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USING CREDIT CARDS TO PAY BUS FARES IN PHOENIX

Research and Special Programs Administration John A. Volpe National Transportation Systems Center Cambridge, MA 02142-1093

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In 1991 the City of Phoenix Public Transit System, first in the nation to install magnetic card readers on the electronic fareboxes in its buses, implemented a program known as Bus Card Plus, which billed employers for trips made by employees using employer-issued credit cards. Four years later, Phoenix was again the first system to introduce a commercial credit card bus fare payment program which also relied on the magnetic card reader equipment. This report documents these two innovative programs, describing their background, objectives, development, equipment, operation, growth, and issues.

The main objectives of Bus Card Plus are to attract riders to the bus system, and to provide employers a means to record accurately their employees' use of public transit for compliance with Maricopa County's travel reduction ordinance. Bus Card Plus sales have more than tripled over the past three years, and are estimated to represent approximately 7 percent of annual Valley Metro bus boardings. The use of commercial credit cards to pay fares has expanded rapidly during its first few months, and is expected to be an asset for transit to the many out-of-town visitors attending the 1996 Super Bowl.

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PREFACE

This report was prepared by the Research and Special Programs Administration's John A. Volpe National Transportation Systems Center (Volpe Center), Office of Research and Analysis, Service Assessment Division, for the Federal Transit Administration (FTA), Office of Research, Demonstration, and Innovation. The FTA project sponsor, Bert Arrillaga, TRI-12, provided overall direction for the work. The project was performed under Project Plan Agreement TT-627, Regional Mobility Support.

In 1991 the City of Phoenix Public Transit System, first in the nation to install magnetic card readers on the electronic fareboxes in its buses, implemented a program known as Bus Card Plus, which billed employers for trips made by employees using employer-issued credit cards. Four years later, Phoenix was again the first system to introduce a commercial credit card bus fare payment program, which also relied on the magnetic card reader equipment. This report documents these two innovative programs, describing their background, objectives, development, equipment, operation, growth, and issues.

The Volpe Center appreciates the enthusiastic support provided by all the people in the Phoenix area contacted for information needed for the preparation of this report, including: Mike Nevarez, Transit Operations Manager for the City of Phoenix Public Transit Department; Scott Wisner, Business Development Supervisor for Valley Metro; Octavian Bruda, Industrial Engineer for Phoenix Transit System; and Suzanne Kingsley Day, Account Executive for the Regional Public Transportation Authority.

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METRIC/ENGLISH CONVERSION FACTORS

ENGLISH TO METRIC

METRIC TO ENGLISH

LENGTH (APPROXIMATE)

1 inch (in) = 2.5 centimeters (cm) 1 foot (ft) = 30 centimeters (cm) 1 yard (yd) = 0.9 meter (m)

1 mile (mi) = 1.6 kilometers (km)

LENGTH (APPROXIMATE)

1 millimeter (mm) = 0.04 inch (in) 1 centimeter (cm) = 0.4 inch (in) 1 meter (m) = 3.3 feet (ft) 1 meter (m) = 1.1 yards (yd)1 kilometer (km) = 0.6 mile (mi)

AREA (APPROXIMATE)

1 square inch (sq in, in²) = 6.5 square centimeters (cm²)

1 square foot (sq ft, ft²) = 0.09 square meter (m²)

1 square vard (sq vd. vd²) = 0.8 square meter (m²)

1 square mile (sq mi, mi²) = 2.6 square kilometers (km²)

1 acre = 0.4 hectare (he) = 4,000 square meters (m²)

AREA (APPROXIMATE)

1 square centimeter = 0.16 square inch (sq in, in²)

(cm²)

1 square meter (m²) = 1.2 square yards (sq yd,

yd²)

1 square kilometer (km²) 0.4 square mile (sq mi, mi2) 10,000 square meters = 1 hectare (ha) = 2.5 acres

(m²)

MASS - WEIGHT (APPROXIMATE)

1 ounce (oz) = 28 grams (gm)

1 pound (lb) = 0.45 kilogram (kg)

1 short ton = 2,000 pounds = 0.9 tonne (t)

(lb)

MASS - WEIGHT (APPROXIMATE)

1 gram (gm) = 0.036 ounce (oz)

1 kilogram (kg) = 2.2 pounds (lb)

1 tonne (t) =

1,000 kilograms (kg) = 1.1 short tons

VOLUME (APPROXIMATE)

1 teaspoon (tsp) = 5 milliliters (ml)

1 tablespoon (tbsp) = 15 milliliters (ml)

1 fluid ounce (fl oz) = 30 milliliters (ml)

1 cup (c) = 0.24 liter (l)

1 pint (pt) = 0.47 liter (l) 1 quart (qt) = 0.96 liter (l)

1 gallon (gal) = 3.8 liters (l)

1 cubic foot (cu ft, ft³) = 0.03 cubic meter (m³)

1 cubic yard (cu yd, yd³) = 0.76 cubic meter (m³)

VOLUME (APPROXIMATE)

1 milliliter (ml) = 0.03 fluid ounce (fl oz)

1 liter (l) = 2.1 pints (pt)

1 liter (i) = 1.06 quarts (qt)

1 liter (I) = 0.26 gallon (gal)

1 cubic meter (m³) = 36 cubic feet (cu ft, ft³) 1 cubic meter (m³) = 1.3 cubic yards (cu yd, yd³)

TEMPERATURE (EXACT)

 $[(x-32)(5/9)] ^{\circ}F = y ^{\circ}C$

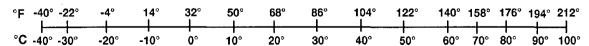
TEMPERATURE (EXACT)

 $[(9/5) y + 32] ^{\circ}C = x ^{\circ}F$

QUICK INCH - CENTIMETER LENGTH CONVERSION



QUICK FAHRENHEIT - CELSIUS TEMPERATURE CONVERSION



For more exact and or other conversion factors, see NIST Miscellaneous Publication 286, Units of Weights and Measures. Price \$2.50 SD Catalog No. C13 10286 Updated 1/23/95

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EXECUTIVE SUMMARY

In 1991 the City of Phoenix Public Transit System, first in the nation to install magnetic card readers on the electronic fareboxes in its buses, implemented a program known as Bus Card Plus, which billed employers for trips made by employees using employer-issued credit cards. Four years later, Phoenix was again the first system to introduce a commercial credit card bus fare payment program, which also relied on the magnetic card reader equipment.

<u>Objectives</u> The main objectives of both programs are to attract riders to the bus system, to increase passenger convenience in riding the bus and in paying the fare, to move toward completely cashless transactions for bus fare payment during high volume commuter periods, and to create more accurate ridership counts. In addition, Bus Card Plus provides employers a means to record accurately their employees' use of public transit, and reduce the possibility of misuse of monthly passes.

Background In the late 1980's and early 1990's, a number of events occurred to set the stage for the introduction of these two programs. Maricopa County approved a travel reduction ordinance, requiring employers with more than 100 employees to reduce single-occupancy commuting trips by 5 percent in two years. In 1994, the regulation was changed to include employers with more than 50 employees. The maximum monthly transit benefit that employers could give to their employees tax-free and could deduct as a business expense was increased to \$21 in 1991, and to \$60 in 1993. Finally, Phoenix Transit developed electronic fare boxes and installed them in all Valley Metro buses.

<u>Development</u> The City of Phoenix Public Transit Department developed the Bus Card Plus program in conjunction with Phoenix Transit System. Phoenix Transit engineers added magnetic card readers to the electronic fareboxes by adapting off-the-shelf card readers to the fareboxes. The farebox software was modified to accept data read from standard credit card-sized passes. The Bus Card Program was tested in 1990 and went into full operation in 1991. Four years later, Phoenix Transit further adapted the software to accept commercial credit cards, and in mid-1995, the system began accepting VISA and MasterCard.

Bus Card Plus System Operation Employers purchase Bus Card Plus cards, distribute them to eligible employees, and maintain records of the participating employers and their card number assignments. An employee receives a Bus Card Plus from his or her employer to use for transportation on Valley Metro buses. Upon entering a bus, the employee swipes the card through the card reader on the farebox, instead of paying a fare or flashing a pass. The Bus Card Plus identification number is checked against the hotlist of invalid numbers stored in the farebox.

At the beginning of each shift, the bus driver initializes the farebox with information on the driver, route and type of service. Each evening Phoenix Transit downloads information from the bus card readers into its management system and processes the data. Farebox hotlists are

updated daily and reports containing billing information and card usage by identification number are prepared for each employer monthly. Employers use these data to track their compliance with the county travel reduction ordinance.

Commercial Credit Fare Payment Program Operation Riders may use their VISA or MasterCard to pay for transportation on Valley Metro buses by swiping them through the card readers on the fareboxes. Each farebox has a list of known invalid card numbers against which the credit card is checked. Each evening credit card information is downloaded from the farebox to the management system. Phoenix Transit batches credit card charges by card number approximately biweekly before billing the credit card companies to save on transaction fees.

<u>Program Growth</u> The Bus Card Plus program has grown significantly in the three years since mid-1992, with a more than threefold increase in the number of users and a more than fourfold increase in participating companies. Expectations are that this trend will continue with continuing pressure on businesses from the Maricopa County travel reduction ordinance, increasing overall transit ridership trends in the Phoenix area, and efforts to develop new markets, such as the area high schools. Businesses are attracted by the savings they enjoy over purchasing traditional one-price passes for their employees and by the records of employee transit usage they receive. Current Bus Card Plus usage represents around 7 percent of annual unlinked trips on Valley Metro.

The commercial credit card fare payment program also enjoyed strong growth during its first few months of operation, and is expected to continue this trend as the farebox software is expanded to accept more credit and debit instruments beyond VISA and MasterCard. As of September 1995, there were about 2,500 monthly boardings using commercial credit cards.

Conclusions The Bus Card Plus program has accomplished several program goals by giving participating businesses the means to track transit usage by their employees in compliance with the Maricopa County travel reduction ordinance, and by increasing passenger convenience in riding the buses and paying fares. It prevents pass abuse through the ability to identify lost and stolen cards and through time limits on repeat card usage. However, while it is likely that Bus Card Plus has attracted new public transit riders, no data are yet available to indicate how many. Similarly, although there are no data to confirm this, it appears that the commercial credit card fare payment program attracts new riders because it offers a convenient fare payment option over purchasing tokens or tickets beforehand or juggling change at the farebox. It has a special appeal to infrequent riders and tourists who are often unfamiliar with the fare structure and the locations for purchasing fare instruments.

Both programs have helped move Valley Metro toward completely cashless electronic fare transactions, which make bus fare payment more efficient, especially during high volume commuter periods, reduce wear and tear on the fareboxes, reduce resources needed for cash handling, and provide more accurate ridership counts.

1. INTRODUCTION

In 1991 the City of Phoenix Public Transit System, first in the nation to install magnetic card readers on the electronic fareboxes in its buses, implemented a program known as Bus Card Plus, which billed employers for trips made by employees using employer-issued credit cards. Four years later, Phoenix was again the first system to introduce a commercial credit card bus fare payment program, which also relied on the magnetic card reader equipment. This report documents these two innovative programs, describing their background, objectives, development, equipment, operation, growth, and issues.

1.1 PHYSICAL CHARACTERISTICS OF PHOENIX

The City of Phoenix in Maricopa County, shown in Figure 1, is situated in a valley surrounded by mountains and green irrigated fields in south central Arizona. Its semiarid, warm and healthful climate and its low cost of living are especially attractive to retired persons and those with allergies. Many people have migrated to the area, expanding Phoenix itself and populating the surrounding communities of Scottsdale, Tempe, Mesa, Chandler, Glendale, and many more. Augmenting the limited natural water supply are the reservoir behind the Roosevelt Dam 75 miles northeast of the city and others built by damming the Salt, Agua Fria and Verde Rivers.

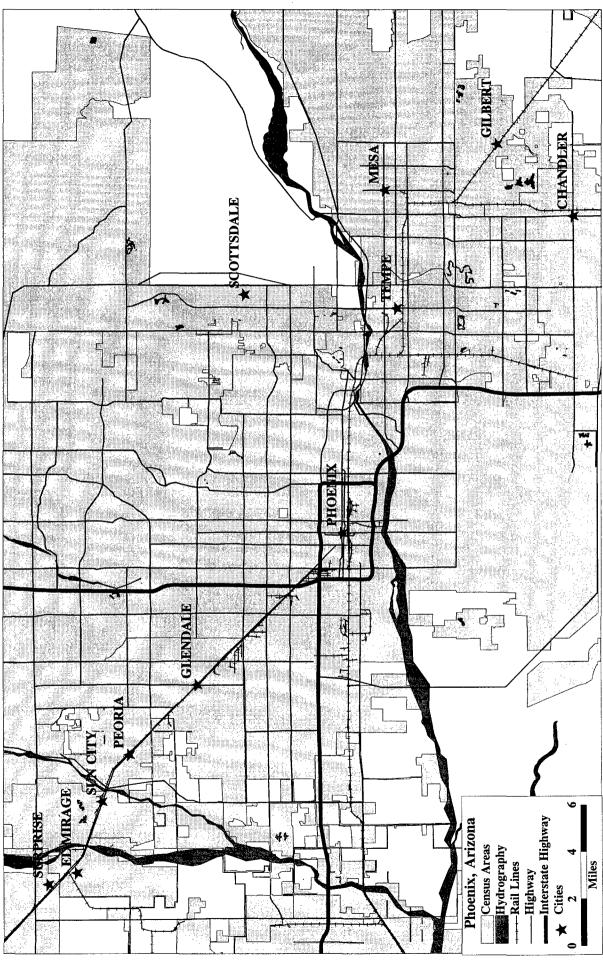
1.2 DEMOGRAPHICS AND EMPLOYMENT

Inhabited by more than 2,000,000 people as of the 1990 United States Census, the greater Phoenix urbanized area in Maricopa County covers about 740 square miles. Approximately half this population lives within one quarter mile of a bus route. The median age is 32.6 years old. Population growth in Maricopa County is expected to be among the highest in the nation over the next few years. Employment is concentrated in government and services (40 percent), construction and manufacturing (21 percent), trade (26 percent), finance and real estate (8 percent), and transportation, communication and public utilities (5 percent). Unemployment is low at 4.7 percent.

¹ "Fact Sheet Operational Statistics," Valley Metro Regional Public Transportation Authority, 1994.

² "Regional Fact Sheet," Maricopa Council of Governments, 1990.

Figure 1. Valley Metro Service Area, Phoenix, Arizona



1.3 VALLEY METRO TRANSIT SYSTEM

The City of Phoenix Public Transit Department has contracted the operation and management of the City of Phoenix Transit System fixed route service to three private contractors: Phoenix Transit System, which is a division of ATC/Vancom, Inc. (Phoenix Transit), Arnett Transportation Services, Inc. (Arnett), and Mayflower/Laidlaw Contract Services (Mayflower), with Phoenix Transit serving as the overall coordinator for the others. In addition, the Regional Public Transportation Authority (RPTA), Mesa Sunrunner, and Scottsdale Connection also provide fixed route service. All the contractors have adopted the name "Valley Metro" along with a new logo and paint scheme, which is being applied to the buses of the above contractors. (Passengers had noted that the different transit system names and colors made using bus service in the Valley confusing.) Valley Metro includes dial-a-ride services operated by the municipalities of El Mirage, Glendale, Mesa, Peoria, Phoenix, Sun City, Surprise and Tempe/Scottsdale, and RPTA's regional vanpool program and travel demand management services. In addition, Valley Metro runs a 30-cent Downtown Area Shuttle (DASH) in downtown Phoenix and a Free Local Area Shuttle (FLASH) serving the Arizona State University campus and downtown.

Valley Metro offers fixed route bus service six days a week with none on Sundays or holidays. Saturday service levels are approximately one third those of weekdays.

Valley Metro operates 460 buses on 49 local and 19 express routes. Forty-six percent of these buses are wheelchair accessible. All of the buses except the DASH buses offer Bike on Bus service, a program funded by the City of Phoenix. The buses have bike carriers onto which riders may load their bicycles for their transit ride at no extra fare. This program is very popular, as evidenced by more than 400,000 bicycles carried during fiscal year 1995. Additionally, Valley Metro takes full advantage of federal grant programs to implement transit innovations. Past programs installed strobe lights on buses to signal ahead to nearby buses to wait for transferring passengers; future plans include installation of electronic message boards and automated vehicle location equipment.

In 1987, Phoenix Transit completed a program begun in 1981 to replace its mechanical fareboxes with electronic fareboxes. Several off-the-shelf electronic fareboxes had been evaluated and found inadequate. So the engineering department of Phoenix Transit bought commercially available Duncan electronic fareboxes, gutted them, and installed its own hardware and software. Like the mechanical boxes, the new boxes received coins, one-dollar bills, tickets and tokens. In addition, the new boxes allowed the driver to classify the type of trip (express or regular) and the type of fare (senior, youth, disability, or other), to identify the operator, trip number and route, to reclassify tickets temporarily, to count transfers, passes and special fares, and to identify the city of origin of the riders. Features of the boxes included sealed keyboards to eliminate dust and fluids, the ability to withstand vibrations and high temperatures, 16-character optical data displays, and clocks for date and time stamping data entries. They were extremely reliable with reporting accuracy with an error rate of only 1.5 percent.

The electronic fareboxes were installed on all Valley Metro buses. Data and fares collected by the farebox were transferred to the central data processing computer and bank, respectively, on a daily basis at the bus terminal. The installation of these fareboxes in the buses facilitated the implementation of the Bus Card Plus and commercial credit card bus fare payment programs a few years later.

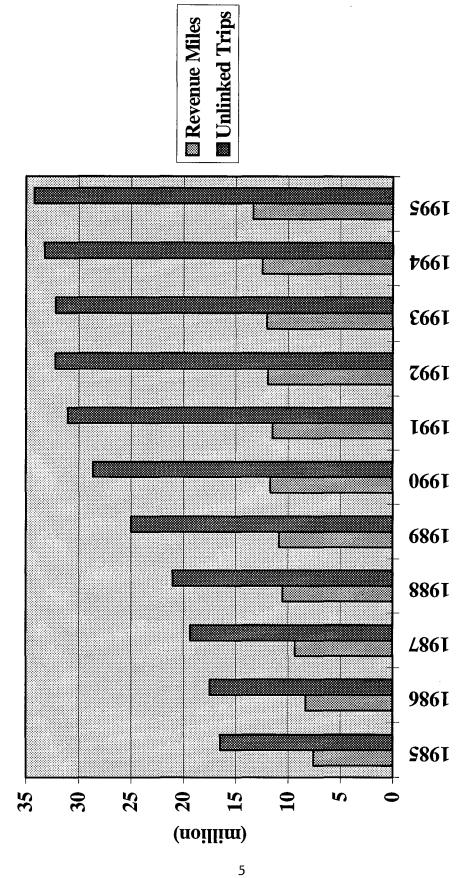
Valley Metro annual operating revenue for fiscal year 1994 was \$64.4 million, \$47.4 million of which consisted of federal, state and local funds, and \$16.0 million consisted of bus fares. Local funds include charges by jurisdiction for fixed route service provided by Valley Metro, based on a standard rate per revenue mile offset by the revenues generated in that jurisdiction. The basic local cash bus fare was raised to \$1.25 from \$1.00 in July 1995, and the express bus fare was raised to \$1.75 from \$1.50. Ten-ticket books for local and express buses are sold, as well as 20-token bags where each token is worth \$0.60. Passengers using tokens or tickets pay \$1.20 for local service (\$.05 less than the cash fare) and \$1.80 for express service (\$.05 more than the cash fare). Daily and monthly passes are priced at a 30 percent discount. With proper identification, youths 18 years of age and under, seniors 65 years of age and older, and persons with disabilities receive a further discount of 50 percent off full fare and passes. Appendix A contains a full description of all the fare options and instruments.

RPTA was created in 1985 by referendum to develop long range transit plans for the Phoenix region and to add a small amount of transit service to areas that had inadequate service. In an endeavor to create a dedicated funding source for regional transit operations, it was unsuccessful in its bid to get a ½-cent sales tax referendum approved by voters in 1988, and a 1/4-cent sales tax increase in 1994. As a result, the operating funds contributed by the City of Phoenix annually (approximately \$18 million in fiscal year 1995) must be approved every year, and no dedicated funding source yet exists.

Ridership³ has been increasing for the last ten fiscal years, except for a slight decrease in fiscal year 1993, as shown in Figure 2, with more than 34 million unlinked passenger trips in fiscal year 1994. From fiscal years 1985 to 1992, growth occurred at an average annual rate of 10 percent, and since then at a slower average annual rate of 2 percent. Revenue miles have also increased over the ten-year period at an average annual growth rate of almost 6 percent. Some unproductive routes were eliminated, and routes that diagonally cross the city were added. These new routes were designed along the same routes that a potential commuter rail system would serve.

³ Ridership and revenue miles are based on combined Section 15 reporting data for the transit agencies operating under the name of Valley Metro.

Figure 2. Annual Passenger Boardings and Revenue Miles in Maricopa County



1.4 CHARACTERISTICS OF TRANSIT RIDERSHIP

A 1993 survey of Valley Metro passengers conducted by an outside contractor revealed the following characteristics of transit ridership:

- The median age of transit riders is 30.
- Fifty percent of riders are male and 50 percent are female.
- Thirty-seven percent of riders are minority compared with 24 percent of the Phoenix area population.
- More than 5 percent of boardings are by disabled persons, compared with 1.2 percent of boardings nationally.
- Forty-three percent have household incomes less than \$20,000.
- Fifty-two percent of bus trips are for work.
- Sixty-six percent of riders have no access to another vehicle for transportation, either as a passenger or a driver, compared with 30 percent of riders nationally.

2. BUS CARD PLUS

2.1 BACKGROUND

In the late 1980's several events occurred to set the stage for the introduction of Bus Card Plus. Because the air quality in the Phoenix metropolitan area had reached a critical stage, the Arizona State Legislature passed the Air Quality Bill. In turn, the severe pollution in the valley led Maricopa County to approve a travel reduction ordinance, vehicle emission controls, usage requirements for oxygenated fuels, and a clean air campaign. The travel reduction ordinance required employers with more than 100 employees to reduce single-occupancy commuting trips by 5 percent in two years.

Employers realized they had no means to track ridership to verify they had met the requirements. Surveys conducted by the city gave unreliable results for individual employers. They also were beginning to realize the tax-free de minimis noncash transit fringe benefit⁴ for employees authorized by the Deficit Reduction Act of 1984 offered them a noncoercive means to induce some of their employees to switch to public transit. It would allow them to give their employees up to \$15 per month tax-free to be used for commuting to and from work. This benefit was also tax deductible for the employer, and had a greater value to the employee than the same dollar value given as a salary increase.

As the largest provider of transit service in Maricopa County, the City of Phoenix Public Transit Department and Phoenix Transit System were faced with getting bus information to the employers and helping them promote transit to their employees. Dozens of new ticket and pass outlets opened during the first two years of the ordinance, and Phoenix Transit's business development staff visited hundreds of work sites distributing bus information. Many employers began subsidizing the cost of bus tickets and passes to encourage riding the bus. Simultaneously Phoenix Transit was beginning to address problems associated with their transit passes. Drivers had difficulty visually identifying passes flashed by riders as they boarded. Additionally, Phoenix Transit wanted to develop a pass system that would counteract fraud and misuse.

The City of Phoenix Public Transport Department developed the Bus Card Plus in conjunction with Phoenix Transit System, its management contractor. Card readers were developed and installed in all Valley Metro buses. In late 1990 Valley Metro introduced plastic transit pass cards with magnetic stripes. After one and one half years of development, the Bus Card Plus program went into operational testing in April 1991, with one company, Valley National Bank (now BankOne). In September 1991, the program was offered to other companies in Maricopa County with 100 or more employees.

⁴ A "de minimis fringe benefit" is one considered too small or insignificant to warrant taxation and the associated record keeping by the giver and the recipient.

Since then, the travel reduction ordinance was strengthened twice: in 1993 it required employers with 75 or more employees to reduce single-occupancy commuting trips by 5 percent; in 1994 employees with 50 or more employees were included. The tax-free monthly employee transit benefit was increased to \$21 in 1991, and to \$60 in 1993. Both these changes enhanced the marketability and attractiveness of Bus Card Plus to employers.

In late 1995, the Bus Card Plus program will be extended to students from selected high schools for transportation to and from school. The Phoenix Union High School District has purchased special machines to produce new student identification cards with magnetic stripes on the back. They will function like Bus Card Plus cards. They will also be used by students to gain admission to their school grounds, to participate in the student lunch program, and to check out library books. The high schools will be billed by Phoenix Transit for the amount of student usage. If successful, this program will be extended to other high schools.

2.2 OBJECTIVES

The main objectives of the Bus Card Plus program are to attract riders to the bus system, and to provide employers a means to record accurately their employees' use of public transit. Secondary objectives include the following:

- to increase passenger convenience in riding the bus and in paying the fare
- to create completely cashless transactions for bus fare payment during high volume commuter times of the day
- to eliminate misuse of monthly passes through the ability to identify lost and stolen cards
- to create more accurate ridership counts through electronically recorded data

2.3 DEVELOPMENT OF THE PROGRAM

The City of Phoenix Public Transit Department developed the Bus Card Plus program in conjunction with Phoenix Transit System. Phoenix Transit engineers added magnetic card readers to the electronic fareboxes by adapting off-the-shelf card readers to the fareboxes. The farebox software was modified to accept data read from standard credit card-sized passes. Program development costs came to \$150,000, covering computer programming, the purchase of the card readers and collateral materials.

In the fall of 1990 bus fare credit cards were tested in the new magnetic card readers to evaluate the effectiveness of the boxes. Survey results from passengers trying out the new technology lead Phoenix Transit to lengthen the magnetic card readers on the electronic fareboxes to improve their ability to read the stripes on the first swipe. In April 1991, a test period limited

to one large employer, Valley National Bank (now BankOne), began. In September 1991, the program went into full operation, and was offered to other employers in Maricopa County with 100 or more employees. Marketing efforts included participating in round table discussions, and Transit Management Association and Association of Commuter Transportation meetings. Extensive promotional materials were provided to interested businesses. (See Appendix B.)

2.4 HOW IT WORKS

Figure 3 shows a flow diagram of the Bus Card Plus system. An employee receives a Bus Card Plus card from his or her employer to use for transportation on Valley Metro buses. The card is similar to a credit card with a magnetic stripe on the back containing a card identification number. (See Figure 4.) Upon entering a bus, the employee swipes the card through the card reader installed on the bus, instead of paying a cash fare or flashing a pass.

Employers purchase cards for \$0.50 per card, distribute them to eligible employees, and maintain records of the participating employees and their card number assignments. They forward lists of card numbers that are no longer valid due to loss, employee terminations, or other reasons to Phoenix Transit to include on its "hotlist," the list of card numbers that the system will not accept.

At the beginning of each shift, the bus driver initializes the farebox with information on operator number, the route being traveled, and the type of trip (express or regular). An automatic stamp indicates the time and date.

Each evening Phoenix Transit downloads information from the bus card readers into its management system and processes the data. It updates the hotlist of invalid card numbers in the bus card readers. Phoenix Transit compiles reports each month on usage for each card, sends these reports to the employers, and bills the employers for the transit usage. The employers use these reports to determine their compliance with the county travel reduction ordinance.

One unique aspect of this program is the use of the credit card-like Bus Card Plus to pay the bus fare. While most transit fare instruments are paid for by customers before riding the bus and have a fixed price, the Bus Card Plus program bills the employer after their employees have ridden the bus for an amount that varies with usage. Valley Metro considers the delay in receiving the fare payment insignificant, compared with the advantages of cashless fare transactions on the buses and reduced activity at ticket outlets. If the amount billed is less than the monthly pass price, the employer pays for the individual rides. If the amount is equal to or greater than the pass price, the employer pays only the pass price, which provides a 30 percent discount over cash for the daily transit commuter. Typically, employers who were subsidizing their employees' commute to work by giving them passes, save money when they join Bus Card Plus, because they are billed only for actual transit usage by their employees and many employees use less than the full cost of a pass. For example, the City of Phoenix' transit subsidy costs fell from \$30,000 annually to \$19,000 after joining Bus Card Plus.

Figure 3. Flow Diagram of Bus Card Plus System

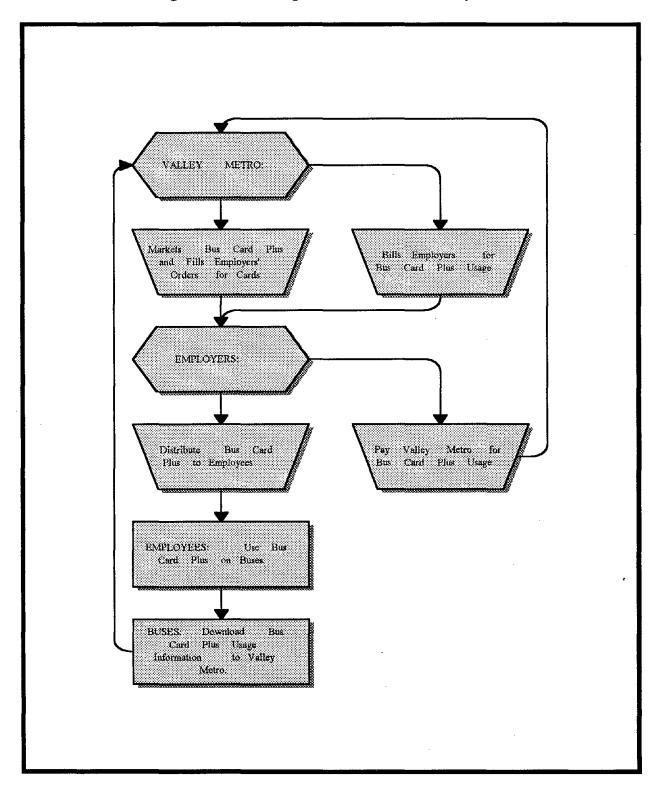
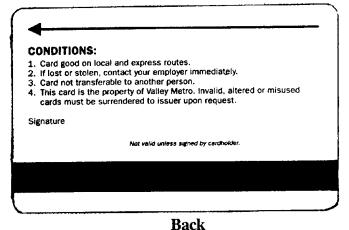


Figure 4. Portrait of a Bus Card Plus





2.5 EQUIPMENT

The card readers, electronic fareboxes and credit cards are critical components of the program. The electronic fareboxes, described earlier in this report, were designed specially for Phoenix Transit's needs (and Valley Metro's), because no off-the-shelf fareboxes were deemed suitable. The fareboxes have features that make them especially reliable for the physically demanding conditions of the Phoenix area. Similarly, the magnetic card readers were adapted to the electronic fareboxes by Phoenix Transit engineers for magnetic transit passes and the Bus Card Plus program. The new electronic farebox with a card reader was patented, and is marketed to other agencies beginning programs similar to Bus Card Plus. Three other cities that introduced programs similar to Bus Card Plus have purchased electronic fareboxes from Phoenix Transit: Los Angeles, Las Vegas and Santa Fe. The sale of the fareboxes gives Phoenix Transit an additional revenue source.

Few modifications have been made to the original design of the fareboxes and card readers. The initial size of the card reader was lengthened after riders had difficulty guiding their cards properly through the reader during the initial test period. After five years, the card readers on express routes, on which 90 percent of fares are paid with magnetic cards, are beginning to wear out, and replacement has begun. Otherwise, the fareboxes have withstood usage well.

The Bus Card Plus cards themselves are made from 0.03-inch plastic with magnetic stripes on the back encoded with an employee number, a sequential code and an expiration date, and are designed to last two years. They have high correctivity magnetic stripes, which reduce the problem of accidental erasure. A high density magnetic stripe was used at one point, but card readers had trouble reading it, so the lower density stripe was reinstituted. Monthly transit passes are made from 0.01-inch plastic with the month of use encoded in the magnetic stripe. Phoenix

Transit employee picture identification cards, also accepted as transit passes on the buses, are made from 0.044-inch plastic.

2.6 FAREBOX SOFTWARE

Some features of the software developed for the fareboxes are:

- It prevents use of the card more than once in five minutes.
- It checks the card identification number against a hotlist of invalid cards, and rejects the card on a match.

Each evening the farebox vault is emptied and information from the farebox is downloaded to a central computer. Simultaneously, any changes to the hotlist are loaded into the boxes. Downloaded information includes the following:

- bus number, operator number, trip number, city code
- date and time of each trip
- classification of each boarding by fare category
- total cash in farebox
- number of magnetic card boardings
- individual record for each use of a magnetically encoded fare card, showing bus number, city, card serial number, date and time card was used, fare category
- date, time and location where farebox was last processed

Monthly billing software prepares reports for employers showing the number of card usages and the amount charged by card number. It allows a two-hour window for transfers at no additional charge; after two hours a full fare is charged for the card usage. The software can link the number of a lost card with the newly assigned replacement card number for individual monthly billing. When a card accumulates charges greater than the price of a monthly pass, only the monthly pass price is billed.

The farebox hotlist is limited to 950 card numbers, against which each card used is checked. In future versions of the farebox, this number may be increased.

2.7 PROGRAM GROWTH

Table 1 shows the growth of Bus Card Plus sales from its inception. The program has never had an employer cease its participation after joining (except a small number that went out of business). The number of active cards suggests the number of riders participating in the Bus Card Plus program. Valley Metro recorded 193,000 uses of the Bus Card Plus on its buses during August 1995. This level of usage, extrapolated to a full year, would represent about 7 percent of all Valley Metro unlinked bus trips.

Average annual program costs to the City of Phoenix total \$28,000, which includes approximately \$7,000 for updating and printing literature, \$19,000 for marketing and outreach staff, and \$1,500 for finance and revenue staff.

DATE	NUMBER OF COMPANIES ENROLLED	NUMBER OF ACTIVE CARDS
JULY 1991	2	2,180
JUNE 1992	40	10,000
JUNE 1993	80	N/A
JUNE 1994	132	16,000
JULY 1995	182	35,710

Table 1. Growth of Bus Card Plus Program

2.8 MARKETING

Phoenix Transit decided to limit marketing to keep the program growing at a rate the service department could handle. Marketing has consisted mainly of presentations and distribution of brochures at transportation management associations, whose members number 600 employers in the Phoenix area, and other groups. Many new customers result from referrals.

One obstacle to enrolling public agencies (state and federal) and companies with branches in other cities, has been their centralized payroll systems, which are cumbersome to modify to include a transit subsidy for employees of only one branch or locality. The federal government, in particular, has difficulty modifying its government-wide payroll system for local programs like Bus Card Plus. Nevertheless, organizations such as Bank of America, Department of Veterans Affairs, IBM, AT&T, and Arizona Public Service, have eventually come on board.

Once a company signs up, Valley Metro gives it materials that describe the program and employee enrollment forms. Appendix B contains various promotional brochures designed for employers and employees.

3. COMMERCIAL CREDIT CARD FARE PAYMENT PROGRAM

3.1 OBJECTIVES

The main objective of the commercial credit card fare payment program is similar to that of the Bus Card Plus program: to attract riders to the bus system by increasing their convenience in riding the buses. Electronic transactions for paying bus fares benefit the transit agency by making bus loading more efficient, reducing resources needed for cash handling, and producing more accurate ridership counts.

3.2 BACKGROUND

The software, as originally developed for the card reader-enhanced electronic fareboxes, recognized five types of cards: 1) monthly passes, 2) Phoenix Transit identification cards, 3) Bus Card Plus, 4) commercial credit/debit and standard bank cards, and 5) daily passes. Until 1995, only the first three cards were actually accepted for transport. As of May 1, 1995, Valley Metro began accepting VISA and MasterCard commercial credit/debit cards for transport on its buses. As of mid-1995, the electronic fareboxes would still not accept daily passes.

Although the commercial credit card fare payment program required no modifications to the fareboxes, Valley Metro waited to introduce it to the public until the supporting software, operational and reporting systems could be designed, developed and tested. Marketing efforts were kept to a minimum with standard promotional materials such as bus posters, car cards, flyers and newsletter announcements notifying riders of the new program. (See Appendix C.) Marketing costs came to about \$5,000. The number of riders using this method of payment has been growing steadily. Valley Metro anticipates that it will be very popular with the influx of tourists for the upcoming 1996 Super Bowl in Tempe.

3.3 HOW IT WORKS

A rider wishing to pay for his or her bus fare with a commercial credit card may pass a VISA or MasterCard through the magnetic card reader on the bus. Customers are charged the full cash fare of \$1.25 for local service and \$1.75 for express service. No discount fares are available at this time. Receipts are not given out on the bus, but a customer may write to Phoenix Transit for one. The customer is billed during his or her regular billing cycle for rides taken during the billing period.

Valley Metro downloads the credit card transactions from each bus on a daily basis. It compiles biweekly reports on commercial credit card usage, matching multiple uses for the same credit card number. All uses of the same card are batched before submission to the commercial credit card company, reducing the fee Valley Metro would have to pay if it submitted each transaction individually.

Since the electronic farebox on the bus stands alone, and is not part of an interactive network, it cannot check the validity of commercial credit card numbers in real time. An invalid card, thus, may be used in the system until it is updated to the hotlist. This generally takes only one or two days, since the credit card numbers are downloaded daily, and checked against lists supplied by the credit card companies. An updated hotlist is loaded into each farebox daily. The number of free trips that could be taken on an invalid card would be limited to those possible within a 24-hour period. Valley Metro estimates that during the first three months of the program, the rate of invalid commercial credit card use has been about 2 percent.

Other controls prevent misuse of the commercial credit cards. For example, the system will not accept the same credit card within five minutes of its previous use, preventing passing an invalid credit card from one person to another for multiple rides.

3.4 PROGRAM GROWTH

Valley Metro announced the program to riders via posters and flyers, shown in Appendix C. Its *Transitions* newsletter, distributed in sales outlets and sent to employers, also contained announcements of the program.

Only limited data are available on commercial credit card usage in Phoenix since the program is so new. The number of uses has increased over the first five months of the program's existence, as shown in Table 2. The average number of commercial credit card uses per month is around 2,500. Valley Metro produced nine billings during the period, with an average charge per credit card of \$3.55, or approximately three bus fares per card.

By batching the credit card uses before billing the commercial credit card companies, Valley Metro saves a significant amount of money in credit card fees. The normal fee is 0.013 percent of the amount of the charge plus \$0.18 per transaction. Batching produces savings on the per transaction portion of the fee. Valley Metro claims it has reduced the overall fees it has paid from about 19 cents per fare to around five cents per fare. During August, for example, Valley Metro paid about \$170 in fees with batching, but would have paid about \$600 in fees if it had not batched the credit card uses before billing. Table 2 shows a comparison of the amounts billed to the commercial credit card companies, the fees paid, and the net revenues for Valley Metro for trips paid for by commercial credit card.

Table 2. Commercial Credit Card Fare Activity and Fees

Billing Date	No. Cards	Amount Billed	Average Amount per Card	Total Fees	Net Revenues
5/25/95	162	\$431.00	\$2.66	\$34.76	\$396.24
6/12/95	193	\$579.00	\$3.00	\$42.27	\$536.73
7/18/95	160	\$563.00	\$3.52	\$36.12	\$526.88
7/25/95	215	\$772.50	\$3.59	\$48.74	\$723.76
7/28/95	200	\$693.50	\$3.47	\$45.02	\$648.49
8/24/95	345	\$1,523.50	\$4.42	\$81.91	\$1,441.60
8/25/95	180	\$605.25	\$3.36	\$40.27	\$564.98
9/01/95	211	\$744.50	\$3.53	\$47.66	\$696.84
9/18/95	208	\$739.25	\$3.55	\$47.05	\$692.20
Total	1,874	\$6,651.50	\$3.55	\$423.80	\$6,227.72



4. CONCLUSIONS

The Bus Card Plus program has grown significantly in the three years since mid-1992, with a more than threefold increase in the number of users and a more than fourfold increase in participating companies. Expectations are that this trend will continue with continuing pressure on businesses from the Maricopa County travel reduction ordinance, increasing overall transit ridership trends in the Phoenix area, and efforts to develop new markets, such as the area high schools. Businesses are attracted by the savings they enjoy over purchasing traditional one-price passes for their employees and by the records of employee transit usage they receive. Current Bus Card Plus usage represents around 7 percent of annual unlinked trips on Valley Metro.

The commercial credit card fare payment program also enjoyed strong growth during its first few months of operation, and is expected to continue this trend as the farebox software is expanded to accept more credit and debit instruments beyond VISA and MasterCard. As of September 1995, there were about 2,500 monthly boardings using commercial credit cards.

The Bus Card Plus program has accomplished several program goals by giving participating businesses the means to track transit usage by their employees in compliance with the Maricopa County travel reduction ordinance, and by increasing passenger convenience in riding the buses and paying fares. It prevents pass abuse through the ability to identify lost and stolen cards and through time limits on repeat card usage. However, while it is likely that Bus Card Plus has attracted new public transit riders, no data are yet available to indicate how many. Similarly, although there are no data to confirm this, it appears that the commercial credit card fare payment program attracts new riders because it offers a convenient fare payment option over purchasing tokens or tickets beforehand or juggling change at the farebox. It has a special appeal to infrequent riders and tourists who are often unfamiliar with the fare structure and the locations for purchasing fare instruments.

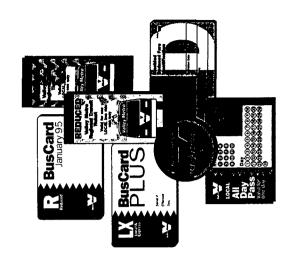
Both programs have helped move Valley Metro toward completely cashless electronic fare transactions, which make bus fare payment more efficient, especially during high volume commuter periods, reduce wear and tear on the fareboxes, reduce resources needed for cash handling, and provide more accurate ridership counts.

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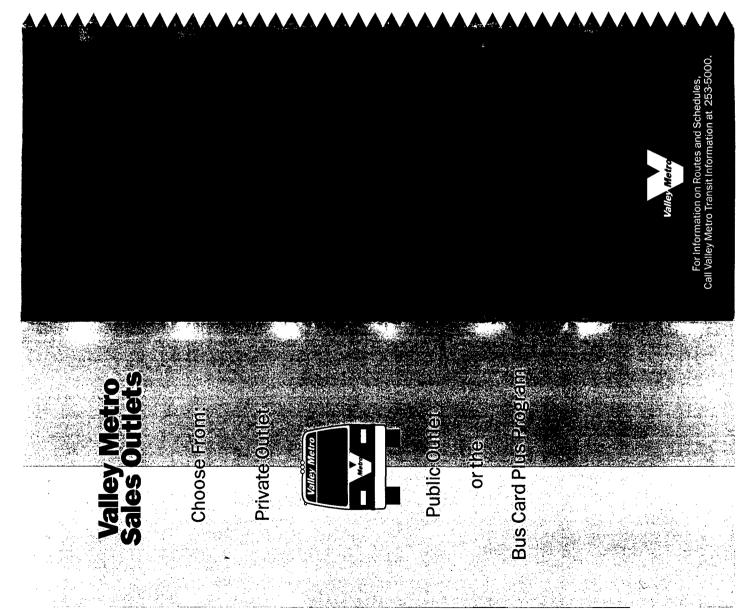
Appendix A. Valley Metro Fare Options

Valley Metro Sales Outlets

Choose a program that's right for your organization.







How to sign-up and become a Valley Metro sales outlet.

Are you interested in offering Valley Metro fare media (tickets, passes, tokens) to your employees or clients? Perhaps you want to start selling fare media to the general public and receive a commission for your services. Maybe the Bus Card Plus program is the answer to your trip reduction needs?

If any of these options fit into you establish an account with transit fare payment program alternative way of paying for marketing materials. All this Outreach office at 495-7283 answer your questions, help us, and supply you with bus your plans of offering your their bus fare, then contact or 261-8505. We're here to the Valley Metro Business will help you promote and clients or employees an that works best for your implement a successful route information and organization.

Choose a program that's right for your organization.

The first thing you need to do is decide what type of program you wish to join and offer at your organization. We have three basic types of programs available:

▶ Private Sales Outlet: If you wish to sell or offer fare media only to your employees, students or clients, your organization will be established as a private sales outlet. Upon establishing an account, you may begin placing orders for fare media by calling 534-9825, or by faxing the order form supplied by us to 534-3699. Your order will be delivered or mailed to you within three business days. An invoice will be included with your order which must be paid within 30 days. You may return any unsold, expired monthly passes back to us and receive proper credit on your account.

▶ Public Sales Outlet: If you wish to sell fare media to the general public, your organization will be established as a public sales outlet. Upon establishing an account, you may begin placing orders for fare media by calling 534-9825, or by faxing the order form supplied by us to 534-3699. Your order will be delivered or mailed to you within three business days. You will receive your fare media on consignment. An invoice and a consignment report will be included with your order and must be filled out every month and returned to us with proper payment. You pay only for the tickets, passes, and tokens you sold each month. Unsold, expired monthly passes must be returned for proper credit. You will receive a 2% commission from your gross sales each month.

▶ Bus Card Plus Program: The Bus Card Plus program is designed to help you administer a convenient and cost effective bus ridership program to fit into your travel reduction plan. This program eliminates the need to order tickets, tokens, or monthly passes each month. By using magnetic card-reading technology, this program will track your employees¹ bus ridership, and encourage employees to ride the bus by creating a flexible and easy way to pay their bus fares. It's like a credit card for the bus!

Upon establishing an account, you will receive a supply of Bus Card Plus cards to distribute to your employees or clients who are interested in riding the bus. At the end of

each month, you will receive a monthly billing summary and ridership report telling you how many times each card was used, and how much each card holder owes for their bus rides. Each card holder will be charged for the number of rides taken that month, not to exceed the cost of a local, express, or reduced fare monthly pass. The amount can be deducted from their paycheck or other payment source, less any subsidy your organization may provide. Your organization is responsible for payment in full, which must be paid within 30 days.

How to get started.

After deciding the type of program you wish to implement at your organization, please fill out and sign the enclosed Valley Metro Sales Outlet Agreement. The information you provide on the agreement will be held in the strictest confidence and will be used solely to establish an account with Phoenix Transit System, a private contractor for Valley Metro.

Mail your agreement to:

Phoenix Transit System Attn: Accounts Receivable P.O. Box 4275 Phoenix, AZ 85030-4275 Upon executing your agreement, you will be mailed an approval letter, a fare media order form, and a copy of your signed agreement. If you are planning to become a public sales outlet or wish to join the Bus Card Plus program, we will call you to set up an appointment to discuss the details of your program in person. If you are planning to become a private sales outlet, you may begin placing orders for fare media immediately.

If you have any questions regarding these programs or need further assistance in getting an account established, please call the Valley Metro Business Outreach office at 495-7283 or 261-8505.

That's all there is to get started. It's simple, convenient, and easy to implement into your organization. Sign up today to become a sales outlet with Valley Metro.

 Full fare media are used by the majority of our passengers and are listed below:

LOCAL

Reduced fare media are used by youths ages 6-18, seniors 65 and older, and persons with disabilities. Passengers must be prepared to show the bus operator proper I.D. upon request to confirm eligibility.

 Specialty fare media have unique price structures and variable expiration dates. Listed below are the two examples of specialty fare media;

Local Ticket Book

- The cost is \$12.00
- Each ticket is worth \$1.20
- Ten tickets per book
- Can be used on local routes
 Additional fare required on
- Additional fare required on express routes

Local & Express Ticket Book

- •The cost is \$18.00 •Each ticket is worth \$1.80
- •Ten tickets per book
- Can be used on local and express routes



All Day Pass

- •The cost is \$3.60
- *Good for unlimited ndes on local routes during a one-day period
- Additional fare required on express routes



Local Monthly Pass

- •The cost is \$34.00
- Good for unlimited rides on local routes for the entire-month printed on pass
- Additional fare required on express routes

Local & Express Monthly Pass

- •The cost is \$51.00
- Good for unlimited rides on local and express routes for the entire month printed on pass



Tokens

- •Each token is worth 60¢
- •Can be purchased in bags of 20 for \$12.00
- •Full fare on local routes requires 2 tokens
- Reduced fare on local routes requires 1 token
- •Full fare on express routes requires 3 tokens
- Reduced fare on express routes requires 3 tokens

DASH Tokens

- •Each token is worth 30¢
- Can be purchased in bags of 250 for \$30.00
- DASH tokens good only on DASH buses

Reduced Fare Ticket Book

- *The cost is \$6.00
- •Each ticket is worth 60¢
- Ten tickets per book
- Can be used on local routes
- Additional fare required on express routes





Reduced Fare All Day Pass

- •The cost is \$1.80
- Good for unlimited rides on local
- routes during a one day period

 •Additional fare required on express routes



Reduced Fare Youth, Senior, or Disabled Monthly Pass

- Disabled Monthly Pas ◆The cost is \$17.00
- Good for unlimited rides on local routes for the entire month printed on pass
- Additional fare required on express routes



Reduced Fare I.D.s

- •Cost is \$2.50
- Issued to person 6-18 years of age
 Issued to person 65 years of age or older
- Issued to person with medically certified disability
- Reduced Fare Identification card, Medicare card, valid Arizona Drivers License, Arizona Non-Drivers I.D., and school I.D. with picture and date of birth are acceptable I.D.'s for seniors and youths.
- Persons with disabilities must have a Reduced Fare Identification card, Medicare card or picture I.D. issued by the Rehabilitation/Instructional Services for the Blind and Visually Impaired.
- •Photo I.D.'s have an expiration date
- Replacement cards cost \$2.50
 Proper I.D. or proof of disability must
- be presented when purchasing card



The Semester Pass

- •The cost is \$120.00
- Good for unlimited rides on local routes for the entire time period printed on pass
- Additional fare required on express routes
- Cards are encoded with a beginning date, expiration date, and card number
- May be purchased on college campuses by full-time college students or full-time graduate



The Bus Card Plus Program

- Offered to employers for their employees
- •Not available on individual basis
- Takes the place of tickets, passes, and tokens
- Cards are encoded with a beginning date, expiration date, company account number, and card number
- •Good for 2 years

Local & Express Bus Card Plus

 Good on local and express routes
 Billed only for actual number of uses up to maximum of \$34.00 per month for local routes or \$51.00 per month for express routes

Reduced Fare Youth, Senior, or Disabled Bus Card Plus

- Good on local and express routes
- •No discount on express routes
- Billed only for actual number of uses up to maximum of \$17,00 per month for local routes or \$51,00 per month for express

FREE FARE

- Children under 6 with responsible fare-paying passenger are not charged a fare on local or express routes
- 60 minute transfers are issued free upon payment of fares (except on DASH)
- Pass users do not need transfers.
 Just slide your card through the reader each time you board.

Appendix B. Bus Card Plus Promotional Materials for Employers and Employees

Valley Metro

The Bus Card Plus Program



Convenient

Stress Free Saves Time

,

Saves Money



The Bus Card Plus Program

Introducing a convenient and cost effective way to monitor and evaluate bus ridership for your organization's trip reduction program.



For Information on Routes and Schedule: Ill Valley Metro Transit Information at 253-

What is the Bus Card Plus?

creating a flexible and magnetic card-reading a program designed to program will track the effective bus ridership help you administer a The Bus Card Plus is easy way to pay their bus ridership of your employees or clients, and encourage them convenient and cost bus fares. It's like a your trip reduction program to fit into credit card for the to ride the bus by technology, this plan. By using

Why would my organization want to join?

The Bus Card Plus program is designed to meet the needs of employers who are affected by the Maricopa County Trip Reduction ordinance. This legislation is intended for employers who have 50 or more employees at a worksite in any 24-hour period. The ordinance requires that these employers attempt to reduce single-occupant vehicle trips or average miles driven by their employees. Until now, employers had no easy way to track how many employees were actually riding the bus to work, or how often. The Bus Card Plus program will do that for you.

How does it work?

After signing up for the program, your organization will receive cards for each person who is interested in riding the bus. Each card is encoded with your organization's account number, individual card number, fare category, and two-year expiration date. By sliding the card through the card reader locared on top of the farebox, data is entered into our computer thereby tracking the usage of that card. This allows you to receive a monthly billing summary and ridership report telling you how many times each card was used, and how much each card holder owes for their bus

Each card holder will be charged for the number of rides taken that month, not to exceed the cost of a local, express, or reduced fare monthly pass. The amount can then be deducted from their payment source, less any subsidy your organization may provide.

Can this program save my organization money?

This program can save your organization time and moost by reducing the amount of hours you might spend administering less automated fare payment systems. If your organization subsidizes bus fares each month, you may realize a savings in the amount of subsidy you pay out each month. Because your bill is based on subsidy on a percentage of the actual number of trips each card holder takes every month.

How do transfers work?

If a rider needs to transfer to another bus, they slide the card through the card reader with each boarding. An additional fare will not be charged to complete the trip (within two hours of boarding the first bus).

What happens if a card is lost or stolen, or a card holder leaves my organization?

If a situation like this occurs, simply fax us the notification form enclosed in your sales kit, listing the card number that needs to be invalidated. We will invalidate that card and it will not be accepted on any bus 24 hours after we receive notification.

What are the benefits offered by this program?

Exact bus ridership statistics for trip reduction reporting.

Fase of distribution - no more monthly passes, tickets or tokens to order and send out. Order a supply of cards from Valley Metro and issue them as needed.



■ The Bus Card Plus makes riding the bus so easy. Just slide your card through the card reader, sit back and enjoy the ride!

- ▶ Saves time and money by reducing the amount of hours spent administering your bus idenship program. For organizations that offer a subsidy, it can lower the amount of subsidy you pay out each month.
- ► Encourages employees or clients to ride the bus by creating a flexible and easy way to pay bus fares. In most eases, monthly charges are deducted from the employees paychecks or paid in full by the organization.

 ▼The Bus Card Plus cannot be duplicated and can be
 - ►The Bus Card Plus cannot be duplicated and can be invalidated and replaced if lost, stolen, or a card holder leaves your organization.
 - ▶ Riding the bus helps improve air quality and reduces traffic congestion.

How much does it cost to get started?

Each card costs just 50e. You must order a minimum of wenty cards to join the program. However, you don't have to have that many bus riders to join. There is no charge for your monthly billing summary and ridership report. Detailed reports of each card holder's actual bus rides (including routes, times, and dates,) are available for just \$10 per month, and can be provided on hard copy, flopty disk, or magnetic tape. With some in-house computer programming, organizations can use these detailed reports to automate a payroll deduction program that will eliminate manually deducting employees' charges each month.

How do I get started?

Just call the Valley Metro Business Outreach office at 495-7283 or 261-8505. We'll send you the conditions of the program. a Valley Metro Sales Oulet Agreement, and some additional information about this program. We'll also set up a meeting with you to explain how to implement this program as part of your trip reduction

Start saving time and money for your organization. Join The Bus Card Plus program today!





The Bus Card Plus It's like a credit card for the Bus.

Convenience

Bus Card Plus takes all the hassle out of paying your fare. No need for exact change, tickets, passes, or tokens to ride the bus. And most organizations offer payroll deduction as an automatic payment method.

Flexibility

You will only get billed if you use your card. It's great for the occasional or frequent bus rider.

Inexpensive Transportation

No more parking fees, wear and tear on your vehicle, or money for gas.

Stress-free Commute

Leave the driving to us. Sit back, read the paper, and enjoy the ride.

Personal Satisfaction

Knowing you're helping to improve the Valley's air quality.







The Bus Card Plus

It's like a credit card for the Bus.



is a convenient program that helps you save both time and money.

The Bus Card Plus

familiar situation. Traffic is get you there with nerves to brown cloud of pollution is traffic nightmare? Catch a Valley Metro bus and we'll spare. And to make riding your way to work. There's there an alternative to this punch your time clock. Is attendant, and feel totally car is not far behind. You blocking your view. Your nerves are shot and your your new Bus Card Plus drained before you even congestion because that garage, pay the parking the bus even easier, use Picture yourself in this backed up for miles on no end in sight to this card to pay your fare. pull into the parking

What's a Bus Card Plus card, and how does it work?

your organization who has just joined the Bus Card It's like a credit card for the bus! And thanks to Plus program, you can take advantage of this solution to air pollution.

By using magnetic card-reading technology, Bus Card Plus will track and record each trip you take on the bus. Anyone who is interested in riding the bus to work is given a plastic card

much each card holder owes for their of times each card was used and how number, fare category, and two year bus rides. You can use your card as expiration date. By sliding the card report. This report lists the number through the card reader located on encoded with their organization's account number, individual serial top of the farebox, data is entered organization to receive a monthly into our computer allowing your billing summary and ridership

convenient and

ticket to

transportation.

stress-free

monthly pass). That amount will be deducted from exceed the cost of a local, express, or reduced fare your paycheck or other payment source, less any charged for your actual rides that month, (not to subsidy your organization may provide. many times as you want and only be

What's in it for you?

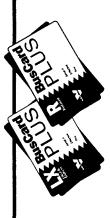
- ►Convenience Bus Card Plus takes all the hassle tickets, passes, or tokens to ride the bus. And most out of paying your fare. No need for exact change, organizations offer payroll deduction as an automatic payment method.
- ▶Flexibility You will only get billed if you use your card. It's great for the occasional, or frequent bus rider.
- driving to us. Sit back, read the paper, ▶Stress-free Commute — Leave the ▶Inexpensive Transportation — No more parking fees, wear and tear on your vehicle, or money for gas.

The Bus Card Plus is Your ▶Personal Satisfaction — Knowing you're helping to improve the Valley's air quality.

and enjoy the ride.

How do I get my own Bus Card Plus card?

coordinator or organization representative and sign The Bus Card Plus is your ticket to convenient and up today. It's that simple, and even easier to use. Contact your trip reduction stress-free transportation!



The Bus Card Plus

YES, I'm interested!

Please send me an application to enroll in the Bus Card Plus Program.

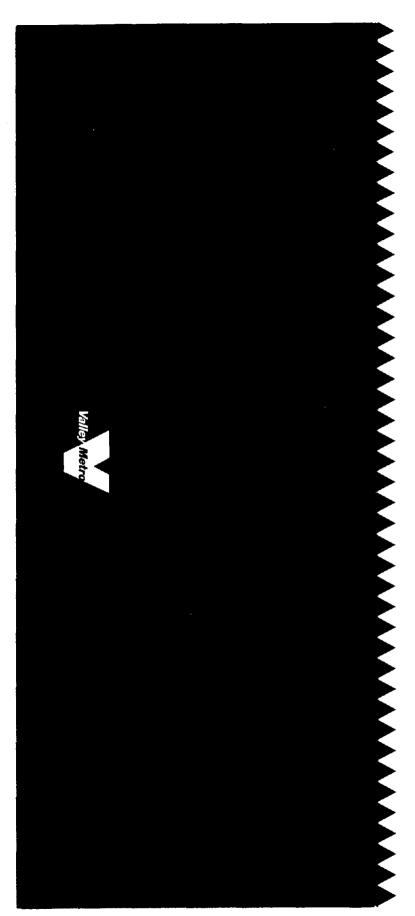
Office Phone

Mail Box No.

Please return this form to your trip reduction coordinator or organization representative.

If you do not know who this person is, contact the Valley Metro Business Outreach Office at 495-7283 or 261-8505.

Welcome aboard!







Here's How To Use Your New Bus Card Plus.

Your employer has joined the Valley Metro Bus Card Plus program. This card replaces monthly passes, tickets, tokens, and cash. When you board, just slide the card through the magnetic card reader located on top of the farebox. Data is entered into our computer, giving your employer bus ridership statistics and billing information for your travel reduction program.

What does The Bus Card Plus do for me?

You don't need to buy tickets, tokens, or a monthly pass anymore. The Bus Card Plus is like a credit card for the bus! You can ride the bus as many times as you want and

only be billed for your actual number of rides that month, not to exceed the cost of a local, express, or reduced fare monthly pass -- no matter how many times you ride. That amout will be deducted from your paycheck or other payment source, less any subsidy your employer may provide.

How does my Bus Card Plus work?

"LX" - Local & Express. The Local & Express Bus Card Plus can be used on any bus in the Valley. You will be charged \$1.00 per ride on local routes, with a monthly maximum of \$28; and \$1.50 per ride on express routes, with a monthly

to persons with disabilities. Reduced express buses or the Downtown Area maximum of \$14; and \$1.50 per ride charged 25¢ per ride on DASH, with any bus in the Valley. However, you a monthly maximum of \$28; 50¢ per seniors 65 years of age or older, and "R" - Reduced Fare. The Reduced maximum of \$42. The reduced fare ride on local buses, with a monthly Bus Card Plus can also be used on charged more than \$42 per month. fare requires the display of proper will not receive a reduced fare on on express buses, with a monthly your destination, you will not be is available to youths ages 6-18, SHuttle (DASH). You will be

identification when a bus operator requests it to confirm eligibility. Call 253-5000 for more information regarding acceptable forms of identifications.

What else do I need to know about my Bus Card Plus?

Transfers: If you need to transfer to another bus, slide your card through the reader each time you board. **You will not be charged an additional fare to complete your trip** (within two hours of when you board your first bus). However, you will be charged for the highest single fare of the buses used to complete your trip.

Billing period: Our billing period runs from the 26th of each month to

the 25th of the following month. All charges you receive are based on rides taken during this period.

maximum of \$42. If you ride both

local and express buses to get to

Serial number: Each Bus Card Plus has a unique serial number. This number identifies you only to your employer and enables them to bill you for your bus rides each month.

Expiration date: Cards are good for two years. Your employer will automatically replace your card before it expires.

Lost/stolen cards: If your Bus Card Plus is lost or stolen, notify your employer immediately! They will notify us and we will invalidate the lost or stolen card. Your employer will replace it with a new one at that time. Your old and new card

numbers will be linked together so that you still get just one bill that month. If you leave your place of employment, turn in your card to your employer. Your card will be invalidated at that time.

You're ready to go! "Slide a ride" today!



Appendix C. Commercial Credit Card Promotional Flyer



Valley Metro buses now accept VISA® and **MasterCard®**

Starting May 1, Valley Metro is pleased to accept MasterCard and VISA credit cards for the payment of bus fares.

VISA

Credit card customers will be charged regular rates of \$1.00 per ride for local bus service, and \$1.50 per ride for express bus service. Use your credit card as often as you wish for any route across the Valley Metro

No reduced rate fares are possible with credit cards at this time.

Bank debit cards with the VISA symbol can also be used to pay for transit fares. However other major credit cards such as American Express, Discover and CarteBlanche will not be accepted at this time.

Passengers may board and pay their fare by sliding their card through the magnetic reader at the top of the farebox. Drivers will not present any receipts for signature or require the entering of PIN numbers.

If you require a receipt, please contact the Customer Relations department at 262-1868. A record of the charge transaction will be mailed to you.





Metro VISA Now you can ride the bus with **Mastercard**° and Visa: Valle Metro BS10867 C-2

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