



# Arlington Pilot Carshare Program

FIRST-YEAR REPORT



ARLINGTON  
VIRGINIA

Arlington County Commuter Services (ACCS)

Division of Transportation

Department of Environmental Services

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## CARSHARING IS A SELF-SERVICE, SHORT-TERM CAR-RENTAL SERVICE that is growing in Europe and North America and has been available in the metropolitan Washington region since 2001. Carsharing complements

Arlington's urban-village neighborhoods by providing car service on demand without the cost and hassles associated with car ownership. In March 2004, the Arlington County Commuter Services (ACCS) unit of the Department of Environmental Services partnered with the two carshare companies—Flexcar and Zipcar—to provide expanded carshare services and promotions called the Arlington Pilot Carshare Program. The overall goals of the Program were the following:

- To dramatically raise vehicle availability and visibility of carsharing in Arlington, thereby increasing membership and use.
- To provide safe, convenient pickup/dropoff locations at all metro stations in the Rosslyn-Ballston corridor, essentially making carsharing an extension of the existing transportation infrastructure.
- To validate carsharing as a viable alternative to car ownership through a high profile partnership with the county.

The Arlington Pilot Carshare Program has been a major success increasing carshare vehicles by 125%, carshare membership by 116%, and carshare use by over 150%. The Pilot Carshare Program survey results corroborated with evidence from leading North American and European studies to show that carsharing allows members to reduce their car ownership, encourages more transit trips, reduces the number of cars on the road and reduces the number of vehicle miles traveled (VMT). Carsharing services provide an important component of an integrated, mobility-management system that complements Arlington transit-oriented, walkable, urban-village concepts and helps ACCS meet its program goals.

It is envisioned that the Arlington Pilot Carshare Program success can be replicated in other Arlington urban villages such as Crystal City, Pentagon City, Shirlington, Columbia Pike and more. The Arlington Pilot Carshare Program accomplishments are in large part due to the high-visibility carshare vehicles that are parked on-street, the convenience of the service, and the safety of the members. Building upon this success, ACCS is expanding the "pilot program" to a permanent part of the transportation landscape in Arlington.

**The Arlington Pilot Carshare Program has been a major success increasing carshare use by over 150%.**



## ACKNOWLEDGEMENTS

We would like to acknowledge the vast amount of teamwork that was involved in realizing the Carshare Program. We'd especially like to thank the following:

- Arlington staff including: Christopher Hamilton, Commuter Services Manager; Jeff Price, TDM Program Manager; Jose Thommana, Transportation Manager; Bobbi Greenberg, Transit Marketing Manager; Jay Freschi, Manager CommuterDirect.com; Lois Demeester, Executive Director, Arlington Transportation Partners; James Hamre, Transit Manager; Mark Kellogg, Chief, Transportation Planning; Dennis M. Leach, Director, Division of Transportation.
- Tim Vogel and staff of Flexcar.
- Gabe Klein and staff of Zipcar.

Also thanks to the Arlington Community for overwhelming support of the Program.



LEFT TO RIGHT: Tim Vogel, Flexcar; Chris Hamilton; Bobbi Greenberg; Jeff Price; Gabe Klein, Zipcar.

## What is Carsharing?

Carsharing has similarities to car rental, with the main differences being technology-based, self-service access, rental increments as small as one-half hour, all-inclusive rates (gas, insurance, parking), and decentralized vehicle placement in the communities, rather than at a central car rental location. In short, carsharing delivers advantages of both a rental car and cab service, and replicates car ownership.

Carsharing began in Switzerland in the 1980s and has expanded throughout Europe to include 450 cities. The concept is relatively new, but growing in the U.S., with carsharing organizations located in Seattle, Chicago, Portland, Long Beach, Los Angeles, Denver, San Diego, Boston, New York, and Washington, D.C. In these cities, for-profit or non-profit organizations maintain the carsharing fleet and reservation website. To become a member of the organization and use the vehicles, an application must be completed and an annual fee paid. Vehicles may be reserved either on-line or by phone. Payment is based on per-hour and per-mile fees.

Membership in a carsharing service includes gas, insurance, and maintenance. Membership fees vary based on how one plans to use the service and which provider one chooses.

## Arlington: A Perfect Fit for Carsharing

Arlington's urban villages are walkable, mixed-use neighborhoods served by an excellent public transportation system. People who live in these neighborhoods can walk or bicycle to shopping, restaurants, and entertainment, and hop on Metrorail, Metrobus or ART when they need to get around. Along the Rosslyn-Ballston and Jefferson-Davis Metrorail corridors, 39% of residents use transit to get to work and 20% of workers use transit to get to work.<sup>1</sup> Arlington County's unique urban village character provides a perfect match for carsharing services. According to a 1999 study by the Victoria Transport Policy Institute,<sup>2</sup> carsharing operates best in an area that:

- Offers a variety of travel choices including transit, ridesharing, cycling and walking
- Has high-density, multi-modal, mixed-use neighborhoods and flexible parking requirements
- Rents or sells residential parking separately from housing

**Carsharing operates best in an area that offers a variety of travel choices including transit, ridesharing, cycling and walking.**



<sup>1</sup> Journey-to-Work census data, 2000. <http://www.census.gov/population/www/socdemo/journey.html>

<sup>2</sup> Victoria Transport Policy Institute (VTPI), Carsharing. <http://www.vtpi.org/tadm/tadm7.htm>

- Establishes Transportation Demand Management (TDM) agencies to encourage employers and employees to develop and use alternative modes of transportation (here in Arlington that's Arlington County Commuter Services)
- Integrates carsharing with other mobility services such as transit, taxis and ridesharing



www.CommuterPage.com

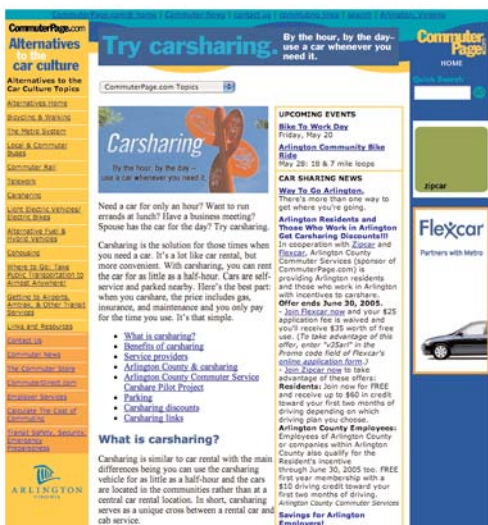
## Two Carsharing Companies Operating in Arlington

The Washington D.C. market is unique in that there are two different carsharing companies—Flexcar<sup>3</sup> and Zipcar<sup>4</sup>—which both started operations here in 2001. Prior to March 1, 2004, carshare service in Arlington included 12 carshare vehicles parked in private lots and garages. Both carshare services offer considerable convenience with service with online- and phone-reservations systems, smart-card technology and new fleets that include energy efficient vehicles such as hybrids.

## Arlington County Commuter Services (ACCS)

Carsharing helps Arlington County Commuter Services (ACCS) achieve its mission<sup>5</sup> to enhance the quality of life and economic vitality of Arlington by working to reduce traffic congestion, reduce demand for parking, provide maximum use of public transportation facilities, improve air quality, and improve mobility. ACCS accomplishes its mission by encouraging people who live and/or work in or commute through Arlington to use mass transit, car/vanpool, bicycle, walk, telecommute and use other smart alternatives to driving alone such as carsharing. ACCS accomplishes this through the following programs<sup>6</sup> and services: The Commuter Store<sup>™</sup>, Arlington Transportation Partners, CommuterPage.com<sup>®</sup> and CommuterDirect.com.

Arlington County Commuter Services (ACCS) had previously supported the introduction of Flexcar and Zipcar in Arlington through discounted membership to Arlington residents. The annual membership application fees were waived and driving credits were provided to individuals who live in Arlington.



www.CommuterPage.com/Carshare

<sup>3</sup> Tim Vogel, General Manager, Flexcar. <http://www.flexcar.com/washingtondc>

<sup>4</sup> Gabe Klein, Regional Vice-President, Zipcar. <http://www.zipcar.com/>

<sup>5</sup> Arlington County Commuter Services (ACCS). <http://www.commuterpage.com/ACCS/index.htm#mission>

<sup>6</sup> Arlington County Commuter Services (ACCS). <http://www.commuterpage.com/ACCS/index.htm#programs>



# ARLINGTON PILOT CARSHARE PROGRAM

## Public-Private Partnership

In March 2004, ACCS partnered with Flexcar and Zipcar to provide expanded carshare services and promotions. The Pilot Program seeded carsharing with a limited investment without long term consequences for the County. The partnership provides a public service to Arlington that would not be feasible under a solely public program.

## Program Goals

The overall goals of the program were the following:

- To dramatically raise vehicle availability and visibility of carsharing in Arlington, thereby increasing membership and use.
- To provide safe, convenient pickup/dropoff locations at all metro stations in the Rosslyn-Ballston corridor, essentially making carsharing an extension of the existing transportation infrastructure.
- To validate carsharing as a viable alternative to car ownership through a high profile partnership with the county.

## Program Elements

In order to make the carsharing service an attractive option to both Arlington residents and workers, ACCS worked with Flexcar and Zipcar to develop a significant Pilot Carshare Program in the Rosslyn-Ballston Corridor that would provide the following program elements:

### DOUBLE THE CARSHARE FLEET IN ARLINGTON

The Pilot Carshare Program provided a critical mass of carsharing service concentrating at the metro stations areas where as many as six carshare vehicles were located. The carshare vehicles were grouped at Metro stations to be easily recognizable and accessible to transit riders. A secondary placement of carshare vehicles was provided adjacent to grocery shopping and apartment buildings. Overall, the program introduced an additional 15 new carshare vehicles in the Rosslyn-Ballston Corridor for a total of 27, the highest per capita concentration in the Washington region.





## SUBSIDY

Flexcar and Zipcar indicated that given their planning schedule and capital restrictions that they'd likely add only 2-3 new vehicles each in Arlington during 2004. In order to encourage the carsharing companies to advance plans to add 20 cars at one time, ACCS agreed to share the risk of capitalizing ten of the new vehicles.

The risk sharing took the form of ACCS providing a subsidy to the carsharing companies for 10 of the new vehicles that were added to the Program. Over the course of the first six months of each car's operation, ACCS provided a sliding scale subsidy, minus revenue earned. The carsharing companies also agreed to keep the cars in operation in the Rosslyn-Ballston Corridor for a total of one year—whether or not the cars became viable. The sliding scale subsidy was as follows:

1. Up to \$1500 per month and car for first 2 months, minus revenue
2. Up to \$1000 per month and car for second 2 months, minus revenue
3. Up to \$500 per month and car for third 2 months, minus revenue

The total amount allocated was never used since revenue grew so rapidly that the allocation ceiling was never reached.

## ON-STREET VISIBILITY

Before the pilot program, most carshare vehicles in Arlington and throughout the Metropolitan D.C. region were located in private parking lots and garages. Arlington designated 20 of the 2,373 on-street metered parking spaces in the Rosslyn-Ballston Corridor for the carsharing vehicles. Flexcar and Zipcar retrofitted these spaces to include the following elements:

- Highly visible, orange signposts with holders for postcards and an insert sign with information on carsharing at each of the 20 designated carshare parking spaces.
- Standard "No Parking" and standard towing signs were affixed to the poles. Additional "Towing Enforced" signs that include "If your car is towed, please call 703-558-2222" (police non-emergency number) were added to each pole.
- Stencils on the pavement were added to the parking spaces indicating "No Parking Except Flexcar" or "No Parking Except Zipcar."





## PROMOTIONS AND EVENTS

The pilot program promotions included a joint effort of ACCS, Flexcar and Zipcar to develop the following promotional efforts:

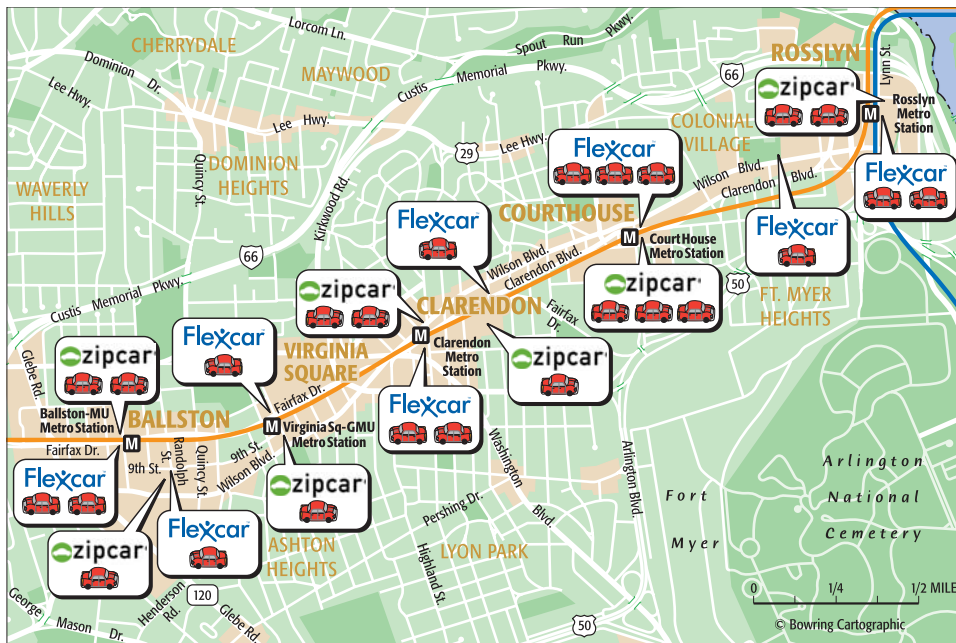
- Carsharing brochure
- "Take-one" Carshare postcards for the holder on Carshare orange pole sign, ACCS program promotion including involvement of Arlington Transportation Partners, CommuterStores, and a marketing campaign on Metrobus and in Metrorail facilities.
- Launch Event. Representatives of Arlington County, the U.S. EPA, Flexcar, and Zipcar joined together on Tuesday, March 23, 2004 to launch Arlington's Carshare Pilot Program. Mark Kellogg from the Arlington Division of Transportation; Arlington County Board Chairman Barbara Favola; Roger Gorham, a representative from the U.S. EPA; the Founder of Flexcar Neil Peterson; and Scott Griffith, CEO and President of Zipcar, all spoke at the event next to four new carsharing vehicles at the Courthouse Metro Station.
 

Mark Kellogg from the Arlington Division of Transportation; Arlington County Board Chairman Barbara Favola; Roger Gorham, a representative from the U.S. EPA; the Founder of Flexcar Neil Peterson; and Scott Griffith, CEO and President of Zipcar, all spoke at the event next to four new carsharing vehicles at the Courthouse Metro Station.
- Both Zipcar and Flexcar also performed additional independent marketing and promotional efforts.



ABOVE LEFT TO RIGHT: Roger Gorham, U.S. EPA representative; Neil Peterson, Founder of Flexcar; Mark Kellogg, Arlington Division of Transportation; Barbara Favola, Chairman of the Arlington County Board; and Chris Zimmerman, Arlington County Board member and Metro Board Chairman at March 23, 2004 launch event.

LEFT: Carshare map from brochure and postcard.





## DISCOUNTS

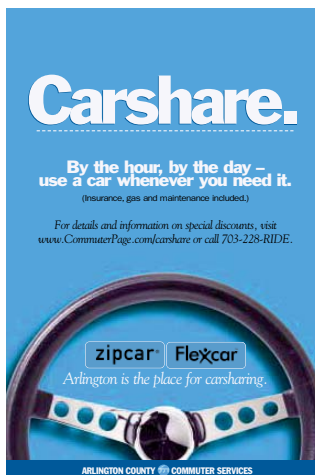
ACCS, Flexcar and Zipcar teamed up to provide discounted membership to Arlington residents. As part of the pilot program, discounts were also extended to persons who work in Arlington. The annual membership-application fees were waived and driving credits were provided to individuals who live or work in Arlington.

## FUNDING

Program Elements including promotions, events, discounts and subsidies were \$85,000 over the course of two fiscal years. ACCS funded the Program with Federal CMAQ (Congestion Management Air Quality) monies.

## ENFORCEMENT

Arlington County Parking Enforcement staff enforced these on-street spaces that are marked with standard "No Parking" signs so as to have the same ability to ticket and tow cars as for regular on-street spaces.



Brochure (top) and postcard, along with the map on page 7, represent some of the collateral materials from the Pilot Carshare Program.

**A**CCS AND THE TWO CARSHARE COMPANIES MET ON A QUARTERLY basis to monitor the progress of the Program. ACCS, Flexcar and Zipcar reviewed general performance numbers that included growth in membership, usage and trends. Since the two private companies are competing, certain information on specific operations remained confidential. At the one-year anniversary, ACCS gathered the following information in order to evaluate the Carsharing Pilot Program:

- **Pilot Carshare Program results:** membership rate increases, Flexcar and Zipcar utilization rates, etc.
- **Pilot Carshare Program survey:** ACCS, Flexcar and Zipcar conducted research to gather information about the success of the pilot program and to gauge the effects that carsharing has on parking and transit use in Arlington. In order to provide ACCS with the necessary evaluation of the pilot program, Flexcar and Zipcar worked together to develop and launch an online survey of their Arlington membership. Staff merged and analyzed the survey data from the 428 total Flexcar and Zipcar respondents and presented results that follow.
- **Carshare research:** Both Flexcar and Zipcar have a national presence and have participated in Adam Millard-Ball's important research activities for his upcoming paper for the Transportation Research Board (TRB) entitled: *Car-Sharing: Where and How It Succeeds*.<sup>7</sup> Several other sources on carsharing impacts were reviewed including Cervero and Tsai's UC Berkeley study entitled: *San Francisco City CarShare: Travel-Demand Trends and Second-Year Impacts*.<sup>8</sup>

<sup>7</sup> A. Millard-Ball, G. Murray and J. Burkhardt, *Car-Sharing: Where and How it Succeeds* (Unpublished interim report by Nelson\Nygaard for the Transit Cooperative Research Program, 2004).

<sup>8</sup> R. Cervero and Y. Tsai. *San Francisco City CarShare: Travel-Demand Trends and Second-Year Impacts* (Berkeley: Institute of Urban and Regional Development, University of California, Berkeley, Working Paper, 2003-05).



## EVALUATION OF CARSHARE PILOT PROGRAM

**The Pilot Carshare Program has roughly doubled the number of carshare members in Arlington.**



### The Carshare Program Increased Availability, Membership and Use

The Pilot Carshare Program more than doubled the number of available carsharing cars from 12 to 27. Twenty-one of the cars are located in prime on-street locations in close proximity to Metrorail station along the Rosslyn-Ballston Corridor.

The Pilot Carshare Program has roughly doubled the number of carshare members in Arlington. At the beginning of the Program in March, 2004, there were 632 Flexcar and 548 Zipcar members for a total of 1,180 carshare members in Arlington. One year later, membership has increased over 116% to 1,407 Flexcar and 1,139 Zipcar members for a total of 2,546 carshare members in Arlington.

The Pilot Program has greatly increased carshare use. Between March 2004 and March 2005, the total monthly use of carshare vehicles increased over 150%. “Compared to the rest of the Washington region, the Arlington Pilot Carshare Program accounted for one-third more growth in Arlington carshare membership than in the rest of the region” according to Gabe Klein of Zipcar.

#### IMPACT OF PILOT CARSHARE PROGRAM

	BEFORE PILOT PROGRAM	AFTER PILOT PROGRAM	% INCREASE
No. of Cars	12 off-street	21 on-street 6 off-street	+ 125%
No. of Carshare Memberships	1,180	2,546	+ 116%
No. of Hours of Car Use Per Month	n/a	n/a	+ 150%

### Arlington Carshare Members Trip Frequency and Purpose

The Pilot Carshare Program survey respondents were asked to enter how many types of the following trips they take per month. The results were as follows:

- 403 respondents reported 1,877 trips per month, with an average of 4.7 trips per respondent per month.

In a similar survey, the Millard-Ball study found trip making yielded an average of 3.34 trips per month,<sup>9</sup> while the Cervero study data suggest 3.36 trips per month.<sup>10</sup> Both the Millard-Ball<sup>11</sup> and Cervero<sup>12</sup> surveys found that the top two trip purposes for carshare users were for shopping and personal business. When survey respondents were asked how many trips of the following trips they take per month, the results by purpose were as follows:

- The most common trips were: grocery shopping (25%), other shopping (22%), recreation/social trips (19%), personal business (18%), work-related trips (9%), and journey to or from work (6%).

## Arlington Carshare Members Rate Service Excellent

The Arlington Carshare member respondents, both Flexcar and Zipcar, were asked to rate the carsharing service that they use as: excellent, very good, good, fair or poor.

- Seventy-three percent of Flexcar members rated the service as very good or excellent. Only a very small percentage of respondents (3.2%) rated the service as fair or poor.
- Eighty-five percent of Zipcar members rated the service as very good or excellent. Only a small percentage of respondents (3.2%) rated the service as fair or poor.

## Carsharing Members Feel Safer with Carshare Vehicles Parked On-Street

Arlington carshare members prefer a safe, visible transportation option. The placement of carsharing vehicles in key on-street locations provided a perceived safety, recognition and legitimacy for carsharing in Arlington. The majority of members, 76.3% at Flexcar and 76% at Zipcar, agreed that they felt safer using carsharing now that vehicles are parked on-street. Research in other cities has shown that several cities and campuses have provided on-street parking including: Portland, OR; Seattle, WA;

**The majority of members agreed that they felt safer using carsharing now that vehicles are parked on-street.**



<sup>9</sup> A. Millard-Ball, G. Murray and J. Burkhardt, *Car-Sharing: Where and How it Succeeds* (Unpublished interim report by Nelson\Wygard for the Transit Cooperative Research Program, 2004) 3-12.

<sup>10</sup> R. Cervero and Y. Tsai. *San Francisco City CarShare: Travel-Demand Trends and Second-Year Impacts* (Berkeley: Institute of Urban and Regional Development, University of California, Berkeley, Working Paper 2003-05). Data based on typical member leasing for 222 hours per year, with an average of 5.5 hours in length.

<sup>11</sup> A. Millard-Ball. *Car-Sharing*, 3-9.

<sup>12</sup> R. Cervero and Y. Tsai. *San Francisco City CarShare*, 11.



Zipcar staff person demonstrates how to unlock the car by holding his Zipcard to the windshield.

Oakland, CA; Cambridge, MA; UNC-Chapel Hill, NC; Vancouver, BC with many others planning to following suit.<sup>13</sup> Washington’s regional transit agency, WMATA also provided on-street parking at its suburban-style metro station locations around the Washington, DC region.<sup>14</sup> Arlington emulated Portland’s successful program and provided the visibility of on-street parking where the vehicles and custom orange signage can be seen by a maximum number of people.

## Arlington Members More Confident Knowing Arlington is Carshare Partner

Arlington carshare members are more confident in the Arlington-sponsored carshare service. When asked if they felt more confident joining a carsharing company knowing that they are partnered with Arlington County, the vast majority of members (Flexcar at 85.8% and Zipcar at 87.4% agreed. Millard-Ball’s research concludes that strong Public-Private partnerships, often including considerable public support such as free parking, are an important factor for success of carshare programs.<sup>15</sup>

## Arlington Carsharing Members Reduce Vehicle-Miles Traveled (VMT)

Studies suggest that carsharing leads to reduced vehicle travel.<sup>16</sup> Millard-Ball’s research indicates “that the key variable is often the relative proportion of members who gave up a vehicle—who will usually drive less as a result—and members who gain access to a car, who will account for most of the induced travel.”<sup>17</sup> When Arlington Carshare members were asked about before-and-after car use, the results fell into the following three categories:

- 45% of Arlington respondents reduced their annual VMT after joining carsharing, suggesting that they drove less as carshare members,
- 35% of respondents increased their annual VMT after joining carsharing suggesting that gaining car access increased their driving,

<sup>13</sup> A. Millard-Ball. *Car-Sharing*, 4-7.

<sup>14</sup> WMATA, [http://www.wmata.com/about/MET\\_NEWS/PressReleaseDetail.cfm?ReleaseID=635](http://www.wmata.com/about/MET_NEWS/PressReleaseDetail.cfm?ReleaseID=635), March 2005.

<sup>15</sup> A. Millard-Ball. *Car-Sharing*, 6-4.

<sup>16</sup> *Ibid.*, 5-15.

<sup>17</sup> *Ibid.*, 5-15.

- 20% reported no change in annual VMT traveled after joining carsharing.

Overall, the Millard-Ball results show a reduction in VMT of 3,850 vehicle-miles per year on average for carshare users, a reduction of almost 40%.<sup>18</sup> The Pilot Carshare Program survey shows similar results with a reduction in VMT of 3,250 vehicle-miles per year, a reduction of almost 43%. Both these results were determined by asking carsharing respondents how much they drove before and after joining carsharing. And while self-reported surveys may not be the ideal measure of recording VMT reduction,<sup>19</sup> carshare program before-and-after evaluations consistently report overall VMT reductions.

## The Pilot Carsharing Program Encourages Transit-Oriented-Living

The Pilot Carshare Program encourages walking, and transit use and makes economic sense. Carsharing creates the possibility of living in a community without owning a private auto (or having a second), and with significant savings to users.<sup>20</sup> When respondents were asked, because they are involved in car sharing, whether they strongly agree, agree, neither agree nor disagree, disagree or strongly disagree with each of the following statements, the results were as follows:

■ Walk more often	49% strongly agree or agree 16% disagree or strongly disagree
■ Use transit more often	54% strongly agree or agree 16% disagree or strongly disagree
■ Save money on transportation	70% strongly agree or agree 12% disagree or strongly disagree
■ Am able to get to places I couldn't get to before	62% strongly agree or agree, 19% disagree or strongly disagree
■ Can make more multi-purpose trips	64% strongly agree or agree, 14% disagree or strongly disagree

The survey showed Arlington carsharing members reduced VMT by over 40%.



<sup>18</sup> A. Millard-Ball, G. Murray and J. Burkhardt, *Car-Sharing: Where and How it Succeeds* (Unpublished interim report by Nelson\Nygaard for the Transit Cooperative Research Program, 2004), 5-17.

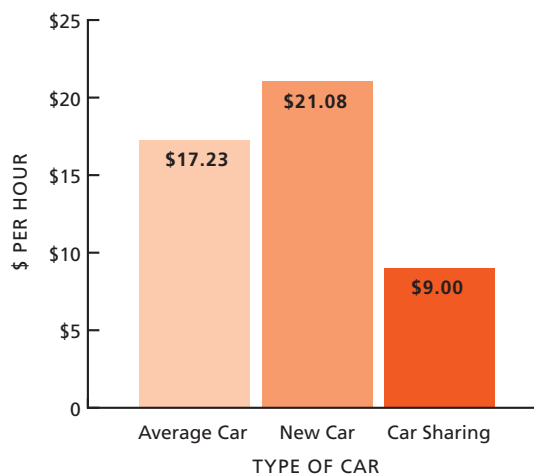
<sup>19</sup> A. Millard-Ball. *Car-Sharing*, 5-17.

<sup>20</sup> T. Beatley. *Native to Nowhere—Sustaining Home and Community in a Global Age* (Washington, DC: Island Press, 2004), 258.

- Feel more independent 68% strongly agree or agree, 11% disagree or strongly disagree
- Have postponed buying another car 68% strongly agree or agree, 9% disagree or strongly disagree
- Make fewer trips by auto 50% strongly agree or agree, 20% disagree or strongly disagree
- Was able to sell my car 25% strongly agree or agree, 26% disagree or strongly disagree

## Carsharing Provides Affordable Alternative to Car Ownership

### AUTOMOBILE COSTS PER HOUR



From an affordability perspective, carsharing makes good sense since ownership with full responsibility for a private auto is an expensive proposition.<sup>21</sup> The American Automobile Association (AAA) states that individuals driving 10,000 miles per year pay about \$6,893 annually<sup>22</sup> (or \$17.23/hr)<sup>23</sup> for their car. AAA states that the average cost of driving a new car in 2004 was \$8,431 per year<sup>24</sup> (\$21.08/hr). Both amounts include car payments, gas, maintenance, parking, taxes, etc. Once the decision has been made to own a car, the fixed costs (car payments, insurance, etc.) are treated as sunk costs by a household, and perceptions of the cost of a trip are based on variable costs (gas, parking, tolls, etc.) Since fixed costs account for 80% or more of 'motoring' costs, this means that the economics of motoring are heavily front-loaded.<sup>25</sup>

Both Flexcar and Zipcar offer several service plan options that include both a membership fee and fees based on a mileage or time basis. Plans vary the average cost per hour. Under the

<sup>21</sup> T. Beatley, *Native to Nowhere—Sustaining Home and Community in a Global Age* (Washington, DC: Island Press, 2004), 258.

<sup>22</sup> American Automobile Association. *Your Driving Cost*, March 8, 2005. [www.ouraaa.com/news/library/drivingcost/driving](http://www.ouraaa.com/news/library/drivingcost/driving)

<sup>23</sup> Assuming an average speed of 25 miles/hr and VMT of 10,000 per year.

<sup>24</sup> American Automobile Association. *Average Driving Cost for 2004*, April, 7, 2004. <http://www.aaanewsroom.net/Articles.asp?ArticleID=294&SectionID=1&CategoryID=4&SubCategoryID=5&>

<sup>25</sup> A. Millard-Ball, G. Murray and J. Burkhardt, *Car-Sharing: Where and How it Succeeds* (Unpublished interim report by Nelson\Nygaard for the Transit Cooperative Research Program, 2004), 5-10.



Standard Plan it costs \$9/hour<sup>26</sup> to rent a Flexcar vehicle. Cervero's findings concluded that carshare members are more judicious and selective when deciding whether to use a car, take transit, walk, bike or even forego a trip.<sup>27</sup> Millard-Ball states that the manner in which carsharing converts fixed car costs into variable cost may be largely responsible for changes in travel behavior.<sup>28</sup>

## Arlington Carshare Members Reduce Car Ownership

Millard-Ball's study reviewed several European and North American studies, conducted a survey of carshare members and found that 20-50% of members give up a vehicle after joining a car-sharing program and that up to 70% of members have been able to postpone buying a car.<sup>29</sup> The Pilot Carshare Program survey results suggest that carshare members are less likely to sell an existing car, but more likely to put off purchasing a new car. When the survey respondents were asked if they felt more confident giving up their personal cars now that there are more carsharing cars near where they live, 74% of respondents agreed. Zipcar recently surveyed its members and found that each Zipcar took more than 20 vehicles off the road.<sup>30</sup> Other survey estimates start at six vehicles removed and go up. Results seem to differ based on whether the question asks if they sold their car immediately prior to joining, or after joining the service.

If carsharing did not exist, more respondents would rely more on personal car use. When Millard-Ball and the Pilot Carshare Program surveys asked what people would do if carsharing services stopped, 30.5% of Millard-Ball and 41% of Arlington respondents said they would buy a car. This translates into the potential for 820 automobiles to be added to Arlington's streets if carsharing services ceased to operate.<sup>31</sup>



<sup>26</sup> Flexcar, March 8, 2005. <http://www.flexcar.com/washingtondc/pricing.asp>

<sup>27</sup> R. Cervero and Y. Tsai. *San Francisco City CarShare: Travel-Demand Trends and Second-Year Impacts* (Berkeley: Institute of Urban and Regional Development, University of California, Berkeley, Working Paper 2003-05), 44.

<sup>28</sup> A. Millard-Ball, G. Murray and J. Burkhardt, *Car-Sharing: Where and How it Succeeds* (Unpublished interim report by Nelson\Nygaard for the Transit Cooperative Research Program, 2004), 5-10.

<sup>29</sup> A. Millard-Ball. *Car-Sharing*, 5-6.

<sup>30</sup> Zipcar. Zipcar Customer Survey, Feb 16, 2005. [www.zipcar.com/press/releases/press-21](http://www.zipcar.com/press/releases/press-21)

<sup>31</sup> Assumes that 41% of the 2000 carshare members would buy a car if carsharing ended in Arlington.

**The Arlington Pilot Carshare Program increased its membership by one-third compared to other programs in the Washington area.**



## The Pilot Carshare Program Makes Efficient Use of Parking

The Millard-Ball study reports that “reduced vehicle ownership may mean that less residential parking has to be provided” so as to lead to improved availability of residential parking, reduced need to construct new public parking and reduced parking ratios for new residential development.<sup>32</sup> The reduction of car ownership relates to reduced parking demand with research on the actual reduction factors forthcoming.

As most private cars remain parked for most of the day, carsharing represents a more efficient use of collective resources: many fewer cars are needed to provide mobility.<sup>33</sup> The two carsharing companies have a combined membership of 2,546 sharing using 27 cars, or approximately 95 members per car. The twenty-one designated on-street carshare spaces act similarly to taxi stands or curbside bus stops and provide a service benefit to many more people than a regular on-street parking space.

According to the Arlington County Police Department (ACPD) the enforcement of the no-parking zones at on-street carsharing locations has not been a problem. ACPD reports that there has been only minor police enforcement required and over the past year, there have been few tickets issued and few cars towed because they were parking illegally in the carshare spaces.

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<sup>32</sup> A. Millard-Ball, G. Murray and J. Burkhardt, *Car-Sharing: Where and How it Succeeds*. (Unpublished interim report by Nelson\Nygaard for the Transit Cooperative Research Program, 2004), 5-4.

<sup>33</sup> Timothy Beatley. *Native to Nowhere—Sustaining Home and Community in a Global Age* (Washington, DC: Island Press, 2004), 258.

**T**HE ARLINGTON PILOT CARSHARE PROGRAM INCREASED CARSHARE availability, membership, and use. The Pilot Carshare Program results support the popular belief that carsharing fills a missing link in the transportation infrastructure so that many urban dwellers, suburban commuters and visitors can keep using alternatives to the privately-owned automobile. “Car-sharing is akin to insurance for transit riders,” says Larry Magid, the executive director of City CarShare, a non-profit car-sharing organization in San Francisco. “Most of the time transit will fill their needs, but every now and then they need a car.”<sup>34</sup> The Pilot Carshare Program helps meet Arlington’s goals and provides an important component of an integrated mobility management system that complements the walk/bike/transit-friendly lifestyle available in Arlington’s urban villages.

The economic and ecological advantages of carsharing are significant.<sup>35</sup> While car use is less efficient than walking, biking or transit, carshare members tend to drive less, and own fewer cars than non-members.<sup>36</sup> Carshare vehicles also tend to be newer and much more energy-efficient. The Pilot Carshare Program casts a wider net of affordable mobility options to Arlington residents and workers. Carsharing can be used by a wide range of members: from low-income individuals such as students to high-income urban dwellers looking for convenience and comfort.

The Pilot Program demonstrated a successful public-private partnership that would not be feasible under a solely public program. A major element in the success of the Program was providing on-street visibility to the public. Other success is in a large part due to raising the profile of carsharing including the convenience of the service, and the safety of the members.

Carsharing provides people the ability to live, work, shop and play in Arlington’s urban villages without needing to own a car while allowing them the occasional convenience of a car when it’s necessary. Arlington carshare service offers considerable convenience with service at metro stations, online and phone reservations systems, and smart-card technology. The Pilot Carshare Program survey results corroborated with evidence from leading North American and European studies to show that carsharing allowed members to reduce their car ownership, take more transit trips, reduce the number of cars on the road and reduce the number of vehicle-miles traveled.

<sup>34</sup> Larry Magid, San Francisco City CarShare. *UC Berkeley News*, October 23, 2003. [http://www.berkeley.edu/news/media/releases/2003/10/23\\_car%20sharing.shtml](http://www.berkeley.edu/news/media/releases/2003/10/23_car%20sharing.shtml)

<sup>35</sup> Timothy Beatley, *Native to Nowhere—Sustaining Home and Community in a Global Age* (Washington, DC: Island Press, 2004), 258.

<sup>36</sup> R. Cervero and Y. Tsai. *San Francisco City CarShare: Travel-Demand Trends and Second-Year Impacts* (Berkeley: Institute of Urban and Regional Development, University of California, Berkeley, Working Paper 2003-05).





## EXTENDING AND EXPANDING SUCCESS

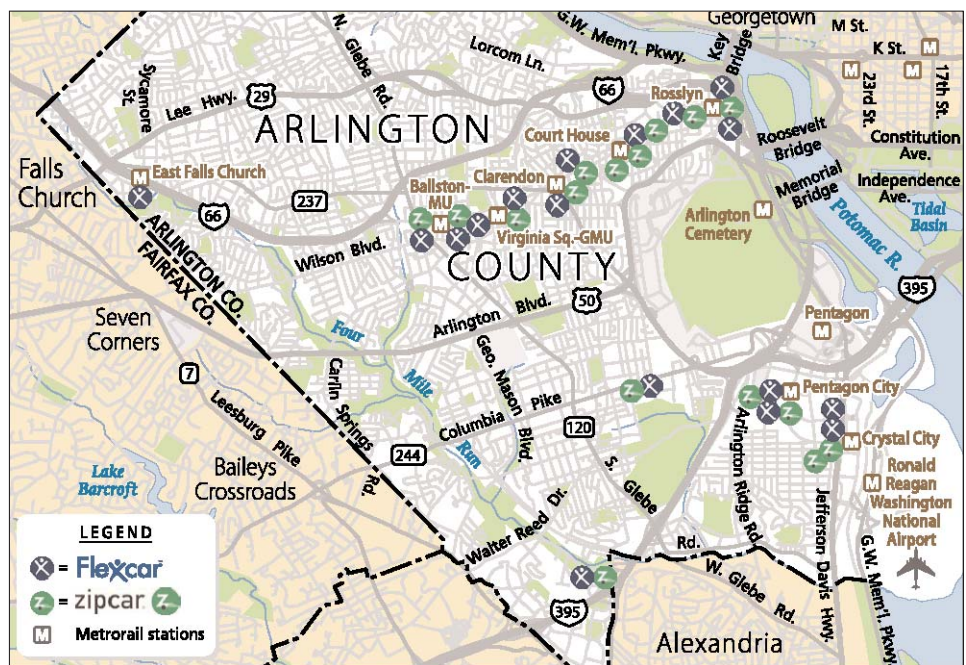
### THE ARLINGTON PILOT CARSHARE PROGRAM HAS BEEN A MAJOR SUCCESS.

It is envisioned that what is being accomplished in the Pilot Carshare Program can be replicated in other Arlington urban villages such as Crystal City, Pentagon City, Shirlington, Columbia Pike and more. Building upon this success, ACCS is making the “pilot program” a permanent part of the transportation landscape in Arlington.

Arlington County is expanding the Carsharing Program in May 2005. ACCS has partnered with Flexcar and Zipcar to add another 15 carsharing vehicles in Arlington. The new cars bring to 40, the number of designated and easy-to-find, on-street parking spaces for carsharing vehicles, all convenient to transit and marked with bright orange signposts. Cars are being added in the Rosslyn-Ballston Corridor, Crystal City, Pentagon City, Shirlington and Columbia Pike. An additional 15 cars are planned to be added by the end of the calendar year. In a first for the region, Flexcar and Zipcar are adding cars to Shirlington and Columbia Pike—areas not within walking distance of Metrorail but with excellent bus service instead.



Postcard (top) and Map (right) represent some of the collateral materials from the expanded Carshare Program for May 2005.



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