9:02	9:10	9:20	B
KEEWATIN at OTTAWA	10:30	10:45	10:50	9:55	10:02	10:10	10:20	C
LACKNER at VICTORIA	11:30	11:45	11:50	10:55	11:02	11:10	11:20	D
KEEWATIN at OTTAWA	12:30	12:45	12:50	11:55	12:02	12:10	12:20	C
STANLEY PARK MALL - Depart -	1:30	1:45	1:50	1:55	2:02	2:10	2:20	B
FAIRVIEW PARK MALL - Arrive -	2:30	2:45	2:50	2:55	3:02	3:10	3:20	A
FAIRVIEW PARK MALL - Depart -	3:30	3:45	3:50	3:55	4:02	4:10	4:20	B
STANLEY PARK MALL - Depart -	4:30	4:45	4:50	4:55	5:02	5:10	5:20	C
KEEWATIN at OTTAWA	5:30	5:45	5:50	5:55	6:02	6:10	6:20	D
LACKNER at VICTORIA	6:30	6:45	6:50	6:54	7:02	7:10	7:20	C
KEEWATIN at OTTAWA	7:30	7:41				7:45	7:55	B
STANLEY PARK MALL - Depart -	8:30	8:41				8:45	8:55	A
FAIRVIEW PARK MALL - Arrive -	9:30	9:41				9:45	9:55	B
FAIRVIEW PARK MALL - Depart -	10:30	10:41				10:45	10:55	C
STANLEY PARK MALL - Depart -	11:30	11:41				11:45	11:55	D

3:33



No summer or Christmas service.

Low-floor bus not available for this trip.

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

## How to use this schedule...

Read across for times from beginning to end of route and down for time at a specific bus stop.  
 Bus stop location on map corresponds with circled letter found under bus stop name.

# SUNDAY SERVICE

TIMEPOINT:	A	B	C	B	A	Map Reference
FAIRVIEW PARK MALL - Depart -	11:00	11:10	11:15	11:25	11:25	A
STANLEY PARK MALL - Depart -	12:00	12:10	12:15	12:25	12:25	B
KEEWATIN at OTTAWA	1:00	1:10	1:15	1:25	1:25	C
LACKNER at VICTORIA	2:00	2:10	2:15	2:25	2:25	B
KEEWATIN at OTTAWA	3:00	3:10	3:15	3:25	3:25	C
STANLEY PARK MALL - Depart -	4:00	4:10	4:15	4:25	4:25	B
FAIRVIEW PARK MALL - Arrive -	5:00	5:10	5:15	5:25	5:25	A

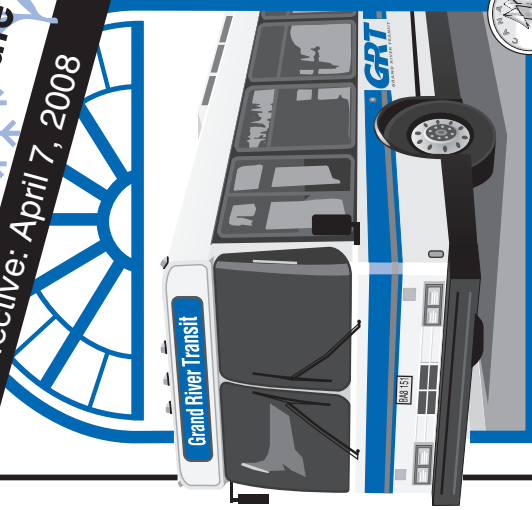


# 18

## Guelph Street



**Year-round Schedule**  
Effective: April 7, 2008



Kindly reuse this timetable

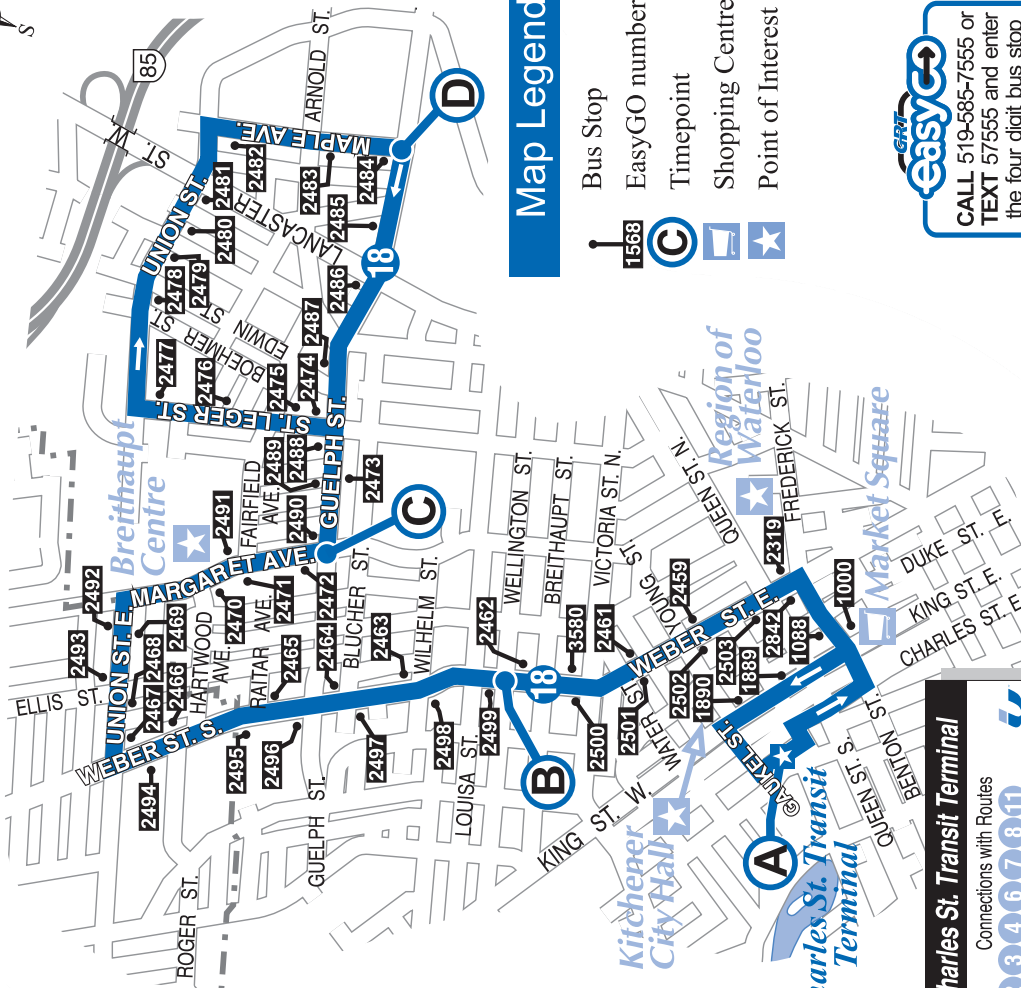


**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)



### Map Legend

- Bus Stop
- EasyGO number
- Timepoint
- Shopping Centre
- Point of Interest

**easyGO**  
CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.  
24 hrs/day 7 days/week

**Charles St. Transit Terminal**  
Connections with Routes  
1 2 3 4 6 7 8 11  
15 19 20 22 23 24 25 *Express*  
**18 2555** To Guelph Street

All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.



*Fares and schedules are subject to change without notice.*

## MONDAY to FRIDAY SERVICE

TO: Guelph St. TO: Downtown

TIMEPOINT:	WEBER at WELINGTON	MARGARET at GUELPH ST.	MAPLE at GUELPH ST.	WEBER at WELINGTON	CHARLES ST. TERMINAL - Depart	Map Reference
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>B</b>	<b>A</b>	
6:30	6:36	6:41	6:46	6:54	7:01	
7:05	7:11	7:16	7:21	7:29	7:36	
7:35	7:41	7:46	7:51	7:59	8:06	
8:05	8:11	8:16	8:21	8:29	8:36	
8:35	8:41	8:46	8:51	8:59	9:06	
9:05	9:12	9:18	9:23	9:32	9:39	
9:30	9:38	9:43	9:48	9:57	10:04	
10:00	10:08	10:13	10:18	10:27	10:34	
10:30	10:38	10:43	10:48	10:57	11:04	
11:00	11:08	11:13	11:18	11:27	11:34	
11:30	11:38	11:43	11:48	11:57	12:04	
12:00	12:08	12:13	12:18	12:27	12:34	
12:30	12:38	12:43	12:48	12:57	1:04	
1:00	1:08	1:13	1:18	1:27	1:34	
1:30	1:38	1:43	1:48	1:57	2:04	
2:00	2:08	2:13	2:18	2:27	2:35	
2:30	2:38	2:43	2:49	2:58	3:06	
3:05	3:13	3:18	3:24	3:33	3:41	
3:35	3:43	3:48	3:54	4:03	4:11	
4:05	4:13	4:18	4:24	4:33	4:41	
4:35	4:43	4:48	4:54	5:03	5:11	
5:05	5:13	5:18	5:24	5:33	5:41	
5:35	5:43	5:48	5:54	6:03	6:10	

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

### How to use this schedule...

Read across for times from beginning to end of route and down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

## SATURDAY SERVICE

TO: Guelph St. TO: Downtown

TIMEPOINT:	WEBER at WELINGTON	MARGARET at GUELPH ST.	MAPLE at GUELPH ST.	WEBER at WELINGTON	CHARLES ST. TERMINAL - Depart	Map Reference
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>B</b>	<b>A</b>	
8:30	8:38	8:43	8:48	8:57	9:04	
9:30	9:38	9:43	9:48	9:57	10:04	
10:30	10:38	10:43	10:48	10:57	11:04	
11:30	11:38	11:43	11:48	11:57	12:04	
12:30	12:38	12:43	12:48	12:57	1:04	
1:30	1:38	1:43	1:48	1:57	2:04	
2:30	2:38	2:43	2:48	2:57	3:04	
3:30	3:38	3:43	3:48	3:57	4:04	
4:30	4:38	4:43	4:48	4:57	5:04	

## SUMMER MIDDAY SERVICE

TO: Guelph St. TO: Downtown

TIMEPOINT:	WEBER at WELINGTON	MARGARET at GUELPH ST.	MAPLE at GUELPH ST.	WEBER at WELINGTON	CHARLES ST. TERMINAL - Arrive	Map Reference
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>B</b>	<b>A</b>	
9:15	9:23	9:28	9:33	9:42	9:49	
10:00	10:08	10:13	10:18	10:27	10:34	
10:45	10:53	10:58	11:03	11:12	11:19	
11:30	11:38	11:43	11:48	11:57	12:04	
12:15	12:23	12:28	12:33	12:42	12:49	
1:00	1:08	1:13	1:18	1:27	1:34	
1:45	1:53	1:58	2:03	2:12	2:19	

### SUMMER SCHEDULE PERIOD - June 22nd, 2009 to Labour Day

During the Summer, service will be reduced in the weekday midday period. For schedule information for the trips denoted by a ❖ please refer to the schedule above.

## Transit Fares

You may pay your transit fare by:

- Cash
- Monthly Pass
- Sunday/Holiday Family Pass
- Ticket
- Day Pass
- Children under 5 ride for free

Tickets and passes are available at 100+ locations throughout Cambridge, Kitchener and Waterloo. Check [www.grt.ca](http://www.grt.ca) for fare agent locations.

## 90 Minute Free Transfer

Request a free transfer from your operator when you board and it will give you 90 minutes of free travel from the time you board the bus. You may travel in any direction, on any route.

You can make short round trips with only one fare as long as you board the return bus before your transfer expires. For example, say you are taking the bus to the bank on your lunch hour. Get off the bus, do your banking, then get back on the bus to return to work by showing your transfer.

Remember, a transfer is valid only on the day it is issued and is not transferable.

## Transit Information

# 519-585-7555

[www.grt.ca](http://www.grt.ca)

**Grand River Transit**

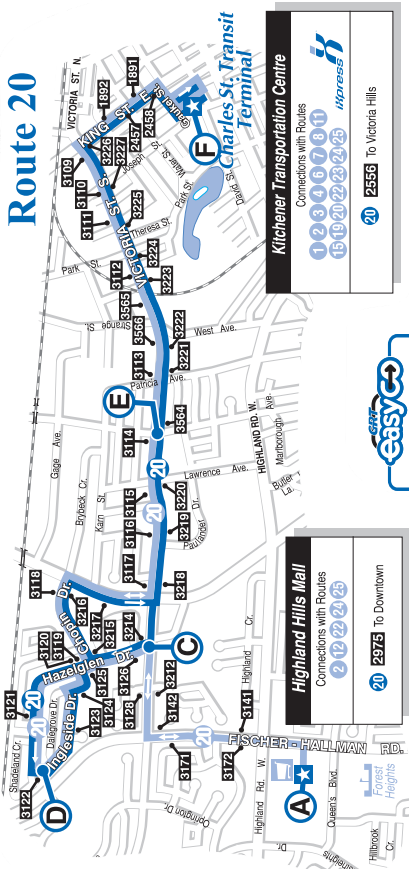
250 Strasburg Road,  
Kitchener, Ontario  
N2E 3M6

A service provided by the



Region of Waterloo

# Route 20



**Highland Hills Mall**  
Connections with Routes  
2, 12, 22, 24, 25

**20** 2975 To Downtown

**Kitchener Transportation Centre**  
Connections with Routes  
1, 2, 3, 4, 6, 7, 9, 11, 15, 19, 20, 22, 23, 24, 25, 40, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200

**20** 2556 To Victoria Hills

**easyGO**  
CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.  
24 hrs/day 7 days/week

Fares and schedules are subject  
to change without notice.

# SUNDAY/HOLIDAY SERVICE

TO: Victoria Hls. TO: Downtown TO: Victoria Hills TO: Mall

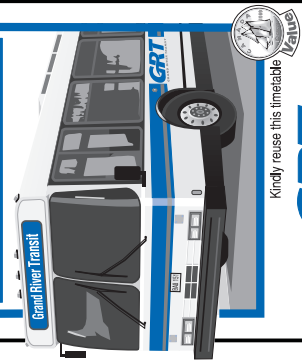
TIMEPOINT	ROUTE NUMBER	HIGHLAND HILLS MALL - Arrive	VICTORIA at HAZELGLEN	INGLESIDE at HAZELGLEN	VICTORIA at BELMONT	CHARLES ST. TERMINAL - Arrive	CHARLES ST. TERMINAL - Depart	VICTORIA at BELMONT	INGLESIDE at HAZELGLEN	VICTORIA at HAZELGLEN	HIGHLAND HILLS MALL - Arrive	Map Reference
A	20	8:15	8:19	8:21	8:28	8:34	8:45	8:50	8:56	8:59	9:04	A
M	20	8:15	8:19	8:21	8:28	8:34	8:45	8:50	8:56	8:59	9:04	A
P	20	10:15	10:19	10:21	10:28	10:34	10:45	10:50	10:56	10:59	11:04	A
M	20	10:15	10:19	10:21	10:28	10:34	10:45	10:50	10:56	10:59	11:04	A
M	20	12:15	12:19	12:21	12:28	12:34	12:45	12:50	12:56	12:59	13:04	A
M	20	12:15	12:19	12:21	12:28	12:34	12:45	12:50	12:56	12:59	13:04	A
M	20	2:15	2:19	2:21	2:28	2:34	2:45	2:50	2:56	2:59	3:04	A
M	20	2:15	2:19	2:21	2:28	2:34	2:45	2:50	2:56	2:59	3:04	A
M	20	3:15	3:19	3:21	3:28	3:34	3:45	3:50	3:56	3:59	4:04	A
M	20	3:15	3:19	3:21	3:28	3:34	3:45	3:50	3:56	3:59	4:04	A
M	20	4:15	4:19	4:21	4:28	4:34	4:45	4:50	4:56	4:59	5:04	A
M	20	4:15	4:19	4:21	4:28	4:34	4:45	4:50	4:56	4:59	5:04	A
M	20	5:15	5:19	5:21	5:28	5:34	5:45	5:50	5:56	5:59	6:04	A
M	20	5:15	5:19	5:21	5:28	5:34	5:45	5:50	5:56	5:59	6:04	A
M	20	6:15	6:19	6:21	6:28	6:34	6:45	6:50	6:56	6:59	7:03	A
M	20	6:15	6:19	6:21	6:28	6:34	6:45	6:50	6:56	6:59	7:03	A
M	20	7:15	7:19	7:21	7:28	7:34	7:45	7:50	7:56	7:59	8:03	A
M	20	7:15	7:19	7:21	7:28	7:34	7:45	7:50	7:56	7:59	8:03	A
M	20	8:15	8:19	8:21	8:28	8:34	8:45	8:50	8:56	8:59	9:03	A
M	20	8:15	8:19	8:21	8:28	8:34	8:45	8:50	8:56	8:59	9:03	A
M	20	9:15	9:19	9:21	9:28	9:34	9:45	9:50	9:56	9:59	10:03	A
M	20	9:15	9:19	9:21	9:28	9:34	9:45	9:50	9:56	9:59	10:03	A
M	20	10:15	10:19	10:21	10:28	10:34	10:45	10:50	10:56	10:59	11:03	A
M	20	10:15	10:19	10:21	10:28	10:34	10:45	10:50	10:56	10:59	11:03	A
M	20	11:15	11:19	11:21	11:28	11:34	11:45	11:50	11:56	11:59	12:03	A
M	20	11:15	11:19	11:21	11:28	11:34	11:45	11:50	11:56	11:59	12:03	A

# Victoria South

# 19/20

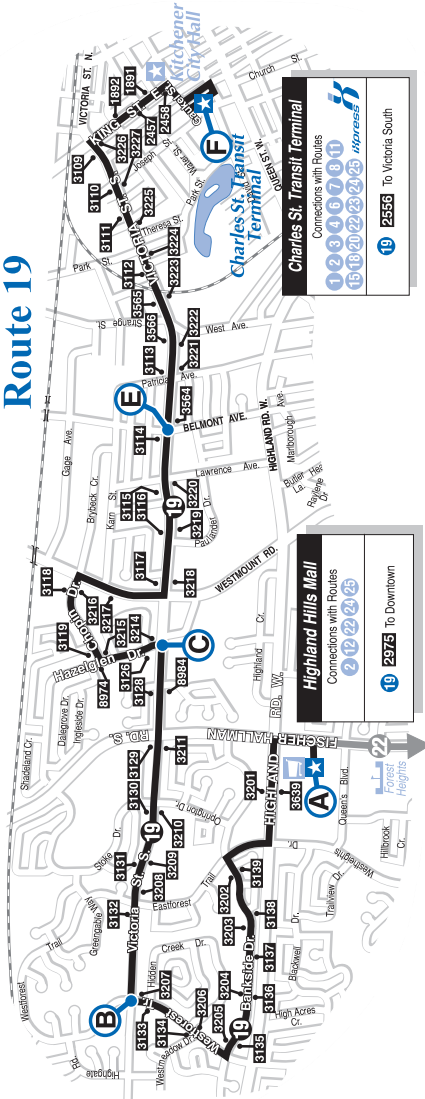
# Victoria Hills

**Year-round Schedule**  
Effective: September 7, 2009



Kindly reuse this timetable  
**GRT**  
GRAND RIVER TRANSIT  
519-585-7555  
TTY: 519-585-7796  
www.grt.ca

# Route 19



**Highland Hills Mall**  
Connections with Routes  
2, 12, 22, 24, 25

**19** 2975 To Downtown

**Charles St. Transit Terminal**  
Connections with Routes  
1, 2, 3, 4, 6, 7, 9, 11, 15, 19, 20, 22, 23, 24, 25, 40, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200

**19** 2556 To Victoria South

All low-floor buses on this route are accessible to mobility impaired passengers. Please make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.

- Map Legend**
- Bus Stop
  - EasyGO Number
  - Timepoint
  - Secondary School
  - Shopping Centre
  - Point of Interest
  - Route 19
  - Route 20 - Off-Peak/Sat./Sun.
  - Route 20 - Rush-hour Periods



# MONDAY to FRIDAY SERVICE

TO: Victoria Hills TO: Downtown TO: Victoria Hills TO: Highland Hills

TIMEPOINT	ROUTE NUMBER	Map Reference																		
		A	B	C	D	E	F	E	D	C	B	A								
A M	20			5:45	5:47	5:54	6:01	to Rt. 8	6:15	6:22	6:26									
	19			5:55	5:57	6:04	6:11	6:15	6:22	6:26										
	20	6:00	6:05	6:10		6:16	6:23	6:30	6:37											
	19			to downtown		6:34	6:42	6:45	6:52	6:56										
	20	6:30	6:35	6:40		6:46	6:53	7:00	7:07											
	19			to downtown		7:04	7:12	7:15	7:22	7:26										
	20	7:00	7:05	7:10		7:16	7:23	7:30	7:37											
	19			to downtown		7:34	7:42	7:45	7:52	7:56										
	20	7:30	7:35	7:40		7:46	7:53	8:00	8:07											
	19			to downtown		8:04	8:12	8:15	8:22	8:26										
	20	8:00	8:05	8:10		8:16	8:23	8:30	8:37											
	19			● 8:24		8:26	8:34	8:42	8:45	8:52	8:56									
	20	8:30	8:35	8:40		8:46	8:53	9:00	9:07											
	19			to downtown		9:04	9:12	9:15	9:22	9:26										
	20	9:00	9:05	9:10		9:16	9:23	to Rt.20												
	19			to downtown		9:26	9:34	9:30	9:36	9:42	9:45									
	20	9:51		9:55	9:57	10:04	10:11	10:00	10:06	10:12	10:15									
	19			to downtown		10:27	10:34	10:41	11:00	11:06	11:12	11:15								
	20	10:21		10:25	10:27	10:34	10:41	11:00	11:06	11:12	11:15									
19			to downtown		11:04	11:11	11:30	11:36	11:42	11:45										
20	10:51		10:55	10:57	11:04	11:11	12:00	12:06	12:12	12:15										
19			to downtown		11:34	11:41	12:30	12:36	12:42	12:45										
20	11:21		11:25	11:27	11:34	11:41	1:00	1:06	1:12	1:15										
19			to downtown		12:04	12:11	1:30	1:36	1:42	1:45										
20	11:51		11:55	11:57	12:04	12:11	1:00	1:06	1:12	1:15										
19			to downtown		12:34	12:41	1:30	1:36	1:42	1:45										
20	12:21		12:25	12:27	12:34	12:41	2:00	2:06	2:12	2:15										
19			to downtown		1:04	1:11	2:30	2:37	2:43	2:46										
20	12:51		12:55	12:57	1:04	1:11	2:30	2:37	2:43	2:46										
19			to downtown		1:34	1:41	2:00	2:06	2:12	2:15										
20	1:21		1:25	1:27	1:34	1:41	2:00	2:06	2:12	2:15										
19			to downtown		2:04	2:11	2:30	2:37	2:43	2:46										
20	1:51		1:55	1:57	2:04	2:11	2:30	2:37	2:43	2:46										
19			to downtown		2:34	2:41	2:45	2:52	2:58											
20	2:21		2:25	2:27	2:34	2:41	3:00	3:07												
19			to downtown		3:12	3:19	3:15	3:22	3:28											
20	3:00		3:05	3:10		3:16	3:23	3:30	3:37											
19			to downtown		3:28	3:35	3:42	3:45	3:52	3:58										
20	3:30		3:35	3:40		3:46	3:53	4:00	4:07											
19			to downtown		3:58	4:05	4:12	4:15	4:22	4:28										
20	4:00		4:05	4:10		4:16	4:23	4:30	4:37											
19			to downtown		4:28	4:35	4:42	4:45	4:52	4:58										
20	4:30		4:35	4:40		4:46	4:53	5:00	5:07											
19			to downtown		4:58	5:05	5:12	5:15	5:22	5:28										
20	5:00		5:05	5:10		5:16	5:23	5:30	5:37											
19			to downtown		5:28	5:35	5:42	5:45	5:52	5:58										
20	5:30		5:35	5:40		5:46	5:53	6:00	6:07											
19			to downtown		5:58	6:05	6:12	6:15	6:22	6:28										
20	6:00		6:05	6:10		6:16	6:23	to garage												
19			to downtown		6:28	6:35	6:42	6:45	6:52	6:56	6:58									
20	6:30		6:35	6:40		6:46	6:53	to garage												
19			to downtown		7:11	7:18	7:24	7:30	7:37	7:41	7:43									
20	7:05		7:09	7:11		7:17	7:24	7:30	7:37	7:41	7:43									
19			to downtown		8:03	8:09	8:15	8:22	8:26	8:28										
20	7:50		7:54	7:56		8:03	8:09	8:15	8:22	8:26	8:28									
19			to downtown		8:41	8:48	8:54	9:00	9:07	9:11	9:13									
20	8:35		8:39	8:41		8:48	8:54	9:00	9:07	9:11	9:13									
19			to downtown		9:33	9:39	9:45	9:52	9:56	9:58										
20	9:20		9:24	9:26		9:33	9:39	9:45	9:52	9:56	9:58									
19			to downtown		10:11	10:18	10:24	10:30	10:37	10:41	10:43									
20	10:05		10:09	10:11		10:18	10:24	10:30	10:37	10:41	10:43									
19			to downtown		11:03	11:09	11:15	11:22	11:26	11:28										
20	10:50		10:54	10:56		11:03	11:09	11:15	11:22	11:26	11:28									
19			to downtown		11:48	11:54	12:00	12:07	12:11	12:13										
20	11:35		11:39	11:41		11:48	11:54	12:00	12:07	12:11	12:13									

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

8:15 Operates only during Christmas and Summer

During the Christmas and Summer periods this trip starts at Ingle side and Hazelglen

Please Note: Route 19 - Victoria South is a rush-hour only service operating from Monday to Friday.

Route 20 - Victoria Hills operates seven days a week, with service to Highland Hills Mall during the midday and evening, and all day Saturday and Sundays. During the rush-hour periods Route 19 must be used to reach Highland Hills Mall from along the Victoria Street South corridor.

Interlining Note: Route 19

Upon arrival at the Highland Hills Mall, the Route 19 - Victoria South changes its destination sign and continues on as the Route 22 - Laurierian West.

Upon arrival at the Kitchener Transportation Centre, the Route 19 - Victoria South changes its destination sign and usually continues on as the Route 11 - Country Hills.

Route 20

Upon arrival at the Highland Hills Mall, the Route 20 - Victoria Hills changes its destination sign and returns to downtown via Victoria Hills.

Upon arrival at the Kitchener Transportation Centre, the Route 20 - Victoria Hills changes its destination sign and usually continues on as the Route 11 - Country Hills.

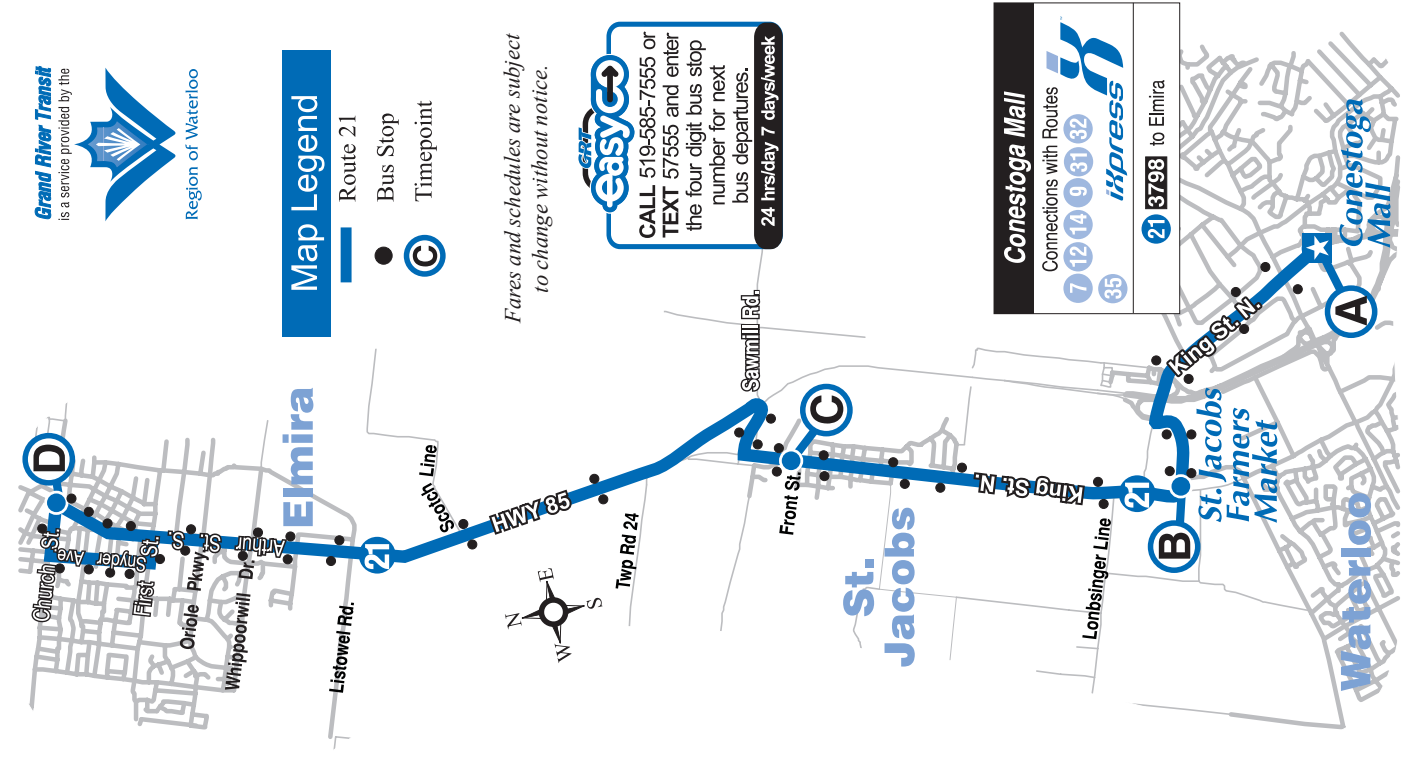
### How to use this schedule...

1. Read across for times from beginning to end of route.
2. The "Route Number" column indicates the bus route for each individual trip.
3. Read down for times at a specific bus stop.
4. Bus stop location on map corresponds with circled letter found under bus stop name.





- EasyGO Stop Numbers**
- To Elmira**
- Conestoga Mall 3798
  - King at Northfield 2089
  - King at Northland 2090
  - King at Martin Grove 3727
  - Walmart 3807
  - Farmers Market 2091
  - King at Lobsinger 3836
- St. Jacobs**
- King at Printery 3808
  - King at Henry 2092
  - King at Cedar 2093
  - King at Front 2094
  - Saw Mill at Parkside 3809
  - Saw Mill at Hwy 85 3729
  - Hwy 85 after Twp Rd 24 3837
- Elmira**
- Hwy 85 at Scotch 3838
  - Arthur at Listowel Rd. 3810
  - Arthur at Earl Martin 3811
  - Arthur at South Field 3812
  - Arthur at Oriole 3813
  - Arthur at Memorial 3814
  - Arthur at South St. 3815
  - Arthur at Wyatt 3816
  - Arthur at Mill 3817
- To Conestoga Mall**
- Elmira**
- Church St. at Township Hall 3818
  - Snyder at Church 3819
  - Snyder at Park 3820
  - Snyder at Brubacher 3821
  - Snyder at Second St. 3822
  - First St. 3823
  - Arthur at Oriole 3824
  - Arthur at Whippoorwill 3825
  - Arthur at South Parkwood 3826
  - Arthur at Listowel Rd. 3827
  - Hwy 85 at Scotch 3839
- St. Jacobs**
- Hwy 85 before Twp Rd 24 3840
  - Saw Mill Rd. 3828
  - King at Front 3829
  - King at Cedar 3830
  - King at Henry 3831
  - King at Printery 3832
  - King at Lobsinger 3841
  - Farmers Market 3833
  - Walmart 3834
  - King at Martin Grove 3728
  - King at Wyman 2095
  - King at Northfield 2096
  - Conestoga Mall 3798



**Elmira**

# 21

**Conestoga Mall**

Includes service to the Village of St. Jacobs

**New Weekday Service**

**Year-round Schedule**

Effective: June 22, 2009

Grand River Transit

Kindly reuse this timetable

**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**  
TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)

Value

# MONDAY TO FRIDAY SERVICE

TO: Elmira

TO: Conestoga Mall

TIMEPOINT:	A	B	C	D	C	B	A	Map Reference
CONESTOGA MALL - Depart -	6:10	6:18	6:24	6:38	6:49	6:55	6:35	A
ST. JACOBS MARKET - Depart -	6:40	6:48	6:54	7:08	7:19	7:25	7:03	B
ST. JACOBS MARKET - King at Front	7:10	7:18	7:24	7:38	7:49	7:55	7:33	C
ELMIRA Arthur at Church	7:40	7:48	7:54	8:08	8:19	8:25	8:03	D
ST. JACOBS MARKET - King at Front	8:10	8:18	8:24	8:38	8:49	8:55	8:33	C
ST. JACOBS MARKET - Depart -	8:40	8:48	8:54	9:08	9:19	9:25	9:03	B
CONESTOGA MALL - Depart -	9:40	9:48	9:54	10:08	10:19	10:25	10:33	A
CONESTOGA MALL - Arrive -	10:40	10:48	10:54	11:08	11:19	11:25	11:33	A
CONESTOGA MALL - Arrive -	11:40	11:48	11:54	12:08	12:19	12:25	12:33	A
CONESTOGA MALL - Arrive -	12:40	12:48	12:54	1:07	1:18	1:24	1:32	A
CONESTOGA MALL - Arrive -	1:35	1:43	1:49	2:02	2:13	2:19	2:27	A
CONESTOGA MALL - Arrive -	2:30	2:38	2:44	2:58	3:09	3:15	3:23	A
CONESTOGA MALL - Arrive -	3:00	3:08	3:14	3:28	3:39	3:45	3:53	A
CONESTOGA MALL - Arrive -	3:30	3:38	3:44	3:58	4:09	4:15	4:23	A
CONESTOGA MALL - Arrive -	4:00	4:08	4:14	4:28	4:39	4:45	4:53	A
CONESTOGA MALL - Arrive -	4:30	4:38	4:44	4:58	5:09	5:15	5:23	A
CONESTOGA MALL - Arrive -	5:00	5:08	5:14	5:28	5:39	5:45	5:53	A
CONESTOGA MALL - Arrive -	5:30	5:38	5:44	5:58	6:09	6:15	6:23	A
CONESTOGA MALL - Arrive -	6:00	6:08	6:14	6:28	6:39	6:45	6:53	A
CONESTOGA MALL - Arrive -	6:30	6:38	6:44	6:58	7:09	7:15	7:23	A

# SATURDAY SERVICE

TO: Elmira

TO: Conestoga Mall

TIMEPOINT:	A	B	C	D	C	B	A	Map Reference
CONESTOGA MALL - Depart -	7:00	7:10	7:19	7:34	7:47	7:54	7:25	A
ST. JACOBS MARKET - Depart -	7:30	7:41	7:50	8:07	8:21	8:29	8:40	B
ST. JACOBS MARKET - King at Front	8:10	8:21	8:30	8:47	9:01	9:09	9:20	C
ELMIRA Arthur at Church	8:50	9:01	9:10	9:27	9:41	9:49	10:00	D
ST. JACOBS MARKET - King at Front	9:30	9:41	9:50	10:07	10:21	10:29	10:40	C
ST. JACOBS MARKET - Depart -	10:10	10:21	10:30	10:47	11:01	11:09	11:20	B
CONESTOGA MALL - Depart -	10:50	11:01	11:10	11:27	11:41	11:49	12:00	A
CONESTOGA MALL - Depart -	11:30	11:41	11:50	12:07	12:21	12:29	12:40	A
CONESTOGA MALL - Depart -	12:10	12:21	12:30	12:47	1:01	1:09	1:20	A
CONESTOGA MALL - Depart -	12:50	1:01	1:10	1:27	1:41	1:49	2:00	A
CONESTOGA MALL - Depart -	1:30	1:41	1:50	2:07	2:21	2:29	2:37	A
CONESTOGA MALL - Depart -	2:10	2:21	2:30	2:46	2:57	3:03	3:11	A
CONESTOGA MALL - Depart -	2:45	2:53	2:59	3:12	3:23	3:29	3:37	A
CONESTOGA MALL - Depart -	3:15	3:23	3:29	3:42	3:53	3:59	4:07	A
CONESTOGA MALL - Depart -	3:45	3:53	3:59	4:12	4:23	4:29	4:37	A

• Service starts at Arthur / Oriole Parkway


Note: Weather conditions, construction, accidents etc. may cause schedule delays.

## How to use this schedule...


Read across for times from beginning to end of route and down for time at a specific bus stop.  
 Bus stop location on map corresponds with circled letter found under bus stop name.

# 22

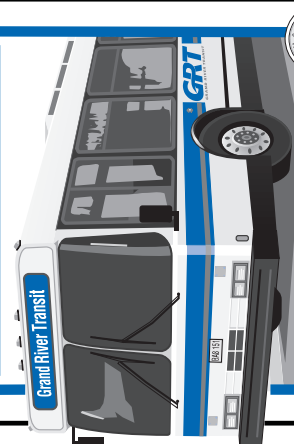
## Laurentian West



**Year-round Schedule**  
Effective: September 7, 2009




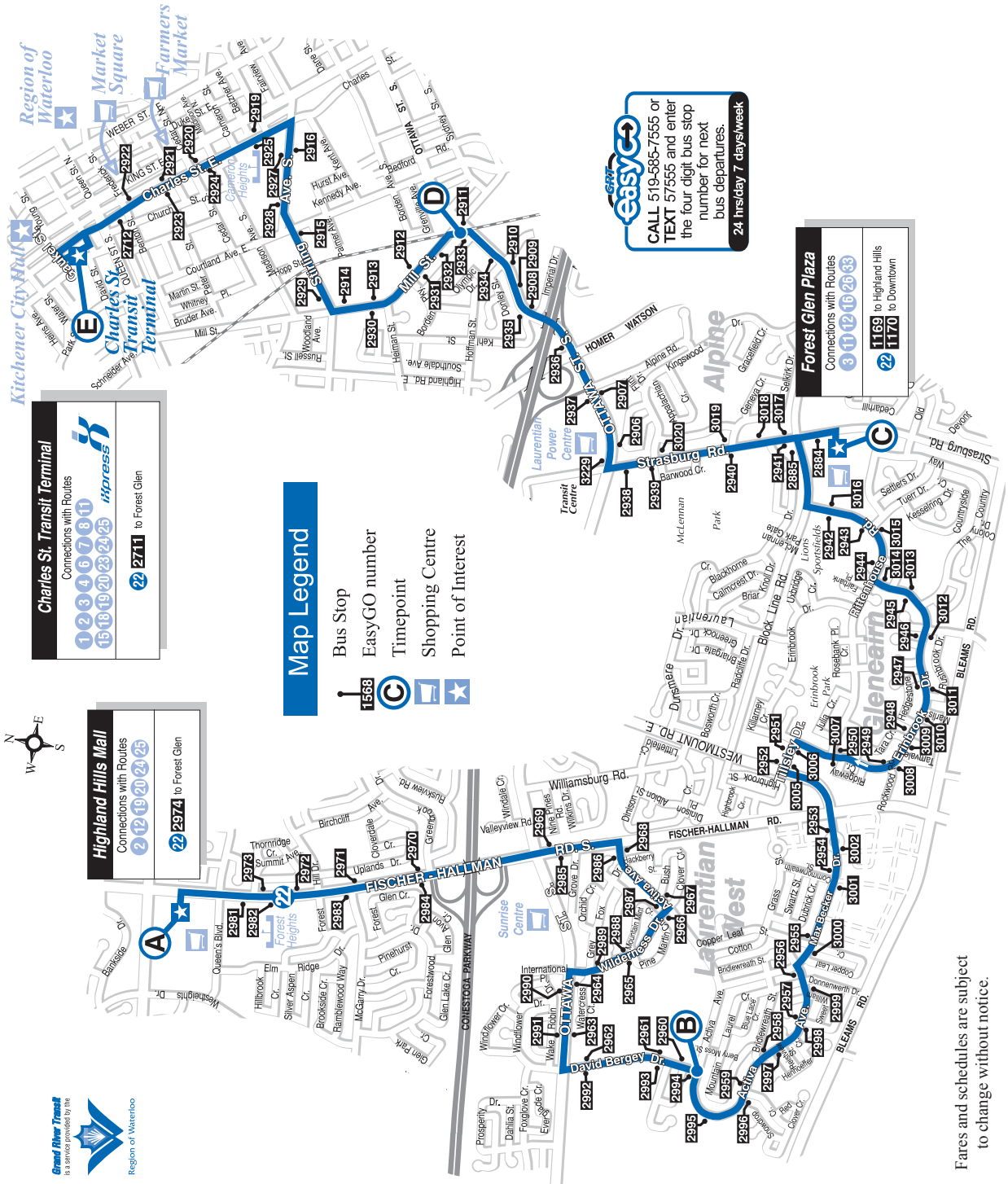
**GRAND RIVER TRANSIT**  
519-585-7555  
TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)



Grand River Transit

Kindly reuse this timetable





Fares and schedules are subject to change without notice.

# MONDAY to FRIDAY SERVICE

To: Downtown via Glencairn

TIMEPOINT:	A	B	C	D	E	Map Reference
HIGHLAND HILLS MALL - Depart	5:45	5:55	6:10	6:15	6:22	6:29
ACTIVA at DAVID BERGÉY	6:15	6:25	6:40	6:45	6:53	7:02
FOREST GLEN PLAZA - Arrive	6:45	6:57	7:12	7:15	7:23	7:32
FOREST GLEN PLAZA - Depart	7:13	7:26	7:42	7:45	7:53	8:02
MILL at OTTAWA	7:43	7:56	8:12	8:15	8:23	8:32
CHARLES ST. TERMINAL - Depart	8:13	8:26	8:42	8:45	8:53	9:02
CHARLES ST. TERMINAL - Arrive	8:45	8:57	9:12	9:15	9:23	9:32
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	9:15	9:25	9:40	9:45	9:53	10:01
ACTIVA at DAVID BERGÉY	9:45	9:55	10:10	10:15	10:23	10:31
FOREST GLEN PLAZA - Arrive	10:15	10:25	10:40	10:45	10:53	11:01
FOREST GLEN PLAZA - Depart	10:45	10:55	11:10	11:15	11:23	11:31
MILL at OTTAWA	11:15	11:25	11:40	11:45	11:53	12:01
CHARLES ST. TERMINAL - Depart	11:45	11:55	12:10	12:15	12:23	12:31
CHARLES ST. TERMINAL - Arrive	12:15	12:25	12:40	12:45	12:53	1:01
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	1:15	1:25	1:40	1:45	1:53	2:01
ACTIVA at DAVID BERGÉY	1:45	1:55	2:10	2:15	2:23	2:31
FOREST GLEN PLAZA - Arrive	2:15	2:25	2:40	2:45	2:53	3:02
FOREST GLEN PLAZA - Depart	2:45	2:57	3:12	3:15	3:23	3:32
MILL at OTTAWA	3:15	3:27	3:42	3:45	3:53	4:02
CHARLES ST. TERMINAL - Depart	3:45	3:57	4:12	4:15	4:23	4:32
CHARLES ST. TERMINAL - Arrive	4:15	4:27	4:42	4:45	4:53	5:02
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	4:45	4:57	5:12	5:15	5:23	5:32
ACTIVA at DAVID BERGÉY	5:15	5:27	5:42	5:45	5:53	6:02
FOREST GLEN PLAZA - Arrive	5:45	5:55	6:10	6:15	6:23	6:31
FOREST GLEN PLAZA - Depart	6:15	6:25	6:40	6:45	6:52	6:58
MILL at OTTAWA	6:45	6:55	7:10	7:15	7:22	7:28
CHARLES ST. TERMINAL - Depart	7:15	7:25	7:40	7:45	7:52	7:58
CHARLES ST. TERMINAL - Arrive	7:45	7:55	8:10	8:15	8:22	8:28
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	8:15	8:25	8:40	8:45	8:52	8:58
ACTIVA at DAVID BERGÉY	8:45	8:55	9:10	9:15	9:22	9:28
FOREST GLEN PLAZA - Arrive	9:15	9:25	9:40	9:45	9:52	9:58
FOREST GLEN PLAZA - Depart	9:45	9:55	10:10	10:15	10:22	10:28
MILL at OTTAWA	10:15	10:25	10:40	10:45	10:52	10:58

To: Laurentian West via Glencairn

TIMEPOINT:	A	B	C	D	E	Map Reference
HIGHLAND HILLS MALL - Depart	6:15	6:25	6:41	6:45	6:58	7:10
ACTIVA at DAVID BERGÉY	6:45	6:59	7:15	7:19	7:29	7:40
FOREST GLEN PLAZA - Arrive	7:15	7:29	7:41	7:45	7:59	8:10
FOREST GLEN PLAZA - Depart	7:45	8:02	8:11	8:15	8:29	8:40
MILL at OTTAWA	8:15	8:32	8:41	8:45	8:59	9:10
CHARLES ST. TERMINAL - Depart	8:45	9:02	9:11	9:15	9:29	9:40
CHARLES ST. TERMINAL - Arrive	9:15	9:32	9:39	9:45	9:58	10:09
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	9:45	10:02	10:09	10:15	10:28	10:39
ACTIVA at DAVID BERGÉY	10:15	10:32	10:39	10:45	10:58	11:09
FOREST GLEN PLAZA - Arrive	10:45	11:02	11:09	11:15	11:28	11:39
FOREST GLEN PLAZA - Depart	11:15	11:32	11:39	11:45	11:58	12:09
MILL at OTTAWA	11:45	12:02	12:09	12:15	12:28	12:39
CHARLES ST. TERMINAL - Depart	12:15	12:32	12:39	12:45	12:58	1:09
CHARLES ST. TERMINAL - Arrive	12:45	1:02	1:09	1:15	1:28	1:39
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	1:15	1:32	1:39	1:45	1:58	2:09
ACTIVA at DAVID BERGÉY	1:45	2:02	2:09	2:15	2:28	2:39
FOREST GLEN PLAZA - Arrive	2:15	2:32	2:41	2:45	2:59	3:10
FOREST GLEN PLAZA - Depart	2:45	3:02	3:11	3:15	3:29	3:40
MILL at OTTAWA	3:15	3:32	3:41	3:45	3:59	4:10
CHARLES ST. TERMINAL - Depart	3:45	4:02	4:11	4:15	4:29	4:40
CHARLES ST. TERMINAL - Arrive	4:15	4:32	4:41	4:46	5:00	5:11
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	4:45	5:02	5:11	5:16	5:30	5:41
ACTIVA at DAVID BERGÉY	5:15	5:32	5:41	5:46	6:00	6:11
FOREST GLEN PLAZA - Arrive	5:45	6:02	6:10	6:15	6:29	6:40
FOREST GLEN PLAZA - Depart	6:15	6:36	6:43	6:45	6:58	7:09
MILL at OTTAWA	7:00	7:36	7:43	7:45	7:58	8:09
CHARLES ST. TERMINAL - Depart	7:45	8:30	8:36	8:43	8:45	8:58
CHARLES ST. TERMINAL - Arrive	8:30	9:30	9:36	9:43	9:45	9:58
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	9:30	10:30	10:36	10:43	10:45	10:58

● This trip starts at Westmount and Fischer-Hallman

# SATURDAY SERVICE

To: Downtown via Glencairn

TIMEPOINT:	A	B	C	D	E	Map Reference
HIGHLAND HILLS MALL - Depart	6:45	6:55	7:10	7:15	7:23	7:31
ACTIVA at DAVID BERGÉY	7:45	7:55	8:10	8:15	8:23	8:31
FOREST GLEN PLAZA - Arrive	8:45	8:56	9:11	9:15	9:23	9:32
FOREST GLEN PLAZA - Depart	9:45	9:56	10:11	10:15	10:23	10:32
MILL at OTTAWA	10:45	10:56	11:11	11:15	11:23	11:32
CHARLES ST. TERMINAL - Depart	11:45	11:56	12:11	12:15	12:23	12:32
CHARLES ST. TERMINAL - Arrive	12:45	12:56	1:11	1:15	1:23	1:32
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	1:45	1:56	2:11	2:15	2:23	2:32
ACTIVA at DAVID BERGÉY	2:45	2:56	3:11	3:15	3:23	3:32
FOREST GLEN PLAZA - Arrive	3:45	3:56	4:11	4:15	4:23	4:32
FOREST GLEN PLAZA - Depart	4:45	4:56	5:11	5:15	5:23	5:32
MILL at OTTAWA	5:45	5:55	6:10	6:15	6:23	6:31
CHARLES ST. TERMINAL - Depart	6:45	6:55	7:10	7:15	7:22	7:28

To: Laurentian West via Glencairn

TIMEPOINT:	A	B	C	D	E	Map Reference
HIGHLAND HILLS MALL - Depart	7:55	8:00	8:09	8:15	8:28	8:39
ACTIVA at DAVID BERGÉY	8:55	9:02	9:11	9:15	9:29	9:40
FOREST GLEN PLAZA - Arrive	9:55	10:02	10:11	10:15	10:29	10:40
FOREST GLEN PLAZA - Depart	10:55	11:02	11:11	11:15	11:29	11:40
MILL at OTTAWA	11:55	12:02	12:11	12:15	12:29	12:40
CHARLES ST. TERMINAL - Depart	12:55	1:02	1:11	1:15	1:29	1:40
CHARLES ST. TERMINAL - Arrive	1:55	2:02	2:11	2:15	2:29	2:40
TIMEPOINT:	A <td>B <td>C <td>D <td>E <td></td> </td></td></td></td>	B <td>C <td>D <td>E <td></td> </td></td></td>	C <td>D <td>E <td></td> </td></td>	D <td>E <td></td> </td>	E <td></td>	
HIGHLAND HILLS MALL - Depart	2:55	3:02	3:11	3:15	3:29	3:40
ACTIVA at DAVID BERGÉY	3:55	4:02	4:11	4:15	4:29	4:40
FOREST GLEN PLAZA - Arrive	4:55	5:02	5:11	5:15	5:29	5:40
FOREST GLEN PLAZA - Depart	5:55	6:02	6:10	6:15	6:29	6:40
MILL at OTTAWA	7:00	7:06	7:13	7:15	7:28	7:39



All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.

**How to use this schedule...**  
Read across for times from beginning to end of route and down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.



# MONDAY TO FRIDAY SERVICE

TO: Fairview via Idlewood

TO: Downtown via Idlewood

TIMEPOINT:	A	B	C	D	E	F	Map Reference
CHARLES ST. TERMINAL - Depart	6:30	6:37	6:45	6:56	7:05	7:05	A
FREDERICK at EDNA	7:05	7:12	7:20	7:31	7:40	7:40	B
OTTAWA at RIVER	7:35	7:42	7:50	8:01	8:10	8:10	C
OLDFIELD at BRIARDALE	8:05	8:12	8:20	8:31	8:40	8:40	D
FAIRVIEW PARK MALL - Arrive	8:35	8:42	8:50	9:01	9:10	9:10	E
FAIRWAY at LACKNER	9:05	9:12	9:19	9:24	9:34	9:34	F
FAIRVIEW PARK MALL - Depart	9:35	9:42	9:49	9:54	10:04	10:04	F
FAIRWAY at LACKNER	10:05	10:12	10:19	10:24	10:34	10:34	F
OTTAWA at RIVER	10:35	10:42	10:49	10:54	11:04	11:04	F
OLDFIELD at BRIARDALE	11:05	11:12	11:19	11:24	11:34	11:34	F
FAIRVIEW PARK MALL - Arrive	11:35	11:42	11:49	11:54	12:04	12:04	F
FAIRWAY at LACKNER	12:05	12:12	12:19	12:24	12:34	12:34	F
FAIRVIEW PARK MALL - Depart	12:35	12:42	12:49	12:54	13:04	13:04	F
FAIRWAY at LACKNER	1:05	1:12	1:19	1:24	1:34	1:34	F
OTTAWA at RIVER	1:35	1:42	1:49	1:54	2:04	2:04	F
OLDFIELD at BRIARDALE	2:05	2:12	2:19	2:24	2:34	2:34	F
FAIRVIEW PARK MALL - Arrive	2:35	2:42	2:50	3:01	3:10	3:10	F
FAIRWAY at LACKNER	3:05	3:12	3:20	3:31	3:40	3:40	F
FAIRVIEW PARK MALL - Depart	3:35	3:42	3:50	4:01	4:10	4:10	F
OTTAWA at RIVER	4:05	4:12	4:20	4:31	4:40	4:40	F
OLDFIELD at BRIARDALE	4:35	4:42	4:50	5:01	5:10	5:10	F
FAIRVIEW PARK MALL - Arrive	5:05	5:12	5:20	5:31	5:40	5:40	F
FAIRWAY at LACKNER	5:35	5:42	5:50	6:01	6:10	6:10	F
FAIRVIEW PARK MALL - Depart	6:05	6:12	6:20	6:31	6:40	6:40	F
FAIRWAY at LACKNER	6:35	6:42	6:50	7:01	7:10	7:10	F

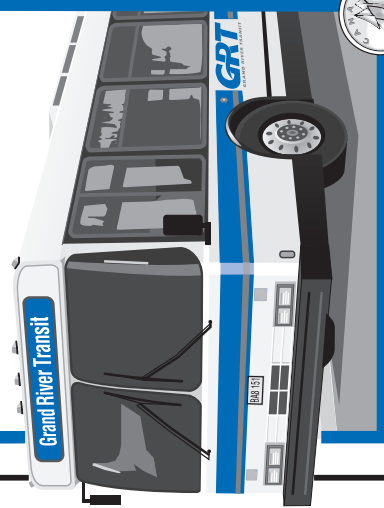
A M P M

# 23

## Idlewood



**Year-round Schedule**  
Effective: June 23, 2008



Kindly reuse this timetable



**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

**How to use this schedule...**

Read across for times from beginning to end of route and down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

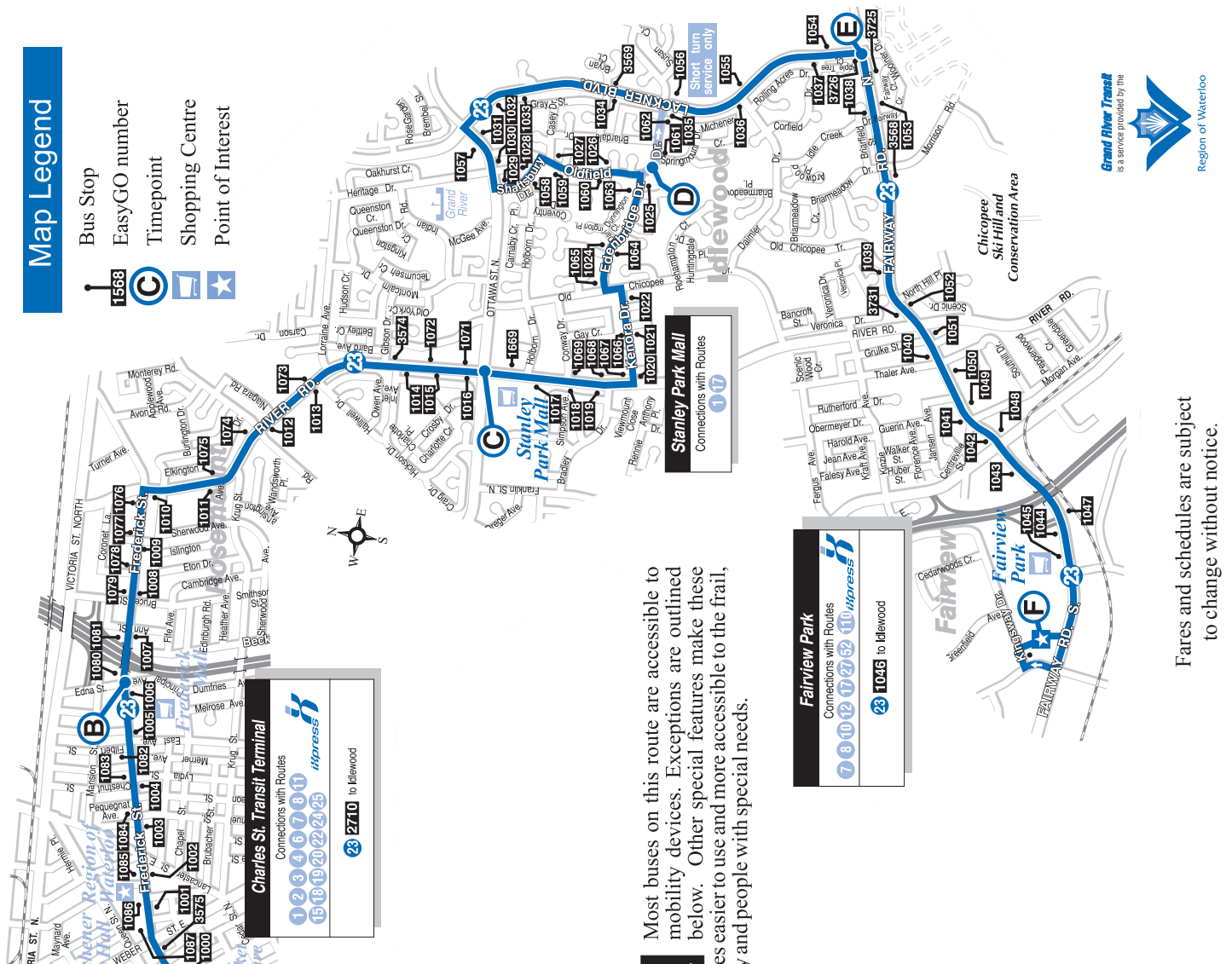
**easyGO**  
 CALL 519-585-7555 or  
 TEXT 57555 and enter  
 the four digit bus stop  
 number for next  
 bus departures.  
 24 hrs/day 7 days/week

**SATURDAY SERVICE**  
 TO: Idlewood TO: Downtown



TIMEPOINT:	A	B	C	D	C	B	A	Map Reference
CHARLES ST. TERMINAL - Depart	7:05	7:12	7:19	7:24	7:33	7:41	7:48	CHARLES ST. TERMINAL - Arrive
FREDERICK at EDNA	7:35	7:42	7:49	7:54	8:03	8:11	8:18	EDNA
OTTAWA at RIVER	8:05	8:12	8:19	8:24	8:33	8:41	8:48	FREDERICK at RIVER
OLDFIELD at BRIARDALE	8:35	8:42	8:49	8:54	9:03	9:11	9:18	OTTAWA at RIVER
OTTAWA at RIVER	9:05	9:12	9:19	9:24	9:33	9:41	9:48	OTTAWA at RIVER
OTTAWA at RIVER	9:35	9:42	9:49	9:54	10:03	10:11	10:18	OTTAWA at RIVER
OTTAWA at RIVER	10:05	10:12	10:19	10:24	10:33	10:41	10:48	OTTAWA at RIVER
OTTAWA at RIVER	10:35	10:42	10:49	10:54	11:03	11:11	11:18	OTTAWA at RIVER
OTTAWA at RIVER	11:05	11:12	11:19	11:24	11:33	11:41	11:48	OTTAWA at RIVER
OTTAWA at RIVER	11:35	11:42	11:49	11:54	12:03	12:11	12:18	OTTAWA at RIVER
OTTAWA at RIVER	12:05	12:12	12:19	12:24	12:33	12:41	12:48	OTTAWA at RIVER
OTTAWA at RIVER	12:35	12:42	12:49	12:54	1:03	1:11	1:18	OTTAWA at RIVER
OTTAWA at RIVER	1:05	1:12	1:19	1:24	1:33	1:41	1:48	OTTAWA at RIVER
OTTAWA at RIVER	1:35	1:42	1:49	1:54	2:03	2:11	2:18	OTTAWA at RIVER
OTTAWA at RIVER	2:05	2:12	2:19	2:24	2:33	2:41	2:48	OTTAWA at RIVER
OTTAWA at RIVER	2:35	2:42	2:49	2:54	3:03	3:11	3:18	OTTAWA at RIVER
OTTAWA at RIVER	3:05	3:12	3:19	3:24	3:33	3:41	3:48	OTTAWA at RIVER
OTTAWA at RIVER	3:35	3:42	3:49	3:54	4:03	4:11	4:18	OTTAWA at RIVER
OTTAWA at RIVER	4:05	4:12	4:19	4:24	4:33	4:41	4:48	OTTAWA at RIVER
OTTAWA at RIVER	4:35	4:42	4:49	4:54	5:03	5:11	5:18	OTTAWA at RIVER
OTTAWA at RIVER	5:05	5:12	5:19	5:24	5:33	5:41	5:48	OTTAWA at RIVER
OTTAWA at RIVER	5:35	5:42	5:49	5:54	6:03	6:11	6:18	OTTAWA at RIVER
OTTAWA at RIVER	6:00	6:07	6:14	6:19	6:28	6:36	6:43	OTTAWA at RIVER
OTTAWA at RIVER	6:35	6:42	6:49	6:53	7:00	to garage		OTTAWA at RIVER

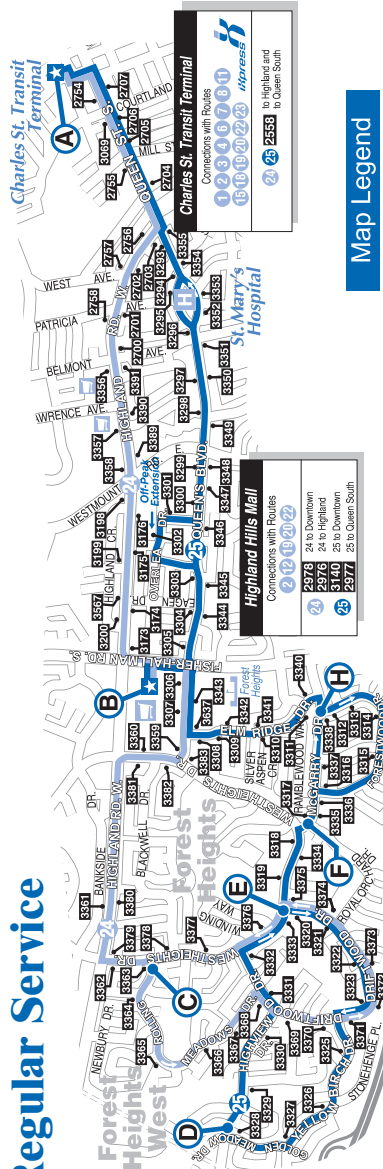
Most buses on this route are accessible to mobility devices. Exceptions are outlined below. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.



Fares and schedules are subject to change without notice.



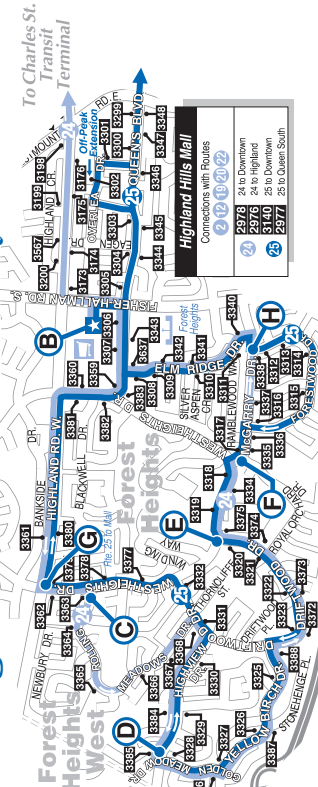
# Regular Service



## Map Legend

- Bus Stop
- EasyGO number
- Timepoint
- Secondary School
- Shopping Centre
- Hospital
- Route 24
- Route 25

# Evening and Route 25 Sunday Service



Fares and schedules are subject to change without notice.

## Highland

# 24/25

## Queen South

Kindly reuse this timetable

**519-585-7555**  
 TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)

**Year-round Schedule**  
 Effective: September 7, 2009

**EasyGO**  
 CALL 519-585-7555 or  
 TEXT 57555 and enter  
 the four digit bus stop  
 number for next  
 bus departures.  
 24 hrs/day 7 days/week

All low-floor buses on this route are accessible to mobility devices. Other special features make these vehicles easier to use and more accessible to the frail, elderly and people with special needs.

## 25 SUNDAY SERVICE

TO: Queen South ← → TO: Downtown

TIMEPOINT	A	B	C	D	E	F	G	H	A
CHARLES ST. TERMINAL - Depart	7:35	7:39	7:44	7:49	7:54	7:59	8:04	8:09	8:12
HIGHLAND HILLS MALL - Depart	8:15	8:30	8:34	8:39	8:44	8:49	8:54	8:59	9:02
WESTHEIGHTS at HIGHVIEW	10:15	10:30	10:34	10:39	10:44	10:49	10:54	10:59	11:02
HIGHLAND HILLS MALL - Arrive	11:15	11:30	11:34	11:39	11:44	11:49	11:54	11:59	12:02
CHARLES ST. TERMINAL - Arrive	12:15	12:30	12:34	12:39	12:44	12:49	12:54	12:59	13:02
WESTHEIGHTS at HIGHVIEW	1:15	1:30	1:34	1:39	1:44	1:49	1:54	1:59	2:02
HIGHLAND HILLS MALL - Depart	2:15	2:30	2:34	2:39	2:44	2:49	2:54	2:59	3:02
WESTHEIGHTS at HIGHVIEW	3:15	3:30	3:34	3:39	3:44	3:49	3:54	3:59	4:02
HIGHLAND HILLS MALL - Depart	4:15	4:30	4:34	4:39	4:44	4:49	4:54	4:59	5:02
WESTHEIGHTS at HIGHVIEW	5:15	5:30	5:34	5:39	5:44	5:49	5:54	5:59	6:02
HIGHLAND HILLS MALL - Depart	6:15	6:30	6:34	6:39	6:44	6:49	6:54	6:59	7:02
WESTHEIGHTS at HIGHVIEW	7:15	7:30	7:34	7:39	7:44	7:49	7:54	7:59	8:02
HIGHLAND HILLS MALL - Depart	8:15	8:30	8:34	8:39	8:44	8:49	8:54	8:59	9:02
WESTHEIGHTS at HIGHVIEW	10:15	10:30	10:34	10:39	10:44	10:49	10:54	10:59	11:02
HIGHLAND HILLS MALL - Depart	11:15	11:30	11:34	11:39	11:44	11:49	11:54	11:59	12:02
CHARLES ST. TERMINAL - Arrive	12:15	12:30	12:34	12:39	12:44	12:49	12:54	12:59	13:02







# 27

## Chicopee



**Year-round Schedule**

Effective: April 6, 2009



Kindly reuse this timetable



**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

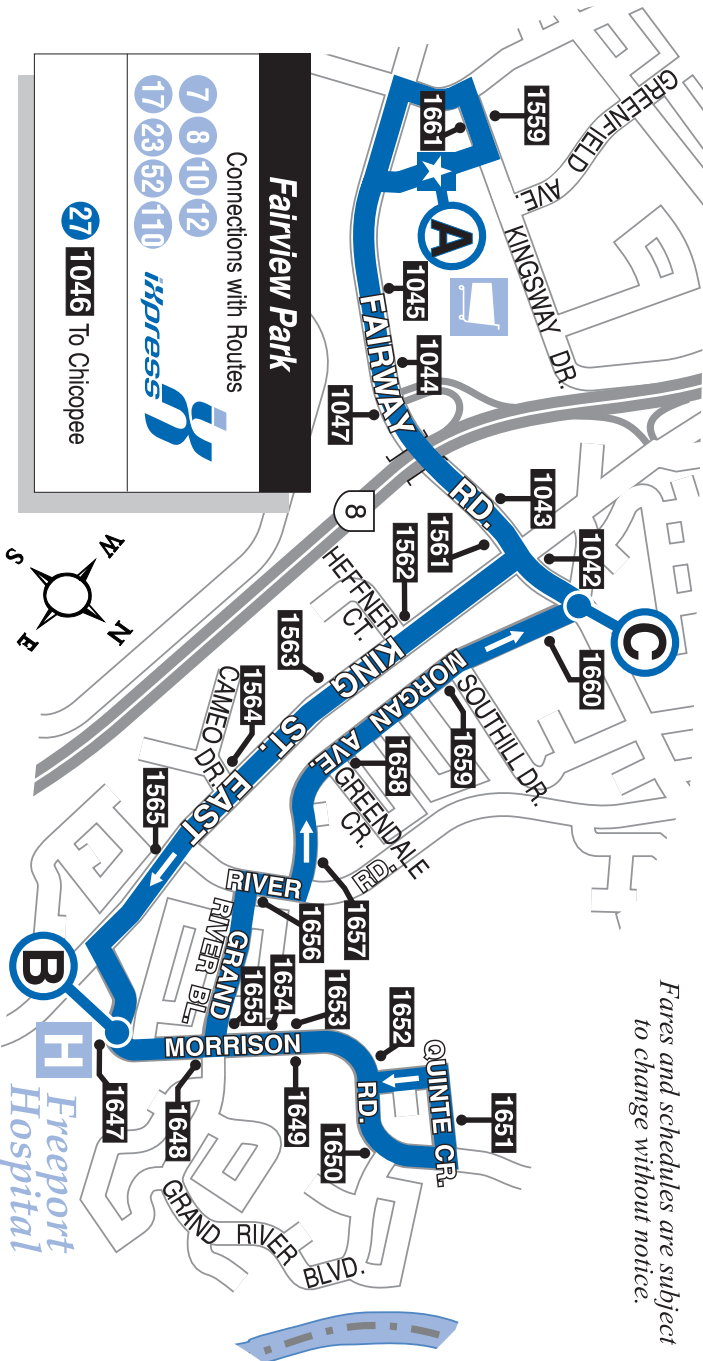
**easyGRT**

CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.

24 hrs/day 7 days/week

### Map Legend

- 1568 Bus Stop
- EasyGO Number
- Timepoint
- Shopping Centre



# MONDAY TO FRIDAY SERVICE

		TIMEPOINT:				
		FAIRVIEW PARK MALL - Depart	MORRISON at FREEPORT HOSPITAL	KING at FAIRWAY	FAIRVIEW PARK MALL - Arrive	
A M	(A)	(B)	(C)	(A)	Map Reference	
	5:57	6:02	6:10	6:13		
	6:30	6:36	6:45	6:48		
	7:00	7:06	7:15	7:18		
	7:30	7:36	7:45	7:48		
	8:00	8:06	8:15	8:18		
	8:30	8:36	8:45	8:48		
	9:00	9:06	9:14	9:17		
	9:30	9:36	9:44	9:47		
	10:00	10:06	10:14	10:17		
	10:30	10:36	10:44	10:47		
	11:00	11:06	11:14	11:17		
	11:30	11:36	11:44	11:47		
	12:00	12:06	12:14	12:17		
	12:30	12:36	12:44	12:47		
	P M	1:00	1:06	1:14	1:17	
1:30		1:36	1:44	1:47		
2:00		2:06	2:14	2:17		
2:30		2:37	2:46	2:50		
3:00		3:07	3:16	3:20		
3:35		3:42	3:51	3:55		
4:00		4:07	4:16	4:20		
4:30		4:37	4:46	4:50		
5:00		5:07	5:16	5:20		
5:30		5:37	5:46	5:50		
6:00		6:06	6:14	6:17		
6:30		6:36	6:44	6:47		
7:00		7:06	7:14	7:17		
8:00		8:06	8:14	8:17		
9:00		9:06	9:14	9:17		
10:00		10:06	10:14	10:17		
11:00	11:06	11:14	11:17			

● No low-floor bus on this trip

# SATURDAY SERVICE

		TIMEPOINT:				
		FAIRVIEW PARK MALL - Depart	MORRISON at FREEPORT HOSPITAL	KING at FAIRWAY	FAIRVIEW PARK MALL - Arrive	
A M	(A)	(B)	(C)	(A)	Map Reference	
	7:00	7:06	7:14	7:17		
	8:00	8:06	8:14	8:17		
	8:30	8:36	8:44	8:47		
	9:00	9:06	9:14	9:17		
	10:00	10:06	10:14	10:17		
	11:00	11:06	11:14	11:17		
	12:00	12:06	12:14	12:17		
	12:30	12:36	12:44	12:47		
	P M	1:00	1:06	1:14	1:17	
		2:00	2:06	2:14	2:17	
		3:00	3:06	3:14	3:17	
		3:30	3:36	3:44	3:47	
		4:00	4:06	4:14	4:17	
		5:00	5:06	5:14	5:17	
		6:00	6:06	6:14	6:17	
6:30		6:36	6:44	6:47		
7:00		7:06	7:14	7:17		
8:00		8:06	8:14	8:17		
9:00		9:06	9:14	9:17		
10:00		10:06	10:14	10:17		
11:10		11:16	11:24	11:27		

# SUNDAY SERVICE

		TIMEPOINT:				
		FAIRVIEW PARK MALL - Depart	MORRISON at FREEPORT HOSPITAL	KING at FAIRWAY	FAIRVIEW PARK MALL - Arrive	
A M	(A)	(B)	(C)	(A)	Map Reference	
	9:30	9:36	9:44	9:47		
	10:30	10:36	10:44	10:47		
	11:30	11:36	11:44	11:47		
	12:30	12:36	12:44	12:47		
	1:30	1:36	1:44	1:47		
	2:30	2:36	2:44	2:47		
	3:30	3:36	3:44	3:47		
	4:30	4:36	4:44	4:47		
	P M	5:30	5:36	5:44	5:47	
		6:30	6:36	6:44	6:47	
		7:30	7:36	7:44	7:47	
		8:30	8:36	8:44	8:47	
		9:30	9:36	9:44	9:47	

**How to use this schedule...** Read across for times from beginning to end of route and down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

## Transit Fares

You may pay your transit fare by:

- Cash
  - Ticket
  - Monthly Pass
  - Day Pass
  - Sunday/Holiday Family Pass
- Children under 5 ride for free*

Tickets and passes are available at 100+ locations throughout Cambridge, Kitchener and Waterloo.  
Check [www.grt.ca](http://www.grt.ca) for fare agent locations.

## 90 Minute Free Transfer

Request a free transfer from your operator when you board and it will give you 90 minutes of free travel from the time you board the bus. You may travel in any direction, on any route.

You can make short round trips with only one fare as long as you board the return bus before your transfer expires. For example, say you are taking the bus to the bank on your lunch hour. Get off the bus, do your banking, then get back on the bus to return to work by showing your transfer.

Remember, a transfer is valid only on the day it is issued and is not transferable.

## Transit Information

# 519-585-7555

[www.grt.ca](http://www.grt.ca)

**Grand River Transit**

250 Strasburg Road,  
Kitchener, Ontario  
N2E 3M6

*A service provided by the*



Region of Waterloo

# 29

## Keats Way

Monday to Friday Service  
**Year-round Schedule**  
Effective: September 7, 2009



Kindly reuse this timetable



# GRT

GRAND RIVER TRANSIT

# 519-585-7555

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

# MONDAY to FRIDAY AM SERVICE

	TIMEPOINT:					Map Reference
	UNIVERSITY OF WATERLOO - Depart	FISCHER-HALLMAN at KEATS WAY	ERB at IRA NEEDLES	FISCHER-HALLMAN at KEATS WAY	UNIVERSITY OF WATERLOO - Arrive	
<b>A M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>B</b>	<b>A</b>	
	7:15	7:20	7:25	7:31	7:39	
	7:45	7:50	7:57	8:01	8:11	
	8:17	8:22	8:27	8:33	8:41	
	8:47	8:52	8:57	9:03	9:11	
	9:17	9:22	9:27	9:33	9:41	
	9:45	9:50	9:55	10:01	10:09	
	10:15	10:20	10:25	10:30	10:38	
	10:50	10:55	11:00	11:05	11:13	
	11:30	11:35	11:40	11:45	11:53	
12:00	12:05	12:10	12:15	12:23		

# MONDAY to FRIDAY PM SERVICE

	TIMEPOINT:					Map Reference
	UNIVERSITY OF WATERLOO - Depart	FISCHER-HALLMAN at KEATS WAY	ERB at IRA NEEDLES	FISCHER-HALLMAN at KEATS WAY	UNIVERSITY OF WATERLOO - Arrive	
<b>P M</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>B</b>	<b>A</b>	
	12:30	12:35	12:40	12:45	12:53	
	1:00	1:05	1:10	1:15	1:23	
	1:30	1:35	1:40	1:45	1:53	
	2:00	2:07	2:12	2:17	2:24	
	2:30	2:37	2:42	2:47	2:54	
	3:00	3:07	3:12	3:17	3:24	
	3:30	3:37	3:42	3:47	3:54	
	4:00	4:07	4:12	4:17	4:24	
	4:30	4:37	4:42	4:47	4:54	
	5:00	5:07	5:12	5:17	5:24	
	5:30	5:37	5:42	5:47	5:54	
	6:00	6:06	6:11	6:16	6:24	
	6:28	6:34	6:39	6:44	6:52	

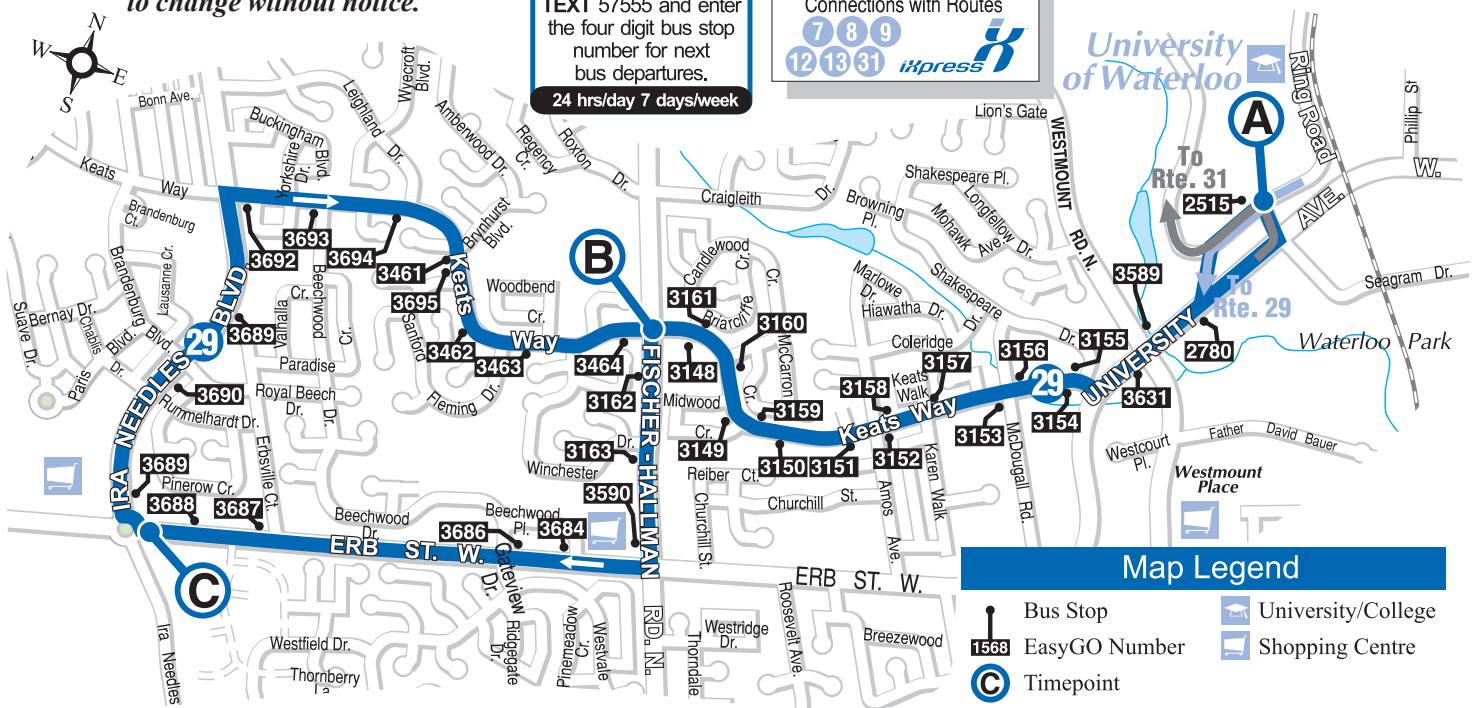
### Interlining Note:

Upon arrival at UW at Seagram (Stop 2515), the Route 29 - Keats Way changes its destination sign and continues on as the Route 31 - Lexington.

Fares and schedules are subject to change without notice.

**easyGO**  
CALL 519-585-7555 or TEXT 57555 and enter the four digit bus stop number for next bus departures.  
24 hrs/day 7 days/week

**University of Waterloo**  
Connections with Routes  
7 8 9  
12 13 31 **itpress**



### Map Legend

- Bus Stop
- EasyGO number
- Timepoint
- Secondary School
- Shopping Centre
- Hospital
- Point of Interest

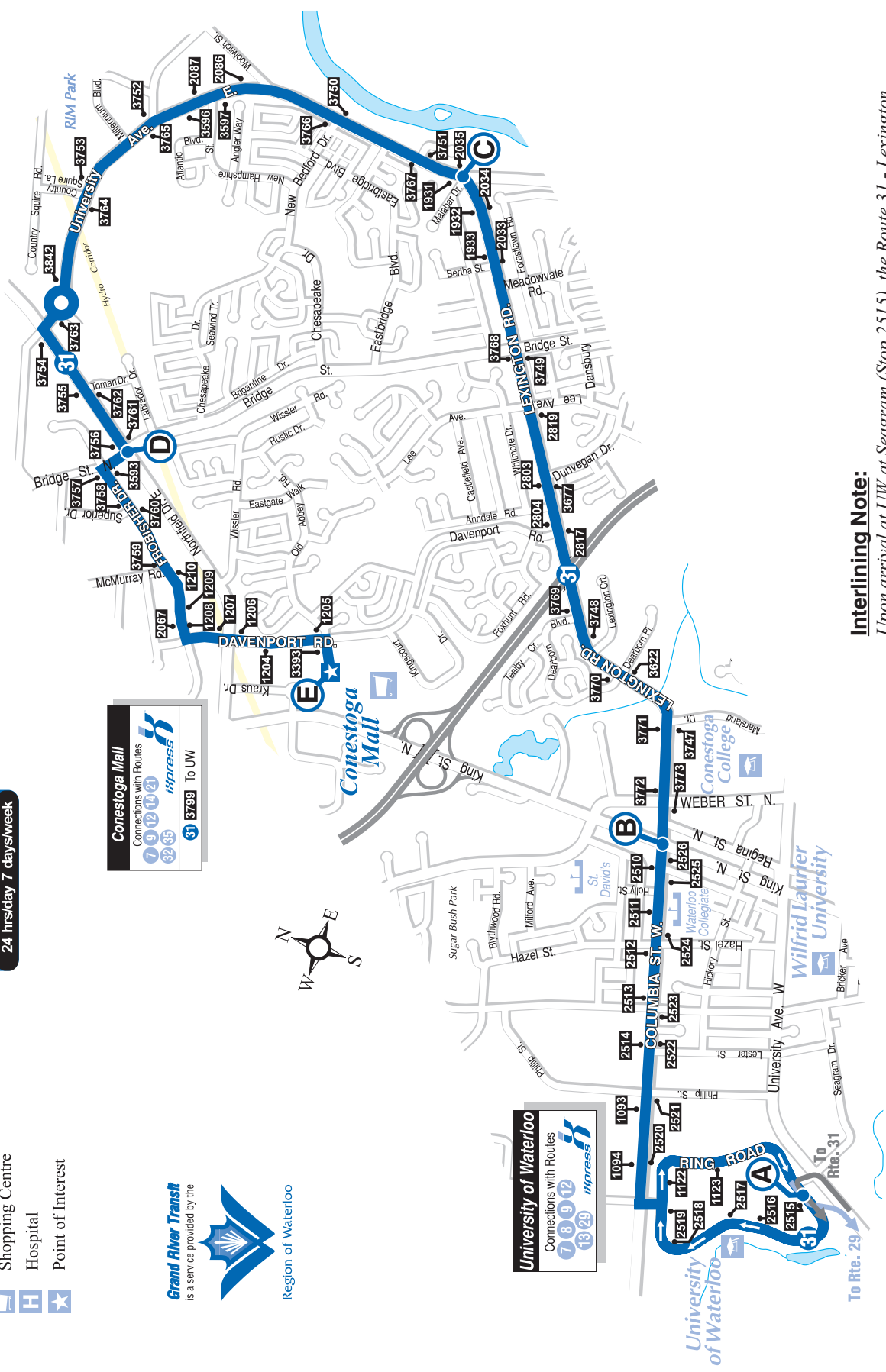


**easyGO**  
 CALL 519-585-7555 or  
 TEXT 57555 and enter  
 the four digit bus stop  
 number for next  
 bus departures.  
 24 hrs/day 7 days/week

**Conestoga Mall**  
 Connections with Routes  
 7 9 12 14 21  
 32 35  
 iPress  
 31 3739 To UW

**University of Waterloo**  
 Connections with Routes  
 7 8 9 12  
 13 29  
 iPress

Note: Weather conditions, construction, accidents etc. may cause schedule delays.



### Interlining Note:

Upon arrival at UW at Seagram (Stop 2515), the Route 31 - Lexington changes its destination sign and continues on as the Route 29 - Keats Way.



# MONDAY TO FRIDAY SERVICE

To: Conestoga Mall

To: University of Waterloo

TIMEPOINT:	A	B	C	D	E
UNIVERSITY OF WATERLOO - Depart	6:15	6:23	6:29	6:34	6:39
COLUMBIA at KING	6:45	6:53	7:00	7:05	7:11
LEXINGTON at UNIVERSITY	7:13	7:21	7:28	7:33	7:39
NORTHFIELD at BRIDGE	7:40	7:48	7:55	8:00	8:06
CONESTOGA MALL - Arrive	8:12	8:20	8:27	8:32	8:38
	8:42	8:50	8:57	9:02	9:08
	9:12	9:20	9:27	9:22	9:38
	9:42	9:51	9:58	10:03	10:10
	10:10	10:19	10:26	10:31	10:38
	10:40	10:49	10:56	11:01	11:08
	11:15	11:24	11:31	11:36	11:43
	11:55	12:04	12:11	12:16	12:23
	12:25	12:34	12:41	12:46	12:53
	12:55	1:04	1:11	1:16	1:23
	1:25	1:34	1:41	1:46	1:53
	1:55	2:04	2:11	2:16	2:23
	2:25	2:34	2:42	2:47	2:54
	2:55	3:04	3:12	3:17	3:24
	3:25	3:34	3:42	3:47	3:54
	3:55	4:04	4:12	4:17	4:24
	4:25	4:34	4:42	4:47	4:54
	4:55	5:04	5:12	5:17	5:24
	5:25	5:34	5:42	5:47	5:54
	5:55	6:04	6:12	6:17	6:24
	6:25	6:34	6:42	6:47	6:54

TIMEPOINT:	E	D	C	B	A
CONESTOGA MALL - Depart	6:15	6:22	6:27	6:35	6:44
NORTHFIELD at BRIDGE	6:45	6:52	6:57	7:05	7:14
LEXINGTON at UNIVERSITY	7:15	7:22	7:27	7:35	7:44
COLUMBIA at KING	7:45	7:52	7:57	8:06	8:16
UNIVERSITY OF WATERLOO - Arrive	8:15	8:22	8:27	8:36	8:46
	8:45	8:52	8:57	9:06	9:16
	9:15	9:22	9:27	9:34	9:43
	9:45	9:52	9:57	10:04	10:13
	10:20	10:27	10:32	10:39	10:48
	10:55	11:02	11:07	11:14	11:23
	11:30	11:37	11:42	11:49	11:58
	11:55	12:02	12:07	12:14	12:23
	12:30	12:37	12:42	12:49	12:58
	1:00	1:07	1:12	1:19	1:28
	1:30	1:37	1:42	1:49	1:58
	2:00	2:07	2:12	2:19	2:28
	2:30	2:37	2:42	2:49	2:58
	3:00	3:07	3:12	3:19	3:28
	3:30	3:37	3:42	3:49	3:58
	4:00	4:07	4:12	4:19	4:28
	4:30	4:37	4:42	4:49	4:58
	5:00	5:07	5:12	5:19	5:28
	5:30	5:37	5:42	5:49	5:58
	6:00	6:07	6:12	6:19	6:28

**How to use this schedule...** Read across for times from beginning to end of route and down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

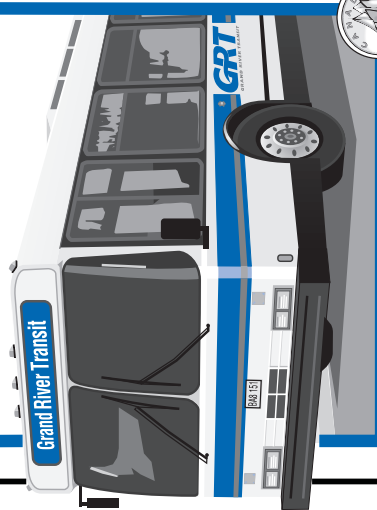
# 31

## Lexington

Monday to Friday Service

Year-round Schedule

Effective: September 7, 2009



Kindly reuse this timetable

**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)



## MONDAY TO FRIDAY SERVICE

	TIMEPOINT: CONESTOGA MALL - Depart	KUMPF at NORTHFIELD	NORTHFIELD WEBER	CONESTOGA MALL - Arrive	Map Reference
<b>A</b>	(A) 6:40	(B) 6:47	(C) 6:54	(A) 7:06	
	7:10	7:17	7:23	7:34	
<b>M</b>	7:40	7:47	7:53	8:04	
	8:10	8:17	8:23	8:34	
	8:40	8:47	8:53	9:04	

<b>P</b>	2:30	2:37	2:43	2:54
	3:00	3:07	3:13	3:24
	3:30	3:37	3:43	3:54
	4:00	4:07	4:13	4:24
	4:30	4:37	4:43	4:54
	5:00	5:07	5:13	5:24
<b>M</b>	5:30	5:37	5:43	5:54

<b>E</b>	10:45	10:51	10:57	11:07
		11:33	11:38	

### Waterloo Industrial Area Special (year-round service)

At 9:13 p.m., Sunday through Friday, Route 9 departs Conestoga Mall and performs an extension operating via Kumpf Drive.

#### How to use this schedule...

Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

# 32

## Kumpf

Monday to Friday Rush-hour Service

Year-round Schedule

Effective: September 7, 2009



Kindly reuse this timetable



# GRT

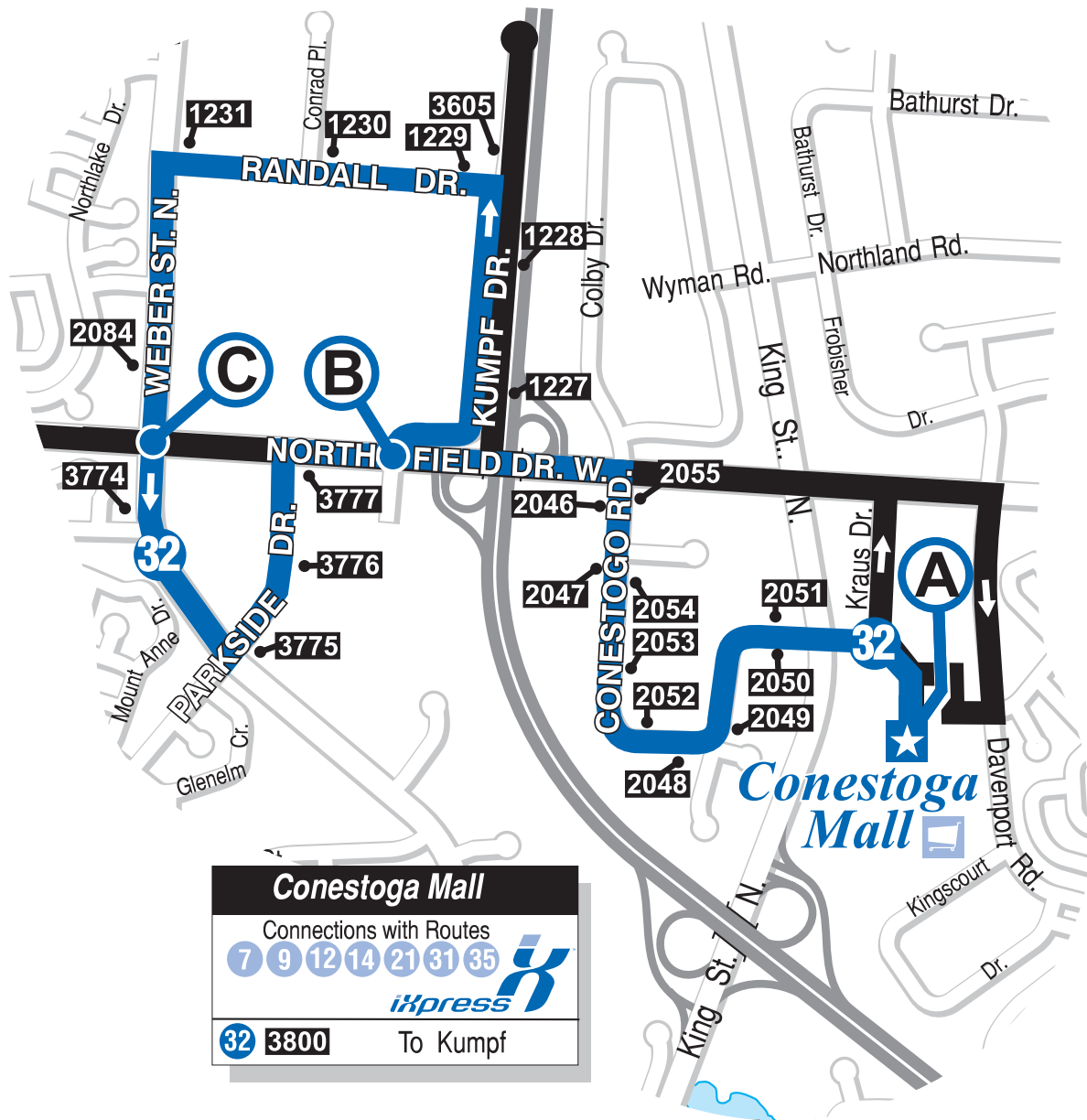
GRAND RIVER TRANSIT

## 519-585-7555







TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)





### Map Legend

-  Bus Stop
-  EasyGO number
-  Timepoint
-  Shopping Centre
-  Point of Interest
-  Route 9 Extension





**CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.**

**24 hrs/day 7 days/week**

## MONDAY TO FRIDAY AM SERVICE

TO: *Huron* →

→ TO: *Forest Glen*

TIMEPOINT:	TO: <i>Huron</i>			TO: <i>Forest Glen</i>			Map Reference
	A	B	C	D	B	A	
	FOREST GLEN PLAZA - Depart			WOODBINE at HURON - Depart			
	TRILLIUM at WASHBURN			TRILLIUM at GROFF PL			
	TRILLIUM at WASHBURN			FOREST GLEN PLAZA - Arrive			
AM	5:50			6:00			6:09
	6:15	6:20	6:27	6:34	To Forest Glen via Strasburg		6:43
	6:45	6:50	6:57	7:04		7:13	
	7:15	7:20	7:27	7:34		7:43	
	7:45	7:50	7:57	8:04		8:13	
	8:15	8:20	8:27	8:34		8:43	
	8:45	8:50	8:57	9:04		9:13	

## MONDAY TO FRIDAY PM SERVICE

TO: *Huron* →

→ TO: *Forest Glen*

TIMEPOINT:	TO: <i>Huron</i>			TO: <i>Forest Glen</i>			Map Reference
	A	B	D	C	B	A	
	FOREST GLEN PLAZA - Depart			WOODBINE at HURON - Depart			
	TRILLIUM at WASHBURN			TRILLIUM at GROFF PL			
	TRILLIUM at WASHBURN			FOREST GLEN PLAZA - Arrive			
PM	2:15	2:21		2:32	2:37	2:43	
	2:45	2:51		3:02	3:07	3:13	
	3:15	To Huron via Strasburg	3:26	3:32	3:37	3:43	
	3:45		3:56	4:02	4:07	4:13	
	4:15		4:26	4:32	4:37	4:43	
	4:45		4:56	5:02	5:07	5:13	
	5:15		5:26	5:32	5:37	5:43	
	5:45		5:56	6:02	6:07	6:13	
	6:15		6:26	6:32	6:37	6:43	
	10:45		10:51	11:03 ✓	11:08	11:14	
	11:15		11:21	11:31	11:36	11:42	

✓ Late evening extension via Huron, Strasburg and Battler.

The colour of a trip above matches the colour of the corresponding routing found on the schedule map.

### How to use this schedule...

Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter under bus stop name.

# 33

## Huron

Monday to Friday Rush-hour Service

Year-round Schedule

Effective: January 4, 2010



Kindly reuse this timetable



# GRT

GRAND RIVER TRANSIT

## 519-585-7555

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)

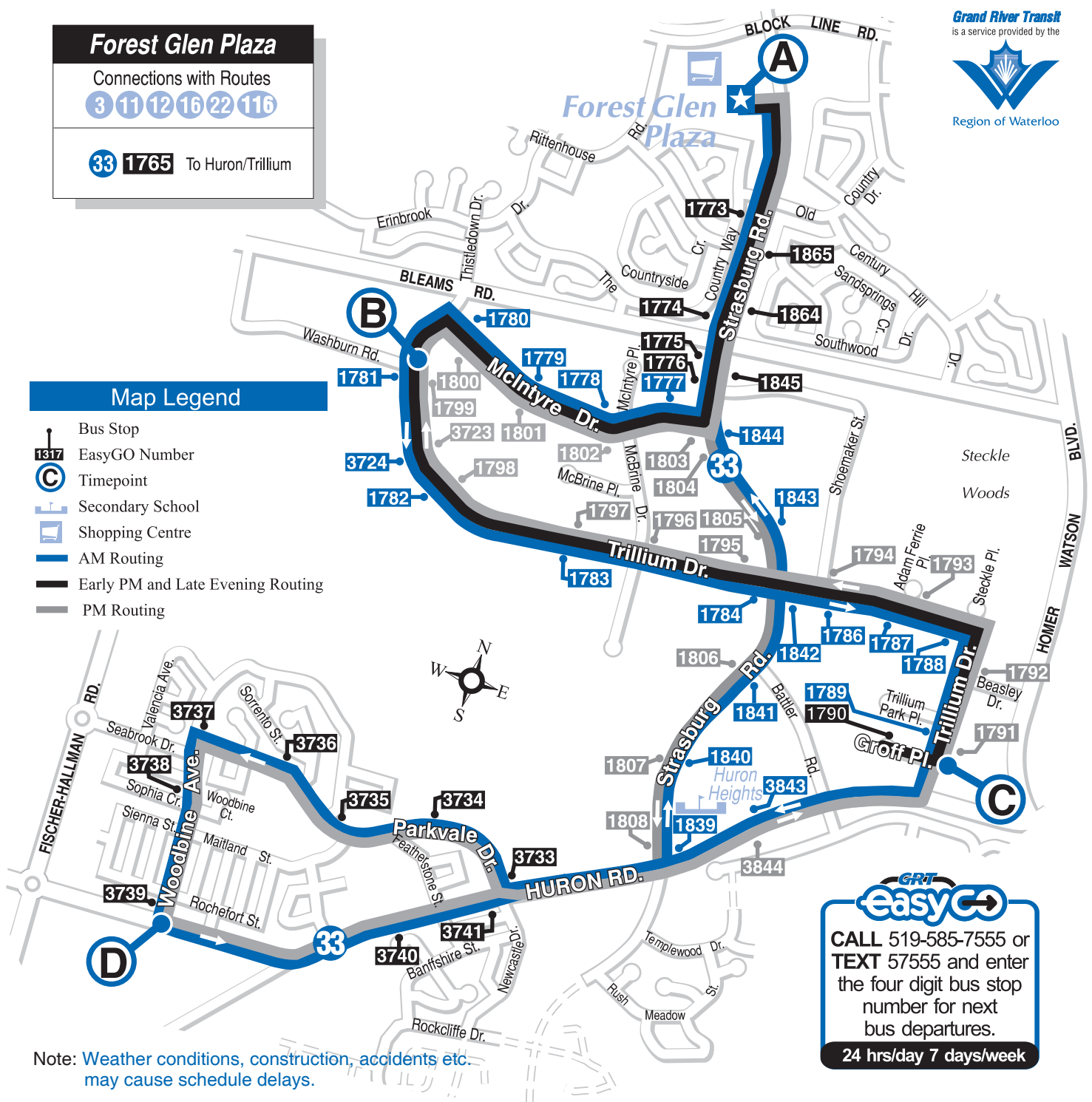
**Forest Glen Plaza**  
Connections with Routes  
**3 11 12 16 22 116**

---

**33 1765** To Huron/Trillium

**Map Legend**

- Bus Stop
- EasyGO Number
- Timepoint
- Secondary School
- Shopping Centre
- AM Routing
- Early PM and Late Evening Routing
- PM Routing



**easyGO**  
CALL 519-585-7555 or  
TEXT 57555 and enter the  
four digit bus stop  
number for next  
bus departures.  
**24 hrs/day 7 days/week**

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

**Routing...**  
During the AM period Route 33 departs Forest Glen Terminal to Huron Business Park via Trillium before arriving at the Huron Village residential area, then returns to Forest Glen via Strasburg. In the PM period, the route travels directly to Huron Village via Strasburg then services Huron Business Park via Trillium before returning to the Forest Glen Terminal. During the early afternoon and evening, additional trips operate from Forest Glen Terminal to Trillium at Groff Pl.

**Specials to Huron Business Park...**  
Every weekday morning the Huron Industrial Special services Wilson, Wabanaki and the Huron Business Park. The special departs Charles Street Terminal at 6:30am and Fairview Park at 6:40am.

**Conestoga Mall**  
Connections with Routes  
7 9 12 14 21  
31 32  
iPress  
35 To Eastbridge

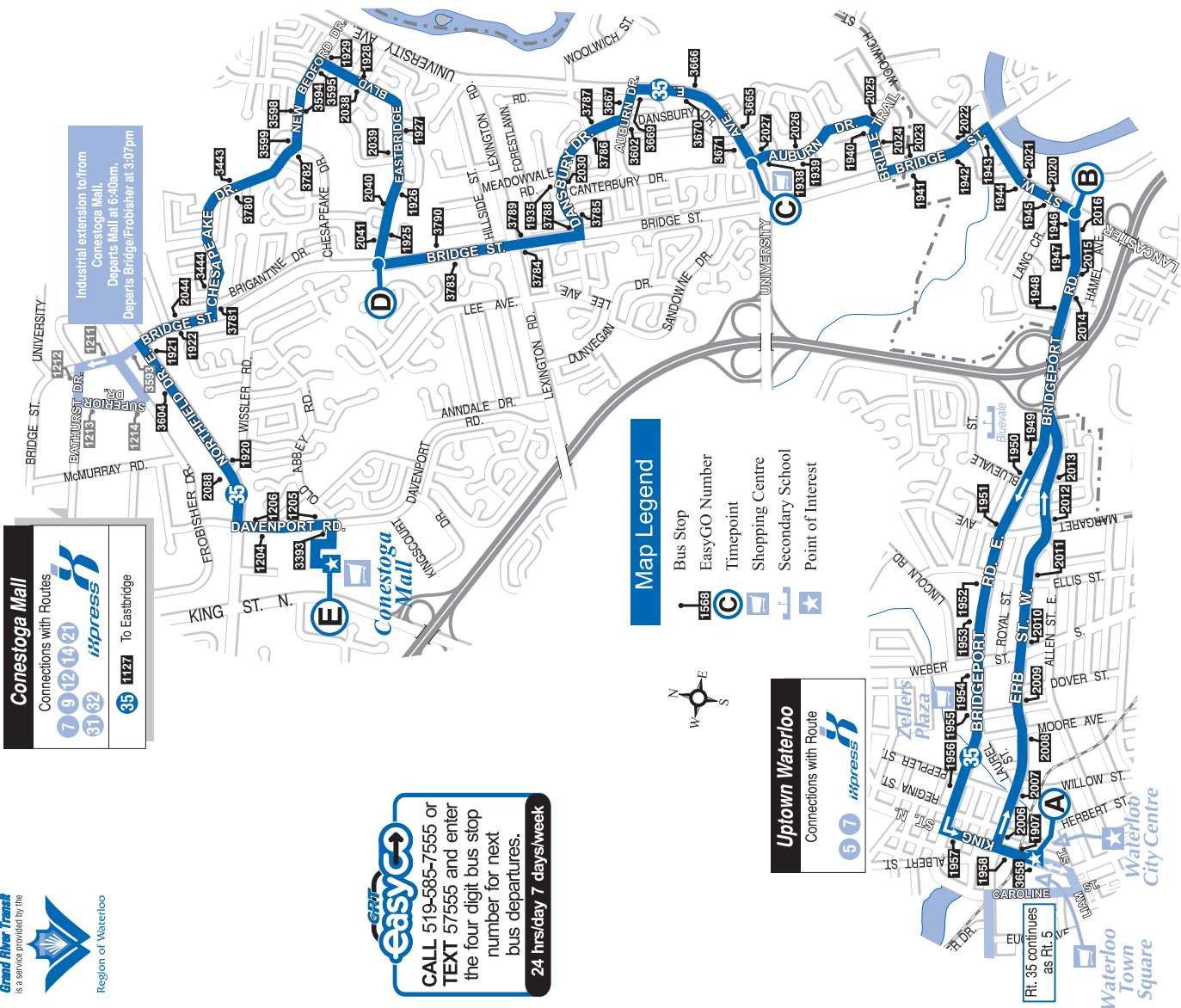
**easyGO**  
CALL: 519-585-7555 or  
TEXT: 57555 and enter  
the four digit bus stop  
number for next  
bus departures.  
24 hrs/day 7 days/week

**Map Legend**

- Bus Stop
- EasyGO Number
- Timepoint
- Shopping Centre
- Secondary School
- Point of Interest

**Uptown Waterloo**  
Connections with Route  
5 7  
iPress  
35

Rt. 35 continues  
as Rt. 3  
Waterloo  
Town  
Square  
Waterloo  
City Centre



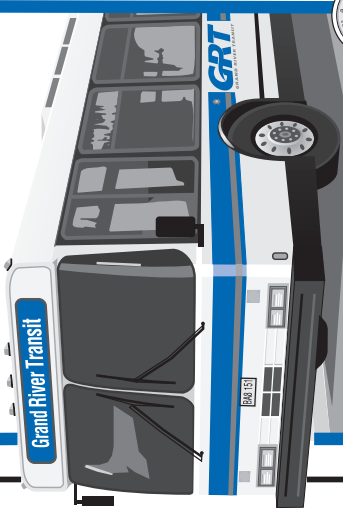
Industrial extension to/from  
Conestoga Mall.  
Departs Mall at 6:40am.  
Departs Bridge/Frobisher at 3:07pm

# 35

## Eastbridge



**Year-round Schedule**  
Effective: April 6, 2009



Kindly reuse this timetable  
**Value**

**GRT**  
GRAND RIVER TRANSIT  
**519-585-7555**  
TTY: 519-585-7796  
[www.grt.ca](http://www.grt.ca)



# WEEKDAY SERVICE

TO: Eastbridge

TO: Uptown Waterloo

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	Map Reference
Depart KING at WILLS WAY	5:40	5:46	5:53	6:05		
BRIDGEPORT at LANCASTER	6:04	6:11	6:17	6:24	6:36	
AUBURN UNIVERSITY at	6:30	6:37	6:43	6:50	7:02	
BRIDGE at EASTBRIDGE	6:52	6:59	7:05	7:12	7:24	
CONESTOGA MALL Depart	7:20	7:27	7:33	7:40	7:52	
Arrive CONESTOGA MALL	7:52	7:59	8:05	8:12	8:24	
BRIDGE at EASTBRIDGE	8:22	8:29	8:35	8:42	8:54	
AUBURN UNIVERSITY at	8:52	8:59	9:04	9:11	9:22	
BRIDGEPORT at LANCASTER	9:22	9:29	9:34	9:41	9:52	
Depart KING at WILLS WAY	9:52	9:59	10:04	10:11	10:22	
CONESTOGA MALL Depart	10:30	10:37	10:42	10:49	11:00	
Arrive CONESTOGA MALL	11:00	11:07	11:12	11:19	11:30	
BRIDGE at EASTBRIDGE	11:30	11:37	11:42	11:49	12:00	
AUBURN UNIVERSITY at	12:00	12:07	12:12	12:19	12:30	
BRIDGEPORT at LANCASTER	12:30	12:37	12:42	12:49	1:00	
Depart KING at WILLS WAY	1:00	1:07	1:12	1:19	1:30	
CONESTOGA MALL Depart	1:30	1:37	1:42	1:49	2:00	
Arrive CONESTOGA MALL	2:00	2:07	2:12	2:19	2:30	
BRIDGE at EASTBRIDGE	2:30	2:37	2:44	2:51	3:13	
AUBURN UNIVERSITY at	3:03	3:11	3:18	3:25	3:38	
BRIDGEPORT at LANCASTER	3:33	3:41	3:48	3:55	4:08	
Depart KING at WILLS WAY	4:03	4:11	4:18	4:25	4:38	
CONESTOGA MALL Depart	4:33	4:41	4:48	4:55	5:08	
Arrive CONESTOGA MALL	5:03	5:11	5:18	5:25	5:38	
BRIDGE at EASTBRIDGE	5:33	5:41	5:48	5:55	6:08	
AUBURN UNIVERSITY at	6:05	6:13	6:19	6:26	6:36	
BRIDGEPORT at LANCASTER	6:35	6:42	6:47	6:54	7:04	
Depart KING at WILLS WAY	7:30	7:37	7:42	7:49	7:59	
CONESTOGA MALL Depart	8:30	8:37	8:42	8:49	8:59	
Arrive CONESTOGA MALL	9:30	9:37	9:42	9:49	9:59	

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	Map Reference
Depart KING at WATLROO SQUARE - Arrive	6:10	5:55	6:01	6:10		
BRIDGEPORT at LANCASTER	6:44	6:29	6:33	6:44		
AUBURN UNIVERSITY at	7:15	7:05	7:05	7:15		
BRIDGE at EASTBRIDGE	7:44	7:27	7:33	7:44		
CONESTOGA MALL Depart	8:14	7:51	7:57	8:03	8:14	
Arrive CONESTOGA MALL	8:44	8:21	8:27	8:33	8:44	
BRIDGE at EASTBRIDGE	9:12	8:40	8:51	8:57	9:03	
AUBURN UNIVERSITY at	9:46	9:15	9:26	9:32	9:37	
BRIDGEPORT at LANCASTER	10:16	9:45	9:56	10:02	10:07	
Depart KING at WATLROO SQUARE - Arrive	10:46	10:15	10:26	10:32	10:37	
CONESTOGA MALL Depart	11:16	10:45	10:56	11:02	11:07	
Arrive CONESTOGA MALL	11:46	11:15	11:26	11:32	11:37	
BRIDGE at EASTBRIDGE	12:16	11:45	11:56	12:02	12:07	
AUBURN UNIVERSITY at	12:46	12:15	12:26	12:32	12:37	
BRIDGEPORT at LANCASTER	1:16	12:45	12:56	1:02	1:07	
Depart KING at WATLROO SQUARE - Arrive	1:46	1:15	1:26	1:32	1:37	
CONESTOGA MALL Depart	2:16	1:45	1:56	2:02	2:07	
Arrive CONESTOGA MALL	2:47	2:15	2:26	2:32	2:37	
BRIDGE at EASTBRIDGE	3:18	2:45	2:57	3:03	3:08	
AUBURN UNIVERSITY at	3:48	3:15	3:27	3:33	3:38	
BRIDGEPORT at LANCASTER	4:18	3:45	3:57	4:03	4:08	
Depart KING at WATLROO SQUARE - Arrive	4:48	4:15	4:27	4:33	4:38	
CONESTOGA MALL Depart	5:18	4:45	4:57	5:03	5:08	
Arrive CONESTOGA MALL	5:48	5:15	5:27	5:33	5:38	
BRIDGE at EASTBRIDGE	6:16	5:45	5:57	6:03	6:08	
AUBURN UNIVERSITY at	6:45	6:15	6:26	6:32	6:37	
BRIDGEPORT at LANCASTER	7:15	6:45	6:56	7:02	7:07	
Depart KING at WATLROO SQUARE - Arrive	7:45	7:15	7:26	7:32	7:37	
CONESTOGA MALL Depart	8:45	8:15	8:26	8:32	8:37	
Arrive CONESTOGA MALL	9:45	9:15	9:26	9:32	9:37	

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

# SATURDAY SERVICE

TO: Eastbridge

TO: Uptown Waterloo

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	Map Reference
Depart KING at WILLS WAY	7:00	7:07	7:12	7:19	7:30	
BRIDGEPORT at LANCASTER	8:00	8:07	8:12	8:19	8:30	
AUBURN UNIVERSITY at	9:00	9:07	9:12	9:19	9:30	
BRIDGE at EASTBRIDGE	10:00	10:07	10:12	10:19	10:30	
CONESTOGA MALL Depart	10:30	10:37	10:42	10:49	11:00	
Arrive CONESTOGA MALL	11:00	11:07	11:12	11:19	11:30	
BRIDGE at EASTBRIDGE	11:30	11:37	11:42	11:49	12:00	
AUBURN UNIVERSITY at	12:00	12:07	12:12	12:19	12:30	
BRIDGEPORT at LANCASTER	12:30	12:37	12:42	12:49	1:00	
Depart KING at WILLS WAY	1:00	1:07	1:12	1:19	1:30	
CONESTOGA MALL Depart	1:30	1:37	1:42	1:49	2:00	
Arrive CONESTOGA MALL	2:00	2:07	2:12	2:19	2:30	
BRIDGE at EASTBRIDGE	2:30	2:37	2:42	2:49	3:00	
AUBURN UNIVERSITY at	3:00	3:07	3:12	3:19	3:30	
BRIDGEPORT at LANCASTER	3:30	3:37	3:42	3:49	4:00	
Depart KING at WILLS WAY	4:00	4:07	4:12	4:19	4:30	
CONESTOGA MALL Depart	4:30	4:37	4:42	4:49	5:00	
Arrive CONESTOGA MALL	5:00	5:07	5:12	5:19	5:30	
BRIDGE at EASTBRIDGE	5:30	5:37	5:42	5:49	6:00	
AUBURN UNIVERSITY at	6:00	6:07	6:12	6:19	6:29	
BRIDGEPORT at LANCASTER	6:30	6:37	6:42	6:49	6:59	
Depart KING at WILLS WAY	7:30	7:37	7:42	7:49	7:59	
CONESTOGA MALL Depart	8:45	8:15	8:26	8:32	8:37	
Arrive CONESTOGA MALL	9:45	9:15	9:26	9:32	9:37	

TIMEPOINT:	(A)	(B)	(C)	(D)	(E)	Map Reference
Depart KING at WATLROO SQUARE - Arrive	6:45	6:56	7:02	7:07	7:16	
BRIDGEPORT at LANCASTER	7:45	7:56	8:02	8:07	8:16	
AUBURN UNIVERSITY at	8:45	8:56	9:02	9:07	9:16	
BRIDGE at EASTBRIDGE	9:45	9:56	10:02	10:07	10:16	
CONESTOGA MALL Depart	10:15	10:26	10:32	10:37	10:46	
Arrive CONESTOGA MALL	10:45	10:56	11:02	11:07	11:16	
BRIDGE at EASTBRIDGE	11:15	11:26	11:32	11:37	11:46	
AUBURN UNIVERSITY at	11:45	11:56	12:02	12:07	12:16	
BRIDGEPORT at LANCASTER	12:15	12:26	12:32	12:37	12:46	
Depart KING at WATLROO SQUARE - Arrive	12:45	12:56	1:02	1:07	1:16	
CONESTOGA MALL Depart	1:15	1:26	1:32	1:37	1:46	
Arrive CONESTOGA MALL	2:16	1:45	1:56	2:02	2:07	
BRIDGE at EASTBRIDGE	2:46	2:15	2:26	2:32	2:37	
AUBURN UNIVERSITY at	3:16	2:45	2:56	3:02	3:07	
BRIDGEPORT at LANCASTER	3:46	3:15	3:26	3:32	3:37	
Depart KING at WATLROO SQUARE - Arrive	4:16	3:45	3:56	4:02	4:07	
CONESTOGA MALL Depart	4:46	4:15	4:26	4:32	4:37	
Arrive CONESTOGA MALL	5:16	4:45	4:56	5:02	5:07	
BRIDGE at EASTBRIDGE	5:46	5:15	5:26	5:32	5:37	
AUBURN UNIVERSITY at	6:15	5:45	5:56	6:02	6:07	
BRIDGEPORT at LANCASTER	6:45	6:15	6:26	6:32	6:37	
Depart KING at WATLROO SQUARE - Arrive	7:15	6:45	6:56	7:02	7:07	
CONESTOGA MALL Depart	7:45	7:15	7:26	7:32	7:37	
Arrive CONESTOGA MALL	8:45	8:15	8:26	8:32	8:37	
BRIDGE at EASTBRIDGE	9:15	8:45	8:56	9:02	9:07	
AUBURN UNIVERSITY at	9:45	9:15	9:26	9:32	9:37	
BRIDGEPORT at LANCASTER	10:15	9:45	9:56	10:02	10:07	
Depart KING at WATLROO SQUARE - Arrive	10:45	10:15	10:26	10:32	10:37	
CONESTOGA MALL Depart	11:15	10:45	10:56	11:02	11:07	
Arrive CONESTOGA MALL	11:45	11:15	11:26	11:32	11:37	
BRIDGE at EASTBRIDGE	12:16	11:45	11:56	12:02	12:07	
AUBURN UNIVERSITY at	12:46	12:15	12:26	12:32	12:37	
BRIDGEPORT at LANCASTER	1:16	12:45	12:56	1:02	1:07	
Depart KING at WATLROO SQUARE - Arrive	1:46	1:15	1:26	1:32	1:37	
CONESTOGA MALL Depart	2:16	1:45	1:56	2:02	2:07	
Arrive CONESTOGA MALL	2:46	2:15	2:26	2:32	2:37	
BRIDGE at EASTBRIDGE	3:16	2:45	2:56	3:02	3:07	
AUBURN UNIVERSITY at	3:46	3:15	3:26	3:32	3:37	
BRIDGEPORT at LANCASTER	4:16	3:45	3:56	4:02	4:07	
Depart KING at WATLROO SQUARE - Arrive	4:46	4:15	4:26	4:32	4:37	
CONESTOGA MALL Depart	5:16	4:45	4:56	5:02	5:07	
Arrive CONESTOGA MALL	5:46	5:15	5:26	5:32	5:37	
BRIDGE at EASTBRIDGE	6:15	5:45	5:56	6:02	6:07	
AUBURN UNIVERSITY at	6:45	6:15	6:26	6:32	6:37	
BRIDGEPORT at LANCASTER	7:15	6:45	6:56	7:02	7:07	
Depart KING at WATLROO SQUARE - Arrive	7:45	7:15	7:26	7:32	7:37	
CONESTOGA MALL Depart	8:45	8:15	8:26	8:32	8:37	
Arrive CONESTOGA MALL	9:45	9:15	9:26	9:32	9:37	

★ Route extension to Bridge at Bathurst

How to use this schedule...Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

# SATURDAY

TIMEPOINT	A AINSLIE ST. TERMINAL - Dep.	B CAMBRIDGE CENTRE - Dep.	C HESPELER TERMINAL - Arr.	C HESPELER TERMINAL - Dep.	B CAMBRIDGE CENTRE - Dep.	A AINSLIE ST. TERMINAL - Arr.
				6:00	6:13	
				6:30	6:43	
6:15	6:30	6:43	6:42	7:00	7:13	
6:45	7:00	7:13	7:12	7:30	7:43	
RUNS EVERY 30 MIN.						
				10:15	10:28	
9:45	10:00	10:13	10:12	10:30	10:43	
	10:15	10:28	10:28	10:45	10:58	
10:15	10:30	10:43	10:42	11:00	11:13	
10:30	10:45	10:58	10:58	11:15	11:28	
RUNS EVERY 15 MIN.						
5:30	5:45	5:58	5:58	6:14	BTG	
5:45	6:00	6:13	6:12	6:30	6:43	
6:00	6:13	Bus to Garage				
6:15	6:30	6:43	6:42	7:00	7:13	
6:45	7:00	7:13	7:12	7:30	7:43	
RUNS EVERY 30 MIN.						
10:45	11:00	11:13	11:12	11:30	11:43	
11:15	11:30	11:43	11:42	12:00	12:13	
11:45	12:00	12:13	to Route 66 Winston			

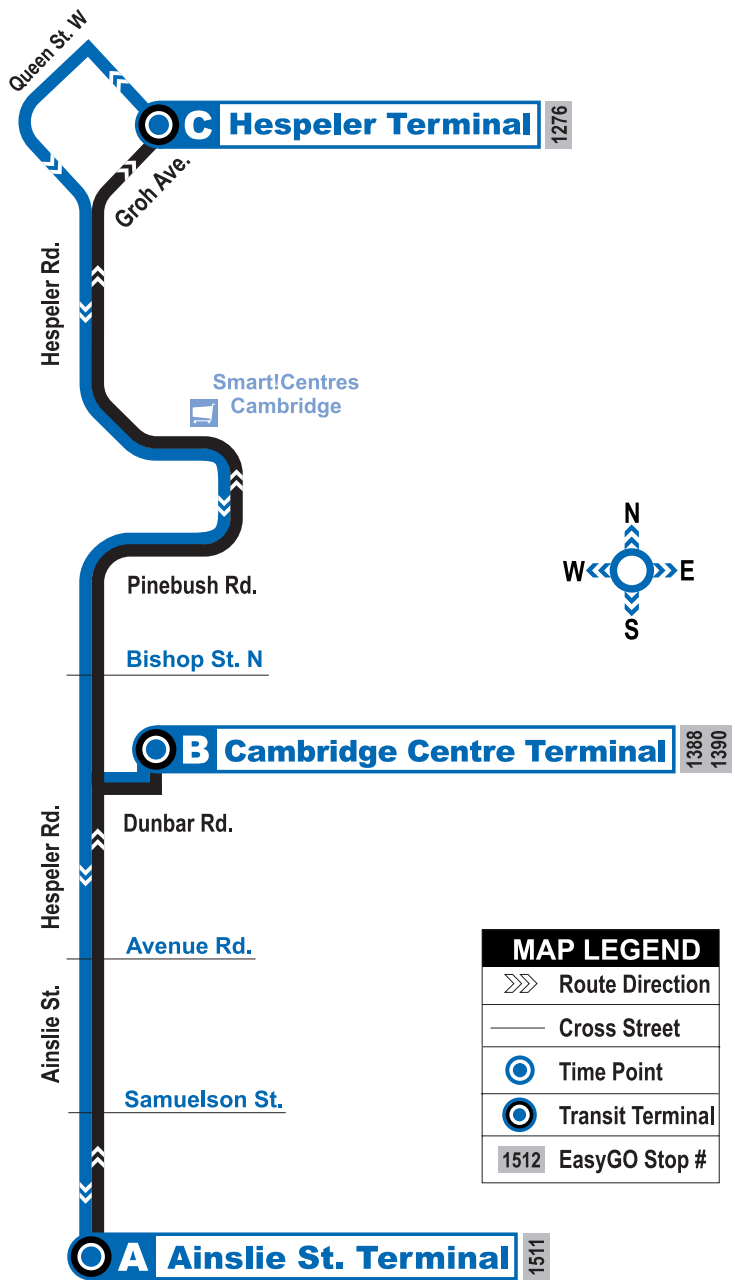
# SUNDAY/HOLIDAY

TIMEPOINT	A AINSLIE ST. TERMINAL - Dep.	B CAMBRIDGE CENTRE - Dep.	C HESPELER TERMINAL - Arr.	C HESPELER TERMINAL - Dep.	B CAMBRIDGE CENTRE - Dep.	A AINSLIE ST. TERMINAL - Arr.
				10:00	10:13	
				10:30	10:43	
10:15	10:30	10:43	10:42	11:00	11:13	
10:45	11:00	11:13	11:12	11:30	11:43	
RUNS EVERY 30 MIN.						
5:15	5:30	5:43	5:42	6:00	6:13	
5:45	6:00	6:13	to Route 66			
6:15	6:30	6:43	to Route 65			

# HESPELER ROAD

## ROUTE 51

Year-Round Schedule  
Effective: September 7, 2009



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	1512 EasyGO Stop #

**GRT**

519-585-7555    www.grt.ca    TTY: 519-585-7796

**Text: 57555 Key in your stop number**

# MONDAY - FRIDAY

## TIMEPOINT

A AINSIE ST. TERMINAL - Dep.	B CAMBRIDGE CENTRE - Dep.	G HESPELER TERMINAL - Arr.	G HESPELER TERMINAL - Dep.	B CAMBRIDGE CENTRE - Dep.	A AINSIE ST. TERMINAL - Arr.
				6:00	6:13
			6:12	6:30	6:43
6:15	6:30	6:43	6:42	7:00	7:13
			6:58	7:15	7:28
6:45	7:00	7:13	7:12	7:30	7:43
7:00	7:15	7:28	7:28	7:45	7:58
7:15	7:30	7:43	7:42	8:00	8:13
7:30	7:45	7:58	7:58	8:15	8:28
7:45	8:00	8:13	8:12	8:30	8:43
8:00	8:15	8:28	8:28	8:45	8:58
8:15	8:30	8:43	8:42	9:00	9:13
8:30	8:45	8:58	8:58	9:15	9:28
8:45	9:00	9:13	9:12	9:30	9:43
9:00	9:15	9:28	9:28	9:45	9:58
9:15	9:30	9:43	9:42	10:00	10:13
9:30	9:45	9:58	9:58	10:15	10:28
9:45	10:00	10:13	10:12	10:30	10:43
10:00	10:15	10:28	10:28	10:45	10:58
10:15	10:30	10:43	10:42	11:00	11:13
10:30	10:45	10:58	10:58	11:15	11:28
10:45	11:00	11:13	11:12	11:30	11:43
11:00	11:15	11:28	11:28	11:45	11:58
▼ RUNS EVERY 15 MIN. ▼					
2:00	2:15	2:28	2:28	2:45	2:58
2:15	2:30	2:43	2:42	3:00	3:13
2:30	2:45	2:58	2:58	3:15	3:28
2:45	3:00	3:13	3:12	3:30	3:43
3:00	3:15	3:28	3:28	3:45	3:58
▼ RUNS EVERY 15 MIN. ▼					
5:30	5:45	5:58	5:58	6:13	BTG
5:45	6:00	6:13	6:12	6:30	6:43
6:00	6:13		Bus to Garage		
6:15	6:30	6:43	6:42	7:00	7:13
▼ RUNS EVERY 30 MIN. ▼					
10:45	11:00	11:13	11:12	11:30	11:43
11:15	11:30	11:43	11:42	12:00	12:13
11:45	12:00	12:13	to Route 66 Winston		

# EasyGO STOPS

HESPELER TERMINAL		AINSIE ST. TERMINAL	
<b>A</b> Ainslie St. Terminal	1511	<b>C</b> Hespeler Terminal	1276
Ainslie at Dickson	1468	Smartcentres Cambridge	1456
Ainslie at Colborne	1469	Smartcentre at Pinebush	1457
Ainslie at Park Hill	1470	Hespeler at Eagle	1458
Ainslie at Simcoe	1471	588 Hespeler Rd.	1459
Water at Samuelson	1472	Hespeler at Langs	1426
Water at Dayton	1473	480 Hespeler Rd.	1427
Water at Todd	1474	Hespeler at Bishop	1428
Hespeler at Jaffray	1475	<b>B</b> Cambridge Ctr. Terminal	1390
Hespeler at Wauchope	3527	250 Hespeler Rd.	3538
Hespeler at Grills	1476	Hespeler at Isherwood	3539
Hespeler at Munch	1384	Hespeler at Wauchope	1460
Hespeler at Can-Amara	3537	Hespeler at Wilmot	1461
<b>B</b> Cambridge Ctr. Terminal	1388	Hespeler at Jaffray	1462
Hespeler at Bishop	1477	Water at Augusta	1463
499 Hespeler Rd.	1478	Water at Dando	1464
Hespeler at Sheldon	1479	Ainslie at Simcoe	1465
561 Hespeler Rd.	1480	Ainslie at Park Hill	1466
Hespeler at Eagle	1481	Ainslie at Dickson	1467
Smartcentres at Pinebush	1482	<b>A</b> Ainslie St. Terminal	1511
Smartcentres Cambridge	1483		
<b>C</b> Hespeler Terminal	1277		

2:30	This trip does not run during School days from Sept. - June
6:15	These trips do not run during Summer or Christmas
Christmas Schedule: Late December to early January	
Summer Schedule: Late June to Labour Day	

Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays



## EasyGO STOPS

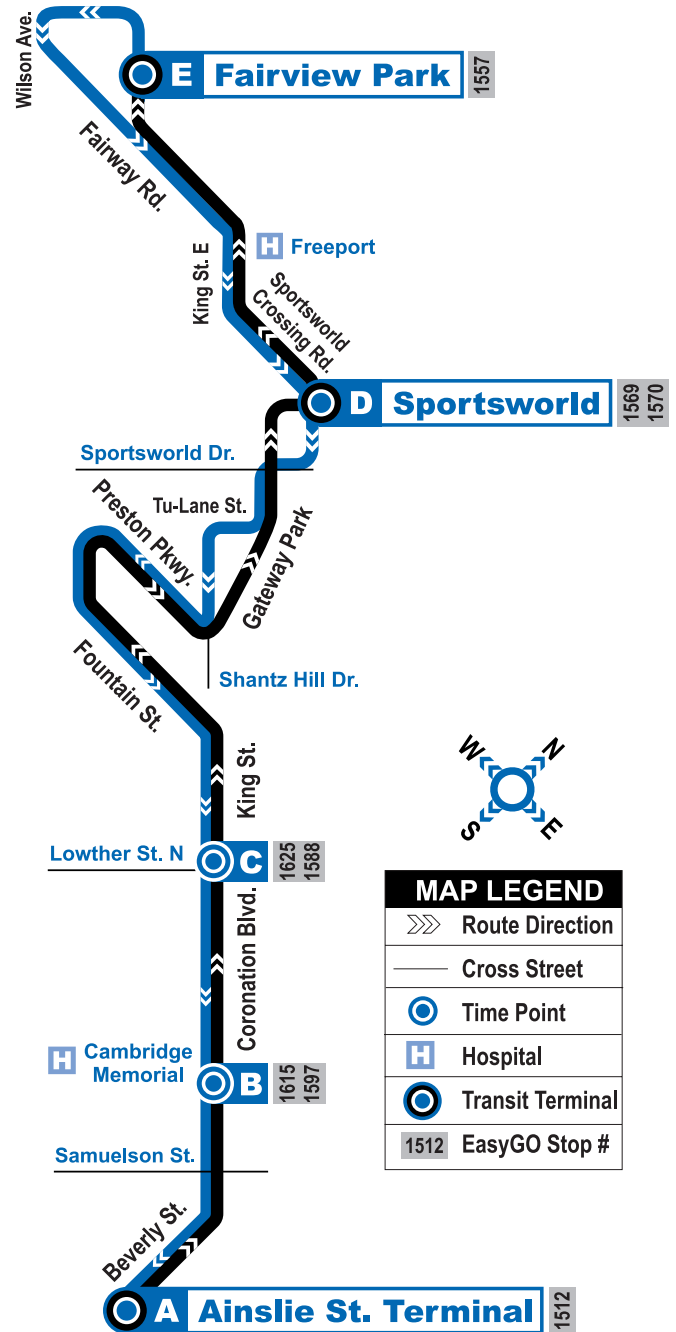
FAIRVIEW PARK		AINSLIE ST. TERMINAL	
<b>A</b> Ainslie St. Terminal	1512	<b>E</b> Fairview Park Terminal	1557
Wellington at Main	1605	Kingsway at Wilson	1559
Beverly at Kerr	1606	Fairway at Fairview Park Entr.	1560
131 Beverly St.	1607	Fairway at Hwy 8 Ramp	1047
Dundas at Grantham	1608	Fairway at King	1561
Dundas at Cambridge	1609	3065 King St. E	1562
Dundas at Roxboro	1610	3227 King St. E	1563
Dundas at Haddington	1611	King at Hofstetter	1564
Coronation at Grandview	1612	King at River	1565
Coronation at Goldie	1613	King at Riverbank	1566
Coronation at Oliver	1614	King past Deer Ridge	1567
<b>B</b> Cambridge Memorial	1615	King at 4283 King St.	1568
Coronation at Coronation	1616	<b>D</b> Sportsworld Terminal	1570
Coronation at Highland	1617	Gateway Park at Sportsworld	1573
Coronation at Blue Heron	1618	Tu Lane at Gateway Park	1574
Coronation at Oriole	1619	Shantz Hill at Preston	1575
King at Coronation	1620	Preston at Linden 1	1576
King at Brower	1621	Preston at Linden 2	1577
King at Bishop	1622	Preston at Parkview	1578
King at Montrose	1623	Preston at Hillview	1579
King at Dolph	1624	Preston at Woods	1580
<b>C</b> King at Lowther	1625	Preston at Fountain	1581
King at Westminster	1455	Fountain at Bauman	1582
King at Waterloo	1626	Fountain at Shantz Hill	1583
King at Chopin	1627	King at Fountain	1584
King at Fountain	1628	King at Chopin	1585
Fountain at Bauman	1629	King at Waterloo	1586
Preston at Fountain	1630	King at Westminster	1587
Preston at Halberstadt	1631	<b>C</b> King at Lowther	1588
Preston at Hillview	1632	King at Dolph	1589
Preston at Parkview	1633	King at Montrose	1443
Preston at Linden	1634	King at Bishop	1591
Shantz Hill at Hwy 401 Ramp	1635	King at Brower	1592
Gateway Park at King	1636	King at Coronation	1593
Gateway Park at Tu Lane	1637	Coronation at Oriole	1594
Gateway Park at Sportsworld	1638	Coronation at Blue Heron	1595
<b>D</b> Sportsworld Terminal	1569	Coronation at Highland 1	3609
4300 King St.	1639	Coronation at Highland 2	1596
King at Deer Ridge	1640	<b>B</b> Cambridge Memorial	1597
King at Riverbank	1641	Coronation at Islandview	1598
King at Stonegate	1642	Coronation at Wright	1599
King at River	1643	Dundas at Easton	1600
King at Hofstetter	1644	Dundas at Roxboro	1601
King at Heffner	1645	Dundas at Cambridge	1602
King at Fairway	1646	Dundas at Beverly	1603
Fairway at Holiday Inn	1043	Beverly at Kerr	1604
Fairway at Wabanaki	1044	Wellington at Dickson	3536
Fairway at Fairview Park Entr.	1045	<b>A</b> Ainslie St. Terminal	1512
<b>E</b> Fairview Park Terminal	1557		

## FAIRVIEW PARK - AINSLIE ST. TERMINAL



# ROUTE 52

**Year-Round Schedule**  
Effective: January 4, 2010



Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays

**GRT**  

519-585-7555    www.grt.ca    TTY: 519-585-7796

**Text: 57555 Key in your stop number**

## MONDAY - FRIDAY

TIMEPOINT

TIMEPOINT	A AINSLIE ST. TERMINAL - Dep.	B CAMBRIDGE MEMORIAL	C KING AT LOWTHER	D SPORTSWORLD TERMINAL	E FAIRVIEW PARK - Arr.	E FAIRVIEW PARK - Dep.	D SPORTSWORLD TERMINAL	C KING AT LOWTHER	B CAMBRIDGE MEMORIAL	A AINSLIE ST. TERMINAL - Arr.
							<b>5:50</b>	5:59	6:04	6:13
		<b>5:35</b>	5:47	6:00	6:00		6:11	6:25	6:30	6:41
5:45	5:53	5:59	6:12	6:25	6:30	6:41	6:55	7:00	7:11	7:11
6:15	6:23	6:29	6:42	6:55	7:00	7:11	7:25	7:30	7:41	7:41
6:45	6:53	6:59	7:12	7:25	7:30	7:41	7:55	8:00	8:11	8:11
7:15	7:23	7:29	7:42	7:55	8:00	8:11	8:25	8:30	8:41	8:41
7:45	7:53	7:59	8:12	8:25	8:30	8:41	8:55	9:00	9:11	9:11
8:15	8:23	8:29	8:42	8:55	9:00	9:11	9:25	9:30	9:41	9:41
8:45	8:53	8:59	9:12	9:25	9:30	9:41	9:55	10:00	10:10	10:10
9:15	9:23	9:29	9:42	9:55	10:00	10:11	10:25	10:30	10:40	10:40
9:45	9:53	9:59	10:12	10:25	10:30	10:41	10:55	11:00	11:10	11:10
10:15	10:23	10:29	10:42	10:55	11:00	11:11	11:25	11:30	11:40	11:40
10:45	10:53	10:59	11:12	11:25	11:30	11:41	11:55	12:00	12:10	12:10
11:15	11:23	11:29	11:42	11:55	12:00	12:11	12:25	12:30	12:40	12:40
11:45	11:53	11:59	12:12	12:25	12:30	12:41	12:55	1:00	1:10	1:10
12:15	12:23	12:29	12:42	12:55	1:00	1:11	1:25	1:30	1:40	1:40
12:45	12:53	12:59	1:12	1:25	1:30	1:41	1:55	2:00	2:10	2:10
1:15	1:23	1:29	1:42	1:55	2:00	2:11	2:25	2:30	2:40	2:40
1:45	1:53	1:59	2:12	2:25	2:30	2:41	2:55	3:00	3:10	3:10
2:15	2:23	2:29	2:42	2:55	3:00	3:13	3:27	3:32	3:42	3:42
				3:25	3:30	3:39	3:54	4:00	4:12	4:12
2:45	2:53	2:59	3:14	3:29	3:35	4:00	4:16	4:21	4:33	4:33
3:15	3:25	3:32	3:52	4:07	4:15	4:30	4:46	4:51	5:03	5:03
3:45	3:55	4:02	4:22	4:37	4:45	5:00	5:16	5:21	5:33	5:33
4:15	4:25	4:32	4:52	5:07	5:15	5:30	5:46	5:51	6:01	6:01
4:45	4:55	5:02	5:22	5:37	5:45	5:59	6:13	6:18	6:28	6:28
5:15	5:25	5:32	5:50	6:05	6:10	6:22	6:35	6:40	6:50	6:50
5:45	5:55	6:01	6:15	6:28	6:30	6:41	6:55	7:00	7:10	7:10
6:15	6:23	6:29	6:42	6:55	7:00	7:11	7:25	7:30	7:40	7:40
6:45	6:53	6:59	7:12	7:25	7:30	7:41	7:55	8:00	8:10	8:10
7:15	7:23	7:29	7:42	7:55	8:00	8:11	8:25	8:30	8:40	8:40
	RUNS EVERY 30 MIN.									
10:45	10:53	10:59	11:12	11:25	11:30	11:41	11:55	12:00	12:10	12:10
11:15	11:23	11:29	11:42	11:55	Bus to Garage					
11:45	11:53	11:59	12:12	12:25	Bus to Garage					

**5:50** Service begins at Shantz Hill and Preston Pkwy

**5:35** Service begins at King and Bishop

## WEEKENDS/HOLIDAY

ALL TRIPS RUN ON SATURDAY

TIMEPOINT

TIMEPOINT	A AINSLIE ST. TERMINAL - Dep.	B CAMBRIDGE MEMORIAL	C KING AT LOWTHER	D SPORTSWORLD TERMINAL	E FAIRVIEW PARK - Arr.	E FAIRVIEW PARK - Dep.	D SPORTSWORLD TERMINAL	C KING AT LOWTHER	B CAMBRIDGE MEMORIAL	A AINSLIE ST. TERMINAL - Arr.
							<b>6:18</b>	6:28	6:32	6:41
						6:30	6:43	6:56	7:01	7:11
6:15	6:23	6:29	6:42	6:55	7:00	7:13	7:26	7:31	7:41	7:41
6:45	6:53	6:59	7:12	7:25	7:30	7:43	7:56	8:01	8:11	8:11
7:15	7:23	7:29	7:42	7:55	8:00	8:13	8:26	8:31	8:41	8:41
7:45	7:53	7:59	8:12	8:25	8:30	8:43	8:56	9:01	9:11	9:11
8:15	8:23	8:29	8:42	8:55	9:00	9:13	9:26	9:31	9:41	9:41
8:45	8:53	8:59	9:12	9:25	9:30	9:43	9:56	10:01	10:11	10:11
9:15	9:23	9:29	9:42	9:55	<b>10:00</b>	<b>10:13</b>	<b>10:26</b>	<b>10:31</b>	<b>10:41</b>	<b>10:41</b>
9:45	9:53	9:59	10:12	10:25	10:30	10:43	10:56	11:01	11:11	11:11
<b>10:15</b>	<b>10:23</b>	<b>10:29</b>	<b>10:42</b>	<b>10:55</b>	<b>11:00</b>	<b>11:13</b>	<b>11:26</b>	<b>11:31</b>	<b>11:41</b>	<b>11:41</b>
10:45	10:53	10:59	11:12	11:25	11:30	11:43	11:56	12:01	12:11	12:11
11:15	11:23	11:29	11:42	11:55	12:00	12:13	12:26	12:31	12:41	12:41
11:45	11:53	11:59	12:12	12:25	12:30	12:43	12:56	1:01	1:11	1:11
12:15	12:23	12:29	12:42	12:55	1:00	1:13	1:26	1:31	1:41	1:41
12:45	12:53	12:59	1:12	1:25	1:30	1:43	1:56	2:01	2:11	2:11
<b>1:15</b>	<b>1:23</b>	<b>1:29</b>	<b>1:42</b>	<b>1:55</b>	<b>2:00</b>	<b>2:13</b>	<b>2:26</b>	<b>2:31</b>	<b>2:41</b>	<b>2:41</b>
1:45	1:53	1:59	2:12	2:25	2:30	2:43	2:56	3:01	3:11	3:11
<b>2:15</b>	<b>2:23</b>	<b>2:29</b>	<b>2:42</b>	<b>2:55</b>	<b>3:00</b>	<b>3:13</b>	<b>3:26</b>	<b>3:31</b>	<b>3:41</b>	<b>3:41</b>
2:45	2:53	2:59	3:12	3:25	3:30	3:43	3:56	4:01	4:11	4:11
<b>3:15</b>	<b>3:23</b>	<b>3:29</b>	<b>3:42</b>	<b>3:55</b>	<b>4:00</b>	<b>4:13</b>	<b>4:26</b>	<b>4:31</b>	<b>4:41</b>	<b>4:41</b>
3:45	3:53	3:59	4:12	4:25	4:30	4:43	4:56	5:01	5:11	5:11
<b>4:15</b>	<b>4:23</b>	<b>4:29</b>	<b>4:42</b>	<b>4:55</b>	<b>5:00</b>	<b>5:13</b>	<b>5:26</b>	<b>5:31</b>	<b>5:41</b>	<b>5:41</b>
4:45	4:53	4:59	5:12	5:25	5:30	5:43	5:56	6:01	6:11	6:11
<b>5:15</b>	<b>5:23</b>	<b>5:29</b>	<b>5:42</b>	<b>5:55</b>	<b>6:00</b>	<b>6:13</b>	<b>6:26</b>	<b>6:31</b>	<b>6:41</b>	<b>6:41</b>
5:45	5:53	5:59	6:12	6:25	6:30	6:43	6:56	7:01	7:11	7:11
<b>6:15</b>	<b>6:23</b>	<b>6:29</b>	<b>6:42</b>	<b>*6:55</b>	7:00	7:13	7:26	7:31	7:41	7:41
6:45	6:53	6:59	7:12	7:25	7:30	7:43	7:56	8:01	8:11	8:11
7:15	7:23	7:29	7:42	7:55	8:00	8:13	8:26	8:31	8:41	8:41
7:45	7:53	7:59	8:12	8:25	8:30	8:43	8:56	9:01	9:11	9:11
8:15	8:23	8:29	8:42	8:55	9:00	9:13	9:26	9:31	9:41	9:41
8:45	8:53	8:59	9:12	9:25	9:30	9:43	9:56	10:01	10:11	10:11
	RUNS EVERY 30 MIN.									
11:15	11:23	11:29	11:42	11:55	Bus to Garage					
11:45	11:53	11:59	12:12	12:25	Bus to Garage					

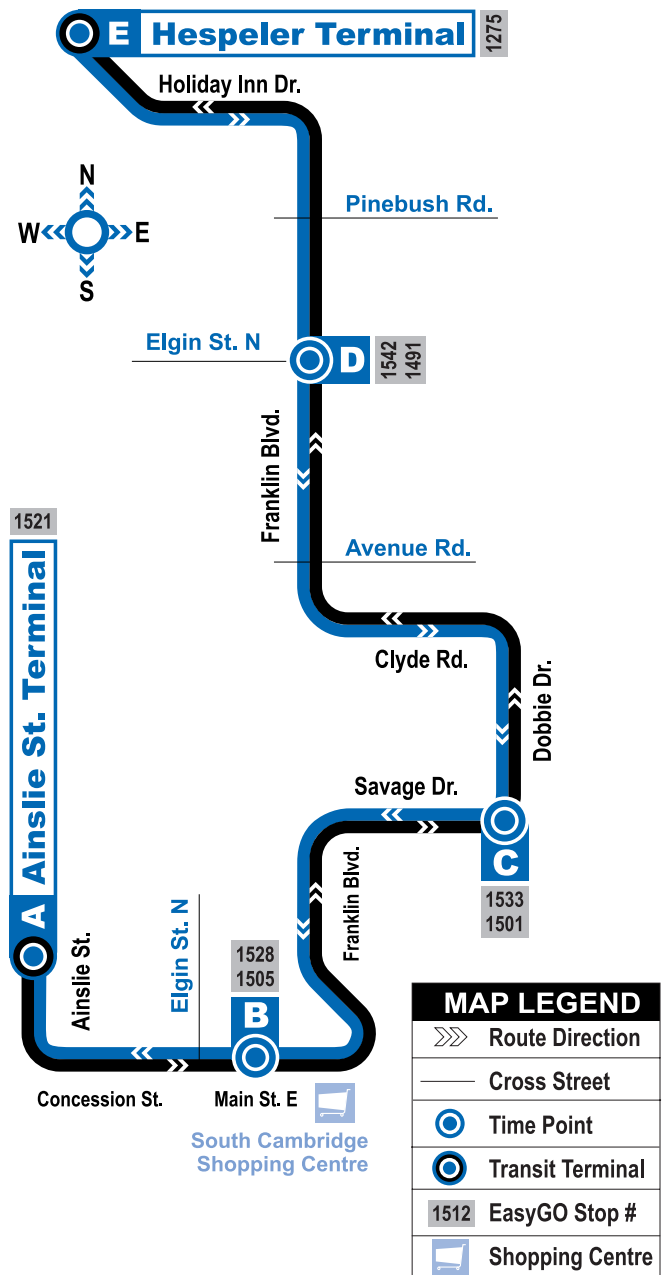
**0:00** Service begins at Shantz Hill and Preston Pkwy

**0:00** These trips run on Sundays. \*Bus to garage after 6:55

# FRANKLIN BOULEVARD

# ROUTE 53

**Year-Round Schedule**  
**Effective: September 7, 2009**



Fares and schedules are subject to change without notice  
 Weather and road conditions may cause schedule delays

519-585-7555    www.grt.ca    TTY: 519-585-7796  
 Text: 57555 Key in your stop number

## EasyGO STOPS

HESPELER TERMINAL		AINSLIE ST. TERMINAL	
<b>A</b> Ainslie St. Terminal	1521	<b>E</b> Hespeler Terminal	1275
Ainslie at Walnut	1523	Holiday Inn at Cambridge Mkt	1294
Concession at Cameron	1524	Holiday Inn Dr. at Holiday Inn	1295
Concession at Peck	1525	Jacob Hespeler SS	1296
Concession at Scrimger	1526	Holiday Inn at Cindy	1297
Main at Elgin	2216	Holiday Inn at Cheval	1298
Main at Alexander	1527	Franklin at Holiday Inn	1484
<b>B</b> Main at Dundas	1528	Franklin at Pinebush	1485
Franklin at Moorefield	1529	Franklin at Stafford	1486
Franklin at Savage	1530	Franklin at Sheldon	1487
Savage at Franklin	1531	Franklin at Turnbull	1488
Savage at Dobbie	1532	Franklin at Raglin	1489
<b>C</b> Dobbie at Savage	1533	Franklin at Bishop	1490
Dobbie at Orion	1534	Franklin at Can-Amera	3659
Dobbie at Clyde	1535	<b>D</b> Franklin at Saginaw	1491
Clyde at Dobbie	1536	Franklin at Glamis	1492
354 Clyde Rd.	1537	Franklin at the Greenway	1493
Clyde at Franklin	1538	Franklin Avenue	1494
Franklin at Athlone	1539	Franklin at Athlone	1495
Franklin Avenue	1540	Clyde at Bluerock	1496
Franklin at Robson	1541	355 Clyde Rd.	1497
<b>D</b> Franklin at Saginaw	1542	Clyde at Dobbie	1498
Franklin at Can-Amera	3660	Dobbie at Clyde	1499
Franklin at Lindsay	1543	Dobbie at Orion	1500
Franklin at Bishop	1544	<b>C</b> Dobbie at Savage	1501
Franklin at Raglin	1545	Savage at Dobbie	1502
Franklin at Turnbull	1546	Franklin at Hilltop	1503
Franklin at Sheldon	1547	Franklin at McLaren	1504
Franklin at Stafford	1548	<b>B</b> Main at Dundas	1505
Franklin at Pinebush	1549	Main at Alexander	1506
Franklin at Holiday Inn	1550	Main at Elgin	1507
Holiday Inn at Cheval	1314	Concession at Scrimger	1508
Jacob Hespeler SS	1315	Concession at Peck	1509
Holiday Inn Dr. at Holiday Inn	1316	Concession at Cameron	1510
Holiday Inn at Heritage Coll.	1317	Ainslie at Veterans	2159
<b>E</b> Hespeler Terminal	1278	<b>A</b> Ainslie St. Terminal	1521

## MONDAY - SATURDAY

ALL TRIPS RUN MONDAY - FRIDAY

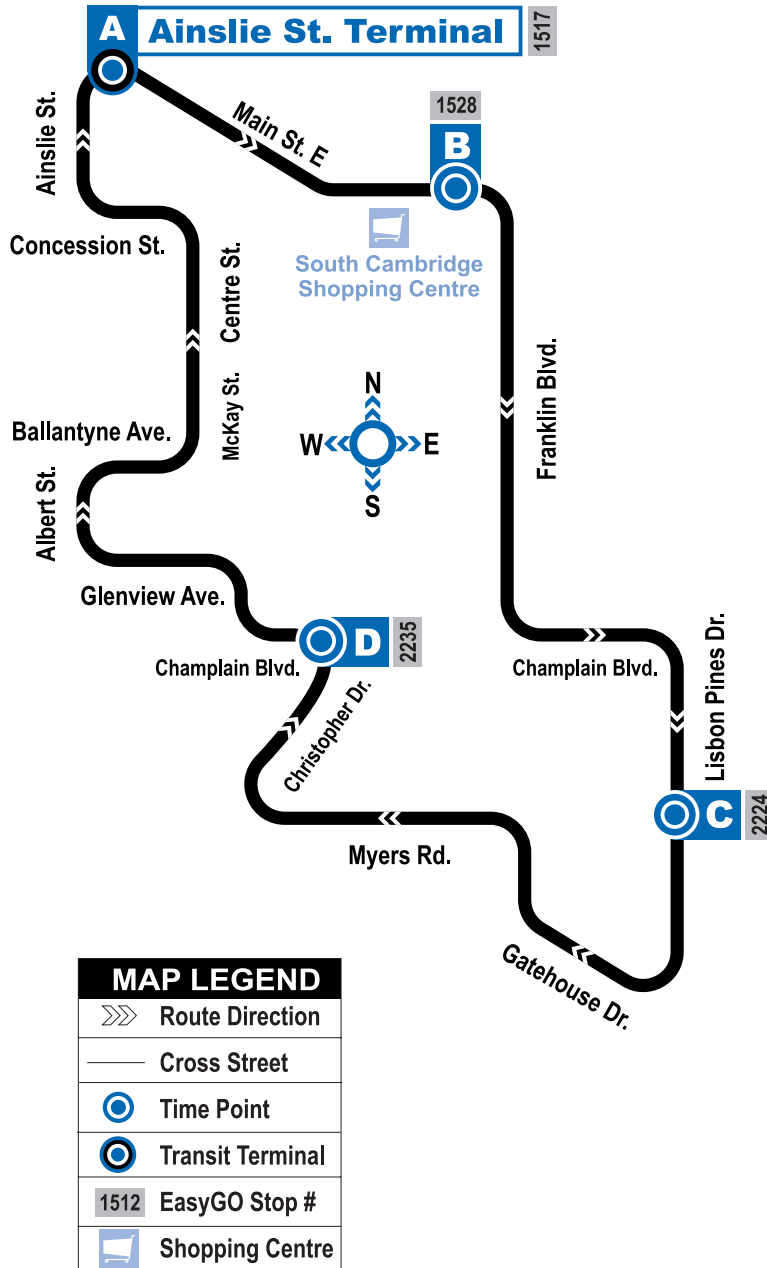
TIMEPOINT	ALL TRIPS RUN MONDAY - FRIDAY									
	A	B	C	D	E	E	D	C	B	A
	AINSLIE ST. TERMINAL - Dep.	SOUTH CAMBRIDGE CENTRE	DOBBIE AT SAVAGE	FRANKLIN AT ELGIN	HESPELER TERMINAL - Arr.	HESPELER TERMINAL - Dep.	FRANKLIN AT ELGIN	DOBBIE AT SAVAGE	SOUTH CAMBRIDGE CENTRE	AINSLIE ST. TERMINAL - Arr.
						6:15	6:24	6:31	6:35	6:42
	6:15	6:21	6:25	6:32	6:41	6:45	6:54	7:01	7:05	7:12
	6:45	6:51	6:55	7:02	7:11	7:15	7:24	7:31	7:35	7:42
	7:15	7:21	7:25	7:32	7:41	7:45	7:54	8:01	8:05	8:12
	7:45	7:51	7:55	8:02	8:11	8:15	8:24	8:31	8:35	8:42
	8:15	8:21	8:25	8:32	8:41	8:45	8:54	9:01	9:05	9:12
	8:45	8:51	8:55	9:02	9:11	9:15	9:24	9:31	9:35	9:42
	9:15	9:21	9:25	9:32	9:41	9:45	9:54	10:01	10:05	10:12
	9:45	9:51	9:55	10:02	10:11	10:15	10:24	10:31	10:35	10:42
	10:15	10:21	10:25	10:32	10:41	10:45	10:54	11:01	11:05	11:12
	10:45	10:51	10:55	11:02	11:11	11:15	11:24	11:31	11:35	11:42
	11:15	11:21	11:25	11:32	11:41	11:45	11:54	12:01	12:05	12:12
	11:45	11:51	11:55	12:02	12:11	12:15	12:24	12:31	12:35	12:42
	12:15	12:21	12:25	12:32	12:41	12:45	12:54	1:01	1:05	1:12
	12:45	12:51	12:55	1:02	1:11	1:15	1:24	1:31	1:35	1:42
	1:15	1:21	1:25	1:32	1:41	1:45	1:54	2:01	2:05	2:12
	1:45	1:51	1:55	2:02	2:11	2:15	2:24	2:31	2:35	2:42
	2:15	2:21	2:25	2:32	2:41	2:45	2:54	3:01	3:05	3:12
	2:45	2:51	2:55	3:02	3:11	3:15	3:24	3:31	3:35	3:42
	3:15	3:21	3:25	3:32	3:41	3:45	3:54	4:01	4:05	4:12
	3:45	3:51	3:55	4:02	4:11	4:15	4:24	4:31	4:35	4:42
	4:15	4:21	4:25	4:32	4:41	4:45	4:54	5:01	5:05	5:12
	4:45	4:51	4:55	5:02	5:11	5:15	5:24	5:31	5:35	5:42
	5:15	5:21	5:25	5:32	5:41	5:45	5:54	6:01	6:05	6:12
	5:45	5:51	5:55	6:02	6:11	6:15	6:24	6:31	6:35	6:42
	6:15	6:21	6:25	6:32	6:41	Arrival Only - Bus to Garage				

6:15 These trips do not run on Saturdays



# ROUTE 54

**Year-Round Schedule**  
**Effective: September 7, 2009**



519-585-7555

www.grt.ca

TTY: 519-585-7796

**Text: 57555 Key in your stop number**

# EasyGO STOPS

## ▶▶▶ AINSLIE ST. TERMINAL

<b>A</b> Ainslie St. Terminal	1517
Main at Harris	3535
Main at Bruce	2213
Main at Peck	2214
Main at Lincoln	2215
Main at Elgin	2216
Main at Alexander	1527
<b>B</b> South Cambridge Centre	1528
Main at Franklin	2217
Franklin at Green Gate	2174
Franklin at Dundas	2175
Franklin at Walkway to Elliott	2218
Franklin at Morning Calm	2219
Champlain at Franklin	2220
Champlain at Azores	2221
Lisbon Pines at Champlain	2222
Lisbon Pines at Madeira	2223
<b>C</b> Lisbon Pines at Myers	2224
Gatehouse at McNichol	2225
Gatehouse at Wheeler	2226
Gatehouse at Flockhart	2227
Gatehouse at Clover	2228
Myers at Franklin	2229
Myers at Elgin	2230
Myers at Greenbrier	2231
Christopher at Myers	2233
Christopher at Tutton	2234
<b>D</b> Champlain at Christopher	2235
McDonald at Dorset	2236
Glenview at Mcdonald	2237
Glenview at Henry	2238
Glenview at Albert	2239
Albert at Ballantyne	2240
Ballantyne at McKay	2241
McKay at South	2242
Centre at Elliott	2243
Centre at Concession	2244
Ainslie at Veterans	2159
<b>A</b> Ainslie St. Terminal	1520

# MON. - SAT.

## ALL TRIPS RUN MONDAY - FRIDAY

### TIMEPOINT

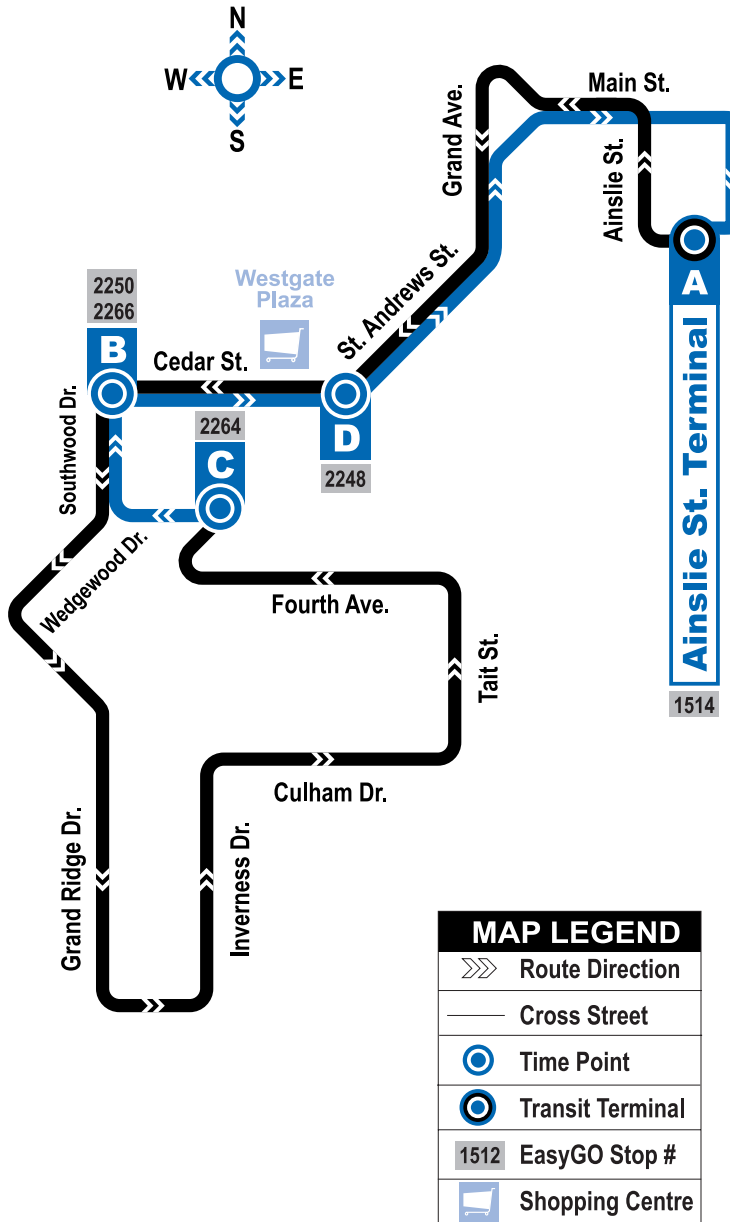
	A AINSIE ST. TERMINAL - Dep.	B SOUTH CAMBRIDGE CENTRE	C LISBON PINES AT MYERS	D CHAMPLAIN AT CHRISTOPHER	A AINSIE ST. TERMINAL - Arr.
		6:25	6:31	6:36	6:43
6:45	6:50	6:56	7:02	7:11	
7:15	7:20	7:26	7:32	7:41	
7:45	7:50	7:56	8:02	8:11	
8:15	8:20	8:26	8:32	8:41	
8:45	8:50	8:56	9:02	9:11	
9:15	9:20	9:26	9:32	9:41	
9:45	9:50	9:56	10:02	10:11	
10:15	10:20	10:26	10:32	10:41	
10:45	10:50	10:56	11:02	11:11	
11:15	11:20	11:26	11:32	11:41	
11:45	11:50	11:56	12:02	12:11	
12:15	12:20	12:26	12:32	12:41	
12:45	12:50	12:56	1:02	1:11	
1:15	1:20	1:26	1:32	1:41	
1:45	1:50	1:56	2:02	2:11	
2:15	2:20	2:26	2:32	2:41	
2:45	2:50	2:56	3:02	3:11	
3:15	3:20	3:26	3:32	3:41	
3:45	3:50	3:56	4:02	4:11	
4:15	4:20	4:26	4:32	4:41	
4:45	4:50	4:56	5:02	5:11	
5:15	5:20	5:26	5:32	5:41	
5:45	5:50	5:56	6:02	6:11	
6:15	6:20	6:26	6:32	6:41	

7:15 Only these trips run on Saturdays



**ROUTE 55**

**Year-Round Schedule  
Effective: September 7, 2009**



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number



# EasyGO STOPS

## AINSLIE ST. TERMINAL

<b>A</b> Ainslie St. Terminal	1514
Main at Water	2186
Grand at South	2245
St. Andrews at George	2246
St. Andrews at Fraser	2247
St. Andrews at Cedar	2248
Cedar at Osborne	2249
<b>B</b> Southwood at Cedar	2250
Southwood at Westwood	2251
Southwood at Wedgewood	2252
Wedgewood at Grand Ridge	2253
Grand Ridge at Mark	2254
Grand Ridge at St. Andrews	2255
Grand Ridge at String MacGrgr	2256
Grand Ridge at Oak Hill	2257
Culham at Barberry	2258
Culham at Ridgewood	2259
Culham at Tait	2260
Tait at Fourth	2261
Fourth at Vincent	2262
Fourth at St. Andrews	2263
<b>C</b> Southwood at St. Andrews	2264
Southwood at Westwood	2265
Southwood at Cedar	2266
Cedar at Southgate	2148
Cedar at Osborne	2267
<b>D</b> St. Andrews at Gilholm	3534
St. Andrews at Grand	2211
Grand at South	2268
Main at Mill	2212
<b>A</b> Ainslie St. Terminal	1522

# MON. - SUN./ HOLIDAY

## ALL TRIPS RUN MONDAY - FRIDAY

### TIMEPOINT

	A AINSLIE ST. TERMINAL - Dep.	B SOUTHWOOD AT CEDAR	C SOUTHWOOD AT ST. ANDREWS	D ST. ANDREWS AT CEDAR	A AINSLIE ST. TERMINAL - Arr.
5:45	5:52	6:00	6:05	6:11	
6:15	6:22	6:30	6:35	6:41	
6:45	6:52	7:00	7:05	7:11	
7:15	7:22	7:30	7:35	7:41	
7:45	7:52	8:00	8:05	8:11	
8:15	8:22	8:30	8:35	8:41	
8:45	8:52	9:00	9:05	9:11	
9:15	9:22	9:30	9:35	9:41	
9:45	9:52	10:00	10:05	10:11	
10:15	10:22	10:30	10:35	10:41	
10:45	10:52	11:00	11:05	11:11	
11:15	11:22	11:30	11:35	11:41	
11:45	11:52	12:00	12:05	12:11	
12:15	12:22	12:30	12:35	12:41	
12:45	12:52	1:00	1:05	1:11	
1:15	1:22	1:30	1:35	1:41	
1:45	1:52	2:00	2:05	2:11	
2:15	2:22	2:30	2:35	2:41	
2:45	2:52	3:00	3:05	3:11	
3:15	3:22	3:30	3:35	3:41	
3:45	3:52	4:00	4:05	4:11	
4:15	4:22	4:30	4:35	4:41	
4:45	4:52	5:00	5:05	5:11	
5:15	5:22	5:30	5:35	5:41	
5:45	5:52	6:00	6:05	6:11	
6:15	6:22	6:30	6:35	6:41	
6:45	6:52	7:00	7:05	7:11	
7:15	7:22	7:30	7:35	7:41	
7:45	7:52	8:00	8:05	8:11	
8:15	8:22	8:30	8:35	8:41	
8:45	8:52	9:00	9:05	9:11	
9:15	9:22	9:30	9:35	9:41	
9:45	9:52	10:00	10:05	10:11	
10:15	10:22	10:30	10:35	10:41	
11:15	11:22	11:30	11:35	11:41	



Fares and schedules are subject to change without notice

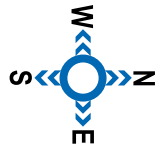
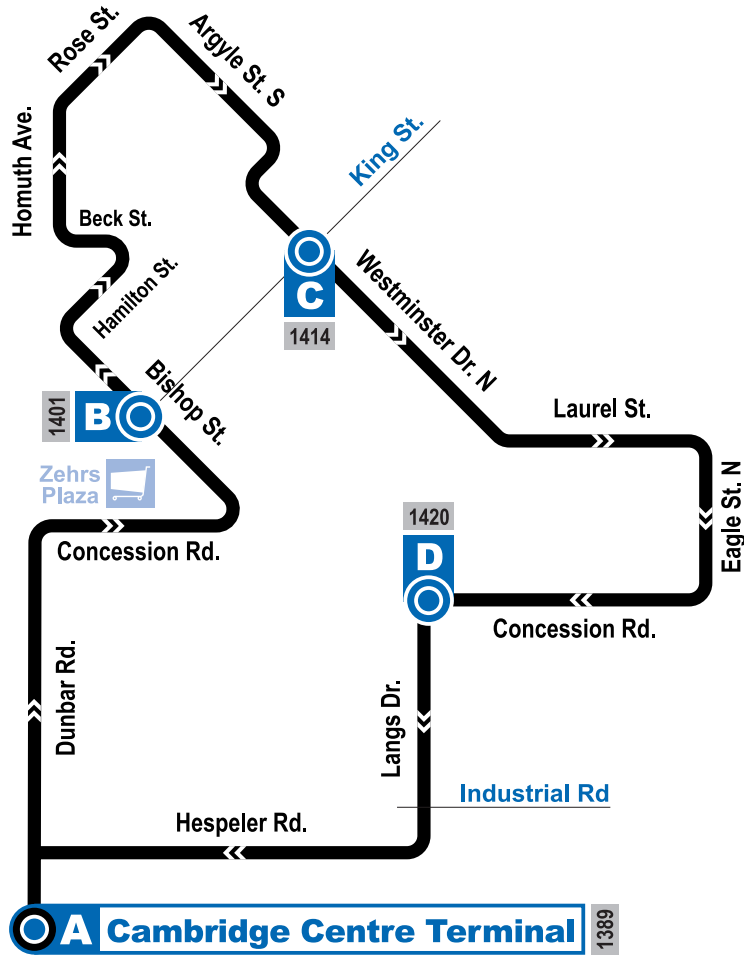
Weather and road conditions may cause schedule delays

5:45 These trips do not run on Saturdays  
 9:45 Only these trips run on Sundays



# ROUTE 56

**Year-Round Schedule  
Effective: September 7, 2009**



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #
	Shopping Centre



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number

# EasyGO STOPS

## ▶▶▶ CAMBRIDGE CTR. TERMINAL

<b>A</b> Cambridge Ctr. Terminal	1389
Dunbar at Hespeler	1392
Dunbar at Briarwood	1393
Dunbar at Daleview	1394
Dunbar at Biscayne	1395
Dunbar at Eastdowns	1396
Dunbar at Pine	1397
Dunbar at St. George	1398
Dunbar at Grand Valley	1399
Concession at Grand Valley	1400
Bishop at Pineview	1445
<b>B</b> Bishop at King	1401
Bishop at Hamilton	1402
Hamilton at Montrose	1403
Hamilton at Beck	1404
Beck at Hamilton	1405
Homuth at Bernhardt	1406
Homuth at Frederick	1407
Rose at Lowther	1408
Rose at Westminster	1409
Rose at Argyle	1410
Argyle at Vine	1411
Argyle at Hamilton	1412
Hamilton at Westminster	1413
<b>C</b> Westminster at King	1414
Westminster at Duke	1415
Westminster at Margaret	1416
Westminster at Laurel	3526
Laurel at North	3522
Laurel at Eagle	1289
Eagle at Arlington	1290
Eagle at Speedsville	1417
Concession at Garden	1418
Concession at Dolph	1419
<b>D</b> Langs at Concession	1420
Langs at Walter	1421
Langs at Shannon	1422
Langs at Trico	1423
Langs at Industrial	1424
Langs at Hespeler	1425
Hespeler at Langs	1426
480 Hespeler Rd.	1427
Hespeler at Bishop	1428
<b>A</b> Cambridge Ctr. Terminal	1391

# MON. - SUN./ HOLIDAY

## ALL TRIPS RUN MON. TO FRI.

### TIMEPOINT

CAMBRIDGE CENTRE - Dep.	BISHOP AT KING	WESTMINSTER AT KING	LANGS AT CONCESSION	CAMBRIDGE CENTRE - Arr.
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>A</b>

6:00	6:05	6:12	6:18	6:26
6:30	6:35	6:42	6:48	6:56
7:00	7:05	7:12	7:18	7:26
7:30	7:35	7:42	7:48	7:56
8:00	8:05	8:12	8:18	8:26
8:30	8:35	8:42	8:48	8:56
9:00	9:05	9:12	9:18	9:26
9:30	9:35	9:42	9:48	9:56
10:00	10:05	10:12	10:18	10:26
10:30	10:35	10:42	10:48	10:56
11:00	11:05	11:12	11:18	11:26
11:30	11:35	11:42	11:48	11:56
12:00	12:05	12:12	12:18	12:26
12:30	12:35	12:42	12:48	12:56
1:00	1:05	1:12	1:18	1:26
1:30	1:35	1:42	1:48	1:56
2:00	2:05	2:12	2:18	2:26
2:30	2:35	2:42	2:48	2:56
3:00	3:05	3:12	3:18	3:26
3:30	3:35	3:42	3:48	3:56
4:00	4:05	4:12	4:18	4:26
4:30	4:35	4:42	4:48	4:56
5:00	5:05	5:12	5:18	5:26
5:30	5:35	5:42	5:48	5:56
6:00	6:05	6:12	6:18	6:26
7:00	7:05	7:12	7:18	7:26
8:00	8:05	8:12	8:18	8:26
9:00	9:05	9:12	9:18	9:26
10:00	10:05	10:12	10:18	10:26
11:00	11:05	11:12	11:18	11:26
12:00	12:05	12:12	12:18	12:26



6:00 This trip does not run on Saturdays

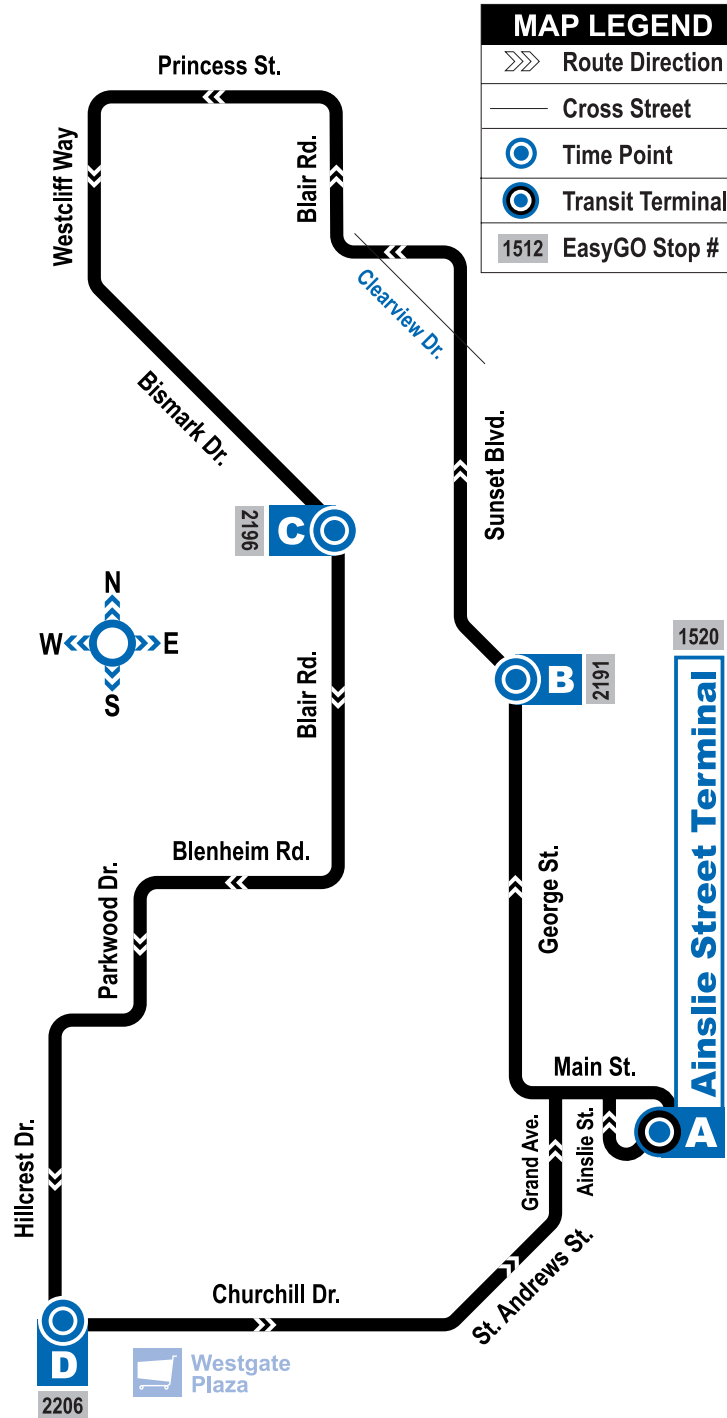
10:00 Only these trips run on Sundays/Holidays

Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays



**ROUTE 57**

**Year-Round Schedule  
Effective: September 7, 2009**



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number

# EasyGO STOPS

## CAMBRIDGE CENTRE

<b>A</b> Ainslie St. Terminal	1520
Main at Water	2186
North at Queen's	2187
George at Blair	2188
George at Hobson	2189
George at James	2190
<b>B</b> Sunset at George	2191
Sunset at Bismark	2192
80 Sunset Blvd.	2193
44 Sunset Blvd.	2194
Clearview at Blair	2195
Blair at Esther	3805
Blair at Princess	3792
Princess at Rosslinn	3793
Princess at Westcliff	3794
Bismark at Westcliff	3795
Bismark at Devils Creek	3796
<b>C</b> Blair at Bismark	2196
Blair at Kenmore	2197
Blair at Sherwood	2198
Blair at Grant	2199
Blair at James	2200
Lansdowne at Blenheim	2201
Blenheim at Vair	2202
Parkwood at Blenheim	2203
Salisbury at Corwin	2204
Hillcrest at Highland	2205
<b>D</b> Hillcrest at Churchill	2206
Churchill at Westgate	2207
Churchill at Forest	2208
Churchill at Barrie	2209
Churchill at Brant	2210
St. Andrews at Grand	2211
Main at Mill	2212
<b>A</b> Ainslie St. Terminal	1517

# MON. - SAT.

## ALL TRIPS RUN MON. TO FRI.

### TIMEPOINT

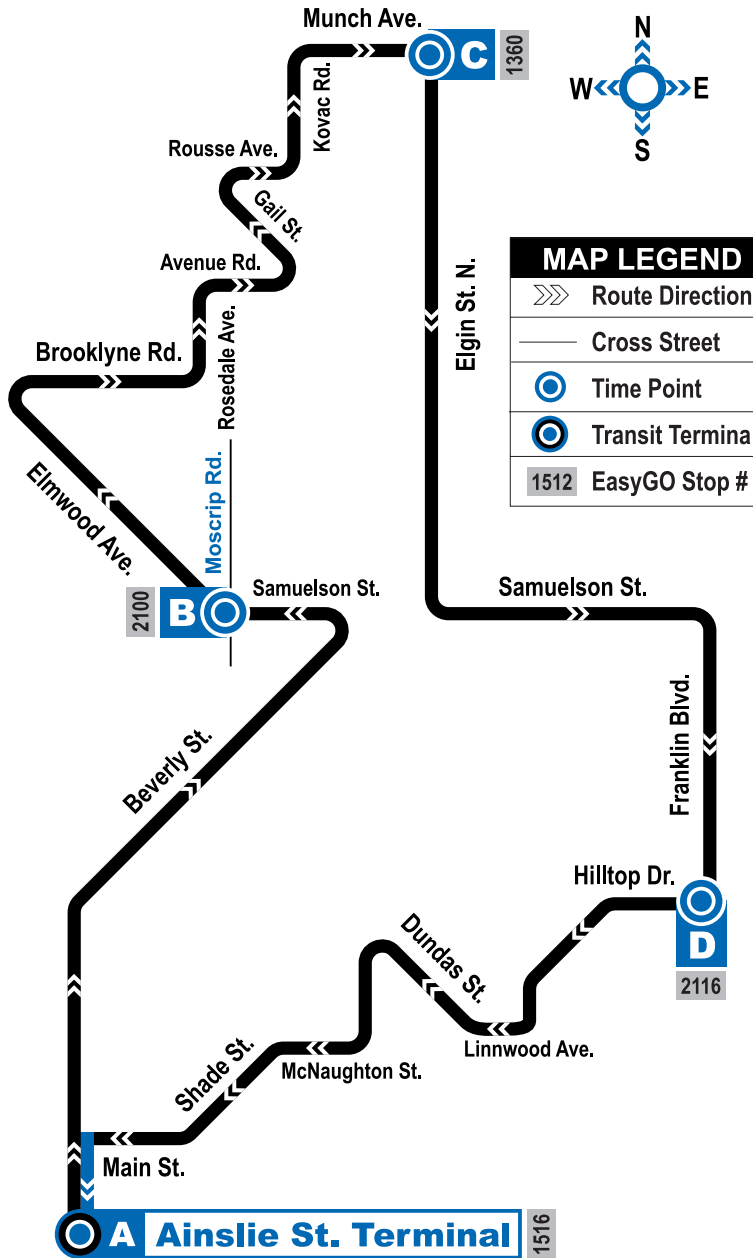
	AINSIE ST. TERMINAL - Dep.	SUNSET AT GEORGE	BLAIR AT BISMARK	HILLCREST AT CHURCHILL	AINSIE ST. TERMINAL - Arr.
<b>A</b>		5:50	5:59	6:05	6:12
6:15	6:20	6:29	6:35	6:42	
6:45	6:50	6:59	7:05	7:12	
7:15	7:20	7:29	7:35	7:42	
7:45	7:50	7:59	8:05	8:12	
8:15	8:20	8:29	8:35	8:42	
8:45	8:50	8:59	9:05	9:12	
9:15	9:20	9:29	9:35	9:42	
9:45	9:50	9:59	10:05	10:12	
10:15	10:20	10:29	10:35	10:42	
10:45	10:50	10:59	11:05	11:12	
11:15	11:20	11:29	11:35	11:42	
11:45	11:50	11:59	12:05	12:12	
12:15	12:20	12:29	12:35	12:42	
12:45	12:50	12:59	1:05	1:12	
1:15	1:20	1:29	1:35	1:42	
1:45	1:50	1:59	2:05	2:12	
2:15	2:20	2:29	2:35	2:42	
2:45	2:50	2:59	3:05	3:12	
3:15	3:20	3:29	3:35	3:42	
3:45	3:50	3:59	4:05	4:12	
4:15	4:20	4:29	4:35	4:42	
4:45	4:50	4:59	5:05	5:12	
5:15	5:20	5:29	5:35	5:42	
5:45	5:50	5:59	6:05	6:12	
6:15	6:20	6:29	6:35	6:42	
6:45	6:50	6:59	7:05	7:12	

6:15 These trips do not run on Saturdays



# ROUTE 58

**Year-Round Schedule**  
**Effective: September 7, 2009**



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number

# EasyGO STOPS

## ▶▶▶ AINSLIE ST. TERMINAL

<b>A</b> Ainslie St. Terminal	1516
Wellington at Main	1605
Beverly at Kerr	1606
131 Beverly St.	1607
Beverly at Dundas	2097
Beverly at Samuelson	2098
Samuelson at Beverly	2099
<b>B</b> Samuelson at Moscrip	2100
Elmwood at Brock	2101
Elmwood at Roxboro	3613
Elmwood at Jarvis	2102
Elmwood at Brooklyne	2103
Rosedale at Brooklyne	2104
Gail at Rouse	2105
Rouse at Gail	2106
Kovac at Munch	2107
<b>C</b> Munch at Elgin	1360
Elgin at Regal	1361
Elgin at Glamis	1362
Elgin at Avenue	2108
Elgin at Winter	2109
Elgin at Galt	2110
Elgin at Bronson	2111
Clyde at Samuelson	2112
Franklin at Clyde	2113
470 Franklin Blvd.	2114
Franklin at Savage	2115
<b>D</b> Hilltop at Franklin	2116
Hilltop at Alison	2117
Lauris at Linnwood	2118
Dundas at Gore	2119
Chalmers at Dundas	2120
Chalmers at McNaughton	2121
McNaughton at Lincoln	2122
McNaughton at Oak	2123
McNaughton at Shade	2124
Main at Harris	2125
<b>A</b> Ainslie St. Terminal	1518

# MON. - SUN./ HOLIDAY

## ALL TRIPS RUN MONDAY - FRIDAY

### TIMEPOINT

	AINSIE ST. TERMINAL - Dep.	SAMUELSON AT MOSCRIP	ELGIN AT MUNCH	HILLTOP AT FRANKLIN	AINSIE ST. TERMINAL - Arr.
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>A</b>
			5:55	6:03	6:12
6:15	6:20	6:25	6:33	6:42	
6:45	6:50	6:55	7:03	7:12	
7:15	7:20	7:25	7:33	7:42	
7:45	7:50	7:55	8:03	8:12	
8:15	8:20	8:25	8:33	8:42	
8:45	8:50	8:55	9:03	9:12	
9:15	9:20	9:25	9:33	9:42	
9:45	9:50	9:55	10:03	10:12	
10:15	10:20	10:25	10:33	10:42	
10:45	10:50	10:55	11:03	11:12	
11:15	11:20	11:25	11:33	11:42	
11:45	11:50	11:55	12:03	12:12	
12:15	12:20	12:25	12:33	12:42	
12:45	12:50	12:55	1:03	1:12	
1:15	1:20	1:25	1:33	1:42	
1:45	1:50	1:55	2:03	2:12	
2:15	2:20	2:25	2:33	2:42	
2:45	2:50	2:55	3:03	3:12	
3:15	3:20	3:25	3:33	3:42	
3:45	3:50	3:55	4:03	4:12	
4:15	4:20	4:25	4:33	4:42	
4:45	4:50	4:55	5:03	5:12	
5:15	5:20	5:25	5:33	5:42	
5:45	5:50	5:55	6:03	6:12	
6:15	6:20	6:25	6:33	6:42	
6:45	6:50	6:55	7:03	7:12	
7:15	7:20	7:25	7:33	7:42	
8:15	8:20	8:25	8:33	8:42	
9:15	9:20	9:25	9:33	9:42	
10:15	10:20	10:25	10:33	10:42	
11:15	11:20	11:25	11:33	11:42	



6:15 Trips do not run Weekends/Holidays

10:15 Only these trips run on Sundays/Holidays

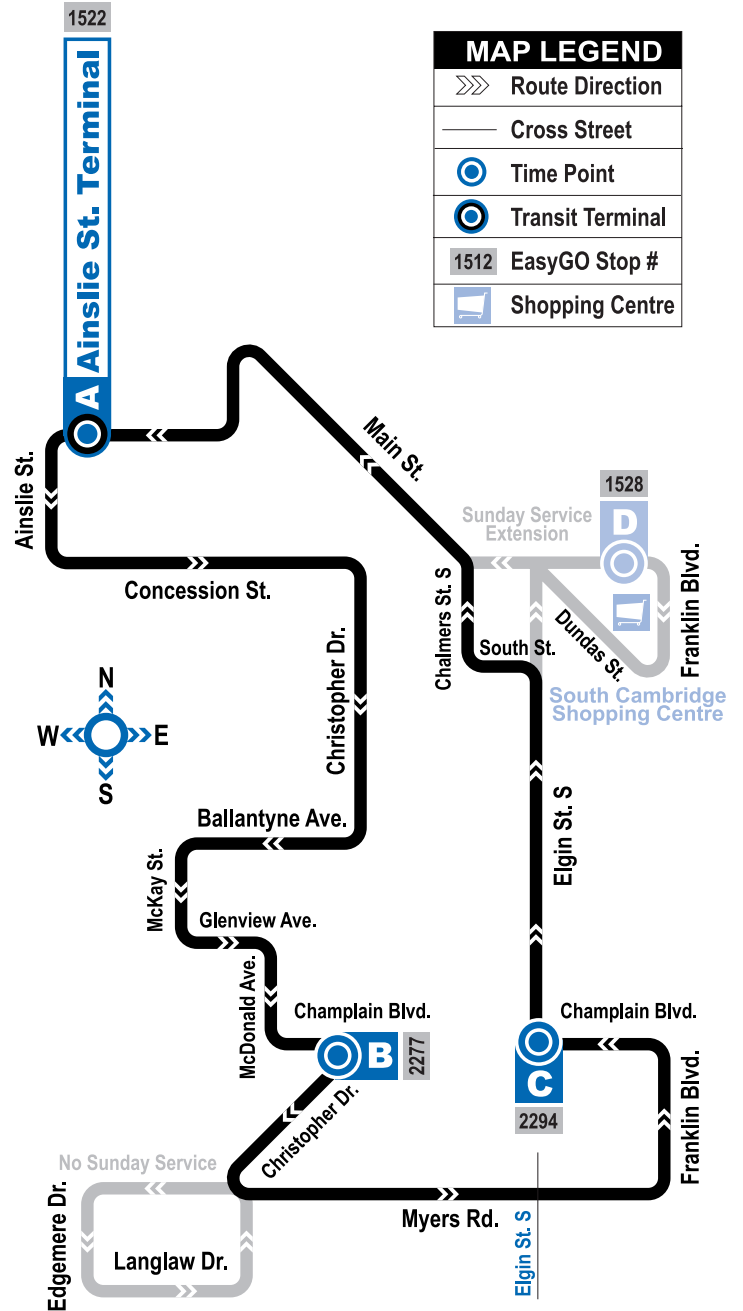
Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays





**ROUTE 59**

**Year-Round Schedule  
Effective: September 7, 2009**



Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays

**519-585-7555    www.grt.ca    TTY: 519-585-7796**  
**Text: 57555 Key in your stop number**

# MON. - SAT.

## EasyGO STOPS

AINSLIE ST. TERMINAL	
<b>A</b> Ainslie St. Terminal	1522
Ainslie at Walnut	1523
Concession at Cameron	1524
Concession at Peck	1525
Christopher at Elliott	2269
Christopher at South	2270
Ballantyne at East	2271
Ballantyne at McDonald	2272
Ballantyne at McKay	2273
McKay at Glenview	2274
Glenview at McDonald	2275
McDonald at Dorset	2276
<b>B</b> Champlain at Christopher	2277
Christopher at Tutton	2278
Christopher at Myers	2279
Myers at Enfield	2280
Edgemere at Sandalwood	2281
Edgemere at Ploughmans	2282
Edgemere at Langlaw	2283
Langlaw at Enfield	2284
Langlaw at Schroeder	3612
Christopher at Wheatland	2285
Christopher at Myers	2286
Myers at Lorraine	2287
Myers at Greenbrier	2288
Myers at Elgin	2289
Myers at Franklin	2290
Franklin at Myers	2291
Franklin at Copperfield	2292
Champlain at Bakersfeild	2293
<b>C</b> Champlain at Elgin	2294
Elgin at Woolley	2295
Elgin at South	2296
Chalmers at South	2299
Chalmers at Main	2300
Main at Lowrey	2301
Main at Cathay	2302
Main at Arthur White	2303
Main at Spruce	2304
Main at Harris	2125
<b>A</b> Ainslie St. Terminal	1519

# SUN./HOLIDAY

## EasyGO STOPS

AINSLIE ST. TERMINAL	
<b>A</b> Ainslie St. Terminal	1522
Ainslie at Walnut	1523
Concession at Cameron	1524
Concession at Peck	1525
Christopher at Elliott	2269
Christopher at South	2270
Ballantyne at East	2271
Ballantyne at McDonald	2272
Ballantyne at McKay	2273
McKay at Glenview	2274
Glenview at McDonald	2275
McDonald at Dorset	2276
<b>B</b> Champlain at Christopher	2277
Christopher at Tutton	2278
Christopher at Myers	2279
Myers at Lorraine	2287
Myers at Greenbrier	2288
Myers at Elgin	2289
Myers at Franklin	2290
Franklin at Myers	2291
Franklin at Copperfield	2292
Champlain at Bakersfeild	2293
<b>C</b> Champlain at Elgin	2294
Elgin at Woolley	2295
Elgin at South	2296
Elgin at Elliot	2297
Elgin at Main	2298
Main at Alexander	1527
<b>D</b> South Cambridge Centre	1528
Main at Franklin	2217
Franklin at Green Gate	2174
Franklin at Dundas	2175
Dundas at Franklin	2176
Main at Alexander	1506
Main at Elgin	1507
Main at Lowrey	2301
Main at Cathay	2302
Main at Arthur White	2303
Main at Spruce	2304
Main at Harris	2125
<b>A</b> Ainslie St. Terminal	1512

# MON. - SAT.

ALL TRIPS RUN MON. - FRI.

TIMEPOINT	AINSLIE ST. TERMINAL - Dep.				CHAMPLAIN AT CHRISTOPHER				ELGIN AT CHAMPLAIN				AINSLIE ST. TERMINAL - Arr.			
	A	B	C	A	A	B	C	A	A	B	C	A	A	B	C	A
5:45	5:53	6:03	6:11	6:15	6:23	6:33	6:41	6:45	6:53	7:03	7:11	7:15	7:23	7:33	7:41	
7:45	7:53	8:03	8:11	8:15	8:23	8:33	8:41	8:45	8:53	9:03	9:11	9:15	9:23	9:33	9:41	
9:45	9:53	10:03	10:11	10:15	10:23	10:33	10:41	10:45	10:53	11:03	11:11	11:15	11:23	11:33	11:41	
11:45	11:53	12:03	12:11	12:15	12:23	12:33	12:41	12:45	12:53	1:03	1:11	1:15	1:23	1:33	1:41	
1:45	1:53	2:03	2:11	2:15	2:23	2:33	2:41	2:45	2:53	3:03	3:11	3:15	3:23	3:33	3:41	
3:45	3:53	4:03	4:11	4:15	4:23	4:33	4:41	4:45	4:53	5:03	5:11	5:15	5:23	5:33	5:41	
5:45	5:53	6:03	6:11	6:15	6:23	6:33	6:41	6:45	6:53	7:03	7:11	7:15	7:23	7:33	7:41	
7:45	7:53	8:03	8:11	8:15	8:23	8:33	8:41	8:45	8:53	9:03	9:11	9:15	9:23	9:33	9:41	
9:45	9:53	10:03	10:11	10:45	10:53	11:03	11:11	11:45	11:53	12:03	12:11	12:15	12:23	12:33	12:41	

6:15 Trips do not run Saturdays

# SUN./HOLIDAY

TIMEPOINT	AINSLIE ST. TERMINAL - Dep.		CHAMPLAIN AT CHRISTOPHER		ELGIN AT CHAMPLAIN		SOUTH CAMBRIDGE CENTRE		AINSLIE ST. TERMINAL - Arr.	
	A	B	C	D	A	B	C	D	A	B
9:45	9:53	9:58	10:03	10:11	10:45	10:53	10:58	11:03	11:11	11:45
11:45	11:53	11:58	12:03	12:11	12:45	12:53	12:58	1:03	1:11	1:45
1:45	1:53	1:58	2:03	2:11	2:45	2:53	2:58	3:03	3:11	3:45
3:45	3:53	3:58	4:03	4:11	4:45	4:53	4:58	5:03	5:11	5:45
5:45	5:53	5:58	6:03	6:11						

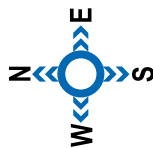
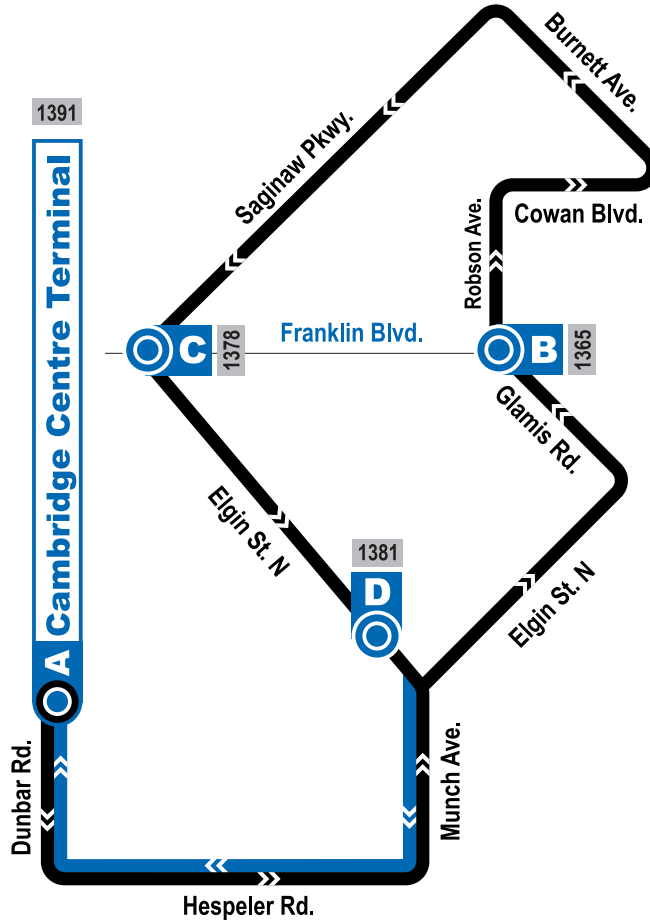
No service to Edgemere/Langlaw

Service Extended to South Cambridge Shopping Centre



**ROUTE 60**

**Year-Round Schedule  
Effective: September 7, 2009**



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #





519-585-7555    [www.grt.ca](http://www.grt.ca)    TTY: 519-585-7796

**Text: 57555 Key in your stop number**

# EasyGO STOPS

## ▶▶▶ CAMBRIDGE CTR. TERMINAL

<b>A</b> Cambridge Ctr. Terminal	1391
250 Hespeler Rd.	3538
Munch at Sekura	1359
Elgin at Munch	1360
Elgin at Regal	1361
Elgin at Glamis	1362
Glamis at Carter	1363
Glamis at the Greenway	1364
<b>B</b> Glamis at Franklin	1365
Robson at Burnett	1366
Cowan at Robson	1367
Cowan at Hume	1368
Burnett Buchanan	1369
Burnett at Chimney Hill	1370
Burnett at McTague	1371
Saginaw at Chamberlin	1382
Saginaw at Stonecairn	1373
Saginaw at Cowan	1374
St. Benedict 2	1356
<b>C</b> Elgin at Franklin	1378
Elgin at Bushnell	1379
Elgin at Glenbrook	1380
<b>D</b> Elgin at Sekura	1381
Munch at Kovac	1382
Munch at Sekura	1383
Hespeler at Munch	1384
Hespeler at Can-Amera	3537
<b>A</b> Cambridge Ctr. Terminal	1386

# MON. - SUN./ HOLIDAY

## ALL TRIPS RUN MONDAY - FRIDAY

### TIMEPOINT

CAMBRIDGE CENTRE - Dep.	GLAMIS AT FRANKLIN	ELGIN AT FRANKLIN	ELGIN AT MUNCH	CAMBRIDGE CENTRE - Arr.
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>A</b>

6:00	6:07	6:16	6:20	6:26
6:30	6:37	6:46	6:50	6:56
7:00	7:07	7:16	7:20	7:26
7:30	7:37	7:46	7:50	7:56
8:00	8:07	8:16	8:20	8:26
8:30	8:37	8:46	8:50	8:56
9:00	9:07	9:16	9:20	9:26
9:30	9:37	9:46	9:50	9:56
10:00	10:07	10:16	10:20	10:26
10:30	10:37	10:46	10:50	10:56
11:00	11:07	11:16	11:20	11:26
11:30	11:37	11:46	11:50	11:56
12:00	12:07	12:16	12:20	12:26
12:30	12:37	12:46	12:50	12:56
1:00	1:07	1:16	1:20	1:26
1:30	1:37	1:46	1:50	1:56
2:00	2:07	2:16	2:20	2:26
2:30	2:37	2:46	2:50	2:56
3:00	3:07	3:16	3:20	3:26
3:30	3:37	3:46	3:50	3:56
4:00	4:07	4:16	4:20	4:26
4:30	4:37	4:46	4:50	4:56
5:00	5:07	5:16	5:20	5:26
5:30	5:37	5:46	5:50	5:56
6:00	6:07	6:16	6:20	6:26
6:30	6:37	6:46	6:50	6:56
7:00	7:07	7:16	7:20	7:26
7:30	7:37	7:46	7:50	7:56
8:00	8:07	8:16	8:20	8:26
8:30	8:37	8:46	8:50	8:56
9:00	9:07	9:16	9:20	9:26
9:30	9:37	9:46	9:50	9:56
10:00	10:07	10:16	10:20	10:26
10:30	10:37	10:46	10:50	10:56
11:30	11:37	11:46	11:50	11:56



**6:00** These trips do not run on Saturdays

**10:30** Only these trips run on Sundays/ Holidays

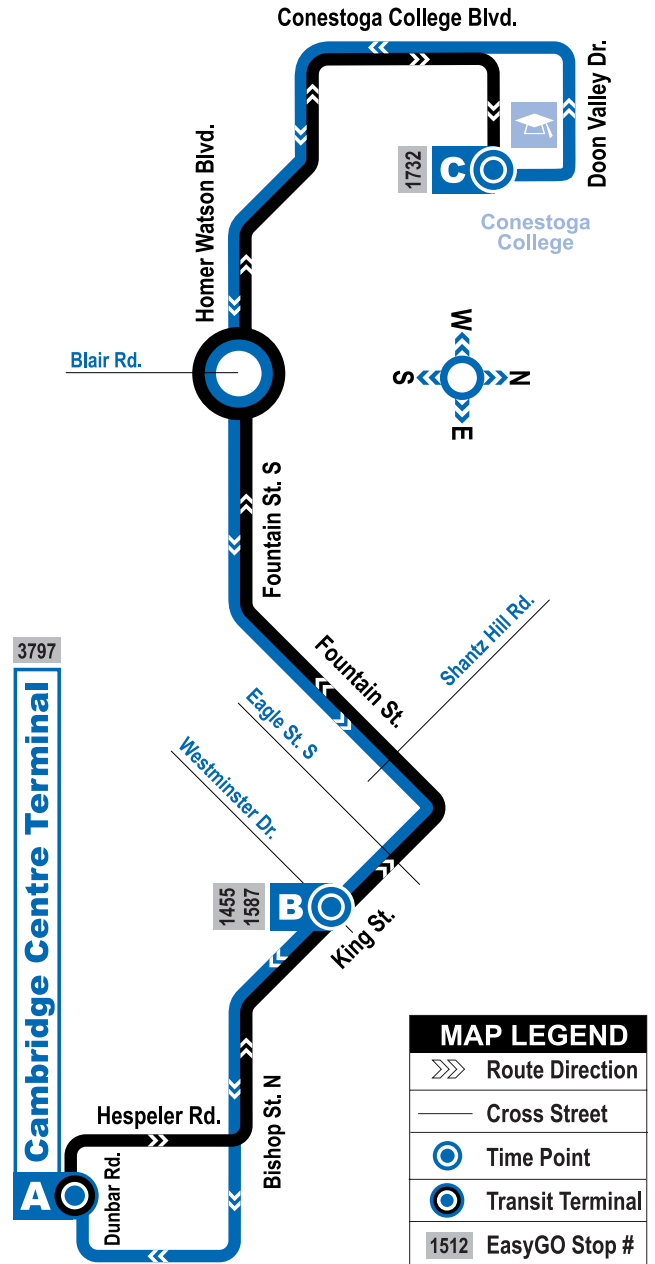
Fares and schedules are subject to change without notice

Weather and road conditions may cause schedule delays

# ROUTE 61

**Year-Round Schedule**

**Effective: September 7, 2009**







**519-585-7555**    [www.grt.ca](http://www.grt.ca)    **TTY: 519-585-7796**  
**Text: 57555 Key in your stop number**

Fares and schedules are subject to change without notice  
 Weather and road conditions may cause schedule delays

## EasyGO STOPS

CONESTOGA COLLEGE	
<b>A</b> Cambridge Centre Terminal	3797
Bishop at Hespeler	1321
Bishop at Pineview	1445
Bishop at King	1401
King at Montrose	1623
King at Dolph	1624
King at Lowther	1625
<b>B</b> King at Westminster	1455
King at Waterloo	1626
King at Chopin	1627
King at Fountain	1628
Fountain at Bauman	1629
Fountain at Morningside	3524
Conestoga College Residence	3803
Conestoga College Blvd. at Pinnacle	3801
Conestoga College Blvd. Midblock	3641
Conestoga College Rec. Centre	1731
<b>C</b> Conestoga College	1732

CAMBRIDGE CENTRE TERMINAL	
<b>C</b> Conestoga College	1732
Conestoga College Daycare	1733
Doon Valley at Orchard Mill	1734
Conestoga C. at Homer Watson	2308
Conestoga College Blvd. at Pinnacle	3802
Conestoga College Residence	3804
Fountain at Blair Rd.	3525
Fountain at Bauman	1582
Fountain at Shantz Hill	1583
King at Fountain	1584
King at Chopin	1585
King at Waterloo	1586
<b>B</b> King at Westminster	1587
King at Lowther	1588
King at Dolph	1589
King at Montrose	1443
Bishop at King	1444
Bishop at Pineview	3835
Bishop at Hespeler	3506
Dunbar at Conestoga	1358
<b>A</b> Cambridge Centre Terminal	3797

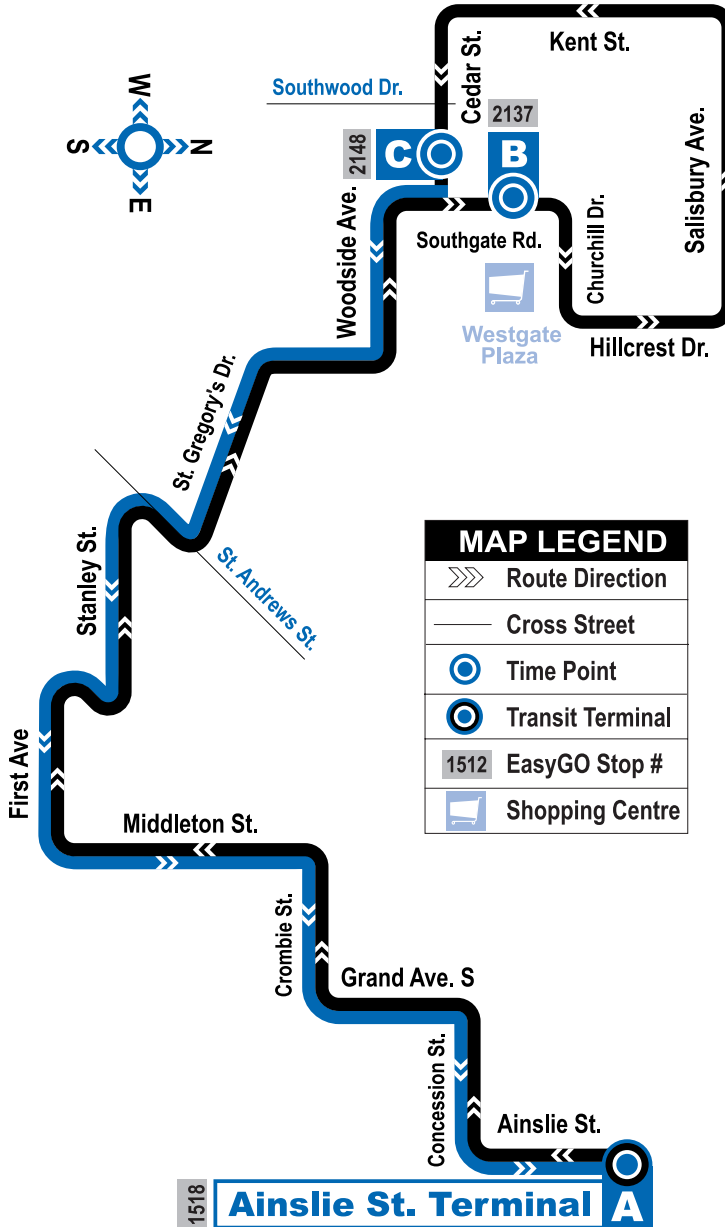
## MONDAY - FRIDAY

TIMEPOINT	CAMBRIDGE CENTRE - Dep.	WESTMINSTER AT KING	CONESTOGA COLLEGE - Arr.	CONESTOGA COLLEGE - Dep.	WESTMINSTER AT KING	CAMBRIDGE CENTRE - Arr.
	<b>A</b>	<b>B</b>	<b>C</b>	<b>C</b>	<b>B</b>	<b>A</b>
	7:00	7:09	7:24	7:30	7:45	7:54
	7:30	7:39	7:54	8:00	8:15	8:24
	8:00	8:09	8:24	8:30	8:45	8:54
	8:30	8:39	8:54	9:00	9:15	9:24
	9:00	9:09	9:24	9:30	9:45	9:54
	9:30	9:39	9:54	10:00	10:15	10:24
	10:00	10:09	10:24	10:30	10:45	10:54
	10:30	10:39	10:54	11:00	11:15	11:24
	11:00	11:09	11:24	11:30	11:45	11:54
	11:30	11:39	11:54	12:00	12:15	12:24
	12:00	12:09	12:24	12:30	12:45	12:54
	12:30	12:39	12:54	1:00	1:15	1:24
	1:00	1:09	12:24	1:30	1:45	1:54
	1:30	1:39	1:54	2:00	2:15	2:24
	2:00	2:09	2:24	2:30	2:45	2:54
	2:30	2:39	2:54	3:00	3:18	3:27
	3:00	3:09	3:27	3:30	3:48	3:57
	3:30	3:39	3:57	4:00	4:18	4:27
	4:00	4:09	4:27	4:30	4:48	4:57
	4:30	4:39	4:57	5:00	5:18	5:27
	5:00	5:09	5:27	5:30	5:48	5:57
9:30	Trips do not run during Summer and Christmas					
Summer Schedule: Late June - Labour Day						
Christmas Schedule: Late Dec. - Early Jan.						



**ROUTE 62**

**Year-Round Schedule  
Effective: September 7, 2009**



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number



# EasyGO STOPS

## ▶▶▶ AINSLIE ST. TERMINAL

<b>A</b> Ainslie St. Terminal	1518
Ainslie at Walnut	1523
Grand at Victoria	2126
Crombie at Grand	2127
Middleton at Francis	2128
First at Caen	2129
Stanley at Glenmorris	2130
Stanley at Tait	2131
Stanley at St. Andrews	2132
St. Gregory's at Caledon	2133
Woodside at Victoria	2134
142 Woodside Ave.	2135
Woodside at Cedar	2136
<b>B</b> Southgate at Cedar	2137
Churchill at Dale	2138
Hillcrest at Churchill	2139
Hillcrest at Highland	2140
Salisbury at Southgate	2141
Salisbury at Murray	2142
Kent at Salisbury	2143
Kent at Hillsboro	2144
Kent at Sim	2145
Kent at Cedar	2146
Cedar at Southwood	2147
<b>C</b> Cedar at Southgate	2148
Woodside at Cedar	2149
Woodside at Victoria	2150
St. Gregory's at St. Andrews	2151
Stanley at Borden	2152
Stanley at Tait	2153
Stanley at Glenmorris	2154
First at Caen	2155
Middleton at Francis	2156
Crombie at Grand	2157
Grand at Cedar	2158
Ainslie at Veterans	2159
<b>A</b> Ainslie St. Terminal	1516

# MON. - SAT.

## ALL TRIPS RUN MON. - FRI.

### TIMEPOINT

**A** AINSLIE ST. TERMINAL - Dep.

**B** SOUTHGATE AT CEDAR

**C** CEDAR AT WOODSIDE

**A** AINSLIE ST. TERMINAL - Arr.

	5:55	6:00	6:10
6:15	6:25	6:31	6:41
6:45	6:55	7:01	7:11
7:15	7:25	7:31	7:41
7:45	7:55	8:01	8:11
8:15	8:25	8:31	8:41
8:45	8:55	9:01	9:11
9:15	9:25	9:31	9:41
9:45	9:55	10:01	10:11
10:15	10:25	10:31	10:41
10:45	10:55	11:01	11:11
11:15	11:25	11:31	11:41
11:45	11:55	12:01	12:11
12:15	12:25	12:31	12:41
12:45	12:55	1:01	1:11
1:15	1:25	1:31	1:41
1:45	1:55	2:01	2:11
2:15	2:25	2:31	2:41
2:45	2:55	3:01	3:11
3:15	3:25	3:31	3:41
3:45	3:55	4:01	4:11
4:15	4:25	4:31	4:41
4:45	4:55	5:01	5:11
5:15	5:25	5:31	5:41
5:45	5:55	6:01	6:11
6:15	6:25	6:31	6:41
6:45	6:55	7:01	7:11
7:45	7:55	8:01	8:11
8:45	8:55	9:01	9:11
9:45	9:55	10:01	10:11
10:45	10:55	11:01	11:11
11:45	11:55	12:01	12:11

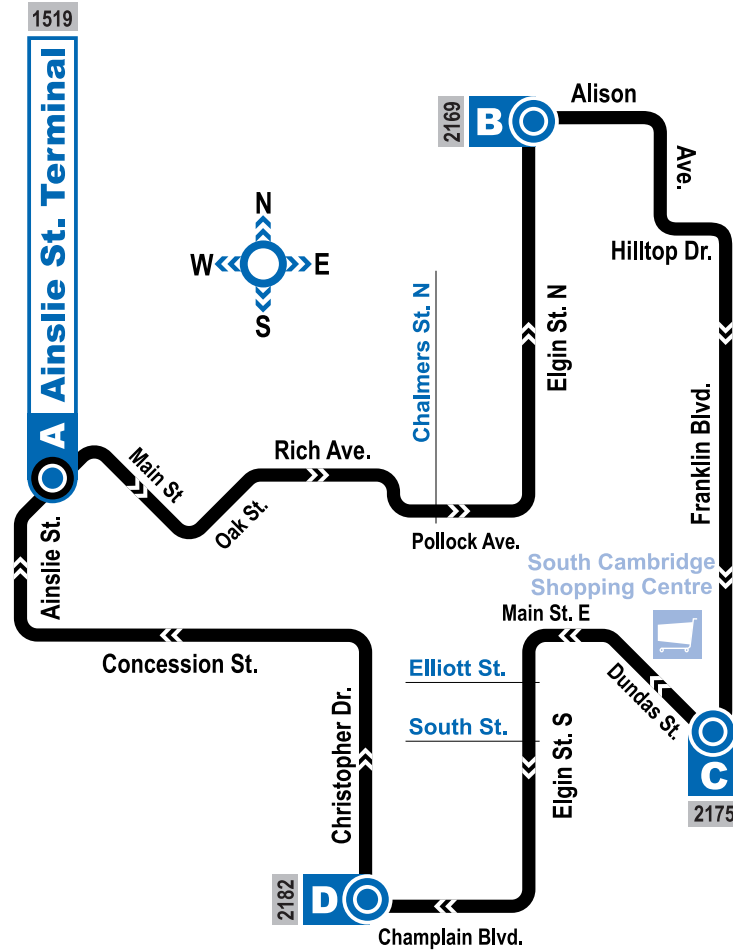


6:15 Trips do not run Saturdays

Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays



**Year-Round Schedule  
Effective: September 7, 2009**



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #
	Shopping Centre



# EasyGO STOPS

## ▶▶▶ AINSLIE ST. TERMINAL

<b>A</b> Ainslie St. Terminal	1519
Main at Harris	3535
Oak at Main	2160
Rich at Lincoln	2161
Pollock at Lincoln	2162
Pollock at Chalmers	2163
Pollock at Elgin	2164
Elgin at Dundas	2165
Elgin at Linnwood	2166
Elgin at Manchester	2167
Elgin at Marion	2168
<b>B</b> Alison at Elgin	2169
Alison at Radford	2170
Alison at Lauris	2171
Alison at Hilltop	2172
Hilltop at Franklin	2173
Franklin at McLaren	1504
Franklin at Green Gate	2174
<b>C</b> South Cambridge Centre	2175
Dundas at Franklin	2176
Main at Alexander	1506
Elgin at Elliott	2177
Elgin at South	2178
Elgin at Woolley	2179
Elgin at Champlain	2180
Champlain at Brierdale	2181
<b>C</b> Champlain at Christopher	2182
Christopher at Foster	2183
Christopher at Ballantyne	2184
Christopher at Elliott	2185
Concession at Peck	1509
Concession at Cameron	1510
Ainslie at Veterans	2159
<b>A</b> Ainslie St. Terminal	1514

# MON. - SAT.

## ALL TRIPS RUN MON. - FRI.

### TIMEPOINT

<b>A</b> AINSLIE ST. TERMINAL - Dep.	<b>B</b> ALISON AT ELGIN	<b>C</b> SOUTH CAMBRIDGE CENTRE	<b>D</b> CHAMPLAIN AT CHRISTOPHER	<b>A</b> AINSLIE ST. TERMINAL - Arr.
--------------------------------------	--------------------------	---------------------------------	-----------------------------------	--------------------------------------

		6:00	6:05	6:13
6:15	6:23	6:28	6:33	6:41
6:45	6:53	6:58	7:03	7:11
7:15	7:23	7:28	7:33	7:41
7:45	7:53	7:58	8:03	8:11
8:15	8:23	8:28	8:33	8:41
8:45	8:53	8:58	9:03	9:11
9:15	9:23	9:28	9:33	9:41
9:45	9:53	9:58	10:03	10:11
10:15	10:23	10:28	10:33	10:41
10:45	10:53	10:58	11:03	11:11
11:15	11:23	11:28	11:33	11:41
11:45	11:53	11:58	12:03	12:11
12:15	12:23	12:28	12:33	12:41
12:45	12:53	12:58	1:03	1:11
1:15	1:23	1:28	1:33	1:41
1:45	1:53	1:58	2:03	2:11
2:15	2:23	2:28	2:33	2:41
2:45	2:53	2:58	3:03	3:11
3:15	3:23	3:28	3:33	3:41
3:45	3:53	3:58	4:03	4:11
4:15	4:23	4:28	4:33	4:41
4:45	4:53	4:58	5:03	5:11
5:15	5:23	5:28	5:33	5:41
5:45	5:53	5:58	6:03	6:11
6:15	6:23	6:28	6:33	6:41
6:45	6:53	6:58	7:03	7:11
7:15	7:23	7:28	7:33	7:41
7:45	7:53	7:58	8:03	8:11
8:15	8:23	8:28	8:33	8:41
8:45	8:53	8:58	9:03	9:11
9:15	9:23	9:28	9:33	9:41
9:45	9:53	9:58	10:03	10:11

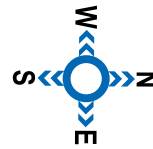
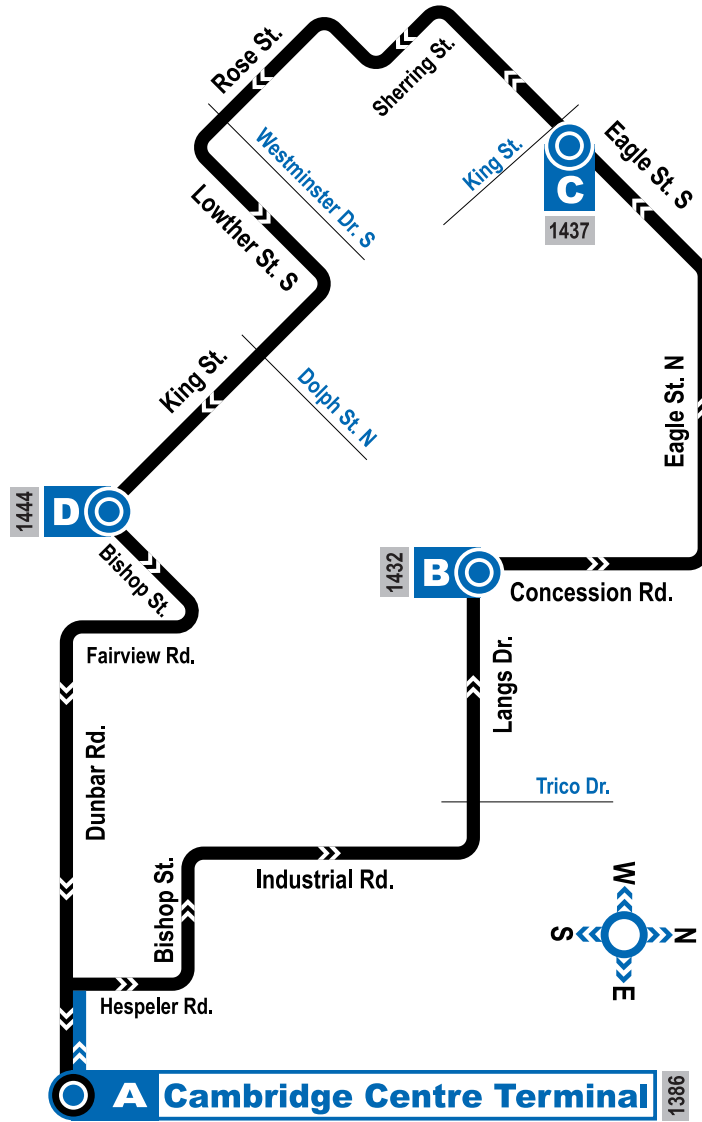
6:15 These trips do not run on Saturdays

Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays



# ROUTE 64

**Year-Round Schedule  
Effective: September 7, 2009**



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number

## EasyGO STOPS

### ▶▶▶ CAMBRIDGE CTR. TERMINAL

<b>A</b> Cambridge Ctr. Terminal	1386
Bishop at Hespeler	1321
Industrial at Bishop	1322
1367 Industrial Rd.	1323
Industrial at Langs	3518
Langs at Industrial	1429
Langs at Trico	1430
Langs at Walter	1431
<b>B</b> Langs at Concession	1432
Concession at Winterhalt	1433
Concession at Garden	3519
Eagle at Whitley	1282
Eagle at Arlington	1283
Eagle at Hexam	1284
336 Eagle St. N	1435
Eagle at William	1436
<b>C</b> Eagle at King	1437
Eagle at Hamilton	1438
Eagle at Sherring	1439
Dover at Rose	3520
Rose at Argyle	1440
Rose at Westminster	3521
Rose at Lowther	3532
Lowther at Vine	1441
Lowther at Hamilton	1442
King at Lowther	1588
King at Dolph	1589
King at Montrose	1443
<b>D</b> Bishop at King	1444
Bishop at Pineview	3835
Fairview at Bishop	1446
Fairview at Grand Valley	1447
Dunbar at Grand Valley	1448
Dunbar at St. George	1449
Dunbar at Pine	1450
Dunbar at Eastdowns	1451
Dunbar at Biscayne	1452
Dunbar at Briarwood	1453
Dunbar at Hespeler	1454
<b>A</b> Cambridge Ctr. Terminal	1389

## MON. - SAT.

### ALL TRIPS RUN MON. - FRI.

### TIMEPOINT

CAMBRIDGE CENTRE - Dep.  
**A**

LANGS AT CONCESSION  
**B**

EAGLE AT KING  
**C**

BISHOP AT KING  
**D**

CAMBRIDGE CENTRE - Arr.  
**A**

6:00	6:07	6:12	6:19	6:26
6:30	6:37	6:42	6:49	6:56
7:00	7:07	7:12	7:19	7:26
7:30	7:37	7:42	7:49	7:56
8:00	8:07	8:12	8:19	8:26
8:30	8:37	8:42	8:49	8:56
9:00	9:07	9:12	9:19	9:26
9:30	9:37	9:42	9:49	9:56
10:00	10:07	10:12	10:19	10:26
10:30	10:37	10:42	10:49	10:56
11:00	11:07	11:12	11:19	11:26
11:30	11:37	11:42	11:49	11:56
12:00	12:07	12:12	12:19	12:26
12:30	12:37	12:42	12:49	12:56
1:00	1:07	1:12	1:19	1:26
1:30	1:37	1:42	1:49	1:56
2:00	2:07	2:12	2:19	2:26
2:30	2:37	2:42	2:49	2:56
3:00	3:07	3:12	3:19	3:26
3:30	3:37	3:42	3:49	3:56
4:00	4:07	4:12	4:19	4:26
4:30	4:37	4:42	4:49	4:56
5:00	5:07	5:12	5:19	5:26
5:30	5:37	5:42	5:49	5:56
6:00	6:07	6:12	6:19	6:26
6:30	6:37	6:42	6:49	6:56
7:30	7:37	7:42	7:49	7:56
8:30	8:37	8:42	8:49	8:56
9:30	9:37	9:42	9:49	9:56

6:00 These trips do not run on Saturdays

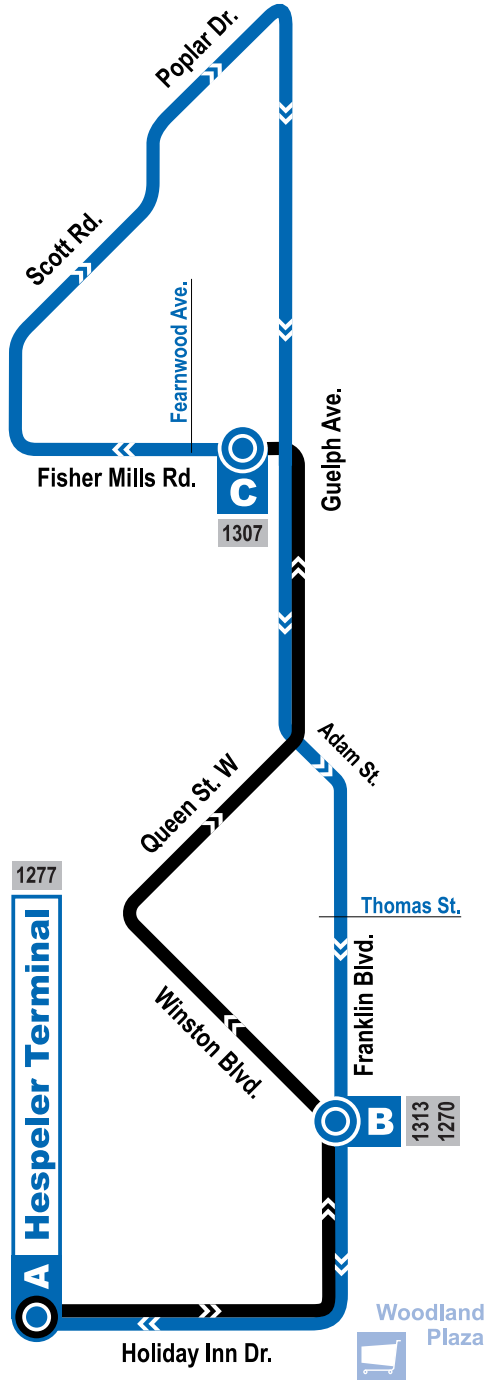
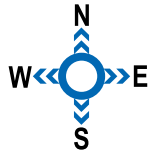
Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays



# ROUTE 65

**Year-Round Schedule**  
**Effective: September 7, 2009**

MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #
	Shopping Centre



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number

# EasyGO STOPS

HESPELER TERMINAL	
<b>A</b> Hespeler Terminal	1277
Holiday Inn at Cambridge Mrkt	1294
Holiday Inn Dr. at Holiday Inn	1295
Jacob Hespeler SS	1296
Holiday Inn at Cindy	1297
Holiday Inn at Cheval	1298
<b>B</b> Franklin at Winston	1270
Winston at Heather	3510
Winston at Hipel	1271
Winston at Edward	1272
Winston at Queen	1273
Queen at Winston	3511
Queen at Harvey	1236
Queen at Adam	3540
Guelph at Sheffield	1300
Fisher Mills at Fearnwood	1301
Fisher Mills at Scott	1302
Scott at Nickolas	1303
Scott at Milton	1304
Poplar at Scott	1305
Poplar at Dawn	1306
Guelph at Milton	3541
<b>C</b> Guelph at Fisher Mills	1307
Guelph at Sheffield	1308
Adam at Tannery	1309
Franklin at Shamrock	1310
Franklin at Thomas	1312
<b>B</b> Franklin at Winston	1313
Holiday Inn at Cheval	1314
Jacob Hespeler SS	1315
Holiday Inn Dr. at Holiday Inn	1316
Holiday Inn at Heritage College	1317
<b>A</b> Hespeler Terminal	1277
DETOUR ROUTING	

# MON. - SUN./ HOLIDAY

ALL TRIPS RUN MON. TO FRI.

## TIMEPOINT

HESPELER TERMINAL - Dep.	FRANKLIN AT WINSTON	FISHER MILLS AT GUELPH	FRANKLIN AT WINSTON	HESPELER TERMINAL - Arr.
<b>A</b>	<b>B</b>	<b>C</b>	<b>B</b>	<b>A</b>



	5:50	5:55	6:04	6:10
6:15	6:20	6:25	6:34	6:40
6:45	6:50	6:55	7:04	7:10
7:15	7:20	7:25	7:34	7:40
7:45	7:50	7:55	8:04	8:10
8:15	8:20	8:25	8:34	8:40
8:45	8:50	8:55	9:04	9:10
9:15	9:20	9:25	9:34	9:40
9:45	9:50	9:55	10:04	10:10
10:15	10:20	10:25	10:34	10:40
10:45	10:50	10:55	11:04	11:10
11:15	11:20	11:25	11:34	11:40
11:45	11:50	11:55	12:04	12:10
12:15	12:20	12:25	12:34	12:40
12:45	12:50	12:55	1:04	1:10
1:15	1:20	1:25	1:34	1:40
1:45	1:50	1:55	2:04	2:10
2:15	2:20	2:25	2:34	2:40
2:45	2:50	2:55	3:04	3:10
3:15	3:20	3:25	3:34	3:40
3:45	3:50	3:55	4:04	4:10
4:15	4:20	4:25	4:34	4:40
4:45	4:50	4:55	5:04	5:10
5:15	5:20	5:25	5:34	5:40
5:45	5:50	5:55	6:04	6:10
6:15	6:20	6:25	6:34	6:40
6:45	6:50	6:55	7:04	7:10
7:15	7:20	7:25	7:34	7:40
7:45	7:50	7:55	8:04	8:10
8:45	8:50	8:55	9:04	9:10
9:45	9:50	9:55	10:04	10:10
10:45	10:50	10:55	11:04	11:10
11:45	11:50	11:55	12:04	to garage

**10:45** These trips do not run on weekends  
**6:15** Only these trips run on Sundays and Holidays



# ROUTE 66

**Year-Round Schedule  
Effective: September 7, 2009**



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number

# EasyGO STOPS

HESPELER TERMINAL	
<b>A</b> Hespeler Terminal	1278
Queen at Miller Heights	1254
Queen at Rosshill	1235
Winston at Queen	1255
Winston at Edward	1256
<b>B</b> Franklin at Winston	1257
Franklin at Thomas	1258
Franklin at Edward	1259
Adam at Forbes	1260
Rife at Kribs	1261
<b>C</b> Cooper at Ellis	1263
Cooper at Adler	1264
Winston at Cooper	1265
Winston at Handorf	1266
Winston at Karl	1267
Winston at Gunn	1268
Winston at Westbury	1269
<b>B</b> Winston at Franklin	1270
Winston at Hipel	1271
Winston at Edward	1272
Winston at Queen	1273
Queen at Rosshill	1274
Queen at Shepherd	1253
<b>A</b> Hespeler Terminal	1275

# MON. - SUN./ HOLIDAY

ALL TRIPS RUN MON. - FRI.

## TIMEPOINT

	HESPELER TERMINAL - Dep.	WINSTON AT FRANKLIN	COOPER AT ELLIS	FRANKLIN AT WINSTON	HESPELER TERMINAL - Arr.
<b>A</b>		<b>B</b>	<b>C</b>	<b>B</b>	<b>A</b>
	5:55	5:59	6:04	6:10	
6:15	6:20	6:24	6:29	6:35	
6:45	6:50	6:54	6:59	7:05	
	6:55	6:59	7:04	7:10	
7:15	7:20	7:24	7:29	7:35	
7:20	7:25	7:29	7:34	7:40	
7:45	7:50	7:54	7:59	8:05	
8:15	8:20	8:24	8:29	8:35	
8:45	8:50	8:54	8:59	9:05	
9:15	9:20	9:24	9:29	9:35	
9:45	9:50	9:54	9:59	10:05	
10:15	10:20	10:24	10:29	10:35	
10:45	10:50	10:54	10:59	11:05	
11:15	11:20	11:24	11:29	11:35	
11:45	11:50	11:54	11:59	12:05	
12:15	12:20	12:24	12:29	12:35	
12:45	12:50	12:54	12:59	1:05	
1:15	1:20	1:24	1:29	1:35	
1:45	1:50	1:54	1:59	2:05	
2:15	2:20	2:24	2:29	2:35	
2:45	2:50	2:54	2:59	3:05	
3:15	3:20	3:24	3:29	3:35	
3:45	3:50	3:54	3:59	4:05	
4:15	4:20	4:24	4:29	4:35	
4:45	4:50	4:54	4:59	5:05	
5:15	5:20	5:24	5:29	5:35	
5:45	5:50	5:54	5:59	6:05	
6:15	6:20	6:24	6:29	6:35	
6:45	6:50	6:54	6:59	7:05	
7:15	7:20	7:24	7:29	7:35	
8:15	8:20	8:24	8:29	8:35	
9:15	9:20	9:24	9:29	9:35	
10:15	10:20	10:24	10:29	10:35	
11:15	11:20	11:24	11:29	11:35	
12:15	12:20	12:24	12:29		



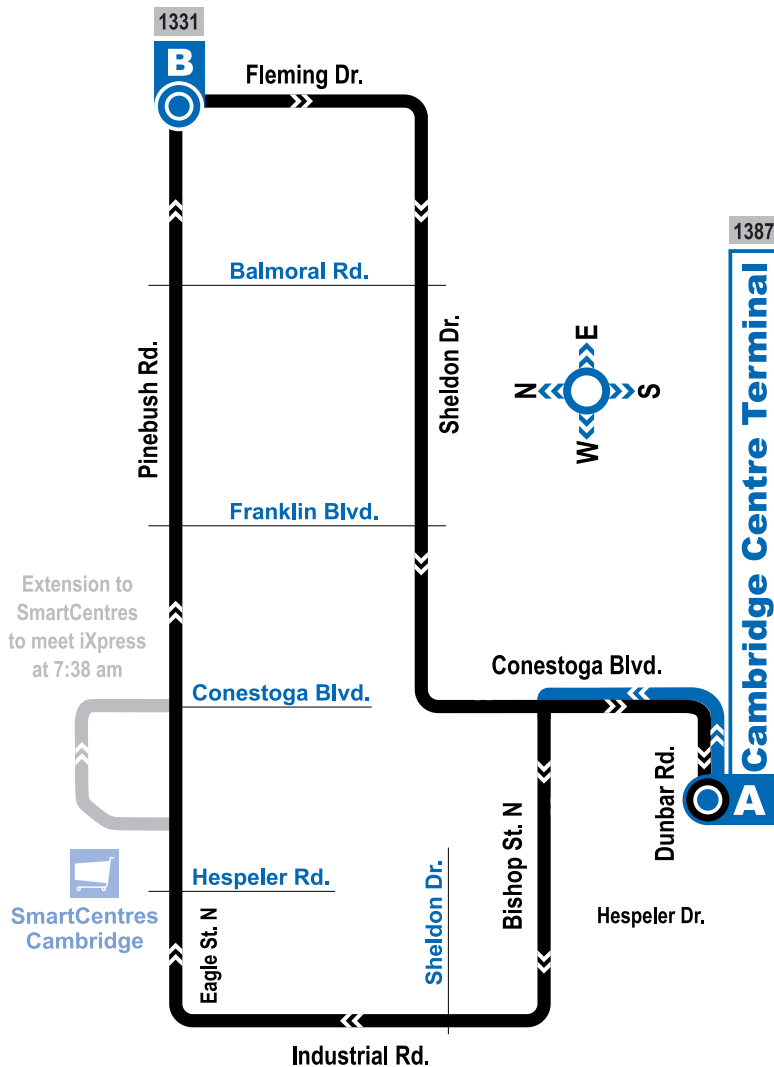
5:55	These trips do not run on Saturdays
10:25	Only these trips run on Sundays
6:55	These trips run only on Saturdays

Fares and schedules are subject to change without notice

Weather and road conditions may cause schedule delays

ROUTE 67

**Year-Round Schedule  
Effective: September 7, 2009**



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #



## EasyGO STOPS

▶▶▶ CAMBRIDGE CTR. TERMINAL

<b>A</b> Cambridge Centre Terminal	1387
Conestoga at Cambridge Ctr	1318
GRT Conestoga Garage	1319
Bishop at Collier-MacMillan	1320
Bishop at Hespeler	1321
Industrial at Bishop	1322
1367 Industrial Rd.	1323
Industrial at Langs	3518
Industrial at Langs	1324
777 Industrial Rd.	3544
Eagle at Hespeler	1325
Smartcentres Cambridge	1456
Pinebush at Smartcentre	1326
Pinebush at High Ridge	1327
Pinebush at Struck	1328
Pinebush at Wayne	3543
Pinebush at Franklin	3514
Pinebush at Balmoral	1329
355 Pinebush Rd.	1330
<b>B</b> Pinebush at Fleming	1331
Fleming at Thompson	1332
Fleming at Sheldon	1333
Sheldon at Thompson	3546
Sheldon at Balmoral	1334
Sheldon at Balmoral	1335
Sheldon at Franklin	1336
Sheldon at Wolseley	1337
Sheldon at Corydon	1338
Conestoga at Sheldon	1339
500 Conestoga Blvd.	1340
Conestoga at Bishop	1341
Conestoga at GRT Garage	3845
<b>C</b> Cambridge Centre Terminal	1387

## MON. - FRI.

TIMEPOINT

CAMBRIDGE CENTRE - Dep.

PINEBUSH AT FLEMING

CAMBRIDGE CENTRE - Arr.

**A**

**B**

**A**

6:30	6:43	6:53
7:00	7:13	7:23
7:30	7:43	7:53
8:00	8:13	8:23
8:30	8:43	8:53
2:30	2:43	2:53
3:00	3:13	3:23
3:30	3:43	3:53
4:00	4:13	4:23
4:30	4:43	4:53
5:00	5:13	5:23
10:30	10:43	10:52
11:00	11:13	11:22



7:30

Route extension to SmartCentres Cambridge to meet iXpress at 7:38 a.m.

# ROUTE 71

## Year-Round Schedule Effective: September 7, 2009



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #
	Shopping Centre

# EasyGO STOPS

HESPELER TERMINAL	
<b>A</b> Hespeler Terminal	1275
Holiday Inn at Cambridge Markets	1294
Holiday Inn Dr. at Holiday Inn	1295
Jacob Hespeler SS	1296
Holiday Inn at Cindy	1297
Holiday Inn at Cheval	1298
Franklin at Winston	1257
Franklin at Thomas	1258
Franklin at Edward	1259
Adam at Forbes	1260
Rife at Kribs	1261
Cooper at Ontario	1248
Cooper at Lewis	1249
<b>B</b> Queen at Cooper	1237
Queen at Panabaker	1238
River at Queen	1239
Melran at McCormick	1240
Melran at Alderson	1241
McMeeken at Werstine Terrace	1242
McMeeken at McCormick	1243
Kerwood at Sofron	3542
Kerwood Gees	1244
<b>C</b> Ellis at Kerwood	1245
Ellis at Cooper	1246
Cooper at Ellis	1247
Cooper at Ramsay	1262
Rife at Bella	3513
Franklin at Shamrock	1310
Franklin at Thomas	1312
Franklin at Winston	1313
Holiday Inn at Cheval	1314
Jacob Hespeler SS	1315
Holiday Inn Dr. at the Holiday Inn	1316
Holiday Inn at Heritage College	1317
<b>A</b> Hespeler Terminal	1276

## DETOUR ROUTING

# MON. - SAT.

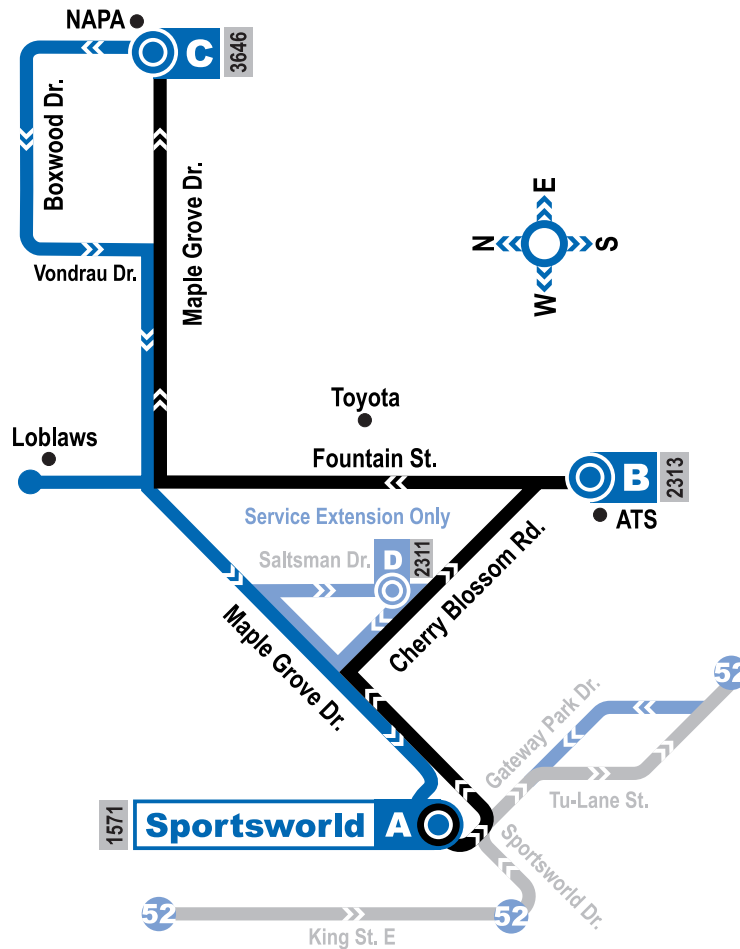
ALL TRIPS RUN MON. TO FRI.				
TIMEPOINT	HESPELER TERMINAL - Dep.			
	A	B	C	A
		5:55	6:01	6:13
	6:15	6:23	6:29	6:41
	6:45	6:53	6:59	7:11
	7:15	7:23	7:29	7:41
	7:45	7:53	7:59	8:11
	8:15	8:23	8:29	8:41
	8:45	8:53	8:59	9:11
	9:15	9:23	9:29	9:41
	9:45	9:53	9:59	10:11
	10:15	10:23	10:29	10:41
	10:45	10:53	10:59	11:11
	11:15	11:23	11:29	11:41
	11:45	11:53	11:59	12:11
	12:15	12:23	12:29	12:41
	12:45	12:53	12:59	1:11
	1:15	1:23	1:29	1:41
	1:45	1:53	1:59	2:11
	2:15	2:23	2:29	3:41
	2:45	2:53	2:59	3:11
	3:15	3:23	3:29	3:41
	3:45	3:53	3:59	4:11
	4:15	4:23	4:29	4:41
	4:45	4:53	4:59	5:11
	5:15	5:23	5:29	5:41
	5:45	5:53	5:59	6:11
	6:15	6:23	6:29	6:41

6:15 Trips do not run on Saturdays

Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays



**ROUTE 72**

**Year-Round Schedule  
Effective: September 7, 2009**



MAP LEGEND	
	Route Direction
	Cross Street
	Time Point
	Transit Terminal
	EasyGO Stop #



EasyGO STOPS		MON. - FRI.					
▶▶▶ SPORTSWORLD TERMINAL		TIMEPOINT	SPORTSWORLD - Dep.	ATS	MAPLE GROVE AT BOXWOOD	CHERRY BLOSSOM AT SALTSMAN	SPORTSWORLD - Arr.
<b>A</b> Sportsworld Terminal	1571						
Cherry Blossom at Maple Gr.	2309						
Cherry Blossom at Barnes	2310						
25 Cherry Blossom Rd.	3643						
Cherry Blossom at Saltsman	2311						
Cherry Blossom at Fountain	2312						
<b>B</b> ATS	2313						
Fountain at Cherry Blossom	3644						
Fountain at Toyota Gate 1	2314						
Fountain at Toyota Gate 2	2315						
Fountain at Maple Grove	3645						
<b>C</b> Boxwood at Maple Grove	3646						
725 Boxwood Dr.	3647						
Boxwood at Vondrau	3648						
Vondrau at Maple Grove	3649						
Loblaws	2316						
Maple Grove at Fountain	2317						
Saltsman at Maple Grove	3650						
Saltsman at Barnes	3651						
<b>D</b> Cherry Blossom at Saltsman	3652						
Cherry Blossom at Maple Gr.	3653						
Maple Grove at Saltsman	3531						
Maple Gr. at Cherry Blossom	2318						
<b>A</b> Sportsworld Terminal	1571						
Saltsman/Cherry Blossom extension		 					
		6:15	6:21	6:26		6:35	
		6:45	6:51	6:56	7:04	7:08	
		7:15	7:25	7:30		7:38	
		7:45	7:51	7:56		8:05	
		8:15	8:21	8:26		8:35	
		8:45	8:51	8:56		9:05	
		9:15	9:21	9:26		9:35	
		2:15	2:21	2:26	2:34	2:38	
		2:45	2:51	2:56	3:04	3:08	
		3:15	3:21	3:26	3:34	3:38	
		3:55	4:01	4:06	4:14	4:18	
		4:25	4:31	4:36	4:44	4:48	
		4:55	5:01	5:06	5:14	5:18	
		5:25	5:31	5:36		5:45	
		5:50	5:56	6:01		6:10	

### CAMBRIDGE BUSINESS PARK INDUSTRIAL SPECIALS

Additional specials trips depart Sportsworld Terminal at 6:13 am, 2:13 pm and 2:43 pm Monday to Friday, year-round (except holidays)

All specials operate to Boxwood and Maple Grove via maple Grove, Cherry Blossom, and Fountain. The 6:13 am trip and afternoon trips return to Sportsworld via Boxwood, Vondrau right on Maple Grove, Saltsman, and Cherry Blossom.

**NOTE:** Upon arrival to Sportsworld at 3:13 pm the special continues to Fairview Park.

## MONDAY to FRIDAY AM SERVICE

	TIMEPOINT: PARKSIDE at CEDARBRAE	NORTHFIELD at WEBER	LAKE LOUISE at CONSERVATION	NORTHFIELD at WEBER	PARKSIDE at CEDARBRAE	Map Reference
	(A)	(B)	(C)	(B)	(A)	
A M	6:35	6:38	6:17	6:25	6:28	
	7:05	7:08	7:17	7:25	7:28	
	7:35	7:38	7:47	7:55	7:58	
	8:05	8:08	8:17	8:25	8:28	
	8:35	8:43	8:52	9:00	9:03	
	9:05	9:13	9:22	9:30	9:33	

## MONDAY to FRIDAY PM SERVICE

	TIMEPOINT: PARKSIDE at CEDARBRAE	NORTHFIELD at WEBER	LAKE LOUISE at CONSERVATION	NORTHFIELD at WEBER	PARKSIDE at CEDARBRAE	Map Reference
	(A)	(B)	(C)	(B)	(A)	
P M	2:52	2:55	2:37	2:45	2:48	
	3:16	3:19	3:28	3:36	3:39	
	3:45	3:48	3:57	4:05	4:07	
	4:15	4:18	4:26	4:34	4:36	
	4:45	4:48	4:57	5:05	5:07	
	5:15	5:18	5:27	5:35	5:37	
	5:45	5:48	5:56	6:04	6:06	
	6:14	6:17	6:26	6:34	6:36	

### How to use this schedule...

Read across for times from beginning to end of route. Read down for time at a specific bus stop. Bus stop location on map corresponds with circled letter found under bus stop name.

Note: Weather conditions, construction, accidents etc. may cause schedule delays.

# 73 bus PLUS

## Northlake

Monday to Friday Rush-hour Service

Year-round Schedule

Effective: June 23, 2008



Kindly reuse this timetable

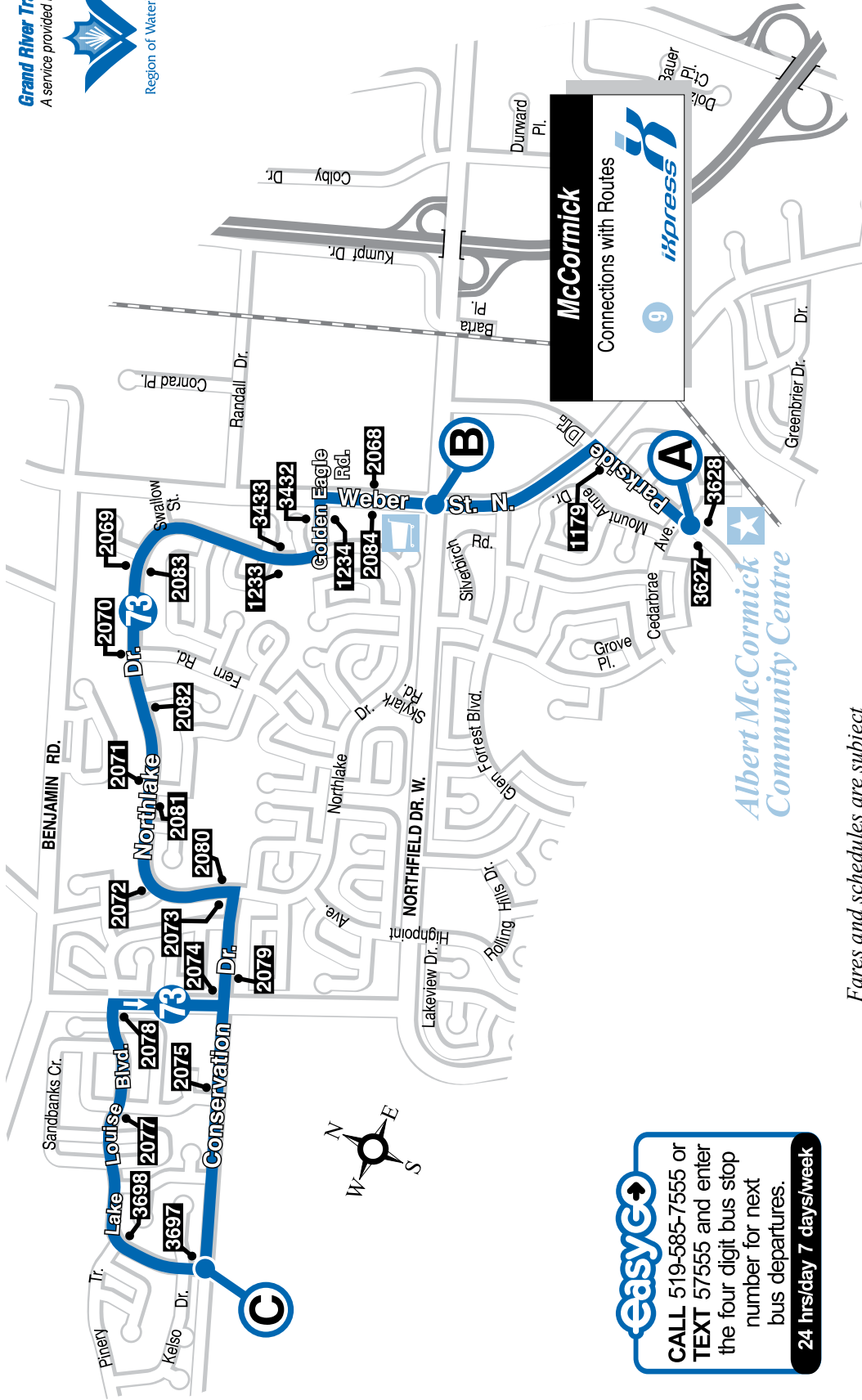


**GRT**  
GRAND RIVER TRANSIT

**519-585-7555**

TTY: 519-585-7796

[www.grt.ca](http://www.grt.ca)



**easyGO**

CALL 519-585-7555 or  
TEXT 57555 and enter  
the four digit bus stop  
number for next  
bus departures.

**24 hrs/day 7 days/week**

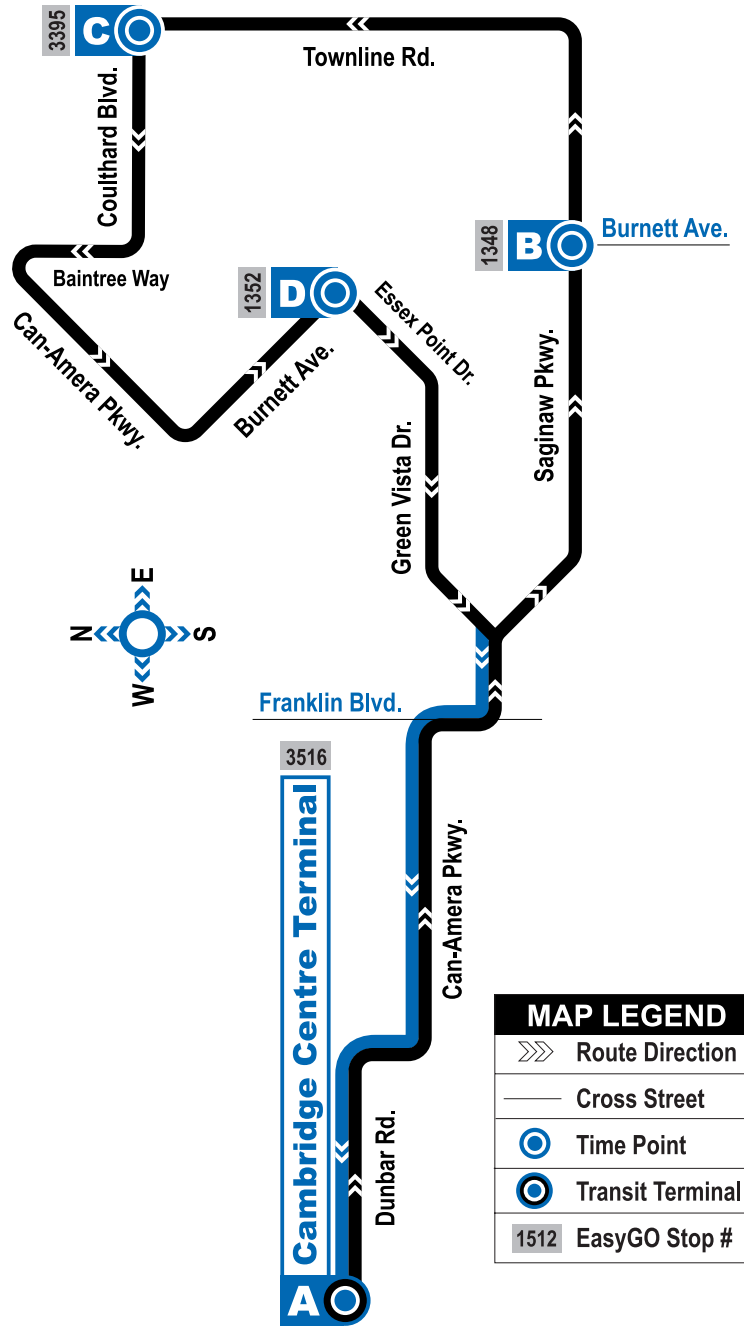
*Fares and schedules are subject to change without notice.*

Follow these simple steps to use **busPLUS**

1. Locate the time on the schedule for the **busPLUS** service you require.
2. Wait for the vehicle at the nearest stop.
3. Pay your fare. If you are transferring to a bus, and you paid your fare by cash or ticket ask the **busPLUS** driver for a transfer.
4. When transferring to a bus show the operator your transfer.

# ROUTE 75

**Year-Round Schedule  
Effective: September 7, 2009**



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number

# EasyGO STOPS

▶▶▶ CAMBRIDGE CTR. TERMINAL

<b>A</b> Cambridge Ctr. Terminal	3516
Dunbar at Conestoga	1342
Can-Amera at Franklin	1343
Saginaw at Green Vista	1344
Saginaw at Cowan	1345
Saginaw at Stonecain	1346
Saginaw at Chamberlin	1347
<b>B</b> Saginaw at Burnett	1348
Saginaw at Light	1349
Saginaw at Granite Hill	1350
Saginaw at Middlemiss	3394
<b>C</b> Townline at Coulthard	3395
Coulthard at Arthur Fach	3396
Coulthard at Baintree	3397
Baintree at Can-Amera	3398
Burnett at Bishop	3399
Burnett at Country Club	3400
<b>D</b> Burnett at Essex Point	1352
Essex Point at Green Vista	1353
Green Vista at Whittaker	1354
Green Vista at Crawford	1355
St. Benedict's	1375
Can-Amera at Franklin	1357
Dunbar at Conestoga	1358
<b>A</b> Cambridge Ctr. Terminal	3516

# MON. - FRI.

TIMEPOINT

	CAMBRIDGE CENTRE - Dep.	SAGINAW AT BURNETT	TOWNLINE AT COULTHARD	BURNETT AT ESSEX POINT	CAMBRIDGE CENTRE - Arr.
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>A</b>
6:00	6:07	6:12	6:17	6:25	
6:30	6:37	6:42	6:47	6:55	
7:00	7:07	7:12	7:17	7:25	
7:30	7:37	7:42	7:47	7:55	
8:00	8:07	8:12	8:17	8:25	
8:30	8:37	8:42	8:47	8:55	
9:00	9:07	9:12	9:17	9:25	
2:30	2:37	2:42	2:47	2:55	
3:00	3:07	3:12	3:17	3:25	
3:30	3:37	3:42	3:47	3:55	
4:00	4:07	4:12	4:17	4:25	
4:30	4:37	4:42	4:47	4:55	
5:00	5:07	5:12	5:17	5:25	
5:30	5:37	5:42	5:47	5:55	
6:05	6:12	6:17	6:25	6:30	



Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays

# AINSLIE ST. - CONESTOGA COLLEGE

# ROUTE 111

**September to April Schedule  
Effective: September 7, 2009**

## EXPRESS ROUTE

**Conestoga College B**

### MON. - FRI.

TIMEPOINT	AINSLIE ST. TERMINAL - Dep.	CONESTOGA COLLEGE - Arr.	CONESTOGA COLLEGE - Dep.	AINSLIE ST. REMINAL - Arr.
	A	B	B	A
☀	7:15	7:31	7:35	7:52
	8:15	8:31	8:35	8:52
	9:15	9:31		
☾			3:20	3:37
	3:45	4:01	4:05	4:22
	4:22	4:38	4:40	4:57
	5:05	5:21	5:25	5:42

#### MAP LEGEND

- Route Direction
- ⊙ Transit Terminal



Express via George Street, Blair Road, Fountain Street

**Ainslie St. Terminal A**

The Route 111 Express only operates during the Conestoga College school year. Service runs from the start of September to the end of April except for the two week Christmas holiday period.

Fares and schedules are subject to change without notice  
Weather and road conditions may cause schedule delays



519-585-7555

www.grt.ca

TTY: 519-585-7796

Text: 57555 Key in your stop number



Ainslie Terminal

Effective: September 7, 2009



GRAND RIVER TRANSIT

New Saturday Service

519-585-7555

TTY: 519-585-7796

www.grt.ca

Kindly reuse this timetable



**easyGO**  
 CALL 519-585-7555 or  
 TEXT 57555 and enter  
 the four digit bus stop  
 number for next  
 bus departures.  
 24 hrs/day 7 days/week

MONDAY TO FRIDAY SERVICE

TIMEPOINT	CONESTOGA MALL - Arrive	MCCORMICK	R & T PARK	U WATERLOO @ Davis Cr.	LAURIER	UPTOWN WATERLOO	GRAND RIVER HOSPITAL	CHARLES TERMINAL	OTTAWA	FAIRVIEW	SMARTCENTRES	CAMBRIDGE CENTRE	AINSLIE TERMINAL	TO: Waterloo
5:40	5:40	5:45	6:00	6:05	6:08	6:10	6:13	6:19	6:22	6:29	6:32	6:38	6:40	6:46
6:10	6:10	6:15	6:30	6:35	6:38	6:40	6:43	6:49	6:52	6:59	7:02	7:08	7:10	7:16
6:45	6:45	6:50	7:05	7:10	7:13	7:15	7:18	7:24	7:27	7:34	7:37	7:43	7:45	7:51
7:15	7:15	7:20	7:35	7:40	7:43	7:45	7:48	7:54	7:57	8:04	8:07	8:13	8:15	8:21
7:45	7:45	7:50	8:05	8:10	8:13	8:15	8:18	8:24	8:27	8:34	8:37	8:43	8:45	8:51
8:15	8:15	8:20	8:35	8:40	8:43	8:45	8:48	8:54	8:57	9:04	9:07	9:13	9:15	9:21
8:45	8:45	8:50	9:05	9:10	9:13	9:15	9:18	9:24	9:27	9:34	9:37	9:43	9:45	9:51
9:15	9:15	9:20	9:35	9:40	9:43	9:45	9:48	9:54	9:57	10:04	10:07	10:13	10:15	10:21
9:45	9:45	9:50	10:05	10:10	10:13	10:15	10:18	10:24	10:27	10:34	10:37	10:43	10:45	10:51
10:15	10:15	10:20	10:35	10:40	10:43	10:45	10:48	10:54	10:57	11:04	11:07	11:13	11:15	11:21
10:45	10:45	10:50	11:05	11:10	11:13	11:15	11:18	11:24	11:27	11:34	11:37	11:43	11:45	11:51
11:15	11:15	11:20	11:35	11:40	11:43	11:45	11:48	11:54	11:57	12:04	12:07	12:13	12:15	12:21
11:45	11:45	11:50	12:05	12:10	12:13	12:15	12:18	12:24	12:27	12:34	12:37	12:43	12:45	12:51
12:15	12:15	12:20	12:35	12:40	12:43	12:45	12:48	12:54	12:57	13:04	13:07	13:13	13:15	13:21
12:45	12:45	12:50	13:05	13:10	13:13	13:15	13:18	13:24	13:27	13:34	13:37	13:43	13:45	13:51
13:15	13:15	13:20	13:35	13:40	13:43	13:45	13:48	13:54	13:57	14:04	14:07	14:13	14:15	14:21
13:45	13:45	13:50	14:05	14:10	14:13	14:15	14:18	14:24	14:27	14:34	14:37	14:43	14:45	14:51
14:15	14:15	14:20	14:35	14:40	14:43	14:45	14:48	14:54	14:57	15:04	15:07	15:13	15:15	15:21
14:45	14:45	14:50	15:05	15:10	15:13	15:15	15:18	15:24	15:27	15:34	15:37	15:43	15:45	15:51
15:15	15:15	15:20	15:35	15:40	15:43	15:45	15:48	15:54	15:57	16:04	16:07	16:13	16:15	16:21
15:45	15:45	15:50	16:05	16:10	16:13	16:15	16:18	16:24	16:27	16:34	16:37	16:43	16:45	16:51
16:15	16:15	16:20	16:35	16:40	16:43	16:45	16:48	16:54	16:57	17:04	17:07	17:13	17:15	17:21
16:45	16:45	16:50	17:05	17:10	17:13	17:15	17:18	17:24	17:27	17:34	17:37	17:43	17:45	17:51
17:15	17:15	17:20	17:35	17:40	17:43	17:45	17:48	17:54	17:57	18:04	18:07	18:13	18:15	18:21
17:45	17:45	17:50	18:05	18:10	18:13	18:15	18:18	18:24	18:27	18:34	18:37	18:43	18:45	18:51
18:15	18:15	18:20	18:35	18:40	18:43	18:45	18:48	18:54	18:57	19:04	19:07	19:13	19:15	19:21
18:45	18:45	18:50	19:05	19:10	19:13	19:15	19:18	19:24	19:27	19:34	19:37	19:43	19:45	19:51
19:15	19:15	19:20	19:35	19:40	19:43	19:45	19:48	19:54	19:57	20:04	20:07	20:13	20:15	20:21

7-40 This trip operates from September to April only except for the two week Christmas period





**Appendix B. Methodology Output, P.M. Peak Period, 4:30 p.m. – 6:00 p.m.**

(54 pages)

<b>SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
1	East	129	39.53%	2.88%	46.60%
1	West	125	34.40%	3.03%	39.60%
2	Downward	56	44.64%	0.00%	58.14%
2	Upward	65	20.00%	0.00%	25.00%
3	1	122	23.77%	5.94%	22.33%
3	2	108	18.52%	8.89%	13.33%
4	Downward	60	33.33%	25.00%	16.67%
4	Upward	92	15.22%	2.56%	15.38%
5	1	60	25.00%	26.67%	6.67%
5	2	63	41.27%	36.00%	16.00%
6	Downward	46	45.65%	43.24%	13.51%
6	Upward	50	38.00%	20.00%	27.50%
7	Downward	303	32.34%	11.98%	28.63%
7	Upward	317	39.12%	20.45%	25.84%
8	North	261	31.03%	9.09%	27.60%
8	South	278	40.65%	11.97%	36.32%
9	Downward	195	47.69%	9.41%	46.11%
9	Upward	226	40.71%	39.79%	8.38%
10	Inbound	125	23.20%	21.00%	8.00%
10	Outbound	122	40.98%	14.29%	36.73%
11	1	138	34.06%	6.03%	34.48%
11	2	209	35.89%	8.38%	36.31%
12	Downward	248	32.66%	12.04%	26.98%
12	Upward	169	34.32%	10.74%	28.86%
13	1	78	32.05%	21.15%	26.92%
13	2	98	31.63%	35.94%	12.31%
14	1	8	37.50%	0.00%	60.00%
14	2	16	6.25%	8.33%	0.00%
15	East	90	18.89%	5.88%	19.40%
15	West	80	31.25%	15.63%	23.44%
16	Inbound	58	22.41%	9.09%	20.45%
16	Outbound	60	10.00%	4.44%	8.89%
17	Downward	17	11.76%	12.50%	0.00%
17	Upward	20	10.00%	0.00%	12.50%
18	Downward	39	35.90%	17.24%	30.00%
18	Upward	33	24.24%	4.35%	30.43%
19	1	162	44.44%	1.48%	51.85%
19	2	126	40.48%	6.67%	41.90%
20	1	63	30.16%	2.38%	42.86%
20	2	84	36.90%	6.35%	42.86%
22	East	144	27.78%	1.59%	30.16%
22	West	76	32.89%	8.96%	28.36%
23	East	97	30.93%	11.90%	24.69%
23	West	65	18.46%	14.81%	7.27%

<b>SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
24	1	47	44.68%	22.86%	36.11%
24	2	54	38.89%	22.22%	24.44%
25	1	189	18.52%	5.73%	16.15%
25	2	105	24.76%	23.81%	7.14%
26	1	27	29.63%	0.00%	44.44%
26	2	27	0.00%	0.00%	0.00%
27	1	51	11.76%	2.94%	14.71%
27	2	33	15.15%	9.09%	13.64%
29	1	16	18.75%	0.00%	37.50%
29	2	12	0.00%	0.00%	0.00%
31	Downward	54	42.59%	36.96%	13.04%
31	Upward	30	40.00%	14.29%	32.00%
32	2	22	50.00%	55.56%	5.88%
33	1	16	18.75%	6.25%	22.22%
33	2	20	45.00%	75.00%	0.00%
35	1	95	45.26%	43.75%	9.76%
35	2	95	20.00%	11.11%	12.35%
51	Inbound	144	45.14%	10.28%	50.00%
51	Outbound	176	38.07%	11.63%	40.94%
52	North	131	35.11%	21.24%	20.37%
52	South	142	45.77%	28.10%	25.62%
53	Inbound	40	65.00%	46.88%	34.38%
53	Outbound	40	47.50%	0.00%	59.38%
54	East	220	37.27%	10.80%	35.80%
55	West	112	41.07%	0.00%	51.11%
56	West	171	34.50%	3.50%	37.76%
57	West	173	54.34%	0.00%	68.61%
58	East	70	41.43%	0.00%	51.79%
59	East	86	30.23%	0.00%	41.27%
60	East	140	38.57%	4.46%	43.75%
61	East	24	37.50%	40.91%	0.00%
61	West	17	35.29%	0.00%	40.00%
62	West	88	25.00%	6.15%	27.69%
63	East	105	28.57%	1.19%	34.52%
64	West	108	43.52%	0.00%	52.22%
65	North	85	48.24%	2.35%	76.47%
66	East	35	22.86%	21.43%	7.14%
67	North	21	42.86%	0.00%	128.57%
71	East	72	47.22%	1.85%	61.11%
110	Downward	64	14.06%	0.00%	20.00%
110	Upward	39	28.21%	3.85%	38.46%
111	North	2	0.00%	0.00%	
111	South	4	0.00%		0.00%
200	Downward	6469	30.07%	9.48%	23.13%
200	Upward	5779	33.69%	4.33%	32.18%

\*As given in GRT Database

<b>SA<sub>2</sub>: "Not On-Time" Percentage (Passenger Perspective)</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
1	East	129	16.15%	3.80%	57.52%
1	West	125	19.55%	0.13%	41.70%
2	Downward	56	27.34%	0.00%	47.42%
2	Upward	65	3.99%	0.00%	31.92%
3	1	122	3.84%	0.34%	16.96%
3	2	108	13.92%	10.68%	17.09%
4	Downward	60	14.67%	28.70%	10.42%
4	Upward	92	2.60%	0.17%	9.32%
5	1	60	23.26%	30.82%	8.47%
5	2	63	33.31%	46.70%	20.62%
6	Downward	46	28.38%	42.31%	21.90%
6	Upward	50	14.50%	10.34%	34.58%
7	Downward	303	15.78%	14.13%	18.40%
7	Upward	317	18.70%	14.85%	24.30%
8	North	261	9.52%	6.04%	24.85%
8	South	278	23.74%	5.20%	49.20%
9	Downward	195	20.87%	5.95%	44.89%
9	Upward	226	23.63%	29.94%	12.91%
10	Inbound	125	6.70%	16.31%	2.94%
10	Outbound	122	10.81%	4.27%	34.63%
11	1	138	14.08%	0.37%	40.22%
11	2	209	17.30%	3.03%	41.71%
12	Downward	248	14.78%	14.32%	15.64%
12	Upward	169	13.61%	4.27%	31.49%
13	1	78	23.51%	22.94%	25.99%
13	2	98	21.49%	33.69%	12.85%
14	1	8	0.00%	0.00%	
14	2	16	1.85%	7.14%	0.00%
15	East	90	3.13%	0.12%	19.03%
15	West	80	24.47%	16.72%	30.63%
16	Inbound	58	8.03%	0.35%	14.53%
16	Outbound	60	2.66%	0.00%	9.06%
17	Downward	17	0.00%	0.00%	0.00%
17	Upward	20	1.27%	0.00%	5.00%
18	Downward	39	27.82%	18.78%	30.34%
18	Upward	33	4.03%	0.00%	31.52%
19	1	162	16.13%	0.12%	53.92%
19	2	126	19.65%	4.94%	40.95%
20	1	63	2.65%	0.10%	45.89%
20	2	84	30.73%	4.91%	43.84%
22	East	144	7.92%	0.29%	19.03%
22	West	76	9.53%	0.29%	29.07%
23	East	97	9.15%	0.23%	29.76%
23	West	65	1.30%	1.22%	1.93%

\*As given in GRT Database

<b>SA<sub>2</sub>: "Not On-Time" Percentage (Passenger Perspective)</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
24	1	47	25.54%	25.61%	35.25%
24	2	54	24.94%	32.13%	17.42%
25	1	189	7.31%	2.88%	17.32%
25	2	105	6.91%	8.05%	6.42%
26	1	27	0.00%	0.00%	0.00%
26	2	27	0.00%	0.00%	0.00%
27	1	51	2.38%	0.40%	16.01%
27	2	33	18.28%	9.09%	19.26%
29	1	16	1.27%	0.00%	37.50%
29	2	12	0.00%		0.00%
31	Downward	54	19.84%	31.52%	18.75%
31	Upward	30	22.96%	0.00%	56.36%
32	2	22	16.67%	50.00%	0.00%
33	1	16	0.00%	0.00%	
33	2	20	10.71%	75.00%	0.00%
35	1	95	16.17%	25.08%	8.97%
35	2	95	7.39%	8.20%	9.17%
51	Inbound	144	27.37%	7.04%	51.16%
51	Outbound	176	22.99%	9.44%	39.50%
52	North	131	5.97%	2.25%	12.46%
52	South	142	6.81%	5.63%	12.96%
53	Inbound	40	19.46%	16.45%	27.88%
53	Outbound	40	17.61%	0.00%	59.52%
54	East	220	10.76%	1.90%	22.78%
55	West	112	10.01%	0.00%	28.80%
56	West	171	15.52%	1.82%	29.78%
57	West	173	16.09%	0.00%	45.74%
58	East	70	10.14%	0.00%	22.98%
59	East	86	12.23%	0.00%	27.58%
60	East	140	8.20%	1.31%	19.26%
61	East	24	0.55%	2.94%	0.00%
61	West	17	1.38%	0.00%	60.00%
62	West	88	4.12%	1.39%	10.87%
63	East	105	5.34%	0.72%	12.78%
64	West	108	12.69%	0.00%	37.69%
65	North	85	20.52%	1.09%	41.92%
66	East	35	2.76%	1.27%	6.72%
67	North	21	28.90%	0.00%	36.21%
71	East	72	13.41%	2.68%	28.95%
110	Downward	64	9.36%	0.00%	20.14%
110	Upward	39	15.92%	0.14%	31.37%
111	North	2			
111	South	4			0.00%
200	Downward	6469	15.12%	6.62%	23.43%
200	Upward	5779	19.07%	4.03%	34.03%

\*As given in GRT Database

<b>SA<sub>3</sub>: Number of Passengers Affected</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
1	East	129	2.94	0.46	2.48
1	West	125	1.43	0.00	1.42
2	Downward	56	1.59	0.00	1.59
2	Upward	65	0.49	0.00	0.49
3	1	122	1.01	0.06	0.95
3	2	108	2.41	0.91	1.50
4	Downward	60	0.92	0.43	0.49
4	Upward	92	0.32	0.02	0.31
5	1	60	3.58	3.16	0.42
5	2	63	1.81	1.24	0.58
6	Downward	46	3.14	1.49	1.65
6	Upward	50	2.03	1.20	0.83
7	Downward	303	14.56	6.68	7.88
7	Upward	317	20.29	9.13	11.16
8	North	261	7.61	3.03	4.58
8	South	278	12.25	1.53	10.71
9	Downward	195	6.13	0.96	5.18
9	Upward	226	9.33	7.95	1.38
10	Inbound	125	4.61	3.16	1.45
10	Outbound	122	3.38	1.02	2.36
11	1	138	3.00	0.05	2.95
11	2	209	2.85	0.27	2.58
12	Downward	248	16.52	8.80	7.72
12	Upward	169	17.71	3.27	14.44
13	1	78	6.05	4.12	1.93
13	2	98	1.63	1.19	0.45
14	1	8	0.00	0.00	0.00
14	2	16	0.13	0.13	0.00
15	East	90	0.38	0.01	0.37
15	West	80	4.13	0.84	3.29
16	Inbound	58	1.28	0.02	1.25
16	Outbound	60	0.24	0.00	0.24
17	Downward	17	0.00	0.00	0.00
17	Upward	20	0.75	0.00	0.75
18	Downward	39	1.03	0.15	0.88
18	Upward	33	0.23	0.00	0.23
19	1	162	4.36	0.02	4.33
19	2	126	4.48	0.64	3.84
20	1	63	0.50	0.02	0.48
20	2	84	2.78	0.15	2.63
22	East	144	2.97	0.06	2.91
22	West	76	3.46	0.07	3.39
23	East	97	1.57	0.03	1.54
23	West	65	0.64	0.45	0.20



<b>SA<sub>3</sub>: Number of Passengers Affected</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
24	1	47	8.83	5.51	3.32
24	2	54	2.49	1.64	0.85
25	1	189	1.89	0.50	1.38
25	2	105	0.90	0.43	0.46
26	1	27	0.00	0.00	0.00
26	2	27	0.00	0.00	0.00
27	1	51	0.47	0.07	0.40
27	2	33	1.72	0.08	1.64
29	1	16	0.19	0.00	0.19
29	2	12	0.00	0.00	0.00
31	Downward	54	1.14	0.91	0.23
31	Upward	30	1.24	0.00	1.24
32	2	22	0.13	0.13	0.00
33	1	16	0.00	0.00	0.00
33	2	20	0.38	0.38	0.00
35	1	95	3.17	2.66	0.51
35	2	95	1.69	1.27	0.42
51	Inbound	144	8.14	1.09	7.05
51	Outbound	176	7.99	1.65	6.34
52	North	131	2.09	0.41	1.68
52	South	142	3.23	1.84	1.39
53	Inbound	40	2.14	0.78	1.36
53	Outbound	40	3.13	0.00	3.13
54	East	220	1.07	0.11	0.96
55	West	112	1.87	0.00	1.87
56	West	171	2.29	0.14	2.15
57	West	173	0.87	0.00	0.87
58	East	70	1.08	0.00	1.08
59	East	86	2.08	0.00	2.08
60	East	140	1.04	0.10	0.94
61	East	24	0.13	0.13	0.00
61	West	17	0.24	0.00	0.24
62	West	88	0.25	0.06	0.19
63	East	105	0.80	0.07	0.73
64	West	108	1.36	0.00	1.36
65	North	85	0.75	0.02	0.73
66	East	35	0.12	0.04	0.08
67	North	21	2.25	0.00	2.25
71	East	72	0.69	0.08	0.61
110	Downward	64	1.28	0.00	1.28
110	Upward	39	5.60	0.02	5.57
111	North	2	0.00	0.00	
111	South	4	0.00		0.00
200	Downward	6469	29.33	6.31	23.02
200	Upward	5779	34.56	3.64	30.92

\*As given in GRT Database

SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
1	East	CHARLES STREET TERMINAL	26	3.85%	3.85%	
1	East	FREDERICK / WEBER	26	26.92%	0.00%	26.92%
1	East	BECKER / BELLEVIEW	9	44.44%	0.00%	44.44%
1	East	LORRAINE / BIRKSHIRE	17	58.82%	0.00%	58.82%
1	East	RIVER / HICKSON	9	44.44%	11.11%	33.33%
1	East	OTTAWA / OLDFIELD	17	41.18%	5.88%	35.29%
1	East	STANLEY PARK MALL TERMINAL	25	72.00%		72.00%
1	West	STANLEY PARK MALL TERMINAL	24	0.00%	0.00%	
1	West	LACKNER / BANBURY	9	22.22%	0.00%	22.22%
1	West	RIVER / HALLIWELL	25	44.00%	0.00%	44.00%
1	West	BELLEVIEW / BECKER	15	26.67%	0.00%	26.67%
1	West	WEBER / SCOTT	26	53.85%	11.54%	42.31%
1	West	CHARLES STREET TERMINAL	26	46.15%		46.15%
2	Downward	HIGHLAND HILLS MALL	13	0.00%	0.00%	
2	Downward	GREENBROOK / WESTMOUNT	14	64.29%	0.00%	64.29%
2	Downward	GREENBROOK / STIRLING	14	64.29%	0.00%	64.29%
2	Downward	CHARLES STREET TERMINAL	15	46.67%		46.67%
2	Upward	CHARLES STREET TERMINAL	13	0.00%	0.00%	
2	Upward	SOUTHMOOR / AVALON	13	23.08%	0.00%	23.08%
2	Upward	GREENBROOK / STIRLING	13	15.38%	0.00%	15.38%
2	Upward	WESTMOUNT / VILLAGE	13	23.08%	0.00%	23.08%
2	Upward	HIGHLAND HILLS MALL	13	38.46%		38.46%
3	1	CHARLES STREET TERMINAL	19	0.00%	0.00%	
3	1	COURTLAND / STIRLING	19	31.58%	0.00%	31.58%
3	1	STRASBURG / TRANSIT GARAGE	21	28.57%	0.00%	28.57%
3	1	OTTAWA / WESTMOUNT	21	33.33%	19.05%	14.29%
3	1	WILLIAMSBURG / DINISON	21	33.33%	9.52%	23.81%
3	1	FOREST GLEN TERMINAL	21	14.29%		14.29%
3	2	FOREST GLEN TERMINAL	18	11.11%	11.11%	
3	2	WILLIAMSBURG / DINISON	18	11.11%	5.56%	5.56%
3	2	OTTAWA / WESTMOUNT	18	16.67%	11.11%	5.56%
3	2	STRASBURG / TRANSIT GARAGE	18	22.22%	11.11%	11.11%
3	2	COURTLAND / MADISON	18	33.33%	5.56%	27.78%
3	2	CHARLES STREET TERMINAL	18	16.67%		16.67%
4	Downward	UNIVERSITY / RESURRECTION	12	8.33%	8.33%	
4	Downward	GLASGOW / WESTMOUNT	12	25.00%	8.33%	16.67%
4	Downward	UNION / KING	12	66.67%	41.67%	25.00%
4	Downward	MOORE / BREITHAUP	12	58.33%	41.67%	16.67%
4	Downward	CHARLES STREET TERMINAL	12	8.33%		8.33%
4	Upward	CHARLES STREET TERMINAL	14	0.00%	0.00%	
4	Upward	MOORE / WELLINGTON	14	14.29%	0.00%	14.29%
4	Upward	UNION / PARK	14	21.43%	0.00%	21.43%
4	Upward	GLASGOW / WESTMOUNT	14	35.71%	7.14%	28.57%
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	14.29%	7.14%	7.14%
4	Upward	UNIVERSITY / BAKER	8	25.00%	0.00%	25.00%
4	Upward	UNIVERSITY / RESURRECTION	14	0.00%		0.00%
5	1	UPTOWN WATERLOO	15	33.33%	33.33%	
5	1	ERB / WESTMOUNT	15	26.67%	26.67%	0.00%
5	1	FISCHER-HALLMAN / ERB	15	33.33%	20.00%	13.33%
5	1	KEATS / KEATSWOOD	15	6.67%		6.67%
5	2	KEATS / KEATSWOOD	13	23.08%	23.08%	
5	2	GATEVIEW / WESTVALE	12	33.33%	25.00%	8.33%
5	2	ERB / FISCHER-HALLMAN	12	75.00%	58.33%	16.67%
5	2	ERB / WESTMOUNT	13	53.85%	38.46%	15.38%
5	2	KING / WILLIS	13	23.08%		23.08%
6	Downward	DANIEL / BLOOMINGDALE	9	22.22%	22.22%	
6	Downward	LANCASTER / HAMEL	9	40.00%	30.00%	10.00%
6	Downward	LANCASTER / GUELPH	10	55.56%	44.44%	11.11%
6	Downward	WELLINGTON / MARGARET	9	88.89%	77.78%	11.11%
6	Downward	CHARLES STREET TERMINAL	9	22.22%		22.22%
6	Upward	CHARLES STREET TERMINAL	10	10.00%	10.00%	
6	Upward	WELLINGTON / MARGARET	10	30.00%	10.00%	20.00%
6	Upward	LANCASTER / GUELPH	10	60.00%	30.00%	30.00%
6	Upward	LANCASTER / HAMEL	10	70.00%	30.00%	40.00%
6	Upward	DANIEL / BLOOMINGDALE	10	20.00%		20.00%
7	Downward	RING / NORTH CAMPUS	21	19.05%	19.05%	
7	Downward	CONESTOGA MALL	30	10.00%	10.00%	
7	Downward	U WATERLOO	11	27.27%	27.27%	
7	Downward	COLUMBIA / HAZEL	21	38.10%	9.52%	28.57%

\*As given in GRT database

				SA <sub>1</sub> : "Not On-Time" Percentage (Bus Perspective)		
Route	Direction*	Timepoint	Obs.	Total	Early	Late
7	Downward	UNIVERSITY / KING	11	45.45%	18.18%	27.27%
7	Downward	KING / UNIVERSITY	51	43.14%	7.84%	35.29%
7	Downward	UPTOWN WATERLOO	14	78.57%	7.14%	71.43%
7	Downward	KING / WILLIS	2	50.00%	0.00%	50.00%
7	Downward	CHARLES STREET TERMINAL	62	32.26%	4.84%	27.42%
7	Downward	KING / OTTAWA	27	22.22%	7.41%	14.81%
7	Downward	FOURTH / CONNAUGHT	3	66.67%	66.67%	0.00%
7	Downward	FOURTH / WILSON	8	50.00%	37.50%	12.50%
7	Downward	KINZIE / WEBER	16	37.50%	0.00%	37.50%
7	Downward	FAIRVIEW PARK	14	14.29%		14.29%
7	Downward	FAIRVIEW PARK MALL	12	8.33%		8.33%
7	Upward	FAIRVIEW PARK	21	19.05%	19.05%	
7	Upward	FAIRVIEW PARK MALL	9	0.00%	0.00%	
7	Upward	CONNAUGHT / FIFTH	8	37.50%	12.50%	25.00%
7	Upward	FOURTH / WILSON	10	10.00%	0.00%	10.00%
7	Upward	WEBER / KINZIE	12	16.67%	8.33%	8.33%
7	Upward	CHARLES STREET TERMINAL	50	28.00%	14.00%	14.00%
7	Upward	KING / OTTAWA	30	43.33%	20.00%	23.33%
7	Upward	UPTOWN WATERLOO	49	51.02%	24.49%	26.53%
7	Upward	UNIVERSITY / KING	22	54.55%	27.27%	27.27%
7	Upward	RING / UNIVERSITY	22	45.45%	18.18%	27.27%
7	Upward	KING / UNIVERSITY	27	66.67%	40.74%	25.93%
7	Upward	RING / NORTH CAMPUS	22	31.82%		31.82%
7	Upward	CONESTOGA MALL	18	16.67%		16.67%
7	Upward	COLUMBIA / HAZEL	9	88.89%	33.33%	55.56%
7	Upward	U WATERLOO	8	50.00%		50.00%
8	North	FAIRVIEW PARK	21	4.76%	4.76%	
8	North	FAIRVIEW PARK MALL	6	0.00%	0.00%	
8	North	FRANKLIN / PROSPECT	9	11.11%	11.11%	0.00%
8	North	WALTON / VANIER	18	50.00%	0.00%	50.00%
8	North	CHARLES STREET TERMINAL	40	30.00%	5.00%	25.00%
8	North	COURTLAND / STIRLING	18	61.11%	0.00%	61.11%
8	North	OTTAWA / WEBER	9	22.22%	22.22%	0.00%
8	North	BELMONT / HIGHLAND	17	35.29%	23.53%	11.76%
8	North	MARGARET / WELLINGTON	23	30.43%	0.00%	30.43%
8	North	UNION / WEBER	23	26.09%	0.00%	26.09%
8	North	UNION / WESTMOUNT	18	44.44%	33.33%	11.11%
8	North	UNIVERSITY / SEAGRAM	18	44.44%	22.22%	22.22%
8	North	UNIVERSITY / KING	41	24.39%		24.39%
8	South	UNIVERSITY / KING	44	6.82%	6.82%	
8	South	UNIVERSITY / SEAGRAM	15	26.67%	0.00%	26.67%
8	South	UNION / WEBER	29	41.38%	10.34%	31.03%
8	South	UNION / WESTMOUNT	15	60.00%	0.00%	60.00%
8	South	MARGARET / WELLINGTON	29	48.28%	34.48%	13.79%
8	South	CHARLES STREET TERMINAL	44	43.18%	11.36%	31.82%
8	South	BELMONT / BURN	15	86.67%	6.67%	80.00%
8	South	COURTLAND / VERNON	22	31.82%	9.09%	22.73%
8	South	WALTON / VANIER	22	45.45%	13.64%	31.82%
8	South	OTTAWA / MCKENZIE	7	28.57%	0.00%	28.57%
8	South	FAIRVIEW PARK MALL	10	80.00%		80.00%
8	South	FAIRVIEW PARK	19	47.37%		47.37%
8	South	WEBER / FRANKLIN	7	42.86%	14.29%	28.57%
9	Downward	CONESTOGA MALL	28	3.57%	3.57%	
9	Downward	NORTHFIELD / WEBER	29	51.72%	3.45%	48.28%
9	Downward	HIGHPOINT / WINTERGREEN	29	48.28%	3.45%	44.83%
9	Downward	PARKSIDE / GLENELM	29	58.62%	10.34%	48.28%
9	Downward	HAZEL / WILDWOOD	29	62.07%	13.79%	48.28%
9	Downward	HAZEL / UNIVERSITY	26	57.69%	23.08%	34.62%
9	Downward	U WATERLOO	25	52.00%		52.00%
9	Upward	U WATERLOO	35	28.57%	28.57%	
9	Upward	HAZEL / UNIVERSITY	35	25.71%	25.71%	0.00%
9	Upward	HAZEL / BEARINGER	35	42.86%	42.86%	0.00%
9	Upward	PARKSIDE / GLENELM	15	40.00%	40.00%	0.00%
9	Upward	HIGHPOINT / WINTERGREEN	35	54.29%	45.71%	8.57%
9	Upward	NORTHFIELD / WEBER	36	61.11%	55.56%	5.56%
9	Upward	CONESTOGA MALL	35	31.43%		31.43%
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	25	12.00%	12.00%	
10	Inbound	PINNACLE / OLD MILL	25	20.00%	8.00%	12.00%
10	Inbound	PIONEER / OLD CARRIAGE	25	28.00%	20.00%	8.00%

SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
10	Inbound	DOON VILLAGE / MILLWOOD	25	52.00%	44.00%	8.00%
10	Inbound	FAIRVIEW PARK	18	5.56%		5.56%
10	Inbound	FAIRVIEW PARK MALL	7	0.00%		0.00%
10	Outbound	FAIRVIEW PARK	24	4.17%	4.17%	
10	Outbound	DOON VILLAGE / MILLWOOD	25	44.00%	12.00%	32.00%
10	Outbound	PIONEER / OLD CARRIAGE	25	56.00%	32.00%	24.00%
10	Outbound	PINNACLE / OLD MILL	24	58.33%	8.33%	50.00%
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	24	41.67%		41.67%
11	1	CHARLES STREET TERMINAL	22	0.00%	0.00%	
11	1	STIRLING / COURTLAND	36	30.56%	2.78%	27.78%
11	1	ALPINE / OTTAWA	36	44.44%	11.11%	33.33%
11	1	COUNTRY HILL / BLOCK LINE	22	50.00%	9.09%	40.91%
11	1	FOREST GLEN TERMINAL	22	40.91%		40.91%
11	2	FOREST GLEN TERMINAL	41	2.44%	2.44%	
11	2	KINGSWOOD / BLOCK LINE	42	33.33%	7.14%	26.19%
11	2	HOFFMAN / OTTAWA	42	50.00%	11.90%	38.10%
11	2	STIRLING / COURTLAND	42	50.00%	11.90%	38.10%
11	2	CHARLES STREET TERMINAL	42	42.86%		42.86%
12	Downward	CONESTOGA MALL	20	20.00%	20.00%	
12	Downward	UNIVERSITY / KING	34	41.18%	23.53%	26.47%
12	Downward	BRIDGE / UNIVERSITY	13	23.08%	0.00%	23.08%
12	Downward	UNIVERSITY / SEAGRAM	34	20.59%	8.82%	11.76%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	29	31.03%	6.90%	24.14%
12	Downward	HIGHLAND HILLS MALL	33	42.42%	12.12%	30.30%
12	Downward	WESTMOUNT / OTTAWA	30	53.33%	6.67%	46.67%
12	Downward	FOREST GLEN TERMINAL	30	43.33%	10.00%	33.33%
12	Downward	FAIRVIEW PARK MALL	14	7.14%		7.14%
12	Downward	FAIRVIEW PARK	11	0.00%		0.00%
12	Upward	FAIRVIEW PARK	16	0.00%	0.00%	
12	Upward	FAIRVIEW PARK MALL	4	0.00%	0.00%	
12	Upward	FOREST GLEN TERMINAL	20	20.00%	5.00%	15.00%
12	Upward	WESTMOUNT / OTTAWA	22	31.82%	13.64%	18.18%
12	Upward	HIGHLAND HILLS MALL	20	35.00%	5.00%	30.00%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	20	35.00%	10.00%	25.00%
12	Upward	UNIVERSITY / SEAGRAM	20	70.00%	25.00%	45.00%
12	Upward	UNIVERSITY / KING	20	45.00%	10.00%	40.00%
12	Upward	BRIDGE / UNIVERSITY	13	38.46%	15.38%	23.08%
12	Upward	CONESTOGA MALL	14	35.71%		35.71%
13	1	U WATERLOO	26	23.08%	23.08%	
13	1	COLUMBIA / FISCHER-HALLMAN	26	50.00%	19.23%	30.77%
13	1	LAURELWOOD / ERBSVILLE	26	23.08%		23.08%
13	2	LAURELWOOD / ERBSVILLE	33	33.33%	33.33%	
13	2	COLUMBIA / FISCHER-HALLMAN	34	47.06%	35.29%	11.76%
13	2	U WATERLOO	31	12.90%		12.90%
14	1	CONESTOGA MALL	3	0.00%	0.00%	
14	1	BATHURST / MCMURRAY	3	66.67%	0.00%	66.67%
14	1	WYMAN / COLBY	2	50.00%		50.00%
14	2	WYMAN / COLBY(2)	4	0.00%	0.00%	
14	2	WYMAN / COLBY	4	0.00%	0.00%	0.00%
14	2	MCMURRAY / NORTHLAND	4	25.00%	25.00%	0.00%
14	2	CONESTOGA MALL	4	0.00%		0.00%
15	East	CHARLES STREET TERMINAL	23	0.00%	0.00%	
15	East	QUEEN / LANCASTER	23	34.78%	8.70%	26.09%
15	East	EDNA / FREDERICK	22	27.27%	9.09%	18.18%
15	East	LACKNER / VICTORIA	22	13.64%		13.64%
15	West	LACKNER / VICTORIA	16	18.75%	18.75%	
15	West	NATCHEZ / HALIFAX	16	37.50%	18.75%	18.75%
15	West	FREDERICK / EDNA	16	37.50%	12.50%	25.00%
15	West	QUEEN / LANCASTER	16	31.25%	12.50%	18.75%
15	West	CHARLES STREET TERMINAL	16	31.25%		31.25%
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	14	0.00%	0.00%	
16	Inbound	PIONEER / BECHTEL	16	50.00%	18.75%	31.25%
16	Inbound	STRASBURG / TRILLIUM	14	21.43%	7.14%	14.29%
16	Inbound	FOREST GLEN TERMINAL	14	14.29%		14.29%
16	Outbound	FOREST GLEN TERMINAL	15	0.00%	0.00%	
16	Outbound	STRASBURG / TRILLIUM	15	13.33%	6.67%	6.67%
16	Outbound	PIONEER / BECHTEL	15	20.00%	6.67%	13.33%
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	6.67%		6.67%
17	Downward	LACKNER / VICTORIA	4	25.00%	25.00%	

\*As given in GRT database

					SA <sub>1</sub> : "Not On-Time" Percentage (Bus Perspective)		
Route	Direction*	Timepoint	Obs.	Total	Early	Late	
17	Downward	KEEWATIN / OTTAWA	4	0.00%	0.00%	0.00%	
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00%	0.00%	0.00%	
17	Downward	RIVER / FAIRWAY	4	25.00%	25.00%	0.00%	
17	Downward	FAIRVIEW PARK	1	0.00%		0.00%	
17	Upward	FAIRVIEW PARK	2	0.00%	0.00%		
17	Upward	FAIRVIEW PARK MALL	2	0.00%	0.00%		
17	Upward	RIVER / FAIRWAY	4	50.00%	0.00%	50.00%	
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00%	0.00%	0.00%	
17	Upward	KEEWATIN / OTTAWA	4	0.00%	0.00%	0.00%	
17	Upward	LACKNER / VICTORIA	4	0.00%		0.00%	
18	Downward	MAPLE / GUELPH	9	11.11%	11.11%		
18	Downward	GUELPH / MARGARET	10	60.00%	20.00%	40.00%	
18	Downward	WEBER / WELLINGTON	10	40.00%	20.00%	20.00%	
18	Downward	CHARLES STREET TERMINAL	10	30.00%		30.00%	
18	Upward	CHARLES STREET TERMINAL	10	0.00%	0.00%		
18	Upward	WEBER / WELLINGTON	3	33.33%	0.00%	33.33%	
18	Upward	GUELPH / FLOYD	10	40.00%	10.00%	30.00%	
18	Upward	MAPLE / GUELPH	10	30.00%		30.00%	
19	1	CHARLES STREET TERMINAL	27	0.00%	0.00%		
19	1	VICTORIA / BELMONT	27	48.15%	0.00%	48.15%	
19	1	CHOPIN / BRYBECK	27	62.96%	0.00%	62.96%	
19	1	HAZELGLEN / VICTORIA	27	51.85%	3.70%	48.15%	
19	1	WESTFOREST / HIDDEN CREEK	27	51.85%	3.70%	48.15%	
19	1	HIGHLAND HILLS MALL	27	51.85%		51.85%	
19	2	HIGHLAND HILLS MALL	21	4.76%	4.76%		
19	2	WESTFOREST / VICTORIA	21	57.14%	0.00%	57.14%	
19	2	HAZELGLEN / MOOREGATE	21	52.38%	9.52%	42.86%	
19	2	CHOPIN / BRYBECK	21	38.10%	9.52%	28.57%	
19	2	VICTORIA / BELMONT	21	57.14%	9.52%	47.62%	
19	2	CHARLES STREET TERMINAL	21	33.33%		33.33%	
20	1	CHARLES STREET TERMINAL	21	0.00%	0.00%		
20	1	VICTORIA / BELMONT	21	42.86%	4.76%	38.10%	
20	1	INGLESIDE / HAZELGLEN	21	47.62%		47.62%	
20	2	INGLESIDE / HAZELGLEN	21	4.76%	4.76%		
20	2	CHOPIN / BRYBECK	21	33.33%	4.76%	28.57%	
20	2	VICTORIA / BELMONT	21	61.90%	9.52%	52.38%	
20	2	CHARLES STREET TERMINAL	21	47.62%		47.62%	
22	East	HIGHLAND HILLS MALL	18	0.00%	0.00%		
22	East	ACTIVA / GREY FOX	18	38.89%	0.00%	38.89%	
22	East	ACTIVA / SNOWDROP	18	61.11%	0.00%	61.11%	
22	East	TILLSLEY / WESTMOUNT	18	44.44%	0.00%	44.44%	
22	East	FOREST GLEN TERMINAL	18	11.11%	0.00%	11.11%	
22	East	OTTAWA / HWY 8 RAMP	18	11.11%	5.56%	5.56%	
22	East	STIRLING / COURTLAND	18	33.33%	5.56%	27.78%	
22	East	CHARLES STREET TERMINAL	18	22.22%		22.22%	
22	West	CHARLES STREET TERMINAL	9	0.00%	0.00%		
22	West	STIRLING / COURTLAND	13	30.77%	15.38%	15.38%	
22	West	OTTAWA / HWY 8 RAMP	9	33.33%	0.00%	33.33%	
22	West	FOREST GLEN TERMINAL	9	44.44%	0.00%	44.44%	
22	West	ERINBROOK / HEDGESTONE	9	55.56%	44.44%	11.11%	
22	West	DAVID BERGEY / PEACH BLOSSOM	9	44.44%	0.00%	44.44%	
22	West	ACTIVA / GREY FOX	9	44.44%	0.00%	44.44%	
22	West	HIGHLAND HILLS MALL	9	11.11%		11.11%	
23	East	CHARLES STREET TERMINAL	16	0.00%	0.00%		
23	East	FREDERICK / DUNHAM	17	41.18%	11.76%	29.41%	
23	East	RIVER / OTTAWA	17	41.18%	23.53%	17.65%	
23	East	OTTAWA / LACKNER	17	29.41%	5.88%	23.53%	
23	East	LACKNER / CORFIELD	17	23.53%	17.65%	5.88%	
23	East	FAIRVIEW PARK	9	66.67%		66.67%	
23	East	FAIRVIEW PARK MALL	4	25.00%		25.00%	
23	West	FAIRVIEW PARK	8	0.00%	0.00%		
23	West	FAIRVIEW PARK MALL	2	0.00%	0.00%		
23	West	LACKNER / CORFIELD	11	18.18%	18.18%	0.00%	
23	West	OTTAWA / OLDFIELD	11	18.18%	18.18%	0.00%	
23	West	RIVER / OTTAWA	11	45.45%	18.18%	27.27%	
23	West	FREDERICK / EDNA	11	27.27%	18.18%	9.09%	
23	West	CHARLES STREET TERMINAL	11	0.00%		0.00%	
24	1	CHARLES STREET TERMINAL	11	27.27%	27.27%		
24	1	HIGHLAND / BELMONT	12	58.33%	25.00%	33.33%	

				SA <sub>1</sub> : "Not On-Time" Percentage (Bus Perspective)		
Route	Direction*	Timepoint	Obs.	Total	Early	Late
24	1	HIGHLAND HILLS MALL	12	50.00%	16.67%	33.33%
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	41.67%		41.67%
24	2	ROLLING MEADOWS / WESTHEIGHTS	9	0.00%	0.00%	
24	2	WESTHEIGHTS / WINDING	9	55.56%	22.22%	33.33%
24	2	WESTHEIGHTS / WESTFOREST	9	66.67%	33.33%	33.33%
24	2	HIGHLAND HILLS MALL	9	55.56%	33.33%	22.22%
24	2	HIGHLAND / BELMONT	9	44.44%	22.22%	22.22%
24	2	CHARLES STREET TERMINAL	9	11.11%		11.11%
25	1	CHARLES STREET TERMINAL	28	3.57%	3.57%	
25	1	QUEENS / WESTMOUNT	31	32.26%	3.23%	29.03%
25	1	CECILE / OVERLEA	4	0.00%	0.00%	0.00%
25	1	HIGHLAND HILLS MALL	32	15.63%	0.00%	15.63%
25	1	FORESTWOOD / MCGARRY	31	12.90%	0.00%	12.90%
25	1	DRIFTWOOD / WESTHEIGHTS	31	35.48%	22.58%	12.90%
25	1	GOLDEN MEADOW / HAVENWOOD	32	12.50%		12.50%
25	2	GOLDEN MEADOW / HAVENWOOD	21	14.29%	14.29%	
25	2	WESTHEIGHTS / LORILEE	21	52.38%	47.62%	4.76%
25	2	HIGHLAND HILLS MALL	21	14.29%	4.76%	9.52%
25	2	QUEENS / WESTMOUNT	21	38.10%	28.57%	9.52%
25	2	CHARLES STREET TERMINAL	21	4.76%		4.76%
26	1	FOREST GLEN TERMINAL	9	0.00%	0.00%	
26	1	TRILLIUM / STRASBURG	9	0.00%	0.00%	0.00%
26	1	TRILLIUM / GROFF	9	88.89%		88.89%
26	2	TRILLIUM / GROFF	9	0.00%	0.00%	
26	2	TRILLIUM / STRASBURG	9	0.00%	0.00%	0.00%
26	2	FOREST GLEN TERMINAL	9	0.00%		0.00%
27	1	FAIRVIEW PARK MALL	8	0.00%	0.00%	
27	1	FAIRVIEW PARK	9	0.00%	0.00%	
27	1	MORRISON / MANOR	17	23.53%	5.88%	17.65%
27	1	QUINTE / MORRISON	17	11.76%		11.76%
27	2	QUINTE / MORRISON	11	9.09%	9.09%	
27	2	FAIRWAY / KING	11	18.18%	9.09%	9.09%
27	2	FAIRVIEW PARK MALL	4	25.00%		25.00%
27	2	FAIRVIEW PARK	7	14.29%		14.29%
29	1	RING / UNIVERSITY	8	0.00%	0.00%	
29	1	FISCHER-HALLMAN / KEATS	8	37.50%	0.00%	37.50%
29	2	KEATS / FISCHER-HALLMAN	6	0.00%	0.00%	0.00%
29	2	RING / UNIVERSITY	6	0.00%		0.00%
31	Downward	CONESTOGA MALL	8	25.00%	25.00%	
31	Downward	NORTHFIELD / BRIDGE	9	33.33%	0.00%	33.33%
31	Downward	UNIVERSITY / RIM PARK INTERNAL	5	20.00%	20.00%	0.00%
31	Downward	UNIVERSITY / LEXINGTON	8	62.50%	62.50%	0.00%
31	Downward	LEXINGTON / ANNDALE	8	62.50%	50.00%	12.50%
31	Downward	COLUMBIA / SPRUCE	8	62.50%	62.50%	0.00%
31	Downward	RING / UNIVERSITY	8	25.00%		25.00%
31	Upward	RING / UNIVERSITY	5	0.00%	0.00%	
31	Upward	COLUMBIA / KING	5	60.00%	0.00%	60.00%
31	Upward	LEXINGTON / DEARBORN	5	60.00%	20.00%	40.00%
31	Upward	UNIVERSITY / LEXINGTON	5	40.00%	0.00%	40.00%
31	Upward	UNIVERSITY / RIM PARK INTERNAL	2	100.00%	50.00%	50.00%
31	Upward	NORTHFIELD / BRIDGE	6	33.33%	33.33%	0.00%
31	Upward	CONESTOGA MALL	2	0.00%		0.00%
32	2	KUMPF / NORTHFIELD	2	40.00%	40.00%	
32	2	WEBER / GOLDEN EAGLE	8	50.00%	50.00%	0.00%
32	2	CONESTOGO / COLBY	5	80.00%	80.00%	0.00%
32	2	CONESTOGA MALL	4	25.00%		25.00%
33	1	FOREST GLEN TERMINAL	7	0.00%	0.00%	
33	1	STRASBURG / TRILLIUM	7	28.57%	0.00%	28.57%
33	1	PARKVALE / NEWCASTLE	2	50.00%	50.00%	0.00%
33	2	HURON / NEWCASTLE	4	75.00%	75.00%	
33	2	STRASBURG / TRILLIUM	8	75.00%	75.00%	0.00%
33	2	FOREST GLEN TERMINAL	8	0.00%		0.00%
35	1	KING / WILLIS	13	23.08%	23.08%	
35	1	ERB / WEBER	13	46.15%	30.77%	15.38%
35	1	BRIDGEPORT / LANCASTER	13	38.46%	23.08%	15.38%
35	1	AUBURN / SABLE	13	53.85%	46.15%	7.69%
35	1	BRIDGE / LEXINGTON	15	73.33%	66.67%	6.67%
35	1	CHESAPEAKE / SPINNAKER	13	76.92%	69.23%	7.69%
35	1	CONESTOGA MALL	15	6.67%		6.67%

					SA <sub>1</sub> : "Not On-Time" Percentage (Bus Perspective)		
Route	Direction*	Timepoint	Obs.	Total	Early	Late	
35	2	CONESTOGA MALL	14	7.14%	7.14%		
35	2	CHESAPEAKE / BRIGANTINE	14	7.14%	7.14%	0.00%	
35	2	BRIDGE / LEXINGTON	11	45.45%	9.09%	36.36%	
35	2	AUBURN / SABLE	14	14.29%	7.14%	7.14%	
35	2	BRIDGEPORT / LANCASTER	14	28.57%	14.29%	14.29%	
35	2	BRIDGEPORT / WEBER	14	42.86%	21.43%	21.43%	
35	2	UPTOWN WATERLOO	14	0.00%		0.00%	
51	Inbound	HOLIDAY INN TERMINAL	36	8.33%	8.33%		
51	Inbound	SMART!CENTRES CAMBRIDGE	37	62.16%	16.22%	45.95%	
51	Inbound	CAMBRIDGE CENTRE TERMINAL	37	59.46%	5.41%	54.05%	
51	Inbound	AINSLIE STREET TERMINAL	34	50.00%		50.00%	
51	Outbound	AINSLIE STREET TERMINAL	49	8.16%	8.16%		
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	48.94%	8.51%	40.43%	
51	Outbound	SMART!CENTRES CAMBRIDGE	40	62.50%	17.50%	45.00%	
51	Outbound	HOLIDAY INN TERMINAL	40	37.50%		37.50%	
52	North	AINSLIE STREET TERMINAL	23	0.00%	0.00%		
52	North	CORONATION / BARRETT	18	38.89%	5.56%	33.33%	
52	North	KING / LOWTHER	18	44.44%	22.22%	22.22%	
52	North	PRESTON / FOUNTAIN	18	50.00%	27.78%	22.22%	
52	North	SHANTZ HILL / HWY 401 RAMP	18	61.11%	44.44%	16.67%	
52	North	SPORTSWORLD	18	50.00%	33.33%	16.67%	
52	North	FAIRVIEW PARK	18	11.11%		11.11%	
52	South	FAIRVIEW PARK	16	6.25%	6.25%		
52	South	FAIRVIEW PARK MALL	5	0.00%	0.00%		
52	South	SPORTSWORLD	18	61.11%	22.22%	38.89%	
52	South	SHANTZ HILL / PRESTON	21	66.67%	42.86%	23.81%	
52	South	PRESTON / FOUNTAIN	20	70.00%	45.00%	25.00%	
52	South	KING / LOWTHER	20	60.00%	35.00%	25.00%	
52	South	CORONATION / MARTIN	21	52.38%	19.05%	33.33%	
52	South	AINSLIE STREET TERMINAL	21	9.52%		9.52%	
53	Inbound	HOLIDAY INN TERMINAL	8	0.00%	0.00%		
53	Inbound	FRANKLIN / SAGINAW	8	100.00%	62.50%	37.50%	
53	Inbound	DOBBIE / SAVAGE	8	100.00%	62.50%	37.50%	
53	Inbound	MAIN / DUNDAS	8	100.00%	62.50%	37.50%	
53	Inbound	AINSLIE STREET TERMINAL	8	25.00%		25.00%	
53	Outbound	AINSLIE STREET TERMINAL	8	0.00%	0.00%		
53	Outbound	MAIN / DUNDAS	8	62.50%	0.00%	62.50%	
53	Outbound	DOBBIE / SAVAGE	8	62.50%	0.00%	62.50%	
53	Outbound	FRANKLIN / SAGINAW	8	62.50%	0.00%	62.50%	
53	Outbound	HOLIDAY INN TERMINAL	8	50.00%		50.00%	
54	East	MAIN / DUNDAS	44	43.18%	18.18%	25.00%	
54	East	LISBON PINES / GATEHOUSE	44	52.27%	13.64%	38.64%	
54	East	AINSLIE STREET TERMINAL	88	18.18%	0.00%	18.18%	
54	East	CHAMPLAIN / CHRISTOPHER	44	54.55%	11.36%	43.18%	
55	West	SOUTHWOOD / CEDAR	23	34.78%	0.00%	34.78%	
55	West	AINSLIE STREET TERMINAL	44	22.73%	0.00%	22.73%	
55	West	SOUTHWOOD / ST ANDREWS	22	72.73%	0.00%	72.73%	
55	West	ST ANDREWS / GILHOLM	23	52.17%	0.00%	52.17%	
56	West	BISHOP / RAILWAY	29	31.03%	3.45%	27.59%	
56	West	ROSE / ARGYLE	28	35.71%	10.71%	25.00%	
56	West	CAMBRIDGE CENTRE TERMINAL	56	28.57%	0.00%	28.57%	
56	West	WESTMINSTER / KING	29	34.48%	0.00%	34.48%	
56	West	LANG'S / CONCESSION	29	48.28%	3.45%	44.83%	
57	West	SUNSET / SAXONY	34	91.18%	0.00%	91.18%	
57	West	BLAIR / BISMARCK	33	60.61%	0.00%	60.61%	



SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
57	West	AINSLIE STREET TERMINAL	72	27.78%	0.00%	27.78%
57	West	HILLCREST / CHURCHILL	34	67.65%	0.00%	67.65%
58	East	MOSCRIP / BRONSON	14	57.14%	0.00%	57.14%
58	East	MUNCH / ELGIN	14	78.57%	0.00%	78.57%
58	East	AINSLIE STREET TERMINAL	28	10.71%	0.00%	10.71%
58	East	HILLTOP / FRANKLIN	14	50.00%	0.00%	50.00%
59	East	CHAMPLAIN / CHRISTOPHER	20	35.00%	0.00%	35.00%
59	East	AINSLIE STREET TERMINAL	45	15.56%	0.00%	15.56%
59	East	CHAMPLAIN / ELGIN	21	57.14%	0.00%	57.14%
60	East	GLAMIS / ROBSON	28	42.86%	10.71%	32.14%
60	East	CAMBRIDGE CENTRE TERMINAL	56	8.93%	0.00%	8.93%
60	East	ELGIN / SAGINAW	28	75.00%	0.00%	75.00%
60	East	MUNCH / KOVAC	28	57.14%	7.14%	50.00%
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8	0.00%	0.00%	
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	16.67%	16.67%	0.00%
61	East	KING / WESTMINSTER	8	100.00%	100.00%	0.00%
61	East	CAMBRIDGE CENTRE	2	0.00%		0.00%
61	West	CAMBRIDGE CENTRE	2	0.00%	0.00%	
61	West	KING / WESTMINSTER	5	60.00%	0.00%	60.00%
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	5	40.00%	0.00%	40.00%
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	5	20.00%		20.00%
62	West	SOUTHGATE / DAY	19	31.58%	0.00%	31.58%
62	West	AINSLIE STREET TERMINAL	46	10.87%	0.00%	10.87%
62	West	WOODSIDE / CEDAR	23	47.83%	17.39%	30.43%
63	East	ALISON / ELGIN	21	38.10%	0.00%	38.10%
63	East	AINSLIE STREET TERMINAL	42	4.76%	0.00%	4.76%
63	East	DUNDAS / FRANKLIN	21	47.62%	0.00%	47.62%
63	East	CHAMPLAIN / CHRISTOPHER	21	47.62%	4.76%	42.86%
64	West	LANG'S / WALTER	18	44.44%	0.00%	44.44%
64	West	EAGLE / KING	18	55.56%	0.00%	55.56%
64	West	CAMBRIDGE CENTRE TERMINAL	36	25.00%	0.00%	25.00%
64	West	ROSE / ARGYLE	18	55.56%	0.00%	55.56%
64	West	BISHOP / RAILWAY	18	55.56%	0.00%	55.56%
65	North	HOLIDAY INN TERMINAL	34	32.35%	0.00%	32.35%
65	North	WINSTON / SCOTTDALE	17	41.18%	11.76%	29.41%
65	North	FISHER MILLS / FEARNWOOD	17	52.94%	0.00%	52.94%
65	North	FRANKLIN / WINSTON	17	82.35%	0.00%	82.35%
66	East	FRANKLIN / WINSTON	7	28.57%	0.00%	28.57%
66	East	COOPER / ELLIS	7	28.57%	28.57%	0.00%
66	East	HOLIDAY INN TERMINAL	14	0.00%	0.00%	0.00%
66	East	WINSTON / WESTBURY	7	57.14%	57.14%	0.00%
67	North	CAMBRIDGE CENTRE TERMINAL	14	35.71%	0.00%	35.71%
67	North	FLEMING / PINEBUSH	7	57.14%	0.00%	57.14%
71	East	QUEEN / HUNGERFORD	18	55.56%	0.00%	55.56%
71	East	HOLIDAY INN TERMINAL	36	19.44%	2.78%	16.67%
71	East	ELLIS / ADLER	18	94.44%	0.00%	94.44%
110	Downward	FAIRVIEW PARK	19	0.00%	0.00%	
110	Downward	PIONEER / OLD CARRIAGE	26	19.23%	0.00%	19.23%
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	19	21.05%		21.05%
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	13	0.00%	0.00%	
110	Upward	PIONEER / OLD CARRIAGE	13	53.85%	7.69%	46.15%
110	Upward	FAIRVIEW PARK	13	30.77%		30.77%
111	North	AINSLIE STREET TERMINAL	2	0.00%	0.00%	
111	South	AINSLIE STREET TERMINAL	4	0.00%		0.00%
200	Downward	CONESTOGA MALL	508	2.56%	2.56%	
200	Downward	McCORMICK	506	22.73%	2.96%	19.76%
200	Downward	R & T PARK	508	27.76%	8.46%	19.29%
200	Downward	U WATERLOO	507	20.91%	7.10%	13.81%
200	Downward	LAURIER	507	28.60%	7.69%	20.91%
200	Downward	UPTOWN WATERLOO	341	42.23%	12.90%	29.33%
200	Downward	KING / WILLIS	53	37.74%	9.43%	28.30%
200	Downward	GRAND RIVER HOSPITAL	508	39.17%	13.19%	25.98%
200	Downward	CHARLES TERMINAL	509	32.42%	3.54%	28.88%
200	Downward	OTTAWA	508	32.48%	8.86%	23.62%
200	Downward	FAIRVIEW	508	22.44%	5.51%	16.93%
200	Downward	SMART!CENTRES CAMBRIDGE	506	50.40%	25.30%	25.10%
200	Downward	CAMBRIDGE CENTRE	504	41.67%	16.87%	24.80%
200	Downward	AINSLIE STREET TERMINAL	496	30.85%		30.85%
200	Upward	AINSLIE STREET TERMINAL	450	2.00%	2.00%	

\*As given in GRT database

Route	Direction*	Timepoint	Obs.	SA <sub>1</sub> : "Not On-Time" Percentage (Bus Perspective)		
				Total	Early	Late
200	Upward	CAMBRIDGE CENTRE	448	19.64%	6.47%	13.17%
200	Upward	SMART!CENTRES CAMBRIDGE	447	25.73%	10.07%	15.66%
200	Upward	FAIRVIEW	447	21.25%	5.37%	15.88%
200	Upward	OTTAWA	449	29.62%	0.00%	29.62%
200	Upward	CHARLES TERMINAL	448	29.69%	4.46%	25.22%
200	Upward	GRAND RIVER HOSPITAL	444	37.84%	2.25%	35.59%
200	Upward	UPTOWN WATERLOO	445	35.96%	1.80%	34.16%
200	Upward	LAURIER	444	42.79%	3.60%	39.19%
200	Upward	U WATERLOO	444	47.30%	1.80%	45.50%
200	Upward	R & T PARK	444	52.25%	5.18%	47.07%
200	Upward	McCORMICK	444	51.13%	9.01%	42.12%
200	Upward	CONESTOGA MALL	425	44.00%		44.00%

				SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
Route	Direction*	Timepoint	Obs.	Total	Early	Late
1	East	CHARLES STREET TERMINAL	26	3.33%	3.85%	
1	East	FREDERICK / WEBER	26	7.69%	0.00%	26.92%
1	East	BECKER / BELLEVIEW	9	35.56%	0.00%	44.44%
1	East	LORRAINE / BIRKSHIRE	17	58.82%		58.82%
1	East	RIVER / HICKSON	9	33.33%		33.33%
1	East	OTTAWA / OLDFIELD	17	27.12%	5.88%	35.29%
1	East	STANLEY PARK MALL TERMINAL	25	72.00%		72.00%
1	West	STANLEY PARK MALL TERMINAL	24	0.00%	0.00%	
1	West	LACKNER / BANBURY	9	14.81%	0.00%	22.22%
1	West	RIVER / HALLIWELL	25	5.50%	0.00%	44.00%
1	West	BELLEVIEW / BECKER	15	13.33%	0.00%	26.67%
1	West	WEBER / SCOTT	26	36.15%	11.54%	42.31%
1	West	CHARLES STREET TERMINAL	26	42.95%		46.15%
2	Downward	HIGHLAND HILLS MALL	13	0.00%	0.00%	
2	Downward	GREENBROOK / WESTMOUNT	14	64.29%		64.29%
2	Downward	GREENBROOK / STIRLING	14	0.00%	0.00%	
2	Downward	CHARLES STREET TERMINAL	15	46.67%		46.67%
2	Upward	CHARLES STREET TERMINAL	13	0.00%	0.00%	
2	Upward	SOUTHMOOR / AVALON	13	19.23%	0.00%	23.08%
2	Upward	GREENBROOK / STIRLING	13	7.69%	0.00%	15.38%
2	Upward	WESTMOUNT / VILLAGE	13	23.08%		23.08%
2	Upward	HIGHLAND HILLS MALL	13	38.46%		38.46%
3	1	CHARLES STREET TERMINAL	19	0.00%	0.00%	
3	1	COURTLAND / STIRLING	19	8.19%	0.00%	31.58%
3	1	STRASBURG / TRANSIT GARAGE	21	16.81%	0.00%	28.57%
3	1	OTTAWA / WESTMOUNT	21	14.72%	19.05%	14.29%
3	1	WILLIAMSBURG / DINISON	21	19.05%	9.52%	23.81%
3	1	FOREST GLEN TERMINAL	21	12.86%		14.29%
3	2	FOREST GLEN TERMINAL	18	11.11%	11.11%	
3	2	WILLIAMSBURG / DINISON	18	5.56%		5.56%
3	2	OTTAWA / WESTMOUNT	18	10.61%	11.11%	5.56%
3	2	STRASBURG / TRANSIT GARAGE	18	11.11%	11.11%	11.11%
3	2	COURTLAND / MADISON	18	18.58%	5.56%	27.78%
3	2	CHARLES STREET TERMINAL	18	16.67%		16.67%
4	Downward	UNIVERSITY / RESURRECTION	12	6.94%	8.33%	
4	Downward	GLASGOW / WESTMOUNT	12	14.29%	8.33%	16.67%
4	Downward	UNION / KING	12	39.58%	41.67%	25.00%
4	Downward	MOORE / BREITHAUP	12	25.76%	41.67%	16.67%
4	Downward	CHARLES STREET TERMINAL	12	8.33%		8.33%
4	Upward	CHARLES STREET TERMINAL	14	0.00%	0.00%	
4	Upward	MOORE / WELLINGTON	14	0.00%	0.00%	
4	Upward	UNION / PARK	14	0.00%	0.00%	
4	Upward	GLASGOW / WESTMOUNT	14	26.43%	7.14%	28.57%
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	7.14%	7.14%	7.14%
4	Upward	UNIVERSITY / BAKER	8	0.00%	0.00%	
4	Upward	UNIVERSITY / RESURRECTION	14	0.00%		0.00%
5	1	UPTOWN WATERLOO	15	32.50%	33.33%	
5	1	ERB / WESTMOUNT	15	14.71%	26.67%	0.00%
5	1	FISCHER-HALLMAN / ERB	15	15.93%	20.00%	13.33%
5	1	KEATS / KEATSWOOD	15	6.67%		6.67%
5	2	KEATS / KEATSWOOD	13	23.08%	23.08%	
5	2	GATEVIEW / WESTVALE	12	25.00%	25.00%	
5	2	ERB / FISCHER-HALLMAN	12	50.00%	58.33%	16.67%
5	2	ERB / WESTMOUNT	13	29.67%	38.46%	15.38%
5	2	KING / WILLIS	13	23.08%		23.08%
6	Downward	DANIEL / BLOOMINGDALE	9	22.22%	22.22%	
6	Downward	LANCASTER / HAMEL	10	29.20%	30.00%	10.00%
6	Downward	LANCASTER / GUELPH	9	44.44%	44.44%	
6	Downward	WELLINGTON / MARGARET	9	70.37%	77.78%	11.11%
6	Downward	CHARLES STREET TERMINAL	9	22.22%		22.22%
6	Upward	CHARLES STREET TERMINAL	10	10.00%	10.00%	
6	Upward	WELLINGTON / MARGARET	10	16.25%	10.00%	20.00%
6	Upward	LANCASTER / GUELPH	10	30.00%		30.00%
6	Upward	LANCASTER / HAMEL	10	38.89%	30.00%	40.00%
6	Upward	DANIEL / BLOOMINGDALE	10			
7	Downward	RING / NORTH CAMPUS	21	18.43%	19.05%	
7	Downward	CONESTOGA MALL	30	9.61%	10.00%	
7	Downward	U WATERLOO	11	26.13%	27.27%	
7	Downward	COLUMBIA / HAZEL	21	25.00%	9.52%	28.57%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
7	Downward	UNIVERSITY / KING	11			
7	Downward	KING / UNIVERSITY	51	16.53%	7.84%	35.29%
7	Downward	UPTOWN WATERLOO	14			
7	Downward	KING / WILLIS	2			
7	Downward	CHARLES STREET TERMINAL	62	20.57%	4.84%	27.42%
7	Downward	KING / OTTAWA	27	12.83%	7.41%	14.81%
7	Downward	FOURTH / CONNAUGHT	3			
7	Downward	FOURTH / WILSON	8	12.50%		12.50%
7	Downward	KINZIE / WEBER	16	19.50%	0.00%	37.50%
7	Downward	FAIRVIEW PARK	14	13.51%		14.29%
7	Downward	FAIRVIEW PARK MALL	12	8.33%		8.33%
7	Upward	FAIRVIEW PARK	21	18.79%	19.05%	
7	Upward	FAIRVIEW PARK MALL	9	0.00%	0.00%	
7	Upward	CONNAUGHT / FIFTH	8	18.75%	12.50%	25.00%
7	Upward	FOURTH / WILSON	10	6.92%	0.00%	10.00%
7	Upward	WEBER / KINZIE	12	8.33%	8.33%	8.33%
7	Upward	CHARLES STREET TERMINAL	50	14.00%	14.00%	14.00%
7	Upward	KING / OTTAWA	30	21.03%	20.00%	23.33%
7	Upward	UPTOWN WATERLOO	49	25.35%	24.49%	26.53%
7	Upward	UNIVERSITY / KING	22	27.27%	27.27%	27.27%
7	Upward	RING / UNIVERSITY	22	23.02%	18.18%	27.27%
7	Upward	KING / UNIVERSITY	27	33.05%	40.74%	25.93%
7	Upward	RING / NORTH CAMPUS	22	31.82%		31.82%
7	Upward	CONESTOGA MALL	18	16.60%		16.67%
7	Upward	COLUMBIA / HAZEL	9	48.15%	33.33%	55.56%
7	Upward	U WATERLOO	8	50.00%		50.00%
8	North	FAIRVIEW PARK	21	3.53%	4.76%	
8	North	FAIRVIEW PARK MALL	6	0.00%	0.00%	
8	North	FRANKLIN / PROSPECT	9	6.67%	11.11%	0.00%
8	North	WALTON / VANIER	18	23.91%	0.00%	50.00%
8	North	CHARLES STREET TERMINAL	40	13.40%	5.00%	25.00%
8	North	COURTLAND / STIRLING	18	57.52%	0.00%	61.11%
8	North	OTTAWA / WEBER	9	5.13%	22.22%	0.00%
8	North	BELMONT / HIGHLAND	17	17.45%	23.53%	11.76%
8	North	MARGARET / WELLINGTON	23	15.63%	0.00%	30.43%
8	North	UNION / WEBER	23	5.53%	0.00%	26.09%
8	North	UNION / WESTMOUNT	18	27.78%	33.33%	11.11%
8	North	UNIVERSITY / SEAGRAM	18	22.22%	22.22%	22.22%
8	North	UNIVERSITY / KING	41	24.39%		24.39%
8	South	UNIVERSITY / KING	44	6.75%	6.82%	
8	South	UNIVERSITY / SEAGRAM	15	3.95%	0.00%	26.67%
8	South	UNION / WEBER	29	22.41%	10.34%	31.03%
8	South	UNION / WESTMOUNT	15	60.00%		60.00%
8	South	MARGARET / WELLINGTON	29	16.23%	34.48%	13.79%
8	South	CHARLES STREET TERMINAL	44	19.03%	11.36%	31.82%
8	South	BELMONT / BURN	15	67.06%	6.67%	80.00%
8	South	COURTLAND / VERNON	22	19.01%	9.09%	22.73%
8	South	WALTON / VANIER	22	23.19%	13.64%	31.82%
8	South	OTTAWA / MCKENZIE	7	9.52%	0.00%	28.57%
8	South	FAIRVIEW PARK MALL	10	75.68%		80.00%
8	South	FAIRVIEW PARK	19	46.29%		47.37%
8	South	WEBER / FRANKLIN	7			
9	Downward	CONESTOGA MALL	28	3.14%	3.57%	
9	Downward	NORTHFIELD / WEBER	29	28.07%	3.45%	48.28%
9	Downward	HIGHPOINT / WINTERGREEN	29	35.09%	3.45%	44.83%
9	Downward	PARKSIDE / GLENELM	29	38.79%	10.34%	48.28%
9	Downward	HAZEL / WILDWOOD	29	26.96%	13.79%	48.28%
9	Downward	HAZEL / UNIVERSITY	26	31.77%	23.08%	34.62%
9	Downward	U WATERLOO	25	51.11%		52.00%
9	Upward	U WATERLOO	35	25.28%	28.57%	
9	Upward	HAZEL / UNIVERSITY	35	18.77%	25.71%	0.00%
9	Upward	HAZEL / BEARINGER	35	13.94%	42.86%	0.00%
9	Upward	PARKSIDE / GLENELM	15	10.00%	40.00%	0.00%
9	Upward	HIGHPOINT / WINTERGREEN	35	18.89%	45.71%	8.57%
9	Upward	NORTHFIELD / WEBER	36	36.38%	55.56%	5.56%
9	Upward	CONESTOGA MALL	35	31.43%		31.43%
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	25	11.97%	12.00%	
10	Inbound	PINNACLE / OLD MILL	25	8.00%	8.00%	
10	Inbound	PIONEER / OLD CARRIAGE	25	16.23%	20.00%	8.00%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
10	Inbound	DOON VILLAGE / MILLWOOD	25	30.04%	44.00%	8.00%
10	Inbound	FAIRVIEW PARK	18	5.56%		5.56%
10	Inbound	FAIRVIEW PARK MALL	7	0.00%		0.00%
10	Outbound	FAIRVIEW PARK	24	4.07%	4.17%	
10	Outbound	DOON VILLAGE / MILLWOOD	25	30.55%	12.00%	32.00%
10	Outbound	PIONEER / OLD CARRIAGE	25	24.00%		24.00%
10	Outbound	PINNACLE / OLD MILL	24			
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	24	41.67%		41.67%
11	1	CHARLES STREET TERMINAL	22	0.00%	0.00%	
11	1	STIRLING / COURTLAND	36	7.78%	2.78%	27.78%
11	1	ALPINE / OTTAWA	36	26.19%	11.11%	33.33%
11	1	COUNTRY HILL / BLOCK LINE	22	37.88%	9.09%	40.91%
11	1	FOREST GLEN TERMINAL	22	40.91%		40.91%
11	2	FOREST GLEN TERMINAL	41	2.07%	2.44%	
11	2	KINGSWOOD / BLOCK LINE	42	12.64%	7.14%	26.19%
11	2	HOFFMAN / OTTAWA	42	26.46%	11.90%	38.10%
11	2	STIRLING / COURTLAND	42	33.73%	11.90%	38.10%
11	2	CHARLES STREET TERMINAL	42	42.68%		42.86%
12	Downward	CONESTOGA MALL	20	19.07%	20.00%	
12	Downward	UNIVERSITY / KING	34	24.35%	23.53%	26.47%
12	Downward	BRIDGE / UNIVERSITY	13	9.07%	0.00%	23.08%
12	Downward	UNIVERSITY / SEAGRAM	34	9.35%	8.82%	11.76%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	29	17.22%	6.90%	24.14%
12	Downward	HIGHLAND HILLS MALL	33	24.47%	12.12%	30.30%
12	Downward	WESTMOUNT / OTTAWA	30	17.87%	6.67%	46.67%
12	Downward	FOREST GLEN TERMINAL	30	18.27%	10.00%	33.33%
12	Downward	FAIRVIEW PARK MALL	14	7.14%		7.14%
12	Downward	FAIRVIEW PARK	11	0.00%		0.00%
12	Upward	FAIRVIEW PARK	16	0.00%	0.00%	
12	Upward	FAIRVIEW PARK MALL	4	0.00%	0.00%	
12	Upward	FOREST GLEN TERMINAL	20	11.20%	5.00%	15.00%
12	Upward	WESTMOUNT / OTTAWA	22	16.16%	13.64%	18.18%
12	Upward	HIGHLAND HILLS MALL	20	20.15%	5.00%	30.00%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	20	15.53%	10.00%	25.00%
12	Upward	UNIVERSITY / SEAGRAM	20	37.16%	25.00%	45.00%
12	Upward	UNIVERSITY / KING	20	27.71%	10.00%	40.00%
12	Upward	BRIDGE / UNIVERSITY	13	22.00%	15.38%	23.08%
12	Upward	CONESTOGA MALL	14	35.71%		35.71%
13	1	U WATERLOO	26	22.87%	23.08%	
13	1	COLUMBIA / FISCHER-HALLMAN	26	28.59%	19.23%	30.77%
13	1	LAURELWOOD / ERBSVILLE	26	22.15%		23.08%
13	2	LAURELWOOD / ERBSVILLE	33	27.54%	33.33%	
13	2	COLUMBIA / FISCHER-HALLMAN	34	30.25%	35.29%	11.76%
13	2	U WATERLOO	31	12.90%		12.90%
14	1	CONESTOGA MALL	3	0.00%	0.00%	
14	1	BATHURST / MCMURRAY	3	0.00%	0.00%	
14	1	WYMAN / COLBY	2			
14	2	WYMAN / COLBY(2)	4	0.00%	0.00%	
14	2	WYMAN / COLBY	4			
14	2	MCMURRAY / NORTHLAND	4	25.00%	25.00%	
14	2	CONESTOGA MALL	4	0.00%		0.00%
15	East	CHARLES STREET TERMINAL	23	0.00%	0.00%	
15	East	QUEEN / LANCASTER	23	24.75%	8.70%	26.09%
15	East	EDNA / FREDERICK	22	17.32%	9.09%	18.18%
15	East	LACKNER / VICTORIA	22	13.64%		13.64%
15	West	LACKNER / VICTORIA	16	18.75%	18.75%	
15	West	NATCHEZ / HALIFAX	16	18.75%	18.75%	18.75%
15	West	FREDERICK / EDNA	16	15.38%	12.50%	25.00%
15	West	QUEEN / LANCASTER	16	13.75%	12.50%	18.75%
15	West	CHARLES STREET TERMINAL	16	28.13%		31.25%
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	14	0.00%	0.00%	
16	Inbound	PIONEER / BECHTEL	16	25.00%	18.75%	31.25%
16	Inbound	STRASBURG / TRILLIUM	14			
16	Inbound	FOREST GLEN TERMINAL	14	14.29%		14.29%
16	Outbound	FOREST GLEN TERMINAL	15	0.00%	0.00%	
16	Outbound	STRASBURG / TRILLIUM	15			
16	Outbound	PIONEER / BECHTEL	15	13.33%		13.33%
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	6.67%		6.67%
17	Downward	LACKNER / VICTORIA	4			

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
17	Downward	KEEWATIN / OTTAWA	4	0.00%	0.00%	
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00%	0.00%	0.00%
17	Downward	RIVER / FAIRWAY	4	0.00%		0.00%
17	Downward	FAIRVIEW PARK	1	0.00%		0.00%
17	Upward	FAIRVIEW PARK	2	0.00%	0.00%	
17	Upward	FAIRVIEW PARK MALL	2	0.00%	0.00%	
17	Upward	RIVER / FAIRWAY	4	42.86%	0.00%	50.00%
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00%	0.00%	0.00%
17	Upward	KEEWATIN / OTTAWA	4	0.00%		0.00%
17	Upward	LACKNER / VICTORIA	4	0.00%		0.00%
18	Downward	MAPLE / GUELPH	9	11.11%	11.11%	
18	Downward	GUELPH / MARGARET	10	40.00%		40.00%
18	Downward	WEBER / WELLINGTON	10	20.00%	20.00%	
18	Downward	CHARLES STREET TERMINAL	10	30.00%		30.00%
18	Upward	CHARLES STREET TERMINAL	10	0.00%	0.00%	
18	Upward	WEBER / WELLINGTON	3	33.33%		33.33%
18	Upward	GUELPH / FLOYD	10	30.00%		30.00%
18	Upward	MAPLE / GUELPH	10	30.00%		30.00%
19	1	CHARLES STREET TERMINAL	27	0.00%	0.00%	
19	1	VICTORIA / BELMONT	27	16.05%	0.00%	48.15%
19	1	CHOPIN / BRYBECK	27	47.61%	0.00%	62.96%
19	1	HAZELGLEN / VICTORIA	27	32.46%	3.70%	48.15%
19	1	WESTFOREST / HIDDEN CREEK	27	44.11%	3.70%	48.15%
19	1	HIGHLAND HILLS MALL	27	51.85%		51.85%
19	2	HIGHLAND HILLS MALL	21	4.59%	4.76%	
19	2	WESTFOREST / VICTORIA	21	45.89%	0.00%	57.14%
19	2	HAZELGLEN / MOOREGATE	21	37.86%	9.52%	42.86%
19	2	CHOPIN / BRYBECK	21	22.07%	9.52%	28.57%
19	2	VICTORIA / BELMONT	21	28.57%	9.52%	47.62%
19	2	CHARLES STREET TERMINAL	21	33.33%		33.33%
20	1	CHARLES STREET TERMINAL	21	0.00%	0.00%	
20	1	VICTORIA / BELMONT	21	16.88%	4.76%	38.10%
20	1	INGLESIDE / HAZELGLEN	21	47.62%		47.62%
20	2	INGLESIDE / HAZELGLEN	21	4.76%	4.76%	
20	2	CHOPIN / BRYBECK	21	13.52%	4.76%	28.57%
20	2	VICTORIA / BELMONT	21	9.52%	9.52%	
20	2	CHARLES STREET TERMINAL	21	47.62%		47.62%
22	East	HIGHLAND HILLS MALL	18	0.00%	0.00%	
22	East	ACTIVA / GREY FOX	18	38.89%		38.89%
22	East	ACTIVA / SNOWDROP	18	0.00%	0.00%	
22	East	TILLSLEY / WESTMOUNT	18	9.52%	0.00%	44.44%
22	East	FOREST GLEN TERMINAL	18	4.98%	0.00%	11.11%
22	East	OTTAWA / HWY 8 RAMP	18	5.56%	5.56%	5.56%
22	East	STIRLING / COURTLAND	18	24.07%	5.56%	27.78%
22	East	CHARLES STREET TERMINAL	18	22.22%		22.22%
22	West	CHARLES STREET TERMINAL	9	0.00%	0.00%	
22	West	STIRLING / COURTLAND	13	15.38%	15.38%	15.38%
22	West	OTTAWA / HWY 8 RAMP	9	12.82%	0.00%	33.33%
22	West	FOREST GLEN TERMINAL	9	13.40%	0.00%	44.44%
22	West	ERINBROOK / HEDGESTONE	9	11.11%		11.11%
22	West	DAVID BERGEY / PEACH BLOSSOM	9	35.56%	0.00%	44.44%
22	West	ACTIVA / GREY FOX	9	38.89%	0.00%	44.44%
22	West	HIGHLAND HILLS MALL	9	11.11%		11.11%
23	East	CHARLES STREET TERMINAL	16	0.00%	0.00%	
23	East	FREDERICK / DUNHAM	17	27.65%	11.76%	29.41%
23	East	RIVER / OTTAWA	17	17.65%		17.65%
23	East	OTTAWA / LACKNER	17	23.53%		23.53%
23	East	LACKNER / CORFIELD	17	7.00%	17.65%	5.88%
23	East	FAIRVIEW PARK	9	66.67%		66.67%
23	East	FAIRVIEW PARK MALL	4	25.00%		25.00%
23	West	FAIRVIEW PARK	8	0.00%	0.00%	
23	West	FAIRVIEW PARK MALL	2	0.00%	0.00%	
23	West	LACKNER / CORFIELD	11	0.00%		0.00%
23	West	OTTAWA / OLDFIELD	11	5.30%	18.18%	0.00%
23	West	RIVER / OTTAWA	11	23.48%	18.18%	27.27%
23	West	FREDERICK / EDNA	11	16.67%	18.18%	9.09%
23	West	CHARLES STREET TERMINAL	11	0.00%		0.00%
24	1	CHARLES STREET TERMINAL	11	22.55%	27.27%	
24	1	HIGHLAND / BELMONT	12	30.77%	25.00%	33.33%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
24	1	HIGHLAND HILLS MALL	12	26.87%	16.67%	33.33%
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	41.67%		41.67%
24	2	ROLLING MEADOWS / WESTHEIGHTS	9	0.00%	0.00%	
24	2	WESTHEIGHTS / WINDING	9	33.33%		33.33%
24	2	WESTHEIGHTS / WESTFOREST	9	33.33%	33.33%	
24	2	HIGHLAND HILLS MALL	9	29.80%	33.33%	22.22%
24	2	HIGHLAND / BELMONT	9	22.22%	22.22%	22.22%
24	2	CHARLES STREET TERMINAL	9	11.11%		11.11%
25	1	CHARLES STREET TERMINAL	28	3.47%	3.57%	
25	1	QUEENS / WESTMOUNT	31	24.81%	3.23%	29.03%
25	1	CECILE / OVERLEA	4			
25	1	HIGHLAND HILLS MALL	32	7.93%	0.00%	15.63%
25	1	FORESTWOOD / MCGARRY	31	12.90%		12.90%
25	1	DRIFTWOOD / WESTHEIGHTS	31	14.70%	22.58%	12.90%
25	1	GOLDEN MEADOW / HAVENWOOD	32	12.50%		12.50%
25	2	GOLDEN MEADOW / HAVENWOOD	21	14.29%	14.29%	
25	2	WESTHEIGHTS / LORILEE	21			
25	2	HIGHLAND HILLS MALL	21	6.33%	4.76%	9.52%
25	2	QUEENS / WESTMOUNT	21	20.95%	28.57%	9.52%
25	2	CHARLES STREET TERMINAL	21	4.41%		4.76%
26	1	FOREST GLEN TERMINAL	9	0.00%	0.00%	
26	1	TRILLIUM / STRASBURG	9	0.00%		0.00%
26	1	TRILLIUM / GROFF	9			
26	2	TRILLIUM / GROFF	9	0.00%	0.00%	
26	2	TRILLIUM / STRASBURG	9	0.00%	0.00%	
26	2	FOREST GLEN TERMINAL	9	0.00%		0.00%
27	1	FAIRVIEW PARK MALL	8	0.00%	0.00%	
27	1	FAIRVIEW PARK	9	0.00%	0.00%	
27	1	MORRISON / MANOR	17	13.18%	5.88%	17.65%
27	1	QUINTE / MORRISON	17	11.76%		11.76%
27	2	QUINTE / MORRISON	11	9.09%	9.09%	
27	2	FAIRWAY / KING	11	9.09%	9.09%	9.09%
27	2	FAIRVIEW PARK MALL	4	25.00%		25.00%
27	2	FAIRVIEW PARK	7	14.29%		14.29%
29	1	RING / UNIVERSITY	8	0.00%	0.00%	
29	1	FISCHER-HALLMAN / KEATS	8	30.00%	0.00%	37.50%
29	2	KEATS / FISCHER-HALLMAN	6			
29	2	RING / UNIVERSITY	6	0.00%		0.00%
31	Downward	CONESTOGA MALL	8	14.84%	25.00%	
31	Downward	NORTHFIELD / BRIDGE	9			
31	Downward	UNIVERSITY / RIM PARK INTERNAL	5			
31	Downward	UNIVERSITY / LEXINGTON	8	0.00%		0.00%
31	Downward	LEXINGTON / ANNDALE	8	12.50%		12.50%
31	Downward	COLUMBIA / SPRUCE	8	50.00%	62.50%	0.00%
31	Downward	RING / UNIVERSITY	8	25.00%		25.00%
31	Upward	RING / UNIVERSITY	5	0.00%	0.00%	
31	Upward	COLUMBIA / KING	5	45.00%	0.00%	60.00%
31	Upward	LEXINGTON / DEARBORN	5	40.00%		40.00%
31	Upward	UNIVERSITY / LEXINGTON	5	40.00%		40.00%
31	Upward	UNIVERSITY / RIM PARK INTERNAL	2			
31	Upward	NORTHFIELD / BRIDGE	6			
31	Upward	CONESTOGA MALL	2			
32	2	KUMPF / NORTHFIELD	5			
32	2	WEBER / GOLDEN EAGLE	8	16.67%	50.00%	0.00%
32	2	CONESTOGO / COLBY	5			
32	2	CONESTOGA MALL	4			
33	1	FOREST GLEN TERMINAL	7	0.00%	0.00%	
33	1	STRASBURG / TRILLIUM	7			
33	1	PARKVALE / NEWCASTLE	2			
33	2	HURON / NEWCASTLE	4	75.00%	75.00%	
33	2	STRASBURG / TRILLIUM	8			
33	2	FOREST GLEN TERMINAL	8	0.00%		0.00%
35	1	KING / WILLIS	13	16.95%	23.08%	
35	1	ERB / WEBER	13	22.49%	30.77%	15.38%
35	1	BRIDGEPORT / LANCASTER	13	17.95%	23.08%	15.38%
35	1	AUBURN / SABLE	13	24.79%	46.15%	7.69%
35	1	BRIDGE / LEXINGTON	15			
35	1	CHESAPEAKE / SPINNAKER	13	69.23%	69.23%	
35	1	CONESTOGA MALL	15	6.67%		6.67%



Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
35	2	CONESTOGA MALL	14	5.91%	7.14%	
35	2	CHESAPEAKE / BRIGANTINE	14	0.00%		0.00%
35	2	BRIDGE / LEXINGTON	11	36.36%		36.36%
35	2	AUBURN / SABLE	14	7.14%	7.14%	7.14%
35	2	BRIDGEPORT / LANCASTER	14	14.29%	14.29%	14.29%
35	2	BRIDGEPORT / WEBER	14	21.43%	21.43%	21.43%
35	2	UPTOWN WATERLOO	14	0.00%		0.00%
51	Inbound	HOLIDAY INN TERMINAL	36	7.54%	8.33%	
51	Inbound	SMART!CENTRES CAMBRIDGE	37	31.68%	16.22%	45.95%
51	Inbound	CAMBRIDGE CENTRE TERMINAL	37	22.26%	5.41%	54.05%
51	Inbound	AINSLIE STREET TERMINAL	34	50.00%		50.00%
51	Outbound	AINSLIE STREET TERMINAL	49	7.25%	8.16%	
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	27.72%	8.51%	40.43%
51	Outbound	SMART!CENTRES CAMBRIDGE	40	25.55%	17.50%	45.00%
51	Outbound	HOLIDAY INN TERMINAL	40	37.36%		37.50%
52	North	AINSLIE STREET TERMINAL	23	0.00%	0.00%	
52	North	CORONATION / BARRETT	18	12.50%	5.56%	33.33%
52	North	KING / LOWTHER	18	22.22%	22.22%	22.22%
52	North	PRESTON / FOUNTAIN	18	22.22%		22.22%
52	North	SHANTZ HILL / HWY 401 RAMP	18	30.56%	44.44%	16.67%
52	North	SPORTSWORLD	18	33.33%	33.33%	
52	North	FAIRVIEW PARK	18	11.11%		11.11%
52	South	FAIRVIEW PARK	16	5.96%	6.25%	
52	South	FAIRVIEW PARK MALL	5	0.00%	0.00%	
52	South	SPORTSWORLD	18	27.49%	22.22%	38.89%
52	South	SHANTZ HILL / PRESTON	21	34.69%	42.86%	23.81%
52	South	PRESTON / FOUNTAIN	20	25.00%		25.00%
52	South	KING / LOWTHER	20	30.00%	35.00%	25.00%
52	South	CORONATION / MARTIN	21	21.03%	19.05%	33.33%
52	South	AINSLIE STREET TERMINAL	21	9.52%		9.52%
53	Inbound	HOLIDAY INN TERMINAL	8	0.00%	0.00%	
53	Inbound	FRANKLIN / SAGINAW	8	51.39%	62.50%	37.50%
53	Inbound	DOBBIE / SAVAGE	8			
53	Inbound	MAIN / DUNDAS	8	50.00%	62.50%	37.50%
53	Inbound	AINSLIE STREET TERMINAL	8	25.00%		25.00%
53	Outbound	AINSLIE STREET TERMINAL	8	0.00%	0.00%	
53	Outbound	MAIN / DUNDAS	8	47.50%	0.00%	62.50%
53	Outbound	DOBBIE / SAVAGE	8	62.50%		62.50%
53	Outbound	FRANKLIN / SAGINAW	8	23.71%	0.00%	62.50%
53	Outbound	HOLIDAY INN TERMINAL	8	50.00%		50.00%
54	East	MAIN / DUNDAS	44	23.47%	18.18%	25.00%
54	East	LISBON PINES / GATEHOUSE	44	28.64%	13.64%	38.64%
54	East	AINSLIE STREET TERMINAL	88	5.95%	0.00%	18.18%
54	East	CHAMPLAIN / CHRISTOPHER	44	29.35%	11.36%	43.18%
55	West	SOUTHWOOD / CEDAR	23	33.62%	0.00%	34.78%
55	West	AINSLIE STREET TERMINAL	44	7.34%	0.00%	22.73%
55	West	SOUTHWOOD / ST ANDREWS	22	11.90%	0.00%	72.73%
55	West	ST ANDREWS / GILHOLM	23	19.57%	0.00%	52.17%
56	West	BISHOP / RAILWAY	29	19.40%	3.45%	27.59%
56	West	ROSE / ARGYLE	28	13.80%	10.71%	25.00%
56	West	CAMBRIDGE CENTRE TERMINAL	56	13.59%	0.00%	28.57%
56	West	WESTMINSTER / KING	29	18.53%	0.00%	34.48%
56	West	LANG'S / CONCESSION	29	27.09%	3.45%	44.83%
57	West	SUNSET / SAXONY	34	53.19%	0.00%	91.18%
57	West	BLAIR / BISMARK	33	42.65%	0.00%	60.61%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
57	West	AINSLIE STREET TERMINAL	72	7.18%	0.00%	27.78%
57	West	HILLCREST / CHURCHILL	34	33.82%	0.00%	67.65%
58	East	MOSCRIP / BRONSON	14	50.42%	0.00%	57.14%
58	East	MUNCH / ELGIN	14	13.10%	0.00%	78.57%
58	East	AINSLIE STREET TERMINAL	28	4.31%	0.00%	10.71%
58	East	HILLTOP / FRANKLIN	14	10.00%	0.00%	50.00%
59	East	CHAMPLAIN / CHRISTOPHER	20	26.85%	0.00%	35.00%
59	East	AINSLIE STREET TERMINAL	45	4.22%	0.00%	15.56%
59	East	CHAMPLAIN / ELGIN	21	28.57%	0.00%	57.14%
60	East	GLAMIS / ROBSON	28	19.40%	10.71%	32.14%
60	East	CAMBRIDGE CENTRE TERMINAL	56	3.43%	0.00%	8.93%
60	East	ELGIN / SAGINAW	28	32.43%	0.00%	75.00%
60	East	MUNCH / KOVAC	28	7.14%	7.14%	
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8	0.00%	0.00%	
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6			
61	East	KING / WESTMINSTER	8	25.00%	100.00%	0.00%
61	East	CAMBRIDGE CENTRE	2	0.00%		0.00%
61	West	CAMBRIDGE CENTRE	2	0.00%	0.00%	
61	West	KING / WESTMINSTER	5	60.00%		60.00%
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	5			
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	5			
62	West	SOUTHGATE / DAY	19	0.00%	0.00%	
62	West	AINSLIE STREET TERMINAL	46	3.35%	0.00%	10.87%
62	West	WOODSIDE / CEDAR	23	17.39%	17.39%	
63	East	ALISON / ELGIN	21	0.00%	0.00%	
63	East	AINSLIE STREET TERMINAL	42	2.18%	0.00%	4.76%
63	East	DUNDAS / FRANKLIN	21	8.50%	0.00%	47.62%
63	East	CHAMPLAIN / CHRISTOPHER	21	17.17%	4.76%	42.86%
64	West	LANG'S / WALTER	18	28.76%	0.00%	44.44%
64	West	EAGLE / KING	18	39.35%	0.00%	55.56%
64	West	CAMBRIDGE CENTRE TERMINAL	36	5.86%	0.00%	25.00%
64	West	ROSE / ARGYLE	18			
64	West	BISHOP / RAILWAY	18	23.81%	0.00%	55.56%
65	North	HOLIDAY INN TERMINAL	34	5.74%	0.00%	32.35%
65	North	WINSTON / SCOTTDALE	17	25.00%	11.76%	29.41%
65	North	FISHER MILLS / FEARNWOOD	17	41.80%	0.00%	52.94%
65	North	FRANKLIN / WINSTON	17			
66	East	FRANKLIN / WINSTON	7	28.57%		28.57%
66	East	COOPER / ELLIS	7	14.29%	28.57%	0.00%
66	East	HOLIDAY INN TERMINAL	14	0.00%	0.00%	0.00%
66	East	WINSTON / WESTBURY	7			
67	North	CAMBRIDGE CENTRE TERMINAL	14	34.11%	0.00%	35.71%
67	North	FLEMING / PINEBUSH	7	5.71%	0.00%	57.14%
71	East	QUEEN / HUNGERFORD	18			
71	East	HOLIDAY INN TERMINAL	36	8.01%	2.78%	16.67%
71	East	ELLIS / ADLER	18	70.83%	0.00%	94.44%
110	Downward	FAIRVIEW PARK	19	0.00%	0.00%	
110	Downward	PIONEER / OLD CARRIAGE	26	19.23%		19.23%
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	19	21.05%		21.05%
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	13	0.00%	0.00%	
110	Upward	PIONEER / OLD CARRIAGE	13	34.32%	7.69%	46.15%
110	Upward	FAIRVIEW PARK	13	30.77%		30.77%
111	North	AINSLIE STREET TERMINAL	2			
111	South	AINSLIE STREET TERMINAL	4	0.00%		0.00%
200	Downward	CONESTOGA MALL	508	2.52%	2.56%	
200	Downward	McCORMICK	506	7.52%	2.96%	19.76%
200	Downward	R & T PARK	508	9.84%	8.46%	19.29%
200	Downward	U WATERLOO	507	9.58%	7.10%	13.81%
200	Downward	LAURIER	507	12.97%	7.69%	20.91%
200	Downward	UPTOWN WATERLOO	341	23.16%	12.90%	29.33%
200	Downward	KING / WILLIS	53	22.22%	9.43%	28.30%
200	Downward	GRAND RIVER HOSPITAL	508	20.82%	13.19%	25.98%
200	Downward	CHARLES TERMINAL	509	17.32%	3.54%	28.88%
200	Downward	OTTAWA	508	18.40%	8.86%	23.62%
200	Downward	FAIRVIEW	508	14.60%	5.51%	16.93%
200	Downward	SMART!CENTRES CAMBRIDGE	506	25.16%	25.30%	25.10%
200	Downward	CAMBRIDGE CENTRE	504	21.24%	16.87%	24.80%
200	Downward	AINSLIE STREET TERMINAL	496	30.76%		30.85%
200	Upward	AINSLIE STREET TERMINAL	450	1.98%	2.00%	

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
200	Upward	CAMBRIDGE CENTRE	448	9.83%	6.47%	13.17%
200	Upward	SMART!CENTRES CAMBRIDGE	447	11.57%	10.07%	15.66%
200	Upward	FAIRVIEW	447	8.52%	5.37%	15.88%
200	Upward	OTTAWA	449	15.40%	0.00%	29.62%
200	Upward	CHARLES TERMINAL	448	15.43%	4.46%	25.22%
200	Upward	GRAND RIVER HOSPITAL	444	18.77%	2.25%	35.59%
200	Upward	UPTOWN WATERLOO	445	19.81%	1.80%	34.16%
200	Upward	LAURIER	444	28.41%	3.60%	39.19%
200	Upward	U WATERLOO	444	18.17%	1.80%	45.50%
200	Upward	R & T PARK	444	29.84%	5.18%	47.07%
200	Upward	McCORMICK	444	38.01%	9.01%	42.12%
200	Upward	CONESTOGA MALL	425	43.98%		44.00%

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
1	East	CHARLES STREET TERMINAL	26	0.44	0.44	
1	East	FREDERICK / WEBER	26	0.02	0.00	0.02
1	East	BECKER / BELLEVIEW	9	0.20	0.00	0.20
1	East	LORRAINE / BIRKSHIRE	17	0.45	0.00	0.45
1	East	RIVER / HICKSON	9	0.07	0.00	0.07
1	East	OTTAWA / OLDFIELD	17	0.29	0.02	0.27
1	East	STANLEY PARK MALL TERMINAL	25	1.47		1.47
1	West	STANLEY PARK MALL TERMINAL	24	0.00	0.00	
1	West	LACKNER / BANBURY	9	0.10	0.00	0.10
1	West	RIVER / HALLIWELL	25	0.02	0.00	0.02
1	West	BELLEVIEW / BECKER	15	0.05	0.00	0.05
1	West	WEBER / SCOTT	26	0.07	0.00	0.07
1	West	CHARLES STREET TERMINAL	26	1.19		1.19
2	Downward	HIGHLAND HILLS MALL	13	0.00	0.00	
2	Downward	GREENBROOK / WESTMOUNT	14	0.09	0.00	0.09
2	Downward	GREENBROOK / STIRLING	14	0.00	0.00	0.00
2	Downward	CHARLES STREET TERMINAL	15	1.49		1.49
2	Upward	CHARLES STREET TERMINAL	13	0.00	0.00	
2	Upward	SOUTHMOOR / AVALON	13	0.09	0.00	0.09
2	Upward	GREENBROOK / STIRLING	13	0.01	0.00	0.01
2	Upward	WESTMOUNT / VILLAGE	13	0.04	0.00	0.04
2	Upward	HIGHLAND HILLS MALL	13	0.36		0.36
3	1	CHARLES STREET TERMINAL	19	0.00	0.00	
3	1	COURTLAND / STIRLING	19	0.12	0.00	0.12
3	1	STRASBURG / TRANSIT GARAGE	21	0.14	0.00	0.14
3	1	OTTAWA / WESTMOUNT	21	0.46	0.05	0.41
3	1	WILLIAMSBURG / DINISON	21	0.05	0.01	0.05
3	1	FOREST GLEN TERMINAL	21	0.24		0.24
3	2	FOREST GLEN TERMINAL	18	0.75	0.75	
3	2	WILLIAMSBURG / DINISON	18	0.02	0.00	0.02
3	2	OTTAWA / WESTMOUNT	18	0.06	0.06	0.00
3	2	STRASBURG / TRANSIT GARAGE	18	0.10	0.06	0.04
3	2	COURTLAND / MADISON	18	0.30	0.04	0.26
3	2	CHARLES STREET TERMINAL	18	1.18		1.18
4	Downward	UNIVERSITY / RESURRECTION	12	0.03	0.03	
4	Downward	GLASGOW / WESTMOUNT	12	0.08	0.01	0.07
4	Downward	UNION / KING	12	0.26	0.24	0.02
4	Downward	MOORE / BREITHAUP	12	0.24	0.14	0.10
4	Downward	CHARLES STREET TERMINAL	12	0.30		0.30
4	Upward	CHARLES STREET TERMINAL	14	0.00	0.00	
4	Upward	MOORE / WELLINGTON	14	0.00	0.00	0.00
4	Upward	UNION / PARK	14	0.00	0.00	0.00
4	Upward	GLASGOW / WESTMOUNT	14	0.19	0.01	0.18
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	0.13	0.01	0.12
4	Upward	UNIVERSITY / BAKER	8	0.00	0.00	0.00
4	Upward	UNIVERSITY / RESURRECTION	14	0.00		0.00
5	1	UPTOWN WATERLOO	15	2.60	2.60	
5	1	ERB / WESTMOUNT	15	0.28	0.28	0.00
5	1	FISCHER-HALLMAN / ERB	15	0.57	0.28	0.29
5	1	KEATS / KEATSWOOD	15	0.12		0.12
5	2	KEATS / KEATSWOOD	13	0.05	0.05	
5	2	GATEVIEW / WESTVALE	12	0.02	0.02	0.00
5	2	ERB / FISCHER-HALLMAN	12	0.83	0.78	0.06
5	2	ERB / WESTMOUNT	13	0.48	0.38	0.09
5	2	KING / WILLIS	13	0.43		0.43
6	Downward	DANIEL / BLOOMINGDALE	9	0.02	0.02	
6	Downward	LANCASTER / HAMEL	10	0.73	0.72	0.01
6	Downward	LANCASTER / GUELPH	9	0.05	0.05	0.00
6	Downward	WELLINGTON / MARGARET	9	0.70	0.69	0.01
6	Downward	CHARLES STREET TERMINAL	9	1.63		1.63
6	Upward	CHARLES STREET TERMINAL	10	1.11	1.11	
6	Upward	WELLINGTON / MARGARET	10	0.13	0.03	0.10
6	Upward	LANCASTER / GUELPH	10	0.09	0.00	0.09
6	Upward	LANCASTER / HAMEL	10	0.70	0.06	0.64
6	Upward	DANIEL / BLOOMINGDALE	10	0.00		0.00
7	Downward	RING / NORTH CAMPUS	21	0.54	0.54	
7	Downward	CONESTOGA MALL	30	2.16	2.16	
7	Downward	U WATERLOO	11	3.40	3.40	
7	Downward	COLUMBIA / HAZEL	21	0.38	0.03	0.35

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
7	Downward	UNIVERSITY / KING	11	0.00	0.00	0.00
7	Downward	KING / UNIVERSITY	51	0.71	0.23	0.48
7	Downward	UPTOWN WATERLOO	14	0.00	0.00	0.00
7	Downward	KING / WILLIS	2	0.00	0.00	0.00
7	Downward	CHARLES STREET TERMINAL	62	4.02	0.29	3.74
7	Downward	KING / OTTAWA	27	0.19	0.03	0.16
7	Downward	FOURTH / CONNAUGHT	3	0.00	0.00	0.00
7	Downward	FOURTH / WILSON	8	0.16	0.00	0.16
7	Downward	KINZIE / WEBER	16	0.30	0.00	0.30
7	Downward	FAIRVIEW PARK	14	1.77		1.77
7	Downward	FAIRVIEW PARK MALL	12	0.92		0.92
7	Upward	FAIRVIEW PARK	21	3.32	3.32	
7	Upward	FAIRVIEW PARK MALL	9	0.00	0.00	
7	Upward	CONNAUGHT / FIFTH	8	0.38	0.13	0.25
7	Upward	FOURTH / WILSON	10	0.09	0.00	0.09
7	Upward	WEBER / KINZIE	12	0.24	0.11	0.13
7	Upward	CHARLES STREET TERMINAL	50	2.43	1.52	0.91
7	Upward	KING / OTTAWA	30	0.50	0.33	0.17
7	Upward	UPTOWN WATERLOO	49	1.25	0.70	0.55
7	Upward	UNIVERSITY / KING	22	1.85	0.87	0.98
7	Upward	RING / UNIVERSITY	22	1.45	0.54	0.92
7	Upward	KING / UNIVERSITY	27	2.55	1.51	1.04
7	Upward	RING / NORTH CAMPUS	22	0.16		0.16
7	Upward	CONESTOGA MALL	18	2.47		2.47
7	Upward	COLUMBIA / HAZEL	9	0.48	0.11	0.37
7	Upward	U WATERLOO	8	3.13		3.13
8	North	FAIRVIEW PARK	21	0.65	0.65	
8	North	FAIRVIEW PARK MALL	6	0.00	0.00	
8	North	FRANKLIN / PROSPECT	9	0.04	0.04	0.00
8	North	WALTON / VANIER	18	0.61	0.00	0.61
8	North	CHARLES STREET TERMINAL	40	1.74	0.38	1.36
8	North	COURTLAND / STIRLING	18	0.54	0.00	0.54
8	North	OTTAWA / WEBER	9	0.07	0.07	0.00
8	North	BELMONT / HIGHLAND	17	0.62	0.40	0.21
8	North	MARGARET / WELLINGTON	23	0.25	0.00	0.25
8	North	UNION / WEBER	23	0.08	0.00	0.08
8	North	UNION / WESTMOUNT	18	0.12	0.11	0.01
8	North	UNIVERSITY / SEAGRAM	18	2.14	1.38	0.75
8	North	UNIVERSITY / KING	41	0.75		0.75
8	South	UNIVERSITY / KING	44	0.31	0.31	
8	South	UNIVERSITY / SEAGRAM	15	0.66	0.00	0.66
8	South	UNION / WEBER	29	0.09	0.02	0.07
8	South	UNION / WESTMOUNT	15	0.84	0.00	0.84
8	South	MARGARET / WELLINGTON	29	0.29	0.07	0.21
8	South	CHARLES STREET TERMINAL	44	2.39	0.89	1.50
8	South	BELMONT / BURN	15	3.04	0.05	2.99
8	South	COURTLAND / VERNON	22	0.10	0.01	0.08
8	South	WALTON / VANIER	22	0.62	0.17	0.45
8	South	OTTAWA / MCKENZIE	7	0.04	0.00	0.04
8	South	FAIRVIEW PARK MALL	10	2.80		2.80
8	South	FAIRVIEW PARK	19	1.07		1.07
8	South	WEBER / FRANKLIN	7	0.00	0.00	0.00
9	Downward	CONESTOGA MALL	28	0.44	0.44	
9	Downward	NORTHFIELD / WEBER	29	0.69	0.04	0.65
9	Downward	HIGHPOINT / WINTERGREEN	29	0.21	0.00	0.20
9	Downward	PARKSIDE / GLENELM	29	0.21	0.01	0.20
9	Downward	HAZEL / WILDWOOD	29	0.51	0.16	0.35
9	Downward	HAZEL / UNIVERSITY	26	1.69	0.30	1.38
9	Downward	U WATERLOO	25	2.39		2.39
9	Upward	U WATERLOO	35	4.96	4.96	
9	Upward	HAZEL / UNIVERSITY	35	1.67	1.67	0.00
9	Upward	HAZEL / BEARINGER	35	0.49	0.49	0.00
9	Upward	PARKSIDE / GLENELM	15	0.08	0.08	0.00
9	Upward	HIGHPOINT / WINTERGREEN	35	0.10	0.07	0.03
9	Upward	NORTHFIELD / WEBER	36	0.74	0.69	0.04
9	Upward	CONESTOGA MALL	35	1.30		1.30
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	25	1.90	1.90	
10	Inbound	PINNACLE / OLD MILL	25	0.02	0.02	0.00
10	Inbound	PIONEER / OLD CARRIAGE	25	0.23	0.19	0.04

					SA <sub>3</sub> : Number of Passengers Affected		
Route	Direction*	Timepoint	Obs.	Total	Early	Late	
10	Inbound	DOON VILLAGE / MILLWOOD	25	1.18	1.06	0.12	
10	Inbound	FAIRVIEW PARK	18	1.29		1.29	
10	Inbound	FAIRVIEW PARK MALL	7	0.00		0.00	
10	Outbound	FAIRVIEW PARK	24	0.98	0.98		
10	Outbound	DOON VILLAGE / MILLWOOD	25	1.34	0.04	1.31	
10	Outbound	PIONEER / OLD CARRIAGE	25	0.12	0.00	0.12	
10	Outbound	PINNACLE / OLD MILL	24	0.00	0.00	0.00	
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	24	0.94		0.94	
11	1	CHARLES STREET TERMINAL	22	0.00	0.00		
11	1	STIRLING / COURTLAND	36	0.03	0.01	0.02	
11	1	ALPINE / OTTAWA	36	0.20	0.03	0.18	
11	1	COUNTRY HILL / BLOCK LINE	22	0.36	0.01	0.35	
11	1	FOREST GLEN TERMINAL	22	2.40		2.40	
11	2	FOREST GLEN TERMINAL	41	0.19	0.19		
11	2	KINGSWOOD / BLOCK LINE	42	0.16	0.06	0.09	
11	2	HOFFMAN / OTTAWA	42	0.06	0.01	0.05	
11	2	STIRLING / COURTLAND	42	0.05	0.00	0.05	
11	2	CHARLES STREET TERMINAL	42	2.40		2.40	
12	Downward	CONESTOGA MALL	20	3.89	3.89		
12	Downward	UNIVERSITY / KING	34	2.57	1.79	0.78	
12	Downward	BRIDGE / UNIVERSITY	13	0.20	0.00	0.20	
12	Downward	UNIVERSITY / SEAGRAM	34	2.12	1.64	0.48	
12	Downward	FISCHER-HALLMAN / UNIVERSITY	29	0.84	0.14	0.71	
12	Downward	HIGHLAND HILLS MALL	33	3.95	0.63	3.32	
12	Downward	WESTMOUNT / OTTAWA	30	0.15	0.04	0.11	
12	Downward	FOREST GLEN TERMINAL	30	1.92	0.68	1.24	
12	Downward	FAIRVIEW PARK MALL	14	0.88		0.88	
12	Downward	FAIRVIEW PARK	11	0.00		0.00	
12	Upward	FAIRVIEW PARK	16	0.00	0.00		
12	Upward	FAIRVIEW PARK MALL	4	0.00	0.00		
12	Upward	FOREST GLEN TERMINAL	20	1.55	0.26	1.28	
12	Upward	WESTMOUNT / OTTAWA	22	0.74	0.28	0.46	
12	Upward	HIGHLAND HILLS MALL	20	2.71	0.27	2.45	
12	Upward	FISCHER-HALLMAN / UNIVERSITY	20	0.59	0.24	0.35	
12	Upward	UNIVERSITY / SEAGRAM	20	6.88	1.81	5.06	
12	Upward	UNIVERSITY / KING	20	2.30	0.34	1.96	
12	Upward	BRIDGE / UNIVERSITY	13	0.73	0.07	0.66	
12	Upward	CONESTOGA MALL	14	2.22		2.22	
13	1	U WATERLOO	26	3.99	3.99		
13	1	COLUMBIA / FISCHER-HALLMAN	26	0.99	0.13	0.86	
13	1	LAURELWOOD / ERBSVILLE	26	1.07		1.07	
13	2	LAURELWOOD / ERBSVILLE	33	0.96	0.96		
13	2	COLUMBIA / FISCHER-HALLMAN	34	0.25	0.23	0.02	
13	2	U WATERLOO	31	0.42		0.42	
14	1	CONESTOGA MALL	3	0.00	0.00		
14	1	BATHURST / MCMURRAY	3	0.00	0.00	0.00	
14	1	WYMAN / COLBY	2	0.00		0.00	
14	2	WYMAN / COLBY(2)	4	0.00	0.00		
14	2	WYMAN / COLBY	4	0.00	0.00	0.00	
14	2	MCMURRAY / NORTHLAND	4	0.13	0.13	0.00	
14	2	CONESTOGA MALL	4	0.00		0.00	
15	East	CHARLES STREET TERMINAL	23	0.00	0.00		
15	East	QUEEN / LANCASTER	23	0.14	0.00	0.14	
15	East	EDNA / FREDERICK	22	0.17	0.01	0.16	
15	East	LACKNER / VICTORIA	22	0.07		0.07	
15	West	LACKNER / VICTORIA	16	0.61	0.61		
15	West	NATCHEZ / HALIFAX	16	0.06	0.02	0.04	
15	West	FREDERICK / EDNA	16	0.13	0.08	0.05	
15	West	QUEEN / LANCASTER	16	0.17	0.13	0.05	
15	West	CHARLES STREET TERMINAL	16	3.16		3.16	
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	14	0.00	0.00		
16	Inbound	PIONEER / BECHTEL	16	0.06	0.02	0.04	
16	Inbound	STRASBURG / TRILLIUM	14	0.00	0.00	0.00	
16	Inbound	FOREST GLEN TERMINAL	14	1.21		1.21	
16	Outbound	FOREST GLEN TERMINAL	15	0.00	0.00		
16	Outbound	STRASBURG / TRILLIUM	15	0.00	0.00	0.00	
16	Outbound	PIONEER / BECHTEL	15	0.12	0.00	0.12	
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	0.11		0.11	
17	Downward	LACKNER / VICTORIA	4	0.00	0.00		

					SA <sub>3</sub> : Number of Passengers Affected		
Route	Direction*	Timepoint	Obs.	Total	Early	Late	
17	Downward	KEEWATIN / OTTAWA	4	0.00	0.00	0.00	
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00	0.00	0.00	
17	Downward	RIVER / FAIRWAY	4	0.00	0.00	0.00	
17	Downward	FAIRVIEW PARK	1	0.00		0.00	
17	Upward	FAIRVIEW PARK	2	0.00	0.00		
17	Upward	FAIRVIEW PARK MALL	2	0.00	0.00		
17	Upward	RIVER / FAIRWAY	4	0.75	0.00	0.75	
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00	0.00	0.00	
17	Upward	KEEWATIN / OTTAWA	4	0.00	0.00	0.00	
17	Upward	LACKNER / VICTORIA	4	0.00		0.00	
18	Downward	MAPLE / GUELPH	9	0.01	0.01		
18	Downward	GUELPH / MARGARET	10	0.04	0.00	0.04	
18	Downward	WEBER / WELLINGTON	10	0.14	0.14	0.00	
18	Downward	CHARLES STREET TERMINAL	10	0.84		0.84	
18	Upward	CHARLES STREET TERMINAL	10	0.00	0.00		
18	Upward	WEBER / WELLINGTON	3	0.11	0.00	0.11	
18	Upward	GUELPH / FLOYD	10	0.06	0.00	0.06	
18	Upward	MAPLE / GUELPH	10	0.06		0.06	
19	1	CHARLES STREET TERMINAL	27	0.00	0.00		
19	1	VICTORIA / BELMONT	27	0.05	0.00	0.05	
19	1	CHOPIN / BRYBECK	27	1.45	0.00	1.45	
19	1	HAZELGLEN / VICTORIA	27	0.41	0.02	0.39	
19	1	WESTFOREST / HIDDEN CREEK	27	0.72	0.01	0.71	
19	1	HIGHLAND HILLS MALL	27	1.73		1.73	
19	2	HIGHLAND HILLS MALL	21	0.54	0.54		
19	2	WESTFOREST / VICTORIA	21	1.44	0.00	1.44	
19	2	HAZELGLEN / MOOREGATE	21	0.72	0.03	0.69	
19	2	CHOPIN / BRYBECK	21	0.43	0.06	0.37	
19	2	VICTORIA / BELMONT	21	0.08	0.01	0.07	
19	2	CHARLES STREET TERMINAL	21	1.27		1.27	
20	1	CHARLES STREET TERMINAL	21	0.00	0.00		
20	1	VICTORIA / BELMONT	21	0.09	0.02	0.07	
20	1	INGLESIDE / HAZELGLEN	21	0.41		0.41	
20	2	INGLESIDE / HAZELGLEN	21	0.04	0.04		
20	2	CHOPIN / BRYBECK	21	0.44	0.10	0.34	
20	2	VICTORIA / BELMONT	21	0.01	0.01	0.00	
20	2	CHARLES STREET TERMINAL	21	2.29		2.29	
22	East	HIGHLAND HILLS MALL	18	0.00	0.00		
22	East	ACTIVA / GREY FOX	18	0.30	0.00	0.30	
22	East	ACTIVA / SNOWDROP	18	0.00	0.00	0.00	
22	East	TILLSLEY / WESTMOUNT	18	0.07	0.00	0.07	
22	East	FOREST GLEN TERMINAL	18	0.64	0.00	0.64	
22	East	OTTAWA / HWY 8 RAMP	18	0.07	0.06	0.01	
22	East	STIRLING / COURTLAND	18	0.08	0.00	0.08	
22	East	CHARLES STREET TERMINAL	18	1.80		1.80	
22	West	CHARLES STREET TERMINAL	9	0.00	0.00		
22	West	STIRLING / COURTLAND	13	0.11	0.07	0.04	
22	West	OTTAWA / HWY 8 RAMP	9	0.19	0.00	0.19	
22	West	FOREST GLEN TERMINAL	9	1.88	0.00	1.88	
22	West	ERINBROOK / HEDGESTONE	9	0.06	0.00	0.06	
22	West	DAVID BERGEY / PEACH BLOSSOM	9	0.40	0.00	0.40	
22	West	ACTIVA / GREY FOX	9	0.35	0.00	0.35	
22	West	HIGHLAND HILLS MALL	9	0.49		0.49	
23	East	CHARLES STREET TERMINAL	16	0.00	0.00		
23	East	FREDERICK / DUNHAM	17	0.16	0.01	0.16	
23	East	RIVER / OTTAWA	17	0.28	0.00	0.28	
23	East	OTTAWA / LACKNER	17	0.03	0.00	0.03	
23	East	LACKNER / CORFIELD	17	0.09	0.02	0.07	
23	East	FAIRVIEW PARK	9	0.89		0.89	
23	East	FAIRVIEW PARK MALL	4	0.13		0.13	
23	West	FAIRVIEW PARK	8	0.00	0.00		
23	West	FAIRVIEW PARK MALL	2	0.00	0.00		
23	West	LACKNER / CORFIELD	11	0.00	0.00	0.00	
23	West	OTTAWA / OLDFIELD	11	0.12	0.12	0.00	
23	West	RIVER / OTTAWA	11	0.26	0.08	0.17	
23	West	FREDERICK / EDNA	11	0.27	0.25	0.02	
23	West	CHARLES STREET TERMINAL	11	0.00		0.00	
24	1	CHARLES STREET TERMINAL	11	4.74	4.74		
24	1	HIGHLAND / BELMONT	12	1.00	0.25	0.75	



					SA <sub>3</sub> : Number of Passengers Affected		
Route	Direction*	Timepoint	Obs.	Total	Early	Late	
24	1	HIGHLAND HILLS MALL	12	2.19	0.53	1.67	
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	0.90		0.90	
24	2	ROLLING MEADOWS / WESTHEIGHTS	9	0.00	0.00		
24	2	WESTHEIGHTS / WINDING	9	0.04	0.00	0.04	
24	2	WESTHEIGHTS / WESTFOREST	9	0.48	0.48	0.00	
24	2	HIGHLAND HILLS MALL	9	1.46	1.11	0.35	
24	2	HIGHLAND / BELMONT	9	0.27	0.05	0.22	
24	2	CHARLES STREET TERMINAL	9	0.25		0.25	
25	1	CHARLES STREET TERMINAL	28	0.46	0.46		
25	1	QUEENS / WESTMOUNT	31	0.44	0.01	0.43	
25	1	CECILE / OVERLEA	4	0.00	0.00	0.00	
25	1	HIGHLAND HILLS MALL	32	0.68	0.00	0.68	
25	1	FORESTWOOD / MCGARRY	31	0.04	0.00	0.04	
25	1	DRIFTWOOD / WESTHEIGHTS	31	0.13	0.04	0.09	
25	1	GOLDEN MEADOW / HAVENWOOD	32	0.14		0.14	
25	2	GOLDEN MEADOW / HAVENWOOD	21	0.06	0.06		
25	2	WESTHEIGHTS / LORILEE	21	0.00	0.00	0.00	
25	2	HIGHLAND HILLS MALL	21	0.41	0.21	0.20	
25	2	QUEENS / WESTMOUNT	21	0.20	0.16	0.04	
25	2	CHARLES STREET TERMINAL	21	0.22		0.22	
26	1	FOREST GLEN TERMINAL	9	0.00	0.00		
26	1	TRILLIUM / STRASBURG	9	0.00	0.00	0.00	
26	1	TRILLIUM / GROFF	9	0.00		0.00	
26	2	TRILLIUM / GROFF	9	0.00	0.00		
26	2	TRILLIUM / STRASBURG	9	0.00	0.00	0.00	
26	2	FOREST GLEN TERMINAL	9	0.00		0.00	
27	1	FAIRVIEW PARK MALL	8	0.00	0.00		
27	1	FAIRVIEW PARK	9	0.00	0.00		
27	1	MORRISON / MANOR	17	0.39	0.07	0.32	
27	1	QUINTE / MORRISON	17	0.08		0.08	
27	2	QUINTE / MORRISON	11	0.02	0.02		
27	2	FAIRWAY / KING	11	0.07	0.06	0.01	
27	2	FAIRVIEW PARK MALL	4	1.00		1.00	
27	2	FAIRVIEW PARK	7	0.63		0.63	
29	1	RING / UNIVERSITY	8	0.00	0.00		
29	1	FISCHER-HALLMAN / KEATS	8	0.19	0.00	0.19	
29	2	KEATS / FISCHER-HALLMAN	6	0.00	0.00	0.00	
29	2	RING / UNIVERSITY	6	0.00		0.00	
31	Downward	CONESTOGA MALL	8	0.59	0.59		
31	Downward	NORTHFIELD / BRIDGE	9	0.00	0.00	0.00	
31	Downward	UNIVERSITY / RIM PARK INTERNAL	5	0.00	0.00	0.00	
31	Downward	UNIVERSITY / LEXINGTON	8	0.00	0.00	0.00	
31	Downward	LEXINGTON / ANNDALE	8	0.02	0.00	0.02	
31	Downward	COLUMBIA / SPRUCE	8	0.31	0.31	0.00	
31	Downward	RING / UNIVERSITY	8	0.22		0.22	
31	Upward	RING / UNIVERSITY	5	0.00	0.00		
31	Upward	COLUMBIA / KING	5	1.08	0.00	1.08	
31	Upward	LEXINGTON / DEARBORN	5	0.08	0.00	0.08	
31	Upward	UNIVERSITY / LEXINGTON	5	0.08	0.00	0.08	
31	Upward	UNIVERSITY / RIM PARK INTERNAL	2	0.00	0.00	0.00	
31	Upward	NORTHFIELD / BRIDGE	6	0.00	0.00	0.00	
31	Upward	CONESTOGA MALL	2	0.00		0.00	
32	2	KUMPF / NORTHFIELD	5	0.00	0.00		
32	2	WEBER / GOLDEN EAGLE	8	0.13	0.13	0.00	
32	2	CONESTOGO / COLBY	5	0.00	0.00	0.00	
32	2	CONESTOGA MALL	4	0.00		0.00	
33	1	FOREST GLEN TERMINAL	7	0.00	0.00		
33	1	STRASBURG / TRILLIUM	7	0.00	0.00	0.00	
33	1	PARKVALE / NEWCASTLE	2	0.00	0.00	0.00	
33	2	HURON / NEWCASTLE	4	0.38	0.38		
33	2	STRASBURG / TRILLIUM	8	0.00	0.00	0.00	
33	2	FOREST GLEN TERMINAL	8	0.00		0.00	
35	1	KING / WILLIS	13	2.11	2.11		
35	1	ERB / WEBER	13	0.22	0.14	0.08	
35	1	BRIDGEPORT / LANCASTER	13	0.25	0.11	0.14	
35	1	AUBURN / SABLE	13	0.17	0.14	0.03	
35	1	BRIDGE / LEXINGTON	15	0.00	0.00	0.00	
35	1	CHESAPEAKE / SPINNAKER	13	0.16	0.16	0.00	
35	1	CONESTOGA MALL	15	0.26		0.26	

						SA <sub>3</sub> : Number of Passengers Affected	
Route	Direction*	Timepoint	Obs.	Total	Early	Late	
35	2	CONESTOGA MALL	14	0.95	0.95		
35	2	CHESAPEAKE / BRIGANTINE	14	0.00	0.00	0.00	
35	2	BRIDGE / LEXINGTON	11	0.03	0.00	0.03	
35	2	AUBURN / SABLE	14	0.08	0.04	0.04	
35	2	BRIDGEPORT / LANCASTER	14	0.28	0.14	0.13	
35	2	BRIDGEPORT / WEBER	14	0.35	0.14	0.21	
35	2	UPTOWN WATERLOO	14	0.00		0.00	
51	Inbound	HOLIDAY INN TERMINAL	36	0.42	0.42		
51	Inbound	SMART!CENTRES CAMBRIDGE	37	0.64	0.16	0.48	
51	Inbound	CAMBRIDGE CENTRE TERMINAL	37	3.21	0.51	2.70	
51	Inbound	AINSLIE STREET TERMINAL	34	3.87		3.87	
51	Outbound	AINSLIE STREET TERMINAL	49	0.78	0.78		
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	4.00	0.49	3.51	
51	Outbound	SMART!CENTRES CAMBRIDGE	40	0.79	0.38	0.41	
51	Outbound	HOLIDAY INN TERMINAL	40	2.43		2.43	
52	North	AINSLIE STREET TERMINAL	23	0.00	0.00		
52	North	CORONATION / BARRETT	18	0.14	0.05	0.09	
52	North	KING / LOWTHER	18	0.54	0.32	0.22	
52	North	PRESTON / FOUNTAIN	18	0.01	0.00	0.01	
52	North	SHANTZ HILL / HWY 401 RAMP	18	0.03	0.02	0.01	
52	North	SPORTSWORLD	18	0.02	0.02	0.00	
52	North	FAIRVIEW PARK	18	1.35		1.35	
52	South	FAIRVIEW PARK	16	0.81	0.81		
52	South	FAIRVIEW PARK MALL	5	0.00	0.00		
52	South	SPORTSWORLD	18	0.29	0.16	0.13	
52	South	SHANTZ HILL / PRESTON	21	0.46	0.33	0.14	
52	South	PRESTON / FOUNTAIN	20	0.03	0.00	0.03	
52	South	KING / LOWTHER	20	0.45	0.26	0.19	
52	South	CORONATION / MARTIN	21	0.36	0.28	0.08	
52	South	AINSLIE STREET TERMINAL	21	0.83		0.83	
53	Inbound	HOLIDAY INN TERMINAL	8	0.00	0.00		
53	Inbound	FRANKLIN / SAGINAW	8	0.58	0.39	0.19	
53	Inbound	DOBBIE / SAVAGE	8	0.00	0.00	0.00	
53	Inbound	MAIN / DUNDAS	8	0.63	0.39	0.23	
53	Inbound	AINSLIE STREET TERMINAL	8	0.94		0.94	
53	Outbound	AINSLIE STREET TERMINAL	8	0.00	0.00		
53	Outbound	MAIN / DUNDAS	8	1.48	0.00	1.48	
53	Outbound	DOBBIE / SAVAGE	8	0.16	0.00	0.16	
53	Outbound	FRANKLIN / SAGINAW	8	0.86	0.00	0.86	
53	Outbound	HOLIDAY INN TERMINAL	8	0.63		0.63	
54	East	MAIN / DUNDAS	44	0.41	0.07	0.34	
54	East	LISBON PINES / GATEHOUSE	44	0.07	0.01	0.05	
54	East	AINSLIE STREET TERMINAL	88	0.44	0.00	0.44	
54	East	CHAMPLAIN / CHRISTOPHER	44	0.15	0.03	0.13	
55	West	SOUTHWOOD / CEDAR	23	0.44	0.00	0.44	
55	West	AINSLIE STREET TERMINAL	44	1.07	0.00	1.07	
55	West	SOUTHWOOD / ST ANDREWS	22	0.30	0.00	0.30	
55	West	ST ANDREWS / GILHOLM	23	0.07	0.00	0.07	
56	West	BISHOP / RAILWAY	29	0.37	0.02	0.35	
56	West	ROSE / ARGYLE	28	0.18	0.11	0.07	
56	West	CAMBRIDGE CENTRE TERMINAL	56	1.15	0.00	1.15	
56	West	WESTMINSTER / KING	29	0.51	0.00	0.51	
56	West	LANG'S / CONCESSION	29	0.07	0.00	0.06	
57	West	SUNSET / SAXONY	34	0.19	0.00	0.19	
57	West	BLAIR / BISMARCK	33	0.35	0.00	0.35	

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
57	West	AINSLIE STREET TERMINAL	72	0.30	0.00	0.30
57	West	HILLCREST / CHURCHILL	34	0.04	0.00	0.04
58	East	MOSCRIP / BRONSON	14	0.61	0.00	0.61
58	East	MUNCH / ELGIN	14	0.06	0.00	0.06
58	East	AINSLIE STREET TERMINAL	28	0.37	0.00	0.37
58	East	HILLTOP / FRANKLIN	14	0.04	0.00	0.04
59	East	CHAMPLAIN / CHRISTOPHER	20	1.56	0.00	1.56
59	East	AINSLIE STREET TERMINAL	45	0.46	0.00	0.46
59	East	CHAMPLAIN / ELGIN	21	0.05	0.00	0.05
60	East	GLAMIS / ROBSON	28	0.26	0.08	0.17
60	East	CAMBRIDGE CENTRE TERMINAL	56	0.33	0.00	0.33
60	East	ELGIN / SAGINAW	28	0.43	0.00	0.43
60	East	MUNCH / KOVAC	28	0.02	0.02	0.00
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8	0.00	0.00	
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	0.00	0.00	0.00
61	East	KING / WESTMINSTER	8	0.13	0.13	0.00
61	East	CAMBRIDGE CENTRE	2	0.00		0.00
61	West	CAMBRIDGE CENTRE	2	0.00	0.00	
61	West	KING / WESTMINSTER	5	0.24	0.00	0.24
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	5	0.00	0.00	0.00
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	5	0.00		0.00
62	West	SOUTHGATE / DAY	19	0.00	0.00	0.00
62	West	AINSLIE STREET TERMINAL	46	0.19	0.00	0.19
62	West	WOODSIDE / CEDAR	23	0.06	0.06	0.00
63	East	ALISON / ELGIN	21	0.00	0.00	0.00
63	East	AINSLIE STREET TERMINAL	42	0.22	0.00	0.22
63	East	DUNDAS / FRANKLIN	21	0.23	0.00	0.23
63	East	CHAMPLAIN / CHRISTOPHER	21	0.35	0.07	0.29
64	West	LANG'S / WALTER	18	0.27	0.00	0.27
64	West	EAGLE / KING	18	0.52	0.00	0.52
64	West	CAMBRIDGE CENTRE TERMINAL	36	0.47	0.00	0.47
64	West	ROSE / ARGYLE	18	0.00	0.00	0.00
64	West	BISHOP / RAILWAY	18	0.09	0.00	0.09
65	North	HOLIDAY INN TERMINAL	34	0.10	0.00	0.10
65	North	WINSTON / SCOTTDALE	17	0.18	0.02	0.16
65	North	FISHER MILLS / FEARNWOOD	17	0.47	0.00	0.47
65	North	FRANKLIN / WINSTON	17	0.00	0.00	0.00
66	East	FRANKLIN / WINSTON	7	0.08	0.00	0.08
66	East	COOPER / ELLIS	7	0.04	0.04	0.00
66	East	HOLIDAY INN TERMINAL	14	0.00	0.00	0.00
66	East	WINSTON / WESTBURY	7	0.00	0.00	0.00
67	North	CAMBRIDGE CENTRE TERMINAL	14	2.17	0.00	2.17
67	North	FLEMING / PINEBUSH	7	0.08	0.00	0.08
71	East	QUEEN / HUNGERFORD	18	0.00	0.00	0.00
71	East	HOLIDAY INN TERMINAL	36	0.38	0.08	0.30
71	East	ELLIS / ADLER	18	0.31	0.00	0.31
110	Downward	FAIRVIEW PARK	19	0.00	0.00	
110	Downward	PIONEER / OLD CARRIAGE	26	0.61	0.00	0.61
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	19	0.66		0.66
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	13	0.00	0.00	
110	Upward	PIONEER / OLD CARRIAGE	13	0.34	0.02	0.32
110	Upward	FAIRVIEW PARK	13	5.25		5.25
111	North	AINSLIE STREET TERMINAL	2	0.00	0.00	
111	South	AINSLIE STREET TERMINAL	4	0.00		0.00
200	Downward	CONESTOGA MALL	508	0.47	0.47	
200	Downward	MCCORMICK	506	0.82	0.24	0.58
200	Downward	R & T PARK	508	0.45	0.34	0.11
200	Downward	U WATERLOO	507	3.50	1.64	1.86
200	Downward	LAURIER	507	1.55	0.55	1.00
200	Downward	UPTOWN WATERLOO	341	2.25	0.47	1.78
200	Downward	KING / WILLIS	53	1.90	0.26	1.64
200	Downward	GRAND RIVER HOSPITAL	508	0.96	0.25	0.71
200	Downward	CHARLES TERMINAL	509	5.40	0.50	4.89
200	Downward	OTTAWA	508	0.46	0.08	0.38
200	Downward	FAIRVIEW	508	3.57	0.28	3.29
200	Downward	SMART!CENTRES CAMBRIDGE	506	1.20	0.35	0.86
200	Downward	CAMBRIDGE CENTRE	504	2.56	0.91	1.65
200	Downward	AINSLIE STREET TERMINAL	496	4.28		4.28
200	Upward	AINSLIE STREET TERMINAL	450	0.29	0.29	

Route	Direction*	Timepoint	Obs.	Total	SA <sub>3</sub> : Number of Passengers Affected	
					Early	Late
200	Upward	CAMBRIDGE CENTRE	448	1.50	0.49	1.01
200	Upward	SMART!CENTRES CAMBRIDGE	447	0.71	0.45	0.26
200	Upward	FAIRVIEW	447	2.46	1.09	1.38
200	Upward	OTTAWA	449	0.30	0.00	0.30
200	Upward	CHARLES TERMINAL	448	4.15	0.57	3.58
200	Upward	GRAND RIVER HOSPITAL	444	0.53	0.03	0.50
200	Upward	UPTOWN WATERLOO	445	1.80	0.07	1.72
200	Upward	LAURIER	444	2.75	0.11	2.65
200	Upward	U WATERLOO	444	5.47	0.34	5.13
200	Upward	R & T PARK	444	0.49	0.03	0.45
200	Upward	McCORMICK	444	5.66	0.17	5.50
200	Upward	CONESTOGA MALL	425	8.45		8.45

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
1	East	CHARLES STREET TERMINAL	26			
1	East	FREDERICK / WEBER	26	180.00	239.15	274.15
1	East	BECKER / BELLEVIEW	9	240.00	275.22	305.5
1	East	LORRAINE / BIRKSHIRE	17	420.00	469.12	492
1	East	RIVER / HICKSON	9	300.00	287.22	469.5
1	East	OTTAWA / OLDFIELD	17	360.00	333.47	347.5
1	East	STANLEY PARK MALL TERMINAL	25	180.00	278.92	316.15
1	West	STANLEY PARK MALL TERMINAL	24			
1	West	LACKNER / BANBURY	9	300.00	358.89	402.2
1	West	RIVER / HALLIWELL	25	202.50	232.46	320
1	West	BELLEVIEW / BECKER	15	240.00	231.20	247.85
1	West	WEBER / SCOTT	26	352.80	332.64	428.45
1	West	CHARLES STREET TERMINAL	26	300.00	312.15	348.6
2	Downward	HIGHLAND HILLS MALL	13			
2	Downward	GREENBROOK / WESTMOUNT	14	360.00	412.42	445.75
2	Downward	GREENBROOK / STIRLING	14	120.00	112.21	124.8
2	Downward	CHARLES STREET TERMINAL	15	572.00	463.87	606.8
2	Upward	CHARLES STREET TERMINAL	13			
2	Upward	SOUTHMOOR / AVALON	13	540.00	603.69	622.3
2	Upward	GREENBROOK / STIRLING	13	120.00	94.69	488.1
2	Upward	WESTMOUNT / VILLAGE	13	120.00	93.46	140
2	Upward	HIGHLAND HILLS MALL	13	360.00	428.85	502
3	1	CHARLES STREET TERMINAL	19			
3	1	COURTLAND / STIRLING	19	240.00	315.95	342.9
3	1	STRASBURG / TRANSIT GARAGE	21	480.00	453.21	509.9
3	1	OTTAWA / WESTMOUNT	21	300.00	233.57	246.55
3	1	WILLIAMSBURG / DINISON	21	180.00	213.43	257
3	1	FOREST GLEN TERMINAL	21	420.00	339.00	395
3	2	FOREST GLEN TERMINAL	18			
3	2	WILLIAMSBURG / DINISON	18	360.00	408.72	421.55
3	2	OTTAWA / WESTMOUNT	18	240.00	199.56	217.55
3	2	STRASBURG / TRANSIT GARAGE	18	300.00	251.28	300.1
3	2	COURTLAND / MADISON	18	520.00	577.72	614
3	2	CHARLES STREET TERMINAL	18	240.00	204.44	227.7
4	Downward	UNIVERSITY / RESURRECTION	12			
4	Downward	GLASGOW / WESTMOUNT	12	480.00	466.25	514.5
4	Downward	UNION / KING	12	360.00	304.17	348.95
4	Downward	MOORE / BREITHAUP	12	300.00	260.83	310
4	Downward	CHARLES STREET TERMINAL	12	340.00	280.75	327.9
4	Upward	CHARLES STREET TERMINAL	14			
4	Upward	MOORE / WELLINGTON	14	300.00	344.50	371.2
4	Upward	UNION / PARK	14	360.00	321.64	356.25
4	Upward	GLASGOW / WESTMOUNT	14	300.00	279.64	300.5
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	398.57	363.43	405.75
4	Upward	UNIVERSITY / BAKER	8	240.00	265.50	313
4	Upward	UNIVERSITY / RESURRECTION	14	282.86	143.00	273.35
5	1	UPTOWN WATERLOO	15			
5	1	ERB / WESTMOUNT	15	420.00	432.07	432.2
5	1	FISCHER-HALLMAN / ERB	15	240.00	273.13	285.3
5	1	KEATS / KEATSWOOD	15	300.00	201.87	248.2
5	2	KEATS / KEATSWOOD	13			
5	2	GATEVIEW / WESTVALE	12	360.00	335.50	358.95
5	2	ERB / FISCHER-HALLMAN	12	360.00	372.83	422.5
5	2	ERB / WESTMOUNT	13	295.38	295.31	259.1
5	2	KING / WILLIS	13	300.00	313.77	319.2
6	Downward	DANIEL / BLOOMINGDALE	9			
6	Downward	LANCASTER / HAMEL	10	420.00	357.60	356.4
6	Downward	LANCASTER / GUELPH	9	180.00	151.22	174
6	Downward	WELLINGTON / MARGARET	9	240.00	156.00	180.6
6	Downward	CHARLES STREET TERMINAL	9	540.00	567.11	597.35
6	Upward	CHARLES STREET TERMINAL	10			
6	Upward	WELLINGTON / MARGARET	10	480.00	532.00	591.2
6	Upward	LANCASTER / GUELPH	10	240.00	204.00	191.6
6	Upward	LANCASTER / HAMEL	10	120.00	139.50	163.3
6	Upward	DANIEL / BLOOMINGDALE	10	498.00	439.30	469.9
7	Downward	RING / NORTH CAMPUS	21			
7	Downward	CONESTOGA MALL	30			
7	Downward	U WATERLOO	11			
7	Downward	COLUMBIA / HAZEL	21	240.00	322.57	315

Route	Direction*	Timepoint	Running Time from Previous Timepoint			
			Obs.	Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
7	Downward	UNIVERSITY / KING	11	360.00	391.45	421.85
7	Downward	KING / UNIVERSITY	51	469.41	503.86	590
7	Downward	UPTOWN WATERLOO	14	300.00	277.14	316.05
7	Downward	KING / WILLIS	2	300.00	248.50	326.8
7	Downward	CHARLES STREET TERMINAL	62	940.33	892.64	1062.85
7	Downward	KING / OTTAWA	27	420.00	483.41	563
7	Downward	FOURTH / CONNAUGHT	3	400.00	289.67	329
7	Downward	FOURTH / WILSON	8	420.00	337.25	398
7	Downward	KINZIE / WEBER	16	540.00	563.00	580.85
7	Downward	FAIRVIEW PARK	14	462.86	363.71	466.1
7	Downward	FAIRVIEW PARK MALL	12	460.00	362.58	454.3
7	Upward	FAIRVIEW PARK	21			
7	Upward	FAIRVIEW PARK MALL	9			
7	Upward	CONNAUGHT / FIFTH	8	240.00	261.50	314.95
7	Upward	FOURTH / WILSON	10	240.00	318.70	338.4
7	Upward	WEBER / KINZIE	12	450.00	512.75	579
7	Upward	CHARLES STREET TERMINAL	50	534.00	498.93	557.5
7	Upward	KING / OTTAWA	30	456.00	417.20	469.8
7	Upward	UPTOWN WATERLOO	49	650.00	677.77	763.3
7	Upward	UNIVERSITY / KING	22	351.82	318.05	353.7
7	Upward	RING / UNIVERSITY	22	300.00	294.82	326.3
7	Upward	KING / UNIVERSITY	27	368.89	301.56	311.6
7	Upward	RING / NORTH CAMPUS	22	231.82	244.73	290.75
7	Upward	CONESTOGA MALL	18	533.33	417.28	474.7
7	Upward	COLUMBIA / HAZEL	9	300.00	300.67	378.9
7	Upward	U WATERLOO	8	360.00	314.75	410.5
8	North	FAIRVIEW PARK	21			
8	North	FAIRVIEW PARK MALL	6			
8	North	FRANKLIN / PROSPECT	9	480.00	502.33	541
8	North	WALTON / VANIER	18	360.00	497.78	516.45
8	North	CHARLES STREET TERMINAL	40	420.00	426.93	487.85
8	North	COURTLAND / STIRLING	18	360.00	395.67	399
8	North	OTTAWA / WEBER	9	480.00	431.89	433
8	North	BELMONT / HIGHLAND	17	420.00	470.44	464.15
8	North	MARGARET / WELLINGTON	23	420.00	522.78	528
8	North	UNION / WEBER	23	271.30	242.35	268.05
8	North	UNION / WESTMOUNT	18	480.00	420.29	489.8
8	North	UNIVERSITY / SEAGRAM	18	346.67	388.61	484.7
8	North	UNIVERSITY / KING	41	411.22	390.98	478
8	South	UNIVERSITY / KING	44			
8	South	UNIVERSITY / SEAGRAM	15	300.00	314.60	321.65
8	South	UNION / WEBER	29	480.00	515.90	523.85
8	South	UNION / WESTMOUNT	15	360.00	456.73	422.8
8	South	MARGARET / WELLINGTON	29	360.00	236.03	273.4
8	South	CHARLES STREET TERMINAL	44	454.09	440.02	472.3
8	South	BELMONT / BURN	15	420.00	426.67	457
8	South	COURTLAND / VERNON	22	289.09	395.41	407.9
8	South	WALTON / VANIER	22	360.00	339.59	368.7
8	South	OTTAWA / MCKENZIE	7	454.29	508.29	561
8	South	FAIRVIEW PARK MALL	10	426.00	528.80	588.2
8	South	FAIRVIEW PARK	19	438.95	459.32	520.9
8	South	WEBER / FRANKLIN	7	454.29	360.29	416
9	Downward	CONESTOGA MALL	28			
9	Downward	NORTHFIELD / WEBER	29	300.00	418.71	462.5
9	Downward	HIGHPOINT / WINTERGREEN	29	240.00	211.10	251.2
9	Downward	PARKSIDE / GLENELM	29	360.00	363.21	406.35
9	Downward	HAZEL / WILDWOOD	29	283.45	258.72	283.35
9	Downward	HAZEL / UNIVERSITY	26	341.54	236.54	294.2
9	Downward	U WATERLOO	25	343.20	360.76	432.1
9	Upward	U WATERLOO	35			
9	Upward	HAZEL / UNIVERSITY	35	420.00	422.40	433.6
9	Upward	HAZEL / BEARINGER	35	300.00	283.46	320.65
9	Upward	PARKSIDE / GLENELM	15	296.00	285.20	327.95
9	Upward	HIGHPOINT / WINTERGREEN	35	358.24	349.06	400
9	Upward	NORTHFIELD / WEBER	36	301.67	243.11	261
9	Upward	CONESTOGA MALL	35	360.00	499.54	506
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	25			190.9
10	Inbound	PINNACLE / OLD MILL	25	180.00	199.72	218
10	Inbound	PIONEER / OLD CARRIAGE	25	360.00	324.08	351

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
10	Inbound	DOON VILLAGE / MILLWOOD	25	240.00	185.84	215.65
10	Inbound	FAIRVIEW PARK	18	480.00	483.17	475.95
10	Inbound	FAIRVIEW PARK MALL	7	480.00	499.57	470
10	Outbound	FAIRVIEW PARK	24			
10	Outbound	DOON VILLAGE / MILLWOOD	25	515.00	589.88	573
10	Outbound	PIONEER / OLD CARRIAGE	25	273.60	177.72	207.8
10	Outbound	PINNACLE / OLD MILL	24	215.00	351.54	362.4
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	24	280.00	245.92	262
11	1	CHARLES STREET TERMINAL	22			
11	1	STIRLING / COURTLAND	36	300.00	312.81	348.9
11	1	ALPINE / OTTAWA	36	480.00	496.69	524
11	1	COUNTRY HILL / BLOCK LINE	22	240.00	264.91	300.9
11	1	FOREST GLEN TERMINAL	22	360.00	321.05	371.6
11	2	FOREST GLEN TERMINAL	41			
11	2	KINGSWOOD / BLOCK LINE	42	360.00	403.02	453.1
11	2	HOFFMAN / OTTAWA	42	360.00	378.95	417.4
11	2	STIRLING / COURTLAND	42	300.00	293.07	338.1
11	2	CHARLES STREET TERMINAL	42	525.71	502.05	572
12	Downward	CONESTOGA MALL	20			
12	Downward	UNIVERSITY / KING	34	902.86	930.24	1194
12	Downward	BRIDGE / UNIVERSITY	13	590.00	705.67	700.2
12	Downward	UNIVERSITY / SEAGRAM	34	282.35	320.15	322.1
12	Downward	FISCHER-HALLMAN / UNIVERSITY	29	620.69	659.76	706.8
12	Downward	HIGHLAND HILLS MALL	33	334.55	324.61	347
12	Downward	WESTMOUNT / OTTAWA	30	496.00	632.57	614.95
12	Downward	FOREST GLEN TERMINAL	30	434.00	355.17	402.6
12	Downward	FAIRVIEW PARK MALL	14	762.86	739.79	812.6
12	Downward	FAIRVIEW PARK	11	758.18	686.55	793
12	Upward	FAIRVIEW PARK	16			
12	Upward	FAIRVIEW PARK MALL	4			
12	Upward	FOREST GLEN TERMINAL	20	780.00	834.95	859.05
12	Upward	WESTMOUNT / OTTAWA	22	343.64	366.68	425
12	Upward	HIGHLAND HILLS MALL	20	522.00	509.55	584.9
12	Upward	FISCHER-HALLMAN / UNIVERSITY	20	399.00	376.85	435.1
12	Upward	UNIVERSITY / SEAGRAM	20	579.00	577.75	659.1
12	Upward	UNIVERSITY / KING	20	336.00	327.75	283
12	Upward	BRIDGE / UNIVERSITY	13	595.38	610.54	629.85
12	Upward	CONESTOGA MALL	14	647.14	561.21	644.4
13	1	U WATERLOO	26			
13	1	COLUMBIA / FISCHER-HALLMAN	26	360.00	417.12	421.45
13	1	LAURELWOOD / ERBSVILLE	26	360.00	317.62	341
13	2	LAURELWOOD / ERBSVILLE	33			
13	2	COLUMBIA / FISCHER-HALLMAN	34	416.36	343.73	391.6
13	2	U WATERLOO	31	356.13	289.84	326.35
14	1	CONESTOGA MALL	3			
14	1	BATHURST / MCMURRAY	3	360.00	296.00	385.6
14	1	WYMAN / COLBY	2	300.00	161.50	260.5
14	2	WYMAN / COLBY(2)	4			
14	2	WYMAN / COLBY	4	300.00	224.75	298.8
14	2	MCMURRAY / NORTHLAND	4	240.00	188.00	346.35
14	2	CONESTOGA MALL	4	420.00	284.25	327.9
15	East	CHARLES STREET TERMINAL	23			
15	East	QUEEN / LANCASTER	23	404.35	462.91	486.9
15	East	EDNA / FREDERICK	22	180.00	164.05	189
15	East	LACKNER / VICTORIA	22	583.64	503.86	566
15	West	LACKNER / VICTORIA	16			
15	West	NATCHEZ / HALIFAX	16	180.00	180.63	202
15	West	FREDERICK / EDNA	16	420.00	440.44	480.8
15	West	QUEEN / LANCASTER	16	240.00	218.44	217.4
15	West	CHARLES STREET TERMINAL	16	480.00	467.00	485.2
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	14			
16	Inbound	PIONEER / BECHTEL	16	397.50	365.63	416.75
16	Inbound	STRASBURG / TRILLIUM	14	591.43	562.64	598.4
16	Inbound	FOREST GLEN TERMINAL	14	300.00	259.07	270.2
16	Outbound	FOREST GLEN TERMINAL	15			
16	Outbound	STRASBURG / TRILLIUM	15	204.00	235.47	261.2
16	Outbound	PIONEER / BECHTEL	15	528.00	521.80	593.1
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	528.00	416.33	459.75
17	Downward	LACKNER / VICTORIA	4			

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
17	Downward	KEEWATIN / OTTAWA	4	420.00	526.00	611.4
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	480.00	331.25	420.9
17	Downward	RIVER / FAIRWAY	4	240.00	168.50	223.8
17	Downward	FAIRVIEW PARK	1	360.00	351.00	959.2
17	Upward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK MALL	2			
17	Upward	RIVER / FAIRWAY	4	300.00	439.75	418.1
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	600.00	219.75	246
17	Upward	KEEWATIN / OTTAWA	4	300.00	284.00	350.15
17	Upward	LACKNER / VICTORIA	4	240.00	161.25	197.9
18	Downward	MAPLE / GUELPH	9			
18	Downward	GUELPH / MARGARET	10	180.00	184.56	224
18	Downward	WEBER / WELLINGTON	10	360.00	327.40	348.9
18	Downward	CHARLES STREET TERMINAL	10	462.00	462.90	549
18	Upward	CHARLES STREET TERMINAL	10			
18	Upward	WEBER / WELLINGTON	3	480.00	489.67	503
18	Upward	GUELPH / FLOYD	10	300.00	342.40	376
18	Upward	MAPLE / GUELPH	10	360.00	293.90	354
19	1	CHARLES STREET TERMINAL	27			
19	1	VICTORIA / BELMONT	27	420.00	493.89	561.25
19	1	CHOPIN / BRYBECK	27	180.00	227.89	259.35
19	1	HAZELGLEN / VICTORIA	27	180.00	105.70	121
19	1	WESTFOREST / HIDDEN CREEK	27	300.00	278.11	329.9
19	1	HIGHLAND HILLS MALL	27	360.00	355.44	456.5
19	2	HIGHLAND HILLS MALL	21			
19	2	WESTFOREST / VICTORIA	21	300.00	430.52	494.6
19	2	HAZELGLEN / MOOREGATE	21	300.00	238.95	306.55
19	2	CHOPIN / BRYBECK	21	180.00	97.62	117.65
19	2	VICTORIA / BELMONT	21	180.00	218.43	298.6
19	2	CHARLES STREET TERMINAL	21	420.00	384.81	476
20	1	CHARLES STREET TERMINAL	21			
20	1	VICTORIA / BELMONT	21	420.00	501.81	538.95
20	1	INGLESIDE / HAZELGLEN	21	360.00	355.48	340.5
20	2	INGLESIDE / HAZELGLEN	21			133.7
20	2	CHOPIN / BRYBECK	21	240.00	176.10	206
20	2	VICTORIA / BELMONT	21	180.00	219.43	282
20	2	CHARLES STREET TERMINAL	21	420.00	393.14	499
22	East	HIGHLAND HILLS MALL	18			
22	East	ACTIVA / GREY FOX	18	346.67	479.78	494
22	East	ACTIVA / SNOWDROP	18	346.67	369.33	397.7
22	East	TILLSLEY / WESTMOUNT	18	360.00	329.22	372
22	East	FOREST GLEN TERMINAL	18	540.00	397.11	455.2
22	East	OTTAWA / HWY 8 RAMP	18	300.00	285.50	339.7
22	East	STIRLING / COURTLAND	18	300.00	349.11	381.5
22	East	CHARLES STREET TERMINAL	18	390.00	365.11	391.5
22	West	CHARLES STREET TERMINAL	9			
22	West	STIRLING / COURTLAND	13	300.00	316.62	334.6
22	West	OTTAWA / HWY 8 RAMP	9	360.00	373.67	356.1
22	West	FOREST GLEN TERMINAL	9	280.00	311.33	342.2
22	West	ERINBROOK / HEDGESTONE	9	480.00	336.67	348
22	West	DAVID BERGEY / PEACH BLOSSOM	9	360.00	533.00	559.2
22	West	ACTIVA / GREY FOX	9	300.00	276.56	312
22	West	HIGHLAND HILLS MALL	9	360.00	321.11	374
23	East	CHARLES STREET TERMINAL	16			
23	East	FREDERICK / DUNHAM	17	420.00	422.38	463.4
23	East	RIVER / OTTAWA	17	480.00	407.88	439.2
23	East	OTTAWA / LACKNER	17	420.00	447.12	521.35
23	East	LACKNER / CORFIELD	17	240.00	188.29	209.45
23	East	FAIRVIEW PARK	9	540.00	660.44	923.25
23	East	FAIRVIEW PARK MALL	4	540.00	681.00	1212.3
23	West	FAIRVIEW PARK	8			
23	West	FAIRVIEW PARK MALL	2			
23	West	LACKNER / CORFIELD	11	480.00	513.40	554.75
23	West	OTTAWA / OLDFIELD	11	240.00	212.18	242
23	West	RIVER / OTTAWA	11	420.00	439.36	477.85
23	West	FREDERICK / EDNA	11	480.00	391.64	435.7
23	West	CHARLES STREET TERMINAL	11	480.00	462.18	528.3
24	1	CHARLES STREET TERMINAL	11			
24	1	HIGHLAND / BELMONT	12	403.64	385.18	392



Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
24	1	HIGHLAND HILLS MALL	12	360.00	347.83	397.2
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	420.00	510.00	576.65
24	2	ROLLING MEADOWS / WESTHEIGHTS	9			
24	2	WESTHEIGHTS / WINDING	9	420.00	384.22	490.1
24	2	WESTHEIGHTS / WESTFOREST	9	180.00	80.67	124
24	2	HIGHLAND HILLS MALL	9	420.00	293.11	415
24	2	HIGHLAND / BELMONT	9	300.00	427.44	609.55
24	2	CHARLES STREET TERMINAL	9	480.00	332.33	363
25	1	CHARLES STREET TERMINAL	28			
25	1	QUEENS / WESTMOUNT	31	420.00	470.00	511.05
25	1	CECILE / OVERLEA	4	60.00	63.25	80.5
25	1	HIGHLAND HILLS MALL	32	313.13	201.59	230
25	1	FORESTWOOD / MCGARRY	31	240.00	297.71	328.4
25	1	DRIFTWOOD / WESTHEIGHTS	31	300.00	239.13	286
25	1	GOLDEN MEADOW / HAVENWOOD	32	316.88	217.63	313.25
25	2	GOLDEN MEADOW / HAVENWOOD	21			
25	2	WESTHEIGHTS / LORILEE	21	300.00	248.33	283
25	2	HIGHLAND HILLS MALL	21	360.00	369.24	419.1
25	2	QUEENS / WESTMOUNT	21	240.00	185.67	249
25	2	CHARLES STREET TERMINAL	21	480.00	392.71	517.2
26	1	FOREST GLEN TERMINAL	9			
26	1	TRILLIUM / STRASBURG	9	420.00	421.67	576.5
26	1	TRILLIUM / GROFF	9	300.00	544.44	602.5
26	2	TRILLIUM / GROFF	9			
26	2	TRILLIUM / STRASBURG	9	180.00	123.00	150
26	2	FOREST GLEN TERMINAL	9	480.00	456.78	500.5
27	1	FAIRVIEW PARK MALL	8			
27	1	FAIRVIEW PARK	9			
27	1	MORRISON / MANOR	17	398.82	424.53	449
27	1	QUINTE / MORRISON	17	180.00	123.41	157.85
27	2	QUINTE / MORRISON	11			
27	2	FAIRWAY / KING	11	360.00	361.64	413.3
27	2	FAIRVIEW PARK MALL	4	240.00	187.25	226
27	2	FAIRVIEW PARK	7	240.00	169.71	211.6
29	1	RING / UNIVERSITY	8			
29	1	FISCHER-HALLMAN / KEATS	8	360.00	383.88	438
29	2	KEATS / FISCHER-HALLMAN	6			
29	2	RING / UNIVERSITY	6	420.00	373.17	472.8
31	Downward	CONESTOGA MALL	8			
31	Downward	NORTHFIELD / BRIDGE	9	420.00	647.38	1136.8
31	Downward	UNIVERSITY / RIM PARK INTERNAL	5	300.00	150.60	368.5
31	Downward	UNIVERSITY / LEXINGTON	8	412.50	279.00	606
31	Downward	LEXINGTON / ANNDALE	8	300.00	303.13	269.45
31	Downward	COLUMBIA / SPRUCE	8	360.00	261.63	351
31	Downward	RING / UNIVERSITY	8	540.00	602.25	853.75
31	Upward	RING / UNIVERSITY	5			
31	Upward	COLUMBIA / KING	5	540.00	673.80	675
31	Upward	LEXINGTON / DEARBORN	5	360.00	195.20	190.1
31	Upward	UNIVERSITY / LEXINGTON	5	300.00	380.20	456.85
31	Upward	UNIVERSITY / RIM PARK INTERNAL	2	300.00	159.00	176.3
31	Upward	NORTHFIELD / BRIDGE	6	300.00	176.50	215.4
31	Upward	CONESTOGA MALL	2	420.00	344.00	466.4
32	2	KUMPF / NORTHFIELD	5			
32	2	WEBER / GOLDEN EAGLE	8	360.00	275.29	412.2
32	2	CONESTOGO / COLBY	5	300.00	297.80	329
32	2	CONESTOGA MALL	4	360.00	517.25	889.8
33	1	FOREST GLEN TERMINAL	7			
33	1	STRASBURG / TRILLIUM	7	240.00	226.71	266.95
33	1	PARKVALE / NEWCASTLE	2	180.00	167.00	172
33	2	HURON / NEWCASTLE	4			114
33	2	STRASBURG / TRILLIUM	8	180.00	157.25	168.2
33	2	FOREST GLEN TERMINAL	8	240.00	228.25	263.75
35	1	KING / WILLIS	13			
35	1	ERB / WEBER	13	180.00	182.69	213.4
35	1	BRIDGEPORT / LANCASTER	13	300.00	253.38	259.4
35	1	AUBURN / SABLE	13	420.00	375.38	387.6
35	1	BRIDGE / LEXINGTON	15	360.00	278.27	310
35	1	CHESAPEAKE / SPINNAKER	13	420.00	412.62	451.8
35	1	CONESTOGA MALL	15	420.00	404.53	407

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
35	2	CONESTOGA MALL	14			
35	2	CHESAPEAKE / BRIGANTINE	14	360.00	378.71	397
35	2	BRIDGE / LEXINGTON	11	360.00	453.91	474.6
35	2	AUBURN / SABLE	14	377.14	324.71	278
35	2	BRIDGEPORT / LANCASTER	14	338.57	309.79	345.4
35	2	BRIDGEPORT / WEBER	14	240.00	220.43	303
35	2	UPTOWN WATERLOO	14	377.14	234.14	270
51	Inbound	HOLIDAY INN TERMINAL	36			
51	Inbound	SMART!CENTRES CAMBRIDGE	37	388.33	351.92	383
51	Inbound	CAMBRIDGE CENTRE TERMINAL	37	540.00	612.08	659
51	Inbound	AINSLIE STREET TERMINAL	34	780.00	786.79	813.1
51	Outbound	AINSLIE STREET TERMINAL	49			
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	780.00	705.60	802
51	Outbound	SMART!CENTRES CAMBRIDGE	40	540.00	532.55	592.5
51	Outbound	HOLIDAY INN TERMINAL	40	240.00	139.23	147.2
52	North	AINSLIE STREET TERMINAL	23			
52	North	CORONATION / BARRETT	18	600.00	604.00	632
52	North	KING / LOWTHER	18	406.67	333.17	360
52	North	PRESTON / FOUNTAIN	18	466.67	460.44	445.6
52	North	SHANTZ HILL / HWY 401 RAMP	18	273.33	200.56	220
52	North	SPORTSWORLD	18	286.67	326.50	317.15
52	North	FAIRVIEW PARK	18	873.33	693.67	713.95
52	South	FAIRVIEW PARK	16			
52	South	FAIRVIEW PARK MALL	5			
52	South	SPORTSWORLD	18	793.33	957.33	890.3
52	South	SHANTZ HILL / PRESTON	21	408.57	377.86	298.85
52	South	PRESTON / FOUNTAIN	20	216.00	180.55	209.4
52	South	KING / LOWTHER	20	468.00	375.05	401.9
52	South	CORONATION / MARTIN	21	300.00	393.95	387
52	South	AINSLIE STREET TERMINAL	21	765.71	490.05	542.9
53	Inbound	HOLIDAY INN TERMINAL	8			
53	Inbound	FRANKLIN / SAGINAW	8	540.00	579.75	655
53	Inbound	DOBBIE / SAVAGE	8	420.00	400.25	443.75
53	Inbound	MAIN / DUNDAS	8	240.00	200.75	239.25
53	Inbound	AINSLIE STREET TERMINAL	8	420.00	376.38	407.25
53	Outbound	AINSLIE STREET TERMINAL	8			
53	Outbound	MAIN / DUNDAS	8	360.00	378.38	440.5
53	Outbound	DOBBIE / SAVAGE	8	240.00	233.25	256.8
53	Outbound	FRANKLIN / SAGINAW	8	420.00	530.50	484.9
53	Outbound	HOLIDAY INN TERMINAL	8	540.00	530.50	580.9
54	East	MAIN / DUNDAS	44	420.00	328.70	361.3
54	East	LISBON PINES / GATEHOUSE	44	360.00	388.73	438.25
54	East	AINSLIE STREET TERMINAL	88	480.00	425.16	501.05
54	East	CHAMPLAIN / CHRISTOPHER	44	300.00	327.30	387.4
55	West	SOUTHWOOD / CEDAR	23	420.00	485.91	513.5
55	West	AINSLIE STREET TERMINAL	44	360.00	315.05	319.45
55	West	SOUTHWOOD / ST ANDREWS	22	480.00	589.14	659.15
55	West	ST ANDREWS / GILHOLM	23	320.87	257.61	288.55
56	West	BISHOP / RAILWAY	29	360.00	332.71	381.6
56	West	ROSE / ARGYLE	28	300.00	271.32	309
56	West	CAMBRIDGE CENTRE TERMINAL	56	420.00	485.00	527.15
56	West	WESTMINSTER / KING	29	130.34	134.45	143
56	West	LANG'S / CONCESSION	29	360.00	374.24	432
57	West	SUNSET / SAXONY	34	300.00	456.32	471.9
57	West	BLAIR / BISMARCK	33	540.00	432.15	465.7

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
57	West	AINSLIE STREET TERMINAL	72	420.00	401.81	442
57	West	HILLCREST / CHURCHILL	34	375.88	380.82	386.05
58	East	MOSCRIP / BRONSON	14	300.00	374.79	387.9
58	East	MUNCH / ELGIN	14	300.00	350.86	400
58	East	AINSLIE STREET TERMINAL	28	540.00	381.93	444
58	East	HILLTOP / FRANKLIN	14	480.00	406.43	499
59	East	CHAMPLAIN / CHRISTOPHER	20	480.00	500.70	551
59	East	AINSLIE STREET TERMINAL	45	529.09	452.64	438.3
59	East	CHAMPLAIN / ELGIN	21	622.86	664.19	678.6
60	East	GLAMIS / ROBSON	28	480.00	455.75	489
60	East	CAMBRIDGE CENTRE TERMINAL	56	420.00	233.43	263
60	East	ELGIN / SAGINAW	28	480.00	608.29	638.6
60	East	MUNCH / KOVAC	28	240.00	170.89	197
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8			
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	240.00	197.33	229.3
61	East	KING / WESTMINSTER	8	900.00	666.88	702.95
61	East	CAMBRIDGE CENTRE	2	540.00	652.50	669.65
61	West	CAMBRIDGE CENTRE	2			
61	West	KING / WESTMINSTER	5	540.00	557.00	523.35
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	5	840.00	712.60	687
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	5	240.00	117.00	151
62	West	SOUTHGATE / DAY	19	600.00	638.95	655
62	West	AINSLIE STREET TERMINAL	46	600.00	537.96	617
62	West	WOODSIDE / CEDAR	23	464.35	420.70	482.5
63	East	ALISON / ELGIN	21	480.00	495.10	529.75
63	East	AINSLIE STREET TERMINAL	42	480.00	314.57	355
63	East	DUNDAS / FRANKLIN	21	300.00	326.76	371
63	East	CHAMPLAIN / CHRISTOPHER	21	360.00	339.33	365
64	West	LANG'S / WALTER	18	420.00	471.11	473.7
64	West	EAGLE / KING	18	300.00	340.83	390
64	West	CAMBRIDGE CENTRE TERMINAL	36	420.00	377.44	433.05
64	West	ROSE / ARGYLE	18	120.00	123.67	145.35
64	West	BISHOP / RAILWAY	18	300.00	306.11	374
65	North	HOLIDAY INN TERMINAL	34			197.95
65	North	WINSTON / SCOTTDAL	17	300.00	242.76	281.95
65	North	FISHER MILLS / FEARNWOOD	17	300.00	381.29	383.4
65	North	FRANKLIN / WINSTON	17	540.00	663.12	746
66	East	FRANKLIN / WINSTON	7	360.00	272.86	309
66	East	COOPER / ELLIS	7	300.00	252.86	277.95
66	East	HOLIDAY INN TERMINAL	14	360.00	306.57	372.4
66	East	WINSTON / WESTBURY	7	360.00	252.71	290.1
67	North	CAMBRIDGE CENTRE TERMINAL	14			
67	North	FLEMING / PINEBUSH	7	780.00	917.00	1042.4
71	East	QUEEN / HUNGERFORD	18	300.00	367.83	500.25
71	East	HOLIDAY INN TERMINAL	36	420.00	350.11	408
71	East	ELLIS / ADLER	18	420.00	594.50	695.15
110	Downward	FAIRVIEW PARK	19			
110	Downward	PIONEER / OLD CARRIAGE	26	600.00	650.20	659.9
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	19	360.00	258.63	408.3
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	13			
110	Upward	PIONEER / OLD CARRIAGE	13	360.00	359.85	364.1
110	Upward	FAIRVIEW PARK	13	660.00	548.46	541.7
111	North	AINSLIE STREET TERMINAL	2			
111	South	AINSLIE STREET TERMINAL	4	1020.00	943.25	1073
200	Downward	CONESTOGA MALL	508			
200	Downward	McCORMICK	506	419.76	444.89	455
200	Downward	R & T PARK	508	180.83	146.29	166
200	Downward	U WATERLOO	507	239.76	157.20	179
200	Downward	LAURIER	507	300.00	298.57	305.8
200	Downward	UPTOWN WATERLOO	341	299.65	285.96	301
200	Downward	KING / WILLIS	53	300.00	309.79	323.7
200	Downward	GRAND RIVER HOSPITAL	508	181.65	142.65	158
200	Downward	CHARLES TERMINAL	509	362.95	324.32	341
200	Downward	OTTAWA	508	240.00	242.03	267
200	Downward	FAIRVIEW	508	505.63	406.73	426
200	Downward	SMART!CENTRES CAMBRIDGE	506	813.20	798.85	776.25
200	Downward	CAMBRIDGE CENTRE	504	477.60	443.24	432
200	Downward	AINSLIE STREET TERMINAL	496	631.20	603.72	728.25
200	Upward	AINSLIE STREET TERMINAL	450			

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
200	Upward	CAMBRIDGE CENTRE	448	660.00	604.05	712.6
200	Upward	SMART!CENTRES CAMBRIDGE	447	443.08	426.81	454
200	Upward	FAIRVIEW	447	1117.05	983.12	883
200	Upward	OTTAWA	449	429.89	496.82	499
200	Upward	CHARLES TERMINAL	448	289.82	238.83	275
200	Upward	GRAND RIVER HOSPITAL	444	270.68	345.98	387
200	Upward	UPTOWN WATERLOO	445	180.67	158.19	201
200	Upward	LAURIER	444	249.23	236.08	270.4
200	Upward	U WATERLOO	444	240.00	227.00	270
200	Upward	R & T PARK	444	180.00	140.46	169
200	Upward	McCORMICK	444	180.00	135.74	154
200	Upward	CONESTOGA MALL	425	404.47	381.44	423

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
1	East	CHARLES STREET TERMINAL	26			
1	East	FREDERICK / WEBER	26	100.00%	85.71%	
1	East	BECKER / BELLEVIEW	9	75.00%	0.00%	100.00%
1	East	LORRAINE / BIRKSHIRE	17	100.00%	0.00%	100.00%
1	East	RIVER / HICKSON	9	100.00%	0.00%	100.00%
1	East	OTTAWA / OLDFIELD	17	33.33%	0.00%	100.00%
1	East	STANLEY PARK MALL TERMINAL	25	94.44%	0.00%	100.00%
1	West	STANLEY PARK MALL TERMINAL	24			
1	West	LACKNER / BANBURY	9	100.00%	100.00%	
1	West	RIVER / HALLIWELL	25	100.00%	18.18%	54.55%
1	West	BELLEVIEW / BECKER	15	75.00%	0.00%	100.00%
1	West	WEBER / SCOTT	26	50.00%	0.00%	100.00%
1	West	CHARLES STREET TERMINAL	26	33.33%	25.00%	91.67%
2	Downward	HIGHLAND HILLS MALL	13			
2	Downward	GREENBROOK / WESTMOUNT	14	71.43%	57.14%	
2	Downward	GREENBROOK / STIRLING	14	44.44%	33.33%	100.00%
2	Downward	CHARLES STREET TERMINAL	15	0.00%	14.29%	100.00%
2	Upward	CHARLES STREET TERMINAL	13			
2	Upward	SOUTHMOOR / AVALON	13	100.00%	66.67%	
2	Upward	GREENBROOK / STIRLING	13	50.00%	0.00%	100.00%
2	Upward	WESTMOUNT / VILLAGE	13	33.33%	0.00%	100.00%
2	Upward	HIGHLAND HILLS MALL	13	100.00%	0.00%	80.00%
3	1	CHARLES STREET TERMINAL	19			
3	1	COURTLAND / STIRLING	19	100.00%	100.00%	
3	1	STRASBURG / TRANSIT GARAGE	21	80.00%	0.00%	100.00%
3	1	OTTAWA / WESTMOUNT	21	33.33%	0.00%	100.00%
3	1	WILLIAMSBURG / DINISON	21	80.00%	40.00%	100.00%
3	1	FOREST GLEN TERMINAL	21	0.00%	0.00%	100.00%
3	2	FOREST GLEN TERMINAL	18			
3	2	WILLIAMSBURG / DINISON	18	100.00%	100.00%	
3	2	OTTAWA / WESTMOUNT	18	100.00%	0.00%	0.00%
3	2	STRASBURG / TRANSIT GARAGE	18	50.00%	50.00%	100.00%
3	2	COURTLAND / MADISON	18	100.00%	20.00%	80.00%
3	2	CHARLES STREET TERMINAL	18	33.33%	0.00%	100.00%
4	Downward	UNIVERSITY / RESURRECTION	12			
4	Downward	GLASGOW / WESTMOUNT	12	100.00%	100.00%	
4	Downward	UNION / KING	12	33.33%	0.00%	100.00%
4	Downward	MOORE / BREITHAUP	12	0.00%	0.00%	100.00%
4	Downward	CHARLES STREET TERMINAL	12	0.00%	0.00%	100.00%
4	Upward	CHARLES STREET TERMINAL	14			
4	Upward	MOORE / WELLINGTON	14	100.00%	100.00%	
4	Upward	UNION / PARK	14	33.33%	0.00%	100.00%
4	Upward	GLASGOW / WESTMOUNT	14	25.00%	0.00%	100.00%
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	0.00%	100.00%	100.00%
4	Upward	UNIVERSITY / BAKER	8	50.00%	50.00%	100.00%
4	Upward	UNIVERSITY / RESURRECTION	14			
5	1	UPTOWN WATERLOO	15			
5	1	ERB / WESTMOUNT	15			
5	1	FISCHER-HALLMAN / ERB	15	100.00%	0.00%	100.00%
5	1	KEATS / KEATSWOOD	15	0.00%	100.00%	100.00%
5	2	KEATS / KEATSWOOD	13			
5	2	GATEVIEW / WESTVALE	12	100.00%	0.00%	
5	2	ERB / FISCHER-HALLMAN	12	100.00%	0.00%	100.00%
5	2	ERB / WESTMOUNT	13	0.00%	0.00%	100.00%
5	2	KING / WILLIS	13	66.67%	0.00%	100.00%
6	Downward	DANIEL / BLOOMINGDALE	9			
6	Downward	LANCASTER / HAMEL	10	0.00%	0.00%	
6	Downward	LANCASTER / GUELPH	9	0.00%	0.00%	100.00%
6	Downward	WELLINGTON / MARGARET	9	0.00%	0.00%	100.00%
6	Downward	CHARLES STREET TERMINAL	9	100.00%	0.00%	100.00%
6	Upward	CHARLES STREET TERMINAL	10			
6	Upward	WELLINGTON / MARGARET	10	100.00%	100.00%	
6	Upward	LANCASTER / GUELPH	10	33.33%	0.00%	100.00%
6	Upward	LANCASTER / HAMEL	10	75.00%	0.00%	100.00%
6	Upward	DANIEL / BLOOMINGDALE	10	50.00%	50.00%	100.00%
7	Downward	RING / NORTH CAMPUS	21			
7	Downward	CONESTOGA MALL	30			
7	Downward	U WATERLOO	11			
7	Downward	COLUMBIA / HAZEL	21	100.00%	16.67%	

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
7	Downward	UNIVERSITY / KING	11	66.67%	66.67%	
7	Downward	KING / UNIVERSITY	51	83.33%	27.78%	72.22%
7	Downward	UPTOWN WATERLOO	14	40.00%	30.00%	100.00%
7	Downward	KING / WILLIS	2	0.00%	0.00%	100.00%
7	Downward	CHARLES STREET TERMINAL	62	47.06%	5.88%	100.00%
7	Downward	KING / OTTAWA	27	75.00%	25.00%	50.00%
7	Downward	FOURTH / CONNAUGHT	3			
7	Downward	FOURTH / WILSON	8	0.00%	0.00%	100.00%
7	Downward	KINZIE / WEBER	16	83.33%	50.00%	100.00%
7	Downward	FAIRVIEW PARK	14	0.00%	0.00%	100.00%
7	Downward	FAIRVIEW PARK MALL	12	0.00%	0.00%	100.00%
7	Upward	FAIRVIEW PARK	21			
7	Upward	FAIRVIEW PARK MALL	9			
7	Upward	CONNAUGHT / FIFTH	8	100.00%	100.00%	
7	Upward	FOURTH / WILSON	10	100.00%	100.00%	
7	Upward	WEBER / KINZIE	12	100.00%	100.00%	
7	Upward	CHARLES STREET TERMINAL	50	57.14%	14.29%	100.00%
7	Upward	KING / OTTAWA	30	85.71%	0.00%	100.00%
7	Upward	UPTOWN WATERLOO	49	91.67%	33.33%	66.67%
7	Upward	UNIVERSITY / KING	22	50.00%	16.67%	100.00%
7	Upward	RING / UNIVERSITY	22	50.00%	16.67%	100.00%
7	Upward	KING / UNIVERSITY	27	57.14%	57.14%	100.00%
7	Upward	RING / NORTH CAMPUS	22	85.71%	57.14%	100.00%
7	Upward	CONESTOGA MALL	18	33.33%	66.67%	100.00%
7	Upward	COLUMBIA / HAZEL	9	40.00%	40.00%	100.00%
7	Upward	U WATERLOO	8	50.00%	0.00%	100.00%
8	North	FAIRVIEW PARK	21			
8	North	FAIRVIEW PARK MALL	6			
8	North	FRANKLIN / PROSPECT	9			
8	North	WALTON / VANIER	18	100.00%	88.89%	
8	North	CHARLES STREET TERMINAL	40	30.00%	0.00%	90.00%
8	North	COURTLAND / STIRLING	18	72.73%	0.00%	100.00%
8	North	OTTAWA / WEBER	9			
8	North	BELMONT / HIGHLAND	17	100.00%	50.00%	0.00%
8	North	MARGARET / WELLINGTON	23	100.00%	42.86%	57.14%
8	North	UNION / WEBER	23	16.67%	0.00%	100.00%
8	North	UNION / WESTMOUNT	18	50.00%	0.00%	100.00%
8	North	UNIVERSITY / SEAGRAM	18	75.00%	0.00%	100.00%
8	North	UNIVERSITY / KING	41	60.00%	20.00%	100.00%
8	South	UNIVERSITY / KING	44			
8	South	UNIVERSITY / SEAGRAM	15	100.00%	25.00%	
8	South	UNION / WEBER	29	88.89%	33.33%	
8	South	UNION / WESTMOUNT	15	100.00%	66.67%	100.00%
8	South	MARGARET / WELLINGTON	29	0.00%	0.00%	100.00%
8	South	CHARLES STREET TERMINAL	44	50.00%	7.14%	100.00%
8	South	BELMONT / BURN	15	66.67%	8.33%	100.00%
8	South	COURTLAND / VERNON	22	100.00%	40.00%	100.00%
8	South	WALTON / VANIER	22	57.14%	0.00%	100.00%
8	South	OTTAWA / MCKENZIE	7	100.00%	0.00%	100.00%
8	South	FAIRVIEW PARK MALL	10	100.00%	0.00%	100.00%
8	South	FAIRVIEW PARK	19	77.78%	0.00%	100.00%
8	South	WEBER / FRANKLIN	7	0.00%	50.00%	100.00%
9	Downward	CONESTOGA MALL	28			
9	Downward	NORTHFIELD / WEBER	29	100.00%	100.00%	
9	Downward	HIGHPOINT / WINTERGREEN	29	30.77%	7.69%	100.00%
9	Downward	PARKSIDE / GLENELM	29	92.86%	14.29%	100.00%
9	Downward	HAZEL / WILDWOOD	29	42.86%	0.00%	100.00%
9	Downward	HAZEL / UNIVERSITY	26	0.00%	11.11%	100.00%
9	Downward	U WATERLOO	25	53.85%	30.77%	100.00%
9	Upward	U WATERLOO	35			
9	Upward	HAZEL / UNIVERSITY	35			
9	Upward	HAZEL / BEARINGER	35			
9	Upward	PARKSIDE / GLENELM	15			
9	Upward	HIGHPOINT / WINTERGREEN	35	100.00%	0.00%	100.00%
9	Upward	NORTHFIELD / WEBER	36	0.00%	50.00%	100.00%
9	Upward	CONESTOGA MALL	35	90.91%	18.18%	63.64%
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	25			
10	Inbound	PINNACLE / OLD MILL	25	100.00%	100.00%	
10	Inbound	PIONEER / OLD CARRIAGE	25	0.00%	0.00%	100.00%

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
10	Inbound	DOON VILLAGE / MILLWOOD	25	0.00%	0.00%	100.00%
10	Inbound	FAIRVIEW PARK	18	100.00%	0.00%	100.00%
10	Inbound	FAIRVIEW PARK MALL	7			
10	Outbound	FAIRVIEW PARK	24			
10	Outbound	DOON VILLAGE / MILLWOOD	25	85.71%	100.00%	
10	Outbound	PIONEER / OLD CARRIAGE	25	0.00%	0.00%	100.00%
10	Outbound	PINNACLE / OLD MILL	24	100.00%	0.00%	91.67%
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	24	20.00%	0.00%	100.00%
11	1	CHARLES STREET TERMINAL	22			
11	1	STIRLING / COURTLAND	36	80.00%	90.00%	
11	1	ALPINE / OTTAWA	36	91.67%	16.67%	100.00%
11	1	COUNTRY HILL / BLOCK LINE	22	88.89%	11.11%	100.00%
11	1	FOREST GLEN TERMINAL	22	33.33%	0.00%	100.00%
11	2	FOREST GLEN TERMINAL	41			
11	2	KINGSWOOD / BLOCK LINE	42	100.00%	70.00%	
11	2	HOFFMAN / OTTAWA	42	87.50%	0.00%	100.00%
11	2	STIRLING / COURTLAND	42	62.50%	0.00%	100.00%
11	2	CHARLES STREET TERMINAL	42	38.89%	22.22%	100.00%
12	Downward	CONESTOGA MALL	20			
12	Downward	UNIVERSITY / KING	34	100.00%	66.67%	77.78%
12	Downward	BRIDGE / UNIVERSITY	13	100.00%	66.67%	
12	Downward	UNIVERSITY / SEAGRAM	34	75.00%	50.00%	25.00%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	29	85.71%	100.00%	100.00%
12	Downward	HIGHLAND HILLS MALL	33	30.00%	10.00%	80.00%
12	Downward	WESTMOUNT / OTTAWA	30	100.00%	14.29%	85.71%
12	Downward	FOREST GLEN TERMINAL	30	20.00%	10.00%	100.00%
12	Downward	FAIRVIEW PARK MALL	14	100.00%	0.00%	100.00%
12	Downward	FAIRVIEW PARK	11			
12	Upward	FAIRVIEW PARK	16			
12	Upward	FAIRVIEW PARK MALL	4			
12	Upward	FOREST GLEN TERMINAL	20	100.00%	100.00%	
12	Upward	WESTMOUNT / OTTAWA	22	100.00%	50.00%	100.00%
12	Upward	HIGHLAND HILLS MALL	20	50.00%	0.00%	100.00%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	20	80.00%	60.00%	100.00%
12	Upward	UNIVERSITY / SEAGRAM	20	55.56%	0.00%	88.89%
12	Upward	UNIVERSITY / KING	20	25.00%	37.50%	100.00%
12	Upward	BRIDGE / UNIVERSITY	13	100.00%	0.00%	100.00%
12	Upward	CONESTOGA MALL	14	100.00%	80.00%	100.00%
13	1	U WATERLOO	26			
13	1	COLUMBIA / FISCHER-HALLMAN	26	87.50%	87.50%	
13	1	LAURELWOOD / ERBSVILLE	26	83.33%	0.00%	100.00%
13	2	LAURELWOOD / ERBSVILLE	33			
13	2	COLUMBIA / FISCHER-HALLMAN	34	25.00%	0.00%	
13	2	U WATERLOO	31	25.00%	50.00%	100.00%
14	1	CONESTOGA MALL	3			
14	1	BATHURST / MCMURRAY	3	0.00%	100.00%	
14	1	WYMAN / COLBY	2	0.00%	0.00%	100.00%
14	2	WYMAN / COLBY(2)	4			
14	2	WYMAN / COLBY	4			
14	2	MCMURRAY / NORTHLAND	4			
14	2	CONESTOGA MALL	4			
15	East	CHARLES STREET TERMINAL	23			
15	East	QUEEN / LANCASTER	23	83.33%	100.00%	
15	East	EDNA / FREDERICK	22	75.00%	25.00%	100.00%
15	East	LACKNER / VICTORIA	22	0.00%	0.00%	100.00%
15	West	LACKNER / VICTORIA	16			
15	West	NATCHEZ / HALIFAX	16	0.00%	0.00%	
15	West	FREDERICK / EDNA	16	50.00%	0.00%	100.00%
15	West	QUEEN / LANCASTER	16	66.67%	0.00%	100.00%
15	West	CHARLES STREET TERMINAL	16	60.00%	0.00%	100.00%
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	14			
16	Inbound	PIONEER / BECHTEL	16	0.00%	40.00%	
16	Inbound	STRASBURG / TRILLIUM	14	50.00%	50.00%	50.00%
16	Inbound	FOREST GLEN TERMINAL	14	50.00%	0.00%	100.00%
16	Outbound	FOREST GLEN TERMINAL	15			
16	Outbound	STRASBURG / TRILLIUM	15	100.00%	100.00%	
16	Outbound	PIONEER / BECHTEL	15	100.00%	0.00%	100.00%
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	0.00%	0.00%	100.00%
17	Downward	LACKNER / VICTORIA	4			

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
17	Downward	KEEWATIN / OTTAWA	4			
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4			
17	Downward	RIVER / FAIRWAY	4			
17	Downward	FAIRVIEW PARK	1			
17	Upward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK MALL	2			
17	Upward	RIVER / FAIRWAY	4	100.00%	100.00%	
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4			
17	Upward	KEEWATIN / OTTAWA	4			
17	Upward	LACKNER / VICTORIA	4			
18	Downward	MAPLE / GUELPH	9			
18	Downward	GUELPH / MARGARET	10	100.00%	0.00%	
18	Downward	WEBER / WELLINGTON	10	50.00%	0.00%	100.00%
18	Downward	CHARLES STREET TERMINAL	10	100.00%	0.00%	100.00%
18	Upward	CHARLES STREET TERMINAL	10			
18	Upward	WEBER / WELLINGTON	3	100.00%	0.00%	
18	Upward	GUELPH / FLOYD	10	100.00%	0.00%	33.33%
18	Upward	MAPLE / GUELPH	10	0.00%	0.00%	100.00%
19	1	CHARLES STREET TERMINAL	27			
19	1	VICTORIA / BELMONT	27	100.00%	100.00%	
19	1	CHOPIN / BRYBECK	27	100.00%	29.41%	100.00%
19	1	HAZELGLEN / VICTORIA	27	0.00%	0.00%	100.00%
19	1	WESTFOREST / HIDDEN CREEK	27	38.46%	23.08%	100.00%
19	1	HIGHLAND HILLS MALL	27	50.00%	0.00%	100.00%
19	2	HIGHLAND HILLS MALL	21			
19	2	WESTFOREST / VICTORIA	21	100.00%	91.67%	
19	2	HAZELGLEN / MOOREGATE	21	11.11%	0.00%	100.00%
19	2	CHOPIN / BRYBECK	21	0.00%	0.00%	100.00%
19	2	VICTORIA / BELMONT	21	100.00%	40.00%	100.00%
19	2	CHARLES STREET TERMINAL	21	57.14%	0.00%	100.00%
20	1	CHARLES STREET TERMINAL	21			
20	1	VICTORIA / BELMONT	21	87.50%	87.50%	
20	1	INGLESIDE / HAZELGLEN	21	60.00%	0.00%	100.00%
20	2	INGLESIDE / HAZELGLEN	21			
20	2	CHOPIN / BRYBECK	21	0.00%	0.00%	
20	2	VICTORIA / BELMONT	21	90.91%	0.00%	100.00%
20	2	CHARLES STREET TERMINAL	21	40.00%	10.00%	100.00%
22	East	HIGHLAND HILLS MALL	18			
22	East	ACTIVA / GREY FOX	18	100.00%	100.00%	
22	East	ACTIVA / SNOWDROP	18	72.73%	0.00%	100.00%
22	East	TILLSLEY / WESTMOUNT	18	62.50%	0.00%	100.00%
22	East	FOREST GLEN TERMINAL	18	0.00%	0.00%	100.00%
22	East	OTTAWA / HWY 8 RAMP	18	100.00%	100.00%	0.00%
22	East	STIRLING / COURTLAND	18	100.00%	40.00%	100.00%
22	East	CHARLES STREET TERMINAL	18	25.00%	0.00%	100.00%
22	West	CHARLES STREET TERMINAL	9			
22	West	STIRLING / COURTLAND	13	100.00%	100.00%	
22	West	OTTAWA / HWY 8 RAMP	9	100.00%	0.00%	100.00%
22	West	FOREST GLEN TERMINAL	9	100.00%	0.00%	100.00%
22	West	ERINBROOK / HEDGESTONE	9	0.00%	100.00%	100.00%
22	West	DAVID BERGEY / PEACH BLOSSOM	9	100.00%	0.00%	75.00%
22	West	ACTIVA / GREY FOX	9	25.00%	0.00%	100.00%
22	West	HIGHLAND HILLS MALL	9	0.00%	0.00%	100.00%
23	East	CHARLES STREET TERMINAL	16			
23	East	FREDERICK / DUNHAM	17	75.00%	100.00%	
23	East	RIVER / OTTAWA	17	0.00%	0.00%	100.00%
23	East	OTTAWA / LACKNER	17	100.00%	0.00%	100.00%
23	East	LACKNER / CORFIELD	17	0.00%	0.00%	100.00%
23	East	FAIRVIEW PARK	9	100.00%	0.00%	66.67%
23	East	FAIRVIEW PARK MALL	4	100.00%	0.00%	100.00%
23	West	FAIRVIEW PARK	8			
23	West	FAIRVIEW PARK MALL	2			
23	West	LACKNER / CORFIELD	11			
23	West	OTTAWA / OLDFIELD	11			
23	West	RIVER / OTTAWA	11	100.00%	33.33%	100.00%
23	West	FREDERICK / EDNA	11	0.00%	0.00%	100.00%
23	West	CHARLES STREET TERMINAL	11			
24	1	CHARLES STREET TERMINAL	11			
24	1	HIGHLAND / BELMONT	12	75.00%	100.00%	



Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
24	1	HIGHLAND HILLS MALL	12	75.00%	0.00%	100.00%
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	100.00%	40.00%	60.00%
24	2	ROLLING MEADOWS / WESTHEIGHTS	9			
24	2	WESTHEIGHTS / WINDING	9	33.33%	33.33%	
24	2	WESTHEIGHTS / WESTFOREST	9	0.00%	33.33%	100.00%
24	2	HIGHLAND HILLS MALL	9	50.00%	0.00%	100.00%
24	2	HIGHLAND / BELMONT	9	100.00%	50.00%	50.00%
24	2	CHARLES STREET TERMINAL	9	100.00%	100.00%	100.00%
25	1	CHARLES STREET TERMINAL	28			
25	1	QUEENS / WESTMOUNT	31	87.50%	87.50%	
25	1	CECILE / OVERLEA	4			
25	1	HIGHLAND HILLS MALL	32	0.00%	0.00%	80.00%
25	1	FORESTWOOD / MCGARRY	31	100.00%	25.00%	100.00%
25	1	DRIFTWOOD / WESTHEIGHTS	31	50.00%	0.00%	100.00%
25	1	GOLDEN MEADOW / HAVENWOOD	32	25.00%	0.00%	100.00%
25	2	GOLDEN MEADOW / HAVENWOOD	21			
25	2	WESTHEIGHTS / LORILEE	21	0.00%	0.00%	
25	2	HIGHLAND HILLS MALL	21	50.00%	0.00%	50.00%
25	2	QUEENS / WESTMOUNT	21	0.00%	50.00%	50.00%
25	2	CHARLES STREET TERMINAL	21	100.00%	0.00%	100.00%
26	1	FOREST GLEN TERMINAL	9			
26	1	TRILLIUM / STRASBURG	9			
26	1	TRILLIUM / GROFF	9	100.00%	0.00%	100.00%
26	2	TRILLIUM / GROFF	9			
26	2	TRILLIUM / STRASBURG	9			
26	2	FOREST GLEN TERMINAL	9			
27	1	FAIRVIEW PARK MALL	8			
27	1	FAIRVIEW PARK	9			
27	1	MORRISON / MANOR	17	100.00%	100.00%	
27	1	QUINTE / MORRISON	17	0.00%	0.00%	100.00%
27	2	QUINTE / MORRISON	11			
27	2	FAIRWAY / KING	11	0.00%	0.00%	
27	2	FAIRVIEW PARK MALL	4	0.00%	0.00%	100.00%
27	2	FAIRVIEW PARK	7	100.00%	0.00%	100.00%
29	1	RING / UNIVERSITY	8			
29	1	FISCHER-HALLMAN / KEATS	8	66.67%	66.67%	
29	2	KEATS / FISCHER-HALLMAN	6			
29	2	RING / UNIVERSITY	6			
31	Downward	CONESTOGA MALL	8			
31	Downward	NORTHFIELD / BRIDGE	9	66.67%	66.67%	
31	Downward	UNIVERSITY / RIM PARK INTERNAL	5			
31	Downward	UNIVERSITY / LEXINGTON	8			
31	Downward	LEXINGTON / ANNDALE	8	100.00%	0.00%	0.00%
31	Downward	COLUMBIA / SPRUCE	8			
31	Downward	RING / UNIVERSITY	8	100.00%	0.00%	100.00%
31	Upward	RING / UNIVERSITY	5			
31	Upward	COLUMBIA / KING	5	100.00%	100.00%	
31	Upward	LEXINGTON / DEARBORN	5	0.00%	0.00%	100.00%
31	Upward	UNIVERSITY / LEXINGTON	5	100.00%	0.00%	100.00%
31	Upward	UNIVERSITY / RIM PARK INTERNAL	2	0.00%	0.00%	100.00%
31	Upward	NORTHFIELD / BRIDGE	6			
31	Upward	CONESTOGA MALL	2			
32	2	KUMPF / NORTHFIELD	5			
32	2	WEBER / GOLDEN EAGLE	8			
32	2	CONESTOGO / COLBY	5			
32	2	CONESTOGA MALL	4	100.00%	0.00%	0.00%
33	1	FOREST GLEN TERMINAL	7			
33	1	STRASBURG / TRILLIUM	7	50.00%	100.00%	
33	1	PARKVALE / NEWCASTLE	2			
33	2	HURON / NEWCASTLE	4			
33	2	STRASBURG / TRILLIUM	8			
33	2	FOREST GLEN TERMINAL	8			
35	1	KING / WILLIS	13			
35	1	ERB / WEBER	13	100.00%	100.00%	
35	1	BRIDGEPORT / LANCASTER	13	0.00%	0.00%	100.00%
35	1	AUBURN / SABLE	13	100.00%	100.00%	100.00%
35	1	BRIDGE / LEXINGTON	15	0.00%	0.00%	100.00%
35	1	CHESAPEAKE / SPINNAKER	13	0.00%	0.00%	100.00%
35	1	CONESTOGA MALL	15	0.00%	0.00%	100.00%

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
35	2	CONESTOGA MALL	14			
35	2	CHESAPEAKE / BRIGANTINE	14			
35	2	BRIDGE / LEXINGTON	11	100.00%	0.00%	100.00%
35	2	AUBURN / SABLE	14	100.00%	0.00%	100.00%
35	2	BRIDGEPORT / LANCASTER	14	50.00%	0.00%	100.00%
35	2	BRIDGEPORT / WEBER	14	66.67%	0.00%	100.00%
35	2	UPTOWN WATERLOO	14			
51	Inbound	HOLIDAY INN TERMINAL	36			
51	Inbound	SMART!CENTRES CAMBRIDGE	37	35.29%	70.59%	
51	Inbound	CAMBRIDGE CENTRE TERMINAL	37	85.00%	10.00%	100.00%
51	Inbound	AINSLIE STREET TERMINAL	34	41.18%	17.65%	100.00%
51	Outbound	AINSLIE STREET TERMINAL	49			
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	31.58%	94.74%	
51	Outbound	SMART!CENTRES CAMBRIDGE	40	50.00%	27.78%	94.44%
51	Outbound	HOLIDAY INN TERMINAL	40	13.33%	20.00%	93.33%
52	North	AINSLIE STREET TERMINAL	23			
52	North	CORONATION / BARRETT	18	60.00%	100.00%	
52	North	KING / LOWTHER	18	0.00%	0.00%	100.00%
52	North	PRESTON / FOUNTAIN	18	50.00%	25.00%	100.00%
52	North	SHANTZ HILL / HWY 401 RAMP	18	0.00%	0.00%	100.00%
52	North	SPORTSWORLD	18	33.33%	0.00%	100.00%
52	North	FAIRVIEW PARK	18	0.00%	0.00%	100.00%
52	South	FAIRVIEW PARK	16			
52	South	FAIRVIEW PARK MALL	5			
52	South	SPORTSWORLD	18	100.00%	100.00%	
52	South	SHANTZ HILL / PRESTON	21	40.00%	40.00%	80.00%
52	South	PRESTON / FOUNTAIN	20	40.00%	20.00%	100.00%
52	South	KING / LOWTHER	20	0.00%	0.00%	100.00%
52	South	CORONATION / MARTIN	21	71.43%	28.57%	85.71%
52	South	AINSLIE STREET TERMINAL	21	0.00%	0.00%	100.00%
53	Inbound	HOLIDAY INN TERMINAL	8			
53	Inbound	FRANKLIN / SAGINAW	8	100.00%	66.67%	
53	Inbound	DOBBIE / SAVAGE	8	66.67%	0.00%	100.00%
53	Inbound	MAIN / DUNDAS	8	33.33%	0.00%	100.00%
53	Inbound	AINSLIE STREET TERMINAL	8	50.00%	0.00%	100.00%
53	Outbound	AINSLIE STREET TERMINAL	8			
53	Outbound	MAIN / DUNDAS	8	60.00%	80.00%	
53	Outbound	DOBBIE / SAVAGE	8	80.00%	0.00%	100.00%
53	Outbound	FRANKLIN / SAGINAW	8	40.00%	0.00%	100.00%
53	Outbound	HOLIDAY INN TERMINAL	8	50.00%	50.00%	100.00%
54	East	MAIN / DUNDAS	44	0.00%	100.00%	
54	East	LISBON PINES / GATEHOUSE	44	76.47%	5.88%	100.00%
54	East	AINSLIE STREET TERMINAL	88	18.75%	0.00%	100.00%
54	East	CHAMPLAIN / CHRISTOPHER	44	94.74%	0.00%	100.00%
55	West	SOUTHWOOD / CEDAR	23	85.71%	100.00%	
55	West	AINSLIE STREET TERMINAL	44	40.00%	20.00%	100.00%
55	West	SOUTHWOOD / ST ANDREWS	22	100.00%	0.00%	100.00%
55	West	ST ANDREWS / GILHOLM	23	16.67%	8.33%	100.00%
56	West	BISHOP / RAILWAY	29	71.43%	71.43%	
56	West	ROSE / ARGYLE	28	14.29%	0.00%	100.00%
56	West	CAMBRIDGE CENTRE TERMINAL	56	100.00%	0.00%	100.00%
56	West	WESTMINSTER / KING	29	50.00%	0.00%	100.00%
56	West	LANG'S / CONCESSION	29	76.92%	15.38%	100.00%
57	West	SUNSET / SAXONY	34	100.00%	93.55%	
57	West	BLAIR / BISMARCK	33	10.00%	0.00%	100.00%

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
57	West	AINSLIE STREET TERMINAL	72	35.00%	5.00%	95.00%
57	West	HILLCREST / CHURCHILL	34	60.87%	0.00%	100.00%
58	East	MOSCRIP / BRONSON	14	100.00%	100.00%	
58	East	MUNCH / ELGIN	14	90.91%	9.09%	100.00%
58	East	AINSLIE STREET TERMINAL	28	0.00%	0.00%	100.00%
58	East	HILLTOP / FRANKLIN	14	28.57%	0.00%	100.00%
59	East	CHAMPLAIN / CHRISTOPHER	20	71.43%	100.00%	
59	East	AINSLIE STREET TERMINAL	45	14.29%	14.29%	85.71%
59	East	CHAMPLAIN / ELGIN	21	100.00%	16.67%	91.67%
60	East	GLAMIS / ROBSON	28	44.44%	100.00%	
60	East	CAMBRIDGE CENTRE TERMINAL	56	0.00%	0.00%	100.00%
60	East	ELGIN / SAGINAW	28	100.00%	23.81%	95.24%
60	East	MUNCH / KOVAC	28	0.00%	0.00%	100.00%
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8			
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6			
61	East	KING / WESTMINSTER	8			
61	East	CAMBRIDGE CENTRE	2			
61	West	CAMBRIDGE CENTRE	2			
61	West	KING / WESTMINSTER	5	100.00%	100.00%	
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	5	0.00%	0.00%	100.00%
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	5	0.00%	100.00%	100.00%
62	West	SOUTHGATE / DAY	19	100.00%	100.00%	
62	West	AINSLIE STREET TERMINAL	46	20.00%	0.00%	100.00%
62	West	WOODSIDE / CEDAR	23	85.71%	0.00%	100.00%
63	East	ALISON / ELGIN	21	62.50%	87.50%	
63	East	AINSLIE STREET TERMINAL	42	0.00%	0.00%	100.00%
63	East	DUNDAS / FRANKLIN	21	80.00%	0.00%	100.00%
63	East	CHAMPLAIN / CHRISTOPHER	21	55.56%	0.00%	100.00%
64	West	LANG'S / WALTER	18	100.00%	100.00%	
64	West	EAGLE / KING	18	90.00%	0.00%	100.00%
64	West	CAMBRIDGE CENTRE TERMINAL	36	33.33%	11.11%	100.00%
64	West	ROSE / ARGYLE	18	60.00%	0.00%	100.00%
64	West	BISHOP / RAILWAY	18	80.00%	0.00%	100.00%
65	North	HOLIDAY INN TERMINAL	34			
65	North	WINSTON / SCOTTDALE	17	0.00%	80.00%	
65	North	FISHER MILLS / FEARNWOOD	17	100.00%	11.11%	100.00%
65	North	FRANKLIN / WINSTON	17	100.00%	0.00%	100.00%
66	East	FRANKLIN / WINSTON	7	0.00%	100.00%	
66	East	COOPER / ELLIS	7			
66	East	HOLIDAY INN TERMINAL	14			
66	East	WINSTON / WESTBURY	7			
67	North	CAMBRIDGE CENTRE TERMINAL	14			
67	North	FLEMING / PINEBUSH	7	100.00%	100.00%	
71	East	QUEEN / HUNGERFORD	18	80.00%	40.00%	
71	East	HOLIDAY INN TERMINAL	36	16.67%	0.00%	
71	East	ELLIS / ADLER	18	82.35%	0.00%	100.00%
110	Downward	FAIRVIEW PARK	19			
110	Downward	PIONEER / OLD CARRIAGE	26	100.00%	100.00%	
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	19	50.00%	100.00%	100.00%
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	13			
110	Upward	PIONEER / OLD CARRIAGE	13	66.67%	83.33%	
110	Upward	FAIRVIEW PARK	13	25.00%	0.00%	100.00%
111	North	AINSLIE STREET TERMINAL	2			
111	South	AINSLIE STREET TERMINAL	4			
200	Downward	CONESTOGA MALL	508			
200	Downward	McCORMICK	506	84.00%	98.00%	
200	Downward	R & T PARK	508	7.14%	36.73%	98.98%
200	Downward	U WATERLOO	507	0.00%	18.57%	100.00%
200	Downward	LAURIER	507	50.00%	100.00%	100.00%
200	Downward	UPTOWN WATERLOO	341	59.00%	55.00%	100.00%
200	Downward	KING / WILLIS	53	80.00%	40.00%	100.00%
200	Downward	GRAND RIVER HOSPITAL	508	8.33%	49.24%	78.03%
200	Downward	CHARLES TERMINAL	509	46.26%	14.97%	97.28%
200	Downward	OTTAWA	508	62.50%	28.33%	94.17%
200	Downward	FAIRVIEW	508	13.95%	30.23%	98.84%
200	Downward	SMART!CENTRES CAMBRIDGE	506	83.46%	82.68%	81.10%
200	Downward	CAMBRIDGE CENTRE	504	66.67%	0.00%	100.00%
200	Downward	AINSLIE STREET TERMINAL	496	50.00%	50.00%	75.00%
200	Upward	AINSLIE STREET TERMINAL	450			

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
200	Upward	CAMBRIDGE CENTRE	448	57.14%	100.00%	
200	Upward	SMART!CENTRES CAMBRIDGE	447	25.00%	50.00%	100.00%
200	Upward	FAIRVIEW	447	76.06%	46.48%	91.55%
200	Upward	OTTAWA	449	86.47%	92.48%	89.47%
200	Upward	CHARLES TERMINAL	448	23.01%	4.42%	100.00%
200	Upward	GRAND RIVER HOSPITAL	444	91.77%	32.91%	93.04%
200	Upward	UPTOWN WATERLOO	445	32.24%	15.79%	100.00%
200	Upward	LAURIER	444	50.00%	16.67%	100.00%
200	Upward	U WATERLOO	444	66.67%	22.22%	100.00%
200	Upward	R & T PARK	444	12.44%	90.91%	100.00%
200	Upward	McCORMICK	444	5.35%	2.14%	100.00%
200	Upward	CONESTOGA MALL	425	55.61%	31.02%	100.00%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
1	East	CHARLES STREET TERMINAL	26	0.00%		
1	East	FREDERICK / WEBER	26			
1	East	BECKER / BELLEVIEW	9			
1	East	LORRAINE / BIRKSHIRE	17			
1	East	RIVER / HICKSON	9	0.00%	100.00%	100.00%
1	East	OTTAWA / OLDFIELD	17	0.00%	100.00%	100.00%
1	East	STANLEY PARK MALL TERMINAL	25			
1	West	STANLEY PARK MALL TERMINAL	24			
1	West	LACKNER / BANBURY	9			
1	West	RIVER / HALLIWELL	25			
1	West	BELLEVIEW / BECKER	15			
1	West	WEBER / SCOTT	26	0.00%	100.00%	66.67%
1	West	CHARLES STREET TERMINAL	26			
2	Downward	HIGHLAND HILLS MALL	13			
2	Downward	GREENBROOK / WESTMOUNT	14			
2	Downward	GREENBROOK / STIRLING	14			
2	Downward	CHARLES STREET TERMINAL	15			
2	Upward	CHARLES STREET TERMINAL	13			
2	Upward	SOUTHMOOR / AVALON	13			
2	Upward	GREENBROOK / STIRLING	13			
2	Upward	WESTMOUNT / VILLAGE	13			
2	Upward	HIGHLAND HILLS MALL	13			
3	1	CHARLES STREET TERMINAL	19			
3	1	COURTLAND / STIRLING	19			
3	1	STRASBURG / TRANSIT GARAGE	21			
3	1	OTTAWA / WESTMOUNT	21	0.00%	100.00%	25.00%
3	1	WILLIAMSBURG / DINISON	21	0.00%	0.00%	100.00%
3	1	FOREST GLEN TERMINAL	21			
3	2	FOREST GLEN TERMINAL	18	0.00%		
3	2	WILLIAMSBURG / DINISON	18	0.00%	0.00%	100.00%
3	2	OTTAWA / WESTMOUNT	18	0.00%	100.00%	50.00%
3	2	STRASBURG / TRANSIT GARAGE	18	0.00%	100.00%	50.00%
3	2	COURTLAND / MADISON	18	0.00%	100.00%	100.00%
3	2	CHARLES STREET TERMINAL	18			
4	Downward	UNIVERSITY / RESURRECTION	12	0.00%		
4	Downward	GLASGOW / WESTMOUNT	12	0.00%	100.00%	100.00%
4	Downward	UNION / KING	12	0.00%	100.00%	40.00%
4	Downward	MOORE / BREITHAUP	12	0.00%	100.00%	80.00%
4	Downward	CHARLES STREET TERMINAL	12			
4	Upward	CHARLES STREET TERMINAL	14			
4	Upward	MOORE / WELLINGTON	14			
4	Upward	UNION / PARK	14			
4	Upward	GLASGOW / WESTMOUNT	14	0.00%	100.00%	0.00%
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	0.00%	100.00%	100.00%
4	Upward	UNIVERSITY / BAKER	8			
4	Upward	UNIVERSITY / RESURRECTION	14			
5	1	UPTOWN WATERLOO	15	0.00%		
5	1	ERB / WESTMOUNT	15	0.00%	75.00%	75.00%
5	1	FISCHER-HALLMAN / ERB	15	0.00%	66.67%	100.00%
5	1	KEATS / KEATSWOOD	15			
5	2	KEATS / KEATSWOOD	13	0.00%		
5	2	GATEVIEW / WESTVALE	12	0.00%	100.00%	100.00%
5	2	ERB / FISCHER-HALLMAN	12	0.00%	57.14%	85.71%
5	2	ERB / WESTMOUNT	13	0.00%	100.00%	100.00%
5	2	KING / WILLIS	13			
6	Downward	DANIEL / BLOOMINGDALE	9	0.00%		
6	Downward	LANCASTER / HAMEL	10	0.00%	100.00%	33.33%
6	Downward	LANCASTER / GUELPH	9	0.00%	75.00%	100.00%
6	Downward	WELLINGTON / MARGARET	9	0.00%	100.00%	85.71%
6	Downward	CHARLES STREET TERMINAL	9			
6	Upward	CHARLES STREET TERMINAL	10	0.00%		
6	Upward	WELLINGTON / MARGARET	10	0.00%	100.00%	100.00%
6	Upward	LANCASTER / GUELPH	10	0.00%	100.00%	66.67%
6	Upward	LANCASTER / HAMEL	10	0.00%	66.67%	100.00%
6	Upward	DANIEL / BLOOMINGDALE	10			
7	Downward	RING / NORTH CAMPUS	21	0.00%		
7	Downward	CONESTOGA MALL	30	0.00%		
7	Downward	U WATERLOO	11	0.00%		
7	Downward	COLUMBIA / HAZEL	21	0.00%	0.00%	100.00%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
7	Downward	UNIVERSITY / KING	11	0.00%	50.00%	100.00%
7	Downward	KING / UNIVERSITY	51	0.00%	100.00%	100.00%
7	Downward	UPTOWN WATERLOO	14	0.00%	100.00%	100.00%
7	Downward	KING / WILLIS	2			
7	Downward	CHARLES STREET TERMINAL	62	33.33%	66.67%	100.00%
7	Downward	KING / OTTAWA	27	0.00%	100.00%	100.00%
7	Downward	FOURTH / CONNAUGHT	3	0.00%	100.00%	0.00%
7	Downward	FOURTH / WILSON	8	0.00%	100.00%	66.67%
7	Downward	KINZIE / WEBER	16			
7	Downward	FAIRVIEW PARK	14			
7	Downward	FAIRVIEW PARK MALL	12			
7	Upward	FAIRVIEW PARK	21	0.00%		
7	Upward	FAIRVIEW PARK MALL	9			
7	Upward	CONNAUGHT / FIFTH	8	0.00%	100.00%	100.00%
7	Upward	FOURTH / WILSON	10			
7	Upward	WEBER / KINZIE	12	0.00%	100.00%	100.00%
7	Upward	CHARLES STREET TERMINAL	50	28.57%	100.00%	66.67%
7	Upward	KING / OTTAWA	30	0.00%	100.00%	50.00%
7	Upward	UPTOWN WATERLOO	49	0.00%	100.00%	58.33%
7	Upward	UNIVERSITY / KING	22	0.00%	100.00%	100.00%
7	Upward	RING / UNIVERSITY	22	0.00%	75.00%	100.00%
7	Upward	KING / UNIVERSITY	27	0.00%	100.00%	72.73%
7	Upward	RING / NORTH CAMPUS	22			
7	Upward	CONESTOGA MALL	18			
7	Upward	COLUMBIA / HAZEL	9	0.00%	33.33%	100.00%
7	Upward	U WATERLOO	8			
8	North	FAIRVIEW PARK	21	0.00%		
8	North	FAIRVIEW PARK MALL	6			
8	North	FRANKLIN / PROSPECT	9	0.00%	100.00%	100.00%
8	North	WALTON / VANIER	18			
8	North	CHARLES STREET TERMINAL	40	50.00%	100.00%	100.00%
8	North	COURTLAND / STIRLING	18			
8	North	OTTAWA / WEBER	9	0.00%	100.00%	50.00%
8	North	BELMONT / HIGHLAND	17	0.00%	75.00%	50.00%
8	North	MARGARET / WELLINGTON	23			
8	North	UNION / WEBER	23			
8	North	UNION / WESTMOUNT	18	0.00%	100.00%	80.00%
8	North	UNIVERSITY / SEAGRAM	18	0.00%	75.00%	100.00%
8	North	UNIVERSITY / KING	41			
8	South	UNIVERSITY / KING	44	0.00%		
8	South	UNIVERSITY / SEAGRAM	15			
8	South	UNION / WEBER	29	0.00%	100.00%	100.00%
8	South	UNION / WESTMOUNT	15			
8	South	MARGARET / WELLINGTON	29	0.00%	100.00%	40.00%
8	South	CHARLES STREET TERMINAL	44	80.00%	40.00%	80.00%
8	South	BELMONT / BURN	15	0.00%	100.00%	100.00%
8	South	COURTLAND / VERNON	22	0.00%	0.00%	100.00%
8	South	WALTON / VANIER	22	0.00%	100.00%	66.67%
8	South	OTTAWA / MCKENZIE	7			
8	South	FAIRVIEW PARK MALL	10			
8	South	FAIRVIEW PARK	19			
8	South	WEBER / FRANKLIN	7	0.00%	100.00%	0.00%
9	Downward	CONESTOGA MALL	28	0.00%		
9	Downward	NORTHFIELD / WEBER	29	0.00%	100.00%	100.00%
9	Downward	HIGHPOINT / WINTERGREEN	29	0.00%	100.00%	100.00%
9	Downward	PARKSIDE / GLENELM	29	0.00%	100.00%	66.67%
9	Downward	HAZEL / WILDWOOD	29	0.00%	100.00%	75.00%
9	Downward	HAZEL / UNIVERSITY	26	0.00%	100.00%	83.33%
9	Downward	U WATERLOO	25			
9	Upward	U WATERLOO	35	0.00%		
9	Upward	HAZEL / UNIVERSITY	35	0.00%	88.89%	77.78%
9	Upward	HAZEL / BEARINGER	35	0.00%	86.67%	100.00%
9	Upward	PARKSIDE / GLENELM	15	0.00%	83.33%	100.00%
9	Upward	HIGHPOINT / WINTERGREEN	35	0.00%	81.25%	87.50%
9	Upward	NORTHFIELD / WEBER	36	0.00%	90.00%	85.00%
9	Upward	CONESTOGA MALL	35			
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	25	0.00%		
10	Inbound	PINNACLE / OLD MILL	25	0.00%	50.00%	100.00%
10	Inbound	PIONEER / OLD CARRIAGE	25	0.00%	100.00%	60.00%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
10	Inbound	DOON VILLAGE / MILLWOOD	25	0.00%	100.00%	90.91%
10	Inbound	FAIRVIEW PARK	18			
10	Inbound	FAIRVIEW PARK MALL	7			
10	Outbound	FAIRVIEW PARK	24	0.00%		
10	Outbound	DOON VILLAGE / MILLWOOD	25	0.00%	100.00%	66.67%
10	Outbound	PIONEER / OLD CARRIAGE	25	0.00%	100.00%	50.00%
10	Outbound	PINNACLE / OLD MILL	24	0.00%	0.00%	100.00%
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	24			
11	1	CHARLES STREET TERMINAL	22			
11	1	STIRLING / COURTLAND	36	0.00%	100.00%	100.00%
11	1	ALPINE / OTTAWA	36	0.00%	100.00%	100.00%
11	1	COUNTRY HILL / BLOCK LINE	22	0.00%	100.00%	100.00%
11	1	FOREST GLEN TERMINAL	22			
11	2	FOREST GLEN TERMINAL	41	0.00%		
11	2	KINGSWOOD / BLOCK LINE	42	0.00%	100.00%	66.67%
11	2	HOFFMAN / OTTAWA	42	0.00%	100.00%	80.00%
11	2	STIRLING / COURTLAND	42	0.00%	80.00%	100.00%
11	2	CHARLES STREET TERMINAL	42			
12	Downward	CONESTOGA MALL	20	0.00%		
12	Downward	UNIVERSITY / KING	34	50.00%	33.33%	16.67%
12	Downward	BRIDGE / UNIVERSITY	13			
12	Downward	UNIVERSITY / SEAGRAM	34	0.00%	33.33%	100.00%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	29	0.00%	100.00%	50.00%
12	Downward	HIGHLAND HILLS MALL	33	50.00%	75.00%	50.00%
12	Downward	WESTMOUNT / OTTAWA	30	0.00%	50.00%	100.00%
12	Downward	FOREST GLEN TERMINAL	30	33.33%	66.67%	66.67%
12	Downward	FAIRVIEW PARK MALL	14			
12	Downward	FAIRVIEW PARK	11			
12	Upward	FAIRVIEW PARK	16			
12	Upward	FAIRVIEW PARK MALL	4			
12	Upward	FOREST GLEN TERMINAL	20	100.00%	100.00%	100.00%
12	Upward	WESTMOUNT / OTTAWA	22	0.00%	66.67%	100.00%
12	Upward	HIGHLAND HILLS MALL	20	100.00%	100.00%	0.00%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	20	0.00%	100.00%	100.00%
12	Upward	UNIVERSITY / SEAGRAM	20	0.00%	100.00%	80.00%
12	Upward	UNIVERSITY / KING	20	100.00%	50.00%	0.00%
12	Upward	BRIDGE / UNIVERSITY	13	0.00%	100.00%	100.00%
12	Upward	CONESTOGA MALL	14			
13	1	U WATERLOO	26	0.00%		
13	1	COLUMBIA / FISCHER-HALLMAN	26	0.00%	80.00%	100.00%
13	1	LAURELWOOD / ERBSVILLE	26			
13	2	LAURELWOOD / ERBSVILLE	33	0.00%		
13	2	COLUMBIA / FISCHER-HALLMAN	34	0.00%	100.00%	91.67%
13	2	U WATERLOO	31			
14	1	CONESTOGA MALL	3			
14	1	BATHURST / MCMURRAY	3			
14	1	WYMAN / COLBY	2			
14	2	WYMAN / COLBY(2)	4			
14	2	WYMAN / COLBY	4			
14	2	MCMURRAY / NORTHLAND	4	0.00%	100.00%	0.00%
14	2	CONESTOGA MALL	4			
15	East	CHARLES STREET TERMINAL	23			
15	East	QUEEN / LANCASTER	23	0.00%	100.00%	0.00%
15	East	EDNA / FREDERICK	22	0.00%	100.00%	100.00%
15	East	LACKNER / VICTORIA	22			
15	West	LACKNER / VICTORIA	16	0.00%		
15	West	NATCHEZ / HALIFAX	16	0.00%	33.33%	100.00%
15	West	FREDERICK / EDNA	16	0.00%	100.00%	50.00%
15	West	QUEEN / LANCASTER	16	0.00%	100.00%	100.00%
15	West	CHARLES STREET TERMINAL	16			
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	14			
16	Inbound	PIONEER / BECHTEL	16	0.00%	66.67%	33.33%
16	Inbound	STRASBURG / TRILLIUM	14	0.00%	100.00%	100.00%
16	Inbound	FOREST GLEN TERMINAL	14			
16	Outbound	FOREST GLEN TERMINAL	15			
16	Outbound	STRASBURG / TRILLIUM	15	0.00%	100.00%	0.00%
16	Outbound	PIONEER / BECHTEL	15	0.00%	100.00%	100.00%
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15			
17	Downward	LACKNER / VICTORIA	4	0.00%		

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
17	Downward	KEEWATIN / OTTAWA	4			
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4			
17	Downward	RIVER / FAIRWAY	4	0.00%	100.00%	0.00%
17	Downward	FAIRVIEW PARK	1			
17	Upward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK MALL	2			
17	Upward	RIVER / FAIRWAY	4			
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4			
17	Upward	KEEWATIN / OTTAWA	4			
17	Upward	LACKNER / VICTORIA	4			
18	Downward	MAPLE / GUELPH	9	0.00%		
18	Downward	GUELPH / MARGARET	10	0.00%	100.00%	100.00%
18	Downward	WEBER / WELLINGTON	10	0.00%	100.00%	100.00%
18	Downward	CHARLES STREET TERMINAL	10			
18	Upward	CHARLES STREET TERMINAL	10			
18	Upward	WEBER / WELLINGTON	3			
18	Upward	GUELPH / FLOYD	10	0.00%	100.00%	100.00%
18	Upward	MAPLE / GUELPH	10			
19	1	CHARLES STREET TERMINAL	27			
19	1	VICTORIA / BELMONT	27			
19	1	CHOPIN / BRYBECK	27			
19	1	HAZELGLEN / VICTORIA	27	0.00%	100.00%	0.00%
19	1	WESTFOREST / HIDDEN CREEK	27	0.00%	100.00%	0.00%
19	1	HIGHLAND HILLS MALL	27			
19	2	HIGHLAND HILLS MALL	21	0.00%		
19	2	WESTFOREST / VICTORIA	21			
19	2	HAZELGLEN / MOOREGATE	21	0.00%	100.00%	0.00%
19	2	CHOPIN / BRYBECK	21	0.00%	100.00%	100.00%
19	2	VICTORIA / BELMONT	21	0.00%	50.00%	100.00%
19	2	CHARLES STREET TERMINAL	21			
20	1	CHARLES STREET TERMINAL	21			
20	1	VICTORIA / BELMONT	21	0.00%	100.00%	0.00%
20	1	INGLESIDE / HAZELGLEN	21			
20	2	INGLESIDE / HAZELGLEN	21	0.00%		
20	2	CHOPIN / BRYBECK	21	0.00%	100.00%	100.00%
20	2	VICTORIA / BELMONT	21	0.00%	100.00%	100.00%
20	2	CHARLES STREET TERMINAL	21			
22	East	HIGHLAND HILLS MALL	18			
22	East	ACTIVA / GREY FOX	18			
22	East	ACTIVA / SNOWDROP	18			
22	East	TILLSLEY / WESTMOUNT	18			
22	East	FOREST GLEN TERMINAL	18			
22	East	OTTAWA / HWY 8 RAMP	18	0.00%	100.00%	0.00%
22	East	STIRLING / COURTLAND	18	0.00%	100.00%	100.00%
22	East	CHARLES STREET TERMINAL	18			
22	West	CHARLES STREET TERMINAL	9			
22	West	STIRLING / COURTLAND	13	0.00%	100.00%	50.00%
22	West	OTTAWA / HWY 8 RAMP	9			
22	West	FOREST GLEN TERMINAL	9			
22	West	ERINBROOK / HEDGESTONE	9	0.00%	100.00%	0.00%
22	West	DAVID BERGEY / PEACH BLOSSOM	9			
22	West	ACTIVA / GREY FOX	9			
22	West	HIGHLAND HILLS MALL	9			
23	East	CHARLES STREET TERMINAL	16			
23	East	FREDERICK / DUNHAM	17	0.00%	100.00%	50.00%
23	East	RIVER / OTTAWA	17	0.00%	100.00%	50.00%
23	East	OTTAWA / LACKNER	17	0.00%	100.00%	100.00%
23	East	LACKNER / CORFIELD	17	0.00%	100.00%	66.67%
23	East	FAIRVIEW PARK	9			
23	East	FAIRVIEW PARK MALL	4			
23	West	FAIRVIEW PARK	8			
23	West	FAIRVIEW PARK MALL	2			
23	West	LACKNER / CORFIELD	11	0.00%	100.00%	0.00%
23	West	OTTAWA / OLDFIELD	11	0.00%	100.00%	100.00%
23	West	RIVER / OTTAWA	11	0.00%	100.00%	100.00%
23	West	FREDERICK / EDNA	11	0.00%	100.00%	100.00%
23	West	CHARLES STREET TERMINAL	11			
24	1	CHARLES STREET TERMINAL	11	0.00%		
24	1	HIGHLAND / BELMONT	12	0.00%	66.67%	66.67%



Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
24	1	HIGHLAND HILLS MALL	12	100.00%	50.00%	50.00%
24	1	ROLLING MEADOWS / WESTHEIGHTS	12			
24	2	ROLLING MEADOWS / WESTHEIGHTS	9			
24	2	WESTHEIGHTS / WINDING	9	0.00%	100.00%	0.00%
24	2	WESTHEIGHTS / WESTFOREST	9	0.00%	100.00%	66.67%
24	2	HIGHLAND HILLS MALL	9	66.67%	100.00%	66.67%
24	2	HIGHLAND / BELMONT	9	0.00%	50.00%	100.00%
24	2	CHARLES STREET TERMINAL	9			
25	1	CHARLES STREET TERMINAL	28	0.00%		
25	1	QUEENS / WESTMOUNT	31	0.00%	100.00%	0.00%
25	1	CECILE / OVERLEA	4			
25	1	HIGHLAND HILLS MALL	32			
25	1	FORESTWOOD / MCGARRY	31			
25	1	DRIFTWOOD / WESTHEIGHTS	31	0.00%	100.00%	14.29%
25	1	GOLDEN MEADOW / HAVENWOOD	32			
25	2	GOLDEN MEADOW / HAVENWOOD	21	0.00%		
25	2	WESTHEIGHTS / LORILEE	21	0.00%	100.00%	50.00%
25	2	HIGHLAND HILLS MALL	21	0.00%	100.00%	100.00%
25	2	QUEENS / WESTMOUNT	21	0.00%	100.00%	33.33%
25	2	CHARLES STREET TERMINAL	21			
26	1	FOREST GLEN TERMINAL	9			
26	1	TRILLIUM / STRASBURG	9			
26	1	TRILLIUM / GROFF	9			
26	2	TRILLIUM / GROFF	9			
26	2	TRILLIUM / STRASBURG	9			
26	2	FOREST GLEN TERMINAL	9			
27	1	FAIRVIEW PARK MALL	8			
27	1	FAIRVIEW PARK	9			
27	1	MORRISON / MANOR	17	0.00%	100.00%	100.00%
27	1	QUINTE / MORRISON	17			
27	2	QUINTE / MORRISON	11	0.00%		
27	2	FAIRWAY / KING	11	0.00%	100.00%	0.00%
27	2	FAIRVIEW PARK MALL	4			
27	2	FAIRVIEW PARK	7			
29	1	RING / UNIVERSITY	8			
29	1	FISCHER-HALLMAN / KEATS	8			
29	2	KEATS / FISCHER-HALLMAN	6			
29	2	RING / UNIVERSITY	6			
31	Downward	CONESTOGA MALL	8	0.00%		
31	Downward	NORTHFIELD / BRIDGE	9			
31	Downward	UNIVERSITY / RIM PARK INTERNAL	5	0.00%	100.00%	0.00%
31	Downward	UNIVERSITY / LEXINGTON	8	0.00%	100.00%	40.00%
31	Downward	LEXINGTON / ANNDAL	8	0.00%	75.00%	75.00%
31	Downward	COLUMBIA / SPRUCE	8	0.00%	100.00%	100.00%
31	Downward	RING / UNIVERSITY	8			
31	Upward	RING / UNIVERSITY	5			
31	Upward	COLUMBIA / KING	5			
31	Upward	LEXINGTON / DEARBORN	5	0.00%	100.00%	0.00%
31	Upward	UNIVERSITY / LEXINGTON	5			
31	Upward	UNIVERSITY / RIM PARK INTERNAL	2	0.00%	100.00%	0.00%
31	Upward	NORTHFIELD / BRIDGE	6	0.00%	100.00%	50.00%
31	Upward	CONESTOGA MALL	2			
32	2	KUMPF / NORTHFIELD	5	0.00%		
32	2	WEBER / GOLDEN EAGLE	8	0.00%	100.00%	100.00%
32	2	CONESTOGO / COLBY	5	0.00%	75.00%	100.00%
32	2	CONESTOGA MALL	4			
33	1	FOREST GLEN TERMINAL	7			
33	1	STRASBURG / TRILLIUM	7			
33	1	PARKVALE / NEWCASTLE	2	0.00%	100.00%	100.00%
33	2	HURON / NEWCASTLE	4	0.00%		
33	2	STRASBURG / TRILLIUM	8	0.00%	100.00%	100.00%
33	2	FOREST GLEN TERMINAL	8			
35	1	KING / WILLIS	13	0.00%		
35	1	ERB / WEBER	13	0.00%	100.00%	100.00%
35	1	BRIDGEPORT / LANCASTER	13	0.00%	100.00%	100.00%
35	1	AUBURN / SABLE	13	0.00%	83.33%	66.67%
35	1	BRIDGE / LEXINGTON	15	0.00%	100.00%	70.00%
35	1	CHESAPEAKE / SPINNAKER	13	0.00%	66.67%	88.89%
35	1	CONESTOGA MALL	15			

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
35	2	CONESTOGA MALL	14	0.00%		
35	2	CHESAPEAKE / BRIGANTINE	14	0.00%	100.00%	100.00%
35	2	BRIDGE / LEXINGTON	11	0.00%	0.00%	100.00%
35	2	AUBURN / SABLE	14	0.00%	100.00%	100.00%
35	2	BRIDGEPORT / LANCASTER	14	0.00%	100.00%	50.00%
35	2	BRIDGEPORT / WEBER	14	0.00%	100.00%	100.00%
35	2	UPTOWN WATERLOO	14			
51	Inbound	HOLIDAY INN TERMINAL	36	0.00%		
51	Inbound	SMART!CENTRES CAMBRIDGE	37	0.00%	100.00%	50.00%
51	Inbound	CAMBRIDGE CENTRE TERMINAL	37	50.00%	50.00%	100.00%
51	Inbound	AINSLIE STREET TERMINAL	34			
51	Outbound	AINSLIE STREET TERMINAL	49	0.00%		
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	0.00%	100.00%	50.00%
51	Outbound	SMART!CENTRES CAMBRIDGE	40	0.00%	85.71%	85.71%
51	Outbound	HOLIDAY INN TERMINAL	40			
52	North	AINSLIE STREET TERMINAL	23			
52	North	CORONATION / BARRETT	18	0.00%	100.00%	0.00%
52	North	KING / LOWTHER	18	0.00%	100.00%	50.00%
52	North	PRESTON / FOUNTAIN	18	0.00%	80.00%	100.00%
52	North	SHANTZ HILL / HWY 401 RAMP	18	0.00%	87.50%	37.50%
52	North	SPORTSWORLD	18	83.33%	83.33%	66.67%
52	North	FAIRVIEW PARK	18			
52	South	FAIRVIEW PARK	16	0.00%		
52	South	FAIRVIEW PARK MALL	5			
52	South	SPORTSWORLD	18	100.00%	50.00%	25.00%
52	South	SHANTZ HILL / PRESTON	21	0.00%	77.78%	66.67%
52	South	PRESTON / FOUNTAIN	20	0.00%	77.78%	88.89%
52	South	KING / LOWTHER	20	0.00%	100.00%	85.71%
52	South	CORONATION / MARTIN	21	0.00%	0.00%	100.00%
52	South	AINSLIE STREET TERMINAL	21			
53	Inbound	HOLIDAY INN TERMINAL	8			
53	Inbound	FRANKLIN / SAGINAW	8	0.00%	100.00%	60.00%
53	Inbound	DOBBIE / SAVAGE	8	0.00%	80.00%	100.00%
53	Inbound	MAIN / DUNDAS	8	0.00%	100.00%	100.00%
53	Inbound	AINSLIE STREET TERMINAL	8			
53	Outbound	AINSLIE STREET TERMINAL	8			
53	Outbound	MAIN / DUNDAS	8			
53	Outbound	DOBBIE / SAVAGE	8			
53	Outbound	FRANKLIN / SAGINAW	8			
53	Outbound	HOLIDAY INN TERMINAL	8			
54	East	MAIN / DUNDAS	44	0.00%	100.00%	12.50%
54	East	LISBON PINES / GATEHOUSE	44	0.00%	83.33%	100.00%
54	East	AINSLIE STREET TERMINAL	88			
54	East	CHAMPLAIN / CHRISTOPHER	44	0.00%	20.00%	100.00%
55	West	SOUTHWOOD / CEDAR	23			
55	West	AINSLIE STREET TERMINAL	44			
55	West	SOUTHWOOD / ST ANDREWS	22			
55	West	ST ANDREWS / GILHOLM	23			
56	West	BISHOP / RAILWAY	29	0.00%	100.00%	0.00%
56	West	ROSE / ARGYLE	28	0.00%	100.00%	66.67%
56	West	CAMBRIDGE CENTRE TERMINAL	56			
56	West	WESTMINSTER / KING	29			
56	West	LANG'S / CONCESSION	29	0.00%	100.00%	100.00%
57	West	SUNSET / SAXONY	34			
57	West	BLAIR / BISMARK	33			

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
57	West	AINSLIE STREET TERMINAL	72			
57	West	HILLCREST / CHURCHILL	34			
58	East	MOSCRIP / BRONSON	14			
58	East	MUNCH / ELGIN	14			
58	East	AINSLIE STREET TERMINAL	28			
58	East	HILLTOP / FRANKLIN	14			
59	East	CHAMPLAIN / CHRISTOPHER	20			
59	East	AINSLIE STREET TERMINAL	45			
59	East	CHAMPLAIN / ELGIN	21			
60	East	GLAMIS / ROBSON	28	0.00%	100.00%	33.33%
60	East	CAMBRIDGE CENTRE TERMINAL	56			
60	East	ELGIN / SAGINAW	28			
60	East	MUNCH / KOVAC	28	0.00%	100.00%	0.00%
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8			
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	0.00%	100.00%	0.00%
61	East	KING / WESTMINSTER	8	0.00%	100.00%	37.50%
61	East	CAMBRIDGE CENTRE	2			
61	West	CAMBRIDGE CENTRE	2			
61	West	KING / WESTMINSTER	5			
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	5			
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	5			
62	West	SOUTHGATE / DAY	19			
62	West	AINSLIE STREET TERMINAL	46			
62	West	WOODSIDE / CEDAR	23	0.00%	100.00%	0.00%
63	East	ALISON / ELGIN	21			
63	East	AINSLIE STREET TERMINAL	42			
63	East	DUNDAS / FRANKLIN	21			
63	East	CHAMPLAIN / CHRISTOPHER	21	0.00%	100.00%	0.00%
64	West	LANG'S / WALTER	18			
64	West	EAGLE / KING	18			
64	West	CAMBRIDGE CENTRE TERMINAL	36			
64	West	ROSE / ARGYLE	18			
64	West	BISHOP / RAILWAY	18			
65	North	HOLIDAY INN TERMINAL	34			
65	North	WINSTON / SCOTTDALE	17	0.00%	100.00%	0.00%
65	North	FISHER MILLS / FEARNWOOD	17			
65	North	FRANKLIN / WINSTON	17			
66	East	FRANKLIN / WINSTON	7			
66	East	COOPER / ELLIS	7	0.00%	100.00%	50.00%
66	East	HOLIDAY INN TERMINAL	14			
66	East	WINSTON / WESTBURY	7	0.00%	100.00%	50.00%
67	North	CAMBRIDGE CENTRE TERMINAL	14			
67	North	FLEMING / PINEBUSH	7			
71	East	QUEEN / HUNGERFORD	18			
71	East	HOLIDAY INN TERMINAL	36	0.00%		
71	East	ELLIS / ADLER	18			
110	Downward	FAIRVIEW PARK	19			
110	Downward	PIONEER / OLD CARRIAGE	26			
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	19			
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	13			
110	Upward	PIONEER / OLD CARRIAGE	13	0.00%	100.00%	100.00%
110	Upward	FAIRVIEW PARK	13			
111	North	AINSLIE STREET TERMINAL	2			
111	South	AINSLIE STREET TERMINAL	4			
200	Downward	CONESTOGA MALL	508	0.00%		
200	Downward	McCORMICK	506	0.00%	100.00%	73.33%
200	Downward	R & T PARK	508	0.00%	97.67%	90.70%
200	Downward	U WATERLOO	507	0.00%	100.00%	91.67%
200	Downward	LAURIER	507	0.00%	100.00%	50.00%
200	Downward	UPTOWN WATERLOO	341	0.00%	100.00%	88.64%
200	Downward	KING / WILLIS	53	0.00%	100.00%	100.00%
200	Downward	GRAND RIVER HOSPITAL	508	0.00%	95.52%	100.00%
200	Downward	CHARLES TERMINAL	509	38.89%	94.44%	50.00%
200	Downward	OTTAWA	508	0.00%	97.78%	62.22%
200	Downward	FAIRVIEW	508	0.00%	100.00%	57.14%
200	Downward	SMART!CENTRES CAMBRIDGE	506	0.00%	99.22%	39.84%
200	Downward	CAMBRIDGE CENTRE	504	0.00%	75.00%	100.00%
200	Downward	AINSLIE STREET TERMINAL	496			
200	Upward	AINSLIE STREET TERMINAL	450	0.00%		

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
200	Upward	CAMBRIDGE CENTRE	448	0.00%	100.00%	50.00%
200	Upward	SMART!CENTRES CAMBRIDGE	447	0.00%	100.00%	100.00%
200	Upward	FAIRVIEW	447	0.00%	100.00%	45.83%
200	Upward	OTTAWA	449			
200	Upward	CHARLES TERMINAL	448	55.00%	90.00%	20.00%
200	Upward	GRAND RIVER HOSPITAL	444	0.00%	100.00%	100.00%
200	Upward	UPTOWN WATERLOO	445	0.00%	100.00%	100.00%
200	Upward	LAURIER	444	0.00%	100.00%	100.00%
200	Upward	U WATERLOO	444	0.00%		
200	Upward	R & T PARK	444	0.00%	100.00%	60.87%
200	Upward	McCORMICK	444	0.00%	100.00%	87.50%
200	Upward	CONESTOGA MALL	425			

**Appendix C. Methodology Output, A.M. Peak Period, 7:30 a.m. – 9:00 a.m.**

(48 pages)

<b>SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
1	East	164	31.10%	10.69%	28.03%
1	West	140	20.00%	9.82%	15.18%
2	Downward	72	40.28%	5.26%	45.61%
2	Upward	58	31.03%	6.82%	34.88%
3	1	84	33.33%	4.29%	35.71%
3	2	144	18.75%	3.33%	19.17%
4	Downward	61	26.23%	16.33%	16.33%
4	Upward	93	30.11%	10.13%	25.32%
5	1	56	16.07%	4.76%	16.67%
5	2	115	27.83%	11.96%	22.83%
6	Downward	66	46.97%	5.66%	52.83%
6	Upward	70	40.00%	0.00%	50.00%
7	Downward	274	39.05%	13.42%	32.48%
7	Upward	400	37.50%	12.57%	31.50%
8	North	333	36.34%	7.12%	36.20%
8	South	329	41.03%	12.45%	36.73%
9	Downward	144	31.25%	7.32%	29.27%
9	Upward	146	34.93%	32.52%	8.94%
10	Inbound	95	12.63%	0.00%	15.79%
10	Outbound	75	21.33%	18.33%	8.33%
11	1	95	32.63%	6.25%	32.50%
11	2	150	22.00%	4.17%	23.33%
12	Downward	296	26.69%	16.67%	13.90%
12	Upward	275	36.73%	6.67%	34.84%
13	1	69	17.39%	4.35%	21.74%
13	2	72	18.06%	10.42%	16.67%
14	1	9	0.00%	0.00%	0.00%
14	2	22	59.09%	81.25%	0.00%
15	East	88	15.91%	4.55%	16.67%
15	West	70	20.00%	10.71%	14.29%
16	Inbound	24	41.67%	31.58%	21.05%
16	Outbound	45	22.22%	0.00%	29.41%
17	Downward	18	16.67%	12.50%	7.14%
17	Upward	20	20.00%	25.00%	0.00%
18	Downward	56	30.36%	2.38%	38.10%
18	Upward	44	15.91%	13.33%	10.00%
19	1	78	24.36%	10.77%	18.46%
19	2	77	35.06%	7.69%	34.38%
20	1	33	9.09%	0.00%	13.64%
20	2	98	20.41%	5.26%	20.78%
22	East	134	20.90%	5.93%	17.95%
22	West	82	30.49%	31.51%	2.74%
23	East	59	28.81%	14.00%	20.41%
23	West	71	35.21%	5.08%	36.67%

<b>SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
24	1	47	10.64%	8.57%	5.56%
24	2	53	22.64%	6.82%	20.45%
25	1	164	14.02%	4.48%	12.32%
25	2	170	27.65%	19.12%	15.44%
26	1	57	42.11%	0.00%	63.16%
26	2	57	10.53%	15.79%	0.00%
27	1	42	4.76%	0.00%	7.14%
27	2	27	18.52%	0.00%	27.78%
29	1	19	5.26%	5.56%	0.00%
29	2	18	22.22%	22.22%	11.11%
31	Downward	57	22.81%	14.58%	11.76%
31	Upward	39	48.72%	46.15%	3.13%
32	1	2	0.00%	0.00%	0.00%
32	2	58	55.17%	60.00%	11.36%
33	1	6	0.00%	0.00%	0.00%
33	2	6	50.00%	25.00%	33.33%
35	1	135	37.78%	6.96%	37.07%
35	2	117	17.95%	9.00%	12.12%
51	Inbound	161	17.39%	14.75%	8.26%
51	Outbound	189	23.28%	23.94%	7.09%
52	North	142	38.03%	0.82%	45.30%
52	South	199	40.70%	4.71%	42.94%
53	Inbound	40	40.00%	50.00%	0.00%
53	Outbound	39	17.95%	0.00%	22.58%
54	East	213	26.29%	17.06%	15.79%
55	West	111	36.04%	2.22%	42.70%
56	West	156	22.44%	10.00%	16.92%
57	West	184	26.09%	4.79%	28.08%
58	East	55	34.55%	2.27%	40.91%
59	East	89	20.22%	0.00%	26.87%
60	East	120	28.33%	4.17%	31.25%
61	East	22	45.45%	45.45%	0.00%
61	West	35	17.14%	23.08%	0.00%
62	West	84	26.19%	12.70%	22.95%
63	East	112	19.64%	0.00%	24.72%
64	West	96	20.83%	1.25%	23.75%
65	North	80	41.25%	16.25%	41.67%
66	East	40	27.50%	34.38%	0.00%
71	East	72	33.33%	3.70%	40.74%
110	Downward	32	21.88%	0.00%	43.75%
110	Upward	42	16.67%	3.57%	21.43%
111	North	2	0.00%	0.00%	
111	South	2	50.00%		50.00%
200	Downward	5712	24.35%	9.65%	16.78%
200	Upward	6867	25.05%	4.78%	22.37%

\*As given in GRT Database

**SA<sub>2</sub>: "Not On-Time" Percentage (Passenger Perspective)**

Route	Direction*	Obs.	Total	Early	Late
1	East	164	18.37%	12.49%	29.88%
1	West	140	19.13%	14.27%	21.16%
2	Downward	72	28.07%	2.55%	40.00%
2	Upward	58	24.11%	6.71%	55.41%
3	1	84	14.81%	1.82%	40.33%
3	2	144	19.81%	3.10%	24.89%
4	Downward	61	15.66%	14.77%	16.52%
4	Upward	93	17.06%	1.68%	33.69%
5	1	56	18.38%	4.59%	27.18%
5	2	115	22.05%	9.37%	26.01%
6	Downward	66	31.10%	4.03%	45.90%
6	Upward	70	16.39%	0.00%	50.23%
7	Downward	274	22.00%	10.14%	34.44%
7	Upward	400	26.43%	13.66%	42.43%
8	North	333	22.54%	4.23%	41.73%
8	South	329	32.24%	12.45%	41.26%
9	Downward	144	23.03%	11.72%	34.55%
9	Upward	146	23.37%	34.03%	7.16%
10	Inbound	95	12.14%	0.00%	14.60%
10	Outbound	75	9.07%	12.30%	6.67%
11	1	95	26.73%	6.75%	51.83%
11	2	150	18.77%	5.57%	30.07%
12	Downward	296	10.96%	14.18%	9.58%
12	Upward	275	21.44%	4.74%	41.37%
13	1	69	11.53%	0.39%	17.53%
13	2	72	8.30%	8.70%	8.33%
14	1	9	0.00%	0.00%	0.00%
14	2	22	11.90%	83.33%	0.00%
15	East	88	6.48%	4.37%	15.15%
15	West	70	14.99%	16.25%	14.50%
16	Inbound	24	16.34%	24.10%	20.00%
16	Outbound	45	17.35%	0.00%	38.97%
17	Downward	18	0.98%	3.66%	0.00%
17	Upward	20	2.55%	3.09%	0.00%
18	Downward	56	25.38%	0.00%	35.71%
18	Upward	44	14.29%	14.29%	14.29%
19	1	78	22.92%	14.37%	29.66%
19	2	77	38.51%	7.69%	68.82%
20	1	33	0.89%	0.00%	4.55%
20	2	98	28.45%	11.08%	40.12%
22	East	134	7.74%	1.08%	12.25%
22	West	82	1.92%	3.93%	0.00%
23	East	59	20.00%	5.15%	23.96%
23	West	71	30.35%	4.91%	42.84%

\*As given in GRT Database



<b>SA<sub>2</sub>: "Not On-Time" Percentage (Passenger Perspective)</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
24	1	47	2.27%	3.34%	1.04%
24	2	53	19.45%	16.91%	20.41%
25	1	164	4.57%	0.93%	10.42%
25	2	170	16.64%	17.22%	16.51%
26	1	57	0.00%	0.00%	
26	2	57	3.29%	15.79%	0.00%
27	1	42	2.30%	0.00%	10.48%
27	2	27	14.62%	0.00%	15.22%
29	1	19	0.00%	0.00%	
29	2	18	21.78%		21.78%
31	Downward	57	19.95%	30.43%	7.62%
31	Upward	39	18.32%	26.37%	2.60%
32	1	2			
32	2	58	28.41%	53.32%	20.06%
33	1	6	0.00%	0.00%	
33	2	6			
35	1	135	20.13%	5.52%	36.86%
35	2	117	6.60%	6.37%	9.37%
51	Inbound	161	7.20%	6.87%	8.27%
51	Outbound	189	5.41%	5.14%	7.29%
52	North	142	9.08%	0.00%	28.24%
52	South	199	13.52%	4.22%	34.97%
53	Inbound	40	6.79%	16.45%	0.00%
53	Outbound	39	5.31%	0.00%	17.04%
54	East	213	7.79%	1.36%	14.82%
55	West	111	9.48%	0.42%	16.13%
56	West	156	10.94%	5.99%	12.45%
57	West	184	9.62%	2.28%	13.71%
58	East	55	7.26%	1.27%	15.16%
59	East	89	3.72%	0.00%	10.00%
60	East	120	12.39%	2.60%	17.39%
61	East	22	10.21%	18.24%	0.00%
61	West	35	0.68%	1.47%	0.00%
62	West	84	9.46%	10.50%	9.09%
63	East	112	8.63%	0.00%	13.45%
64	West	96	10.29%	0.20%	17.27%
65	North	80	20.75%	11.84%	30.70%
66	East	40	5.95%	25.00%	0.00%
71	East	72	8.32%	1.11%	11.11%
110	Downward	32	21.74%	0.00%	43.75%
110	Upward	42	11.86%	2.68%	21.43%
111	North	2		0.00%	
111	South	2			
200	Downward	5712	9.96%	5.19%	14.97%
200	Upward	6867	14.51%	4.18%	24.89%

<b>SA<sub>3</sub>: Number of Passengers Affected</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
1	East	164	2.33	0.77	1.55
1	West	140	3.91	0.61	3.30
2	Downward	72	4.14	0.11	4.03
2	Upward	58	1.58	0.28	1.30
3	1	84	5.03	0.30	4.72
3	2	144	6.68	0.22	6.46
4	Downward	61	1.44	0.66	0.78
4	Upward	93	2.70	0.14	2.56
5	1	56	1.54	0.14	1.40
5	2	115	4.28	0.42	3.86
6	Downward	66	5.55	0.25	5.30
6	Upward	70	2.19	0.00	2.19
7	Downward	274	16.42	3.70	12.71
7	Upward	400	34.03	9.49	24.54
8	North	333	14.73	1.33	13.40
8	South	329	11.50	1.39	10.11
9	Downward	144	6.15	1.25	4.90
9	Upward	146	4.27	3.78	0.49
10	Inbound	95	6.87	0.00	6.87
10	Outbound	75	2.85	1.69	1.16
11	1	95	6.20	0.86	5.34
11	2	150	6.16	0.77	5.39
12	Downward	296	8.17	3.40	4.78
12	Upward	275	23.87	2.77	21.10
13	1	69	1.48	0.02	1.46
13	2	72	2.34	0.66	1.68
14	1	9	0.00	0.00	0.00
14	2	22	0.42	0.42	0.00
15	East	88	1.04	0.56	0.48
15	West	70	1.95	0.59	1.36
16	Inbound	24	2.15	1.39	0.76
16	Outbound	45	7.79	0.00	7.79
17	Downward	18	0.38	0.38	0.00
17	Upward	20	0.63	0.63	0.00
18	Downward	56	0.69	0.00	0.69
18	Upward	44	0.71	0.65	0.06
19	1	78	11.20	3.01	8.19
19	2	77	9.79	0.92	8.87
20	1	33	0.05	0.00	0.05
20	2	98	5.93	0.88	5.05
22	East	134	3.39	0.18	3.21
22	West	82	0.61	0.61	0.00
23	East	59	9.21	0.50	8.71
23	West	71	11.80	0.63	11.17

<b>SA<sub>3</sub>: Number of Passengers Affected</b>					
<b>Route</b>	<b>Direction*</b>	<b>Obs.</b>	<b>Total</b>	<b>Early</b>	<b>Late</b>
24	1	47	0.41	0.35	0.06
24	2	53	4.80	1.15	3.65
25	1	164	0.70	0.09	0.61
25	2	170	6.07	2.06	4.01
26	1	57	0.00	0.00	0.00
26	2	57	0.04	0.04	0.00
27	1	42	0.22	0.00	0.22
27	2	27	4.98	0.00	4.98
29	1	19	0.00	0.00	0.00
29	2	18	2.42	0.00	2.42
31	Downward	57	3.96	3.36	0.59
31	Upward	39	0.51	0.49	0.02
32	1	2	0.00	0.00	0.00
32	2	58	1.34	1.00	0.34
33	1	6	0.00	0.00	0.00
33	2	6	0.00	0.00	0.00
35	1	135	4.11	0.60	3.52
35	2	117	0.94	0.47	0.47
51	Inbound	161	1.51	0.85	0.66
51	Outbound	189	1.10	0.68	0.43
52	North	142	2.44	0.00	2.44
52	South	199	6.52	1.42	5.11
53	Inbound	40	1.95	1.95	0.00
53	Outbound	39	1.34	0.00	1.34
54	East	213	0.96	0.09	0.88
55	West	111	1.78	0.03	1.74
56	West	156	2.24	0.29	1.95
57	West	184	0.63	0.05	0.58
58	East	55	0.91	0.09	0.82
59	East	89	0.64	0.00	0.64
60	East	120	1.59	0.11	1.47
61	East	22	0.78	0.78	0.00
61	West	35	0.11	0.11	0.00
62	West	84	0.53	0.15	0.38
63	East	112	1.49	0.00	1.49
64	West	96	1.49	0.01	1.47
65	North	80	0.93	0.28	0.65
66	East	40	0.31	0.31	0.00
71	East	72	0.87	0.03	0.84
110	Downward	32	8.94	0.00	8.94
110	Upward	42	0.95	0.11	0.84
111	North	2	0.00	0.00	
111	South	2	0.00		0.00
200	Downward	5712	13.94	3.68	10.26
200	Upward	6867	20.76	2.99	17.77

\*As given in GRT Database

SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
1	East	CHARLES STREET TERMINAL	32	12.50%	12.50%	
1	East	FREDERICK / WEBER	33	30.30%	9.09%	21.21%
1	East	BECKER / BELLEVIEW	21	33.33%	4.76%	28.57%
1	East	LORRAINE / BIRKSHIRE	12	16.67%	0.00%	16.67%
1	East	RIVER / HICKSON	21	47.62%	14.29%	33.33%
1	East	OTTAWA / OLDFIELD	12	33.33%	25.00%	8.33%
1	East	STANLEY PARK MALL TERMINAL	33	42.42%		42.42%
1	West	STANLEY PARK MALL TERMINAL	28	25.00%	25.00%	
1	West	LACKNER / BANBURY	16	25.00%	6.25%	18.75%
1	West	BELLEVIEW / BECKER	12	8.33%	8.33%	0.00%
1	West	RIVER / HALLIWELL	28	10.71%	0.00%	10.71%
1	West	WEBER / SCOTT	28	25.00%	7.14%	17.86%
1	West	CHARLES STREET TERMINAL	28	21.43%		21.43%
2	Downward	HIGHLAND HILLS MALL	15	0.00%	0.00%	
2	Downward	GREENBROOK / WESTMOUNT	14	50.00%	0.00%	50.00%
2	Downward	GREENBROOK / STIRLING	14	64.29%	7.14%	57.14%
2	Downward	SOUTHMOOR / AVALON	14	50.00%	14.29%	35.71%
2	Downward	CHARLES STREET TERMINAL	15	40.00%		40.00%
2	Upward	CHARLES STREET TERMINAL	15	6.67%	6.67%	
2	Upward	GREENBROOK / STIRLING	14	28.57%	7.14%	21.43%
2	Upward	WESTMOUNT / VILLAGE	15	33.33%	6.67%	26.67%
2	Upward	HIGHLAND HILLS MALL	14	57.14%		57.14%
3	1	CHARLES STREET TERMINAL	14	0.00%	0.00%	
3	1	COURTLAND / STIRLING	14	28.57%	0.00%	28.57%
3	1	STRASBURG / TRANSIT GARAGE	14	42.86%	0.00%	42.86%
3	1	OTTAWA / WESTMOUNT	14	42.86%	14.29%	28.57%
3	1	WILLIAMSBURG / DINISON	14	42.86%	7.14%	35.71%
3	1	FOREST GLEN TERMINAL	14	42.86%		42.86%
3	2	FOREST GLEN TERMINAL	24	4.17%	4.17%	
3	2	WILLIAMSBURG / DINISON	24	16.67%	8.33%	8.33%
3	2	OTTAWA / WESTMOUNT	24	25.00%	4.17%	20.83%
3	2	STRASBURG / TRANSIT GARAGE	24	16.67%	0.00%	16.67%
3	2	COURTLAND / MADISON	24	25.00%	0.00%	25.00%
3	2	CHARLES STREET TERMINAL	24	25.00%		25.00%
4	Downward	UNIVERSITY / RESURRECTION	12	16.67%	16.67%	
4	Downward	GLASGOW / WESTMOUNT	12	25.00%	8.33%	16.67%
4	Downward	UNION / KING	12	41.67%	25.00%	16.67%
4	Downward	MOORE / BREITHAUP	13	30.77%	15.38%	15.38%
4	Downward	CHARLES STREET TERMINAL	12	16.67%		16.67%
4	Upward	CHARLES STREET TERMINAL	14	0.00%	0.00%	
4	Upward	MOORE / WELLINGTON	14	35.71%	28.57%	7.14%
4	Upward	UNION / PARK	14	21.43%	7.14%	14.29%
4	Upward	GLASGOW / WESTMOUNT	14	50.00%	21.43%	28.57%
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	35.71%	0.00%	35.71%
4	Upward	UNIVERSITY / BAKER	9	66.67%	0.00%	66.67%
4	Upward	UNIVERSITY / RESURRECTION	14	14.29%		14.29%
5	1	UPTOWN WATERLOO	14	7.14%	7.14%	
5	1	ERB / WESTMOUNT	14	21.43%	0.00%	21.43%
5	1	FISCHER-HALLMAN / ERB	14	35.71%	7.14%	28.57%
5	1	KEATS / KEATSWOOD	14	0.00%		0.00%
5	2	KEATS / KEATSWOOD	23	0.00%	0.00%	
5	2	GATEVIEW / WESTVALE	23	34.78%	17.39%	17.39%
5	2	ERB / FISCHER-HALLMAN	23	43.48%	21.74%	21.74%
5	2	ERB / WESTMOUNT	23	34.78%	8.70%	26.09%
5	2	KING / WILLIS	23	26.09%		26.09%
6	Downward	DANIEL / BLOOMINGDALE	13	7.69%	7.69%	
6	Downward	LANCASTER / HAMEL	14	57.14%	0.00%	57.14%
6	Downward	LANCASTER / GUELPH	13	61.54%	7.69%	53.85%
6	Downward	WELLINGTON / MARGARET	13	69.23%	7.69%	61.54%
6	Downward	CHARLES STREET TERMINAL	13	38.46%		38.46%
6	Upward	CHARLES STREET TERMINAL	14	0.00%	0.00%	
6	Upward	WELLINGTON / MARGARET	14	50.00%	0.00%	50.00%
6	Upward	LANCASTER / GUELPH	14	57.14%	0.00%	57.14%
6	Upward	LANCASTER / HAMEL	14	50.00%	0.00%	50.00%
6	Upward	DANIEL / BLOOMINGDALE	14	42.86%		42.86%
7	Downward	RING / NORTH CAMPUS	15	13.33%	13.33%	
7	Downward	U WATERLOO	10	10.00%	10.00%	
7	Downward	CONESTOGA MALL	15	6.67%	6.67%	
7	Downward	COLUMBIA / HAZEL	15	40.00%	13.33%	26.67%

\*As given in GRT database

				SA <sub>1</sub> : "Not On-Time" Percentage (Bus Perspective)		
Route	Direction*	Timepoint	Obs.	Total	Early	Late
7	Downward	UNIVERSITY / KING	11	90.91%	9.09%	81.82%
7	Downward	KING / UNIVERSITY	32	28.13%	6.25%	21.88%
7	Downward	UPTOWN WATERLOO	13	53.85%	23.08%	30.77%
7	Downward	KING / WILLIS	3	33.33%	0.00%	33.33%
7	Downward	CHARLES STREET TERMINAL	43	37.21%	4.65%	32.56%
7	Downward	KING / OTTAWA	39	48.72%	20.51%	28.21%
7	Downward	FOURTH / CONNAUGHT	9	55.56%	44.44%	11.11%
7	Downward	FOURTH / WILSON	8	50.00%	37.50%	12.50%
7	Downward	KINZIE / WEBER	22	63.64%	9.09%	54.55%
7	Downward	FAIRVIEW PARK	25	24.00%		24.00%
7	Downward	FAIRVIEW PARK MALL	14	42.86%		42.86%
7	Upward	FAIRVIEW PARK MALL	19	26.32%	26.32%	
7	Upward	FAIRVIEW PARK	27	3.70%	3.70%	
7	Upward	CONNAUGHT / FIFTH	18	5.56%	5.56%	0.00%
7	Upward	FOURTH / WILSON	7	42.86%	0.00%	42.86%
7	Upward	WEBER / KINZIE	21	42.86%	9.52%	33.33%
7	Upward	KING / OTTAWA	48	43.75%	10.42%	33.33%
7	Upward	CHARLES STREET TERMINAL	58	46.55%	17.24%	32.76%
7	Upward	UPTOWN WATERLOO	58	34.48%	8.62%	25.86%
7	Upward	KING / UNIVERSITY	50	38.00%	18.00%	20.00%
7	Upward	UNIVERSITY / KING	8	37.50%	12.50%	25.00%
7	Upward	CONESTOGA MALL	30	20.00%		20.00%
7	Upward	RING / UNIVERSITY	8	62.50%	25.00%	37.50%
7	Upward	COLUMBIA / HAZEL	20	60.00%	10.00%	50.00%
7	Upward	RING / NORTH CAMPUS	8	62.50%		62.50%
7	Upward	U WATERLOO	20	65.00%		65.00%
8	North	FAIRVIEW PARK	20	5.00%	5.00%	
8	North	FAIRVIEW PARK MALL	10	0.00%	0.00%	
8	North	FRANKLIN / PROSPECT	19	52.63%	0.00%	52.63%
8	North	WALTON / VANIER	11	72.73%	0.00%	72.73%
8	North	CHARLES STREET TERMINAL	55	25.45%	5.45%	20.00%
8	North	MARGARET / WELLINGTON	26	34.62%	3.85%	30.77%
8	North	COURTLAND / STIRLING	11	72.73%	0.00%	72.73%
8	North	OTTAWA / WEBER	19	42.11%	10.53%	31.58%
8	North	UNION / WEBER	25	36.00%	12.00%	24.00%
8	North	BELMONT / HIGHLAND	27	22.22%	11.11%	11.11%
8	North	UNION / WESTMOUNT	29	34.48%	17.24%	17.24%
8	North	UNIVERSITY / KING	52	44.23%		44.23%
8	North	UNIVERSITY / SEAGRAM	29	51.72%	6.90%	44.83%
8	South	UNIVERSITY / KING	54	11.11%	11.11%	
8	South	UNIVERSITY / SEAGRAM	25	52.00%	32.00%	20.00%
8	South	UNION / WEBER	29	44.83%	10.34%	34.48%
8	South	UNION / WESTMOUNT	25	60.00%	12.00%	48.00%
8	South	MARGARET / WELLINGTON	29	51.72%	24.14%	27.59%
8	South	BELMONT / BURN	27	59.26%	14.81%	44.44%
8	South	COURTLAND / VERNON	19	26.32%	0.00%	26.32%
8	South	CHARLES STREET TERMINAL	56	37.50%	3.57%	33.93%
8	South	WALTON / VANIER	19	26.32%	0.00%	26.32%
8	South	OTTAWA / MCKENZIE	9	44.44%	0.00%	44.44%
8	South	FAIRVIEW PARK	17	47.06%		47.06%
8	South	FAIRVIEW PARK MALL	11	81.82%		81.82%
8	South	WEBER / FRANKLIN	9	55.56%	11.11%	44.44%
9	Downward	CONESTOGA MALL	21	14.29%	14.29%	
9	Downward	NORTHFIELD / WEBER	21	23.81%	4.76%	19.05%
9	Downward	HIGHPOINT / WINTERGREEN	21	33.33%	0.00%	33.33%
9	Downward	PARKSIDE / GLENELM	21	33.33%	0.00%	33.33%
9	Downward	HAZEL / WILDWOOD	21	28.57%	9.52%	19.05%
9	Downward	HAZEL / UNIVERSITY	18	50.00%	16.67%	33.33%
9	Downward	U WATERLOO	21	38.10%		38.10%
9	Upward	U WATERLOO	22	27.27%	27.27%	
9	Upward	UNIVERSITY / KING	1	0.00%	0.00%	
9	Upward	HAZEL / UNIVERSITY	23	30.43%	30.43%	0.00%
9	Upward	HAZEL / BEARINGER	23	30.43%	30.43%	0.00%
9	Upward	PARKSIDE / GLENELM	8	37.50%	25.00%	12.50%
9	Upward	HIGHPOINT / WINTERGREEN	23	39.13%	26.09%	13.04%
9	Upward	NORTHFIELD / WEBER	23	60.87%	52.17%	8.70%
9	Upward	CONESTOGA MALL	23	21.74%		21.74%
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	19	0.00%	0.00%	
10	Inbound	PINNACLE / OLD MILL	19	10.53%	0.00%	10.53%

SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
10	Inbound	PIONEER / OLD CARRIAGE	19	15.79%	0.00%	15.79%
10	Inbound	DOON VILLAGE / MILLWOOD	19	15.79%	0.00%	15.79%
10	Inbound	FAIRVIEW PARK	14	28.57%		28.57%
10	Inbound	FAIRVIEW PARK MALL	5	0.00%		0.00%
10	Outbound	FAIRVIEW PARK	15	13.33%	13.33%	
10	Outbound	DOON VILLAGE / MILLWOOD	15	6.67%	0.00%	6.67%
10	Outbound	PIONEER / OLD CARRIAGE	15	53.33%	53.33%	0.00%
10	Outbound	PINNACLE / OLD MILL	15	26.67%	6.67%	20.00%
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	6.67%		6.67%
11	1	CHARLES STREET TERMINAL	15	6.67%	6.67%	
11	1	STIRLING / COURTLAND	25	16.00%	8.00%	8.00%
11	1	ALPINE / OTTAWA	25	28.00%	4.00%	24.00%
11	1	COUNTRY HILL / BLOCK LINE	15	73.33%	6.67%	66.67%
11	1	FOREST GLEN TERMINAL	15	53.33%		53.33%
11	2	FOREST GLEN TERMINAL	30	6.67%	6.67%	
11	2	KINGSWOOD / BLOCK LINE	30	6.67%	0.00%	6.67%
11	2	HOFFMAN / OTTAWA	30	20.00%	3.33%	16.67%
11	2	STIRLING / COURTLAND	30	33.33%	6.67%	26.67%
11	2	CHARLES STREET TERMINAL	30	43.33%		43.33%
12	Downward	CONESTOGA MALL	31	0.00%	0.00%	
12	Downward	BRIDGE / UNIVERSITY	24	25.00%	8.33%	16.67%
12	Downward	UNIVERSITY / KING	38	21.05%	10.53%	10.53%
12	Downward	UNIVERSITY / SEAGRAM	38	34.21%	23.68%	10.53%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	38	50.00%	31.58%	18.42%
12	Downward	HIGHLAND HILLS MALL	38	36.84%	18.42%	18.42%
12	Downward	WESTMOUNT / OTTAWA	29	27.59%	13.79%	13.79%
12	Downward	FOREST GLEN TERMINAL	30	36.67%	16.67%	20.00%
12	Downward	FAIRVIEW PARK MALL	13	0.00%		0.00%
12	Downward	FAIRVIEW PARK	17	0.00%		0.00%
12	Upward	FAIRVIEW PARK	19	0.00%	0.00%	
12	Upward	FAIRVIEW PARK MALL	12	0.00%	0.00%	
12	Upward	FOREST GLEN TERMINAL	32	15.63%	9.38%	6.25%
12	Upward	WESTMOUNT / OTTAWA	35	28.57%	8.57%	20.00%
12	Upward	HIGHLAND HILLS MALL	32	53.13%	9.38%	43.75%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	32	50.00%	0.00%	50.00%
12	Upward	UNIVERSITY / SEAGRAM	32	62.50%	12.50%	50.00%
12	Upward	UNIVERSITY / KING	32	53.13%	9.38%	43.75%
12	Upward	BRIDGE / UNIVERSITY	23	30.43%	0.00%	30.43%
12	Upward	CONESTOGA MALL	26	34.62%		34.62%
13	1	U WATERLOO	23	0.00%	0.00%	
13	1	COLUMBIA / FISCHER-HALLMAN	23	34.78%	8.70%	26.09%
13	1	LAURELWOOD / ERBSVILLE	23	17.39%		17.39%
13	2	LAURELWOOD / ERBSVILLE	24	8.33%	8.33%	
13	2	COLUMBIA / FISCHER-HALLMAN	24	37.50%	12.50%	25.00%
13	2	U WATERLOO	24	8.33%		8.33%
14	1	CONESTOGA MALL	3	0.00%	0.00%	
14	1	BATHURST / MCMURRAY	3	0.00%	0.00%	0.00%
14	1	WYMAN / COLBY	3	0.00%		0.00%
14	2	WYMAN / COLBY(2)	4	50.00%	50.00%	
14	2	WYMAN / COLBY	6	83.33%	83.33%	0.00%
14	2	MCMURRAY / NORTHLAND	6	100.00%	100.00%	0.00%
14	2	CONESTOGA MALL	6	0.00%		0.00%
15	East	CHARLES STREET TERMINAL	22	4.55%	4.55%	
15	East	QUEEN / LANCASTER	22	18.18%	0.00%	18.18%
15	East	EDNA / FREDERICK	22	27.27%	9.09%	18.18%
15	East	LACKNER / VICTORIA	22	13.64%		13.64%
15	West	LACKNER / VICTORIA	14	7.14%	7.14%	
15	West	NATCHEZ / HALIFAX	14	7.14%	0.00%	7.14%
15	West	FREDERICK / EDNA	14	35.71%	14.29%	21.43%
15	West	QUEEN / LANCASTER	14	35.71%	21.43%	14.29%
15	West	CHARLES STREET TERMINAL	14	14.29%		14.29%
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	5	20.00%	20.00%	
16	Inbound	PIONEER / BECHTEL	9	55.56%	33.33%	22.22%
16	Inbound	STRASBURG / TRILLIUM	5	60.00%	40.00%	20.00%
16	Inbound	FOREST GLEN TERMINAL	5	20.00%		20.00%
16	Outbound	FOREST GLEN TERMINAL	11	0.00%	0.00%	
16	Outbound	STRASBURG / TRILLIUM	11	36.36%	0.00%	36.36%
16	Outbound	PIONEER / BECHTEL	11	27.27%	0.00%	27.27%
16	Outbound	Doon Public School	1	100.00%	0.00%	100.00%

\*As given in GRT database

SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	11	18.18%		18.18%
17	Downward	LACKNER / VICTORIA	4	25.00%	25.00%	
17	Downward	KEEWATIN / OTTAWA	4	25.00%	0.00%	25.00%
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00%	0.00%	0.00%
17	Downward	RIVER / FAIRWAY	4	25.00%	25.00%	0.00%
17	Downward	FAIRVIEW PARK	2	0.00%		0.00%
17	Upward	FAIRVIEW PARK	2	0.00%	0.00%	
17	Upward	FAIRVIEW PARK MALL	2	0.00%	0.00%	
17	Upward	RIVER / FAIRWAY	4	0.00%	0.00%	0.00%
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	50.00%	50.00%	0.00%
17	Upward	KEEWATIN / OTTAWA	4	50.00%	50.00%	0.00%
17	Upward	LACKNER / VICTORIA	4	0.00%		0.00%
18	Downward	MAPLE / GUELPH	14	0.00%	0.00%	
18	Downward	GUELPH / MARGARET	14	35.71%	0.00%	35.71%
18	Downward	WEBER / WELLINGTON	14	50.00%	7.14%	42.86%
18	Downward	CHARLES STREET TERMINAL	14	35.71%		35.71%
18	Upward	CHARLES STREET TERMINAL	14	14.29%	14.29%	
18	Upward	WEBER / WELLINGTON	2	0.00%	0.00%	0.00%
18	Upward	GUELPH / FLOYD	14	21.43%	14.29%	7.14%
18	Upward	MAPLE / GUELPH	14	14.29%		14.29%
19	1	CHARLES STREET TERMINAL	13	15.38%	15.38%	
19	1	VICTORIA / BELMONT	13	15.38%	0.00%	15.38%
19	1	CHOPIN / BRYBECK	13	23.08%	0.00%	23.08%
19	1	HAZELGLEN / VICTORIA	13	30.77%	23.08%	7.69%
19	1	WESTFOREST / HIDDEN CREEK	13	30.77%	15.38%	15.38%
19	1	HIGHLAND HILLS MALL	13	30.77%		30.77%
19	2	HIGHLAND HILLS MALL	13	7.69%	7.69%	
19	2	WESTFOREST / VICTORIA	13	23.08%	7.69%	15.38%
19	2	HAZELGLEN / MOOREGATE	13	30.77%	7.69%	23.08%
19	2	CHOPIN / BRYBECK	13	15.38%	7.69%	7.69%
19	2	VICTORIA / BELMONT	13	61.54%	7.69%	53.85%
19	2	CHARLES STREET TERMINAL	12	75.00%		75.00%
20	1	CHARLES STREET TERMINAL	11	0.00%	0.00%	
20	1	VICTORIA / BELMONT	11	27.27%	0.00%	27.27%
20	1	INGLESIDE / HAZELGLEN	11	0.00%		0.00%
20	2	HAZELGLEN / MOOREGATE	10	10.00%	10.00%	
20	2	INGLESIDE / HAZELGLEN	22	4.55%	0.00%	4.55%
20	2	CHOPIN / BRYBECK	22	18.18%	13.64%	4.55%
20	2	VICTORIA / BELMONT	22	22.73%	0.00%	22.73%
20	2	CHARLES STREET TERMINAL	22	40.91%		40.91%
22	East	HIGHLAND HILLS MALL	17	0.00%	0.00%	
22	East	ACTIVA / GREY FOX	17	47.06%	11.76%	35.29%
22	East	ACTIVA / SNOWDROP	17	29.41%	5.88%	23.53%
22	East	TILLSLEY / WESTMOUNT	17	35.29%	17.65%	17.65%
22	East	FOREST GLEN TERMINAL	17	11.76%	0.00%	11.76%
22	East	OTTAWA / HWY 8 RAMP	17	11.76%	0.00%	11.76%
22	East	STIRLING / COURTLAND	16	18.75%	6.25%	12.50%
22	East	CHARLES STREET TERMINAL	16	12.50%		12.50%
22	West	CHARLES STREET TERMINAL	9	0.00%	0.00%	
22	West	STIRLING / COURTLAND	19	36.84%	26.32%	10.53%
22	West	OTTAWA / HWY 8 RAMP	9	33.33%	33.33%	0.00%
22	West	FOREST GLEN TERMINAL	9	0.00%	0.00%	0.00%
22	West	ERINBROOK / HEDGESTONE	9	100.00%	100.00%	0.00%
22	West	DAVID BERGEY / PEACH BLOSSOM	9	33.33%	33.33%	0.00%
22	West	ACTIVA / GREY FOX	9	33.33%	33.33%	0.00%
22	West	HIGHLAND HILLS MALL	9	0.00%		0.00%
23	East	CHARLES STREET TERMINAL	10	0.00%	0.00%	
23	East	FREDERICK / DUNHAM	10	20.00%	0.00%	20.00%
23	East	RIVER / OTTAWA	10	40.00%	20.00%	20.00%
23	East	OTTAWA / LACKNER	10	30.00%	10.00%	20.00%
23	East	LACKNER / CORFIELD	10	50.00%	40.00%	10.00%
23	East	FAIRVIEW PARK MALL	3	0.00%		0.00%
23	East	FAIRVIEW PARK	6	50.00%		50.00%
23	West	FAIRVIEW PARK MALL	4	0.00%	0.00%	
23	West	FAIRVIEW PARK	7	14.29%	14.29%	
23	West	LACKNER / CORFIELD	12	16.67%	0.00%	16.67%
23	West	OTTAWA / OLDFIELD	12	25.00%	0.00%	25.00%
23	West	RIVER / OTTAWA	12	58.33%	0.00%	58.33%
23	West	FREDERICK / EDNA	12	50.00%	16.67%	33.33%

\*As given in GRT database

SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
23	West	CHARLES STREET TERMINAL	12	50.00%		50.00%
24	1	CHARLES STREET TERMINAL	11	0.00%	0.00%	
24	1	HIGHLAND / BELMONT	12	16.67%	16.67%	0.00%
24	1	HIGHLAND HILLS MALL	12	8.33%	8.33%	0.00%
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	16.67%		16.67%
24	2	ROLLING MEADOWS / WESTHEIGHTS	9	0.00%	0.00%	
24	2	WESTHEIGHTS / WINDING	9	33.33%	0.00%	33.33%
24	2	WESTHEIGHTS / WESTFOREST	8	0.00%	0.00%	0.00%
24	2	HIGHLAND HILLS MALL	9	44.44%	33.33%	11.11%
24	2	HIGHLAND / BELMONT	9	33.33%	0.00%	33.33%
24	2	CHARLES STREET TERMINAL	9	22.22%		22.22%
25	1	CHARLES STREET TERMINAL	26	0.00%	0.00%	
25	1	QUEENS / WESTMOUNT	29	13.79%	6.90%	6.90%
25	1	HIGHLAND HILLS MALL	30	6.67%	0.00%	6.67%
25	1	FORESTWOOD / MCGARRY	26	15.38%	0.00%	15.38%
25	1	DRIFTWOOD / WESTHEIGHTS	27	33.33%	14.81%	18.52%
25	1	GOLDEN MEADOW / HAVENWOOD	26	15.38%		15.38%
25	2	GOLDEN MEADOW / HAVENWOOD	34	14.71%	14.71%	
25	2	WESTHEIGHTS / LORILEE	34	41.18%	26.47%	14.71%
25	2	HIGHLAND HILLS MALL	34	44.12%	17.65%	26.47%
25	2	QUEENS / WESTMOUNT	34	23.53%	17.65%	5.88%
25	2	CHARLES STREET TERMINAL	34	14.71%		14.71%
26	1	FOREST GLEN TERMINAL	19	0.00%	0.00%	
26	1	TRILLIUM / STRASBURG	19	47.37%	0.00%	47.37%
26	1	TRILLIUM / GROFF	19	78.95%		78.95%
26	2	TRILLIUM / GROFF	19	15.79%	15.79%	
26	2	TRILLIUM / STRASBURG	19	15.79%	15.79%	0.00%
26	2	FOREST GLEN TERMINAL	19	0.00%		0.00%
27	1	FAIRVIEW PARK	10	0.00%	0.00%	
27	1	FAIRVIEW PARK MALL	4	0.00%	0.00%	
27	1	MORRISON / MANOR	14	14.29%	0.00%	14.29%
27	1	QUINTE / MORRISON	14	0.00%		0.00%
27	2	QUINTE / MORRISON	9	0.00%	0.00%	
27	2	FAIRWAY / KING	9	33.33%	0.00%	33.33%
27	2	FAIRVIEW PARK	7	28.57%		28.57%
27	2	FAIRVIEW PARK MALL	2	0.00%		0.00%
29	1	RING / UNIVERSITY	9	0.00%	0.00%	
29	1	FISCHER-HALLMAN / KEATS	9	11.11%	11.11%	0.00%
29	1	ERB / ERB	1	0.00%		0.00%
29	2	KEATS / FISCHER-HALLMAN	9	22.22%	22.22%	0.00%
29	2	RING / UNIVERSITY	9	22.22%		22.22%
31	Downward	CONESTOGA MALL	6	33.33%	33.33%	
31	Downward	NORTHFIELD / BRIDGE	9	11.11%	0.00%	11.11%
31	Downward	UNIVERSITY / RIM PARK INTERNAL	6	50.00%	16.67%	33.33%
31	Downward	UNIVERSITY / LEXINGTON	9	22.22%	0.00%	22.22%
31	Downward	LEXINGTON / ANNDALE	9	11.11%	11.11%	0.00%
31	Downward	COLUMBIA / SPRUCE	9	33.33%	33.33%	0.00%
31	Downward	RING / UNIVERSITY	9	11.11%		11.11%
31	Upward	RING / UNIVERSITY	7	28.57%	28.57%	
31	Upward	COLUMBIA / KING	7	28.57%	14.29%	14.29%
31	Upward	LEXINGTON / DEARBORN	7	71.43%	71.43%	0.00%
31	Upward	UNIVERSITY / LEXINGTON	7	57.14%	57.14%	0.00%
31	Upward	UNIVERSITY / RIM PARK INTERNAL	4	25.00%	25.00%	0.00%
31	Upward	NORTHFIELD / BRIDGE	7	71.43%	71.43%	0.00%
32	1	CONESTOGA MALL	1	0.00%	0.00%	
32	1	KUMPF / NORTHFIELD	1	0.00%		0.00%
32	2	KUMPF / NORTHFIELD	14	50.00%	50.00%	
32	2	WEBER / GOLDEN EAGLE	17	82.35%	76.47%	5.88%
32	2	CONESTOGO / COLBY	14	57.14%	50.00%	7.14%
32	2	CONESTOGA MALL	13	23.08%		23.08%
33	1	FOREST GLEN TERMINAL	2	0.00%	0.00%	
33	1	STRASBURG / TRILLIUM	2	0.00%	0.00%	0.00%
33	1	PARKVALE / NEWCASTLE	2	0.00%	0.00%	0.00%
33	2	HURON / NEWCASTLE	2	0.00%	0.00%	
33	2	STRASBURG / TRILLIUM	2	100.00%	50.00%	50.00%
33	2	FOREST GLEN TERMINAL	2	50.00%		50.00%
35	1	KING / WILLIS	19	5.26%	5.26%	
35	1	ERB / WEBER	19	47.37%	5.26%	42.11%
35	1	BRIDGEPORT / LANCASTER	19	47.37%	5.26%	42.11%

\*As given in GRT database



SA<sub>1</sub>: "Not On-Time" Percentage (Bus Perspective)

Route	Direction*	Timepoint	Obs.	Total	Early	Late
35	1	AUBURN / SABLE	19	42.11%	5.26%	36.84%
35	1	BRIDGE / LEXINGTON	20	45.00%	10.00%	35.00%
35	1	CHESAPEAKE / SPINNAKER	19	42.11%	10.53%	31.58%
35	1	CONESTOGA MALL	20	35.00%		35.00%
35	2	CONESTOGA MALL	18	0.00%	0.00%	
35	2	CHESAPEAKE / BRIGANTINE	17	5.88%	5.88%	0.00%
35	2	BRIDGE / LEXINGTON	15	20.00%	6.67%	13.33%
35	2	AUBURN / SABLE	17	17.65%	11.76%	5.88%
35	2	BRIDGEPORT / LANCASTER	16	37.50%	18.75%	18.75%
35	2	BRIDGEPORT / WEBER	17	47.06%	11.76%	35.29%
35	2	UPTOWN WATERLOO	17	0.00%		0.00%
51	Inbound	HOLIDAY INN TERMINAL	40	5.00%	5.00%	
51	Inbound	SMARTCENTRES CAMBRIDGE	40	40.00%	32.50%	7.50%
51	Inbound	CAMBRIDGE CENTRE TERMINAL	42	16.67%	7.14%	9.52%
51	Inbound	AINSLIE STREET TERMINAL	39	7.69%		7.69%
51	Outbound	AINSLIE STREET TERMINAL	48	0.00%	0.00%	
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	17.02%	8.51%	8.51%
51	Outbound	SMARTCENTRES CAMBRIDGE	47	72.34%	63.83%	8.51%
51	Outbound	HOLIDAY INN TERMINAL	47	4.26%		4.26%
52	North	AINSLIE STREET TERMINAL	25	0.00%	0.00%	
52	North	CORONATION / BARRETT	20	60.00%	0.00%	60.00%
52	North	KING / LOWTHER	20	40.00%	0.00%	40.00%
52	North	PRESTON / FOUNTAIN	19	47.37%	0.00%	47.37%
52	North	SHANTZ HILL / HWY 401 RAMP	19	63.16%	5.26%	57.89%
52	North	SPORTSWORLD	19	42.11%	0.00%	42.11%
52	North	FAIRVIEW PARK	20	25.00%		25.00%
52	South	FAIRVIEW PARK MALL	5	0.00%	0.00%	
52	South	FAIRVIEW PARK	24	8.33%	8.33%	
52	South	SPORTSWORLD	25	56.00%	0.00%	56.00%
52	South	SHANTZ HILL / PRESTON	29	41.38%	3.45%	37.93%
52	South	PRESTON / FOUNTAIN	29	55.17%	3.45%	51.72%
52	South	KING / LOWTHER	29	48.28%	6.90%	41.38%
52	South	CORONATION / MARTIN	29	55.17%	6.90%	48.28%
52	South	AINSLIE STREET TERMINAL	29	24.14%		24.14%
53	Inbound	HOLIDAY INN TERMINAL	8	12.50%	12.50%	
53	Inbound	FRANKLIN / SAGINAW	8	50.00%	50.00%	0.00%
53	Inbound	DOBBIE / SAVAGE	8	62.50%	62.50%	0.00%
53	Inbound	MAIN / DUNDAS	8	75.00%	75.00%	0.00%
53	Inbound	AINSLIE STREET TERMINAL	8	0.00%		0.00%
53	Outbound	AINSLIE STREET TERMINAL	8	0.00%	0.00%	
53	Outbound	MAIN / DUNDAS	8	25.00%	0.00%	25.00%
53	Outbound	DOBBIE / SAVAGE	8	12.50%	0.00%	12.50%
53	Outbound	FRANKLIN / SAGINAW	7	14.29%	0.00%	14.29%
53	Outbound	HOLIDAY INN TERMINAL	8	37.50%		37.50%
54	East	MAIN / DUNDAS	42	28.57%	28.57%	0.00%
54	East	LISBON PINES / GATEHOUSE	43	39.53%	34.88%	4.65%
54	East	AINSLIE STREET TERMINAL	85	17.65%	0.00%	17.65%
54	East	CHAMPLAIN / CHRISTOPHER	43	27.91%	4.65%	23.26%
55	West	SOUTHWOOD / CEDAR	22	13.64%	9.09%	4.55%
55	West	AINSLIE STREET TERMINAL	43	18.60%	0.00%	18.60%
55	West	SOUTHWOOD / ST ANDREWS	23	65.22%	0.00%	65.22%
55	West	ST ANDREWS / GILHOLM	23	60.87%	0.00%	60.87%
56	West	BISHOP / RAILWAY	26	7.69%	0.00%	7.69%
56	West	ROSE / ARGYLE	26	23.08%	19.23%	3.85%
56	West	CAMBRIDGE CENTRE TERMINAL	52	21.15%	0.00%	21.15%
56	West	WESTMINSTER / KING	26	19.23%	11.54%	7.69%
56	West	LANG'S / CONCESSION	26	42.31%	19.23%	23.08%
57	West	SUNSET / SAXONY	36	52.78%	0.00%	52.78%
57	West	BLAIR / BISMARCK	36	27.78%	8.33%	19.44%
57	West	AINSLIE STREET TERMINAL	76	7.89%	0.00%	7.89%
57	West	HILLCREST / CHURCHILL	36	36.11%	11.11%	25.00%
58	East	MOSCRIP / BRONSON	11	18.18%	0.00%	18.18%
58	East	MUNCH / ELGIN	11	63.64%	0.00%	63.64%
58	East	AINSLIE STREET TERMINAL	22	13.64%	0.00%	13.64%
58	East	HILLTOP / FRANKLIN	11	63.64%	9.09%	54.55%
59	East	CHAMPLAIN / CHRISTOPHER	22	18.18%	0.00%	18.18%
59	East	AINSLIE STREET TERMINAL	44	9.09%	0.00%	9.09%
59	East	CHAMPLAIN / ELGIN	23	43.48%	0.00%	43.48%
60	East	GLAMIS / ROBSON	24	25.00%	8.33%	16.67%

\*As given in GRT database

				SA <sub>1</sub> : "Not On-Time" Percentage (Bus Perspective)		
Route	Direction*	Timepoint	Obs.	Total	Early	Late
60	East	CAMBRIDGE CENTRE TERMINAL	48	2.08%	0.00%	2.08%
60	East	ELGIN / SAGINAW	24	62.50%	4.17%	58.33%
60	East	MUNCH / KOVAC	24	50.00%	4.17%	45.83%
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8	12.50%	12.50%	
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	16.67%	16.67%	0.00%
61	East	KING / WESTMINSTER	8	100.00%	100.00%	0.00%
61	West	CAMBRIDGE CENTRE	8	0.00%	0.00%	
61	West	KING / WESTMINSTER	9	33.33%	33.33%	0.00%
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	9	33.33%	33.33%	0.00%
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	9	0.00%		0.00%
62	West	SOUTHGATE / DAY	18	27.78%	11.11%	16.67%
62	West	AINSLIE STREET TERMINAL	44	11.36%	2.27%	9.09%
62	West	WOODSIDE / CEDAR	22	54.55%	22.73%	31.82%
63	East	ALISON / ELGIN	22	31.82%	0.00%	31.82%
63	East	AINSLIE STREET TERMINAL	45	6.67%	0.00%	6.67%
63	East	DUNDAS / FRANKLIN	23	30.43%	0.00%	30.43%
63	East	CHAMPLAIN / CHRISTOPHER	22	22.73%	0.00%	22.73%
64	West	LANG'S / WALTER	16	12.50%	0.00%	12.50%
64	West	EAGLE / KING	16	18.75%	0.00%	18.75%
64	West	CAMBRIDGE CENTRE TERMINAL	32	9.38%	0.00%	9.38%
64	West	ROSE / ARGYLE	16	31.25%	0.00%	31.25%
64	West	BISHOP / RAILWAY	16	43.75%	6.25%	37.50%
65	North	HOLIDAY INN TERMINAL	32	40.63%	12.50%	28.13%
65	North	WINSTON / SCOTTDAL	16	43.75%	43.75%	0.00%
65	North	FISHER MILLS / FEARNWOOD	16	18.75%	12.50%	6.25%
65	North	FRANKLIN / WINSTON	16	62.50%	0.00%	62.50%
66	East	FRANKLIN / WINSTON	8	25.00%	25.00%	0.00%
66	East	COOPER / ELLIS	8	50.00%	50.00%	0.00%
66	East	HOLIDAY INN TERMINAL	16	0.00%	0.00%	0.00%
66	East	WINSTON / WESTBURY	8	62.50%	62.50%	0.00%
71	East	QUEEN / HUNGERFORD	18	22.22%	0.00%	22.22%
71	East	HOLIDAY INN TERMINAL	36	16.67%	5.56%	11.11%
71	East	ELLIS / ADLER	18	77.78%	0.00%	77.78%
110	Downward	FAIRVIEW PARK	16	0.00%	0.00%	
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	16	43.75%		43.75%
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	14	0.00%	0.00%	
110	Upward	PIONEER / OLD CARRIAGE	14	28.57%	7.14%	21.43%
110	Upward	FAIRVIEW PARK	14	21.43%		21.43%
111	North	AINSLIE STREET TERMINAL	2	0.00%	0.00%	
111	South	AINSLIE STREET TERMINAL	2	50.00%		50.00%
200	Downward	CONESTOGA MALL	450	3.11%	3.11%	
200	Downward	McCORMICK	448	22.10%	0.67%	21.43%
200	Downward	R & T PARK	447	29.08%	2.46%	26.62%
200	Downward	U WATERLOO	447	18.57%	5.59%	12.98%
200	Downward	LAURIER	447	33.11%	2.46%	30.65%
200	Downward	KING / WILLIS	47	42.55%	14.89%	27.66%
200	Downward	UPTOWN WATERLOO	302	32.45%	7.62%	24.83%
200	Downward	GRAND RIVER HOSPITAL	446	35.20%	11.43%	23.77%
200	Downward	CHARLES TERMINAL	447	34.68%	6.71%	27.96%
200	Downward	OTTAWA	447	26.17%	12.75%	13.42%
200	Downward	FAIRVIEW	445	9.44%	4.49%	4.94%
200	Downward	SMART!CENTRES CAMBRIDGE	446	39.01%	34.75%	4.26%
200	Downward	CAMBRIDGE CENTRE	446	27.35%	22.65%	4.71%
200	Downward	AINSLIE STREET TERMINAL	447	6.71%		6.71%
200	Upward	AINSLIE STREET TERMINAL	534	1.50%	1.50%	
200	Upward	CAMBRIDGE CENTRE	528	17.80%	2.08%	15.72%
200	Upward	SMART!CENTRES CAMBRIDGE	528	26.89%	3.22%	23.67%
200	Upward	FAIRVIEW	531	15.25%	6.03%	9.23%
200	Upward	OTTAWA	530	22.83%	7.36%	15.47%
200	Upward	CHARLES TERMINAL	532	25.00%	6.77%	18.23%
200	Upward	GRAND RIVER HOSPITAL	526	23.38%	0.57%	22.81%
200	Upward	UPTOWN WATERLOO	527	26.94%	2.28%	24.67%
200	Upward	LAURIER	527	29.22%	6.26%	22.96%
200	Upward	U WATERLOO	526	36.50%	3.42%	33.08%
200	Upward	R & T PARK	525	44.76%	7.05%	37.71%
200	Upward	McCORMICK	526	35.93%	10.84%	25.10%
200	Upward	CONESTOGA MALL	527	19.92%		19.92%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
1	East	CHARLES STREET TERMINAL	32	10.18%	12.50%	
1	East	FREDERICK / WEBER	33	21.21%		21.21%
1	East	BECKER / BELLEVIEW	21	4.76%	4.76%	
1	East	LORRAINE / BIRKSHIRE	12	12.96%	0.00%	16.67%
1	East	RIVER / HICKSON	21	33.33%		33.33%
1	East	OTTAWA / OLDFIELD	12	13.89%	25.00%	8.33%
1	East	STANLEY PARK MALL TERMINAL	33	42.42%		42.42%
1	West	STANLEY PARK MALL TERMINAL	28	24.14%	25.00%	
1	West	LACKNER / BANBURY	16	9.48%	6.25%	18.75%
1	West	BELLEVIEW / BECKER	12			
1	West	RIVER / HALLIWELL	28	0.00%	0.00%	
1	West	WEBER / SCOTT	28	15.27%	7.14%	17.86%
1	West	CHARLES STREET TERMINAL	28	20.71%		21.43%
2	Downward	HIGHLAND HILLS MALL	15	0.00%	0.00%	
2	Downward	GREENBROOK / WESTMOUNT	14	0.00%	0.00%	
2	Downward	GREENBROOK / STIRLING	14	7.14%	7.14%	
2	Downward	SOUTHMOOR / AVALON	14	14.29%	14.29%	
2	Downward	CHARLES STREET TERMINAL	15	40.00%		40.00%
2	Upward	CHARLES STREET TERMINAL	15	6.67%	6.67%	
2	Upward	GREENBROOK / STIRLING	14	7.14%	7.14%	
2	Upward	WESTMOUNT / VILLAGE	15	13.33%	6.67%	26.67%
2	Upward	HIGHLAND HILLS MALL	14	57.14%		57.14%
3	1	CHARLES STREET TERMINAL	14	0.00%	0.00%	
3	1	COURTLAND / STIRLING	14	23.81%	0.00%	28.57%
3	1	STRASBURG / TRANSIT GARAGE	14	34.29%	0.00%	42.86%
3	1	OTTAWA / WESTMOUNT	14	18.23%	14.29%	28.57%
3	1	WILLIAMSBURG / DINISON	14	10.15%	7.14%	35.71%
3	1	FOREST GLEN TERMINAL	14	42.86%		42.86%
3	2	FOREST GLEN TERMINAL	24	3.32%	4.17%	
3	2	WILLIAMSBURG / DINISON	24	8.33%	8.33%	
3	2	OTTAWA / WESTMOUNT	24	4.17%	4.17%	
3	2	STRASBURG / TRANSIT GARAGE	24	2.84%	0.00%	16.67%
3	2	COURTLAND / MADISON	24	22.54%	0.00%	25.00%
3	2	CHARLES STREET TERMINAL	24	24.81%		25.00%
4	Downward	UNIVERSITY / RESURRECTION	12	16.67%	16.67%	
4	Downward	GLASGOW / WESTMOUNT	12	10.00%	8.33%	16.67%
4	Downward	UNION / KING	12	18.89%	25.00%	16.67%
4	Downward	MOORE / BREITHAUP	13	15.38%	15.38%	15.38%
4	Downward	CHARLES STREET TERMINAL	12	16.67%		16.67%
4	Upward	CHARLES STREET TERMINAL	14	0.00%	0.00%	
4	Upward	MOORE / WELLINGTON	14	7.14%		7.14%
4	Upward	UNION / PARK	14	14.29%		14.29%
4	Upward	GLASGOW / WESTMOUNT	14	21.43%	21.43%	
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	29.66%	0.00%	35.71%
4	Upward	UNIVERSITY / BAKER	9	5.56%	0.00%	66.67%
4	Upward	UNIVERSITY / RESURRECTION	14	14.29%		14.29%
5	1	UPTOWN WATERLOO	14	6.32%	7.14%	
5	1	ERB / WESTMOUNT	14	10.34%	0.00%	21.43%
5	1	FISCHER-HALLMAN / ERB	14	27.19%	7.14%	28.57%
5	1	KEATS / KEATSWOOD	14			
5	2	KEATS / KEATSWOOD	23	0.00%	0.00%	
5	2	GATEVIEW / WESTVALE	23	17.39%	17.39%	
5	2	ERB / FISCHER-HALLMAN	23	21.74%	21.74%	21.74%
5	2	ERB / WESTMOUNT	23	16.81%	8.70%	26.09%
5	2	KING / WILLIS	23	26.09%		26.09%
6	Downward	DANIEL / BLOOMINGDALE	13	7.69%	7.69%	
6	Downward	LANCASTER / HAMEL	14	0.00%	0.00%	
6	Downward	LANCASTER / GUELPH	13	13.93%	7.69%	53.85%
6	Downward	WELLINGTON / MARGARET	13	51.75%	7.69%	61.54%
6	Downward	CHARLES STREET TERMINAL	13	38.46%		38.46%
6	Upward	CHARLES STREET TERMINAL	14	0.00%	0.00%	
6	Upward	WELLINGTON / MARGARET	14	43.75%	0.00%	50.00%
6	Upward	LANCASTER / GUELPH	14	28.57%	0.00%	57.14%
6	Upward	LANCASTER / HAMEL	14	45.61%	0.00%	50.00%
6	Upward	DANIEL / BLOOMINGDALE	14			
7	Downward	RING / NORTH CAMPUS	15	13.33%	13.33%	
7	Downward	U WATERLOO	10	7.87%	10.00%	
7	Downward	CONESTOGA MALL	15	6.67%	6.67%	
7	Downward	COLUMBIA / HAZEL	15	13.33%	13.33%	

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
7	Downward	UNIVERSITY / KING	11	81.82%		81.82%
7	Downward	KING / UNIVERSITY	32	7.23%	6.25%	21.88%
7	Downward	UPTOWN WATERLOO	13			
7	Downward	KING / WILLIS	3			
7	Downward	CHARLES STREET TERMINAL	43	16.11%	4.65%	32.56%
7	Downward	KING / OTTAWA	39	25.48%	20.51%	28.21%
7	Downward	FOURTH / CONNAUGHT	9	44.44%	44.44%	
7	Downward	FOURTH / WILSON	8	32.81%	37.50%	12.50%
7	Downward	KINZIE / WEBER	22	40.56%	9.09%	54.55%
7	Downward	FAIRVIEW PARK	25	23.92%		24.00%
7	Downward	FAIRVIEW PARK MALL	14	42.45%		42.86%
7	Upward	FAIRVIEW PARK MALL	19	26.32%	26.32%	
7	Upward	FAIRVIEW PARK	27	3.48%	3.70%	
7	Upward	CONNAUGHT / FIFTH	18	5.07%	5.56%	0.00%
7	Upward	FOURTH / WILSON	7	0.00%	0.00%	
7	Upward	WEBER / KINZIE	21	17.99%	9.52%	33.33%
7	Upward	KING / OTTAWA	48	13.90%	10.42%	33.33%
7	Upward	CHARLES STREET TERMINAL	58	20.44%	17.24%	32.76%
7	Upward	UPTOWN WATERLOO	58	17.06%	8.62%	25.86%
7	Upward	KING / UNIVERSITY	50	19.24%	18.00%	20.00%
7	Upward	UNIVERSITY / KING	8	15.79%	12.50%	25.00%
7	Upward	CONESTOGA MALL	30	19.46%		20.00%
7	Upward	RING / UNIVERSITY	8	36.84%	25.00%	37.50%
7	Upward	COLUMBIA / HAZEL	20	12.46%	10.00%	50.00%
7	Upward	RING / NORTH CAMPUS	8	62.50%		62.50%
7	Upward	U WATERLOO	20	65.00%		65.00%
8	North	FAIRVIEW PARK	20	3.96%	5.00%	
8	North	FAIRVIEW PARK MALL	10	0.00%	0.00%	
8	North	FRANKLIN / PROSPECT	19	32.89%	0.00%	52.63%
8	North	WALTON / VANIER	11	10.83%	0.00%	72.73%
8	North	CHARLES STREET TERMINAL	55	14.20%	5.45%	20.00%
8	North	MARGARET / WELLINGTON	26	5.53%	3.85%	30.77%
8	North	COURTLAND / STIRLING	11	72.73%		72.73%
8	North	OTTAWA / WEBER	19	13.33%	10.53%	31.58%
8	North	UNION / WEBER	25	19.83%	12.00%	24.00%
8	North	BELMONT / HIGHLAND	27	11.11%	11.11%	11.11%
8	North	UNION / WESTMOUNT	29	17.24%	17.24%	
8	North	UNIVERSITY / KING	52	44.23%		44.23%
8	North	UNIVERSITY / SEAGRAM	29	38.22%	6.90%	44.83%
8	South	UNIVERSITY / KING	54	11.11%	11.11%	
8	South	UNIVERSITY / SEAGRAM	25	23.23%	32.00%	20.00%
8	South	UNION / WEBER	29	29.89%	10.34%	34.48%
8	South	UNION / WESTMOUNT	25			
8	South	MARGARET / WELLINGTON	29	26.04%	24.14%	27.59%
8	South	BELMONT / BURN	27	33.53%	14.81%	44.44%
8	South	COURTLAND / VERNON	19	13.16%	0.00%	26.32%
8	South	CHARLES STREET TERMINAL	56	25.04%	3.57%	33.93%
8	South	WALTON / VANIER	19	6.58%	0.00%	26.32%
8	South	OTTAWA / MCKENZIE	9	0.00%	0.00%	
8	South	FAIRVIEW PARK	17	47.06%		47.06%
8	South	FAIRVIEW PARK MALL	11	81.82%		81.82%
8	South	WEBER / FRANKLIN	9	44.44%		44.44%
9	Downward	CONESTOGA MALL	21	9.52%	14.29%	
9	Downward	NORTHFIELD / WEBER	21	8.59%	4.76%	19.05%
9	Downward	HIGHPOINT / WINTERGREEN	21	0.00%	0.00%	
9	Downward	PARKSIDE / GLENELM	21	23.61%	0.00%	33.33%
9	Downward	HAZEL / WILDWOOD	21	12.61%	9.52%	19.05%
9	Downward	HAZEL / UNIVERSITY	18	27.15%	16.67%	33.33%
9	Downward	U WATERLOO	21	38.10%		38.10%
9	Upward	U WATERLOO	22	24.06%	27.27%	
9	Upward	UNIVERSITY / KING	1			
9	Upward	HAZEL / UNIVERSITY	23	25.09%	30.43%	0.00%
9	Upward	HAZEL / BEARINGER	23	4.83%	30.43%	0.00%
9	Upward	PARKSIDE / GLENELM	8			
9	Upward	HIGHPOINT / WINTERGREEN	23	24.64%	26.09%	13.04%
9	Upward	NORTHFIELD / WEBER	23	32.95%	52.17%	8.70%
9	Upward	CONESTOGA MALL	23	21.74%		21.74%
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	19	0.00%	0.00%	
10	Inbound	PINNACLE / OLD MILL	19	0.00%	0.00%	

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
10	Inbound	PIONEER / OLD CARRIAGE	19	1.32%	0.00%	15.79%
10	Inbound	DOON VILLAGE / MILLWOOD	19	0.49%	0.00%	15.79%
10	Inbound	FAIRVIEW PARK	14	28.57%		28.57%
10	Inbound	FAIRVIEW PARK MALL	5	0.00%		0.00%
10	Outbound	FAIRVIEW PARK	15	13.06%	13.33%	
10	Outbound	DOON VILLAGE / MILLWOOD	15	2.03%	0.00%	6.67%
10	Outbound	PIONEER / OLD CARRIAGE	15			
10	Outbound	PINNACLE / OLD MILL	15			
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	6.67%		6.67%
11	1	CHARLES STREET TERMINAL	15	6.59%	6.67%	
11	1	STIRLING / COURTLAND	25	8.00%	8.00%	8.00%
11	1	ALPINE / OTTAWA	25	19.56%	4.00%	24.00%
11	1	COUNTRY HILL / BLOCK LINE	15	6.67%	6.67%	
11	1	FOREST GLEN TERMINAL	15	53.33%		53.33%
11	2	FOREST GLEN TERMINAL	30	6.06%	6.67%	
11	2	KINGSWOOD / BLOCK LINE	30	5.01%	0.00%	6.67%
11	2	HOFFMAN / OTTAWA	30	3.33%	3.33%	
11	2	STIRLING / COURTLAND	30	18.67%	6.67%	26.67%
11	2	CHARLES STREET TERMINAL	30	43.33%		43.33%
12	Downward	CONESTOGA MALL	31	0.00%	0.00%	
12	Downward	BRIDGE / UNIVERSITY	24	9.52%	8.33%	16.67%
12	Downward	UNIVERSITY / KING	38	10.53%	10.53%	10.53%
12	Downward	UNIVERSITY / SEAGRAM	38	12.00%	23.68%	10.53%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	38	22.14%	31.58%	18.42%
12	Downward	HIGHLAND HILLS MALL	38	18.42%	18.42%	18.42%
12	Downward	WESTMOUNT / OTTAWA	29	13.79%	13.79%	13.79%
12	Downward	FOREST GLEN TERMINAL	30	18.54%	16.67%	20.00%
12	Downward	FAIRVIEW PARK MALL	13	0.00%		0.00%
12	Downward	FAIRVIEW PARK	17	0.00%		0.00%
12	Upward	FAIRVIEW PARK	19	0.00%	0.00%	
12	Upward	FAIRVIEW PARK MALL	12	0.00%	0.00%	
12	Upward	FOREST GLEN TERMINAL	32	7.99%	9.38%	6.25%
12	Upward	WESTMOUNT / OTTAWA	35	10.61%	8.57%	20.00%
12	Upward	HIGHLAND HILLS MALL	32	20.71%	9.38%	43.75%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	32	32.80%	0.00%	50.00%
12	Upward	UNIVERSITY / SEAGRAM	32	45.73%	12.50%	50.00%
12	Upward	UNIVERSITY / KING	32	32.29%	9.38%	43.75%
12	Upward	BRIDGE / UNIVERSITY	23	18.73%	0.00%	30.43%
12	Upward	CONESTOGA MALL	26	34.62%		34.62%
13	1	U WATERLOO	23	0.00%	0.00%	
13	1	COLUMBIA / FISCHER-HALLMAN	23	16.15%	8.70%	26.09%
13	1	LAURELWOOD / ERBSVILLE	23	17.39%		17.39%
13	2	LAURELWOOD / ERBSVILLE	24	7.82%	8.33%	
13	2	COLUMBIA / FISCHER-HALLMAN	24	12.50%	12.50%	
13	2	U WATERLOO	24	8.33%		8.33%
14	1	CONESTOGA MALL	3	0.00%	0.00%	
14	1	BATHURST / MCMURRAY	3	0.00%		0.00%
14	1	WYMAN / COLBY	3			
14	2	WYMAN / COLBY(2)	4			
14	2	WYMAN / COLBY	6	62.50%	83.33%	0.00%
14	2	MCMURRAY / NORTHLAND	6			
14	2	CONESTOGA MALL	6	0.00%		0.00%
15	East	CHARLES STREET TERMINAL	22	4.55%	4.55%	
15	East	QUEEN / LANCASTER	22	9.09%	0.00%	18.18%
15	East	EDNA / FREDERICK	22	18.18%		18.18%
15	East	LACKNER / VICTORIA	22	13.64%		13.64%
15	West	LACKNER / VICTORIA	14	7.14%	7.14%	
15	West	NATCHEZ / HALIFAX	14	1.79%	0.00%	7.14%
15	West	FREDERICK / EDNA	14	16.39%	14.29%	21.43%
15	West	QUEEN / LANCASTER	14	19.84%	21.43%	14.29%
15	West	CHARLES STREET TERMINAL	14	14.29%		14.29%
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	5	10.53%	20.00%	
16	Inbound	PIONEER / BECHTEL	9	33.33%	33.33%	
16	Inbound	STRASBURG / TRILLIUM	5			
16	Inbound	FOREST GLEN TERMINAL	5	20.00%		20.00%
16	Outbound	FOREST GLEN TERMINAL	11	0.00%	0.00%	
16	Outbound	STRASBURG / TRILLIUM	11	36.36%		36.36%
16	Outbound	PIONEER / BECHTEL	11	0.00%	0.00%	
16	Outbound	Doon Public School	1	100.00%		100.00%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	11	18.18%		18.18%
17	Downward	LACKNER / VICTORIA	4	25.00%	25.00%	
17	Downward	KEEWATIN / OTTAWA	4	0.00%	0.00%	
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00%	0.00%	0.00%
17	Downward	RIVER / FAIRWAY	4	25.00%	25.00%	
17	Downward	FAIRVIEW PARK	2	0.00%		0.00%
17	Upward	FAIRVIEW PARK	2	0.00%	0.00%	
17	Upward	FAIRVIEW PARK MALL	2	0.00%	0.00%	
17	Upward	RIVER / FAIRWAY	4	0.00%	0.00%	
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	25.00%	50.00%	0.00%
17	Upward	KEEWATIN / OTTAWA	4	0.00%		0.00%
17	Upward	LACKNER / VICTORIA	4	0.00%		0.00%
18	Downward	MAPLE / GUELPH	14	0.00%	0.00%	
18	Downward	GUELPH / MARGARET	14	0.00%	0.00%	
18	Downward	WEBER / WELLINGTON	14			
18	Downward	CHARLES STREET TERMINAL	14	35.71%		35.71%
18	Upward	CHARLES STREET TERMINAL	14	14.29%	14.29%	
18	Upward	WEBER / WELLINGTON	2			
18	Upward	GUELPH / FLOYD	14			
18	Upward	MAPLE / GUELPH	14	14.29%		14.29%
19	1	CHARLES STREET TERMINAL	13	15.15%	15.38%	
19	1	VICTORIA / BELMONT	13	2.37%	0.00%	15.38%
19	1	CHOPIN / BRYBECK	13	5.41%	0.00%	23.08%
19	1	HAZELGLEN / VICTORIA	13	22.21%	23.08%	7.69%
19	1	WESTFOREST / HIDDEN CREEK	13	15.38%	15.38%	15.38%
19	1	HIGHLAND HILLS MALL	13	30.49%		30.77%
19	2	HIGHLAND HILLS MALL	13	6.68%	7.69%	
19	2	WESTFOREST / VICTORIA	13	9.30%	7.69%	15.38%
19	2	HAZELGLEN / MOOREGATE	13	11.54%	7.69%	23.08%
19	2	CHOPIN / BRYBECK	13	7.69%	7.69%	7.69%
19	2	VICTORIA / BELMONT	13	7.69%	7.69%	
19	2	CHARLES STREET TERMINAL	12	75.00%		75.00%
20	1	CHARLES STREET TERMINAL	11	0.00%	0.00%	
20	1	VICTORIA / BELMONT	11	10.91%	0.00%	27.27%
20	1	INGLESIDE / HAZELGLEN	11	0.00%		0.00%
20	2	HAZELGLEN / MOOREGATE	10	8.80%	10.00%	
20	2	INGLESIDE / HAZELGLEN	22	0.25%	0.00%	4.55%
20	2	CHOPIN / BRYBECK	22	13.23%	13.64%	4.55%
20	2	VICTORIA / BELMONT	22	0.00%	0.00%	
20	2	CHARLES STREET TERMINAL	22	40.91%		40.91%
22	East	HIGHLAND HILLS MALL	17	0.00%	0.00%	
22	East	ACTIVA / GREY FOX	17	14.53%	11.76%	35.29%
22	East	ACTIVA / SNOWDROP	17	10.29%	5.88%	23.53%
22	East	TILLSLEY / WESTMOUNT	17	17.65%	17.65%	17.65%
22	East	FOREST GLEN TERMINAL	17	7.16%	0.00%	11.76%
22	East	OTTAWA / HWY 8 RAMP	17	4.28%	0.00%	11.76%
22	East	STIRLING / COURTLAND	16	11.61%	6.25%	12.50%
22	East	CHARLES STREET TERMINAL	16	12.50%		12.50%
22	West	CHARLES STREET TERMINAL	9	0.00%	0.00%	
22	West	STIRLING / COURTLAND	19	26.32%	26.32%	
22	West	OTTAWA / HWY 8 RAMP	9	0.00%		0.00%
22	West	FOREST GLEN TERMINAL	9	0.00%	0.00%	0.00%
22	West	ERINBROOK / HEDGESTONE	9			
22	West	DAVID BERGEY / PEACH BLOSSOM	9	26.19%	33.33%	0.00%
22	West	ACTIVA / GREY FOX	9	26.67%	33.33%	0.00%
22	West	HIGHLAND HILLS MALL	9	0.00%		0.00%
23	East	CHARLES STREET TERMINAL	10	0.00%	0.00%	
23	East	FREDERICK / DUNHAM	10	13.33%	0.00%	20.00%
23	East	RIVER / OTTAWA	10	20.00%		20.00%
23	East	OTTAWA / LACKNER	10	16.67%	10.00%	20.00%
23	East	LACKNER / CORFIELD	10	37.69%	40.00%	10.00%
23	East	FAIRVIEW PARK MALL	3	0.00%		0.00%
23	East	FAIRVIEW PARK	6	50.00%		50.00%
23	West	FAIRVIEW PARK MALL	4	0.00%	0.00%	
23	West	FAIRVIEW PARK	7	14.29%	14.29%	
23	West	LACKNER / CORFIELD	12	0.00%	0.00%	
23	West	OTTAWA / OLDFIELD	12	21.36%	0.00%	25.00%
23	West	RIVER / OTTAWA	12	9.21%	0.00%	58.33%
23	West	FREDERICK / EDNA	12	22.73%	16.67%	33.33%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
23	West	CHARLES STREET TERMINAL	12	50.00%		50.00%
24	1	CHARLES STREET TERMINAL	11	0.00%	0.00%	
24	1	HIGHLAND / BELMONT	12	9.52%	16.67%	0.00%
24	1	HIGHLAND HILLS MALL	12	2.88%	8.33%	0.00%
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	16.67%		16.67%
24	2	ROLLING MEADOWS / WESTHEIGHTS	9	0.00%	0.00%	
24	2	WESTHEIGHTS / WINDING	9			
24	2	WESTHEIGHTS / WESTFOREST	8	0.00%	0.00%	0.00%
24	2	HIGHLAND HILLS MALL	9	22.99%	33.33%	11.11%
24	2	HIGHLAND / BELMONT	9	14.29%	0.00%	33.33%
24	2	CHARLES STREET TERMINAL	9	22.22%		22.22%
25	1	CHARLES STREET TERMINAL	26	0.00%	0.00%	
25	1	QUEENS / WESTMOUNT	29	6.90%	6.90%	6.90%
25	1	HIGHLAND HILLS MALL	30	4.79%	0.00%	6.67%
25	1	FORESTWOOD / MCGARRY	26	15.38%		15.38%
25	1	DRIFTWOOD / WESTHEIGHTS	27	17.88%	14.81%	18.52%
25	1	GOLDEN MEADOW / HAVENWOOD	26	15.38%		15.38%
25	2	GOLDEN MEADOW / HAVENWOOD	34	14.37%	14.71%	
25	2	WESTHEIGHTS / LORILEE	34	26.47%	26.47%	
25	2	HIGHLAND HILLS MALL	34	21.87%	17.65%	26.47%
25	2	QUEENS / WESTMOUNT	34	10.17%	17.65%	5.88%
25	2	CHARLES STREET TERMINAL	34	14.53%		14.71%
26	1	FOREST GLEN TERMINAL	19	0.00%	0.00%	
26	1	TRILLIUM / STRASBURG	19			
26	1	TRILLIUM / GROFF	19			
26	2	TRILLIUM / GROFF	19	15.79%	15.79%	
26	2	TRILLIUM / STRASBURG	19			
26	2	FOREST GLEN TERMINAL	19	0.00%		0.00%
27	1	FAIRVIEW PARK	10	0.00%	0.00%	
27	1	FAIRVIEW PARK MALL	4	0.00%	0.00%	
27	1	MORRISON / MANOR	14	6.29%	0.00%	14.29%
27	1	QUINTE / MORRISON	14	0.00%		0.00%
27	2	QUINTE / MORRISON	9	0.00%	0.00%	
27	2	FAIRWAY / KING	9	26.67%	0.00%	33.33%
27	2	FAIRVIEW PARK	7	28.57%		28.57%
27	2	FAIRVIEW PARK MALL	2	0.00%		0.00%
29	1	RING / UNIVERSITY	9	0.00%	0.00%	
29	1	FISCHER-HALLMAN / KEATS	9			
29	1	ERB / ERB	1			
29	2	KEATS / FISCHER-HALLMAN	9	0.00%		0.00%
29	2	RING / UNIVERSITY	9	22.22%		22.22%
31	Downward	CONESTOGA MALL	6	22.81%	33.33%	
31	Downward	NORTHFIELD / BRIDGE	9			
31	Downward	UNIVERSITY / RIM PARK INTERNAL	6			
31	Downward	UNIVERSITY / LEXINGTON	9	0.00%	0.00%	
31	Downward	LEXINGTON / ANNDALE	9	11.11%	11.11%	
31	Downward	COLUMBIA / SPRUCE	9	25.19%	33.33%	0.00%
31	Downward	RING / UNIVERSITY	9	11.11%		11.11%
31	Upward	RING / UNIVERSITY	7	26.19%	28.57%	
31	Upward	COLUMBIA / KING	7	14.29%	14.29%	14.29%
31	Upward	LEXINGTON / DEARBORN	7	0.00%		0.00%
31	Upward	UNIVERSITY / LEXINGTON	7			
31	Upward	UNIVERSITY / RIM PARK INTERNAL	4	0.00%		0.00%
31	Upward	NORTHFIELD / BRIDGE	7			
32	1	CONESTOGA MALL	1			
32	1	KUMPF / NORTHFIELD	1			
32	2	KUMPF / NORTHFIELD	14	50.00%	50.00%	
32	2	WEBER / GOLDEN EAGLE	17	37.25%	76.47%	5.88%
32	2	CONESTOGO / COLBY	14			
32	2	CONESTOGA MALL	13	12.59%		23.08%
33	1	FOREST GLEN TERMINAL	2	0.00%	0.00%	
33	1	STRASBURG / TRILLIUM	2			
33	1	PARKVALE / NEWCASTLE	2			
33	2	HURON / NEWCASTLE	2			
33	2	STRASBURG / TRILLIUM	2			
33	2	FOREST GLEN TERMINAL	2			
35	1	KING / WILLIS	19	5.19%	5.26%	
35	1	ERB / WEBER	19	10.42%	5.26%	42.11%
35	1	BRIDGEPORT / LANCASTER	19	37.82%	5.26%	42.11%

Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
35	1	AUBURN / SABLE	19	23.84%	5.26%	36.84%
35	1	BRIDGE / LEXINGTON	20			
35	1	CHESAPEAKE / SPINNAKER	19	10.53%	10.53%	
35	1	CONESTOGA MALL	20	35.00%		35.00%
35	2	CONESTOGA MALL	18	0.00%	0.00%	
35	2	CHESAPEAKE / BRIGANTINE	17			
35	2	BRIDGE / LEXINGTON	15	6.67%	6.67%	
35	2	AUBURN / SABLE	17	11.57%	11.76%	5.88%
35	2	BRIDGEPORT / LANCASTER	16	18.75%	18.75%	18.75%
35	2	BRIDGEPORT / WEBER	17	29.41%	11.76%	35.29%
35	2	UPTOWN WATERLOO	17	0.00%		0.00%
51	Inbound	HOLIDAY INN TERMINAL	40	4.53%	5.00%	
51	Inbound	SMARTCENTRES CAMBRIDGE	40	13.43%	32.50%	7.50%
51	Inbound	CAMBRIDGE CENTRE TERMINAL	42	7.85%	7.14%	9.52%
51	Inbound	AINSLIE STREET TERMINAL	39	7.69%		7.69%
51	Outbound	AINSLIE STREET TERMINAL	48	0.00%	0.00%	
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	8.51%	8.51%	8.51%
51	Outbound	SMARTCENTRES CAMBRIDGE	47	40.78%	63.83%	8.51%
51	Outbound	HOLIDAY INN TERMINAL	47	4.26%		4.26%
52	North	AINSLIE STREET TERMINAL	25	0.00%	0.00%	
52	North	CORONATION / BARRETT	20	45.88%	0.00%	60.00%
52	North	KING / LOWTHER	20	16.47%	0.00%	40.00%
52	North	PRESTON / FOUNTAIN	19	0.00%	0.00%	
52	North	SHANTZ HILL / HWY 401 RAMP	19			
52	North	SPORTSWORLD	19	0.00%	0.00%	
52	North	FAIRVIEW PARK	20	25.00%		25.00%
52	South	FAIRVIEW PARK MALL	5	0.00%	0.00%	
52	South	FAIRVIEW PARK	24	8.31%	8.33%	
52	South	SPORTSWORLD	25	53.05%	0.00%	56.00%
52	South	SHANTZ HILL / PRESTON	29	7.90%	3.45%	37.93%
52	South	PRESTON / FOUNTAIN	29			
52	South	KING / LOWTHER	29	13.79%	6.90%	41.38%
52	South	CORONATION / MARTIN	29	30.70%	6.90%	48.28%
52	South	AINSLIE STREET TERMINAL	29	24.14%		24.14%
53	Inbound	HOLIDAY INN TERMINAL	8	12.07%	12.50%	
53	Inbound	FRANKLIN / SAGINAW	8	5.95%	50.00%	0.00%
53	Inbound	DOBBIE / SAVAGE	8			
53	Inbound	MAIN / DUNDAS	8	0.00%		0.00%
53	Inbound	AINSLIE STREET TERMINAL	8	0.00%		0.00%
53	Outbound	AINSLIE STREET TERMINAL	8	0.00%	0.00%	
53	Outbound	MAIN / DUNDAS	8	10.00%	0.00%	25.00%
53	Outbound	DOBBIE / SAVAGE	8	12.50%		12.50%
53	Outbound	FRANKLIN / SAGINAW	7	11.76%	0.00%	14.29%
53	Outbound	HOLIDAY INN TERMINAL	8	37.50%		37.50%
54	East	MAIN / DUNDAS	42	1.99%	28.57%	0.00%
54	East	LISBON PINES / GATEHOUSE	43	27.33%	34.88%	4.65%
54	East	AINSLIE STREET TERMINAL	85	8.37%	0.00%	17.65%
54	East	CHAMPLAIN / CHRISTOPHER	43	5.95%	4.65%	23.26%
55	West	SOUTHWOOD / CEDAR	22	4.95%	9.09%	4.55%
55	West	AINSLIE STREET TERMINAL	43	11.46%	0.00%	18.60%
55	West	SOUTHWOOD / ST ANDREWS	23	6.02%	0.00%	65.22%
55	West	ST ANDREWS / GILHOLM	23	15.22%	0.00%	60.87%
56	West	BISHOP / RAILWAY	26	2.83%	0.00%	7.69%
56	West	ROSE / ARGYLE	26	4.89%	19.23%	3.85%
56	West	CAMBRIDGE CENTRE TERMINAL	52	15.36%	0.00%	21.15%
56	West	WESTMINSTER / KING	26	10.07%	11.54%	7.69%
56	West	LANG'S / CONCESSION	26	21.76%	19.23%	23.08%
57	West	SUNSET / SAXONY	36	0.00%	0.00%	
57	West	BLAIR / BISMARCK	36	9.64%	8.33%	19.44%
57	West	AINSLIE STREET TERMINAL	76	5.50%	0.00%	7.89%
57	West	HILLCREST / CHURCHILL	36	23.51%	11.11%	25.00%
58	East	MOSCRIP / BRONSON	11	0.00%	0.00%	
58	East	MUNCH / ELGIN	11	3.54%	0.00%	63.64%
58	East	AINSLIE STREET TERMINAL	22	7.61%	0.00%	13.64%
58	East	HILLTOP / FRANKLIN	11	12.88%	9.09%	54.55%
59	East	CHAMPLAIN / CHRISTOPHER	22	3.35%	0.00%	18.18%
59	East	AINSLIE STREET TERMINAL	44	3.92%	0.00%	9.09%
59	East	CHAMPLAIN / ELGIN	23	0.00%	0.00%	
60	East	GLAMIS / ROBSON	24	11.83%	8.33%	16.67%



Route	Direction*	Timepoint	Obs.	SA <sub>2</sub> : "Not On-Time" Percentage (Passenger Perspective)		
				Total	Early	Late
60	East	CAMBRIDGE CENTRE TERMINAL	48	1.48%	0.00%	2.08%
60	East	ELGIN / SAGINAW	24	48.88%	4.17%	58.33%
60	East	MUNCH / KOVAC	24	4.17%	4.17%	
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8	7.18%	12.50%	
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	16.67%	16.67%	
61	East	KING / WESTMINSTER	8	22.22%	100.00%	0.00%
61	West	CAMBRIDGE CENTRE	8	0.00%	0.00%	
61	West	KING / WESTMINSTER	9	25.00%	33.33%	0.00%
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	9			
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	9	0.00%		0.00%
62	West	SOUTHGATE / DAY	18	11.11%	11.11%	
62	West	AINSLIE STREET TERMINAL	44	7.96%	2.27%	9.09%
62	West	WOODSIDE / CEDAR	22	22.73%	22.73%	
63	East	ALISON / ELGIN	22	0.00%	0.00%	
63	East	AINSLIE STREET TERMINAL	45	4.94%	0.00%	6.67%
63	East	DUNDAS / FRANKLIN	23	17.56%	0.00%	30.43%
63	East	CHAMPLAIN / CHRISTOPHER	22	12.02%	0.00%	22.73%
64	West	LANG'S / WALTER	16	5.65%	0.00%	12.50%
64	West	EAGLE / KING	16	5.00%	0.00%	18.75%
64	West	CAMBRIDGE CENTRE TERMINAL	32	5.55%	0.00%	9.38%
64	West	ROSE / ARGYLE	16	31.25%		31.25%
64	West	BISHOP / RAILWAY	16	24.11%	6.25%	37.50%
65	North	HOLIDAY INN TERMINAL	32	21.97%	12.50%	28.13%
65	North	WINSTON / SCOTTDAL	16			
65	North	FISHER MILLS / FEARWOOD	16	11.04%	12.50%	6.25%
65	North	FRANKLIN / WINSTON	16	48.61%	0.00%	62.50%
66	East	FRANKLIN / WINSTON	8			
66	East	COOPER / ELLIS	8	41.67%	50.00%	0.00%
66	East	HOLIDAY INN TERMINAL	16	0.00%	0.00%	0.00%
66	East	WINSTON / WESTBURY	8			
71	East	QUEEN / HUNGERFORD	18	0.00%	0.00%	
71	East	HOLIDAY INN TERMINAL	36	10.71%	5.56%	11.11%
71	East	ELLIS / ADLER	18	0.00%	0.00%	
110	Downward	FAIRVIEW PARK	16	0.00%	0.00%	
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	16	43.75%		43.75%
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	14	0.00%	0.00%	
110	Upward	PIONEER / OLD CARRIAGE	14	7.79%	7.14%	21.43%
110	Upward	FAIRVIEW PARK	14	21.43%		21.43%
111	North	AINSLIE STREET TERMINAL	2	0.00%	0.00%	
111	South	AINSLIE STREET TERMINAL	2			
200	Downward	CONESTOGA MALL	450	2.87%	3.11%	
200	Downward	McCORMICK	448	0.91%	0.67%	21.43%
200	Downward	R & T PARK	447	16.71%	2.46%	26.62%
200	Downward	U WATERLOO	447	10.37%	5.59%	12.98%
200	Downward	LAURIER	447	11.62%	2.46%	30.65%
200	Downward	KING / WILLIS	47	19.79%	14.89%	27.66%
200	Downward	UPTOWN WATERLOO	302	14.30%	7.62%	24.83%
200	Downward	GRAND RIVER HOSPITAL	446	18.90%	11.43%	23.77%
200	Downward	CHARLES TERMINAL	447	17.39%	6.71%	27.96%
200	Downward	OTTAWA	447	13.17%	12.75%	13.42%
200	Downward	FAIRVIEW	445	4.86%	4.49%	4.94%
200	Downward	SMART!CENTRES CAMBRIDGE	446	7.45%	34.75%	4.26%
200	Downward	CAMBRIDGE CENTRE	446	9.82%	22.65%	4.71%
200	Downward	AINSLIE STREET TERMINAL	447	6.71%		6.71%
200	Upward	AINSLIE STREET TERMINAL	534	1.48%	1.50%	
200	Upward	CAMBRIDGE CENTRE	528	8.93%	2.08%	15.72%
200	Upward	SMART!CENTRES CAMBRIDGE	528	8.80%	3.22%	23.67%
200	Upward	FAIRVIEW	531	6.62%	6.03%	9.23%
200	Upward	OTTAWA	530	9.80%	7.36%	15.47%
200	Upward	CHARLES TERMINAL	532	11.43%	6.77%	18.23%
200	Upward	GRAND RIVER HOSPITAL	526	9.67%	0.57%	22.81%
200	Upward	UPTOWN WATERLOO	527	11.46%	2.28%	24.67%
200	Upward	LAURIER	527	18.10%	6.26%	22.96%
200	Upward	U WATERLOO	526	29.63%	3.42%	33.08%
200	Upward	R & T PARK	525	36.08%	7.05%	37.71%
200	Upward	McCORMICK	526	20.62%	10.84%	25.10%
200	Upward	CONESTOGA MALL	527	19.91%		19.92%

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
1	East	CHARLES STREET TERMINAL	32	0.70	0.70	
1	East	FREDERICK / WEBER	33	0.30	0.00	0.30
1	East	BECKER / BELLEVIEW	21	0.01	0.01	0.00
1	East	LORRAINE / BIRKSHIRE	12	0.10	0.00	0.10
1	East	RIVER / HICKSON	21	0.11	0.00	0.11
1	East	OTTAWA / OLDFIELD	12	0.10	0.06	0.04
1	East	STANLEY PARK MALL TERMINAL	33	1.00		1.00
1	West	STANLEY PARK MALL TERMINAL	28	0.50	0.50	
1	West	LACKNER / BANBURY	16	0.18	0.09	0.09
1	West	BELLEVIEW / BECKER	12	0.00	0.00	0.00
1	West	RIVER / HALLIWELL	28	0.00	0.00	0.00
1	West	WEBER / SCOTT	28	0.16	0.02	0.14
1	West	CHARLES STREET TERMINAL	28	3.07		3.07
2	Downward	HIGHLAND HILLS MALL	15	0.00	0.00	
2	Downward	GREENBROOK / WESTMOUNT	14	0.00	0.00	0.00
2	Downward	GREENBROOK / STIRLING	14	0.02	0.02	0.00
2	Downward	SOUTHMOOR / AVALON	14	0.09	0.09	0.00
2	Downward	CHARLES STREET TERMINAL	15	4.03		4.03
2	Upward	CHARLES STREET TERMINAL	15	0.24	0.24	
2	Upward	GREENBROOK / STIRLING	14	0.03	0.03	0.00
2	Upward	WESTMOUNT / VILLAGE	15	0.05	0.02	0.04
2	Upward	HIGHLAND HILLS MALL	14	1.27		1.27
3	1	CHARLES STREET TERMINAL	14	0.00	0.00	
3	1	COURTLAND / STIRLING	14	0.41	0.00	0.41
3	1	STRASBURG / TRANSIT GARAGE	14	0.24	0.00	0.24
3	1	OTTAWA / WESTMOUNT	14	0.38	0.21	0.16
3	1	WILLIAMSBURG / DINISON	14	0.14	0.09	0.05
3	1	FOREST GLEN TERMINAL	14	3.86		3.86
3	2	FOREST GLEN TERMINAL	24	0.10	0.10	
3	2	WILLIAMSBURG / DINISON	24	0.07	0.07	0.00
3	2	OTTAWA / WESTMOUNT	24	0.04	0.04	0.00
3	2	STRASBURG / TRANSIT GARAGE	24	0.06	0.00	0.06
3	2	COURTLAND / MADISON	24	2.39	0.00	2.39
3	2	CHARLES STREET TERMINAL	24	4.02		4.02
4	Downward	UNIVERSITY / RESURRECTION	12	0.33	0.33	
4	Downward	GLASGOW / WESTMOUNT	12	0.21	0.14	0.07
4	Downward	UNION / KING	12	0.47	0.17	0.31
4	Downward	MOORE / BREITHAUP	13	0.11	0.02	0.08
4	Downward	CHARLES STREET TERMINAL	12	0.32		0.32
4	Upward	CHARLES STREET TERMINAL	14	0.00	0.00	
4	Upward	MOORE / WELLINGTON	14	0.01	0.00	0.01
4	Upward	UNION / PARK	14	0.10	0.00	0.10
4	Upward	GLASGOW / WESTMOUNT	14	0.14	0.14	0.00
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	2.37	0.00	2.37
4	Upward	UNIVERSITY / BAKER	9	0.07	0.00	0.07
4	Upward	UNIVERSITY / RESURRECTION	14	0.01		0.01
5	1	UPTOWN WATERLOO	14	0.12	0.12	
5	1	ERB / WESTMOUNT	14	0.21	0.00	0.21
5	1	FISCHER-HALLMAN / ERB	14	1.20	0.02	1.18
5	1	KEATS / KEATSWOOD	14	0.00		0.00
5	2	KEATS / KEATSWOOD	23	0.00	0.00	
5	2	GATEVIEW / WESTVALE	23	0.06	0.06	0.00
5	2	ERB / FISCHER-HALLMAN	23	0.26	0.21	0.06
5	2	ERB / WESTMOUNT	23	0.55	0.15	0.40
5	2	KING / WILLIS	23	3.40		3.40
6	Downward	DANIEL / BLOOMINGDALE	13	0.01	0.01	
6	Downward	LANCASTER / HAMEL	14	0.00	0.00	0.00
6	Downward	LANCASTER / GUELPH	13	0.40	0.19	0.21
6	Downward	WELLINGTON / MARGARET	13	2.19	0.06	2.13
6	Downward	CHARLES STREET TERMINAL	13	2.96		2.96
6	Upward	CHARLES STREET TERMINAL	14	0.00	0.00	
6	Upward	WELLINGTON / MARGARET	14	0.25	0.00	0.25
6	Upward	LANCASTER / GUELPH	14	0.08	0.00	0.08
6	Upward	LANCASTER / HAMEL	14	1.86	0.00	1.86
6	Upward	DANIEL / BLOOMINGDALE	14	0.00		0.00
7	Downward	RING / NORTH CAMPUS	15	0.04	0.04	
7	Downward	U WATERLOO	10	0.37	0.37	
7	Downward	CONESTOGA MALL	15	0.79	0.79	
7	Downward	COLUMBIA / HAZEL	15	0.04	0.04	0.00

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
7	Downward	UNIVERSITY / KING	11	0.07	0.00	0.07
7	Downward	KING / UNIVERSITY	32	0.36	0.29	0.07
7	Downward	UPTOWN WATERLOO	13	0.00	0.00	0.00
7	Downward	KING / WILLIS	3	0.00	0.00	0.00
7	Downward	CHARLES STREET TERMINAL	43	3.01	0.51	2.50
7	Downward	KING / OTTAWA	39	0.42	0.12	0.30
7	Downward	FOURTH / CONNAUGHT	9	0.89	0.89	0.00
7	Downward	FOURTH / WILSON	8	0.66	0.61	0.05
7	Downward	KINZIE / WEBER	22	0.72	0.05	0.67
7	Downward	FAIRVIEW PARK	25	2.75		2.75
7	Downward	FAIRVIEW PARK MALL	14	6.31		6.31
7	Upward	FAIRVIEW PARK MALL	19	3.01	3.01	
7	Upward	FAIRVIEW PARK	27	0.61	0.61	
7	Upward	CONNAUGHT / FIFTH	18	0.06	0.06	0.00
7	Upward	FOURTH / WILSON	7	0.00	0.00	0.00
7	Upward	WEBER / KINZIE	21	0.77	0.26	0.51
7	Upward	KING / OTTAWA	48	0.36	0.23	0.13
7	Upward	CHARLES STREET TERMINAL	58	5.30	3.55	1.75
7	Upward	UPTOWN WATERLOO	58	0.55	0.14	0.41
7	Upward	KING / UNIVERSITY	50	0.96	0.34	0.62
7	Upward	UNIVERSITY / KING	8	1.13	0.66	0.47
7	Upward	CONESTOGA MALL	30	2.64		2.64
7	Upward	RING / UNIVERSITY	8	2.63	0.09	2.53
7	Upward	COLUMBIA / HAZEL	20	0.71	0.54	0.18
7	Upward	RING / NORTH CAMPUS	8	1.17		1.17
7	Upward	U WATERLOO	20	14.14		14.14
8	North	FAIRVIEW PARK	20	0.19	0.19	
8	North	FAIRVIEW PARK MALL	10	0.00	0.00	
8	North	FRANKLIN / PROSPECT	19	0.28	0.00	0.28
8	North	WALTON / VANIER	11	0.93	0.00	0.93
8	North	CHARLES STREET TERMINAL	55	1.70	0.26	1.44
8	North	MARGARET / WELLINGTON	26	0.07	0.04	0.02
8	North	COURTLAND / STIRLING	11	1.98	0.00	1.98
8	North	OTTAWA / WEBER	19	0.11	0.07	0.03
8	North	UNION / WEBER	25	0.18	0.04	0.14
8	North	BELMONT / HIGHLAND	27	0.24	0.17	0.07
8	North	UNION / WESTMOUNT	29	0.31	0.31	0.00
8	North	UNIVERSITY / KING	52	1.18		1.18
8	North	UNIVERSITY / SEAGRAM	29	7.56	0.24	7.33
8	South	UNIVERSITY / KING	54	0.37	0.37	
8	South	UNIVERSITY / SEAGRAM	25	1.35	0.50	0.85
8	South	UNION / WEBER	29	0.22	0.01	0.20
8	South	UNION / WESTMOUNT	25	0.00	0.00	0.00
8	South	MARGARET / WELLINGTON	29	0.88	0.37	0.51
8	South	BELMONT / BURN	27	0.24	0.04	0.20
8	South	COURTLAND / VERNON	19	0.03	0.00	0.03
8	South	CHARLES STREET TERMINAL	56	2.54	0.11	2.43
8	South	WALTON / VANIER	19	0.10	0.00	0.10
8	South	OTTAWA / MCKENZIE	9	0.00	0.00	0.00
8	South	FAIRVIEW PARK	17	2.55		2.55
8	South	FAIRVIEW PARK MALL	11	2.90		2.90
8	South	WEBER / FRANKLIN	9	0.35	0.00	0.35
9	Downward	CONESTOGA MALL	21	0.53	0.53	
9	Downward	NORTHFIELD / WEBER	21	0.17	0.07	0.10
9	Downward	HIGHPOINT / WINTERGREEN	21	0.00	0.00	0.00
9	Downward	PARKSIDE / GLENELM	21	0.27	0.00	0.27
9	Downward	HAZEL / WILDWOOD	21	0.20	0.10	0.10
9	Downward	HAZEL / UNIVERSITY	18	2.40	0.55	1.85
9	Downward	U WATERLOO	21	2.58		2.58
9	Upward	U WATERLOO	22	0.74	0.74	
9	Upward	UNIVERSITY / KING	1	0.00	0.00	
9	Upward	HAZEL / UNIVERSITY	23	1.61	1.61	0.00
9	Upward	HAZEL / BEARINGER	23	0.13	0.13	0.00
9	Upward	PARKSIDE / GLENELM	8	0.00	0.00	0.00
9	Upward	HIGHPOINT / WINTERGREEN	23	0.10	0.09	0.01
9	Upward	NORTHFIELD / WEBER	23	1.36	1.20	0.16
9	Upward	CONESTOGA MALL	23	0.32		0.32
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	19	0.00	0.00	
10	Inbound	PINNACLE / OLD MILL	19	0.00	0.00	0.00

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
10	Inbound	PIONEER / OLD CARRIAGE	19	0.06	0.00	0.06
10	Inbound	DOON VILLAGE / MILLWOOD	19	0.02	0.00	0.02
10	Inbound	FAIRVIEW PARK	14	6.80		6.80
10	Inbound	FAIRVIEW PARK MALL	5	0.00		0.00
10	Outbound	FAIRVIEW PARK	15	1.69	1.69	
10	Outbound	DOON VILLAGE / MILLWOOD	15	0.03	0.00	0.03
10	Outbound	PIONEER / OLD CARRIAGE	15	0.00	0.00	0.00
10	Outbound	PINNACLE / OLD MILL	15	0.00	0.00	0.00
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	1.13		1.13
11	1	CHARLES STREET TERMINAL	15	0.76	0.76	
11	1	STIRLING / COURTLAND	25	0.09	0.08	0.01
11	1	ALPINE / OTTAWA	25	0.07	0.00	0.07
11	1	COUNTRY HILL / BLOCK LINE	15	0.02	0.02	0.00
11	1	FOREST GLEN TERMINAL	15	5.26		5.26
11	2	FOREST GLEN TERMINAL	30	0.71	0.71	
11	2	KINGSWOOD / BLOCK LINE	30	0.40	0.00	0.40
11	2	HOFFMAN / OTTAWA	30	0.02	0.02	0.00
11	2	STIRLING / COURTLAND	30	0.31	0.04	0.27
11	2	CHARLES STREET TERMINAL	30	4.72		4.72
12	Downward	CONESTOGA MALL	31	0.00	0.00	
12	Downward	BRIDGE / UNIVERSITY	24	0.25	0.19	0.06
12	Downward	UNIVERSITY / KING	38	1.31	0.56	0.75
12	Downward	UNIVERSITY / SEAGRAM	38	1.36	0.30	1.06
12	Downward	FISCHER-HALLMAN / UNIVERSITY	38	1.15	0.47	0.69
12	Downward	HIGHLAND HILLS MALL	38	1.71	0.87	0.83
12	Downward	WESTMOUNT / OTTAWA	29	0.21	0.15	0.06
12	Downward	FOREST GLEN TERMINAL	30	2.19	0.86	1.33
12	Downward	FAIRVIEW PARK MALL	13	0.00		0.00
12	Downward	FAIRVIEW PARK	17	0.00		0.00
12	Upward	FAIRVIEW PARK	19	0.00	0.00	
12	Upward	FAIRVIEW PARK MALL	12	0.00	0.00	
12	Upward	FOREST GLEN TERMINAL	32	1.03	0.67	0.36
12	Upward	WESTMOUNT / OTTAWA	35	0.58	0.38	0.19
12	Upward	HIGHLAND HILLS MALL	32	4.10	1.25	2.86
12	Upward	FISCHER-HALLMAN / UNIVERSITY	32	2.56	0.00	2.56
12	Upward	UNIVERSITY / SEAGRAM	32	12.43	0.39	12.05
12	Upward	UNIVERSITY / KING	32	0.85	0.08	0.77
12	Upward	BRIDGE / UNIVERSITY	23	0.32	0.00	0.32
12	Upward	CONESTOGA MALL	26	2.00		2.00
13	1	U WATERLOO	23	0.00	0.00	
13	1	COLUMBIA / FISCHER-HALLMAN	23	0.05	0.02	0.03
13	1	LAURELWOOD / ERBSVILLE	23	1.43		1.43
13	2	LAURELWOOD / ERBSVILLE	24	0.58	0.58	
13	2	COLUMBIA / FISCHER-HALLMAN	24	0.08	0.08	0.00
13	2	U WATERLOO	24	1.68		1.68
14	1	CONESTOGA MALL	3	0.00	0.00	
14	1	BATHURST / MCMURRAY	3	0.00	0.00	0.00
14	1	WYMAN / COLBY	3	0.00		0.00
14	2	WYMAN / COLBY(2)	4	0.00	0.00	
14	2	WYMAN / COLBY	6	0.42	0.42	0.00
14	2	MCMURRAY / NORTHLAND	6	0.00	0.00	0.00
14	2	CONESTOGA MALL	6	0.00		0.00
15	East	CHARLES STREET TERMINAL	22	0.56	0.56	
15	East	QUEEN / LANCASTER	22	0.09	0.00	0.09
15	East	EDNA / FREDERICK	22	0.10	0.00	0.10
15	East	LACKNER / VICTORIA	22	0.29		0.29
15	West	LACKNER / VICTORIA	14	0.04	0.04	
15	West	NATCHEZ / HALIFAX	14	0.01	0.00	0.01
15	West	FREDERICK / EDNA	14	0.20	0.12	0.08
15	West	QUEEN / LANCASTER	14	0.51	0.43	0.08
15	West	CHARLES STREET TERMINAL	14	1.19		1.19
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	5	0.80	0.80	
16	Inbound	PIONEER / BECHTEL	9	0.59	0.59	0.00
16	Inbound	STRASBURG / TRILLIUM	5	0.00	0.00	0.00
16	Inbound	FOREST GLEN TERMINAL	5	0.76		0.76
16	Outbound	FOREST GLEN TERMINAL	11	0.00	0.00	
16	Outbound	STRASBURG / TRILLIUM	11	0.13	0.00	0.13
16	Outbound	PIONEER / BECHTEL	11	0.00	0.00	0.00
16	Outbound	Doon Public School	1	5.00	0.00	5.00

Route	Direction*	Timepoint	Obs.	Total	SA <sub>3</sub> : Number of Passengers Affected	
					Early	Late
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	11	2.66		2.66
17	Downward	LACKNER / VICTORIA	4	0.13	0.13	
17	Downward	KEEWATIN / OTTAWA	4	0.00	0.00	0.00
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00	0.00	0.00
17	Downward	RIVER / FAIRWAY	4	0.25	0.25	0.00
17	Downward	FAIRVIEW PARK	2	0.00		0.00
17	Upward	FAIRVIEW PARK	2	0.00	0.00	
17	Upward	FAIRVIEW PARK MALL	2	0.00	0.00	
17	Upward	RIVER / FAIRWAY	4	0.00	0.00	0.00
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	0.63	0.63	0.00
17	Upward	KEEWATIN / OTTAWA	4	0.00	0.00	0.00
17	Upward	LACKNER / VICTORIA	4	0.00		0.00
18	Downward	MAPLE / GUELPH	14	0.00	0.00	
18	Downward	GUELPH / MARGARET	14	0.00	0.00	0.00
18	Downward	WEBER / WELLINGTON	14	0.00	0.00	0.00
18	Downward	CHARLES STREET TERMINAL	14	0.69		0.69
18	Upward	CHARLES STREET TERMINAL	14	0.65	0.65	
18	Upward	WEBER / WELLINGTON	2	0.00	0.00	0.00
18	Upward	GUELPH / FLOYD	14	0.00	0.00	0.00
18	Upward	MAPLE / GUELPH	14	0.06		0.06
19	1	CHARLES STREET TERMINAL	13	0.78	0.78	
19	1	VICTORIA / BELMONT	13	0.02	0.00	0.02
19	1	CHOPIN / BRYBECK	13	0.27	0.00	0.27
19	1	HAZELGLEN / VICTORIA	13	1.52	1.49	0.03
19	1	WESTFOREST / HIDDEN CREEK	13	0.84	0.73	0.11
19	1	HIGHLAND HILLS MALL	13	7.76		7.76
19	2	HIGHLAND HILLS MALL	13	0.27	0.27	
19	2	WESTFOREST / VICTORIA	13	0.31	0.20	0.11
19	2	HAZELGLEN / MOOREGATE	13	0.25	0.12	0.12
19	2	CHOPIN / BRYBECK	13	0.31	0.30	0.01
19	2	VICTORIA / BELMONT	13	0.02	0.02	0.00
19	2	CHARLES STREET TERMINAL	12	8.63		8.63
20	1	CHARLES STREET TERMINAL	11	0.00	0.00	
20	1	VICTORIA / BELMONT	11	0.05	0.00	0.05
20	1	INGLESIDE / HAZELGLEN	11	0.00		0.00
20	2	HAZELGLEN / MOOREGATE	10	0.22	0.22	
20	2	INGLESIDE / HAZELGLEN	22	0.00	0.00	0.00
20	2	CHOPIN / BRYBECK	22	0.67	0.66	0.01
20	2	VICTORIA / BELMONT	22	0.00	0.00	0.00
20	2	CHARLES STREET TERMINAL	22	5.04		5.04
22	East	HIGHLAND HILLS MALL	17	0.00	0.00	
22	East	ACTIVA / GREY FOX	17	0.15	0.10	0.04
22	East	ACTIVA / SNOWDROP	17	0.02	0.01	0.01
22	East	TILLSLEY / WESTMOUNT	17	0.07	0.06	0.01
22	East	FOREST GLEN TERMINAL	17	1.61	0.00	1.61
22	East	OTTAWA / HWY 8 RAMP	17	0.03	0.00	0.03
22	East	STIRLING / COURTLAND	16	0.05	0.00	0.05
22	East	CHARLES STREET TERMINAL	16	1.46		1.46
22	West	CHARLES STREET TERMINAL	9	0.00	0.00	
22	West	STIRLING / COURTLAND	19	0.06	0.06	0.00
22	West	OTTAWA / HWY 8 RAMP	9	0.00	0.00	0.00
22	West	FOREST GLEN TERMINAL	9	0.00	0.00	0.00
22	West	ERINBROOK / HEDGESTONE	9	0.00	0.00	0.00
22	West	DAVID BERGEY / PEACH BLOSSOM	9	0.41	0.41	0.00
22	West	ACTIVA / GREY FOX	9	0.15	0.15	0.00
22	West	HIGHLAND HILLS MALL	9	0.00		0.00
23	East	CHARLES STREET TERMINAL	10	0.00	0.00	
23	East	FREDERICK / DUNHAM	10	0.08	0.00	0.08
23	East	RIVER / OTTAWA	10	0.12	0.00	0.12
23	East	OTTAWA / LACKNER	10	0.10	0.02	0.08
23	East	LACKNER / CORFIELD	10	0.49	0.48	0.01
23	East	FAIRVIEW PARK MALL	3	0.00		0.00
23	East	FAIRVIEW PARK	6	8.42		8.42
23	West	FAIRVIEW PARK MALL	4	0.00	0.00	
23	West	FAIRVIEW PARK	7	0.53	0.53	
23	West	LACKNER / CORFIELD	12	0.00	0.00	0.00
23	West	OTTAWA / OLDFIELD	12	1.83	0.00	1.83
23	West	RIVER / OTTAWA	12	0.15	0.00	0.15
23	West	FREDERICK / EDNA	12	0.21	0.10	0.11

Route	Direction*	Timepoint	Obs.	Total	SA <sub>3</sub> : Number of Passengers Affected	
					Early	Late
23	West	CHARLES STREET TERMINAL	12	9.08		9.08
24	1	CHARLES STREET TERMINAL	11	0.00	0.00	
24	1	HIGHLAND / BELMONT	12	0.17	0.17	0.00
24	1	HIGHLAND HILLS MALL	12	0.19	0.19	0.00
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	0.06		0.06
24	2	ROLLING MEADOWS / WESTHEIGHTS	9	0.00	0.00	
24	2	WESTHEIGHTS / WINDING	9	0.00	0.00	0.00
24	2	WESTHEIGHTS / WESTFOREST	8	0.00	0.00	0.00
24	2	HIGHLAND HILLS MALL	9	1.48	1.15	0.33
24	2	HIGHLAND / BELMONT	9	0.11	0.00	0.11
24	2	CHARLES STREET TERMINAL	9	3.21		3.21
25	1	CHARLES STREET TERMINAL	26	0.00	0.00	
25	1	QUEENS / WESTMOUNT	29	0.05	0.03	0.01
25	1	HIGHLAND HILLS MALL	30	0.26	0.00	0.26
25	1	FORESTWOOD / MCGARRY	26	0.01	0.00	0.01
25	1	DRIFTWOOD / WESTHEIGHTS	27	0.38	0.05	0.33
25	1	GOLDEN MEADOW / HAVENWOOD	26	0.01		0.01
25	2	GOLDEN MEADOW / HAVENWOOD	34	0.37	0.37	
25	2	WESTHEIGHTS / LORILEE	34	0.07	0.07	0.00
25	2	HIGHLAND HILLS MALL	34	2.96	1.25	1.71
25	2	QUEENS / WESTMOUNT	34	0.58	0.37	0.21
25	2	CHARLES STREET TERMINAL	34	2.08		2.08
26	1	FOREST GLEN TERMINAL	19	0.00	0.00	
26	1	TRILLIUM / STRASBURG	19	0.00	0.00	0.00
26	1	TRILLIUM / GROFF	19	0.00		0.00
26	2	TRILLIUM / GROFF	19	0.04	0.04	
26	2	TRILLIUM / STRASBURG	19	0.00	0.00	0.00
26	2	FOREST GLEN TERMINAL	19	0.00		0.00
27	1	FAIRVIEW PARK	10	0.00	0.00	
27	1	FAIRVIEW PARK MALL	4	0.00	0.00	
27	1	MORRISON / MANOR	14	0.22	0.00	0.22
27	1	QUINTE / MORRISON	14	0.00		0.00
27	2	QUINTE / MORRISON	9	0.00	0.00	
27	2	FAIRWAY / KING	9	0.44	0.00	0.44
27	2	FAIRVIEW PARK	7	4.53		4.53
27	2	FAIRVIEW PARK MALL	2	0.00		0.00
29	1	RING / UNIVERSITY	9	0.00	0.00	
29	1	FISCHER-HALLMAN / KEATS	9	0.00	0.00	0.00
29	1	ERB / ERB	1	0.00		0.00
29	2	KEATS / FISCHER-HALLMAN	9	0.00	0.00	0.00
29	2	RING / UNIVERSITY	9	2.42		2.42
31	Downward	CONESTOGA MALL	6	0.72	0.72	
31	Downward	NORTHFIELD / BRIDGE	9	0.00	0.00	0.00
31	Downward	UNIVERSITY / RIM PARK INTERNAL	6	0.00	0.00	0.00
31	Downward	UNIVERSITY / LEXINGTON	9	0.00	0.00	0.00
31	Downward	LEXINGTON / ANNDALE	9	0.12	0.12	0.00
31	Downward	COLUMBIA / SPRUCE	9	2.52	2.52	0.00
31	Downward	RING / UNIVERSITY	9	0.59		0.59
31	Upward	RING / UNIVERSITY	7	0.45	0.45	
31	Upward	COLUMBIA / KING	7	0.06	0.04	0.02
31	Upward	LEXINGTON / DEARBORN	7	0.00	0.00	0.00
31	Upward	UNIVERSITY / LEXINGTON	7	0.00	0.00	0.00
31	Upward	UNIVERSITY / RIM PARK INTERNAL	4	0.00	0.00	0.00
31	Upward	NORTHFIELD / BRIDGE	7	0.00	0.00	0.00
32	1	CONESTOGA MALL	1	0.00	0.00	
32	1	KUMPF / NORTHFIELD	1	0.00		0.00
32	2	KUMPF / NORTHFIELD	14	0.82	0.82	
32	2	WEBER / GOLDEN EAGLE	17	0.20	0.18	0.02
32	2	CONESTOGO / COLBY	14	0.00	0.00	0.00
32	2	CONESTOGA MALL	13	0.32		0.32
33	1	FOREST GLEN TERMINAL	2	0.00	0.00	
33	1	STRASBURG / TRILLIUM	2	0.00	0.00	0.00
33	1	PARKVALE / NEWCASTLE	2	0.00	0.00	0.00
33	2	HURON / NEWCASTLE	2	0.00	0.00	
33	2	STRASBURG / TRILLIUM	2	0.00	0.00	0.00
33	2	FOREST GLEN TERMINAL	2	0.00		0.00
35	1	KING / WILLIS	2	0.39	0.39	
35	1	ERB / WEBER	19	0.27	0.12	0.16
35	1	BRIDGEPORT / LANCASTER	19	0.86	0.01	0.84

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
35	1	AUBURN / SABLE	19	0.21	0.02	0.19
35	1	BRIDGE / LEXINGTON	20	0.00	0.00	0.00
35	1	CHESAPEAKE / SPINNAKER	19	0.06	0.06	0.00
35	1	CONESTOGA MALL	20	2.33		2.33
35	2	CONESTOGA MALL	18	0.00	0.00	
35	2	CHESAPEAKE / BRIGANTINE	17	0.00	0.00	0.00
35	2	BRIDGE / LEXINGTON	15	0.02	0.02	0.00
35	2	AUBURN / SABLE	17	0.21	0.21	0.00
35	2	BRIDGEPORT / LANCASTER	16	0.36	0.21	0.15
35	2	BRIDGEPORT / WEBER	17	0.35	0.03	0.31
35	2	UPTOWN WATERLOO	17	0.00		0.00
51	Inbound	HOLIDAY INN TERMINAL	40	0.29	0.29	
51	Inbound	SMART!CENTRES CAMBRIDGE	40	0.20	0.11	0.08
51	Inbound	CAMBRIDGE CENTRE TERMINAL	42	0.70	0.45	0.25
51	Inbound	AINSLIE STREET TERMINAL	39	0.33		0.33
51	Outbound	AINSLIE STREET TERMINAL	48	0.00	0.00	
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	0.51	0.20	0.31
51	Outbound	SMART!CENTRES CAMBRIDGE	47	0.52	0.48	0.05
51	Outbound	HOLIDAY INN TERMINAL	47	0.07		0.07
52	North	AINSLIE STREET TERMINAL	25	0.00	0.00	
52	North	CORONATION / BARRETT	20	0.39	0.00	0.39
52	North	KING / LOWTHER	20	0.14	0.00	0.14
52	North	PRESTON / FOUNTAIN	19	0.00	0.00	0.00
52	North	SHANTZ HILL / HWY 401 RAMP	19	0.00	0.00	0.00
52	North	SPORTSWORLD	19	0.00	0.00	0.00
52	North	FAIRVIEW PARK	20	1.91		1.91
52	South	FAIRVIEW PARK MALL	5	0.00	0.00	
52	South	FAIRVIEW PARK	24	1.21	1.21	
52	South	SPORTSWORLD	25	2.02	0.00	2.02
52	South	SHANTZ HILL / PRESTON	29	0.08	0.03	0.05
52	South	PRESTON / FOUNTAIN	29	0.00	0.00	0.00
52	South	KING / LOWTHER	29	0.26	0.10	0.16
52	South	CORONATION / MARTIN	29	0.77	0.07	0.70
52	South	AINSLIE STREET TERMINAL	29	2.18		2.18
53	Inbound	HOLIDAY INN TERMINAL	8	1.33	1.33	
53	Inbound	FRANKLIN / SAGINAW	8	0.63	0.63	0.00
53	Inbound	DOBBIE / SAVAGE	8	0.00	0.00	0.00
53	Inbound	MAIN / DUNDAS	8	0.00	0.00	0.00
53	Inbound	AINSLIE STREET TERMINAL	8	0.00		0.00
53	Outbound	AINSLIE STREET TERMINAL	8	0.00	0.00	
53	Outbound	MAIN / DUNDAS	8	0.06	0.00	0.06
53	Outbound	DOBBIE / SAVAGE	8	0.09	0.00	0.09
53	Outbound	FRANKLIN / SAGINAW	7	0.86	0.00	0.86
53	Outbound	HOLIDAY INN TERMINAL	8	0.33		0.33
54	East	MAIN / DUNDAS	42	0.02	0.02	0.00
54	East	LISBON PINES / GATEHOUSE	43	0.03	0.02	0.00
54	East	AINSLIE STREET TERMINAL	85	0.86	0.00	0.86
54	East	CHAMPLAIN / CHRISTOPHER	43	0.06	0.04	0.02
55	West	SOUTHWOOD / CEDAR	22	0.20	0.03	0.17
55	West	AINSLIE STREET TERMINAL	43	1.22	0.00	1.22
55	West	SOUTHWOOD / ST ANDREWS	23	0.17	0.00	0.17
55	West	ST ANDREWS / GILHOLM	23	0.19	0.00	0.19
56	West	BISHOP / RAILWAY	26	0.02	0.00	0.02
56	West	ROSE / ARGYLE	26	0.39	0.10	0.28
56	West	CAMBRIDGE CENTRE TERMINAL	52	1.40	0.00	1.40
56	West	WESTMINSTER / KING	26	0.13	0.09	0.04
56	West	LANG'S / CONCESSION	26	0.29	0.09	0.20
57	West	SUNSET / SAXONY	36	0.00	0.00	0.00
57	West	BLAIR / BISMARCK	36	0.05	0.03	0.01
57	West	AINSLIE STREET TERMINAL	76	0.22	0.00	0.22
57	West	HILLCREST / CHURCHILL	36	0.37	0.02	0.35
58	East	MOSCRIP / BRONSON	11	0.00	0.00	0.00
58	East	MUNCH / ELGIN	11	0.06	0.00	0.06
58	East	AINSLIE STREET TERMINAL	22	0.71	0.00	0.71
58	East	HILLTOP / FRANKLIN	11	0.14	0.09	0.05
59	East	CHAMPLAIN / CHRISTOPHER	22	0.12	0.00	0.12
59	East	AINSLIE STREET TERMINAL	44	0.52	0.00	0.52
59	East	CHAMPLAIN / ELGIN	23	0.00	0.00	0.00
60	East	GLAMIS / ROBSON	24	0.15	0.06	0.09

SA<sub>3</sub>: Number of Passengers Affected

Route	Direction*	Timepoint	Obs.	Total	Early	Late
60	East	CAMBRIDGE CENTRE TERMINAL	48	0.12	0.00	0.12
60	East	ELGIN / SAGINAW	24	1.28	0.02	1.26
60	East	MUNCH / KOVAC	24	0.03	0.03	0.00
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8	0.42	0.42	
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	0.11	0.11	0.00
61	East	KING / WESTMINSTER	8	0.25	0.25	0.00
61	West	CAMBRIDGE CENTRE	8	0.00	0.00	
61	West	KING / WESTMINSTER	9	0.11	0.11	0.00
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	9	0.00	0.00	0.00
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	9	0.00		0.00
62	West	SOUTHGATE / DAY	18	0.01	0.01	0.00
62	West	AINSLIE STREET TERMINAL	44	0.39	0.02	0.38
62	West	WOODSIDE / CEDAR	22	0.12	0.12	0.00
63	East	ALISON / ELGIN	22	0.00	0.00	0.00
63	East	AINSLIE STREET TERMINAL	45	0.45	0.00	0.45
63	East	DUNDAS / FRANKLIN	23	0.20	0.00	0.20
63	East	CHAMPLAIN / CHRISTOPHER	22	0.85	0.00	0.85
64	West	LANG'S / WALTER	16	0.15	0.00	0.15
64	West	EAGLE / KING	16	0.09	0.00	0.09
64	West	CAMBRIDGE CENTRE TERMINAL	32	0.40	0.00	0.40
64	West	ROSE / ARGYLE	16	0.74	0.00	0.74
64	West	BISHOP / RAILWAY	16	0.11	0.01	0.09
65	North	HOLIDAY INN TERMINAL	32	0.45	0.10	0.35
65	North	WINSTON / SCOTTDAL	16	0.00	0.00	0.00
65	North	FISHER MILLS / FEARNWOOD	16	0.21	0.18	0.03
65	North	FRANKLIN / WINSTON	16	0.27	0.00	0.27
66	East	FRANKLIN / WINSTON	8	0.00	0.00	0.00
66	East	COOPER / ELLIS	8	0.31	0.31	0.00
66	East	HOLIDAY INN TERMINAL	16	0.00	0.00	0.00
66	East	WINSTON / WESTBURY	8	0.00	0.00	0.00
71	East	QUEEN / HUNGERFORD	18	0.00	0.00	0.00
71	East	HOLIDAY INN TERMINAL	36	0.87	0.03	0.84
71	East	ELLIS / ADLER	18	0.00	0.00	0.00
110	Downward	FAIRVIEW PARK	16	0.00	0.00	
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	16	8.94		8.94
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	14	0.00	0.00	
110	Upward	PIONEER / OLD CARRIAGE	14	0.12	0.11	0.02
110	Upward	FAIRVIEW PARK	14	0.83		0.83
111	North	AINSLIE STREET TERMINAL	2	0.00	0.00	
111	South	AINSLIE STREET TERMINAL	2	0.00		0.00
200	Downward	CONESTOGA MALL	450	0.21	0.21	
200	Downward	McCORMICK	448	0.19	0.14	0.05
200	Downward	R & T PARK	447	0.20	0.01	0.19
200	Downward	U WATERLOO	447	2.40	0.46	1.94
200	Downward	LAURIER	447	0.94	0.14	0.81
200	Downward	KING / WILLIS	47	1.39	0.65	0.75
200	Downward	UPTOWN WATERLOO	302	1.04	0.34	0.70
200	Downward	GRAND RIVER HOSPITAL	446	0.91	0.22	0.69
200	Downward	CHARLES TERMINAL	447	4.35	0.84	3.51
200	Downward	OTTAWA	447	0.25	0.09	0.16
200	Downward	FAIRVIEW	445	0.95	0.17	0.78
200	Downward	SMART!CENTRES CAMBRIDGE	446	0.19	0.09	0.10
200	Downward	CAMBRIDGE CENTRE	446	0.51	0.34	0.18
200	Downward	AINSLIE STREET TERMINAL	447	0.41		0.41
200	Upward	AINSLIE STREET TERMINAL	534	0.23	0.23	
200	Upward	CAMBRIDGE CENTRE	528	1.11	0.13	0.98
200	Upward	SMART!CENTRES CAMBRIDGE	528	0.37	0.10	0.27
200	Upward	FAIRVIEW	531	1.11	0.82	0.29
200	Upward	OTTAWA	530	0.22	0.12	0.10
200	Upward	CHARLES TERMINAL	532	3.00	1.05	1.95
200	Upward	GRAND RIVER HOSPITAL	526	0.74	0.03	0.71
200	Upward	UPTOWN WATERLOO	527	0.87	0.10	0.77
200	Upward	LAURIER	527	1.89	0.19	1.70
200	Upward	U WATERLOO	526	8.00	0.11	7.89
200	Upward	R & T PARK	525	1.29	0.01	1.28
200	Upward	McCORMICK	526	0.62	0.10	0.52
200	Upward	CONESTOGA MALL	527	1.31		1.31



Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
1	East	CHARLES STREET TERMINAL	32			
1	East	FREDERICK / WEBER	33	180.00	210.91	274.15
1	East	BECKER / BELLEVIEW	21	240.00	269.29	305.5
1	East	LORRAINE / BIRKSHIRE	12	420.00	421.25	492
1	East	RIVER / HICKSON	21	300.00	285.48	469.5
1	East	OTTAWA / OLDFIELD	12	360.00	305.00	347.5
1	East	STANLEY PARK MALL TERMINAL	33	180.00	193.36	316.15
1	West	STANLEY PARK MALL TERMINAL	28			
1	West	LACKNER / BANBURY	16	300.00	370.81	402.2
1	West	BELLEVIEW / BECKER	12	240.00	241.17	247.85
1	West	RIVER / HALLIWELL	28	214.29	247.68	320
1	West	WEBER / SCOTT	28	400.71	388.71	428.45
1	West	CHARLES STREET TERMINAL	28	332.14	288.79	348.6
2	Downward	HIGHLAND HILLS MALL	15			
2	Downward	GREENBROOK / WESTMOUNT	14	360.00	388.36	445.75
2	Downward	GREENBROOK / STIRLING	14	120.00	105.07	124.8
2	Downward	SOUTHMOOR / AVALON	14	120.00	75.86	84.55
2	Downward	CHARLES STREET TERMINAL	15	640.00	628.33	606.8
2	Upward	CHARLES STREET TERMINAL	15			
2	Upward	GREENBROOK / STIRLING	14	480.00	485.21	488.1
2	Upward	WESTMOUNT / VILLAGE	15	152.00	152.80	140
2	Upward	HIGHLAND HILLS MALL	14	360.00	467.07	502
3	1	CHARLES STREET TERMINAL	14			
3	1	COURTLAND / STIRLING	14	240.00	283.57	342.9
3	1	STRASBURG / TRANSIT GARAGE	14	420.00	430.64	509.9
3	1	OTTAWA / WESTMOUNT	14	240.00	207.07	246.55
3	1	WILLIAMSBURG / DINISON	14	180.00	234.71	257
3	1	FOREST GLEN TERMINAL	14	420.00	385.29	395
3	2	FOREST GLEN TERMINAL	24			
3	2	WILLIAMSBURG / DINISON	24	360.00	389.29	421.55
3	2	OTTAWA / WESTMOUNT	24	180.00	200.42	217.55
3	2	STRASBURG / TRANSIT GARAGE	24	300.00	281.88	300.1
3	2	COURTLAND / MADISON	24	540.00	557.33	614
3	2	CHARLES STREET TERMINAL	24	240.00	194.13	227.7
4	Downward	UNIVERSITY / RESURRECTION	12			
4	Downward	GLASGOW / WESTMOUNT	12	480.00	535.08	514.5
4	Downward	UNION / KING	12	360.00	343.50	348.95
4	Downward	MOORE / BREITHAUP	13	300.00	273.85	310
4	Downward	CHARLES STREET TERMINAL	12	340.00	285.58	327.9
4	Upward	CHARLES STREET TERMINAL	14			
4	Upward	MOORE / WELLINGTON	14	300.00	288.79	371.2
4	Upward	UNION / PARK	14	300.00	336.57	356.25
4	Upward	GLASGOW / WESTMOUNT	14	300.00	299.07	300.5
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	360.00	355.00	405.75
4	Upward	UNIVERSITY / BAKER	9	240.00	297.00	313
4	Upward	UNIVERSITY / RESURRECTION	14	265.71	154.50	273.35
5	1	UPTOWN WATERLOO	14			
5	1	ERB / WESTMOUNT	14	300.00	342.64	432.2
5	1	FISCHER-HALLMAN / ERB	14	240.00	216.50	285.3
5	1	KEATS / KEATSWOOD	14	300.00	214.64	248.2
5	2	KEATS / KEATSWOOD	23			
5	2	GATEVIEW / WESTVALE	23	360.00	328.22	358.95
5	2	ERB / FISCHER-HALLMAN	23	360.00	395.70	422.5
5	2	ERB / WESTMOUNT	23	240.00	257.26	259.1
5	2	KING / WILLIS	23	300.00	261.39	319.2
6	Downward	DANIEL / BLOOMINGDALE	13			
6	Downward	LANCASTER / HAMEL	14	360.00	498.29	356.4
6	Downward	LANCASTER / GUELPH	13	180.00	135.00	174
6	Downward	WELLINGTON / MARGARET	13	180.00	159.00	180.6
6	Downward	CHARLES STREET TERMINAL	13	540.00	470.15	597.35
6	Upward	CHARLES STREET TERMINAL	14			
6	Upward	WELLINGTON / MARGARET	14	360.00	467.14	591.2
6	Upward	LANCASTER / GUELPH	14	180.00	171.36	191.6
6	Upward	LANCASTER / HAMEL	14	120.00	102.57	163.3
6	Upward	DANIEL / BLOOMINGDALE	14	480.00	445.71	469.9
7	Downward	RING / NORTH CAMPUS	15			
7	Downward	U WATERLOO	10			
7	Downward	CONESTOGA MALL	15			
7	Downward	COLUMBIA / HAZEL	15	240.00	242.27	315

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
7	Downward	UNIVERSITY / KING	11	360.00	369.40	421.85
7	Downward	KING / UNIVERSITY	32	360.00	398.03	590
7	Downward	UPTOWN WATERLOO	13	300.00	243.92	316.05
7	Downward	KING / WILLIS	3	300.00	340.67	326.8
7	Downward	CHARLES STREET TERMINAL	43	848.37	812.70	1062.85
7	Downward	KING / OTTAWA	39	420.00	393.38	563
7	Downward	FOURTH / CONNAUGHT	9	360.00	290.33	329
7	Downward	FOURTH / WILSON	8	360.00	321.13	398
7	Downward	KINZIE / WEBER	22	480.00	485.86	580.85
7	Downward	FAIRVIEW PARK	25	381.60	325.44	466.1
7	Downward	FAIRVIEW PARK MALL	14	372.86	358.14	454.3
7	Upward	FAIRVIEW PARK MALL	19			
7	Upward	FAIRVIEW PARK	27			
7	Upward	CONNAUGHT / FIFTH	18	240.00	289.67	314.95
7	Upward	FOURTH / WILSON	7	240.00	360.29	338.4
7	Upward	WEBER / KINZIE	21	468.57	550.05	579
7	Upward	KING / OTTAWA	48	416.09	421.28	469.8
7	Upward	CHARLES STREET TERMINAL	58	488.94	453.81	557.5
7	Upward	UPTOWN WATERLOO	58	600.00	673.14	763.3
7	Upward	KING / UNIVERSITY	50	300.00	242.30	311.6
7	Upward	UNIVERSITY / KING	8	300.00	262.88	353.7
7	Upward	CONESTOGA MALL	30	480.00	414.13	474.7
7	Upward	RING / UNIVERSITY	8	300.00	302.50	326.3
7	Upward	COLUMBIA / HAZEL	20	240.00	352.00	378.9
7	Upward	RING / NORTH CAMPUS	8	187.50	241.00	290.75
7	Upward	U WATERLOO	20	342.00	425.55	410.5
8	North	FAIRVIEW PARK	20			
8	North	FAIRVIEW PARK MALL	10			
8	North	FRANKLIN / PROSPECT	19	420.00	481.79	541
8	North	WALTON / VANIER	11	360.00	581.00	516.45
8	North	CHARLES STREET TERMINAL	55	474.00	404.47	487.85
8	North	MARGARET / WELLINGTON	26	420.00	479.35	528
8	North	COURTLAND / STIRLING	11	360.00	378.27	399
8	North	OTTAWA / WEBER	19	480.00	416.05	433
8	North	UNION / WEBER	25	300.00	245.76	268.05
8	North	BELMONT / HIGHLAND	27	360.00	380.19	464.15
8	North	UNION / WESTMOUNT	29	504.83	509.45	489.8
8	North	UNIVERSITY / KING	52	373.85	349.29	478
8	North	UNIVERSITY / SEAGRAM	29	388.97	483.34	484.7
8	South	UNIVERSITY / KING	54			
8	South	UNIVERSITY / SEAGRAM	25	300.00	281.28	321.65
8	South	UNION / WEBER	29	360.00	440.24	523.85
8	South	UNION / WESTMOUNT	25	300.00	372.72	422.8
8	South	MARGARET / WELLINGTON	29	300.00	223.07	273.4
8	South	BELMONT / BURN	27	420.00	377.96	457
8	South	COURTLAND / VERNON	19	240.00	352.32	407.9
8	South	CHARLES STREET TERMINAL	56	451.07	410.55	472.3
8	South	WALTON / VANIER	19	360.00	312.63	368.7
8	South	OTTAWA / MCKENZIE	9	420.00	492.00	561
8	South	FAIRVIEW PARK	17	409.41	453.06	520.9
8	South	FAIRVIEW PARK MALL	11	425.45	533.55	588.2
8	South	WEBER / FRANKLIN	9	440.00	383.44	416
9	Downward	CONESTOGA MALL	21			
9	Downward	NORTHFIELD / WEBER	21	300.00	445.67	462.5
9	Downward	HIGHPOINT / WINTERGREEN	21	240.00	241.38	251.2
9	Downward	PARKSIDE / GLENELM	21	351.43	371.38	406.35
9	Downward	HAZEL / WILDWOOD	21	291.43	236.19	283.35
9	Downward	HAZEL / UNIVERSITY	18	360.00	307.06	294.2
9	Downward	U WATERLOO	21	351.43	363.52	432.1
9	Upward	U WATERLOO	22			
9	Upward	UNIVERSITY / KING	1			
9	Upward	HAZEL / UNIVERSITY	23	346.36	367.59	433.6
9	Upward	HAZEL / BEARINGER	23	294.78	246.91	320.65
9	Upward	PARKSIDE / GLENELM	8	300.00	300.25	327.95
9	Upward	HIGHPOINT / WINTERGREEN	23	300.00	302.43	400
9	Upward	NORTHFIELD / WEBER	23	286.96	234.74	261
9	Upward	CONESTOGA MALL	23	360.00	435.30	506
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	19			190.9
10	Inbound	PINNACLE / OLD MILL	19	180.00	214.05	218

\*As given in GRT database

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
10	Inbound	PIONEER / OLD CARRIAGE	19	360.00	349.16	351
10	Inbound	DOON VILLAGE / MILLWOOD	19	240.00	214.42	215.65
10	Inbound	FAIRVIEW PARK	14	480.00	453.00	475.95
10	Inbound	FAIRVIEW PARK MALL	5	480.00	445.60	470
10	Outbound	FAIRVIEW PARK	15			
10	Outbound	DOON VILLAGE / MILLWOOD	15	540.00	572.60	573
10	Outbound	PIONEER / OLD CARRIAGE	15	300.00	203.20	207.8
10	Outbound	PINNACLE / OLD MILL	15	236.00	328.27	362.4
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	300.00	235.60	262
11	1	CHARLES STREET TERMINAL	15			
11	1	STIRLING / COURTLAND	25	300.00	294.36	348.9
11	1	ALPINE / OTTAWA	25	420.00	477.12	524
11	1	COUNTRY HILL / BLOCK LINE	15	240.00	294.27	300.9
11	1	FOREST GLEN TERMINAL	15	360.00	321.40	371.6
11	2	FOREST GLEN TERMINAL	30			
11	2	KINGSWOOD / BLOCK LINE	30	360.00	423.43	453.1
11	2	HOFFMAN / OTTAWA	30	360.00	363.47	417.4
11	2	STIRLING / COURTLAND	30	300.00	306.60	338.1
11	2	CHARLES STREET TERMINAL	30	492.00	503.37	572
12	Downward	CONESTOGA MALL	31			
12	Downward	BRIDGE / UNIVERSITY	24	644.35	657.57	700.2
12	Downward	UNIVERSITY / KING	38	849.68	772.87	1194
12	Downward	UNIVERSITY / SEAGRAM	38	287.37	266.63	322.1
12	Downward	FISCHER-HALLMAN / UNIVERSITY	38	600.00	581.11	706.8
12	Downward	HIGHLAND HILLS MALL	38	347.37	298.53	347
12	Downward	WESTMOUNT / OTTAWA	29	480.00	535.10	614.95
12	Downward	FOREST GLEN TERMINAL	30	376.00	366.00	402.6
12	Downward	FAIRVIEW PARK MALL	13	720.00	682.00	812.6
12	Downward	FAIRVIEW PARK	17	720.00	676.88	793
12	Upward	FAIRVIEW PARK	19			
12	Upward	FAIRVIEW PARK MALL	12			
12	Upward	FOREST GLEN TERMINAL	32	720.00	742.87	859.05
12	Upward	WESTMOUNT / OTTAWA	35	349.71	397.51	425
12	Upward	HIGHLAND HILLS MALL	32	532.50	560.28	584.9
12	Upward	FISCHER-HALLMAN / UNIVERSITY	32	386.25	432.81	435.1
12	Upward	UNIVERSITY / SEAGRAM	32	600.00	613.38	659.1
12	Upward	UNIVERSITY / KING	32	292.50	236.59	283
12	Upward	BRIDGE / UNIVERSITY	23	576.52	532.91	629.85
12	Upward	CONESTOGA MALL	26	574.62	569.42	644.4
13	1	U WATERLOO	23			
13	1	COLUMBIA / FISCHER-HALLMAN	23	300.00	315.78	421.45
13	1	LAURELWOOD / ERBSVILLE	23	352.17	323.57	341
13	2	LAURELWOOD / ERBSVILLE	24			
13	2	COLUMBIA / FISCHER-HALLMAN	24	360.00	368.25	391.6
13	2	U WATERLOO	24	420.00	323.88	326.35
14	1	CONESTOGA MALL	3			
14	1	BATHURST / MCMURRAY	3	360.00	361.00	385.6
14	1	WYMAN / COLBY	3	300.00	206.00	260.5
14	2	WYMAN / COLBY(2)	4			
14	2	WYMAN / COLBY	6	300.00	217.00	298.8
14	2	MCMURRAY / NORTHLAND	6	240.00	232.67	346.35
14	2	CONESTOGA MALL	6	420.00	269.17	327.9
15	East	CHARLES STREET TERMINAL	22			
15	East	QUEEN / LANCASTER	22	360.00	395.05	486.9
15	East	EDNA / FREDERICK	22	180.00	147.14	189
15	East	LACKNER / VICTORIA	22	480.00	482.09	566
15	West	LACKNER / VICTORIA	14			
15	West	NATCHEZ / HALIFAX	14	180.00	179.64	202
15	West	FREDERICK / EDNA	14	420.00	448.57	480.8
15	West	QUEEN / LANCASTER	14	240.00	183.00	217.4
15	West	CHARLES STREET TERMINAL	14	480.00	411.71	485.2
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	5			
16	Inbound	PIONEER / BECHTEL	9	420.00	375.67	416.75
16	Inbound	STRASBURG / TRILLIUM	5	540.00	578.40	598.4
16	Inbound	FOREST GLEN TERMINAL	5	300.00	244.80	270.2
16	Outbound	FOREST GLEN TERMINAL	11			
16	Outbound	STRASBURG / TRILLIUM	11	240.00	247.91	261.2
16	Outbound	PIONEER / BECHTEL	11	540.00	563.45	593.1
16	Outbound	Doon Public School	1	300.00	283.00	283

\*As given in GRT database

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	11	561.82	454.36	459.75
17	Downward	LACKNER / VICTORIA	4			
17	Downward	KEEWATIN / OTTAWA	4	420.00	551.00	611.4
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4	480.00	385.50	420.9
17	Downward	RIVER / FAIRWAY	4	240.00	207.00	223.8
17	Downward	FAIRVIEW PARK	2	360.00	347.50	959.2
17	Upward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK MALL	2			
17	Upward	RIVER / FAIRWAY	4	300.00	352.00	418.1
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	600.00	200.75	246
17	Upward	KEEWATIN / OTTAWA	4	300.00	274.50	350.15
17	Upward	LACKNER / VICTORIA	4	240.00	172.75	197.9
18	Downward	MAPLE / GUELPH	14			
18	Downward	GUELPH / MARGARET	14	180.00	172.93	224
18	Downward	WEBER / WELLINGTON	14	300.00	316.86	348.9
18	Downward	CHARLES STREET TERMINAL	14	420.00	402.64	549
18	Upward	CHARLES STREET TERMINAL	14			
18	Upward	WEBER / WELLINGTON	2	360.00	485.50	503
18	Upward	GUELPH / FLOYD	14	300.00	317.71	376
18	Upward	MAPLE / GUELPH	14	300.00	313.29	354
19	1	CHARLES STREET TERMINAL	13			
19	1	VICTORIA / BELMONT	13	420.00	429.08	561.25
19	1	CHOPIN / BRYBECK	13	180.00	197.69	259.35
19	1	HAZELGLEN / VICTORIA	13	180.00	106.69	121
19	1	WESTFOREST / HIDDEN CREEK	13	300.00	293.77	329.9
19	1	HIGHLAND HILLS MALL	13	360.00	410.38	456.5
19	2	HIGHLAND HILLS MALL	13			
19	2	WESTFOREST / VICTORIA	13	300.00	445.69	494.6
19	2	HAZELGLEN / MOOREGATE	13	300.00	271.23	306.55
19	2	CHOPIN / BRYBECK	13	180.00	100.15	117.65
19	2	VICTORIA / BELMONT	13	180.00	279.00	298.6
19	2	CHARLES STREET TERMINAL	12	420.00	461.42	476
20	1	CHARLES STREET TERMINAL	11			
20	1	VICTORIA / BELMONT	11	420.00	418.91	538.95
20	1	INGLESIDE / HAZELGLEN	11	360.00	268.82	340.5
20	2	HAZELGLEN / MOOREGATE	10			268.1
20	2	INGLESIDE / HAZELGLEN	22	120.00	130.70	133.7
20	2	CHOPIN / BRYBECK	22	240.00	198.82	206
20	2	VICTORIA / BELMONT	22	180.00	279.36	282
20	2	CHARLES STREET TERMINAL	22	420.00	470.41	499
22	East	HIGHLAND HILLS MALL	17			
22	East	ACTIVA / GREY FOX	17	360.00	417.24	494
22	East	ACTIVA / SNOWDROP	17	360.00	359.00	397.7
22	East	TILLSLEY / WESTMOUNT	17	360.00	348.59	372
22	East	FOREST GLEN TERMINAL	17	540.00	449.94	455.2
22	East	OTTAWA / HWY 8 RAMP	17	300.00	328.41	339.7
22	East	STIRLING / COURTLAND	16	300.00	307.69	381.5
22	East	CHARLES STREET TERMINAL	16	420.00	346.38	391.5
22	West	CHARLES STREET TERMINAL	9			
22	West	STIRLING / COURTLAND	19	300.00	277.53	334.6
22	West	OTTAWA / HWY 8 RAMP	9	360.00	299.67	356.1
22	West	FOREST GLEN TERMINAL	9	300.00	233.33	342.2
22	West	ERINBROOK / HEDGESTONE	9	480.00	295.56	348
22	West	DAVID BERGEY / PEACH BLOSSOM	9	360.00	452.44	559.2
22	West	ACTIVA / GREY FOX	9	300.00	285.22	312
22	West	HIGHLAND HILLS MALL	9	360.00	324.44	374
23	East	CHARLES STREET TERMINAL	10			
23	East	FREDERICK / DUNHAM	10	420.00	411.70	463.4
23	East	RIVER / OTTAWA	10	480.00	387.10	439.2
23	East	OTTAWA / LACKNER	10	420.00	419.70	521.35
23	East	LACKNER / CORFIELD	10	240.00	199.70	209.45
23	East	FAIRVIEW PARK MALL	3	540.00	577.33	1212.3
23	East	FAIRVIEW PARK	6	540.00	714.33	923.25
23	West	FAIRVIEW PARK MALL	4			
23	West	FAIRVIEW PARK	7			
23	West	LACKNER / CORFIELD	12	480.00	545.91	554.75
23	West	OTTAWA / OLDFIELD	12	240.00	217.50	242
23	West	RIVER / OTTAWA	12	420.00	449.83	477.85
23	West	FREDERICK / EDNA	12	480.00	421.33	435.7

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
23	West	CHARLES STREET TERMINAL	12	460.00	480.08	528.3
24	1	CHARLES STREET TERMINAL	11			
24	1	HIGHLAND / BELMONT	12	360.00	323.18	392
24	1	HIGHLAND HILLS MALL	12	360.00	283.67	397.2
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	420.00	510.58	576.65
24	2	ROLLING MEADOWS / WESTHEIGHTS	9			
24	2	WESTHEIGHTS / WINDING	9	420.00	364.44	490.1
24	2	WESTHEIGHTS / WESTFOREST	8	180.00	113.25	124
24	2	HIGHLAND HILLS MALL	9	440.00	310.67	415
24	2	HIGHLAND / BELMONT	9	300.00	475.89	609.55
24	2	CHARLES STREET TERMINAL	9	420.00	364.11	363
25	1	CHARLES STREET TERMINAL	26			
25	1	QUEENS / WESTMOUNT	29	420.00	416.96	511.05
25	1	HIGHLAND HILLS MALL	30	300.00	204.10	230
25	1	FORESTWOOD / MCGARRY	26	240.00	282.56	328.4
25	1	DRIFTWOOD / WESTHEIGHTS	27	308.89	286.85	286
25	1	GOLDEN MEADOW / HAVENWOOD	26	300.00	288.35	313.25
25	2	GOLDEN MEADOW / HAVENWOOD	34			
25	2	WESTHEIGHTS / LORILEE	34	300.00	266.56	283
25	2	HIGHLAND HILLS MALL	34	360.00	426.18	419.1
25	2	QUEENS / WESTMOUNT	34	240.00	233.09	249
25	2	CHARLES STREET TERMINAL	34	480.00	478.74	517.2
26	1	FOREST GLEN TERMINAL	19			
26	1	TRILLIUM / STRASBURG	19	420.00	543.21	576.5
26	1	TRILLIUM / GROFF	19	300.00	371.95	602.5
26	2	TRILLIUM / GROFF	19			
26	2	TRILLIUM / STRASBURG	19	180.00	130.79	150
26	2	FOREST GLEN TERMINAL	19	480.00	434.11	500.5
27	1	FAIRVIEW PARK	10			
27	1	FAIRVIEW PARK MALL	4			
27	1	MORRISON / MANOR	14	360.00	384.64	449
27	1	QUINTE / MORRISON	14	180.00	144.43	157.85
27	2	QUINTE / MORRISON	9			
27	2	FAIRWAY / KING	9	360.00	435.33	413.3
27	2	FAIRVIEW PARK	7	180.00	187.43	211.6
27	2	FAIRVIEW PARK MALL	2	180.00	172.00	226
29	1	RING / UNIVERSITY	9			
29	1	FISCHER-HALLMAN / KEATS	9	360.00	314.00	438
29	1	ERB / ERB	1	300.00	234.00	224.7
29	2	KEATS / FISCHER-HALLMAN	9			
29	2	RING / UNIVERSITY	9	420.00	463.11	472.8
31	Downward	CONESTOGA MALL	6			
31	Downward	NORTHFIELD / BRIDGE	9	420.00	624.00	1136.8
31	Downward	UNIVERSITY / RIM PARK INTERNAL	6	300.00	276.00	368.5
31	Downward	UNIVERSITY / LEXINGTON	9	400.00	387.11	606
31	Downward	LEXINGTON / ANNDALE	9	300.00	239.22	269.45
31	Downward	COLUMBIA / SPRUCE	9	360.00	323.22	351
31	Downward	RING / UNIVERSITY	9	540.00	646.89	853.75
31	Upward	RING / UNIVERSITY	7			
31	Upward	COLUMBIA / KING	7	540.00	568.29	675
31	Upward	LEXINGTON / DEARBORN	7	360.00	123.86	190.1
31	Upward	UNIVERSITY / LEXINGTON	7	300.00	335.57	456.85
31	Upward	UNIVERSITY / RIM PARK INTERNAL	4	300.00	204.25	176.3
31	Upward	NORTHFIELD / BRIDGE	7	300.00	235.00	215.4
32	1	CONESTOGA MALL	1			
32	1	KUMPF / NORTHFIELD	1	420.00	333.00	333
32	2	KUMPF / NORTHFIELD	14			
32	2	WEBER / GOLDEN EAGLE	17	360.00	324.24	412.2
32	2	CONESTOGO / COLBY	14	300.00	317.00	329
32	2	CONESTOGA MALL	13	360.00	410.46	889.8
33	1	FOREST GLEN TERMINAL	2			
33	1	STRASBURG / TRILLIUM	2	240.00	239.50	266.95
33	1	PARKVALE / NEWCASTLE	2	180.00	174.00	172
33	2	HURON / NEWCASTLE	2			114
33	2	STRASBURG / TRILLIUM	2	180.00	185.50	168.2
33	2	FOREST GLEN TERMINAL	2	240.00	263.00	263.75
35	1	KING / WILLIS	19			
35	1	ERB / WEBER	19	180.00	186.00	213.4
35	1	BRIDGEPORT / LANCASTER	19	240.00	239.21	259.4

Route	Direction*	Timepoint	Running Time from Previous Timepoint			
			Obs.	Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
35	1	AUBURN / SABLE	19	360.00	337.84	387.6
35	1	BRIDGE / LEXINGTON	20	300.00	247.70	310
35	1	CHESAPEAKE / SPINNAKER	19	407.37	409.16	451.8
35	1	CONESTOGA MALL	20	420.00	362.30	407
35	2	CONESTOGA MALL	18			
35	2	CHESAPEAKE / BRIGANTINE	17	360.00	366.47	397
35	2	BRIDGE / LEXINGTON	15	420.00	446.33	474.6
35	2	AUBURN / SABLE	17	349.41	309.71	278
35	2	BRIDGEPORT / LANCASTER	16	326.25	336.00	345.4
35	2	BRIDGEPORT / WEBER	17	289.41	325.94	303
35	2	UPTOWN WATERLOO	17	360.00	224.06	270
51	Inbound	HOLIDAY INN TERMINAL	40			
51	Inbound	SMARTCENTRES CAMBRIDGE	40	385.50	315.15	383
51	Inbound	CAMBRIDGE CENTRE TERMINAL	42	540.00	468.75	659
51	Inbound	AINSLIE STREET TERMINAL	39	780.00	654.05	813.1
51	Outbound	AINSLIE STREET TERMINAL	48			
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	780.00	662.94	802
51	Outbound	SMARTCENTRES CAMBRIDGE	47	540.00	448.21	592.5
51	Outbound	HOLIDAY INN TERMINAL	47	240.00	130.94	147.2
52	North	AINSLIE STREET TERMINAL	25			
52	North	CORONATION / BARRETT	20	480.00	587.50	632
52	North	KING / LOWTHER	20	360.00	300.00	360
52	North	PRESTON / FOUNTAIN	19	360.00	389.00	445.6
52	North	SHANTZ HILL / HWY 401 RAMP	19	180.00	195.05	220
52	North	SPORTSWORLD	19	240.00	184.95	317.15
52	North	FAIRVIEW PARK	20	819.00	667.20	713.95
52	South	FAIRVIEW PARK MALL	5			
52	South	FAIRVIEW PARK	24			
52	South	SPORTSWORLD	25	660.00	831.52	890.3
52	South	SHANTZ HILL / PRESTON	29	331.03	311.45	298.85
52	South	PRESTON / FOUNTAIN	29	180.00	202.45	209.4
52	South	KING / LOWTHER	29	420.00	348.21	401.9
52	South	CORONATION / MARTIN	29	300.00	335.66	387
52	South	AINSLIE STREET TERMINAL	29	651.72	468.14	542.9
53	Inbound	HOLIDAY INN TERMINAL	8			
53	Inbound	FRANKLIN / SAGINAW	8	540.00	475.75	655
53	Inbound	DOBBIE / SAVAGE	8	420.00	380.50	443.75
53	Inbound	MAIN / DUNDAS	8	240.00	196.13	239.25
53	Inbound	AINSLIE STREET TERMINAL	8	420.00	336.00	407.25
53	Outbound	AINSLIE STREET TERMINAL	8			
53	Outbound	MAIN / DUNDAS	8	360.00	405.25	440.5
53	Outbound	DOBBIE / SAVAGE	8	240.00	192.88	256.8
53	Outbound	FRANKLIN / SAGINAW	7	420.00	422.86	484.9
53	Outbound	HOLIDAY INN TERMINAL	8	592.50	598.00	580.9
54	East	MAIN / DUNDAS	42	420.00	309.33	361.3
54	East	LISBON PINES / GATEHOUSE	43	360.00	386.76	438.25
54	East	AINSLIE STREET TERMINAL	85	480.00	471.35	501.05
54	East	CHAMPLAIN / CHRISTOPHER	43	300.00	378.67	387.4
55	West	SOUTHWOOD / CEDAR	22	420.00	427.52	513.5
55	West	AINSLIE STREET TERMINAL	43	360.00	294.43	319.45
55	West	SOUTHWOOD / ST ANDREWS	23	498.26	1158.22	659.15
55	West	ST ANDREWS / GILHOLM	23	300.00	275.87	288.55
56	West	BISHOP / RAILWAY	26	360.00	351.96	381.6
56	West	ROSE / ARGYLE	26	300.00	265.04	309
56	West	CAMBRIDGE CENTRE TERMINAL	52	420.00	462.85	527.15
56	West	WESTMINSTER / KING	26	120.00	121.96	143
56	West	LANG'S / CONCESSION	26	360.00	382.38	432
57	West	SUNSET / SAXONY	36	300.00	406.39	471.9
57	West	BLAIR / BISMARCK	36	540.00	422.89	465.7
57	West	AINSLIE STREET TERMINAL	76	420.00	391.03	442
57	West	HILLCREST / CHURCHILL	36	360.00	341.19	386.05
58	East	MOSCRIP / BRONSON	11	300.00	340.64	387.9
58	East	MUNCH / ELGIN	11	300.00	380.64	400
58	East	AINSLIE STREET TERMINAL	22	540.00	404.45	444
58	East	HILLTOP / FRANKLIN	11	480.00	460.73	499
59	East	CHAMPLAIN / CHRISTOPHER	22	480.00	512.18	551
59	East	AINSLIE STREET TERMINAL	44	480.00	415.23	438.3
59	East	CHAMPLAIN / ELGIN	23	600.00	814.82	678.6
60	East	GLAMIS / ROBSON	24	480.00	430.08	489

Route	Direction*	Timepoint	Obs.	Running Time from Previous Timepoint		
				Avg. Scheduled (sec)	Avg. (sec)	85 <sup>th</sup> Percentile (sec)
60	East	CAMBRIDGE CENTRE TERMINAL	48	420.00	231.92	263
60	East	ELGIN / SAGINAW	24	480.00	603.38	638.6
60	East	MUNCH / KOVAC	24	240.00	193.00	197
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8			
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	180.00	205.17	229.3
61	East	KING / WESTMINSTER	8	765.00	556.25	702.95
61	West	CAMBRIDGE CENTRE	8			
61	West	KING / WESTMINSTER	9	540.00	436.13	523.35
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	9	720.00	570.89	687
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	9	180.00	129.56	151
62	West	SOUTHGATE / DAY	18	600.00	927.83	655
62	West	AINSLIE STREET TERMINAL	44	600.00	588.57	617
62	West	WOODSIDE / CEDAR	22	496.36	739.41	482.5
63	East	ALISON / ELGIN	22	480.00	493.41	529.75
63	East	AINSLIE STREET TERMINAL	45	496.36	358.32	355
63	East	DUNDAS / FRANKLIN	23	320.87	333.48	371
63	East	CHAMPLAIN / CHRISTOPHER	22	360.00	330.09	365
64	West	LANG'S / WALTER	16	420.00	405.44	473.7
64	West	EAGLE / KING	16	300.00	330.81	390
64	West	CAMBRIDGE CENTRE TERMINAL	32	420.00	350.88	433.05
64	West	ROSE / ARGYLE	16	120.00	118.75	145.35
64	West	BISHOP / RAILWAY	16	300.00	300.25	374
65	North	HOLIDAY INN TERMINAL	32			197.95
65	North	WINSTON / SCOTTDAL	16	300.00	277.50	281.95
65	North	FISHER MILLS / FEARNWOOD	16	300.00	353.19	383.4
65	North	FRANKLIN / WINSTON	16	540.00	707.63	746
66	East	FRANKLIN / WINSTON	8	360.00	247.50	309
66	East	COOPER / ELLIS	8	300.00	258.88	277.95
66	East	HOLIDAY INN TERMINAL	16	360.00	341.00	372.4
66	East	WINSTON / WESTBURY	8	360.00	260.13	290.1
71	East	QUEEN / HUNGERFORD	18	300.00	354.89	500.25
71	East	HOLIDAY INN TERMINAL	36	420.00	312.39	408
71	East	ELLIS / ADLER	18	420.00	588.50	695.15
110	Downward	FAIRVIEW PARK	16			
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	16	780.00	869.63	408.3
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	14			
110	Upward	PIONEER / OLD CARRIAGE	14	360.00	328.57	364.1
110	Upward	FAIRVIEW PARK	14	660.00	487.14	541.7
111	North	AINSLIE STREET TERMINAL	2			
111	South	AINSLIE STREET TERMINAL	2	1020.00	997.50	1073
200	Downward	CONESTOGA MALL	450			
200	Downward	McCORMICK	448	360.00	389.95	455
200	Downward	R & T PARK	447	180.00	146.45	166
200	Downward	U WATERLOO	447	240.00	165.85	179
200	Downward	LAURIER	447	240.00	274.00	305.8
200	Downward	KING / WILLIS	47	240.00	194.17	323.7
200	Downward	UPTOWN WATERLOO	302	240.00	194.15	301
200	Downward	GRAND RIVER HOSPITAL	446	180.54	134.78	158
200	Downward	CHARLES TERMINAL	447	304.16	304.44	341
200	Downward	OTTAWA	447	244.43	220.09	267
200	Downward	FAIRVIEW	445	540.00	378.77	426
200	Downward	SMART!CENTRES CAMBRIDGE	446	811.61	671.65	776.25
200	Downward	CAMBRIDGE CENTRE	446	525.00	357.54	432
200	Downward	AINSLIE STREET TERMINAL	447	821.38	610.28	728.25
200	Upward	AINSLIE STREET TERMINAL	534			
200	Upward	CAMBRIDGE CENTRE	528	600.00	581.19	712.6
200	Upward	SMART!CENTRES CAMBRIDGE	528	408.00	468.68	454
200	Upward	FAIRVIEW	531	1048.92	817.16	883
200	Upward	OTTAWA	530	422.49	443.88	499
200	Upward	CHARLES TERMINAL	532	267.41	251.11	275
200	Upward	GRAND RIVER HOSPITAL	526	274.45	345.11	387
200	Upward	UPTOWN WATERLOO	527	180.57	155.79	201
200	Upward	LAURIER	527	276.52	245.43	270.4
200	Upward	U WATERLOO	526	240.00	248.71	270
200	Upward	R & T PARK	525	180.00	145.10	169
200	Upward	McCORMICK	526	180.34	134.41	154
200	Upward	CONESTOGA MALL	527	422.62	360.96	423

\*As given in GRT database

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
1	East	CHARLES STREET TERMINAL	32			
1	East	FREDERICK / WEBER	33	100.00%	85.71%	
1	East	BECKER / BELLEVIEW	21	83.33%	16.67%	100.00%
1	East	LORRAINE / BIRKSHIRE	12	50.00%	0.00%	100.00%
1	East	RIVER / HICKSON	21	85.71%	0.00%	100.00%
1	East	OTTAWA / OLDFIELD	12		0.00%	100.00%
1	East	STANLEY PARK MALL TERMINAL	33	71.43%	7.14%	92.86%
1	West	STANLEY PARK MALL TERMINAL	28			
1	West	LACKNER / BANBURY	16	66.67%	0.00%	
1	West	BELLEVIEW / BECKER	12			
1	West	RIVER / HALLIWELL	28	100.00%	0.00%	100.00%
1	West	WEBER / SCOTT	28	60.00%	0.00%	100.00%
1	West	CHARLES STREET TERMINAL	28	66.67%	0.00%	100.00%
2	Downward	HIGHLAND HILLS MALL	15			
2	Downward	GREENBROOK / WESTMOUNT	14	57.14%	14.29%	
2	Downward	GREENBROOK / STIRLING	14	37.50%	12.50%	100.00%
2	Downward	SOUTHMOOR / AVALON	14	0.00%	0.00%	100.00%
2	Downward	CHARLES STREET TERMINAL	15	83.33%	0.00%	83.33%
2	Upward	CHARLES STREET TERMINAL	15			
2	Upward	GREENBROOK / STIRLING	14	66.67%	100.00%	
2	Upward	WESTMOUNT / VILLAGE	15	50.00%	25.00%	75.00%
2	Upward	HIGHLAND HILLS MALL	14	100.00%	25.00%	87.50%
3	1	CHARLES STREET TERMINAL	14			
3	1	COURTLAND / STIRLING	14	100.00%	100.00%	
3	1	STRASBURG / TRANSIT GARAGE	14	83.33%	0.00%	100.00%
3	1	OTTAWA / WESTMOUNT	14	50.00%	0.00%	100.00%
3	1	WILLIAMSBURG / DINISON	14	80.00%	0.00%	100.00%
3	1	FOREST GLEN TERMINAL	14	16.67%	0.00%	100.00%
3	2	FOREST GLEN TERMINAL	24			
3	2	WILLIAMSBURG / DINISON	24	100.00%	50.00%	
3	2	OTTAWA / WESTMOUNT	24	100.00%	0.00%	100.00%
3	2	STRASBURG / TRANSIT GARAGE	24	50.00%	25.00%	100.00%
3	2	COURTLAND / MADISON	24	100.00%	33.33%	100.00%
3	2	CHARLES STREET TERMINAL	24	0.00%	0.00%	100.00%
4	Downward	UNIVERSITY / RESURRECTION	12			
4	Downward	GLASGOW / WESTMOUNT	12	100.00%	50.00%	
4	Downward	UNION / KING	12	50.00%	100.00%	100.00%
4	Downward	MOORE / BREITHAUP	13	0.00%	0.00%	100.00%
4	Downward	CHARLES STREET TERMINAL	12	0.00%	50.00%	100.00%
4	Upward	CHARLES STREET TERMINAL	14			
4	Upward	MOORE / WELLINGTON	14	100.00%	0.00%	
4	Upward	UNION / PARK	14	100.00%	0.00%	100.00%
4	Upward	GLASGOW / WESTMOUNT	14	50.00%	0.00%	100.00%
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14	40.00%	60.00%	100.00%
4	Upward	UNIVERSITY / BAKER	9	66.67%	0.00%	100.00%
4	Upward	UNIVERSITY / RESURRECTION	14	0.00%	0.00%	100.00%
5	1	UPTOWN WATERLOO	14			
5	1	ERB / WESTMOUNT	14	100.00%	100.00%	
5	1	FISCHER-HALLMAN / ERB	14	25.00%	25.00%	100.00%
5	1	KEATS / KEATSWOOD	14			
5	2	KEATS / KEATSWOOD	23			
5	2	GATEVIEW / WESTVALE	23	25.00%	0.00%	
5	2	ERB / FISCHER-HALLMAN	23	80.00%	0.00%	100.00%
5	2	ERB / WESTMOUNT	23	100.00%	0.00%	100.00%
5	2	KING / WILLIS	23	33.33%	0.00%	100.00%
6	Downward	DANIEL / BLOOMINGDALE	13			
6	Downward	LANCASTER / HAMEL	14	87.50%	0.00%	
6	Downward	LANCASTER / GUELPH	13	0.00%	0.00%	100.00%
6	Downward	WELLINGTON / MARGARET	13	37.50%	0.00%	100.00%
6	Downward	CHARLES STREET TERMINAL	13	20.00%	0.00%	100.00%
6	Upward	CHARLES STREET TERMINAL	14			
6	Upward	WELLINGTON / MARGARET	14	100.00%	100.00%	
6	Upward	LANCASTER / GUELPH	14	75.00%	0.00%	100.00%
6	Upward	LANCASTER / HAMEL	14	28.57%	0.00%	100.00%
6	Upward	DANIEL / BLOOMINGDALE	14	50.00%	16.67%	100.00%
7	Downward	RING / NORTH CAMPUS	15			
7	Downward	U WATERLOO	10			
7	Downward	CONESTOGA MALL	15			
7	Downward	COLUMBIA / HAZEL	15	75.00%	25.00%	



Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
7	Downward	UNIVERSITY / KING	11	33.33%	55.56%	
7	Downward	KING / UNIVERSITY	32	85.71%	42.86%	57.14%
7	Downward	UPTOWN WATERLOO	13	0.00%	0.00%	100.00%
7	Downward	KING / WILLIS	3	100.00%	0.00%	100.00%
7	Downward	CHARLES STREET TERMINAL	43	50.00%	7.14%	100.00%
7	Downward	KING / OTTAWA	39	18.18%	0.00%	100.00%
7	Downward	FOURTH / CONNAUGHT	9	0.00%	0.00%	100.00%
7	Downward	FOURTH / WILSON	8	100.00%	0.00%	100.00%
7	Downward	KINZIE / WEBER	22	41.67%	41.67%	91.67%
7	Downward	FAIRVIEW PARK	25	0.00%	16.67%	100.00%
7	Downward	FAIRVIEW PARK MALL	14	50.00%	0.00%	100.00%
7	Upward	FAIRVIEW PARK MALL	19			
7	Upward	FAIRVIEW PARK	27			
7	Upward	CONNAUGHT / FIFTH	18			
7	Upward	FOURTH / WILSON	7	100.00%	66.67%	
7	Upward	WEBER / KINZIE	21	100.00%	100.00%	
7	Upward	KING / OTTAWA	48	71.43%	0.00%	100.00%
7	Upward	CHARLES STREET TERMINAL	58	33.33%	22.22%	100.00%
7	Upward	UPTOWN WATERLOO	58	100.00%	20.00%	80.00%
7	Upward	KING / UNIVERSITY	50	20.00%	10.00%	100.00%
7	Upward	UNIVERSITY / KING	8	50.00%	0.00%	100.00%
7	Upward	CONESTOGA MALL	30	16.67%	33.33%	100.00%
7	Upward	RING / UNIVERSITY	8	66.67%	0.00%	100.00%
7	Upward	COLUMBIA / HAZEL	20	100.00%	10.00%	100.00%
7	Upward	RING / NORTH CAMPUS	8	100.00%	0.00%	100.00%
7	Upward	U WATERLOO	20	92.31%	38.46%	100.00%
8	North	FAIRVIEW PARK	20			
8	North	FAIRVIEW PARK MALL	10			
8	North	FRANKLIN / PROSPECT	19	90.00%	40.00%	
8	North	WALTON / VANIER	11	100.00%	87.50%	
8	North	CHARLES STREET TERMINAL	55	30.00%	0.00%	100.00%
8	North	MARGARET / WELLINGTON	26	100.00%	50.00%	50.00%
8	North	COURTLAND / STIRLING	11	62.50%	62.50%	100.00%
8	North	OTTAWA / WEBER	19	16.67%	0.00%	100.00%
8	North	UNION / WEBER	25	0.00%	33.33%	100.00%
8	North	BELMONT / HIGHLAND	27	100.00%	33.33%	66.67%
8	North	UNION / WESTMOUNT	29	40.00%	40.00%	80.00%
8	North	UNIVERSITY / KING	52	60.87%	21.74%	100.00%
8	North	UNIVERSITY / SEAGRAM	29	92.31%	7.69%	92.31%
8	South	UNIVERSITY / KING	54			
8	South	UNIVERSITY / SEAGRAM	25	80.00%	0.00%	
8	South	UNION / WEBER	29	100.00%	10.00%	
8	South	UNION / WESTMOUNT	25	100.00%	8.33%	100.00%
8	South	MARGARET / WELLINGTON	29	0.00%	0.00%	100.00%
8	South	BELMONT / BURN	27	33.33%	8.33%	100.00%
8	South	COURTLAND / VERNON	19	100.00%	20.00%	80.00%
8	South	CHARLES STREET TERMINAL	56	31.58%	31.58%	100.00%
8	South	WALTON / VANIER	19	20.00%	0.00%	100.00%
8	South	OTTAWA / MCKENZIE	9	100.00%	25.00%	75.00%
8	South	FAIRVIEW PARK	17	87.50%	0.00%	100.00%
8	South	FAIRVIEW PARK MALL	11	77.78%	11.11%	88.89%
8	South	WEBER / FRANKLIN	9	25.00%	25.00%	100.00%
9	Downward	CONESTOGA MALL	21			
9	Downward	NORTHFIELD / WEBER	21	100.00%	75.00%	
9	Downward	HIGHPOINT / WINTERGREEN	21	57.14%	0.00%	100.00%
9	Downward	PARKSIDE / GLENELM	21	85.71%	0.00%	100.00%
9	Downward	HAZEL / WILDWOOD	21	25.00%	0.00%	100.00%
9	Downward	HAZEL / UNIVERSITY	18	50.00%	0.00%	100.00%
9	Downward	U WATERLOO	21	62.50%	37.50%	100.00%
9	Upward	U WATERLOO	22			
9	Upward	UNIVERSITY / KING	1			
9	Upward	HAZEL / UNIVERSITY	23			
9	Upward	HAZEL / BEARINGER	23			
9	Upward	PARKSIDE / GLENELM	8	100.00%	0.00%	100.00%
9	Upward	HIGHPOINT / WINTERGREEN	23	66.67%	0.00%	33.33%
9	Upward	NORTHFIELD / WEBER	23	100.00%	50.00%	100.00%
9	Upward	CONESTOGA MALL	23	100.00%	20.00%	100.00%
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	19			
10	Inbound	PINNACLE / OLD MILL	19	100.00%	100.00%	

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
10	Inbound	PIONEER / OLD CARRIAGE	19	66.67%	0.00%	100.00%
10	Inbound	DOON VILLAGE / MILLWOOD	19	100.00%	33.33%	100.00%
10	Inbound	FAIRVIEW PARK	14	75.00%	0.00%	100.00%
10	Inbound	FAIRVIEW PARK MALL	5			
10	Outbound	FAIRVIEW PARK	15			
10	Outbound	DOON VILLAGE / MILLWOOD	15	0.00%	100.00%	
10	Outbound	PIONEER / OLD CARRIAGE	15			
10	Outbound	PINNACLE / OLD MILL	15	100.00%	0.00%	100.00%
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15	100.00%	0.00%	100.00%
11	1	CHARLES STREET TERMINAL	15			
11	1	STIRLING / COURTLAND	25	100.00%	50.00%	
11	1	ALPINE / OTTAWA	25	83.33%	0.00%	83.33%
11	1	COUNTRY HILL / BLOCK LINE	15	100.00%	0.00%	100.00%
11	1	FOREST GLEN TERMINAL	15	25.00%	0.00%	100.00%
11	2	FOREST GLEN TERMINAL	30			
11	2	KINGSWOOD / BLOCK LINE	30	100.00%	100.00%	
11	2	HOFFMAN / OTTAWA	30	100.00%	0.00%	100.00%
11	2	STIRLING / COURTLAND	30	100.00%	12.50%	100.00%
11	2	CHARLES STREET TERMINAL	30	92.31%	0.00%	100.00%
12	Downward	CONESTOGA MALL	31			
12	Downward	BRIDGE / UNIVERSITY	24	100.00%	100.00%	
12	Downward	UNIVERSITY / KING	38	75.00%	25.00%	75.00%
12	Downward	UNIVERSITY / SEAGRAM	38	100.00%	25.00%	100.00%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	38	71.43%	28.57%	100.00%
12	Downward	HIGHLAND HILLS MALL	38	42.86%	42.86%	100.00%
12	Downward	WESTMOUNT / OTTAWA	29	100.00%	75.00%	25.00%
12	Downward	FOREST GLEN TERMINAL	30	100.00%	0.00%	100.00%
12	Downward	FAIRVIEW PARK MALL	13			
12	Downward	FAIRVIEW PARK	17			
12	Upward	FAIRVIEW PARK	19			
12	Upward	FAIRVIEW PARK MALL	12			
12	Upward	FOREST GLEN TERMINAL	32	100.00%	100.00%	
12	Upward	WESTMOUNT / OTTAWA	35	100.00%	28.57%	100.00%
12	Upward	HIGHLAND HILLS MALL	32	85.71%	14.29%	100.00%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	32	81.25%	25.00%	87.50%
12	Upward	UNIVERSITY / SEAGRAM	32	87.50%	0.00%	100.00%
12	Upward	UNIVERSITY / KING	32	7.14%	57.14%	100.00%
12	Upward	BRIDGE / UNIVERSITY	23	28.57%	0.00%	100.00%
12	Upward	CONESTOGA MALL	26	66.67%	66.67%	88.89%
13	1	U WATERLOO	23			
13	1	COLUMBIA / FISCHER-HALLMAN	23	83.33%	33.33%	
13	1	LAURELWOOD / ERBSVILLE	23	25.00%	0.00%	100.00%
13	2	LAURELWOOD / ERBSVILLE	24			
13	2	COLUMBIA / FISCHER-HALLMAN	24	83.33%	33.33%	
13	2	U WATERLOO	24	0.00%	0.00%	100.00%
14	1	CONESTOGA MALL	3			
14	1	BATHURST / MCMURRAY	3			
14	1	WYMAN / COLBY	3			
14	2	WYMAN / COLBY(2)	4			
14	2	WYMAN / COLBY	6			
14	2	MCMURRAY / NORTHLAND	6			
14	2	CONESTOGA MALL	6			
15	East	CHARLES STREET TERMINAL	22			
15	East	QUEEN / LANCASTER	22	75.00%	100.00%	
15	East	EDNA / FREDERICK	22	25.00%	25.00%	100.00%
15	East	LACKNER / VICTORIA	22	33.33%	33.33%	100.00%
15	West	LACKNER / VICTORIA	14			
15	West	NATCHEZ / HALIFAX	14	100.00%	0.00%	
15	West	FREDERICK / EDNA	14	100.00%	0.00%	100.00%
15	West	QUEEN / LANCASTER	14	50.00%	0.00%	100.00%
15	West	CHARLES STREET TERMINAL	14	100.00%	0.00%	100.00%
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	5			
16	Inbound	PIONEER / BECHTEL	9	50.00%	50.00%	
16	Inbound	STRASBURG / TRILLIUM	5	100.00%	0.00%	100.00%
16	Inbound	FOREST GLEN TERMINAL	5	0.00%	0.00%	100.00%
16	Outbound	FOREST GLEN TERMINAL	11			
16	Outbound	STRASBURG / TRILLIUM	11	25.00%	100.00%	
16	Outbound	PIONEER / BECHTEL	11	100.00%	0.00%	100.00%
16	Outbound	Doon Public School	1	0.00%	0.00%	100.00%

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	11	100.00%	0.00%	100.00%
17	Downward	LACKNER / VICTORIA	4			
17	Downward	KEEWATIN / OTTAWA	4	100.00%	100.00%	
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4			
17	Downward	RIVER / FAIRWAY	4			
17	Downward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK MALL	2			
17	Upward	RIVER / FAIRWAY	4			
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4			
17	Upward	KEEWATIN / OTTAWA	4			
17	Upward	LACKNER / VICTORIA	4			
18	Downward	MAPLE / GUELPH	14			
18	Downward	GUELPH / MARGARET	14	60.00%	0.00%	
18	Downward	WEBER / WELLINGTON	14	100.00%	33.33%	100.00%
18	Downward	CHARLES STREET TERMINAL	14	80.00%	0.00%	100.00%
18	Upward	CHARLES STREET TERMINAL	14			
18	Upward	WEBER / WELLINGTON	2			
18	Upward	GUELPH / FLOYD	14	100.00%	0.00%	100.00%
18	Upward	MAPLE / GUELPH	14	100.00%	0.00%	100.00%
19	1	CHARLES STREET TERMINAL	13			
19	1	VICTORIA / BELMONT	13	50.00%	100.00%	
19	1	CHOPIN / BRYBECK	13	33.33%	0.00%	100.00%
19	1	HAZELGLEN / VICTORIA	13	0.00%	0.00%	100.00%
19	1	WESTFOREST / HIDDEN CREEK	13	50.00%	50.00%	100.00%
19	1	HIGHLAND HILLS MALL	13	50.00%	0.00%	100.00%
19	2	HIGHLAND HILLS MALL	13			
19	2	WESTFOREST / VICTORIA	13	100.00%	100.00%	
19	2	HAZELGLEN / MOOREGATE	13	66.67%	0.00%	100.00%
19	2	CHOPIN / BRYBECK	13	0.00%	0.00%	100.00%
19	2	VICTORIA / BELMONT	13	100.00%	28.57%	100.00%
19	2	CHARLES STREET TERMINAL	12	88.89%	0.00%	100.00%
20	1	CHARLES STREET TERMINAL	11			
20	1	VICTORIA / BELMONT	11	66.67%	100.00%	
20	1	INGLESIDE / HAZELGLEN	11			
20	2	HAZELGLEN / MOOREGATE	10			
20	2	INGLESIDE / HAZELGLEN	22	0.00%	0.00%	
20	2	CHOPIN / BRYBECK	22	0.00%	100.00%	100.00%
20	2	VICTORIA / BELMONT	22	100.00%	20.00%	80.00%
20	2	CHARLES STREET TERMINAL	22	100.00%	11.11%	100.00%
22	East	HIGHLAND HILLS MALL	17			
22	East	ACTIVA / GREY FOX	17	100.00%	100.00%	
22	East	ACTIVA / SNOWDROP	17	25.00%	0.00%	100.00%
22	East	TILLSLEY / WESTMOUNT	17	100.00%	0.00%	100.00%
22	East	FOREST GLEN TERMINAL	17	50.00%	0.00%	100.00%
22	East	OTTAWA / HWY 8 RAMP	17	100.00%	0.00%	100.00%
22	East	STIRLING / COURTLAND	16	50.00%	100.00%	100.00%
22	East	CHARLES STREET TERMINAL	16	0.00%	50.00%	100.00%
22	West	CHARLES STREET TERMINAL	9			
22	West	STIRLING / COURTLAND	19	50.00%	100.00%	
22	West	OTTAWA / HWY 8 RAMP	9			
22	West	FOREST GLEN TERMINAL	9			
22	West	ERINBROOK / HEDGESTONE	9			
22	West	DAVID BERGEY / PEACH BLOSSOM	9			
22	West	ACTIVA / GREY FOX	9			
22	West	HIGHLAND HILLS MALL	9			
23	East	CHARLES STREET TERMINAL	10			
23	East	FREDERICK / DUNHAM	10	100.00%	100.00%	
23	East	RIVER / OTTAWA	10	0.00%	0.00%	100.00%
23	East	OTTAWA / LACKNER	10	0.00%	0.00%	100.00%
23	East	LACKNER / CORFIELD	10	0.00%	0.00%	100.00%
23	East	FAIRVIEW PARK MALL	3			
23	East	FAIRVIEW PARK	6	100.00%	0.00%	66.67%
23	West	FAIRVIEW PARK MALL	4			
23	West	FAIRVIEW PARK	7			
23	West	LACKNER / CORFIELD	12	50.00%	50.00%	
23	West	OTTAWA / OLDFIELD	12	66.67%	0.00%	100.00%
23	West	RIVER / OTTAWA	12	85.71%	0.00%	100.00%
23	West	FREDERICK / EDNA	12	25.00%	0.00%	100.00%

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
23	West	CHARLES STREET TERMINAL	12	83.33%	50.00%	100.00%
24	1	CHARLES STREET TERMINAL	11			
24	1	HIGHLAND / BELMONT	12			
24	1	HIGHLAND HILLS MALL	12			
24	1	ROLLING MEADOWS / WESTHEIGHTS	12	100.00%	100.00%	0.00%
24	2	ROLLING MEADOWS / WESTHEIGHTS	9			
24	2	WESTHEIGHTS / WINDING	9	66.67%	33.33%	
24	2	WESTHEIGHTS / WESTFOREST	8			
24	2	HIGHLAND HILLS MALL	9	0.00%	0.00%	100.00%
24	2	HIGHLAND / BELMONT	9	100.00%	33.33%	66.67%
24	2	CHARLES STREET TERMINAL	9	50.00%	0.00%	100.00%
25	1	CHARLES STREET TERMINAL	26			
25	1	QUEENS / WESTMOUNT	29	100.00%	100.00%	
25	1	HIGHLAND HILLS MALL	30	0.00%	0.00%	100.00%
25	1	FORESTWOOD / MCGARRY	26	100.00%	75.00%	75.00%
25	1	DRIFTWOOD / WESTHEIGHTS	27	60.00%	20.00%	100.00%
25	1	GOLDEN MEADOW / HAVENWOOD	26	50.00%	0.00%	100.00%
25	2	GOLDEN MEADOW / HAVENWOOD	34			
25	2	WESTHEIGHTS / LORILEE	34	20.00%	20.00%	
25	2	HIGHLAND HILLS MALL	34	100.00%	0.00%	100.00%
25	2	QUEENS / WESTMOUNT	34	100.00%	0.00%	100.00%
25	2	CHARLES STREET TERMINAL	34	100.00%	0.00%	100.00%
26	1	FOREST GLEN TERMINAL	19			
26	1	TRILLIUM / STRASBURG	19	100.00%	100.00%	
26	1	TRILLIUM / GROFF	19	73.33%	0.00%	100.00%
26	2	TRILLIUM / GROFF	19			
26	2	TRILLIUM / STRASBURG	19			
26	2	FOREST GLEN TERMINAL	19			
27	1	FAIRVIEW PARK	10			
27	1	FAIRVIEW PARK MALL	4			
27	1	MORRISON / MANOR	14	50.00%	100.00%	
27	1	QUINTE / MORRISON	14			
27	2	QUINTE / MORRISON	9			
27	2	FAIRWAY / KING	9	100.00%	0.00%	
27	2	FAIRVIEW PARK	7	100.00%	0.00%	100.00%
27	2	FAIRVIEW PARK MALL	2			
29	1	RING / UNIVERSITY	9			
29	1	FISCHER-HALLMAN / KEATS	9			
29	1	ERB / ERB	1			
29	2	KEATS / FISCHER-HALLMAN	9			
29	2	RING / UNIVERSITY	9	100.00%	50.00%	100.00%
31	Downward	CONESTOGA MALL	6			
31	Downward	NORTHFIELD / BRIDGE	9	0.00%	100.00%	
31	Downward	UNIVERSITY / RIM PARK INTERNAL	6	100.00%	0.00%	100.00%
31	Downward	UNIVERSITY / LEXINGTON	9	100.00%	0.00%	100.00%
31	Downward	LEXINGTON / ANNDAL	9			
31	Downward	COLUMBIA / SPRUCE	9			
31	Downward	RING / UNIVERSITY	9	100.00%	0.00%	100.00%
31	Upward	RING / UNIVERSITY	7			
31	Upward	COLUMBIA / KING	7	100.00%	100.00%	
31	Upward	LEXINGTON / DEARBORN	7			
31	Upward	UNIVERSITY / LEXINGTON	7			
31	Upward	UNIVERSITY / RIM PARK INTERNAL	4			
31	Upward	NORTHFIELD / BRIDGE	7			
32	1	CONESTOGA MALL	1			
32	1	KUMPF / NORTHFIELD	1			
32	2	KUMPF / NORTHFIELD	14			
32	2	WEBER / GOLDEN EAGLE	17	100.00%	0.00%	
32	2	CONESTOGO / COLBY	14	100.00%	0.00%	100.00%
32	2	CONESTOGA MALL	13	100.00%	33.33%	0.00%
33	1	FOREST GLEN TERMINAL	2			
33	1	STRASBURG / TRILLIUM	2			
33	1	PARKVALE / NEWCASTLE	2			
33	2	HURON / NEWCASTLE	2			
33	2	STRASBURG / TRILLIUM	2	100.00%	0.00%	100.00%
33	2	FOREST GLEN TERMINAL	2	100.00%	0.00%	100.00%
35	1	KING / WILLIS	19			
35	1	ERB / WEBER	19	62.50%	87.50%	
35	1	BRIDGEPORT / LANCASTER	19	37.50%	0.00%	100.00%

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
35	1	AUBURN / SABLE	19	14.29%	14.29%	100.00%
35	1	BRIDGE / LEXINGTON	20	14.29%	14.29%	100.00%
35	1	CHESAPEAKE / SPINNAKER	19	33.33%	0.00%	100.00%
35	1	CONESTOGA MALL	20	14.29%	0.00%	100.00%
35	2	CONESTOGA MALL	18			
35	2	CHESAPEAKE / BRIGANTINE	17			
35	2	BRIDGE / LEXINGTON	15	100.00%	0.00%	100.00%
35	2	AUBURN / SABLE	17	100.00%	0.00%	100.00%
35	2	BRIDGEPORT / LANCASTER	16	100.00%	33.33%	100.00%
35	2	BRIDGEPORT / WEBER	17	66.67%	0.00%	83.33%
35	2	UPTOWN WATERLOO	17			
51	Inbound	HOLIDAY INN TERMINAL	40			
51	Inbound	SMARTCENTRES CAMBRIDGE	40	66.67%	0.00%	
51	Inbound	CAMBRIDGE CENTRE TERMINAL	42	50.00%	0.00%	100.00%
51	Inbound	AINSLIE STREET TERMINAL	39	100.00%	66.67%	66.67%
51	Outbound	AINSLIE STREET TERMINAL	48			
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	75.00%	100.00%	
51	Outbound	SMARTCENTRES CAMBRIDGE	47	50.00%	50.00%	75.00%
51	Outbound	HOLIDAY INN TERMINAL	47	0.00%	0.00%	100.00%
52	North	AINSLIE STREET TERMINAL	25			
52	North	CORONATION / BARRETT	20	100.00%	100.00%	
52	North	KING / LOWTHER	20	0.00%	0.00%	100.00%
52	North	PRESTON / FOUNTAIN	19	66.67%	11.11%	100.00%
52	North	SHANTZ HILL / HWY 401 RAMP	19	90.91%	0.00%	100.00%
52	North	SPORTSWORLD	19	12.50%	37.50%	100.00%
52	North	FAIRVIEW PARK	20	20.00%	20.00%	100.00%
52	South	FAIRVIEW PARK MALL	5			
52	South	FAIRVIEW PARK	24			
52	South	SPORTSWORLD	25	100.00%	100.00%	
52	South	SHANTZ HILL / PRESTON	29	36.36%	36.36%	100.00%
52	South	PRESTON / FOUNTAIN	29	73.33%	6.67%	100.00%
52	South	KING / LOWTHER	29	16.67%	0.00%	100.00%
52	South	CORONATION / MARTIN	29	78.57%	0.00%	100.00%
52	South	AINSLIE STREET TERMINAL	29	0.00%	14.29%	100.00%
53	Inbound	HOLIDAY INN TERMINAL	8			
53	Inbound	FRANKLIN / SAGINAW	8			
53	Inbound	DOBBIE / SAVAGE	8			
53	Inbound	MAIN / DUNDAS	8			
53	Inbound	AINSLIE STREET TERMINAL	8			
53	Outbound	AINSLIE STREET TERMINAL	8			
53	Outbound	MAIN / DUNDAS	8	100.00%	100.00%	
53	Outbound	DOBBIE / SAVAGE	8	0.00%	0.00%	100.00%
53	Outbound	FRANKLIN / SAGINAW	7	100.00%	0.00%	100.00%
53	Outbound	HOLIDAY INN TERMINAL	8	100.00%	33.33%	100.00%
54	East	MAIN / DUNDAS	42			
54	East	LISBON PINES / GATEHOUSE	43	100.00%	0.00%	100.00%
54	East	AINSLIE STREET TERMINAL	85	80.00%	6.67%	100.00%
54	East	CHAMPLAIN / CHRISTOPHER	43	90.00%	10.00%	100.00%
55	West	SOUTHWOOD / CEDAR	22	100.00%	100.00%	
55	West	AINSLIE STREET TERMINAL	43	12.50%	0.00%	100.00%
55	West	SOUTHWOOD / ST ANDREWS	23	100.00%	0.00%	93.33%
55	West	ST ANDREWS / GILHOLM	23	35.71%	7.14%	100.00%
56	West	BISHOP / RAILWAY	26	50.00%	100.00%	
56	West	ROSE / ARGYLE	26	100.00%	0.00%	100.00%
56	West	CAMBRIDGE CENTRE TERMINAL	52	90.91%	0.00%	100.00%
56	West	WESTMINSTER / KING	26	100.00%	0.00%	100.00%
56	West	LANG'S / CONCESSION	26	100.00%	0.00%	100.00%
57	West	SUNSET / SAXONY	36	100.00%	94.74%	
57	West	BLAIR / BISMARCK	36	0.00%	0.00%	100.00%
57	West	AINSLIE STREET TERMINAL	76	50.00%	0.00%	100.00%
57	West	HILLCREST / CHURCHILL	36	44.44%	0.00%	100.00%
58	East	MOSCRIP / BRONSON	11	100.00%	100.00%	
58	East	MUNCH / ELGIN	11	100.00%	0.00%	100.00%
58	East	AINSLIE STREET TERMINAL	22	0.00%	0.00%	100.00%
58	East	HILLTOP / FRANKLIN	11	66.67%	0.00%	100.00%
59	East	CHAMPLAIN / CHRISTOPHER	22	100.00%	100.00%	
59	East	AINSLIE STREET TERMINAL	44	0.00%	0.00%	100.00%
59	East	CHAMPLAIN / ELGIN	23	90.00%	30.00%	90.00%
60	East	GLAMIS / ROBSON	24	25.00%	75.00%	

Route	Direction*	Timepoint	Obs.	Late Cause Statistics		
				L1	L2	L3
60	East	CAMBRIDGE CENTRE TERMINAL	48	0.00%	0.00%	100.00%
60	East	ELGIN / SAGINAW	24	100.00%	7.14%	85.71%
60	East	MUNCH / KOVAC	24	9.09%	18.18%	100.00%
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8			
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6			
61	East	KING / WESTMINSTER	8			
61	West	CAMBRIDGE CENTRE	8			
61	West	KING / WESTMINSTER	9			
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	9			
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	9			
62	West	SOUTHGATE / DAY	18	100.00%	100.00%	
62	West	AINSLIE STREET TERMINAL	44	75.00%	0.00%	75.00%
62	West	WOODSIDE / CEDAR	22	85.71%	14.29%	85.71%
63	East	ALISON / ELGIN	22	85.71%	85.71%	
63	East	AINSLIE STREET TERMINAL	45	0.00%	0.00%	100.00%
63	East	DUNDAS / FRANKLIN	23	71.43%	14.29%	85.71%
63	East	CHAMPLAIN / CHRISTOPHER	22	40.00%	0.00%	100.00%
64	West	LANG'S / WALTER	16	0.00%	100.00%	
64	West	EAGLE / KING	16	100.00%	0.00%	100.00%
64	West	CAMBRIDGE CENTRE TERMINAL	32	0.00%	0.00%	100.00%
64	West	ROSE / ARGYLE	16	80.00%	40.00%	100.00%
64	West	BISHOP / RAILWAY	16	83.33%	0.00%	100.00%
65	North	HOLIDAY INN TERMINAL	32			
65	North	WINSTON / SCOTTDAL	16			
65	North	FISHER MILLS / FEARWOOD	16	100.00%	0.00%	100.00%
65	North	FRANKLIN / WINSTON	16	100.00%	10.00%	100.00%
66	East	FRANKLIN / WINSTON	8			
66	East	COOPER / ELLIS	8			
66	East	HOLIDAY INN TERMINAL	16			
66	East	WINSTON / WESTBURY	8			
71	East	QUEEN / HUNGERFORD	18	50.00%	25.00%	
71	East	HOLIDAY INN TERMINAL	36	25.00%	0.00%	
71	East	ELLIS / ADLER	18	85.71%	0.00%	85.71%
110	Downward	FAIRVIEW PARK	16			
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	16	71.43%	100.00%	
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	14			
110	Upward	PIONEER / OLD CARRIAGE	14	33.33%	100.00%	
110	Upward	FAIRVIEW PARK	14	0.00%	0.00%	100.00%
111	North	AINSLIE STREET TERMINAL	2			
111	South	AINSLIE STREET TERMINAL	2	100.00%	0.00%	
200	Downward	CONESTOGA MALL	450			
200	Downward	McCORMICK	448	78.13%	98.96%	
200	Downward	R & T PARK	447	9.24%	87.39%	100.00%
200	Downward	U WATERLOO	447	13.79%	3.45%	100.00%
200	Downward	LAURIER	447	62.50%	50.00%	87.50%
200	Downward	KING / WILLIS	47	38.46%	15.38%	100.00%
200	Downward	UPTOWN WATERLOO	302	24.00%	18.67%	100.00%
200	Downward	GRAND RIVER HOSPITAL	446	7.55%	29.25%	74.53%
200	Downward	CHARLES TERMINAL	447	62.40%	7.20%	98.40%
200	Downward	OTTAWA	447	40.00%	41.67%	93.33%
200	Downward	FAIRVIEW	445	18.18%	36.36%	90.91%
200	Downward	SMART!CENTRES CAMBRIDGE	446	68.42%	89.47%	78.95%
200	Downward	CAMBRIDGE CENTRE	446	0.00%	0.00%	100.00%
200	Downward	AINSLIE STREET TERMINAL	447	100.00%	25.00%	50.00%
200	Upward	AINSLIE STREET TERMINAL	534			
200	Upward	CAMBRIDGE CENTRE	528	77.78%	100.00%	
200	Upward	SMART!CENTRES CAMBRIDGE	528	91.67%	50.00%	83.33%
200	Upward	FAIRVIEW	531	58.33%	14.58%	91.67%
200	Upward	OTTAWA	530	68.29%	74.39%	96.34%
200	Upward	CHARLES TERMINAL	532	58.76%	11.34%	97.94%
200	Upward	GRAND RIVER HOSPITAL	526	97.50%	24.17%	92.50%
200	Upward	UPTOWN WATERLOO	527	33.08%	40.00%	100.00%
200	Upward	LAURIER	527	71.43%	57.14%	100.00%
200	Upward	U WATERLOO	526	71.43%	42.86%	100.00%
200	Upward	R & T PARK	525	13.64%	68.69%	100.00%
200	Upward	McCORMICK	526	2.27%	2.27%	100.00%
200	Upward	CONESTOGA MALL	527	29.52%	7.62%	90.48%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
1	East	CHARLES STREET TERMINAL	32	0.00%		
1	East	FREDERICK / WEBER	33	0.00%	33.33%	100.00%
1	East	BECKER / BELLEVIEW	21	0.00%	0.00%	100.00%
1	East	LORRAINE / BIRKSHIRE	12			
1	East	RIVER / HICKSON	21	0.00%	100.00%	100.00%
1	East	OTTAWA / OLDFIELD	12	0.00%	100.00%	33.33%
1	East	STANLEY PARK MALL TERMINAL	33			
1	West	STANLEY PARK MALL TERMINAL	28	0.00%		
1	West	LACKNER / BANBURY	16	0.00%	100.00%	100.00%
1	West	BELLEVIEW / BECKER	12	0.00%	100.00%	100.00%
1	West	RIVER / HALLIWELL	28			
1	West	WEBER / SCOTT	28	0.00%	100.00%	50.00%
1	West	CHARLES STREET TERMINAL	28			
2	Downward	HIGHLAND HILLS MALL	15			
2	Downward	GREENBROOK / WESTMOUNT	14			
2	Downward	GREENBROOK / STIRLING	14	0.00%	100.00%	0.00%
2	Downward	SOUTHMOOR / AVALON	14	0.00%	100.00%	100.00%
2	Downward	CHARLES STREET TERMINAL	15			
2	Upward	CHARLES STREET TERMINAL	15	0.00%		
2	Upward	GREENBROOK / STIRLING	14	0.00%	0.00%	100.00%
2	Upward	WESTMOUNT / VILLAGE	15	0.00%	0.00%	100.00%
2	Upward	HIGHLAND HILLS MALL	14			
3	1	CHARLES STREET TERMINAL	14			
3	1	COURTLAND / STIRLING	14			
3	1	STRASBURG / TRANSIT GARAGE	14			
3	1	OTTAWA / WESTMOUNT	14	0.00%	100.00%	100.00%
3	1	WILLIAMSBURG / DINISON	14	0.00%	100.00%	100.00%
3	1	FOREST GLEN TERMINAL	14			
3	2	FOREST GLEN TERMINAL	24	0.00%		
3	2	WILLIAMSBURG / DINISON	24	0.00%	100.00%	100.00%
3	2	OTTAWA / WESTMOUNT	24	0.00%	100.00%	100.00%
3	2	STRASBURG / TRANSIT GARAGE	24			
3	2	COURTLAND / MADISON	24			
3	2	CHARLES STREET TERMINAL	24			
4	Downward	UNIVERSITY / RESURRECTION	12	0.00%		
4	Downward	GLASGOW / WESTMOUNT	12	0.00%	100.00%	100.00%
4	Downward	UNION / KING	12	0.00%	100.00%	100.00%
4	Downward	MOORE / BREITHAUP	13	0.00%	100.00%	100.00%
4	Downward	CHARLES STREET TERMINAL	12			
4	Upward	CHARLES STREET TERMINAL	14			
4	Upward	MOORE / WELLINGTON	14	0.00%	100.00%	50.00%
4	Upward	UNION / PARK	14	0.00%	100.00%	100.00%
4	Upward	GLASGOW / WESTMOUNT	14	0.00%	100.00%	100.00%
4	Upward	UNIVERSITY / FISCHER-HALLMAN	14			
4	Upward	UNIVERSITY / BAKER	9			
4	Upward	UNIVERSITY / RESURRECTION	14			
5	1	UPTOWN WATERLOO	14	0.00%		
5	1	ERB / WESTMOUNT	14			
5	1	FISCHER-HALLMAN / ERB	14	0.00%	100.00%	100.00%
5	1	KEATS / KEATSWOOD	14			
5	2	KEATS / KEATSWOOD	23			
5	2	GATEVIEW / WESTVALE	23	0.00%	100.00%	25.00%
5	2	ERB / FISCHER-HALLMAN	23	0.00%	40.00%	100.00%
5	2	ERB / WESTMOUNT	23	0.00%	100.00%	100.00%
5	2	KING / WILLIS	23			
6	Downward	DANIEL / BLOOMINGDALE	13	0.00%		
6	Downward	LANCASTER / HAMEL	14			
6	Downward	LANCASTER / GUELPH	13	0.00%	100.00%	100.00%
6	Downward	WELLINGTON / MARGARET	13	0.00%	100.00%	100.00%
6	Downward	CHARLES STREET TERMINAL	13			
6	Upward	CHARLES STREET TERMINAL	14			
6	Upward	WELLINGTON / MARGARET	14			
6	Upward	LANCASTER / GUELPH	14			
6	Upward	LANCASTER / HAMEL	14			
6	Upward	DANIEL / BLOOMINGDALE	14			
7	Downward	RING / NORTH CAMPUS	15	0.00%		
7	Downward	U WATERLOO	10	0.00%		
7	Downward	CONESTOGA MALL	15	0.00%		
7	Downward	COLUMBIA / HAZEL	15	0.00%	50.00%	100.00%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
7	Downward	UNIVERSITY / KING	11	0.00%	0.00%	100.00%
7	Downward	KING / UNIVERSITY	32	0.00%	100.00%	100.00%
7	Downward	UPTOWN WATERLOO	13	0.00%	100.00%	66.67%
7	Downward	KING / WILLIS	3			
7	Downward	CHARLES STREET TERMINAL	43	0.00%	100.00%	100.00%
7	Downward	KING / OTTAWA	39	0.00%	100.00%	37.50%
7	Downward	FOURTH / CONNAUGHT	9	0.00%	100.00%	75.00%
7	Downward	FOURTH / WILSON	8	0.00%	100.00%	100.00%
7	Downward	KINZIE / WEBER	22	0.00%	100.00%	0.00%
7	Downward	FAIRVIEW PARK	25			
7	Downward	FAIRVIEW PARK MALL	14			
7	Upward	FAIRVIEW PARK MALL	19	0.00%		
7	Upward	FAIRVIEW PARK	27	0.00%		
7	Upward	CONNAUGHT / FIFTH	18	0.00%	0.00%	100.00%
7	Upward	FOURTH / WILSON	7			
7	Upward	WEBER / KINZIE	21	0.00%	100.00%	100.00%
7	Upward	KING / OTTAWA	48	0.00%	100.00%	60.00%
7	Upward	CHARLES STREET TERMINAL	58	60.00%	100.00%	25.00%
7	Upward	UPTOWN WATERLOO	58	0.00%	100.00%	80.00%
7	Upward	KING / UNIVERSITY	50	0.00%	100.00%	66.67%
7	Upward	UNIVERSITY / KING	8	0.00%	100.00%	100.00%
7	Upward	CONESTOGA MALL	30			
7	Upward	RING / UNIVERSITY	8	0.00%	100.00%	50.00%
7	Upward	COLUMBIA / HAZEL	20	0.00%	0.00%	100.00%
7	Upward	RING / NORTH CAMPUS	8			
7	Upward	U WATERLOO	20			
8	North	FAIRVIEW PARK	20	0.00%		
8	North	FAIRVIEW PARK MALL	10			
8	North	FRANKLIN / PROSPECT	19			
8	North	WALTON / VANIER	11			
8	North	CHARLES STREET TERMINAL	55	66.67%	100.00%	0.00%
8	North	MARGARET / WELLINGTON	26	0.00%	100.00%	0.00%
8	North	COURTLAND / STIRLING	11			
8	North	OTTAWA / WEBER	19	0.00%	100.00%	50.00%
8	North	UNION / WEBER	25	0.00%	100.00%	33.33%
8	North	BELMONT / HIGHLAND	27	0.00%	100.00%	100.00%
8	North	UNION / WESTMOUNT	29	0.00%	100.00%	60.00%
8	North	UNIVERSITY / KING	52			
8	North	UNIVERSITY / SEAGRAM	29	0.00%	0.00%	100.00%
8	South	UNIVERSITY / KING	54	0.00%		
8	South	UNIVERSITY / SEAGRAM	25	0.00%	100.00%	75.00%
8	South	UNION / WEBER	29	0.00%	66.67%	66.67%
8	South	UNION / WESTMOUNT	25	0.00%	0.00%	100.00%
8	South	MARGARET / WELLINGTON	29	0.00%	100.00%	57.14%
8	South	BELMONT / BURN	27	0.00%	100.00%	100.00%
8	South	COURTLAND / VERNON	19			
8	South	CHARLES STREET TERMINAL	56	100.00%	100.00%	0.00%
8	South	WALTON / VANIER	19			
8	South	OTTAWA / MCKENZIE	9			
8	South	FAIRVIEW PARK	17			
8	South	FAIRVIEW PARK MALL	11			
8	South	WEBER / FRANKLIN	9	0.00%	100.00%	0.00%
9	Downward	CONESTOGA MALL	21	0.00%		
9	Downward	NORTHFIELD / WEBER	21	0.00%	0.00%	100.00%
9	Downward	HIGHPOINT / WINTERGREEN	21			
9	Downward	PARKSIDE / GLENELM	21			
9	Downward	HAZEL / WILDWOOD	21	0.00%	100.00%	50.00%
9	Downward	HAZEL / UNIVERSITY	18	0.00%	100.00%	100.00%
9	Downward	U WATERLOO	21			
9	Upward	U WATERLOO	22	0.00%		
9	Upward	UNIVERSITY / KING	1			
9	Upward	HAZEL / UNIVERSITY	23	0.00%	83.33%	100.00%
9	Upward	HAZEL / BEARINGER	23	0.00%	85.71%	100.00%
9	Upward	PARKSIDE / GLENELM	8	0.00%	100.00%	50.00%
9	Upward	HIGHPOINT / WINTERGREEN	23	0.00%	83.33%	100.00%
9	Upward	NORTHFIELD / WEBER	23	0.00%	83.33%	66.67%
9	Upward	CONESTOGA MALL	23			
10	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	19			
10	Inbound	PINNACLE / OLD MILL	19			



Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
10	Inbound	PIONEER / OLD CARRIAGE	19			
10	Inbound	DOON VILLAGE / MILLWOOD	19			
10	Inbound	FAIRVIEW PARK	14			
10	Inbound	FAIRVIEW PARK MALL	5			
10	Outbound	FAIRVIEW PARK	15	0.00%		
10	Outbound	DOON VILLAGE / MILLWOOD	15			
10	Outbound	PIONEER / OLD CARRIAGE	15	0.00%	100.00%	25.00%
10	Outbound	PINNACLE / OLD MILL	15	0.00%	0.00%	100.00%
10	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	15			
11	1	CHARLES STREET TERMINAL	15	0.00%		
11	1	STIRLING / COURTLAND	25	0.00%	100.00%	50.00%
11	1	ALPINE / OTTAWA	25	0.00%	100.00%	100.00%
11	1	COUNTRY HILL / BLOCK LINE	15	0.00%	100.00%	100.00%
11	1	FOREST GLEN TERMINAL	15			
11	2	FOREST GLEN TERMINAL	30	0.00%		
11	2	KINGSWOOD / BLOCK LINE	30			
11	2	HOFFMAN / OTTAWA	30	0.00%	100.00%	0.00%
11	2	STIRLING / COURTLAND	30	0.00%	100.00%	50.00%
11	2	CHARLES STREET TERMINAL	30			
12	Downward	CONESTOGA MALL	31			
12	Downward	BRIDGE / UNIVERSITY	24	0.00%	100.00%	50.00%
12	Downward	UNIVERSITY / KING	38	75.00%	50.00%	25.00%
12	Downward	UNIVERSITY / SEAGRAM	38	0.00%	77.78%	77.78%
12	Downward	FISCHER-HALLMAN / UNIVERSITY	38	0.00%	66.67%	75.00%
12	Downward	HIGHLAND HILLS MALL	38	28.57%	100.00%	71.43%
12	Downward	WESTMOUNT / OTTAWA	29	0.00%	75.00%	100.00%
12	Downward	FOREST GLEN TERMINAL	30	20.00%	60.00%	80.00%
12	Downward	FAIRVIEW PARK MALL	13			
12	Downward	FAIRVIEW PARK	17			
12	Upward	FAIRVIEW PARK	19			
12	Upward	FAIRVIEW PARK MALL	12			
12	Upward	FOREST GLEN TERMINAL	32	66.67%	100.00%	33.33%
12	Upward	WESTMOUNT / OTTAWA	35	0.00%	100.00%	33.33%
12	Upward	HIGHLAND HILLS MALL	32	33.33%	66.67%	100.00%
12	Upward	FISCHER-HALLMAN / UNIVERSITY	32			
12	Upward	UNIVERSITY / SEAGRAM	32	0.00%	100.00%	25.00%
12	Upward	UNIVERSITY / KING	32	100.00%	100.00%	33.33%
12	Upward	BRIDGE / UNIVERSITY	23			
12	Upward	CONESTOGA MALL	26			
13	1	U WATERLOO	23			
13	1	COLUMBIA / FISCHER-HALLMAN	23	0.00%	100.00%	50.00%
13	1	LAURELWOOD / ERBSVILLE	23			
13	2	LAURELWOOD / ERBSVILLE	24	0.00%		
13	2	COLUMBIA / FISCHER-HALLMAN	24	0.00%	100.00%	66.67%
13	2	U WATERLOO	24			
14	1	CONESTOGA MALL	3			
14	1	BATHURST / MCMURRAY	3			
14	1	WYMAN / COLBY	3			
14	2	WYMAN / COLBY(2)	4	0.00%		
14	2	WYMAN / COLBY	6	0.00%	100.00%	66.67%
14	2	MCMURRAY / NORTHLAND	6	0.00%	66.67%	83.33%
14	2	CONESTOGA MALL	6			
15	East	CHARLES STREET TERMINAL	22	0.00%		
15	East	QUEEN / LANCASTER	22			
15	East	EDNA / FREDERICK	22	0.00%	100.00%	50.00%
15	East	LACKNER / VICTORIA	22			
15	West	LACKNER / VICTORIA	14	0.00%		
15	West	NATCHEZ / HALIFAX	14			
15	West	FREDERICK / EDNA	14	0.00%	100.00%	50.00%
15	West	QUEEN / LANCASTER	14	0.00%	100.00%	100.00%
15	West	CHARLES STREET TERMINAL	14			
16	Inbound	CONESTOGA COLLEGE - DOON AT DOOR 3	5	0.00%		
16	Inbound	PIONEER / BECHTEL	9	0.00%	100.00%	66.67%
16	Inbound	STRASBURG / TRILLIUM	5	0.00%	100.00%	100.00%
16	Inbound	FOREST GLEN TERMINAL	5			
16	Outbound	FOREST GLEN TERMINAL	11			
16	Outbound	STRASBURG / TRILLIUM	11			
16	Outbound	PIONEER / BECHTEL	11			
16	Outbound	Doon Public School	1			

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
16	Outbound	CONESTOGA COLLEGE - DOON AT DOOR 3	11			
17	Downward	LACKNER / VICTORIA	4	0.00%		
17	Downward	KEEWATIN / OTTAWA	4			
17	Downward	STANLEY PARK MALL INTERNAL / RIVER	4			
17	Downward	RIVER / FAIRWAY	4	0.00%	100.00%	0.00%
17	Downward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK	2			
17	Upward	FAIRVIEW PARK MALL	2			
17	Upward	RIVER / FAIRWAY	4			
17	Upward	STANLEY PARK MALL INTERNAL / RIVER	4	0.00%	100.00%	0.00%
17	Upward	KEEWATIN / OTTAWA	4	0.00%	100.00%	100.00%
17	Upward	LACKNER / VICTORIA	4			
18	Downward	MAPLE / GUELPH	14			
18	Downward	GUELPH / MARGARET	14			
18	Downward	WEBER / WELLINGTON	14	0.00%	100.00%	0.00%
18	Downward	CHARLES STREET TERMINAL	14			
18	Upward	CHARLES STREET TERMINAL	14	0.00%		
18	Upward	WEBER / WELLINGTON	2			
18	Upward	GUELPH / FLOYD	14	0.00%	100.00%	100.00%
18	Upward	MAPLE / GUELPH	14			
19	1	CHARLES STREET TERMINAL	13	0.00%		
19	1	VICTORIA / BELMONT	13			
19	1	CHOPIN / BRYBECK	13			
19	1	HAZELGLEN / VICTORIA	13	0.00%	100.00%	33.33%
19	1	WESTFOREST / HIDDEN CREEK	13	0.00%	100.00%	100.00%
19	1	HIGHLAND HILLS MALL	13			
19	2	HIGHLAND HILLS MALL	13	0.00%		
19	2	WESTFOREST / VICTORIA	13	0.00%	100.00%	100.00%
19	2	HAZELGLEN / MOOREGATE	13	0.00%	100.00%	100.00%
19	2	CHOPIN / BRYBECK	13	0.00%	100.00%	100.00%
19	2	VICTORIA / BELMONT	13	0.00%	100.00%	100.00%
19	2	CHARLES STREET TERMINAL	12			
20	1	CHARLES STREET TERMINAL	11			
20	1	VICTORIA / BELMONT	11			
20	1	INGLESIDE / HAZELGLEN	11			
20	2	HAZELGLEN / MOOREGATE	10	0.00%		
20	2	INGLESIDE / HAZELGLEN	22			
20	2	CHOPIN / BRYBECK	22	0.00%	100.00%	100.00%
20	2	VICTORIA / BELMONT	22			
20	2	CHARLES STREET TERMINAL	22			
22	East	HIGHLAND HILLS MALL	17			
22	East	ACTIVA / GREY FOX	17	0.00%	100.00%	50.00%
22	East	ACTIVA / SNOWDROP	17	0.00%	100.00%	100.00%
22	East	TILLSLEY / WESTMOUNT	17	0.00%	100.00%	100.00%
22	East	FOREST GLEN TERMINAL	17			
22	East	OTTAWA / HWY 8 RAMP	17			
22	East	STIRLING / COURTLAND	16	0.00%	100.00%	0.00%
22	East	CHARLES STREET TERMINAL	16			
22	West	CHARLES STREET TERMINAL	9			
22	West	STIRLING / COURTLAND	19	0.00%	100.00%	40.00%
22	West	OTTAWA / HWY 8 RAMP	9	0.00%	100.00%	100.00%
22	West	FOREST GLEN TERMINAL	9			
22	West	ERINBROOK / HEDGESTONE	9	0.00%	100.00%	0.00%
22	West	DAVID BERGEY / PEACH BLOSSOM	9	0.00%	0.00%	100.00%
22	West	ACTIVA / GREY FOX	9	0.00%	100.00%	100.00%
22	West	HIGHLAND HILLS MALL	9			
23	East	CHARLES STREET TERMINAL	10			
23	East	FREDERICK / DUNHAM	10			
23	East	RIVER / OTTAWA	10	0.00%	100.00%	0.00%
23	East	OTTAWA / LACKNER	10	0.00%	100.00%	100.00%
23	East	LACKNER / CORFIELD	10	0.00%	100.00%	75.00%
23	East	FAIRVIEW PARK MALL	3			
23	East	FAIRVIEW PARK	6			
23	West	FAIRVIEW PARK MALL	4			
23	West	FAIRVIEW PARK	7	0.00%		
23	West	LACKNER / CORFIELD	12			
23	West	OTTAWA / OLDFIELD	12			
23	West	RIVER / OTTAWA	12			
23	West	FREDERICK / EDNA	12	0.00%	100.00%	50.00%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
23	West	CHARLES STREET TERMINAL	12			
24	1	CHARLES STREET TERMINAL	11			
24	1	HIGHLAND / BELMONT	12	0.00%	100.00%	0.00%
24	1	HIGHLAND HILLS MALL	12	0.00%	100.00%	0.00%
24	1	ROLLING MEADOWS / WESTHEIGHTS	12			
24	2	ROLLING MEADOWS / WESTHEIGHTS	9			
24	2	WESTHEIGHTS / WINDING	9			
24	2	WESTHEIGHTS / WESTFOREST	8			
24	2	HIGHLAND HILLS MALL	9	100.00%	100.00%	33.33%
24	2	HIGHLAND / BELMONT	9			
24	2	CHARLES STREET TERMINAL	9			
25	1	CHARLES STREET TERMINAL	26			
25	1	QUEENS / WESTMOUNT	29	0.00%	100.00%	100.00%
25	1	HIGHLAND HILLS MALL	30			
25	1	FORESTWOOD / MCGARRY	26			
25	1	DRIFTWOOD / WESTHEIGHTS	27	0.00%	100.00%	25.00%
25	1	GOLDEN MEADOW / HAVENWOOD	26			
25	2	GOLDEN MEADOW / HAVENWOOD	34	0.00%		
25	2	WESTHEIGHTS / LORILEE	34	0.00%	100.00%	55.56%
25	2	HIGHLAND HILLS MALL	34	66.67%	0.00%	83.33%
25	2	QUEENS / WESTMOUNT	34	0.00%	83.33%	33.33%
25	2	CHARLES STREET TERMINAL	34			
26	1	FOREST GLEN TERMINAL	19			
26	1	TRILLIUM / STRASBURG	19			
26	1	TRILLIUM / GROFF	19			
26	2	TRILLIUM / GROFF	19	0.00%		
26	2	TRILLIUM / STRASBURG	19	0.00%	100.00%	66.67%
26	2	FOREST GLEN TERMINAL	19			
27	1	FAIRVIEW PARK	10			
27	1	FAIRVIEW PARK MALL	4			
27	1	MORRISON / MANOR	14			
27	1	QUINTE / MORRISON	14			
27	2	QUINTE / MORRISON	9			
27	2	FAIRWAY / KING	9			
27	2	FAIRVIEW PARK	7			
27	2	FAIRVIEW PARK MALL	2			
29	1	RING / UNIVERSITY	9			
29	1	FISCHER-HALLMAN / KEATS	9	0.00%	100.00%	0.00%
29	1	ERB / ERB	1			
29	2	KEATS / FISCHER-HALLMAN	9	0.00%		
29	2	RING / UNIVERSITY	9			
31	Downward	CONESTOGA MALL	6	0.00%		
31	Downward	NORTHFIELD / BRIDGE	9			
31	Downward	UNIVERSITY / RIM PARK INTERNAL	6	0.00%	100.00%	100.00%
31	Downward	UNIVERSITY / LEXINGTON	9			
31	Downward	LEXINGTON / ANNDALE	9	0.00%	100.00%	100.00%
31	Downward	COLUMBIA / SPRUCE	9	0.00%	66.67%	66.67%
31	Downward	RING / UNIVERSITY	9			
31	Upward	RING / UNIVERSITY	7	0.00%		
31	Upward	COLUMBIA / KING	7	0.00%	0.00%	100.00%
31	Upward	LEXINGTON / DEARBORN	7	0.00%	100.00%	20.00%
31	Upward	UNIVERSITY / LEXINGTON	7	0.00%	50.00%	100.00%
31	Upward	UNIVERSITY / RIM PARK INTERNAL	4	0.00%	100.00%	100.00%
31	Upward	NORTHFIELD / BRIDGE	7	0.00%	80.00%	60.00%
32	1	CONESTOGA MALL	1			
32	1	KUMPF / NORTHFIELD	1			
32	2	KUMPF / NORTHFIELD	14	0.00%		
32	2	WEBER / GOLDEN EAGLE	17	0.00%	92.31%	84.62%
32	2	CONESTOGO / COLBY	14	0.00%	100.00%	100.00%
32	2	CONESTOGA MALL	13			
33	1	FOREST GLEN TERMINAL	2			
33	1	STRASBURG / TRILLIUM	2			
33	1	PARKVALE / NEWCASTLE	2			
33	2	HURON / NEWCASTLE	2			
33	2	STRASBURG / TRILLIUM	2	0.00%	100.00%	100.00%
33	2	FOREST GLEN TERMINAL	2			
35	1	KING / WILLIS	19	0.00%		
35	1	ERB / WEBER	19	0.00%	100.00%	100.00%
35	1	BRIDGEPORT / LANCASTER	19	0.00%	100.00%	100.00%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
35	1	AUBURN / SABLE	19	0.00%	100.00%	0.00%
35	1	BRIDGE / LEXINGTON	20	0.00%	100.00%	50.00%
35	1	CHESAPEAKE / SPINNAKER	19	0.00%	50.00%	100.00%
35	1	CONESTOGA MALL	20			
35	2	CONESTOGA MALL	18			
35	2	CHESAPEAKE / BRIGANTINE	17	0.00%	100.00%	0.00%
35	2	BRIDGE / LEXINGTON	15	0.00%	100.00%	0.00%
35	2	AUBURN / SABLE	17	0.00%	100.00%	50.00%
35	2	BRIDGEPORT / LANCASTER	16	0.00%	66.67%	66.67%
35	2	BRIDGEPORT / WEBER	17	0.00%	50.00%	50.00%
35	2	UPTOWN WATERLOO	17			
51	Inbound	HOLIDAY INN TERMINAL	40	0.00%		
51	Inbound	SMART!CENTRES CAMBRIDGE	40	0.00%	100.00%	30.77%
51	Inbound	CAMBRIDGE CENTRE TERMINAL	42	66.67%	100.00%	33.33%
51	Inbound	AINSLIE STREET TERMINAL	39			
51	Outbound	AINSLIE STREET TERMINAL	48			
51	Outbound	CAMBRIDGE CENTRE TERMINAL	47	25.00%	100.00%	25.00%
51	Outbound	SMART!CENTRES CAMBRIDGE	47	0.00%	100.00%	36.67%
51	Outbound	HOLIDAY INN TERMINAL	47			
52	North	AINSLIE STREET TERMINAL	25			
52	North	CORONATION / BARRETT	20			
52	North	KING / LOWTHER	20			
52	North	PRESTON / FOUNTAIN	19			
52	North	SHANTZ HILL / HWY 401 RAMP	19	0.00%	100.00%	0.00%
52	North	SPORTSWORLD	19			
52	North	FAIRVIEW PARK	20			
52	South	FAIRVIEW PARK MALL	5			
52	South	FAIRVIEW PARK	24	0.00%		
52	South	SPORTSWORLD	25			
52	South	SHANTZ HILL / PRESTON	29	0.00%	100.00%	0.00%
52	South	PRESTON / FOUNTAIN	29	0.00%	0.00%	100.00%
52	South	KING / LOWTHER	29	0.00%	100.00%	50.00%
52	South	CORONATION / MARTIN	29	0.00%	50.00%	100.00%
52	South	AINSLIE STREET TERMINAL	29			
53	Inbound	HOLIDAY INN TERMINAL	8	0.00%		
53	Inbound	FRANKLIN / SAGINAW	8	0.00%	100.00%	25.00%
53	Inbound	DOBBIE / SAVAGE	8	0.00%	100.00%	100.00%
53	Inbound	MAIN / DUNDAS	8	0.00%	100.00%	83.33%
53	Inbound	AINSLIE STREET TERMINAL	8			
53	Outbound	AINSLIE STREET TERMINAL	8			
53	Outbound	MAIN / DUNDAS	8			
53	Outbound	DOBBIE / SAVAGE	8			
53	Outbound	FRANKLIN / SAGINAW	7			
53	Outbound	HOLIDAY INN TERMINAL	8			
54	East	MAIN / DUNDAS	42	0.00%	100.00%	0.00%
54	East	LISBON PINES / GATEHOUSE	43	0.00%	64.29%	92.86%
54	East	AINSLIE STREET TERMINAL	85			
54	East	CHAMPLAIN / CHRISTOPHER	43	0.00%	0.00%	100.00%
55	West	SOUTHWOOD / CEDAR	22	0.00%	100.00%	0.00%
55	West	AINSLIE STREET TERMINAL	43			
55	West	SOUTHWOOD / ST ANDREWS	23			
55	West	ST ANDREWS / GILHOLM	23			
56	West	BISHOP / RAILWAY	26			
56	West	ROSE / ARGYLE	26	0.00%	100.00%	80.00%
56	West	CAMBRIDGE CENTRE TERMINAL	52			
56	West	WESTMINSTER / KING	26	0.00%	66.67%	100.00%
56	West	LANG'S / CONCESSION	26	0.00%	80.00%	100.00%
57	West	SUNSET / SAXONY	36			
57	West	BLAIR / BISMARCK	36	0.00%	100.00%	0.00%
57	West	AINSLIE STREET TERMINAL	76			
57	West	HILLCREST / CHURCHILL	36	0.00%	100.00%	75.00%
58	East	MOSCRIP / BRONSON	11			
58	East	MUNCH / ELGIN	11			
58	East	AINSLIE STREET TERMINAL	22			
58	East	HILLTOP / FRANKLIN	11	0.00%	100.00%	0.00%
59	East	CHAMPLAIN / CHRISTOPHER	22			
59	East	AINSLIE STREET TERMINAL	44			
59	East	CHAMPLAIN / ELGIN	23			
60	East	GLAMIS / ROBSON	24	0.00%	100.00%	0.00%

Route	Direction*	Timepoint	Obs.	Early Cause Statistics		
				E1	E2	E3
60	East	CAMBRIDGE CENTRE TERMINAL	48			
60	East	ELGIN / SAGINAW	24	0.00%	100.00%	100.00%
60	East	MUNCH / KOVAC	24	0.00%	100.00%	100.00%
61	East	CONESTOGA COLLEGE - DOON AT DOOR 3	8	0.00%		
61	East	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	6	0.00%	0.00%	100.00%
61	East	KING / WESTMINSTER	8	0.00%	100.00%	12.50%
61	West	CAMBRIDGE CENTRE	8			
61	West	KING / WESTMINSTER	9	0.00%	100.00%	0.00%
61	West	NEW DUNDEE / CONESTOGA COLLEGE RESIDENCE	9	0.00%	100.00%	33.33%
61	West	CONESTOGA COLLEGE - DOON AT DOOR 3	9			
62	West	SOUTHGATE / DAY	18	0.00%	100.00%	50.00%
62	West	AINSLIE STREET TERMINAL	44	0.00%		
62	West	WOODSIDE / CEDAR	22	0.00%	80.00%	20.00%
63	East	ALISON / ELGIN	22			
63	East	AINSLIE STREET TERMINAL	45			
63	East	DUNDAS / FRANKLIN	23			
63	East	CHAMPLAIN / CHRISTOPHER	22			
64	West	LANG'S / WALTER	16			
64	West	EAGLE / KING	16			
64	West	CAMBRIDGE CENTRE TERMINAL	32			
64	West	ROSE / ARGYLE	16			
64	West	BISHOP / RAILWAY	16	0.00%	100.00%	100.00%
65	North	HOLIDAY INN TERMINAL	32	0.00%		
65	North	WINSTON / SCOTTDAL	16	0.00%	100.00%	71.43%
65	North	FISHER MILLS / FEARNWOOD	16	0.00%	50.00%	100.00%
65	North	FRANKLIN / WINSTON	16			
66	East	FRANKLIN / WINSTON	8	0.00%	100.00%	0.00%
66	East	COOPER / ELLIS	8	0.00%	100.00%	100.00%
66	East	HOLIDAY INN TERMINAL	16			
66	East	WINSTON / WESTBURY	8	0.00%	100.00%	80.00%
71	East	QUEEN / HUNGERFORD	18			
71	East	HOLIDAY INN TERMINAL	36	0.00%		
71	East	ELLIS / ADLER	18			
110	Downward	FAIRVIEW PARK	16			
110	Downward	CONESTOGA COLLEGE - DOON AT DOOR 3	16			
110	Upward	CONESTOGA COLLEGE - DOON AT DOOR 3	14			
110	Upward	PIONEER / OLD CARRIAGE	14	0.00%	100.00%	0.00%
110	Upward	FAIRVIEW PARK	14			
111	North	AINSLIE STREET TERMINAL	2			
111	South	AINSLIE STREET TERMINAL	2			
200	Downward	CONESTOGA MALL	450	0.00%		
200	Downward	McCORMICK	448	0.00%	100.00%	100.00%
200	Downward	R & T PARK	447	0.00%	90.91%	63.64%
200	Downward	U WATERLOO	447	0.00%	100.00%	68.00%
200	Downward	LAURIER	447	0.00%		
200	Downward	KING / WILLIS	47	0.00%	100.00%	85.71%
200	Downward	UPTOWN WATERLOO	302	0.00%	100.00%	60.87%
200	Downward	GRAND RIVER HOSPITAL	446	0.00%	100.00%	76.47%
200	Downward	CHARLES TERMINAL	447	46.67%	63.33%	70.00%
200	Downward	OTTAWA	447	0.00%	98.25%	59.65%
200	Downward	FAIRVIEW	445	0.00%	100.00%	70.00%
200	Downward	SMART!CENTRES CAMBRIDGE	446	0.00%	100.00%	30.97%
200	Downward	CAMBRIDGE CENTRE	446	0.00%	100.00%	75.00%
200	Downward	AINSLIE STREET TERMINAL	447			
200	Upward	AINSLIE STREET TERMINAL	534	0.00%		
200	Upward	CAMBRIDGE CENTRE	528	0.00%		
200	Upward	SMART!CENTRES CAMBRIDGE	528	0.00%		
200	Upward	FAIRVIEW	531	0.00%	100.00%	31.25%
200	Upward	OTTAWA	530	0.00%	97.44%	64.10%
200	Upward	CHARLES TERMINAL	532	80.56%	52.78%	58.33%
200	Upward	GRAND RIVER HOSPITAL	526	0.00%	100.00%	66.67%
200	Upward	UPTOWN WATERLOO	527	0.00%	100.00%	75.00%
200	Upward	LAURIER	527	0.00%		
200	Upward	U WATERLOO	526	0.00%	100.00%	100.00%
200	Upward	R & T PARK	525	0.00%	97.30%	62.16%
200	Upward	McCORMICK	526	0.00%	100.00%	80.70%
200	Upward	CONESTOGA MALL	527			

## **Appendix D. Number of Observations per Route**

(3 pages)

Route	Direction*	Timepoints**	Weekday A.M. Peak		Weekday P.M. Peak	
			Total Observations	Average Observations per Timepoint	Total Observations	Average Observations per Timepoint
1	East	7	284	41	129	18
	West	6	335	56	125	21
2	Downward	4	131	33	56	14
	Upward	5	112	22	65	13
3	1	6	175	29	122	20
	2	6	348	58	108	18
4	Downward	5	121	24	60	12
	Upward	7	158	23	92	13
5	1	4	139	35	60	15
	2	5	200	40	63	13
6	Downward	5	101	20	46	9
	Upward	5	108	22	50	10
7	Downward	15	495	33	303	20
	Upward	15	711	47	317	21
8	North	13	657	51	261	20
	South	13	597	46	278	21
9	Downward	7	318	45	195	28
	Upward	7	260	37	226	32
10	Inbound	6	159	27	125	21
	Outbound	5	110	22	122	24
11	1	5	212	42	138	28
	2	5	319	64	209	42
12	Downward	10	549	55	248	25
	Upward	10	463	46	169	17
13	1	3	109	36	78	26
	2	3	101	34	98	33
14	1	3	36	12	8	3
	2	4	54	14	16	4
15	East	4	145	36	90	23
	West	5	145	29	80	16
16	Inbound	4	46	12	58	15
	Outbound	4	107	27	60	15
17	Downward	5	87	17	17	3
	Upward	6	66	11	20	3
18	Downward	4	96	24	39	10
	Upward	4	76	19	33	8
19	1	6	107	18	162	27
	2	6	136	23	126	21
20	1	3	90	30	63	21

Route	Direction*	Timepoints**	Weekday A.M. Peak		Weekday P.M. Peak	
			Total Observations	Average Observations per Timepoint	Total Observations	Average Observations per Timepoint
22	2	4	207	52	84	21
	East	8	307	38	144	18
	West	8	178	22	76	10
23	East	7	149	21	97	14
	West	7	232	33	65	9
24	1	4	71	18	47	12
25	2	6	125	21	54	9
	1	7	349	50	189	27
26	2	5	240	48	105	21
	1	3	96	32	27	9
27	2	3	87	29	27	9
	1	4	84	21	51	13
29	2	4	69	17	33	8
	1	2	25	13	16	8
31	2	2	24	12	12	6
	Downward	7	88	13	54	8
	Upward	7	69	10	30	4
32	2	4	96	24	22	6
33	1	3	26	9	16	5
	2	3	27	9	20	7
35	1	7	316	45	95	14
	2	7	272	39	95	14
51	Inbound	4	325	81	144	36
	Outbound	4	328	82	176	44
52	North	7	357	51	131	19
	South	8	429	54	142	18
53	Inbound	5	80	16	40	8
	Outbound	5	79	16	40	8
54	East	4	381	95	220	55
55	West	4	255	64	112	28
56	West	5	264	53	171	34
57	West	4	450	113	173	43
58	East	4	156	39	70	18
59	East	3	206	69	86	29
60	East	4	210	53	140	35
61	East	4	22	6	24	6
	West	4	46	12	17	4
62	West	3	162	54	88	29
63	East	4	243	61	105	26



Route	Direction*	Timepoints**	Weekday A.M. Peak		Weekday P.M. Peak	
			Total Observations	Average Observations per Timepoint	Total Observations	Average Observations per Timepoint
<b>64</b>	West	5	174	35	108	22
<b>65</b>	North	4	167	42	85	21
<b>66</b>	East	4	84	21	35	9
<b>67</b>	North	2	0	0	21	11
<b>71</b>	East	3	160	53	72	24
<b>110</b>	Downward	3	66	22	64	21
	Upward	3	57	19	39	13
<b>111</b>	North	1	3	3	2	2
	South	1	2	2	4	4
<b>iXpress</b>	Downward	13	12369	884	6469	462
	Upward	13	14324	1102	5779	445
<b>Grand Total</b>		<b>481</b>	<b>43096</b>	<b>90</b>	<b>20431</b>	<b>42</b>

\*As given in GRT in database

\*\*Number of timepoints is based on timepoints identified by GRT for scheduling purposes, and may not necessarily match the number of timepoints in printed schedules

**Appendix E. Visualization Aid for iXpress during P.M. Peak Period,  
Upward Direction**

(1 page)

