



### Introduction

The Pennsylvania Department of Public Transportation (PennDOT) requires agencies to report standardized and verified data to support the distribution of specific operating assistance funds. Pennsylvania Act 44 (permanent regulations dated April 19, 2014) Chapter 427 – Public Transportation-Sustainable Mobility, Section 421.11 – Data Submissions and Verifications states:

- The factors used to calculate the distribution of operating assistance funds are under section 1513 of the act (relating to operating program) in excess of the base operating allocation are the following for the most recently completed fiscal year, as defined in the act:
  - Total passengers
  - Total seniors
  - Revenue vehicle hours
  - Revenue vehicle miles
- The chief operating officer of each local transportation organization shall certify the accuracy of the data factors submitted under this section may result in funding changes.

Heritage Community Transportation (HCT) contracts with ACCESS Transportation Systems, Inc. (ACCESS), a brokerage firm, for its fixed route service and the current provider is PRN. ACCESS and HCT have implemented the following processes to validate data.

### Data Collection

At the start of the daily schedule, the PRN driver enters the odometer reading into the In-Touch device and records that reading on a Driver Route Sheet along with the starting time. When passengers board the bus, passengers with rider cards swipe their cards through the In-Touch device. The operator records passengers without cards using the touch screen or swiping a card programmed to record children or courtesy passengers. The operator records all passenger de-boarding using the In-Touch device. The GPS system records the time and odometer reading at each location where a rider boards or exits the vehicle. At the end of the day, the ending odometer reading is entered into the In-Touch device and also recorded on the Driver Route Sheet along with the ending time. This starting and ending activity provides for the recording of vehicle hours and miles for each driver's daily route.

### Data Review

ACCESS staff uploads the daily PRN information and places it into spreadsheets. The following identifies the key information that is in the spreadsheet:

- Shuttle Name and Van Number
- Date

- Operator Assignment Number (labeled route)
- Stop Arrival Time
- Stop Odometer Reading
- Stop Location Name
- Stop Location Address
- recID (software record identification number)
- Number of Passengers On
- Number of Passengers Off
- Number of Passengers On-Board
- Distance to Previous Stop
- Passenger Miles
- First Pick Up Time
- Last Drop Off Time
- First Odometer Reading
- Last Odometer Reading
- Rider ID Number
- Expire Date
- Card Status

The spreadsheets are reviewed by ACCESS and any identified errors are corrected. Corrections may include operator contact or review of on-board camera footage. The spreadsheets are then sent to HCT. ACCESS also provides monthly invoices that detail the service hours, ridership and costs per hour and if applicable, fuel surcharges. ACCESS compiles monthly reports that detail vehicle miles and hours as well as revenue vehicle miles and hours. As a broker, ACCESS has extensive experience in providing statistics that conform to the requirements of the National Transit Database and PennDOT. ACCESS certifies its' data.

HCT saves the daily shuttle spreadsheets on a shared drive in individual folders. The title of the folder is ACCESS Shuttle Reports." There is one report provided for each day of the week. The report details the activity for each van utilized on the specified day of the report. The daily shuttle reports are combined into one spreadsheet for each month. The reports are checked by HCT staff for any red flags or outliers such as: total number of boardings matching the number of passengers exiting the van; courtesy cards used only for boarding at a Forbes or UPMC medical campus; excessive number of boardings or alightings; and unusual activity. Any discrepancies or issues are reported to ACCESS for clarification or correction.

There are two other ACCESS reports that are routinely examined by HCT; the monthly invoice and monthly summary reports. During the first week of each month, ACCESS provides HCT with an invoice detailing the number of hours the van was in service and the number of passengers boarding/exiting the van each service day in that month. This report is compared to the daily shuttle reports. The passenger numbers on the invoice must match the total number of passengers on the daily shuttle reports. A file of all prn reported service interruptions or any changes to the daily schedule is kept in the HCT shared drive. The monthly invoices are compared to the entries in this file to ensure that the service interruptions are reflected in the revenue hours reported on the invoice. Any discrepancies or issues are reported to ACCESS for correction or explanation.

Staff reviews ACCESS' Monthly Summary Report for skewed data and red flags. The Monthly Summary Reports are compared to the compiled daily shuttle reports and the monthly invoice statements. Any discrepancies are reported to ACCESS.

### **Data Validation and Certification**

Agencies are required to implement quality control procedures to ensure the accuracy of data. PennDOT has advised agencies that it “requires checks to be completed on at least three vehicles in revenue service for each fixed-route mode for the entire span of two randomly selected weekdays for the month.” Heritage Community Transportation is not staffed to handle such a time consuming task and discussed this requirement in a meeting with PennDOT’s consultant Wade White (Whitehouse Group, Inc.) on May 22, 2015. Mr. White indicated that because HCT was small and has only three routes, HCT could conduct the checks less frequently and, in his opinion, believed that quarterly reporting was an acceptable practice.

### **Total Passengers**

- Data collected and recorded by PRN.
- ACCESS uploads and checks data.
- HCT reviews and checks data looking for red flags and outliers.
- Every quarter, HCT randomly selects two weekdays on which two randomly selected vehicles are used for the ridership validation process. This information is provided to ACCESS. ACCESS obtains PRN on-board camera video recordings for the selected days and transfers the files to a flash drive. HCT counts passengers via camera footage and compares it to the spreadsheet data. The counts commence when the vehicle is placed into service and end when it is placed out of the service on the randomly selected day. HCT copies the video files and returns the flash drive to prn for re-use. HCT retains the video footage for a 5-year period.
- HCT staff reviews the footage and cross checks the information for accuracy. If variance is greater than 5%, a staff member will discuss the issue with ACCESS/p.r.n. and take additional actions to identify and correct errors. Additional actions may include: conducting additional video checks, conduct on-board checks, etc.
- HCT documents its validation results.
- HCT has in place a fare reconciliation process. See separate section for rider card and fare collection process.
- Every month HCT will evaluate the cash variances against the baseline and when it exceeds a 10% variance that will trigger an in-depth analysis.

### **Total Senior (Lottery/Free Transit) Passengers**

- Seniors are permitted to ride free if they have a HCT Senior Rider Card (different color than regular passenger card), show a Medicare Card or have a Commonwealth of Pennsylvania Senior Identification Card. Senior riders are recorded either electronically with their rider card or by the operator using the senior touch screen button.
- For the HCT Senior Rider Card, every registered senior age 65 and older, has been assigned a unique rider card identification number that begins with the digits “65”. Each time a senior boards the bus, he/she swipes their card and the number is registered in the ridership database. The card numbers appear on the daily shuttle report. HCT staff counts each senior card entry that appears on the daily shuttle reports to determine the number of senior passengers. To ensure that seniors who are using an older card that does not contain the digits “65”, a date of birth query is performed in the Salsa CRM database. This database contains HCT’s registered rider demographic information. These card numbers are cross-checked with the rider card numbers reported on the daily shuttle reports.

- HCT calculates the number of seniors by counting the number of senior rider cards and total senior touch screen rides. HCT reviews the daily ridership spreadsheets for anomalies. Further analysis by HCT is required if senior rides exceed 10% of total ridership.
- The senior rider totals are compared as outlined above. Any skewed data would trigger an in-depth review. Further analysis may include on-board checks and review of camera footage.

### Other Passenger Counts

- Half-fare - Children age 6 to 11 and persons with disabilities counts are reviewed for any irregularities.

In-Touch Screen – October 1, 2015

Back	Full Fare: xx	Plus	Minus	Psgr Off
	Half Fare: xx	Plus	Minus	
	Kids (6-11): xx	Plus	Minus	xx
	Seniors: xx	Plus	Minus	
	No/Free Fare: xx	Plus	Minus	
	Cards Scanned: xx	Total Riders: xx		OK

### Miles and Hours Data

- **Data and Calculations** - ACCESS calculates and certifies revenue vehicle hours and miles as well as total vehicle hours and miles. The following summarizes the data and calculations:
  - **Actual Total Vehicle Hours** - Total service hours plus deadhead (to/from garage). The service hours include layover/recovery time as well as any deviations or missed service hours. The calculations do not include hours for charter service; school bus service; operator training; and/or vehicle maintenance testing. The actual vehicle hours are the billed hours for service.
  - **Actual Revenue Vehicle Hours** – Total of all revenue service hours including layover/recovery hours. The calculations do not include hours for deadhead; operator training; maintenance testing; school bus service; and/or charter services. ACCESS calculates the revenue hours by calculating the hours using the public timetable for the service including the layover/recovery time. Adjustments are made for missed service and deviations.
  - **Actual Total Vehicle Miles** - Total revenue service miles plus deadhead (to/from garage). The miles include layover/recovery miles as well as any deviations or missed service. The calculations do not include miles for charter service; school bus service; operator training;

and/or vehicle maintenance testing. ACCESS calculates the total miles using the beginning and ending odometer readings. In the event the vehicle is used for maintenance testing or some other non-revenue service the mileage would be adjusted.

- **Actual Revenue Vehicle Miles** – Total of all revenue service miles including layover/recovery miles. The calculations do not include miles for deadhead; operator training; maintenance testing; school bus service; and/or charter services. ACCESS calculates the revenue vehicle miles for each segment and it includes layover/recovery miles. Adjustments are made for missed service and deviations.
- **Passenger Miles** – The cumulative sum of the miles ridden by passengers. ACCESS calculates passenger miles by calculating the distance between two stop locations; multiplying that distance by the number of passengers on board between those two stops; and then totaling the passenger miles for each segment.

- **Certification/Validation**

HCT conducts a basic review of revenue vehicle hours to ensure that they are less than the total vehicle hours and the hours are adjusted for any service disruptions. Staff also performs a basic review of revenue vehicle miles to ensure that they are less than total vehicle miles and the miles are adjusted for any service disruptions.

- **Revenue Vehicle Hours** – ACCESS and HCT separately review daily reports and look for skewed data and red flags such as gaps in time and out of service. HCT also reviews monthly invoices.
  - Each quarter, HCT will randomly select two operator runs (daily assignments) and conduct an in-depth review to verify the revenue hours are accurate. HCT will review archived real-time vehicle replays and certify the runs were operating for the entire service hours as scheduled and/or billed. HCT will document the review.
- **Revenue Vehicle Miles** - HCT reviews monthly invoice data that list daily revenue miles and look for skewed data and red flags.
  - Operators manually record the beginning and ending odometer reading for the assigned vehicle on the prn daily pay route sheet. Each quarter, ACCESS will review pay route sheets for two randomly selected operator runs (assignments) and compare the written beginning and ending odometer readings to the odometer readings on the daily shuttle report. ACCESS will send HCT documentation that the odometer readings are accurate.

#### **HCT Summary Data**

- Service and Fare Report summarizes detailed data for fare variance.
  - Method of Fares
  - Weekly Cash Variances

#### **ACCESS Summary Data**

Each month, ACCESS provides HCT with a summary spreadsheet that provides at a minimum the monthly information for the following:

- Revenue Vehicle Hours
- Actual Total Vehicle Hours
- Revenue Vehicle Miles

- Actual Total Vehicle Miles
- Passenger Miles
- Total Passengers

HCT cross checks monthly data with previous reports and historical information and resolves any issues with ACCESS.