Meeting the Transportation Needs of Northern Virginia's Seniors









Recommendations for Public Transit Systems and Other Mobility Providers

Final Report March 24, 2006







NORTHERN VIRGINIA TRANSPORTATION COMMISSION

Northern Virginia Transportation Commission 4350 North Fairfax Drive, Suite 720 Arlington, Virginia 22203 (703) 524-3322 (703) 524-1756

> E-mail: nvtc@nvtdc.org Website: www.thinkoutsidethecar.org

> Richard K. Taube, Executive Director

2006 OFFICERS

Gerald E. Connolly, Chairman David F. Snyder, Vice Chairman William D. Euille, Secretary-Treasurer

COMMISSIONERS

City of Alexandria	City of Falls Church
City of Alexandria	City of Falls Church

Hon. Ludwig Gaines
Hon. David F. Snyder
Honorable William D. Euille
Alternate: Robin Gardner

Alternate: Paul Smedburg

Arlington County Loudoun County

Hon. Paul Ferguson
Hon. Jay Fisette
Hon. Christopher Zimmerman
Hon. Eugene Delgaudio
Alternate: D.M. Mick Staton
Alternate: Lori Waters

City of Fairfax VDRPT

Hon. Scott Silverthorne Mr. Corey Hill
Alternate: Jeffery Greenfield Alternate: Tanya Husick

<u>Fairfax County</u> <u>General Assembly</u>

Hon. Sharon Bulova
Hon. Gerald E. Connolly
Hon. Jeannemarie Devolites Davis
Hon. Gerbering Hondring
Hon. David B. Albo

Hon. Catherine Hudgins Hon. Adam Ebbin

Hon. Dana Kauffman Hon. Mary Margaret Whipple Hon. Elaine McConnell

Project Team

Jana Lynott, AICP Project Manager NVTC

Elizabeth Rodgers Research Assistant NVTC

Steve Markenson Kevin Pullis WB&A

Buffy Ellis Paul Nabti KFH Group, Inc.

This study was done in cooperation with area agencies on aging and transportation service providers, and received funding support from the Commonwealth of Virginia Department of Rail and Public Transportation.

Table of Contents

Executive Summary

Chapter 1 Introduction

Chapter 2 Demographic and Travel Characteristics of Northern Virginia's Seniors

Chapter 3 Senior Transportation Issues and Needs

Chapter 4 Meeting Seniors' Transportation Needs

Appendix 1 Detailed Demographic Tables

Appendix 2 Quantitative Analysis Report: Results of Telephone Survey

Appendix 3 Qualitative Analysis: Summary of Focus Groups with Seniors and Brokers Focus Group

Appendix 4 Service Route Potential for Senior Concentrated Areas

Appendix 5 Community Type Classification

Appendix 6 Detailed Analysis of Census Migration Patterns

Appendix 7 Advisory Team Membership

List of Figures

Figure 2.1	Jurisdictional Regions
Figure 2.2	Projected Growth in Population Age 65 and Older, 2000-2030
Figure 2.3	Location of Seniors in 2000 and 2030
Figure 2.4	Northern Virginia Outmigration Age 55 and Older, 1995-2000
Figure 2.5	Northern Virginia Inmigration Age 55 and Older, 1995-2000
Figure 2.6	Net Migration Rates (per 1000) for the Population 65 Years and Older by Age, 1995-2000
Figure 2.7	Most Important Factors In Deciding Where to Live by Employment Status
Figure 2.8	Racial Composition of Northern Virginia Seniors
Figure 2.9	Percent of Northern Virginia Residents Age 65 and Older in Poverty
Figure 2.10	Older Women are Twice as Likely as Men to Live Alone (Age 65 and Older)
Figure 2.11	Percent of Seniors that Report Difficulty Going Outside the Home Alone Due to a Physical, Mental, or Emotional Condition Lasting Six Months or More
Figure 2.12	Transit Availability
Figure 2.13	Number of Northern Virginians Age 65 and Older That Do Not Drive (Percent of Total Seniors Population)
Figure 2.14	Percent of Seniors Householders Without an Available Vehicle
Figure 3.1	Northern Virginia's Older Seniors Are Much More Educated and Affluent than Older Seniors Nationwide
Figure 3.2	Many Are Aging-in-Place
Figure 3.3	Many Have Difficulty With Life Activities
Figure 3.4	Car is the Most Frequently Used Mode of Transportation
Figure 3.5	Car Driven by Self Accounts for the Predominant Share of Trips
Figure 3.6	Use of Public Transportation Now and Prior to Age 65`
Figure 3.7	Fixed Route Public Transportation Users and Drivers Differ from Non- Drivers
Figure 3.8	Typical Weekday Trips
Figure 3.9	Mobility and Isolation (Weekly Trips by Income)
Figure 3.10	Mobility and Isolation (Weekly Trips by Overall Satisfaction)

Figure 3.11	Transportation Problems by Destination (Drivers vs. Non-Drivers)
Figure 3.12	Those Who Live in Urban/Town Communities Take More Trips per Week
Figure 3.13	Went Someplace Yesterday
Figure 3.14	Those Who Live in Urban/Town Communities Are More Likely Than Suburban or Rural/Exurban Older Seniors to Walk or Use Fixed-Route Public Transportation
Figure 3.15	Those Who Live in Urban/Town Communities Take a Greater Proportion of Trips by Walking or Fixed Route Public Transportation
Figure 4.1	Low Floor Bus
Figure 4.2	Standard Bus
Figure 4.3	Mixed-Use, Transit-Oriented Development Near Clarendon Metrorail Station in Arlington County
Figure 4.4	An Integrated Land Use and Transportation Vision Can Create a Sense of Place for All Users
Figure 4.5	Recommended Lane and Sidewalk Widths
Figure 4.6	Collector and Arterial Roadways Can Be Designed as Boulevards to Carry Traffic Without Compromising the Pedestrian Environment
Figure 4.7	Ample Buffering of the Main Road Creates a Relaxing Pedestrian Environment
Figure 4.8	Bulb-Outs

List of Tables

Table 2.1	Summary of Characteristics Affecting Future Travel Patterns and Mobility Needs of Older Persons
Table 4.1	Public Transit Systems Operating in Northern Virginia Operating Statistics and Performance Indicators, FY 2004
Table 4.2	Specialized Transportation Services in Northern Virginia
Table 4.3	Estimated Annual One-Way Trips of Seniors Age 75 Years and Older
Table 4.4	Summary of Recommendations By Implementation Effort and Resources

Executive Summary

In the fall of 2004, the Northern Virginia Transportation Commission (NVTC) kicked off a study to understand the transportation needs of seniors in Northern Virginia and develop recommended strategies that public transit and other providers could use to enhance seniors' mobility options. Over the next 25 years, the United States will witness significant demographic change. The number of older residents is expected to more than double. A similar pattern of demographic change is expected in Northern Virginia. By 2030 the ratio of seniors age 65 and older is expected to increase from one in 13 residents to one in seven—an increase of more than 240,000 seniors in Northern Virginia. By understanding this demographic shift, the travel patterns of seniors, and their reported needs, NVTC hopes to guide the region's planners and decision makers toward meeting the transportation needs of seniors in the current and coming decades.

Not only is the senior population growing across the U.S., but the growth is expected to largely occur in suburban and rural areas, locations characterized by dispersed development patterns and fewer transportation alternatives for those who cannot, or choose not to, drive. Given the location choices of younger adults today, and the phenomenon of "aging in place," where seniors grow old in the homes where they raised their children and retired, tomorrow's seniors will be more dependent on the car than today's seniors. Of concern is the potential contribution of this growing cohort's drivers to area traffic congestion and emissions and the reduced use of public transportation services by a growing age group.

In this study, a senior is anyone age 65 and older. Older seniors refer to those individuals age 75 and older, while younger seniors are those age 65 to 74. NVTC's primary research (telephone survey, focus groups, and one-on-one interviews) focused on older seniors, while analysis of census and other data sets provide a breakdown of information by the various age cohorts available to the data set.

The NVTC study includes an analysis of changing demographic trends, an inventory of existing transportation services available to seniors in Northern Virginia, a telephone survey with more than 1,600 older seniors, 23 in-depth one-on-one telephone interviews with older seniors, four focus groups with older seniors, and one focus group with professionals and volunteers who serve seniors and have an understanding of their transportation challenges.

The key research questions explored by the study team include the following:

- What do the travel patterns of Northern Virginia seniors look like today? Are there differencesamong those living in different types of communities? How closely do these travel patterns resemble those of seniors across the nation?
- What socio-economic factors influence the travel patterns of seniors?
- What are the utilization rates of existing transportation services by seniors?
- What are the current and projected gaps in the existing and future transportation services available to seniors?
- What programmatic and service changes need to be made to meet the transportation needs of a growing senior population?

- How can transit systems retain and increase the number of older persons using their services?
- What are the estimated costs of providing recommended transportation services?

Travel Characteristics of Northern Virginia's Seniors

Seniors are highly reliant on private automobile travel, and are expected to become more so in the coming decades. Driving oneself accounts for the majority of total trips (63%) taken by Northern Virginia's older seniors. One-fourth of all trips taken are done by ridesharing, which includes riding with spouses and other relatives. Walking is the second most popular means of getting around after travel by car with 36 percent reporting having walked to a destination in the past month. Nine percent of trips taken in the past week were trips on foot.

Seniors' likelihood of using public transportation has been dropping for decades according to the National Household Travel Survey. Trips taken on fixed-route public transportation by Northern Virginia's older seniors tracks national ridership levels at 1.3 percent of all trips. One in eight (about 7,500) Northern Virginia seniors have used fixed route public transportation in the past month, while six percent have used some form of specialized transportation (transportation for people with disabilities and senior or community vans).

While current use of public transportation among seniors is limited, according to the telephone survey results, several seniors in the focus groups said they would consider using public transportation if it were available to them. They defined availability as public transportation coming to or near their home, being accessible, and running at hours that are convenient to them.

Proximity to public transportation is a strong determinant of transit use. NVTC calculated that about 85 percent of Northern Virginia's seniors age 65 and older live within one-quarter mile of a bus route. After accounting for health and disability, sidewalk and census block boundary limitations, NVTC estimates that the senior transit market is about 77,000 persons at the current time, or about 57 percent of those age 65 and older. For the population 75 years and older, the estimated transit market is about 31,000 people, or 52 percent of the older senior cohort. The NVTC telephone survey revealed that only about 13 percent of older seniors currently use public transportation. Given that more and more seniors will reside in the outer jurisdictions in the coming years, transit providers will need to be proactive in catering to seniors' needs to maintain and grow their use of public transportation.

The number of non-driving seniors is expected to double, from about 28,500 in 2000 to more than 60,000 by the year 2030. The transportation needs of this population of non-drivers will need to be met through walking (the second most popular means of getting around by seniors after travel by car), through public transportation, and through other supplemental services such as MetroAccess, taxis, and ridesharing.

The senior population most vulnerable to social isolation is non-drivers living in poverty. Often their low income is coupled with a disability. Older women suffer from higher disability and poverty rates than older men, and they are more than two times more likely to live alone. As Northern Virginia's population ages, many older women will not have relatives or family to offer them

support or assistance, as women age 65 to 74 today will have had fewer children than any previous cohort of the elderly. Minority women, especially Asian women who are nearly 10 times more likely than white men their same age to live in poverty, are particularly vulnerable.

Characteristics of the Senior Public Transit User

Thirteen percent of Northern Virginia's older seniors, those age 75 and older, report having used fixed-route public transportation in the past month. These users are more active, healthy, and educated compared to those older seniors who do not use public transportation. They are the most mobile, with almost all (95%) taking three or more trips each week. They are also wealthier than non-fixed-route public transit users. Fixed-route users are the most satisfied with their ability to get around and are the least likely to report problems with driving, walking or public transportation. Most drive for a portion of the trips they take each week. They are not dependent on public transportation, but rather they clearly choose to use it when it meets their travel needs.

Those in Northern Virginia who use specialized public transportation, such as paratransit, senior vans, and dial-a-ride, are more like those who rideshare in many respects than they are like fixed-route transit users. This may indicate that ridesharers and specialized transit users are facing similar limitations and are choosing, or being forced to choose, between depending on others versus using specialized transportation. This group of public transportation users is less healthy and mobile. Twenty-eight percent of ridesharers and 29 percent of specialized transit users report poor health and disability status, compared to just seven percent of fixed-route public transportation users. Twenty-three percent of ridesharers and 20 percent of specialized transit users do not get out on a given day. Specialized public transportation users' income typically is lower than that of fixed-route users.

Problems with Using Public Transportation

More than one-half of respondents said that each of the following is a problem with using public transportation:

- 1. Public transportation going where you need to go (56%),
- 2. The distance to bus stops or rail stations (53%), and/or
- 3. The time it takes (52%).

In addition, at least four in ten said that transferring between routes (49%), the frequency of service (45%) and/or being able to get a seat (43%) are also problems in using public transportation.

When respondents who use public transportation are assessed separately from those who do not, the results on the question of problems with public transportation vary between the two groups. For each of the possible problems listed for the survey, fewer users of public transportation reported problems than did non-users. For example, 27 percent of seniors who now use public transportation reported that reliability is a problem, while a greater portion – 39 percent -- of non-users reported a problem with reliability. On the issue of getting information, 28 percent of users report this as a problem, while a larger proportion (38%) of non-users say this is a problem. While some of these results would be expected, for example, distance to bus stops or rail stations is less of a problem for public transportation users (39% vs. 56%), other results suggest that non-users may

perceive problems because they are not familiar with public transportation services in Northern Virginia. Services and information tailored to seniors' needs could fill this gap.

In total, more than six in ten seniors have never used public transportation, and another two in ten have used it in the past but are not currently doing so. About one in ten seniors are currently using public transportation at least occasionally but had never used it in the past, while a similar proportion use public transportation at least occasionally now and had done so when they were younger. This suggests that there is a market of seniors unfamiliar with public transportation that could become transit users.

While driving and getting rides from others are the primary means for seniors to get around, when asked through an open-ended question to identify the area's greatest transportation challenges for seniors, similar proportions named public transportation needs as named driving needs. Public transportation not available or reliable, lack of convenient stops, traffic congestion, and inconsiderate and aggressive drivers were the most frequently reported problems with the transportation system. While most seniors drive, they are just as likely to recognize the need for public transportation improvements as improvements to the road network.

Mobility and Social Isolation

In several recent surveys of senior transportation, seniors' mobility is assessed by the degree to which they go out on a given day or week. The ability and frequency with which seniors go out helps to measure the degree to which seniors are connected to their communities and therefore indirectly their access to community goods, services and social events. A Surface Transportation Policy Project report on senior transportation specifically uses going out on the previous day, or conversely staying at home, as a measure of social isolation.

According to this measure of *going out*, the NVTC study found that 22 percent of Northern Virginia seniors did not go out the previous day, suggesting social isolation. Moreover, 2 percent did not go out at all during the previous week and another 11% made only one or two trips the previous week. Getting out is a particular problem for non-drivers, as only 60 percent get out of their homes three or more times a week, compared to 93 percent of drivers. While the survey data indicate that seniors in Northern Virginia may be somewhat less isolated than seniors nationwide, seniors with more limited mobility become "marooned" in their homes according to a participant in the brokers focus group.

Those who get out more are more satisfied with how they get around. Almost six in ten of those who are satisfied with how they get around get out of their homes five or more times each week, compared to three in ten of those not satisfied with how they get around.

Income and health appear to have a predominant effect on senior mobility. More than six in ten of those with household incomes greater than \$30,000 say they typically get out more than five times a week, compared to about three in ten of those with lower incomes. Almost seven in ten of those with an excellent health and disability status (HDS) get out more than five times a week, versus just three in ten of those with a poor HDS.

More than one-third (36%) of all respondents said they have problems getting somewhere they would like to go. While no one destination stood out, shopping for clothes and household items, seeing a doctor or other health care provider, visiting friends, and just getting out and about were some of the destinations seniors reported having difficulty reaching. Furthermore, those who primarily have to depend on others for rides are more likely to have problems getting anywhere.

Relationship Between Community Type and Senior Mobility

Among the objectives of the NVTC senior transportation study are two related to land use: (1) to identify differences in the travel patterns of seniors by the type of community in which they reside; and (2) to assess the impacts of land use patterns and community type on senior mobility. For this study the region was classified into three different community types, differentiated by population and population density, degree of mixed-use development, and existence of a walkable environment. Survey respondent addresses were geocoded and then grouped into the three community types.

Community Type I: A walkable urban, or town, mixed-use community.

Community Type II: A suburban residential community type characterized by a separation of retail and commercial services from the residential areas.

Community Type III: A rural/exurban community type.

The development patterns of the past several decades have led to today's seniors being more dependent on driving to meet their transportation needs and those who cannot drive will be at risk for social isolation. Suburban development patterns, characterized by a separation of land uses, have led to increased distances between homes and services, making it less convenient to walk and use public transportation. In fact, in Northern Virginia and across the country, the use of public transportation by seniors has been dropping for decades. In contrast, this trend is not true for Northern Virginia's higher density, mixed-use, urban and town communities such as the Rosslyn-Ballston corridor in Arlington, Reston, and the region's historic towns.

The NVTC study reveals that senior travel patterns vary by the type of community in which a senior resides. Land use does affect senior travel and could be part of the solution toward meeting seniors' transportation needs. For example, NVTC's survey found that those who live in urban/town mixed-use communities take a greater proportion of trips on fixed-route public transportation (4%) compared to those from suburban communities (1%) and from exurban areas (<1%). While this level of travel on public transportation may appear low for all community types, Northern Virginia's mixed-use, walkable communities have bucked the national trend of decreasing transit use over the decades. Almost two in ten (18%) of seniors living in Type 1 communities say they have used public transportation in the past week. Conversely, public transportation use is less common in Type 2 communities (7%) and least common in Type 3 communities (2%).

Those who live in mixed-use urban and town communities take a greater proportion of trips by walking or fixed route public transportation than do seniors who live in suburban and rural areas. In the walkable, mixed-use urban and town communities, senior residents take an average of 2.3 trips on foot to a destination each week. Moving outward from the more urbanized areas of Arlington and Alexandria and into the middle and outer suburbs, seniors report taking only an average of 0.7 walking trips per week, and in the exurban and rural areas of Northern Virginia,

only 0.4 trips per week on foot. Forty-eight percent of seniors from urban and town communities report having walked to a destination in the past week. That's more than two times greater than reported for suburban areas, and nearly five times greater than for exurban areas. This is a significant finding and suggests that efforts to improve mobility for seniors should look towards community design policies and strategies that provide more pedestrian-oriented, mixed-use environments that foster walking trips. These types of improvements would also make public transportation use more convenient.

Seniors from walkable, mixed-use urban and town areas are more mobile, taking 20 percent more trips each week than those from suburban and exurban areas. They are also less likely to be socially isolated. Only 16 percent of seniors from urban and town communities were found to not have gotten out the previous day, compared to 22 percent of those from suburban and exurban areas.

Community type has a great impact on how much seniors drive. Driving oneself accounts for less than one-half (48%) of the trips taken by seniors living in urban and town communities, compared to about two-thirds of the trips taken by seniors living in suburban and exurban areas (64% and 66% respectively).

Seniors from walkable, mixed-use areas are more likely to have accepted rides as a passenger in a private vehicle in the past week than those from suburban and rural areas. This can be attributable in part to lower licensing rates among seniors in walkable, mixed-use areas (84%) versus 90 percent (suburban) and 91 percent (exurban). A higher percentage of younger seniors (age 65 to 74) from Arlington and Alexandria have found ways to rely on other forms of transportation as suggested by the higher percentage of those without access to a car (31% and 33% respectively) versus nine percent for the region as a whole.

Balancing Cost-Effective Transportation Improvements and Senior Mobility Needs

It is clear that no one solution will address the transportation needs of all seniors in the region, as needs vary by health and disability status, income, and residential location, among others. The identification of cost-effective transportation solutions is a goal of this study. Transportation costs are influenced by several factors, including the type of service, distance traveled, the ability to group trips, whether services are operated by dedicated providers, and policy decisions that determine those who qualify for service and the size of the service area. The challenge is to design services that take into account these cost factors while offering enough service variety to meet seniors varying needs. NVTC's recommendations emphasize meeting seniors' transportation through least-costly fixed-route service. At the same time, the NVTC recognizes that frail seniors will need more specialized travel options. The recommendations also reflect land use and urban design considerations that encourage the expansion of walkable, mixed-use communities, as the distances between origins and destination are often shorter, and more travel options can be provided to seniors at lower cost.

Fixed-route services are the least costly to provide on a per passenger trip basis, with service provided on a set schedule, traveling a set route. In urban areas, such services may typically carry over 20 passenger trips per vehicle hour, so that the operating costs are spread over relatively high ve-

hicle loads. And the marginal cost of each passenger trip is very low, with a fixed-route bus able to absorb additional ridership until the bus is full and no more standees can fit. In addition, because the biggest cost component is driver wages, the bigger and fewer the buses, the cheaper the cost per passenger. This is not the case for paratransit and specialized transportation services, where passenger trips are individualized, with varying origins and destinations that may change day to day. The marginal cost of each additional trip can be as high as the full cost per passenger trip. The cost difference between the two types of public transportation on a per passenger trip basis is large: national data show the operating cost for a one-way unlinked passenger trip on paratransit is \$21.43 compared to \$2.68 on fixed-route.

Specialized transportation services are an important component of the overall public transportation network, and there are various types of specialized services, differentiated by their purpose as well as their operating characteristics and type of community in which they operate. Specialized transportation services that are designed with characteristics of fixed-route/fixed scheduled service are more cost-effective on a per passenger basis than those that are designed without such aspects. Specifically, the ability to group trips, serve limited destinations, and operate on somewhat of a scheduled basis will help ensure more cost-effective passenger trips. However, the specialized services that are more individualized, providing trips throughout their service area on a "many origins-to-many destinations" basis, provide for greater travel flexibility and allow for more rider assistance from the driver, which is important for frail seniors. By their nature, these types of specialized services are more costly on a per passenger trip basis. Yet, such individualized trips may be those that have been referred to as "quality of life" or "life enhancing" including trips to visit family and friends or to cultural events. These types of trips are important for seniors, and research shows that real needs exist for these trips.

In addition, costs for specialized transportation are influenced by the type of community in which they operate. The characteristics of Community Type 1, which include moderate to high density with mixed land uses and a pedestrian-oriented environment, support the feasibility of fixed-route transit service and specialized services with fixed-route attributes. Such transit services are less costly relative to other types of service on a per passenger trip basis given that greater grouping of riders is possible, trip lengths are shorter, and sidewalks and pathways ensure walking access to transit stops and stations. The characteristics of Community Types 2 and 3, which include lower densities, more segregated land uses, and, in rural and exurban areas, limited commercial and service activities, result in more limited opportunities to group riders and longer trips to access services and destinations. Transit services for such communities will tend to have lower productivities and longer trip distances, leading to higher operating costs on a passenger trip basis.

While the projected numbers of trips on fixed-route transit are greater than those for specialized transportation, it is the costs for specialized transportation that deserve attention, given that the operating cost for a specialized transportation trip is eight times that of a fixed route trip, based on national data. Using the cost range of \$9-\$23 per specialized transportation trip, it can be roughly estimated that the costs for providing specialized transportation in the NVTC region may fall between \$4.5 million to \$11.5 million in 2010 and between \$8.8 million to \$22.4 million by 2030, depending on whether the specialized service is individualized versus one that is able to effectively group passengers for greater cost-effectiveness. Both types of services are needed. These estimates are in 2005 dollars.

While it must be recognized that some seniors, particularly as they become older and more frail, will require more costly and individualized transportation services to maintain mobility, transportation improvements and community design policies can be developed that will work towards a range of options to meet future mobility needs. These options acknowledge that seniors' transportation needs vary, as they do for all individuals, and that funding for public transportation is not unlimited.

Development of appropriate and cost-effective public transportation services to meet the increasing need for senior transportation must balance the diversity of seniors' mobility needs and look to community design and land use policies that support effective transit and mobility solutions.

Projection of Future Transportation Needs

With increasing population comes increasing demand for transportation services. In 2005, approximately 720,000 fixed-route transit trips and 360,000 specialized transit trips were taken by Northern Virginia seniors age 75 and older. In 2030, NVTC estimates that this cohort of seniors will take 1,948,000 fixed-route trips and 974,000 specialized transit trips. Some researchers have postulated that total trip-making by seniors in future years will be greater than current rates, given high rates of mobility of today's adults who will be tomorrow's seniors. To the extent that this happens, the estimates of total trips may be understated. Conversely, these estimates assume that trip-making and modal use rates remain at levels reported in the study's telephone survey. Given national trends in recent years of decreasing use of transit by seniors, this assumption may not hold true. And if proportionally more of Northern Virginia's seniors are living in the more suburban and exurban parts of the region in future years as anticipated, it will be increasingly more costly to provide effective public transit options to meet seniors' transportation needs.

NVTC's analysis of senior travel patterns by community type underscores the importance of enhancing the public transportation system to meet seniors' transportation needs. It also suggests that seniors' mobility options may be improved through housing decisions; namely, choosing to live in more urbanized, mixed-use areas of Northern Virginia.

Recommendations

NVTC had made recommendations in a number of areas to improve public transportation services and mobility for seniors in Northern Virginia. These recommendations build on the study's quantitative and qualitative research, demographic analyses, review of existing specialized services, related literature on senior transportation, and experience in the transit industry.

The recommendations focus efforts in three areas.

1. Encourage and support increased use of fixed route transit by seniors

Recommendations are made to encourage and support increased use of fixed route transit by seniors through a number of different strategies, including:

 a centralized information and referral service that includes "real people" as well as electronic information;

- travel training;
- coordinated fixed-route service with "seamless" transferring, an improvement already planned with the Regional Fare Collection Integration Project;
- targeted marketing and incentives for seniors;
- senior sensitivity training for drivers;
- low floor buses;
- service routes in selected areas with concentrations of seniors; and,
- mid-day and evening service.

These recommendations recognize that the region has many existing public transportation services, including extensive fixed-route service in the more urbanized parts of the region, and use of existing services by seniors could be increased if seniors are given more support. Generally, the recommendations are appropriate for all parts of the region, specifically the three community types, but have more potential where there are more transit services. Some of the recommendations, however, should be focused to younger seniors who reside near fixed-route services. Similarly, the recommendation for service routes would need to be tailored to existing services and land use considerations. Service routes are neighborhood-based routes, using smaller buses, designed to serve seniors and provide access to local shopping and other services, and are more cost-effective than paratransit services.

2. Encourage supplemental specialized services for seniors unable to use fixed-route service

The second set of recommendations focuses on supplemental specialized services for seniors, including volunteer transportation and taxi subsidy services, recognizing that some seniors, particularly older seniors who become more frail, are not able to use fixed route services. Volunteer transportation is increasingly being recognized as an important component of the specialized transportation infrastructure for seniors and persons with disabilities, and efforts should be made to increase the role of volunteer transportation in Northern Virginia. Volunteer drivers can provide the more difficult to serve trips, such as those for very frail seniors, longer distance trips for specialized medical care, and multiple "chained" trips (e.g., a trip to the doctor, to the pharmacy, and then home). These types of trips are difficult for public transportation to provide. While increased volunteer transportation is important throughout the region, it may be particularly important in the more rural parts of the region – Community Type 3 – given more limited options in such areas and the longer distances of many trips.

Another supplemental specialized transportation service is provided through the region's various taxi subsidy programs. These programs provide the more spontaneous trips that seniors need and trips are typically not restricted by jurisdictional boundaries. Specific improvements to taxi services are recommended to address fare payment, reliability, and driver sensitivity. Taxi subsidy programs take advantage of existing transportation providers and subsidy levels can be adjusted for seniors of different income levels, with deeper subsidies provided to lower income seniors. Subsidized taxi services are relatively cost-effective compared to specialized services that require vehicles and drivers dedicated only to serving seniors and other target groups.

3. Address land use and community design

The third and last set of recommendations addresses land use and community design to improve transportation and mobility for seniors. Solid comprehensive plans that explicitly address the community's changing demographics and senior housing and transportation needs will set the stage for the zoning ordinance and subdivision and site plan review. Accessory dwelling units, or granny flats, provide seniors with a rental housing option in their community or the means to generate rental income themselves. Transit oriented development should be planned and built across Northern Virginia to reduce overall auto dependency and increase the efficiency and convenience of using public transportation by people of all ages. Attention to street design that fosters walking and transit use is fundamental to TOD and can increase seniors' transportation options in all types of communities.

Next Steps

During 2006, NVTC will test the effectiveness of instruction to seniors on how to use the region's trains and buses, focusing on attracting seniors to public transportation and meeting their mobility needs. Funding for Phase II of the study is provided by the Virginia Department of Transportation.

Chapter 1 Introduction

In the fall of 2004, the Northern Virginia Transportation Commission (NVTC) kicked off a study to understand the transportation needs of seniors in Northern Virginia and develop recommended strategies that public transit and other providers could use to enhance seniors' mobility options. Over the next 25 years, the United States will witness significant demographic change. The number of older residents is expected to more than double. A similar pattern of demographic change is expected in Northern Virginia. By 2030 the ratio of seniors age 65 and older is expected to increase from one in 13 residents to one in seven—an increase of more than 240,000 seniors in Northern Virginia. By understanding this demographic shift, the travel patterns of seniors, and their reported needs, NVTC hopes to guide the region's planners and decision makers toward meeting the transportation needs of seniors in the current and coming decades.

The impetus for this study evolved from recent publications documenting the notable demographic trends and associated travel patterns and the potential impact of an aging population on our transportation system.¹ Not only is the senior population growing across the U.S., but the growth is expected to largely occur in suburban and rural areas, locations characterized by dispersed development patterns and fewer transportation alternatives for those who cannot, or choose not to, drive. Given the location choices of younger people today, and the phenomenon of "aging in place," tomorrow's seniors will be more dependent on the car than today's seniors. Of concern is the potential contribution of this growing cohort's drivers to area traffic congestion and emissions and the reduced use of public transportation services by a growing age group.

Providing transportation choices enables seniors to responsibly choose to stop driving when a personal medical condition indicates it's time, thus helping to make the transportation system safer for everyone. On a per capita basis, older drivers have fewer crashes than younger drivers, but on an exposure basis (per trip or mile driver) older drivers are more likely to be killed or injured. Seniors should not feel that their lives have ended when it is time to give up the car keys.

Ensuring seniors have access to transportation is important. Transportation enables people to maintain their needs for daily life maintenance and social contact. The key problem of later life is not health care or economic well-being, but social integration; namely, participation in clubs, serving as a volunteer, attending religious services, visiting friends, neighbors, and relatives.² Reduced mobility among older persons is accompanied by lower self-esteem, feelings of uselessness, loneliness, unhappiness, and depression.³ When physical frailty starts to take its toll (generally sometime after age 75) and driving becomes difficult or impossible, mobility may be severely

¹ Rosenbloom, Sandra. The Mobility Needs of Older Americans: Implications for Transportation Reauthorization. The Brookings Institution Center on Urban and Metropolitan Policy. July 2003. Genevieve Giuliano. Travel Patterns of the Elderly: The Role of Land Use. METRANS Transportation Center, University of Southern California. July 2003. Demetra V. Collia, Joy Sharp, and Lee Giesbrecht. The 2001 National Household Travel Survey: A Look into the Travel Patterns of Older Americans. Journal of Safety Research 34 (2003) 461-470.

² Giuliano. p.13.

³ Giuliano. p. 14.

constrained.⁴ "In a society where the automobile provides a level of mobility unparalleled by any other travel mode, the loss of driving ability dramatically impacts the lifestyle of the elderly. It reduces personal independence and accessibility to activities, and eventually may result in isolation from the rest of society".⁵ Transportation provides that critical link to enable the individual to stay engaged in her/his community and is critical to the quality of life of the elderly.

In this study, a senior is anyone age 65 and older. Older seniors refer to those individuals age 75 and older, while younger seniors are those age 65 to 74. NVTC's primary research (telephone survey, focus groups, and one-on-one interviews) focused on older seniors, while analysis of census and other data sets provide a breakdown of information by the various age cohorts available to the data set.

The NVTC study includes an analysis of changing demographic trends, an inventory of existing transportation services available to seniors in Northern Virginia, a telephone survey with more than 1,600 older seniors age 75 and older, 23 in-depth one-on-one telephone interviews with older seniors, four focus groups with older seniors, and one focus group with professionals and volunteers who serve seniors and have a understanding of their transportation challenges.

The key research questions explored by the study team include the following:

- What do the travel patterns of Northern Virginia seniors look like today? Are there differences among those living in different types of communities? How closely do these travel patterns resemble those of seniors across the nation?
- · What socio-economic factors influence the travel patterns of seniors?
- · What are the utilization rates of existing transportation services by seniors?
- What are the current and projected gaps in the existing and future transportation services available to seniors?
- What programmatic and service changes need to be made to meet the transportation needs of a growing senior population?
- · How can transit systems retain and increase the number of older persons using their services?
- · What are the estimated costs of providing recommended transportation services?

Northern Virginia is more than 1,300 square miles and home to about 136,000 persons age 65 and older. The region is served by one of the nation's premier regional fixed-route transit systems that carries more than 400,000 average weekday passenger trips. The Washington Metropolitan Transit Authority is the largest provider in this system with 20 Metrorail stations in Northern Virginia and combined Northern Virginia ridership on Metrorail and Metrobus of over 100 million annual passenger trips. Fairfax Connector, the next largest bus system carries nearly 8 million additional annual passenger trips on its buses. Other providers include Alexandria DASH, the Potomac and Rappahannock Transportation Commission (PRTC) OmniRide and

⁴ Giuliano. p. 13.

⁵ Giuliano, p. 13.

OmniLink, Fairfax CUE, Loudoun County Transit, the Virginia Regional Transit Association (Loudoun County), Arlington Transit (ART), GEORGE, and the Virginia Railway Express (VRE). Complementing the fixed-route transit system are specialized transportation services for seniors provided by WMATA and each of the local jurisdictions. Paratransit services for seniors and other persons with disabilities include MetroAccess, DOT Paratransit in Alexandria, Arlington County's STAR, FASTRAN in Fairfax County, City Wheels in the city of Fairfax, Fare Wheels in Falls Church, Loudoun Transit-On Demand Transportation (VRTA). In addition, several jurisdictions offer transportation to senior centers and adult day-care and taxi subsidy programs and they work with private, non-profit volunteer driver networks such as the American Red Cross and Interfaith Caregivers.

What this study is not

Considerable research has been completed or is underway to expand seniors' driving years in a safe manner.⁶ Efforts are underway to improve the safety of older drivers and their vehicles through driver screening, re-training and certification programs, enhanced night vision, lateral guidance, and eventually automated vehicles. Given the propensity of seniors to meet their transportation needs with the private vehicle, this work is no doubt important. Nonetheless, NVTC, as an agency whose primary mission is to promote public transit and ridesharing in Northern Virginia, has not included this aspect of senior mobility in its research; instead, the focus has been on identifying ways to meet the mobility needs of seniors more effectively using public transit options.

Funding

This study was made possible through a \$114,000 state grant from the Commonwealth of Virginia Department of Rail and Public Transportation. The Potomac and Rappahannock Transportation Commission (PRTC) purchased an additional survey sample so that the research could be expanded to Prince William County and the cities of Manassas and Manassas Park. NVTC provided in-kind labor contributions to manage the project, convene and facilitate an advisory team, perform the demographic analysis, and produce the GIS maps and other graphics. WB&A Market research was retained to conduct the telephone survey and facilitate the focus groups while its subcontractor, the KFH Group, was retained to assist in the analysis of the findings and development of transportation recommendations. The research was guided by a multi-agency and multi-disciplinary advisory team composed of transportation planners and human service agency staff. A full list of advisory team members can be found in Appendix 7.

CHAPTER 2

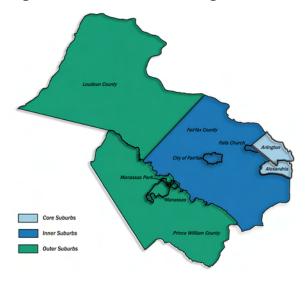
Demographic and Travel Characteristics of Northern Virginia's Seniors

Demographic Characteristics of Northern Virginia Seniors

Several socio-economic factors influence the travel patterns of seniors. These socio-economic variables are not fixed but change with each passing generation. Seniors living in the United States today are generally healthier, wealthier and more mobile than the elderly of previous generations, and this trend is expected to continue. The sheer growth in the number of seniors requires a profound change in the way planners must understand the transportation environment and the effects of older persons on the transportation system. Transit providers must look anew at the services they provide to ensure they address the needs of the public and attract a growing market segment of the overall population.

The following demographic statistics were largely derived from the 2000 Census. Travel characteristics are largely drawn from published research using 2001 National Household Travel Survey data. Because many of the data tables provided by the US Census Bureau are not broken down by detailed age cohorts, the terms seniors, the elderly, and older adults refer to those persons age 65 and over, unless otherwise mentioned. Occasionally data are broken into categories called core (Arlington and Alexandria), inner (Fairfax County, city of Fairfax, and Falls Church), and outer suburbs (Loudoun and Prince

Figure 2.1: Jurisdictional Regions



William counties and the cities of Manassas and Manassas Park). These geographic groupings are commonly used by transportation planners in Northern Virginia.

Numbers of Seniors and Median Age

According to the United States Census Bureau, there were approximately 136,000 men and women age 65 or older living in Northern Virginia in 2000. These older adults constituted 7.5 percent of the total population. About one in every 30 Northern Virginia residents was a senior age 75 or older. The median age in 2000 among Northern Virginia's nine jurisdictions ranged from 30.3

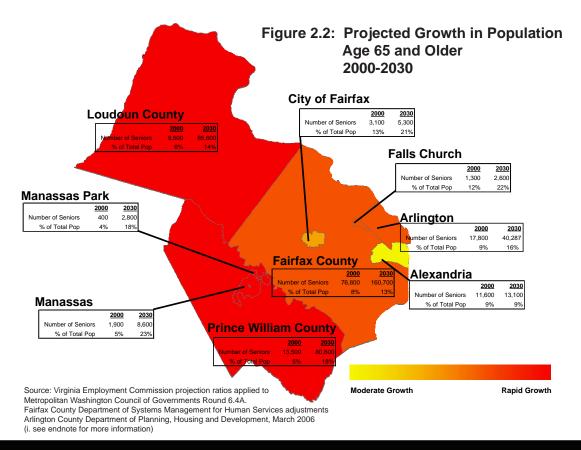
years in Manassas Park, to 39.7 years in Falls Church. The median age in Virginia is 35.7 years compared to a national median age of 35.3 years.

Population Projections

Northern Virginia is expected to add more than 240,000 seniors age 65 and older over the next 25 years. By 2030 the ratio of seniors age 65 and older is expected to increase from one in 13 residents to one in seven. Another way to understand this growth is to compare the rate of growth of the total population with that of the senior population. Northern Virginia's total population is expected to grow by a robust 87 percent over the next 25 years whereas the population age 65 and older is expected to grow nearly 180 percent.

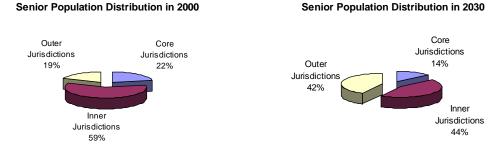
NVTC calculated these projections by applying the Virginia Economic Employment Commission population ratios by age group for the years 2000, 2010, 2020, and 2030 to the Metropolitan Washington Council of Governments Round 6.4a population projections. Fairfax and Arlington Counties provided its own population projections for these years. Tables A1.1 through A1.4 in Appendix 1 provides the projections for each jurisdiction for these four time periods. NVTC has applied these projections to calculate projected transportation needs in the coming decades (see Chapter 4).

As can be seen in Figure 2.2, inside the beltway jurisdictions are expected to witness comparatively moderate growth in senior population between 2000 to 2030, while the outer jurisdictions (Prince William and Loudoun counties) are expected to see phenomenally high growth rates



among senior cohorts (a 499% growth rate in Prince William County and a 591% growth rate in Loudoun County). These high growth rates are largely due to the overall population growth expected during this time frame. For instance, Loudoun County is expected to grow by nearly 300,000 residents between 2000 to 2030, a growth rate of more than 172 percent. While a relatively lower growth rate is expected for Fairfax County (109%), given its already sizable population base, the county will likely see the largest increase in the total number of seniors during this period (around 84,000 seniors or about 37% of Northern Virginia's total growth). The number of seniors as a percent of the total population is expected to remain the same in Alexandria at nine percent. In all other jurisdictions, seniors as a percent of the total population will grow.

Figure 2.3: Location of Seniors in 2000 and 2030



Seniors 65 and Older by Sub-Area				
	2000		2030	
	Population	Percent	Population	Percent
Core Jurisdictions				
Arlington, Alexandria	29,448	22%	53,349	14%
Inner Jurisdictions				
Fairfax County, city of Fairfax, Falls Church	81,153	60%	168,666	44%
Outer Jurisdictions				
Loudoun County, Prince William County,				
Manassas, Manassas Park	25,355	19%	157,872	42%
	135,955	100%	379,887	100%

Source: Virginia Employment Commission projection ratios applied to Metropolitan Washington Council of Governments Round 6.4A. Fairfax County Department of Systems Management for Human Services adjustments Arlington County Department of Planning, Housing and Development, March 2006

This growth pattern is largely the result of "aging-in-place"—seniors choosing to remain in the homes where they raised their families and retired. Figure 2.3 presents another way to look at this. In 2000, 22% of Northern Virginia's senior population resided in the core jurisdictions of Arlington and Alexandria, within close proximity to public transit, shopping and other services. Sixty percent lived in the inner jurisdictions, and 19% lived in the outer jurisdictions. By 2030, the percent of seniors in the core jurisdictions is expected to drop to only 14 percent, while the outer jurisdictions' share will likely grow to 42 percent. Understanding these growth trends is central to properly programming transportation services for seniors in the coming decades.

Migration Patterns (Location Choice) of Northern Virginia's Seniors

In addition to looking at population projections of the number of seniors that are expected to reside in the Northern Virginia area, the project team investigated the extent to which seniors "age-in-place." The team was also interested in whether Northern Virginia attracts retirees from outside the area or whether it exports its retirees to other parts of the country. And finally, do the retirees that relocate to other parts of the country return to Northern Virginia when their health fails?

To investigate these questions, Census 2000 Migration data were used. The full analysis can be found in Appendix 6.

The great majority (70.2%) of Northern Virginia's residents age 55 and older are aging-in-place.¹ These are the people who reported having the same residence in 2000 as in 1995. While these aging-in-place rates are high, they are slightly lower than the US average (75.9%) and Virginia average (77.4%).

Among Northern Virginia seniors age 55 and older who chose to move between 1995 and 2000, one in five relocated to residences still in Northern Virginia. Other movers tended to relocate to other parts of Virginia or the South Atlantic, especially Florida, Maryland, and North Carolina. Figures 2.4 and 2.5 show in- and out-migration patterns for Northern Virginia.

Despite high levels of aging-in-place and the numbers of seniors who merely move to new residences within Northern Virginia, the Northern Virginia area is a net exporter of persons 55 and older, meaning that more people of that age cohort moved out of Northern Virginia during the 1995 to 2000 time period than moved in. There are several possible reasons for this. For some, it may be because they wish to cash in on high home prices and move to less expensive parts of the country or it may be a desire to live in a warmer climate. Income certainly plays a role in relocation decisions. Of all Northern Virginia residents that reported moving out of the region between 1995 and 2000, 48 percent were in the highest income bracket reporting an annual household income of \$75,000 or more. Only 13 percent of seniors that moved out of the region were from the lowest income bracket, reporting an annual income less than \$25,000 per year. Those with the most need for public support services will have limited, if any, relocation options. Thus, one cannot assume that being a net exporter of retirees will reduce the public burden to supply social services, including transportation, to seniors.

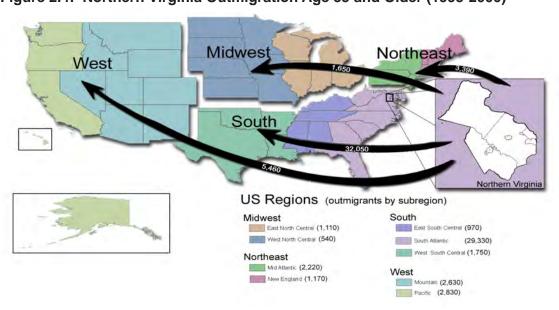
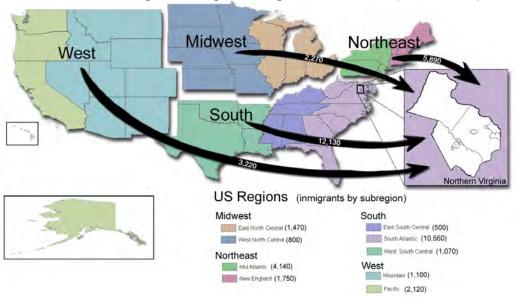


Figure 2.4: Northern Virginia Outmigration Age 55 and Older (1995-2000)

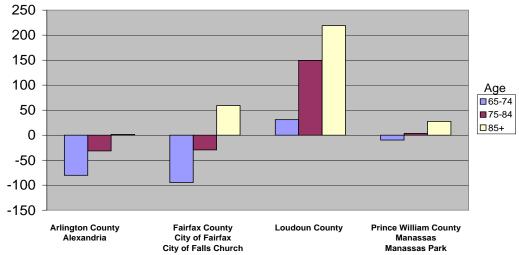
Out of county move rates for those age 65 and older can be found in Appendix 6. The Census only provides county to county migration data for age 55 and older.

Figure 2.5: Northern Virginia Inmigration Age 55 and Older (1995-2000)



Wan He and Jason Schachter of the US Census Bureau found variations in state-level migration rates by age within the older population, suggesting a pattern of "return migration" at the oldest ages for some states. NVTC found this trend to be true for Northern Virginia, albeit to a lesser extent than in other areas of the country (see Figure 2.6). These changes in migration rate by age suggest that, at the older ages (over 85), many people who initially moved away at retirement may have returned to Northern Virginia, perhaps to be closer to family because of ailing health. The inner jurisdictions of Fairfax County, city of Fairfax, and Falls Church, along with Prince William County, Manassas, and Manassas Park show positive net migration rates for those age 85 and older (more persons moving to those jurisdictions than leaving those jurisdictions), but negative rates for those age 65 to 74. The positive net migration rate among older seniors from the core suburbs of Arlington and Alexandria is low. Loudoun County bucks the regional trend attracting seniors at all ages (positive net migration rates for all age cohorts).

Figure 2.6: Net Migration Rates (per 1000)¹ for the Population 65 Years and Older by Age 1995-2000



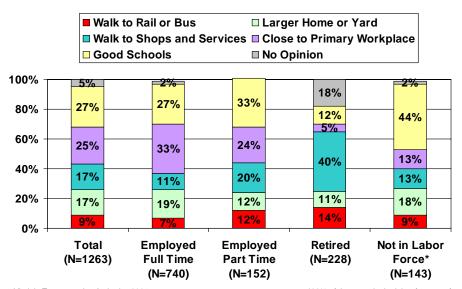
^{1.} The net migration rate divides net migration, which is immigration minus outmigration, by the approximated 1995 population and multiplies the result by 1,000. A negative value for the net migration rate is indicative of net outmigration, meaning more migrants left an area than entered it. Positive numbers reflect net immigration to an area. Source: US Census Bureau, Census 2000.

2

Wan He and Jason P. Schachter. Internal Migration of the Older Population: 1995 to 2000. Census 2000 Special Reports. United States Census 2000. US Census Bureau. August 2003.

At the same time that NVTC was conducting a survey of seniors in Northern Virginia, the Northern Virginia Transportation Authority (NVTA) was conducting a survey of Northern Virginia residents as part of its planning effort to update the regional long-range transportation plan. One of NVTA's research questions was residents' priorities in deciding where to live. The results are telling (Figure 2.7). Seniors, more than any other subgroup, responded that being within walking distance of shopping, services and public transportation stops was most important to them.

Figure 2.7: Most Important Factor in Deciding Where to Live By Employment Status



Source: Northern Virginia Transportation Authority, 2005

*88% of those not in the labor force are female.

Nearly 90 percent of Northern Virginia's older adults reside in more suburban or rural communities. Given the aging-in-place phenomenon, most seniors chose their location of residences years or decades ago. As they've aged and their life circumstances have changed, proximity to shopping, services, and public transportation has grown in relative importance to them. Other factors, such as proximity to good schools and their workplace were likely more important factors at the time of their decision to locate in suburban or rural areas. The preponderance of people aging-in-place has significant transportation implications, given that the majority of these people do not reside in walkable, mixed-use communities. Transit services in the coming decades will need to be designed in such a way to cost-effectively serve seniors in lower-density areas.

Educational Attainment

3

On average, Northern Virginia's seniors are more highly educated and wealthier than their counterparts from around the state and nation. Thirty-nine percent of residents 65 and older have a degree from a higher education institution, be it an associate, bachelors, graduate or professional degree. Statewide, just 20 percent of seniors from this same age cohort have an equivalent level of post high school education. Less than 20 percent of seniors nationally have post secondary degrees. As a percent, senior women in Northern Virginia are far more likely than their female counterparts in the state and nation to hold an associates degree or higher (38.7% versus 23.3% state and 20.5% U.S.). Nonetheless, they are far less likely than Northern Virginia men of the same age

Ninety percent of seniors 65 and older live in either Community Type II or III, as defined by NVTC.

group (54.1%) to have completed advanced studies. Educational attainment is expected to continue to grow in the coming decades as more younger persons, especially women, complete advanced degrees.

Diversity

In 2000, the region's senior population was predominantly white (81.1%) and only slightly more diverse than the state as a whole (80.8%) and slightly less diverse than the nation as a whole (83.6%) (Figure 2.8). While the number of elderly black and Latino residents was lower as a percent of the total population than the state and national average, Northern Virginia was home to a proportionally higher percent of Asians (7.1% in Northern Virginia versus 1.8% in Virginia and 2.3% in the US). The older population cohorts are expected to become increasingly racially and ethnically diverse in the coming decades as today's more diverse younger population ages. Northern Virginia's overall 2000 population was 35 percent minority. Between 1990 and 2000, more than 50 percent of the population growth in Northern Virginia stemmed from immigration.⁴

About seven percent of Northern Virginia's seniors age 65 and older reported speaking English "not well" or "not at all" in 2000. This reflects a higher immigrant population in Northern Virginia than the state and nation. Less than two percent of seniors in the state and only four percent of seniors nationally reported this same lack of English proficiency. The core and inner jurisdictions have the greatest numbers of seniors who are not proficient with English. Across Northern Virginia, almost 10,000 seniors reported not having English proficiency. Many of the region's younger immigrants have chosen to locate in the inner and outer suburbs; thus, as the population ages, those seniors with limited English proficiency are expected to be more widely spread across Northern Virginia, rather than concentrated in the core and inner suburbs. As cultural and language diversity grows, so too will the need for transportation services and information that address cultural and linguistic barriers.

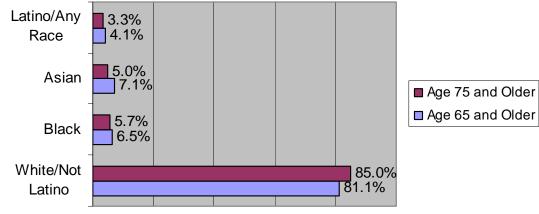


Figure 2.8: Racial Composition of Northern Virginia Seniors

Source: Summary File 1, Table P12, Census 2000, U.S. Census Bureau

Numbers do not include children of foreign born. Ken Billingsley, Director of Demographics, Northern Virginia Regional Commission, presentation to NVRC Board, June, 2005.

Income and Poverty

Poverty rates are much lower in Northern Virginia for all age groups compared to the state and nation. Younger seniors (those age 65 to 74) actually have slightly lower poverty rates (4.5%) than persons under 65 years of age (5.0%). However, by age 75, poverty rates increase to 5.6 percent. In terms of total numbers of individuals, the 2000 Census reports that more than 6000 Northern Virginia seniors age 65 and older live in poverty. Women and minorities are particularly vulnerable (Figure 2.9). While only 2.9 percent of white seniors 65 and older lived below the poverty line in 2000, 15.3 percent of Asians, 14.4 percent of blacks, and 11.1 percent of Latinos (any race) of the same age group were poor. Older women were almost twice as likely to be living in poverty than older men, and those who lived alone had the highest poverty rate of all. Black women age 65 and older were 1.5 times more likely than black men, 4.5 times more likely than white women, and more than eight times more likely than white men to be living in poverty. Surprisingly, there are more Asian seniors living in poverty than there are either black or Latino seniors living in poverty in Northern Virginia (both in terms of absolute numbers of seniors living in poverty and as a percent of their senior population). Asian women over 65 are nearly 10 times more likely than white men their same age to live in poverty.

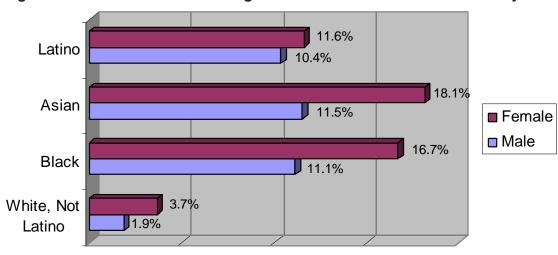


Figure 2.9: Percent of Northern Virginia Residents 65 and Older in Poverty

Source: Summary File 3, PCT75, Census 2000, U.S. Census Bureau

Income is a strong determinant of travel for all age groups.⁶ Over the past 20 years, the financial situation of seniors has, on average, improved.⁷ Should this trend continue, one can expect higher auto-ownership and trip-making among the elderly. Those who cannot drive may have more disposable income to spend on high-quality transportation services.⁸ Giuliano found that while low income is correlated with higher transit use among younger persons, the opposite is true among the elderly.⁹ Burkhardt also found that higher income seniors were more likely to use public

One hypothesis of why Asian poverty rates are higher than Latino and black poverty rates despite higher income levels among Asians in the younger cohorts, is that Asian seniors are less likely than Latino and black seniors to live with their working-age relatives.

^{6 2001} National Household Travel Survey.

⁷ Koffman, David, David Raphael, and Richard Weiner. The Impact of Federal Programs on Transportation for Older Adults. AARP Public Policy Institute. 2004. p. 42.

Burkhardt, Jon E., Adam T. McGavock, Charles A. Nelson, and Christopher G.B. Mitchell. Improving Public Transit Options for Older Persons. Transit Cooperative Research Program Report 82. Vol. I&2. 2002.

⁹ Giuliano, Genevieve, His-Hwa Hu, and Kyoung Lee. Travel Patterns of the Elderly: The Role of Land Use. Final Report Metrans Project 00-8. School of Policy, Planning, and Development. University of Southern California. July 2003.

transportation than seniors in poverty.¹⁰ However, the incomes of those who lack higher education or who have a disability have not kept pace. Burkhardt predicts that this discrepancy will create an even larger income gap for the about 15 percent of the elderly in or near poverty. And while many researchers forecast a continuation of rising incomes among seniors in the future, there is no assurance that these trends will continue. Koffman notes that projections showing increases in future economic well-being of older adults are based on rather optimistic assumptions about trends in per-capita incomes. The future economic resources of older people and their need for publicly subsidized alternatives to driving could change dramatically depending on changes in pension policies, Social Security benefits, the performance of private investments, labor force participation, and cost of living increases.¹¹

Home ownership rates

Home ownership rates can be a predictor of wealth in Northern Virginia as well as a partial explanation of aging-in-place. Home ownership rates among seniors in Northern Virginia are high. Seventy-eight percent of senior households were owner-occupied units. The cities of Fairfax and Manassas Park had the highest rates of home ownership among seniors (90.0% and 87.1% respectively). Owning one's home outright generally can be a strong incentive to remain where one now lives; however, Northern Virginia's rising property taxes could force some property-rich, cash-poor seniors to move. As shown in Table A1.9, home ownership rates increase through age 65 but begin to decrease for the population cohort age 65 to 74 years. By age 85 and older only 58 percent of seniors own the home they live in, down from a high of 83 percent for the cohort age 55 through 64 years.

Live alone rates

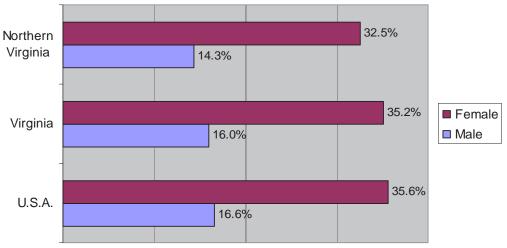
Twenty-five percent of all Northern Virginia seniors age 65 and older live alone, a slightly lower percentage than that observed for the state and US senior population. In Northern Virginia, older women are more than twice as likely as older men to live by themselves (33% and 14% respectively) (see Figure 2.10). Sandra Rosenbloom, writing for the Brookings Institution Center on Urban and Metropolitan Policy, points out that as seniors age and the likelihood of disability increases, those over 85, and women in particular, will face several serious constraints with little family assistance. "The majority of older women will live alone, some because they never married, some because they have been widowed or divorced." She goes on to note that, "while most elderly men have a spouse for assistance, especially when health fails, most elderly women do not. In fact, most older women will have no relatives or family members to provide support or assistance, given that the 85-and-older cohorts in the upcoming two decades will have had fewer children than any previous cohort of the elderly." 12

¹⁰ Burkhardt J. et al. p. 29.

¹¹ offman, D. et al. p. 42.

¹² Rosenbloom, Sandra. The Mobility Needs of Older Americans: Implications for Transportation Reauthorization. Center on Urban and Metropolitan Policy, The Brookings Institution. July 2003.

Figure 2.10: Older Women are Twice as Likely as Men to Live Alone (Age 65 and Older)



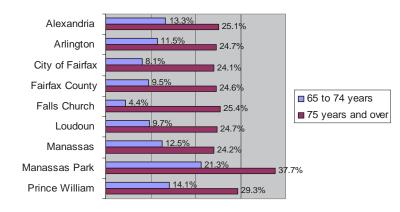
Source: Summary File 1, Table P30, Census 2000, U.S. Census Bureau

Health and Disability

Several studies indicate that health status, rather than age, is a key determinant of the degree to which people can lead independent lives.¹³ The American Association of Retired Persons (AARP) conducted a national telephone survey in 1998/1999 of adults aged 50 and older. AARP found that age alone is not the best indicator of transportation mode use, transportation problems, or personal mobility, but rather health and disability status (HDS) is a strong predictor of mobility in the population age 75 and older. One in five of AARP's respondents age 50 to 74 (22%) re-

poted excellent HDS compared with one in eight respondents age 75 to 79 (12%) and one in 10 respondents age 80 and older (8%). Those 85 and older with excellent HDS were reported to be more mobile than their younger counterparts with poor HDS.¹⁴ A 1999 study in the Baltimore region found that an older person's ability to walk three blocks was the most robust of all predictive variables in travel frequency.¹⁵ The results of NVTC's telephone survey support the above findings and are discussed in detail in Chapter 3.

Figure 2.11: Percent of Seniors that report difficulty going outside the home alone due to a physical, mental, or emotional condition lasting six months or more



Source: Summary File 3, Tables PCT 27-31, Census 2000, U.S. Census Bureau

¹³ Burkhardt J. et al.

¹⁴ Ritter, Anita Stowell, Audrey Straight, and Ed Evans. Understanding Senior Transportation: Report and Analysis of a Survey of Consumers Age 50+. AARP. 2002. p. vii.

¹⁵ Burkhardt J. et al. p. 20.

There are numerous methodologies in use to measure disability. Most reflect the complex interplay among a particular type, or types, of disability an individual endures, the resulting functional limitations such as walking or understanding written material, and the impact these limitations have on the ability to engage in basic life activities, or activities of daily living (ADLs). Activities of daily living include personal care, home management, or traveling about the community.¹⁶

The Census 2000 uses five types of disability classifications for seniors:

- Sensory
- · Physical
- Mental
- · Self-care
- · Go-outside-the home.

The majority of Northern Virginia's seniors are healthy. Sixty-six percent of seniors age 65 and older report not having any disability. The Census Bureau reports Northern Virginia seniors to have lower disability rates (34%) than seniors around the state and nation (42%). The incidence of disability rises significantly from age 65 to 75 and older. Among Northern Virginia seniors age 65 to 74, 11 percent reported difficulty going outside the home alone due to a physical, mental, or emotional condition lasting six months or more, whereas 25 percent of seniors age 75 and older reported this type of disability (Figure 2.11).

Consistent with other national research, women report higher disability rates than men. This trend is especially prominent among seniors over 74. Twenty-nine percent of women of this age cohort versus 18 percent of men report a "go-outside-the-home" disability.

Reporting U.S.-level data from the National Center for Health Statistics Burkhardt found that black, non-Hispanic elderly persons are over two-thirds more likely to have difficulty with two or more activities of daily living (ADLs) than white, non-Hispanic elderly persons (9.4% versus 5.6%). This may in part be due to higher poverty rates among elderly black persons than white persons. Poverty is highly correlated with disability among the elderly. Health problems can pose a serious drain on a household's resources. Older persons below the poverty level are more than twice as likely to report two or more ADL limitations than those older persons with incomes at or above the poverty threshold (10.6% versus 5.2%).¹⁷

Seniors may experience difficulties in traveling outside the home because of temporary medical conditions. The census would not capture those travel difficulties because respondents were requested to report only medical conditions lasting six months or longer. The National Household Travel Survey (NHTS) included a similar question on its survey but without the duration constraint. In response to the question, "Do you have a medical condition that makes it difficult to travel outside the home?" nearly 24 percent of persons age 65 and older responded "yes." Of those who answered "yes" 85 percent reported having reduced their day-to-day travel as a result of their condition.

¹⁶ Burkhardt J. et al.

¹⁷ Burkhardt J. et al.

In the future, disability rates are expected to decline.¹⁸ This will likely lead to an increase in tripmaking, driving, and the potential market of healthy seniors able to use public transportation. At the same time, with the overall graying of the population, the total numbers of seniors in the older age cohorts and those with disabilities that limit their ability to drive or use conventional public transportation will grow. Alternative travel options are needed for both more mobile seniors as well as those least mobile seniors.

The Travel Characteristics of Today's Seniors

The travel patterns of seniors are distinct from those of the general population. As Burkhardt points out, some of these differences are due to long-established travel patterns of the generations, while other differences are due to the above socio-economic factors, most importantly health and disability status. ¹⁹ The following section summarizes the travel differences between seniors and younger age groups and the more pronounced differences among senior cohorts. Older Americans are highly mobile. Travel by seniors remains close to the level traveled during pre-retirement years until about age 75 or older. Seniors are highly reliant on private automobile travel, a trend that is expected to increase in the coming decades. Their likelihood of using public transportation has been dropping for decades. Despite these trends, the sheer growth in the numbers of seniors will lead to a large increase in non-drivers who will need transportation services. This may be in a form of fixed-route public transportation, specialized transportation services, or privately provided service.

The 2001 National Household Travel Survey (NHTS) is one of the best sources of information on travel patterns by age group and is the source of the data below unless otherwise mentioned. This chapter reports national data. Data specific to Northern Virginia that were derived from the telephone survey are reported in the following chapter. It should be mentioned here that Northern Virginia seniors' travel patterns closely resemble national statistics. These similarities and differences are discussed in Chapter 3.

Transit and Other Modes

After travel by car, walking is the second most popular means of getting around by seniors. Nearly nine percent of trips taken by seniors are on foot. Trips on public transportation account for only 1.3 percent of trips taken by seniors age 65 and older. Compared to the population as a whole, the elderly are less likely to take transit (the general population makes 1.7% of their trips on public transportation). Those age 61 to 80 make up 13 percent of the general population but only 7.7 percent are transit users. Unfortunately, trip taking by seniors on public transportation declined by almost 50 percent between 1995 and 2001, a trend that began several decades ago. In 1995, transit use for non-work trips among the elderly was, for the first time, below that of younger people. Contrary to popular myth, the share of transit use does not increase as people age. 22

¹⁸ Burkhardt J. et al.

¹⁹ Burkhardt J. et al.

Public Transit in America: Results from the 2001 National Household Travel Survey. National Center for Transit Research. Center for Urban Transportation Research (CUTR). University of Southern Florida. September 2005. p. 47.

²¹ Purcher, John and John L. Renne. Socioeconomics of Urban Travel: Evidence from the 2001 NHTS. Transportation Quarterly, Vol. 57, No. 3, Summer 2003 (p. 49-77).

²² Rosenbloom, S., 2003.

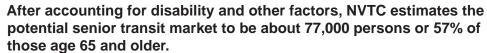
Once an elderly person gives up driving, s/he is more likely to seek out rides as a passenger in other private vehicles, walk, and/or travel less than alight a bus. Taxi use by the elderly also fell between 1995 and 2001, and in 2001 accounted for only 0.1 percent of trips. ²³

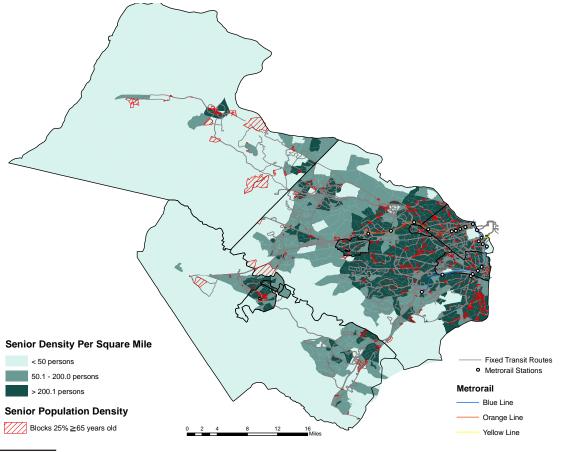
Despite low public transit use rates relative to other means of travel, an estimated 270,000 annual trips are taken by Northern Virginia seniors on fixed-route public transportation. Thirteen percent of telephone survey respondents reported having used fixed-route public transportation in the past month.

Transit Availability

Proximity to public transportation is a strong determinant of transit use. NVTC calculated that about 85 percent of Northern Virginia's seniors age 65 and older live within one-quarter mile of a bus route (see Figure 2.12). The actual senior transit market is much lower as the estimate was derived using census block population data in a geographic information systems analysis. The entire senior population within a census block is counted if any portion of the census block is within one-

Figure 2.12: About 85 percent of Seniors age 65 and older live within 1/4 mile of fixed route public transportation.





quarter mile of a bus route, regardless of whether some of that population is actually more distant from the stop. One must also subtract the number of seniors with medical conditions that make it difficult for them to go outside the home. Finally, not all seniors who live within one-quarter mile of public transportation have adequate sidewalks and crosswalks between their home and the bus stop or rail station. After accounting for the above limitations, NVTC estimates that the senior transit market is about 77,000 persons at the current time, or about 57 percent of the population age 65 and older. Among those age 75 and older, NVTC estimates that about 31,000 seniors (52%) live in close enough proximity and have good enough health to use public transportation. Given that more and more seniors will reside in the outer jurisdictions in the coming years, transit providers will need to be proactive in catering to seniors' needs to maintain and grow their use of public transportation. Chapter 4 offers suggestions on ways to increase ridership by older adults.

Trip-making

Children and the elderly travel the least of any age group. The highly mobile age group (25 to 64 years old) makes an average of 4.4 trips and travel 32.7 person miles each day. That is a third more trips per day than children and the elderly, and almost twice the mileage per day.²⁵ This is due to a reduction in work trips by retirees and the fact that travel diminishes significantly for the oldest of the old.

The differences in travel among elderly cohorts are even greater than the variation observed between the elderly and the non-elderly. Those age 65 to 69 years made more than two times the number of trips each day than persons over 85. Similarly, persons 85 and older covered only about a third as many miles per day as persons 65 to 69 years old.²⁶

The elderly are more dependent on auto travel than any other age group. They rely on the car for 89.1 percent of their trips. This is three percentage points higher than the population as a whole.²⁷ And while trip-making declines with age, even those over age 85 make 80 percent of their trips by car.²⁸

Older women travel less on average than older men. The 2001 National Household Travel Survey reports that older men age 65 and older travel 33.5 person miles each day while older women travel only 24 person miles daily. The discrepancy of daily vehicle miles traveled between men and women is even more pronounced (27 daily VMT for men and 9 daily VMT for women). There is a strong correlation between zero-trip taking rates, an indicator of social isolation, and income. Of women 85 and older in households with annual incomes less than \$25,000, 60 percent did not take a trip on a given day.²⁹

The discrepancy between elderly men and women's travel patterns is expected to narrow in future

Assumptions: subtracted 17% (population w/disabilities), subtracted 10% for census block boundary issues and subtracted 10% for sidewalk issues.

²⁵ Pucher, J. et al. 2003.

²⁶ Pucher, J. et al. 2003.

²⁷ Pucher, J. et al. 2003.

²⁸ Rosenbloom, S., 2003. p. 4.

²⁹ Liss, Susan. Our Nation's Travel: Current Issues. Draft. 2001 National Houusehold Travel Survey (NHTS). U.S. Department of Transportation. Federal Highway Administration. p. 28.

decades as younger women are accustomed to driving and holding a license. Women now hold half of all licenses in America. The percent of drivers is the same for both sexes until about the age of 45.³⁰ Nonetheless, future generations of older women could continue to face mobility challenges given that women's income remains below that of men and that women are expected to continue to outlive men and thus be more likely to live alone. Women's disability rates also are higher than men's.

There are a number of trends that point to a likely increase in the amount of driving by seniors in the coming decades. Licensing rates among seniors has been increasing over time, largely due to an increase in the number of female drivers.³¹ Seniors are aging-in-place in suburbs and exurbs where dispersed development patterns have required more car-oriented lifestyles and where transit options are more limited. The income level of most seniors is increasing, resulting in increased mobility for many. Seniors of today are healthier thus lead more active lifestyles. Despite these trends the sheer increase in the number of seniors will inevitably lead to more non-drivers in the coming decades. It is these non-drivers that are most vulnerable to becoming socially isolated from a lack of transportation. The NHTS reports that non-drivers age 65 and older make only half as many trips per day than drivers.³² As Robert Case cogently points out, the greatest change in trip-making occurs not as people age, but when they stop driving.³³

Those seniors who report having a medical condition that makes it difficult to travel outside the home take an average of two trips per day compared to 3.9 daily trips among those without self-reported medical conditions. How one responds to a medical condition differs by age and gender. Older drivers are more likely than younger drivers to limit their driving to daytime (48% versus 40% respectively). Twice as many older adults than younger adults give up driving altogether. Older women are more likely to give up driving than older men (39% versus 30%). Older adults also are less likely than younger adults to ask others for rides (52% compared to 60%). Younger and older women are more likely than men to ask others for rides (57% versus 43%). Although alternative transportation becomes essential for those who do not drive, only a very small percentage (12%) of those with self-reported medical conditions use specialized transportation services such as dial-aride. Older women are twice as likely to use specialized transportation services than older men. ³⁵

A public policy trend that could affect the demand for senior transportation services is the movement toward increasing reliance on noninstitutional care and outpatient treatment as an alternative to nursing homes and hospital care.³⁶ Frail individuals will need travel to and from day treatment facilities, essential shopping, and other services. A similar trend in medicine toward outpatient care and early hospital release may result in more older people needing nonemergency medical transportation when they temporarily cannot drive.

Polzin, Steven E., Ph.D., Xuehao Chu, Ph.D., and Lavenia Toole-Holt. The Case for Moderate Growth in Vehicle Miles of Travel: A Critical Juncture in U.S. Travel Behavior Trends. Center for Urban Transportation Research. University of South Florida. September 2003.

³¹ Burkhardt J. et al.

Case, Robert B. Increasing Elderly Mobility by 2025: Using the National Household Travel Survey (NHTS) to Increase the Mobility of Elderly Non-Drivers. Transportation Research Board Poster Session. January 2005.

Case, Robert B. Hampton Roads 2030 Regional Transportation Plan: Elderly and Handicapped Transportation in 2030, Part 1, Improving Elderly Transportation Using the NHTS. Hampton Roads Planning District Commission. June 2005. Powerpoint Presentation.

Collia, Demetra V., Joy Sharp and Lee Giesbrecht. *The 2001 National Household Travel Survey: A Look into the Travel Patterns of Older Americans*. Journal of Safety Research 34 (2003) p. 461-470.

³⁵ Collia, D.V. et al.

³⁶ Koffman, D. et al.

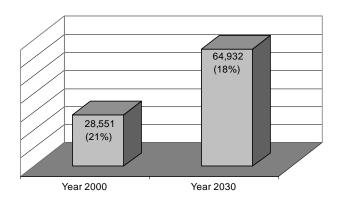
Licensed Drivers

The majority of elderly persons are drivers (79%)³⁷ and while only approximately 21 percent of today's seniors are non-drivers, the fact that the number of persons age 65 and older is expected to more than double in the next twenty-five years could lead to a doubling in the number of non-driving seniors as well. Koffman estimates that the number of non-driving seniors could grow from anywhere between 15 and 52 percent between 2000 and 2020, depending on whether one assumes elderly travel habits of future generations resemble those of the current elderly generation or whether their future travel resembles their higher level of travel today. Case estimates that the percentage of seniors who drive in the coming decades could increase from 79 percent today to 82 percent in the coming decades.

Assuming 18 percent of tomorrow's seniors do not drive, by 2030 Northern Virginia could be home to more than 65,000 seniors who do not drive, compared to approximately 29,000 non-driv-

ing seniors today (a 125% increase) (Figure 2.13). Most of these seniors will not give up driving until their late seventies and beyond. Increases in longevity will mean that large numbers of older adults will require alternative means of transportation for substantial periods toward the ends of their lives. Recent research shows that, subsequent to driving cessation, men will outlive their driving years by six years and women by 10 years.³⁸

Figure 2.13: Number of Northern Virginians 65 and Older that Do Not Drive (Percent of Total Senior Population)



Seniors involved in auto accidents

A strong argument for providing transportation alternatives to seniors is the higher death and injury rate that seniors suffer in car accidents. Older drivers are more likely to have crashes on an exposure basis (per trip or mile driven) and they are more likely to be killed or injured than are younger people in a crash of comparable magnitude.³⁹ Older people, who represent 13 percent of the U.S. population, constitute 18 percent of deaths from U.S. motor vehicle accidents.⁴⁰ Only those under age 25 have higher vehicle deaths per 100,000 miles driven than the elderly over age 75.⁴¹ The Insurance Institute for Highway Safety estimates that the doubling of the elderly population will mean that older people will be involved in 25 percent of all fatal car crashes.⁴²

^{37 2001} National Household Travel Survey.

³⁸ Koffman, D. et al. p. 41.

³⁹ Rosenbloom, S., 2003.

⁴⁰ Rosenbloom, S., 2003.

⁴¹ Rosenbloom, S., 2003.

⁴² Rosenbloom, S., 2003.

It would be wrong to conclude that older drivers are dangerous drivers. On a per capita basis, older drivers have fewer crashes than any other age group and are less likely to be involved in crashes that kill someone.⁴³ Per capita crash rates have been declining among those over age 65 for decades as a result of more driving experience and self regulation.⁴⁴ Nonetheless, the sheer increase in the number of senior drivers and the likelihood that they will be driving more than previous generations will lead to an absolute increase in the number of car accidents involving senior drivers, even if per capita rates continue to drop.

Given these accident statistics and projections, it is wise to design a transportation system that offers alternative means of travel for seniors, especially those with serious deterioration of eyesight, hearing, and reflexes.

Vehicle Availability

Consistent with a reduction in driving in one's later years is the noticeable reduction in vehicle availability after age 75. In Northern Virginia at least one vehicle was available to 91 percent of senior households age 65 to 74. For householders age 75 and older, 22 percent did not have a vehicle available to the household (see Figure 2.14). The elderly are more likely than the non-elderly to live in households without cars, a difference that increases with each successive age cohort.⁴⁵

31% 33% 24% 22% 23% 24% 21% 22% 33% 24% 4% 6% 133% 5% 5% 7% 9% 9% 10% 11% 11% Age 65-74

Research Rese

Figure 2.14: Percent of Senior Householders Without an Available Vehicle

Source: Summary File 3, Table H45, Census 2000, U.S. Census Bureau

Activity Patterns and Time of Travel

Regardless of age, a large portion of daily trips are taken for family and personal reasons such as shopping, running errands, and recreational activities. Social and recreational trips, such as visiting friends, accounted for the largest percentage of older adults' trips (19%). Seniors take a significantly higher percentage of daily trips for shopping as compared to younger adults and they take a higher percentage of trips for medical and religious reasons. ⁴⁶ Notwithstanding, the fact that they take fewer overall trips results in declining out-of-home activity with age.

Daily travel for older adults peaks in the late morning between 10:00 A.M. and noon. Over 60 percent of their daily travel is done between 9:00 A.M. and 3:00 P.M., likely due to the desire by many older adults to avoid night and rush-hour driving. This is not to say that seniors do not wish to get out at other times of the day. NVTC focus group respondents clearly indicated that evening

⁴³ Rosenbloom, S., 2003.

⁴⁴ Rosenbloom, S., 2003.

⁴⁵ Giuliano, G., et al., 2003.

⁴⁶ Collia, D., et al., 2003.

travel is desired but many did not feel comfortable with driving during rush hour or after dark and lacked other transportation options.

Congestion is a concern for 66 percent of all older adults that responded to the NHTS questionnaire, but is of particular concern to older women (70%). Older men express concern about congestion at the same rate as younger men and younger women.⁴⁷ This may be due to a lifetime of less frequent driving by the current cohort of older women, and consequently less overall comfort behind the wheel.

Effects of Land Use on Senior Travel Patterns

In a research paper published in July 2003, Genevieve Giuliano examines the relationship between residential location and travel patterns of the elderly based on an analysis of 1995 NPTS data. For the most part she found that land use and travel relationships are largely the same for the elderly as the non-elderly. For instance, residence in a metropolitan area and higher density neighborhood correlated with higher levels of transit use, as did having a transit stop near to one's home. People

of all age groups travel less total distance when they live in higher density areas. Giuliano also found evidence that the older elderly (age 75 years or more) are more sensitive to increased convenience to goods and services as can be found in more compact, mixed-use communities. Higher density was also associated with an increase in the number of trips made by seniors and shorter travel distances for those trips.

Conclusion

Driving is certainly the preferred travel option of seniors. It provides the convenience of going where one wants to go, when one wants to go. Often, seniors with disabilities find driving possible even after they can no longer walk to a bus stop and use public transportation. While driving may be ideal for a great number of seniors, the nation's auto dependency increases the vulnerability of those who no longer drive. Those non-drivers with disabilities and elderly women with limited financial resources and who live alone are particularly susceptible to social isolation. Table 2.1 summarizes the various demographic, social and transportation trends of older persons that will affect the requirements for transportation services for older adults in the future. It has been reproduced from TCRP Report 82: Improving Public Transit Options for Older Persons (Burkhardt p. 45).

Future measures to increase the mobility of older adults will need to address the challenges of rapid senior population growth, the increasing numbers of seniors living in suburban areas with limited transportation alternatives, the entry into older age groups of a generation with little experience using public transportation, and the increasing cultural diversity of the population.⁴⁸

The proposed mobility solutions outlined in Chapter 4 attempt to address the particular needs of non-driving seniors. They also include recommendations on transit service improvements that can capture senior drivers while they are young and healthy. Finally, they include improvements to the built environment that will aid in making alternative modes of transportation more feasible.

⁴⁷ Collia, D., et al., 2003.

⁴⁸ Koffman, D., et al., 2004.

Table 2.1 Summary of Characteristics Affecting Future Travel Patterns and Mobility Needs of Older Persons

0, , , , ,			
Characteristics	Transportation Implications	Expected Trends	Potential Travel Impacts
Dispersion of activities: Most new residential and	Dispersed travel patterns; strong need for flexible routing and	Most new development will continue to occur in suburban areas.	Strong continued emphasis on automobile travel, unless other travel
commercial development	scheduling as offered by		modes begin to offer more flexible
occurring in suburban areas.	automobile travel.		routing and scheduling.
Automobile driver licensing: Nearly universal driver licensing in younger age groups.	Travelers will have grown up with high expectations in trip-making in levels of comfort, privacy and spontaneity.	Current cohort of elderly with no driving experiences (primarily women) will disappear; licensing and driving rates among older females will approach those of older males; more elderly will drive.	Older persons of the future will expect higher level of service from transportation providers than are found today.
Aging in place: Most people now 50 years of age or older will live in the same house when they reach 65 years of age.	Large numbers of persons aging in suburban and rural areas that now have little or no transit service. More non-metropolitan elderly own their own homes outright, thus having a substantial incentive to stay where they now live.	Continuation of the "graying of the suburbs," where population densities will slowly increase; continued overrepresentation of the oldest-old in rural areas.	Need for new transit paradigms serving low-density areas cost-effectively. New funding options and sources probably needed to fill these demands.
Health status: Improving health status among older persons; longer life spans.	Healthier people are more mobile and have greater travel needs; there will also be more people with mobility limitations, which will increase demands on transit services.	Continued improvements in health status; some individuals living longer with chronic conditions; greater dispersion of characteristics and capabilities among the oldest of the old.	Greater need for travel options for both the more mobile and the least mobile seniors. Unless new travel options are offered, there will be more drivers of advanced age and limited abilities on the road; automobile crashes could increase.
Income/poverty status: Improving income for many older persons.	Greater level of choice in travel options, leading to greater automobile ownership and use.	Continuation of general improvements, which will create an even larger income gap for the about 15 percent of the elderly in or near poverty.	More disposable income to spend on transportation for most seniors, meaning more emphasis on high-quality modes. For others, a greater need for low-cost alternatives.
Retirement status: Many more years of life after retiring from the primary profession than before.	Increasing travel needs for seniors; more trips of all types, including work and recreation.	Increasing dispersion in the implications of retirement and related travel needs.	Greater trip demand among the elderly. Greater variability in travel origins and destinations will create additional needs for flexibly routed and scheduled services.
Family support: Decreasing level of family ties in nuclear and extended families.	Loss of informal networks for trip- making for those not able to provide their own trips. People living alone are much more likely to be poor.	Continuation of dispersion of children and other relatives to locations some distance away from aging parents.	Greater focus on non-family sources of travel assistance, both public and private, formal and informal.
Urban/rural differences: Measurable and important differences on most of the other characteristics.	More serious transportation problems in rural areas, where distances are long, transit options are fewer, and seniors tend to have lower incomes.	Continuation of trends of average age increases in the rural heartland; growth in retirement destinations in more attractive rural communities.	Continued need for additional public and private transit options in less urbanized areas, emphasizing more cost-effective alternatives.
Predominance of women: Substantial numbers of frail and poor women living alone at a low level of independence.	Strong need for assistance with daily transportation. Non-metropolitan women are particularly vulnerable to health and economic problems at advanced ages.	In the short run at least, a continuation of these problems.	Need for transportation capable of simultaneously addressing issues of disability, poverty and isolation.
Cultural diversity: Rapid growth in number of minority seniors; socio- economic concerns of minority seniors regarding poverty, health, and longevity still remain.	People in some minority groups are less able to independently provide their own transportation; at this time, greater reliance on taxis and informal networks, which are highly developed in some cultures.	Increasing proportions of the elderly will be minorities; improvements in income, health and longevity expected.	Need for transportation capable of simultaneously addressing issues of disability and poverty, and also working with informal alternatives, which may offer substantial assistance for people from certain cultures.

Source: Reprinted with permission from Jon E. Burkhardt, Adam T. McGavock, Charles A. Nelson, and Christopher G.B. Mitchell, *Transit Cooperative Research Program Report 82, Improving Public Transit Options for Older Persons, Volume 2: Final Report*, Transportation Research Board, 2002, page 45.

Endnotes

i. The difference in population growth rates for Arlington and Alexandria is likely to be much less. For this study, Arlington and Fairfax County provided their own population projections. For all other jurisdictions NVTC applied the population age ratios provided by the Virginia Employment Commission to Metropolitan Washington Council of Governments Round 6.4a population projections.

Arlington County uses a shift-share method to project population by age. County demographers tabulate the most up-to-date population distribution by age for the state using US Census Bureau data. They then calculate the rates of growth or decline per age group for the years 2000-2030 and apply these rates to Arlington County's known population per age group for the year 2000. Each age group's share of the total population is determined for each year 2001 to 2030. Lastly, these ratios are then reapplied per year to the forecast population in Arlington County in each of these years. These total population forecasts are based on the Metropolitan Washington Council of Government's Round 7.0 forecasts.

The Virginia Employment Commission uses a baseline cohort-component method to project population by age to reflect recent trends in fertility, mortality, and migration.

Fairfax County uses the 2000 Census population subdivided by five-year age cohorts and sex as the base from which to project population, supplemented by age specific 1999 death rates from the Fairfax County Health Department, 1985-1990 Census Migration, the 2000 Census PUMS data set, and modified as necessary based on review of the 2001 through 2003 American Community Surveys conducted by the US Census Bureau.

Using a single methodology; namely, applying VEC population age ratios to the MWCOG Round 6.4a population forecasts for each jurisdiction would result in Arlington County showing an increase of 3300 individuals age 65 or older between 2000 and 2030. The share of this older population as a percentage of the total population would remain at 9%.

CHAPTER 3 SENIOR TRANSPORTATION ISSUES AND NEEDS: QUANTITATIVE AND QUALITATIVE RESEARCH FINDINGS FOR NORTHERN VIRGINIA

Primary research for the NVTC senior transportation study was carried out through four means: 1,636 telephone interviews, four focus groups, 23 in-depth interviews, and a focus group targeted to professionals who work with seniors and senior transportation programs. For the purposes of this study, seniors were defined as those 75 years of age and older. Travel generally does not decrease with age until after or about the age of 75 years. The "younger" elderly substitute personal trips for work trips. After 75, vision and hearing problems, physical movement problems and reduced energy may explain observed lower rates of travel among the elderly.¹

Telephone interviews were conducted between April 26 and May 31, 2005, among the general population of older seniors, defined as 75 years of age and older, in Northern Virginia, with quotas established by jurisdiction to ensure that an adequate number of interviews were completed for statistical analysis. If a respondent was otherwise eligible but could not speak due to a physical or other disability, interviews were conducted with either their caregiver or someone else who was able to answer questions about that person's transportation needs (4% of interviews). The 1,636 interviews averaged about 17 minutes in length. The statistical margin of error was +/- 2.4 percentage points at the 95 percent confidence level for the sample as a whole. The overall response rate was 45.1 percent.

Four focus groups were conducted among seniors age 75 and older living in the following areas of Northern Virginia: Arlington County, city of Alexandria, Fairfax County, city of Fairfax, city of Falls Church and Loudoun County. These focus groups were conducted on July 18, 20 and 21, 2005 in Alexandria, VA (July 18) and Fairfax, VA (July 20 and 21). Participants were chosen from a list of interested telephone survey participants to ensure a mix of both drivers and non-drivers. Preference was given to those who used other forms of transportation besides driving oneself. The table below details the participant breakdown of each group:

Giuliano, Genevieve, His-Hwa Hu, and Kyoung Lee. Travel Patterns of the Elderly: The Role of Land Use. Final Report Metrans Project 00-8. School of Policy, Planning, and Development. University of Southern California. July 2003.

Location	Participant Type	# of Participants	# of Drivers	# of Non- Drivers
Alexandria, VA (Seniors from Arlington/ Alexandria)	Mix of Drivers and Non-Drivers	10	7	3
Fairfax, VA (Seniors from Fairfax County, city of Fairfax, Falls Church)	Primarily Non-Drivers	8	2	6
Fairfax, VA (Seniors from Fairfax County, city of Fairfax, Falls Church)	Primarily Drivers	12	11	1
Fairfax VA (Seniors from Loudoun)	Mix of Drivers and Non-Drivers (from Loudoun County)	11	7	4
	Total	41		

Those who were invited to the focus groups but who were unable or unwilling to attend were then asked to participate in in-depth telephone interviews. Interviewing was conducted from July 18 through July 23, 2005 by professional WB&A Market Research interviewers calling from WB&A's central telephone facility located in Crofton, Maryland. Interviews averaged about 30 minutes in length. The research team conducted 23 in-depth telephone interviews.

Finally, a targeted focus group for professionals who work with seniors was held on August 18, 2005 to supplement information obtained through the study's other efforts. This focus group, called the "brokers" focus group, was convened by NVTC with support from Fairfax County staff and facilitated by WB&A at the Fairfax County Decision Support Center, using computer-assisted facilitation technology.

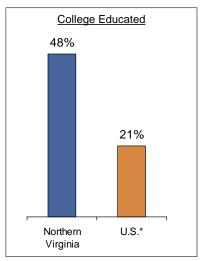
This chapter summarizes the findings of the telephone survey; that is, the quantitative research findings, and the findings of the qualitative research, including the various focus groups and indepth interviews. Detailed results of the telephone survey are provided in Appendix 2; complete findings of the senior focus groups, in-depth interviews, and brokers focus group are provided in Appendix 3.

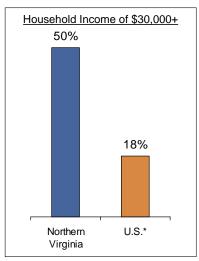
Demographic Characteristics of Survey Respondents

Based on the demographic data gathered from the telephone survey, survey respondents reported themselves to be somewhat more racially homogenous than the population recorded by the 2000 Census. This difference may be due to normal sampling error. NVTC purchased a database composed of residences likely to have someone age 75 or older living in Northern Virginia based on targeting census blocks with large proportions of seniors. Thus, the sample may slightly underrepresent more difficult to reach populations such as those in poverty. Sampling based on census blocks may leave out some seniors (e.g., those living in senior living facilities), and lower income

populations, seniors who tend to be more transient or those less likely to have telephones than the rest of the population. The demographic makeup of telephone survey respondents is primarily white (92%, compared to 85% recorded by the 2000 Census for Northern Virginia and 93% nationally) with a median income of about \$50,000 (\$48,700 nationally). Survey respondents who are female (61%) outnumber their male counterparts (39%). About one-half of survey respondents (48%) are college educated, while only about 21 percent of seniors nationwide are college educated. One-half of survey respondents (49%) have household incomes of \$30,000 or more, compared to 18 percent nationwide.

Figure 3.1: Northern Virginia's older seniors are much more educated and affluent than older seniors nationwide.





*Based on AARP Study

The vast majority (84%) of survey respondents own their own home, having lived in their home for an average of almost 30 years (mean of 27.8 years). However, most Loudoun County seniors have lived in their home for less than 10 years (75%, a mean of 10.6 years). Reflective of the region as a whole, more than one-half (54%) of respondents are from Fairfax County, while Prince William and Arlington counties are the next two most represented jurisdictions (15% and 10% respectively).

This research sought to answer the following questions:

- What are the travel needs and differences among seniors 75+?
- What transportation services are seniors aware of and consider to be available to them? How often and for what do they utilize these services?
- · What are their attitudes towards public transportation options?
- · How convenient is public transportation to seniors in Northern Virginia? Why?
- · What isolation issues does this population face?

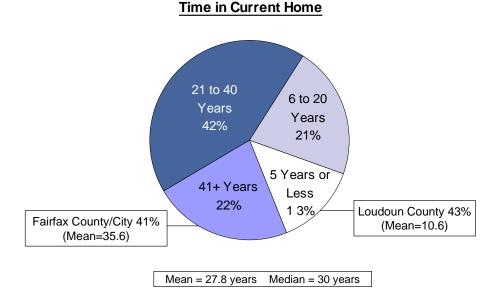
The following sections detail the answers to these questions.

Health and Wellness

Aging is particularly difficult for those who encounter corresponding health problems, and these in turn impact mobility. A recent study on senior transportation conducted by the AARP² documents the important effects that health and disability have on senior mobility, using an index³ of health and disability status:

"Perhaps the most striking finding of the [AARP survey] is the extent to which health and disability status affects the mobility of adults age 75+. Compared with [seniors] with *poor* health and disability status, seniors with *excellent* health and disability status are: more likely to have gone out the previous day or in the previous week; more likely to walk regularly; more likely to drive; and less likely to be passengers in cars. Most notably, those age 85+ with *excellent* health and disability status are more mobile than their younger counterparts with *poor* health and disability status."

Figure 3.2: Many are aging in place.



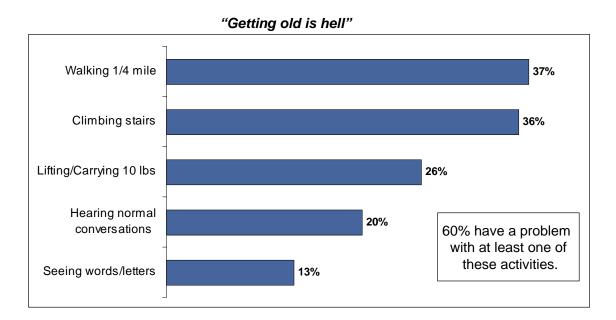
To assess the impact of health on senior transportation in Northern Virginia, this study used the same health and disability status index (HDS) established through the AARP's transportation study. Survey results found that one-fourth of Northern Virginia seniors (24%) have a HDS of poor, compared to 16 percent nationally. Only one in ten Northern Virginia seniors (10%, the same as the national average) rates their HDS as excellent. Simply put, "Getting old is hell," according to one focus group participant. Limitations in getting out and in the transportation modes they use are typical for Northern Virginia seniors in poor health.

² Ritter, Anita Stowell, Audrey Straight, and Ed Evans. Understanding Senior Transportation: Report and Analysis of a Survey of Consumers Age 50+, conducted by the AARP, Washington DC, 2002.

Respondents' health and disability status (HDS) was measured by an index based on survey data that combined respondents' subjective assessment of their health status with their self-reported disabilities with respect to five tasks: reading, hearing, lifting, climbing stairs, and walking.

Interestingly, survey results found a strong correlation between HDS and income. The average household income for a Northern Virginia senior with an *excellent* HDS is about \$60,000 (median of \$57,100), compared to a median income of \$35,000 for those with a *poor* HDS. HDS also appears to impact how Northern Virginia seniors get around. Most of those with an HDS of *excellent* or *very good* have a driver's license (95%), while fewer than nine in ten of those with a *fair* HDS (88%) are licensed, and only about eight in ten with a *poor* HDS (79%) have a driver's license. Furthermore, most with an *excellent* HDS (95%) have driven themselves in the past month, compared to fewer than six in ten with a *poor* HDS (54%). Those with a *poor* HDS are most likely to have been driven by someone else in the past month (93% have used in past month, accounting for 40% of trips). Not surprisingly, Northern Virginia seniors with an *excellent* HDS are also more likely to have walked somewhere in the past month (50% vs. 23% of those with a *poor* HDS). Those with an *excellent* HDS are also far more likely to use fixed route public transportation (19% vs. 4% with a *poor* HDS).

Figure 3.3: Many have difficulty with life activities.



How Seniors Get Around

Almost nine in ten Northern Virginia seniors (88%) have been a passenger in a private vehicle in the past month, while about eight in ten (79%) have driven themselves during the same period of time. However, driving oneself accounts for the majority of total trips taken by Northern Virginia seniors (63%), while only one-fourth of all trips taken (25%) are done by ridesharing, including trips with one's spouse (see Figures 3.4 and 3.5). Walking is the second most popular means of getting around after travel by car with 36 percent reporting having walked to a destination in the past month. Nine percent of trips taken in the past week were trips on foot. Only one in six (18%) have used public transportation in the past month, and no public transportation mode, be it Metrorail/VRE, public bus, paratransit, or community vans for seniors, accounts for more than

Figure 3.4: Car is the most frequently used mode of transportation

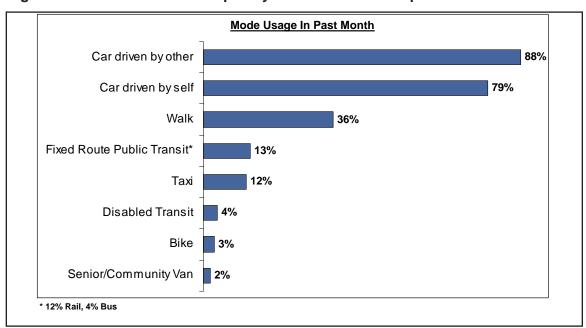
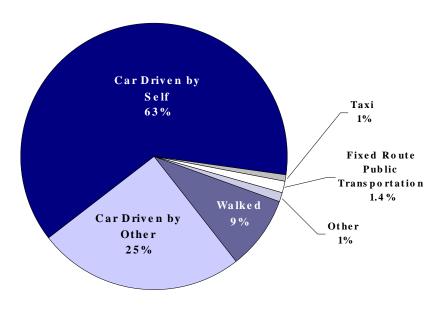


Figure 3.5: Car driven by self accounts for the predominant share of trips.

Share of Trips (past week)



1 percent of all trips taken by seniors. Trips taken by seniors on fixed-route public transportation (Metrorail, VRE, and public bus) tracks national ridership levels at 1.3 percent of all trips. In fact, public transportation is the primary means of transportation for only 1 percent of Northern Virginia seniors, compared to 64 percent primarily driving themselves and 22 percent primarily counting on others for rides. Twelve percent of senior respondents reported having taken a taxi in the past month, but only one percent of all trips were taxi trips.

²⁰⁰¹ National Household Travel Survey for seniors age 75 and older.

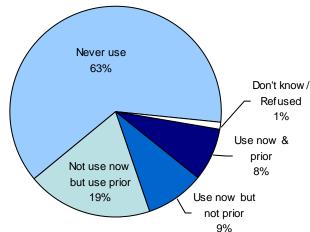
One in eight Northern Virginia seniors (13%) have used fixed route public transportation in the past month, while six percent have used some form of specialized transportation (transportation for people with disabilities and senior or community vans).

In total, more than six in ten seniors (63%) have never used public transportation, and another two in ten (19%) have used it in the past but are not currently doing so. About one in ten seniors

(9%) are currently using public transportation at least occasionally but had never used it in the past, while a similar proportion (8%) use public transportation at least occasionally now had done so when they were younger. This suggests that there is a market of seniors unfamiliar with public transportation that could become transit users.

While driving and getting rides from others are the primary means for seniors to get around, when asked through an open-ended question to identify the area's greatest transportation challenges for seniors, similar proportions named public transportation needs as named

Figure 3.6: Use of Public Transportation Now & Prior to Age 65



About one in ten seniors first began using public transportation after turning 65.

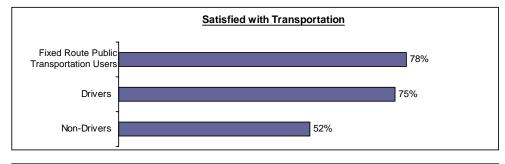
driving needs. Public transportation not available or reliable, lack of convenient stops, traffic congestion, and inconsiderate and aggressive drivers were the most frequently reported problems with the transportation system. (36% named public transportation needs and 35% named driving needs). While most seniors drive, they are just as likely to recognize the need for public transportation improvements as improvements to the road network. This was found to be true of the population as a whole.⁵

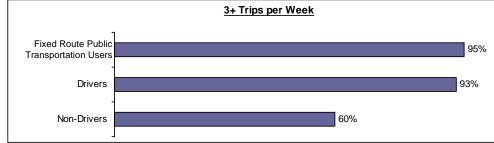
Satisfaction with How They Get Around

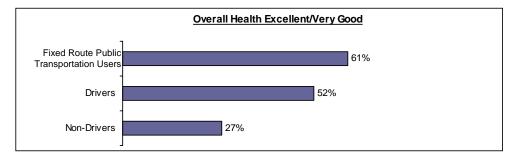
Forty-nine percent of seniors are completely satisfied with how they get around (a score of 10 on a scale of 0-10 where 10 means completely satisfied and 0 means completely dissatisfied). Another 20 percent are somewhat satisfied (score of 8 or 9). Fixed-route public transportation users (those who reported having used trains and/or buses in the last month) are particularly satisfied, with more than three-fourths (78%) of them reporting they are completely or somewhat satisfied with how they get around. It should be noted that many of these seniors also rely on driving for a portion of their trips and thus cannot be considered transit dependent seniors. Three-fourths (75%) of drivers are satisfied (score of 8, 9, or 10) with how they get around, compared to only about one-half (52%) of non-drivers. These seniors primarily rely on their own car or someone else's to get from place to place. Those who can still drive themselves are far more mobile and active than those who rely on other means of transportation.

QSA Research and Strategy. Public Opinion About Transportation Issues in Northern Virginia. A telephone survey report prepared for the Northern Virginia Transportation Authority. October 2005.

Figure 3.7: Fixed route public transportation users and drivers differ from non drivers.







Mobility and Isolation

According to survey results, seniors fall into one of the following three groups:

- · Current full-time drivers who drive themselves to many if not all of their destinations;
- Drivers who have chosen to curtail their driving, limiting it to certain times or certain situations; and,
- · Non-drivers who never drove or have given up driving altogether.

Driving, however, poses challenges for many seniors as shown in **Figure 3.2**. Three areas in particular were identified by respondents as being problems with driving:

- Inconsiderate or aggressive drivers (62% said this is a problem);
- · Driving at night (55%); and,
- Dealing with traffic congestion (49%).

While about nine in ten Northern Virginia seniors (89%) currently have a driver's license, only about 64 percent of seniors reported that driving a car is their primary mode of transportation. Moreover, there is awareness among many of those who currently drive that the time may come when they have to cut back or completely eliminate driving. This is met with general displeasure. Some realize that they will have to give it up even though they may not want to, while others, as

one focus group participant put it, feel that if you take away their car "you may as well bury me."

Northern Virginia seniors who have not driven in the past seven days most often say that it is due to general physical problems (42%). Additionally, about two in ten said that they are not confident in their driving, in particular in their reaction times (20%) and/or that they have vision problems limiting their driving (18%). This was confirmed in the focus groups, where participants who were cutting back on their driving most often said they would avoid driving at night or in rush hour traffic.

In addition, a few focus group participants said they will only drive, day or night, to places with which they are familiar, citing anxiety when they cannot find their way. Other participants concurred, saying they like driving on "autopilot," meaning they are so familiar with their route they do not have to think about how to get where they are going. This, however, has led many to limit their lives to a very small geographic area.

Cutting back on driving has also forced seniors to alter their lifestyles accordingly. One example is a Loudoun County resident who frequently used to go out to dinner and the movies with his wife. They now go to lunch and movies in the afternoon because they are not comfortable driving at night.

As mentioned earlier, about two in ten (21%) have not driven themselves in the past month. "Frustration" was a word often used by focus group participants who have had to give up driving, with some saying that giving up driving has been the single greatest hardship of aging. A few said they miss driving more than anything else. For some, it became a difficult trade-off of risking driving vs. losing independence. As one in-depth participant put it, "I wish I would of kept driving. I would have been more independent but I don't know if I would of been gone (from my home) that much. I never did like to drive that much. I still have a license, I just don't drive. I didn't get a license until I was older and by that time the traffic around here scared me and so when I was driving my mouth would get dry and I just drove because I had to get somewhere. I also got a car so my daughter would learn how to drive. When she learned how to drive real well, I just let her drive me."

For many seniors, giving up driving limits mobility, which can negatively affect seniors' lifestyles. A recent report from the University of California on senior transportation summarizes various research showing the important role that mobility has for seniors. According to this report, many seniors identify mobility as key to life satisfaction. Ability to travel helps ensure social integration for older individuals, and greater social integration leads to physical and psychological well-being. Reduced mobility among seniors brings lower self-esteem, feelings of uselessness, loneliness, unhappiness, and depression. Thus, mobility is very important for ensuring the quality of life for seniors.

In several recent surveys of senior transportation, seniors' mobility is assessed by the degree to which they go out on a given day or week. The ability and frequency with which seniors go out helps to measure the degree to which seniors are connected to their communities and therefore indirectly their access to community goods, services and social events.⁷ A Surface Transportation

⁶ Giuliano, G., et. al., 2003.

Ritter, Anita Stowell, Audrey Straight, and Ed Evans. Understanding Senior Transportation: Report and Analysis of a Survey of Consumers Age 50+, conducted by the AARP, Washington DC, 2002.

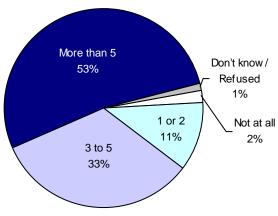
Policy Project report on senior transportation specifically uses *going out* on the previous day, or conversely *staying at home*, as a measure of social isolation.⁸

According to this measure of *going out*, the NVTC study found that 22 percent of Northern Virginia seniors did not go out the previous day, suggesting social isolation. Moreover, two percent did not go out at all during the previous week and another 11% made only one or two trips the previous week. Getting out is a particular problem for non-drivers, as only 60 percent get out

of their homes three or more times a week, compared to 93 percent of drivers. While the survey data indicate that seniors in Northern Virginia may be somewhat less isolated than seniors nationwide (a 2002 AARP survey showed that 31 percent did not go out the previous day)⁹, seniors with more limited mobility become "marooned" in their homes according to a participant in the brokers focus group.

For non-drivers, ridesharing is the predominant mode of transportation, with their adult children (35%) and/or spouses or significant

Figure 3.8: Typical Weekly Trips

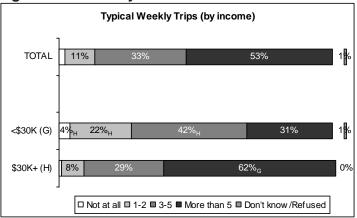


others (33%) being the person non-drivers rely on most for rides. While there is no indication that those who provide these rides are resistant to doing so, there is concern among the dependent seniors. As one put it, "I depend on my daughter and she comes to the door and we get into the car. You know, it's just great, but of course you know I can't do this continuously. I just feel bad and I want to find another way of doing it. Not that she is complaining, believe me she's not but I just think it's not fair." Younger women disproportionately meet thetransportation needs of seniors. The survey results show that 56 percent of drivers age 35 to 54 are female. Just 43 percent of drivers from that

age group are male. This perceived burden articulated by focus group participants could be real in a city with a high proportion of working women.

Despite there being a greater proportion of seniors with a poor HDS, seniors in Northern Virginia tend to be somewhat more mobile than seniors of similar age across the United States. There are a number of factors that appear to impact mobility among seniors in the region, including income and health. The type

Figure 3.9: Mobility and Isolation



Base=Total Sample (n=1636) Note: % not shown are ≤2%

Note: Letters indicate statistical differences at the 95% confidence leve

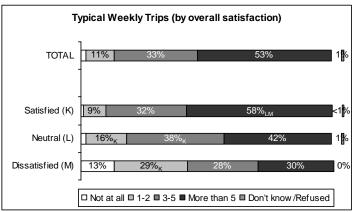
⁸ Bailey, Linda. Aging Americans: Stranded Without Options. Surface Transportation Policy Project, April 2004.

Ritter, Anita Stowell, Audrey Straight, and Ed Evans. Understanding Senior Transportation: Report and Analysis of a Survey of Consumers Age 50+, conducted by the AARP, Washington DC, 2002.

of community that seniors live in also impacts their mobility, as will be discussed in an upcoming section of this chapter. According to the survey, more than six in ten of those with household incomes greater than \$30,000 (62%) say they typically get out more than five times a week, compared to about three in ten (31%) of those with lower incomes. Almost seven in ten of those with an excellent HDS (68%) get out more than five times a week, versus just three in ten of those with a poor HDS (30%). Which all leads to the fact that almost six in ten of those who are satisfied with how they get around (58%) get out of their homes five or more times each week, compared to three in ten (30%) of those not satisfied with how they get around.

Northern Virginia seniors were asked if they have problems getting anyplace in particular, however no one destination stood out. Yet, more than one-third (36%) said they have problems getting somewhere they would like to go. Those who do not drive themselves are far more likely to report having problems getting places (55% vs. 32%). In fact, except for visiting family, non-drivers report having more problems getting to all other destinations than do drivers. Furthermore, those who primarily have to depend on others for rides are more likely to have problems getting anywhere.

Figure 3.10: Mobility and Isolation

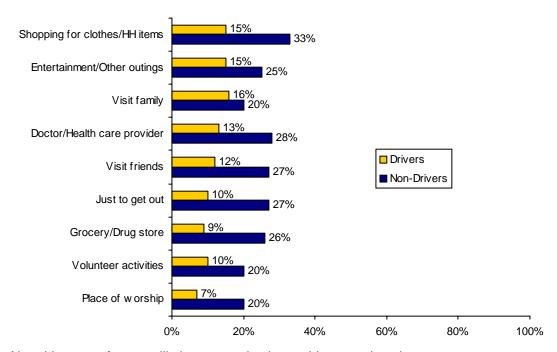


Base=Total Sample (NVTC n=1636; AARP n=1844)

Note: Letters indicate statistical differences at the 95% confidence leve

NVTC: Q22; AARP: Q5

Figure 3.11: Transportation Problems by Destination (drivers vs. non-drivers)



Non-drivers are far more likely to report having problems getting places.

Public Transportation

Public transportation users are more active than non-users, with more than nine in ten (92% vs. 84%) taking three or more trips per week. Public transportation accounts for 10 percent of the weekly trips taken by those who use it. Interestingly, public transportation users walk more often to get to a destination than do non-users (13% of trips vs. 7%). And, while driving accounts for a greater *proportion* of non-users' transportation (65%), on average public transportation users take more total trips each week driving themselves (7.7 vs. 6.7).

The greater activity by public transportation users is not surprising, considering only one in eight (13%) report having an HDS of poor, compared to about one-fourth (24%) of non-users. There are no differences in income levels between public transportation users and non-users. Similar proportions of users and non-users report being satisfied with their ability to get around (70% each). Other differences between public transportation users and non-users include the following:

- · Users are more likely to live in Type 1 communities (17% vs. 8%); and,
- Users are more likely to have a college education (61% vs. 45%).

While current use of public transportation among seniors is limited, according to the telephone survey results, several seniors in the focus groups said they would consider using public transportation if it were available to them. They defined availability as public transportation coming to or near their home, being accessible, and running at hours that are convenient to them.

More than one-half of respondents said that each of the following is a problem with using public transportation:

- · Public transportation going where you need to go (56%);
- The distance to bus stops or rail stations (53%),;and/or,
- The time it takes (52%).

In addition, at least four in ten said that transferring between routes (49%), the frequency of service (45%) and/or being able to get a seat (43%) are also problems in using public transportation.

When respondents who use public transportation are assessed separately from those who do not, the results on the question of problems with public transportation vary between the two groups. For each of the possible problems listed for the survey, fewer users of public transportation reported problems than did non-users. For example, 27 percent of seniors who now use public transportation reported that reliability is a problem, while a greater portion (39 %) of non-users reported a problem with reliability. On the issue of getting information, 28% of users report this as a problem, while a larger proportion (38%) of non-users say this is a problem. While some of these results would be expected, for example, distance to bus stops or rail stations is less of a problem for public transportation users (39% vs. 56%), other results suggest that non-users may perceive problems because they are not familiar with public transportation services in Northern Virginia. For instance, 45 percent of non-users say that getting a seat on public transportation is a problem (vs. 31% of users who say this is a problem). If they are not current users, perhaps they do not know that transit providers reserve the seats behind the driver for seniors and persons with disabilities.

Furthermore, Northern Virginia seniors who do not use public transportation were more likely than those who do to report having problems. Specifically, those who use specialized transportation (transportation for the disabled and senior/community vans) were more likely than those who used fixed route service to report having problems. In fact, the proportion of those who use specialized transportation reporting having problems is similar to those who do not use public transportation at all.

Thirty percent of respondents indicated that the cost of using public transportation is a problem, with 10 percent stating that the cost is a large problem. Of those who indicated cost is a problem, the perceived median cost of a round trip was \$4.00. This is comparable to what a senior might actually have to pay for a round trip on public transportation if that trip involved bus and Metrorail transfers. For example, the base price at the discounted senior fare for a one-way Metrobus trip is 60 cents and the base price for Metrorail is 62 cents to \$1.95 depending on distance. Bus-to-bus and Metrorail-to-bus transfers are free. Not surprisingly, a greater proportion of seniors reported the cost of taxis to be a problem (44%). Of those, they reported they typically pay \$25 (the median) for a round-trip by taxi.

Survey respondents can also be assessed by the types of transportation modes that they use. Results show, interestingly, that those in Northern Virginia who use specialized transit, such as paratransit, senior vans, and dial-a-ride, are more like those who rideshare in many respects than they are like fixed route transit users. This may indicate that ridesharers and specialized transit users are facing similar limitations and are choosing or being forced to choose between depending on others versus using specialized transportation. Among some of the differences between fixed route and specialized transit users:

- Those who rideshare and who use specialized transit are more likely than fixed route users to have various problems with walking and public transportation. Some examples include the following:
 - Walking (asked only of those not using wheelchairs):
 - Everything is too far away (a problem for 56% of ridesharers and specialized transit users vs. 37% of fixed route users)
 - Carrying things on your return trip (50%-58% vs. 34%)
 - ➤ Walking is too physically demanding (38%-47% vs. 21%).
 - Public Transportation:
 - Distance to bus stops or rail stations (54%-56% vs. 33%)
 - ➤ Transferring between routes (52% vs. 25%)
 - ➤ Being able to get a seat (45% vs. 26%)
- Specialized transit users and ridesharers are also more likely to need to use various aids (e.g., canes, wheelchairs, etc.) or to need someone to help them get around.
- Almost all of those who used fixed route service (95%) get out of their homes at least three

- times a week, compared to fewer than nine in ten ridesharers (84%) or specialized transit users (88%).
- Of these three groups, fixed route users have the greatest average household incomes (median of \$60,100), compared to incomes closer to \$50,000 among ridesharers (\$53,600) and specialized transit users (\$47,500).
- About one in seven fixed route users (15%) have an excellent HDS, and only 7 percent have a poor HDS. Thus, fixed route users are much healthier than either ridesharers (9% excellent, 28% poor) or specialized transit users (6% excellent, 29% poor). This finding may not be surprising when one considers that taking a fixed-route trip, either by bus or rail, typically involves some walking, standing, and possibly carrying items. Those seniors with limited ability to walk, in particular, may find fixed-route transit too physically difficult.

Relationship Between Community Type and Senior Mobility

Among the objectives of the NVTC senior transportation study are two related to land use: (1) to identify differences in the travel patterns of seniors by the type of community in which they reside; and (2) to assess the impacts of land use patterns and community type on senior mobility. For this study the region was classified into three different community types, differentiated by population and population density, degree of mixed-use development, and existence of a walkable environment. Survey respondent addresses were geocoded and then grouped into the three community types.

Community Type I: A walkable urban, or town, mixed-use community.

The urban/town community type is characterized by a walkable urban, or town, mixed-use community with a complete pedestrian network of sidewalks, crosswalks, and trails that encourage walking. Roads are generally two to four lanes wide and intersections designed for safe pedestrian crossing. Street traffic is slow enough as to not be intimidating to a senior pedestrian with limited agility. Examples of the walkable urban or town, mixed-use community type would include the Rosslyn-Ballston transit-oriented development corridor in Arlington County; pedestrian friendly, mixed-use areas of Reston in Fairfax County; and the historic downtown area of Manassas. In order to draw the distinction between the mixed-use and suburban community types, an area was not placed in the urban or town, mixed-use community type unless a fair amount of pedestrian activity could be observed in 2005. Another criterion is an integrated mix of use. Ideally, residents would be within ½ mile of commercial retail and services. Nine percent of Northern Virginia's senior population age 75 and older was found to reside in community type I.

Community Type II: A suburban residential community type characterized by a separation of retail and commercial services from the residential areas.

A suburban residential community type is characterized by a separation of retail and commercial services from the residential areas. For instance, a residential subdivision bordered by a commercial strip shopping center that offers a grocery store and other services would qualify under the suburban residential community type. While sidewalks may link homes and the shopping center, seniors may find the distance too great or barriers such as surface parking lots, fast moving vehicular traffic, and wide intersections not conducive for walking. Most of Northern Virginia's senior population falls within community type II (82%).

Community Type III: A rural/exurban community type.

This community type would be characterized by areas where farming, forestry, and ranchette activities occur and where single family homes on large lots are located. Few, if any, retail or service activities are located in these areas, with most located at crossroads. Most of this community type is found in western Loudoun County and in Prince William County, although Fairfax County has some land area in this community type. Nine percent of Northern Virginia's seniors live in rural/exurban areas.

The boundaries of these community types were drafted first by the project team. Census block group data overlaid on a regional land use map was used to isolate those areas with current and particular land use characteristics that are consistent in definition across the region. Three scenarios that provided options for community type designations were shared with the land use planning directors from each of the nine jurisdictions in Northern Virginia. Follow-up calls were made to each jurisdiction to ensure that feedback from land use planners was obtained. Minor changes to the community type boundaries of the project team's preferred scenario were made per this jurisdictional feedback. A letter describing these community types and research objectives was mailed to jurisdiction planning directors for their feedback on the proposed boundaries. A copy of the letter and maps provided can be found in Appendix 5.

A large enough sample of respondents from each of the community types was interviewed so as to analyze the results by this geographic breakdown. Weighting factors were developed from the original sample and applied to the final survey date in order to ensure that the reported results would represent the relative populations of the universe of the Northern Virginia senior population.

According to the survey results, there are important differences in senior mobility and trip-making by community type. The survey has found that seniors who live in Type 1 communities are more mobile than their counterparts in other communities in Northern Virginia based on several measures:

• Seniors living in Type 1 communities take somewhat more trips per week, on average, than seniors in other communities, with a mean of 10.0 for Type 1 vs. 8.4 for Type 2 and 8.1 for Type 3;

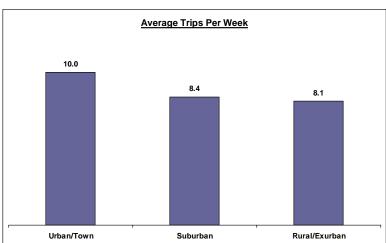
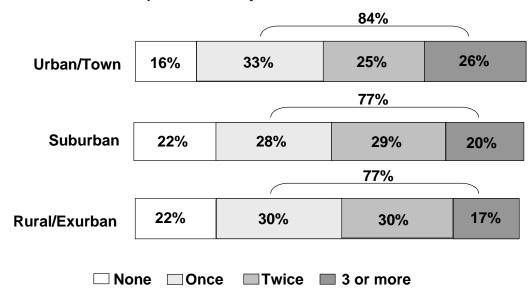


Figure 3.12: Those who live in Urban/Town communities take more trips per week.

- Seniors in Type 1 communities are more likely than others to make five or more trips per week (60% vs. 48%-51%);
- Seniors in Type 1 communities are more likely to report that they went out on the previous day. According to recent research on senior transportation, the inability to go out and thus, staying home, is a measure of social isolation. According to survey results, 84 percent of seniors in Type 1 communities went out at least once in the previous day, compared to 77 percent in both Type 2 and Type 3 communities. Only 16 percent of seniors in Type 1 communities did not go out the previous day, compared to 22 percent in Type 2 and Type 3 communities.

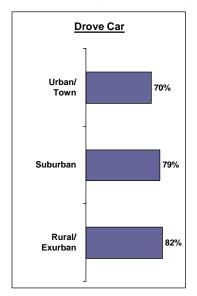
Figure 3.13: Went Someplace Yesterday

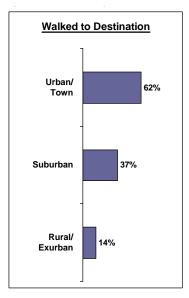


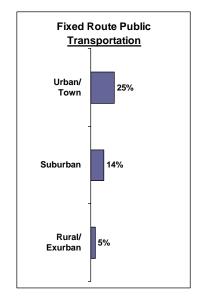
Seniors living in Type 1 communities also report greater use of public transportation, which is related to the greater prevalence of transit services in those areas with higher population density and a supportive pedestrian environment:

- Almost two in ten (18%) of seniors living in Type 1 communities say they have used public transportation in the past week. Conversely, public transportation use is less common in Type 2 communities (7%) and least common in Type 3 communities (2%).
- Incidentally, those living in Type 1 communities are also more likely to say they occasionally use each of the following means of transportation:
 - Taxi (Type 1-25% vs. Type 2-13% vs. Type 3-2%);
 - Metrorail or VRE (21% vs. 12% vs. 5%); and,
 - Public bus (11% vs. 4% vs. 1%).

Figure 3.14: Those who live in Urban/Town communities are more likely than Suburban or Rural/Exurban Older Seniors to walk or use fixed route public transportation.







This lower dependence on private auto travel and higher use of public transportation and rates of walking reflect the nature of a mixed-use community. By definition, shops and services were to be within ½ mile of residences and connected by a complete sidewalk network. Most of Community Type 1 is located in transit accessible locations in Arlington and Alexandria. As reported by respondents, around 75 percent from the urban/town mixed-use areas said they lived within one-quarter mile of a public bus stop, food store, and drug store. Fifty-six percent of respondents from the suburban area reported living within the same distance from one or more of these three conveniences. Only 15 percent of respondents from the rural/exurban area described their community as equally convenient.

Community type has a great impact on how much seniors drive as compared to using other means of transportation. Driving oneself accounts for less than one-half (48%) of the trips taken by seniors living in Type 1 communities, compared to about two-thirds of the trips taken by those living in Type 2 or Type 3 communities (64% and 66% respectively). However, where someone lives has little impact as to whether or not they will drive themselves at least occasionally, with about nine in ten from each community type saying they drive themselves at least sometimes (88%-90%).

With survey results finding that seniors in Type 1 communities are more mobile and drive themselves less than seniors in other community types, the question becomes: how are Type 1 Northern Virginia seniors getting around if they are not driving themselves? Primarily, they are walking more often than those who live in less densely populated areas with segregated land uses. Walking accounts for more than two in ten of the trips taken by seniors in Type 1 communities (22%), compared to fewer than one in ten of the trips taken by those living in Type 2 (8%) or Type 3 (5%) communities. In terms of total trips, senior residents of Type 1 communities take on average 2.3 trips on foot to a destination each week compared with 0.7 trips by residents of suburban areas and 0.4 trips by seniors living in exurban/rural areas. When asked about their travel during the past month, walking was the third most popular means for getting around, followed by riding in

a private vehicle as a passenger and driving. Differences by community type are impressive. Forty-eight percent of those from Type 1 communities report having walked to a destination in the past week. That's more than two times greater than reported for Type 2 areas and nearly five times that of Type 3 communities. This is a significant finding and suggests that efforts to improve mobility for seniors should look towards community design policies and strategies that provide more pedestrian-oriented, mixed-use environments that support walking trips, in addition to other improvements, such as those for public transportation services.

89%

94%

■ Car ■ Walked ■ Fixed Route ■ Other

Suburban

Rural/Exurban

Figure 3.15: Those who live in Urban/Town communities take a greater proportion of trips by walking or fixed route public transportation.

Given that seniors in Type 1 communities walk more than their counterparts in other community types, there was interest in assessing any health and disability differences between community types. Interestingly, while the proportion of those with a *poor* HDS is not particularly different in each of the three land use types (Type 1 21%, Type 2 24% and Type 3 21%), seniors who live in type 3 communities tend to be the more likely to have an *excellent* HDS (14% vs. 11% Type 2 and 7% Type 1). This suggests that walking remains a viable transportation mode for seniors in Type 1 communities despite their lower self-reported rates of *excellent* HDS relative to those rates reported by seniors from Type II and Type III communities. While Type III seniors' self-reported health and disability status would suggest they are more able to walk, they lack the opportunities to do so.

There were no reported differences in overall satisfaction with how one gets around by the community types where seniors live. No differences by community type were reported for the question that asked how often transportation problems interfere with one's ability to go to various places. This may be because seniors are willing to live with or accept what they have, even if it is not what they necessarily want or need. They have learned to make do. Some seniors also may move to where the transportation is adequate to meet their needs.

Ideal System

The focus group and in-depth participants were probed in order to find out what constitutes their ideal transportation system. Focus group participants used a handful of terms and phrases to describe the ideal transportation system for seniors:

- Frequency/how soon the service would be able to take them where they need to go;
- Personal service;
- Dependability;
- Good information; and
- Cost.

An adequately frequent service was described as one that is "reactive to your needs." For specialized transit, that would mean a service that does not need to be scheduled more than one day in advance. For fixed route service, it would mean running often and throughout the day.

Personal service means being treated well by both the transportation service as a whole and by individual drivers. It also means providing door-to-door service, particularly for less mobile seniors. When asked to give an example of good door-to-door services, many focus group participants mentioned taxis. And when asked what constituted being treated well, driving safely, being pleasant and having patience were some of the attributes cited. As one focus group participant said, her daughter is her ideal means of transportation because her daughter has "my best interests at heart."

Dependability was defined by participants as both showing up and arriving to the final destination on-time. Some participants pointed out that, if they are going to schedule their life around a service, that service has to be on a schedule they can count on. A problem cited by many is that services might do a good job of getting passengers where they are going, but are not reliable for pick-ups for return trips.

Some participants said that they are not well informed now about public transportation. According to them, schedules are inaccurate, not kept up-to-date and with each service having a different schedule format, it makes it difficult to learn and tie together multiple modes. Furthermore, many participants did not know where to go to even find the schedules. Suggestions were made to advertise in local newspapers and on local television, saying that these are their primary sources of information. Other suggestions for disseminating information included the following:

- Keep the schedules succinct,
- Have a Web site that would allow riders to enter their origin and destination and the Web site would then list the modes and schedule they should use,
- Provide a universal toll-free number for Northern Virginia transit that people could call for information,
- Print information and scheduling telephone numbers on the side of buses, and
- Mail schedules to everyone.

Notably, a key component of most suggestions was that information should tie together the various Northern Virginia transportation services. It should also be noted that the second and third suggestions exist for the fixed-route transit system. Residents can enter origin and destination information into WMATA's Ride Guide on the Metroopensdoors.com website and get route and schedule information for Metrorail, Metrobus and local providers within the Metro compact area. The same information can be obtained by calling WMATA's toll-free number.

Cost for an ideal system is not necessarily defined as being "free," but as being "economical" – i.e., make it something they can afford. For example, many participants said they think that taxis and public transportation for seniors should either be partially or fully subsidized.

Seniors Assessment of Proposed Transportation Services

As part of the qualitative research, participants in the focus groups, in-depth interviews and brokers focus group were presented with different transportation service options for serving seniors and asked about their opinions on the services. Reactions and comments from the participants to the four different services – subsidized taxi services, volunteer transportation, community service routes, and route deviation – are presented below. While all of these services are offered in parts of Northern Virginia today, participants were presented with a generic concept description, and were not asked to comment based on their experience of an existing service.

Subsidized Taxi Service

Fairfax area focus group participants, as well as the in-depth participants, were generally very positive about the subsidized taxi service concept, while Loudoun County and Arlington/Alexandria participants were more mixed in their views. Participants liked the flexibility it provides along with the reduced cost. However, there was concern over the cost to the taxpayer. As one Loudoun County participant put it, "Great for me, bad for the taxpayer." For others, it had the appeal of "getting something for nothing."

Some of the strengths of this service were identified as the following:

- It can reach areas not covered by traditional public transportation;
- Vehicles would be accessible for people with disabilities;
- Increased use of taxis by seniors would prompt taxi services to improve service,;and,
- Because seniors would have to pay for part of it (as opposed to volunteer services) there would be less "guilt" in using the service.

Some concerns expressed by seniors about the subsidized taxi service included the following:

- What would the cost be to the passenger, even when including the subsidy?
- How much would this cost the taxpayer?
- How complicated would it be to use the coupons? Would it be difficult to calculate the cost of trips?
- Would the drivers be able to help passengers in and out of vehicles and from the curb

- into and out of buildings?
- Would the taxi services earn as much from subsidized rides as they would from full-fare trips? If not, they may be less inclined to take subsidized rides or might not provide the same quality of service.

The subsidized taxi service was overall a well-received concept, and should be explored further with an emphasis on simplifying the coupon system and encouraging good personal service by drivers.

Volunteers In The Community Provide Transportation To Seniors Who Need Rides

Overall, participants were generally mixed in their opinions of the Volunteer Driver concept. While they perceive that they would get personalized service, there were concerns about training and safety issues.

Some of the strengths of this system were identified as the following:

- Using a volunteer service instead of a fixed route service would provide greater flexibility.
- It would be a good way to augment existing services and could serve as a safety net if friends and neighbors are not available to drive; and,
- Volunteers are apt to be more friendly and willing to help than paid employees.

However, there were many questions and concerns raised by seniors:

- Would the volunteers, since they are not being paid, still be reliable?
- Would there be enough volunteers?
- Who are the volunteers? Are they honest and trustworthy?
- What happens if there is an accident? Are they insured?
- Are the vehicles inspected?
- Do the volunteers have a license to transport seniors? Are they trained to deal with the special needs some seniors have (e.g., getting in and out of vehicles, dealing with dialysis machines, etc.)?
- Who would supervise the volunteers?
- Would they be available for round trips?
- Can you do multiple trips?
- Would they leave your community or county?
- How or how well would volunteers know the area?
- Who will pay for the gasoline?

The Volunteer Driver concept could appeal to seniors in a limited fashion. However, assurances will need to be made that the drivers are adequately trained and that the service, despite being "volunteer," is professional and well organized.

Small Buses Operate On Schedules To Link Areas Where Concentrations Of Seniors Live To Local Shopping Areas And Medical Facilities.

Of the four transportation ideas presented in the focus groups and in-depth interviews, participants were the most divergent in their opinions of this service, often called "service routes" or "community service." Those who live in senior communities were very positive toward the idea. In fact, many already had a similar system available to them through their community. Many said it is easy and convenient to use. However, those who do not live around a large number of seniors did not think such a service would be possible for them.

Seniors identified the following as some of the strengths of this service:

- Being senior-only, it would not inconvenience the general public;
- There would be someone who could help passengers on and off of vehicles;
- Since you are traveling with others, if you got lost you could just look for them; and,
- It would be good for trips to common destinations, such as shopping centers or the Smithsonian.

Beyond the doubts that it would be able to serve areas where seniors are not concentrated, the following are some of the concerns expressed about this service:

- This service may not be good for traveling to individual destinations (e.g., a doctor's office).
- It would not be good for last minute trips or trips of unpredictable length;
- They do not want to feel rushed because they have to meet the bus at a specific time;
- A \$4 round-trip could be expensive for lower income seniors;
- What would be the overall cost to the government, especially if the service goes to many destinations?
- Would the service be door-to-door?

Despite these concerns, this service would have a limited but real value for seniors living in high-density senior communities. However, it would need to have a door-to-door component for less mobile seniors to use. A sliding scale fee might also be useful to entice lower income seniors to use the service.

Fixed Route Service With Deviations Off The Route (From Several Blocks To Up To 3/4 Mile) To Pick Up And Drop Off Passengers Who Request A Deviation

The Route Deviation Service received the most negative reviews by participants both in the focus groups and the in-depth interviews. Many did not want to be a "burden" on the general public, forcing people to wait while the bus took them off-route to their destination. Many participants also found it difficult to believe that the bus would be able to stay on schedule while making deviations. Those who did like the idea said that it would be easier than using a normal bus service, which typically requires a longer walk to the bus stop.

Several of the specific concerns about this service included the following:

- It simply would not be possible for a service to stay on schedule when having to make several 1½-mile deviations (three-quarters of a mile each way).
- Having to board and offload disabled seniors would further slow down the trip.
- Other riders may become upset with seniors if they were delayed while the bus is deviating. And it may not be practical for some who have to keep a work schedule.
- Conversely, how delayed would seniors themselves be by these deviations?
- How would vehicles navigate narrow streets?
- Would the vehicles be accessible for seniors with aids such as wheelchairs and walkers?

However, several seniors did say that the service would be worthwhile, particularly because of the door-to-door aspect. For them, it would mean less walking, and for some it would be the difference between a slightly longer trip and not getting out at all.

In order for this service to be successful, seniors will require a great deal of convincing that the service can run on time. The service will also need to be accessible to the disabled. Consideration should be given to making this a senior-only service, since inconveniencing the general public is something many seniors strongly wish to avoid.

CHAPTER 4 MEETING SENIORS' TRANSPORTATION NEEDS

This chapter reviews existing public transportation services available to seniors in Northern Virginia, estimates senior trip needs based on population projections and current trip making as determined from responses to the study's telephone survey, and provides recommendations to improve public transportation in the region to better meet the needs of seniors in the short and longer term.

EXISTING PUBLIC TRANSPORTATION SERVICES AVAILABLE TO SENIORS

Northern Virginia has a wide range of public transportation services available to seniors, including traditional fixed-route services such as Washington Metropolitan Area Transit Authority's (WMATA) Metrorail service and the Fairfax Connector and more specialized services that include senior center transportation programs and subsidized taxi services. These existing services are summarized below.

Fixed-Route Services

Fixed-route services in Northern Virginia include both rail and bus systems. Table 4-1 provides summary operating statistics on the region's fixed-route services. As shown on this table, WMA-TA's Metrorail service carries by far the largest number of transit trips in the region, with more than 87 million annual trips on the Metrorail network in Northern Virginia. WMATA's fixed-route bus service provides the largest number of bus passenger trips in the region, with more than 19 million annual trips. This is well more than twice the number of passenger trips carried by the next largest fixed-route bus provider, the Fairfax Connector, which provides close to 8 million annual passenger trips. In addition to these larger fixed-route providers, a number of the region's jurisdictions provide more local fixed-route service to meet the transportation needs of their residents, including, among others, Arlington's ART service, Alexandria's DASH, the city of Fairfax's CUE, and Loudoun County Transit.

Specialized Transportation Services

In addition to the region's fixed-route services, there are a variety of publicly sponsored transportation services provided for seniors in Northern Virginia. These services, generally referred to as specialized transportation services, include those sponsored by the jurisdictions in the region as well as the regional paratransit service provided by WMATA. Efforts to identify these specialized transportation services began with information available through a large specialized transportation

Table 4-1: Public Transit Systems Operating in Northern Virginia Operating Statistics and Performance Indicators, FY 2004

		Potomac and Rappahannock Transportation Commission	d Rappahannock ion Commission						Washington Me	Washington Metro Area Transit Authority
	<u>Fairfax</u> Connector	Omni Ride	Omni Link	Virginia Railway Express (VRE)	<u>Alexandria</u> <u>DASH</u>	City of Fairfax CUE	City of Fairfax Arlington Transit Loudoun County CUE (ART) Transit	Loudoun County Transit	Metrobus (Northern Virginia)****	Metrorail (Northern <u>Virginia)</u>
Annual Passenger Trips	7,990,825	1,251,316	604,586	3,447,971	3,131,284	985,500	674,806	392,901	19,190,908	87,817,948
Vehicle Miles	7,171,115	2,713,555	658,820	1,984,992	1,355,343	441,430	576,502	907,051	12,896,550*	21,070,916*
Passenger Miles	54,507,027	27,526,818	3,458,232	103,651,104	8,995,299	3,606,808	553,824	13,351,607	57,362,907*	527,998,396*
Fleet Size	170	80	19	69	25	12	27	17	365	346
Average Age of Fleet (years)	5.2	3.5	3.1	22	7.1	3.5	3.7	6	8.5**	17**
Average Weekday Boardings	28,590	4,907	2,371	13,903	10,684	3,438	2,716	1,642	65,381	294,258
Average Trip Length (miles)	6.82	22.00	5.72	30.06	2.87	3.66	0.82	33.98	2.99**	6.01**
On Time Performance	%26	Not available	ailable	%0.78	93.2%	%0.76	98.3%	96.3%	87.8%***	98.2%***
Operating Costs	\$25,091,872	\$14,11	117,664	\$35,764,754	\$6,946,999	\$2,230,883	\$2,563,031	\$2,956,992	\$78,252,403	\$145,943,787

Source: Operating Information obtained directly from individual transit systems

^{*} Estimated based on WMATA sytemwide data

^{**} WMATA systemwide averages

^{***} WMATA buses are classified "not on time" if they are early or more than two minutes late.

^{****}Ridership on WMATA reimbursable services such as GEORGE, PikeRide, and TAGS is included in the Metrobus Virginia ridership figure.

Table 4-2: SPECIALIZED TRANSPORTATION SERVICES IN NORTHERN VIRGINIA

Specialized	Service	Ridership FY04	Operating	Operating	Total	Estimated	Service	Service
Transportation Service	Туре	(One-Way Pass. Trips)	Cost FY04	Cost per Pass.Trip	Vehicle Miles FY04	Trip Length	Area	Provider
			Regionwide	le le				
MetroAccess	ADA complementary paratransit, provided by WMATA in accordance with ADA law. Service provided to eligible riders certified as functionally unable to use regular fixed-route.	1,112,358	\$36,948,649	\$33.22	12,835,734	11.5 mi.	Arl. Co., Fx Co., Alex, Falls Church, Fx Dedicated and City, as well as DC and MD Counties of non-dedicated Mont. And PG.	Dedicated and non-dedicated
			Alexandria	В				
DOT Paratransit	Specialized transportation for Alex. residents who cannot use fixed-route service. Functions as ADA complementary paratransit but not formally ADA paratransit.	54,449	\$985,809	\$18.10	319,472	5.9 mi.	Alexandria, Arlington Co., Fairfax Co., Cities of Falls Church and Fairfax	Non-dedicated; operated by taxi and lift- van co.
Senior Taxi	Subsidized taxi service for seniors to travel within Alex, city limits for shopping trips and within 5-mile radius for medically-related travel.	13,309	\$167,592	\$14.10	Not available		City of Alexandria for shopping trips; City of Alex. Plus 5-mile radius for medical appts.	Non-dedicated; operated by taxi
Senior Van/Trolley	Service includes a pre-arranged "circuit" in the city serving senior centers, grocery stores, and other shopping areas; and door-to-door service to shopping areas in the city. This city service also provides city employee shuttle transportation.	30,280 (52% are senior trips.)	\$371,354	\$12.26 (calculated based on all trips)	23,346	ig ig	City of Alexandria	Dedicated service; operated directly by city
			Arlington County	unty				
STAR	Advanced reservation paratransit service for ADA-eligible Arl. Co. residents and certified seniors.	89,649	\$2.4 Million	\$26.87	938,477	10.5 mi.	Same as MetroAccess, but serves predominantly No. Virginia	Non-dedicated; operated by 2 private providers
Assisted STAR	A rider-support program, where the driver provides door-to-door service to eligible older STAR riders when they travel on STAR.	2,799	\$27,990 (Cost for extra assistance is \$10/one-way trip)	ı	ı	I	;	I
Senior Loop	Pre-arranged/scheduled service on three "loop" routes linking 4 low-income senior housing facilities with local grocery stores.	7,726	\$35,785	\$4.63	Not available		Three routes in Arlington Co.	Non-dedicated; operated by private contractor

Table 4-2: SPECIALIZED TRANSPORTATION SERVICES IN NORTHERN VIRGINIA

Pre-unraged, scheduled carries for seniors traveling Pass Tripe	Specialized	Service	Ridership FY04	Operating	Operating	Total	Estimated	Service	3/13/2006 Service
From the component of t			in discount	Summado.					
Programment	Transportation Service		(One-Way Pass. Trips)	Cost FY04	Cost per Pass.Trip	Vehicle Miles FY04	Trip	Area	Provider
Figure 1. Such in the continuent service to transport service to restrict service to service through other service protection. Service S. Subsidies duta service for service to service service service for service servic	Senior Center Transportation	Pre-arranged, scheduled service for seniors traveling to various county senior centers.		\$109,450	\$3.87	Not available		Arlington Co.	Non-dedicated
Senifor Subsidized taxi service for seniors 70%; can buy Not available fritteen \$20 taxi coupon books for \$10 tax available fritteen \$20 taxi coupon books for \$10 taxi service for seniors 70%; can buy Not available fritteen \$20 taxi coupon books for \$10 taxi service for seniors 70%; can buy the service seniors 70%; can be service provided to seniors 60% for service in this selection of the service seniors for for seniors 60% for service in this selection in the service seniors for for service in the service seniors for clear for clear for clear for clear for seniors for service in the service seniors for clear for service in the service seniors for clear for clear for seniors for clear for seniors for clear for seniors for clear for seniors for clear for service in the service seniors for clear for seniors for clear for the service seniors for clear for clear for seniors for clear for seniors for clear for clear for seniors for clear for seniors for clear for seniors for clear for seniors for clear for seniors for clear for for for clear for clear for clear for clear for clear for clear for for program for clear for clear for for for for clear for clear for	SCAT - Senior Center Transportation Program	Taxi-based, pre-arranged service to transport seniors to senior centers not served through other senior center transportation program.		\$2,017	\$8.17	Not available		Arlington Co.	Taxi provider
Fairfax County Specialized transport for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in Fx Co. 387,509 Specialized transpor. for eligible residents in County human service in County human service for class of county human service in County human service in County human service in County human service for class of county human service in County human service in County human service for class of county human service for County human service in County human service for County human service in County human service in County human service in County human service in County human service for County human service in County human service in County human service for County human service in County human human service in County human h	Super Senior Taxi	Subsidized taxi service for seniors 70+; can buy fifteen \$20 taxi coupon books for \$10 each year.	Not available (1,006 srs bought coupon books; 3,281 books sold)	\$41,248		Not available		User subsidy program; predominately serves No. Virginia	Non-dedicated; taxi provider
Specialized transpor. For eligible residents in Fx Co., \$87,509 \$10,806,758 \$18.39 2.582,059 44 mi. Predominately Fairfax Co., Fairfax	Am. Red Cross, Arlington Chapter	Transportation service provided to seniors 60+ for grocery shopping and medical appt's and to disabled individuals of all ages for medical appt's.	4,987	\$47,344	\$9.49	Not available		Arlington and very close by areas of neighboring No. Virginia jurisdictions	Volunteer drivers and Red Cross vehicles.
Specialized transpor. for eligible residents in Fx Co., 587,509 510,806,758 518,39 2,582,059 4,4 mi. Predominately Fairfax Co., Fairfax				Fairfax Co	unty				
Not available \$490,000 budget Not available User subsidy program; predominately serves No. Virginia start of program to end of FY04. In FY04, 5,537 books sold.) City of Fairfax City of Fx, Geo. Mason Univ, Vienna Metro Stn Metro Stn	FASTRAN	Specialized transpor. for eligible residents in Fx Co., Fx. City, and Falls Church. 90% of service is subscription service for clients of county human service agencies, including seniors. Limited dial-aride service available during mid-day hours for low income residents, incl. seniors.		\$10,806,758	\$18.39	2,582,059	4.4 mi.	Predominately Fairfax Co., Fairfax City and Falls Church City	
ADA complementary paratransit service for CUE 230 \$2,662 \$11.57 Not available bus route within City of Fairfax, Geo. Mason Univ.,	Seniors on the Go	o Taxi subsidy program for low and moderate income seniors 65+; coupon books worth \$30 are sold for \$10 to eligible users.	Not available (2,590 seniors have signed up to participate from start of program to end of FY04. In FY04, 5,537 books sold.)	\$490,000 budget		Not available		User subsidy program; predominately serves No. Virginia	Non-dedicated; operated by taxi
ADA complementary paratransit service for CUE 230 \$2,662 \$11.57 Not available bus route within City of Fairfax, Geo. Mason Univ., and Vienna Metro Stn.				City of Fai	rfax				
	City Wheels	ADA complementary paratransit service for CUE bus route within City of Fairfax, Geo. Mason Univ., and Vienna Metro Stn.	230	\$2,662	\$11.57	Not available		City of Fx, Geo. Mason Univ, Vienna Metro Stn	

Table 4-2: SPECIALIZED TRANSPORTATION SERVICES IN NORTHERN VIRGINIA

Specialized	Service	Ridership FY04	Operating	Operating	Total	Estimated	Service	Service
Transportation	Type	(One-Way	Cost	Cost per	Vehicle Miles	Trip	Area	Provider
Service		Pass. Trips)	FY04	Pass.Trip	FY04	Length		
eniors on the G	Seniors on the Go Taxi subsidy program for low and moderate income seniors 65+.	Not available	\$5,000		Not available		Metro area, predominately central Fairfax	Non-dedicated; operated by taxi
FASTRAN	Accessible DAR service for low-inc. w/ disabilities and srs. to med. appts outside Fairfax City.	475	\$10,000	\$21.05	Not available		Fairfax County area	See Fastran.
			City of Falls Church	hurch				
FareWheels	Taxi subsidy program for low-income seniors (age 62+) and disabled residents; eligible users can receive two coupon books per month, each worth \$40, upon request.	Not available	FY04=est. of \$27,000				Predominately No. Virginia	Non-dedicated; operated by taxi
			Loudoun County	unty				
Loudoun Transit- OnDemand Transportation	Virginia Regional Transportation Association (VRTA) operates transit service in Loudoun County, including 24-hour advance reservation, demand response transportation within Loudoun Co., with 5 vehicles in service M - F. Service open to the general public; srs and disabled have reduced fares.	60,402 (paratransit trips only)		\$10.64 (Cost per passenger trip for all VRTA transit service in Loudoun Co., including fixed route. Figure is based on 8 mos. of FY05 data.)			Loudoun County	VRTA directly operates; dedicated service
County-provided transportation	County manages on-demand transportation (through Dept of Social Services) for elderly, disabled, and indigent residents pre-screened and determined eligible. Service available for clients of DSS, Health Dept, Mental Health/Metal Retardation, Supported Living pgms and local human service agencies. Serves only medical trips.	8,910	\$258,304	\$28.99		20 mi. (est.)	Within Loudoun County and for some trips, to medical destinations outside county, including UVA Clinic in Charlottesville, VA hospitals in WVA and DC, dental clinic in Falls Church, etc.	Private contractors, incl. taxi cos, wheelchair van cos, Red Cross
American Red Cross Senior Transportation	Advance reservation door-to-door transportation provided to seniors and disabled of all ages for medically-related and shopping trips within Loudoum Co. and to destinations beyond (Charlottesville, Fairfax Co., DC).	5,047	\$114,296	\$22.65	110,840	22 mi. (est.)	22 mi. (est.) Both within Loudoun County and to destinations outside county, including Charlottesville, Fairfax County and DC.	Directly operated, with both paid and volunteer drivers

Table 4-2: SPECIALIZED TRANSPORTATION SERVICES IN NORTHERN VIRGINIA

Service	rrovider		nassas Dedicated service	Directly operated w/ PW Co vehicles and PWAAA staff		Volunteers
Service	Area		Prince William County and Manassas and Manassas Park area.	Prince William County	Prince William County	Prince William County
Estimated	ı rıp Length		6 mi. (based on passenger mile data)			
Total	venicie ivilies FY04			Not available	Not available	Not available
Operating Cost nor	Cost per Pass.Trip	County	\$9.23	Avg.=\$5.12	Avg.=\$6.54	\$2.74
Operating	Cost FY04	Prince William County	\$5,593,400		Woodbridge Center =\$4.88/one-way trip Manassas Center =\$10.88/one-way trip	Est. \$7,000
Ridership FY04	(One-way Pass. Trips)		Total ridership= 604,605 "Off-route" trips= 49,180 (8%)	Woodbridge Center =9,516 Manassas Center =6,769	Woodbridge Center =6,158 Manassas Center =2,348	2,557
Service	1ype		Flex-route local bus service in Eastern PW Co. and the Manassas and Manassas Park area. Service provided along established routes but bus will deviate off route, up to 3/4 mile, to pick up or drop off passengers. Some off-route stops served ondemand, while other off-route stops require advanced notice.	Service for seniors traveling to county senior centers for various activities.	Service for seniors traveling to county adult day care centers.	PW Co. contracts w/ Interfaith Care Givers (a non- profit) to provide transportation for persons, including seniors, who cannot meet their needs through the County's public transit system. Service provided by volunteers for ambulatory users only
Specialized	ransportation Service		OmniLink NOTE: Figures shown are for all local bus service, not just the "flex" trips unless otherwise noted.	Senior Center Transportation	Adult Day Care Transportation	Interfaith Care Givers Volunteer Transportation

study conducted for WMATA in 2004.¹ The WMATA study identified the specialized transportation services provided throughout the Washington region by the local jurisdictions as well as those provided through the major federal human service funding programs, such as Medicaid and the federal Community Services Block Grant. This NVTC study focuses on the Northern Virginia jurisdictions rather than the entire region and on the specialized transportation services provided through the jurisdictions and generally available to seniors, rather than the broader spectrum that includes the many human service and non-profit transportation programs.

Table 4-2 presents the various publicly sponsored specialized transportation services in Northern Virginia and their operating characteristics. Where data are available, Table 4-2 also provides information on the cost per passenger trip and estimated passenger trip length.

REVIEW OF PUBLIC TRANSPORTATION SERVICES AVAILABLE FOR SENIORS

Review of Fixed-Route Services

The fixed-route services in Northern Virginia have been designed to meet both commute and non-commute transportation needs in the region. A number of the services are designed to meet longer distance commute needs, such as VRE and OmniRide, while others focus on more local commute and non-commute travel. To meet the requirements of the federal Americans with Disabilities Act (ADA), the region's fixed-route transit service is generally accessible to riders using wheelchairs and other mobility devices.

To the extent that seniors are functionally able to use fixed-route services (can walk to a bus stop or station, wait for the bus or rail service, and board the vehicle), seniors can use fixed-route services when such service is available and can serve their trip needs. However, use of public fixed-route transit by seniors in the region is low, similar to national trends as noted below. While the study's telephone survey found that some seniors do use public transit occasionally (12% indicated occasional use of rail service and 4% indicated occasional use of public bus services), only a very small proportion of seniors' total trips – 1.3 percent – are taken by fixed-route transit.² According to a 2001 NVTC on-board survey of all riders of the fixed-route system, only 3.7 percent of riders were seniors, defined as those aged 65 and above.³

Such usage rates are not unique to Northern Virginia. As pointed out in Chapter 2, a recent Brookings Institute study found that the use of public transportation nationwide by seniors has been dropping for decades. In 1995, seniors made only 2.2 percent of all their trips by transit. For non-work trips, senior trip-making on transit was for the first time, in 1995, below that of younger people. Between 1995 and 2001, transit usage rates fell even lower, by almost 50 percent, with only

^{1 &}lt;u>Specialized Transportation Study – Final Report</u>, prepared for the Washington Metropolitan Area Transit Authority, by KFH Group, Inc. and TranSystems, April 13, 2004.

Among the younger working-age population, those age 25 to 39 take 2.1 percent of their total trips on public transportation, and for those age 40 to 64 years, 1.5 percent of their total trips are on public transportation. 2001 NHTS.

Results of On-Board Survey-Fairfax Connector, DASH, CUE, Loudoun, and ART, Final Report, prepared for Northern Virginia Transportation Commission, by MCV Associates, Inc., April 2001.

1.3 percent of all trips by seniors made on transit in 2001.⁴ Such trends are alarming, particularly given the expected growth in the senior population and their associated needs for transportation.

NVTC believes the senior transit market to be much larger than current use would suggest. As noted in Chapter 2 and Appendix 1, NVTC estimates the potential transit market among those 65 and older to be about 57% of the total population of that cohort and about 52% of those age 75 and older. These are the individuals who live close enough to fixed-route service (within ¼ mile of a rail station or bus route) and who are healthy enough to use the system. Ridership by Northern Virginia's older residents could be increased through service improvement that better meet seniors' needs and through marketing and outreach tailored to the senior customer.

Several of the region's fixed-route systems have begun planning to better meet the needs of senior travel. Fairfax County recently began providing training sessions with a specially designed bus to teach seniors how to use fixed-route service. WMATA has purchased low-floor buses, which are considerably easier for seniors to board and alight, and has a policy to acquire only low-floor buses with future acquisitions. WMATA is also providing training to seniors and persons with disabilities on use of Metro's fixed-route services. (These and other strategies are discussed in more detail later in this chapter.)

Additionally, the transit industry, through its national association, has recognized the growing issue of senior transportation and is implementing measures to improve transit systems' ability to meet the needs of seniors. Various resources are available through the association's website at www.apta.com/sim/.

Review of Specialized Transportation Services

Northern Virginia's specialized transportation services that are identified and listed in Table 4-2 are reviewed below on several factors that relate to their availability to seniors and ability to meet trip needs.

Eligibility

The specialized transportation services in Northern Virginia vary in the degree to which they are available to seniors in the region. Several of the programs serve only or primarily persons who meet the eligibility criteria of the Americans with Disabilities Act (ADA), including WMATA'S ADA program, MetroAccess. Such programs have been implemented and designed to meet the very prescriptive regulations of the ADA, which stipulate that eligibility be provided only to persons who are functionally prevented from using regular fixed-route transit. For MetroAccess, an in-person interview and assessment determine eligibility by a licensed physical or occupational therapist. Age is not considered for eligibility, although the majority of certified users are older, given the relationship between older age and conditions that impair mobility.

In addition to MetroAccess, the other specialized programs designed to serve ADA eligible users include Alexandria's DOT Paratransit, Arlington's STAR and city of Fairfax's City Wheels.

⁴ Rosenbloom, Sandra. The Mobility Needs of Older Americans. *The Brookings Institute Series on Transportation Reform.* Washington, DC, July 2003, p. 4.

However, the STAR program also serves a small number of seniors temporarily certified as eligible for the service, due to an expected short-term transportation-related disability. It is expected that if these seniors require longer-term transportation, they will become ADA eligible through the ADA certification process. According to the study's telephone survey, approximately 4 percent of seniors in the region have used transportation services for persons wirh disabilities, including MetroAccess, in the past month, but, region wide, very few trips (1% of total trips) are provided by specialized services for those with disabilities.

While the ADA paratransit programs serve only those with significant functional disabilities and are provided on an advanced reservation next-day basis, transportation service is available seven days per week, from the very early morning hours until very late at night; service is provided throughout the Washington metropolitan region including the District and Maryland; there are no restrictions on trip purpose; and service cannot be constrained by limited capacity or other factors which limit service availability. According to one recent study, "ADA appears to have vastly improved paratransit service for a large number of older individuals who can work within its limitations and who live in areas with public transportation service." Compared to specialized transportation services that often operate with only limited capacity, a restricted service area, or serve only certain types of trips, ADA paratransit has improved mobility for many ADA-eligible users.

However, ADA paratransit is not available to the many seniors who do not meet the eligibility criteria and is not appropriate for those that require significant assistance when traveling. Arlington County's Assisted STAR program has been designed specifically to meet the needs of seniors (and other ADA eligible riders) who need such extra assistance. Assisted STAR is a rider-support program for STAR's eligible older riders, where the transportation operator is given a supplemental payment so that the driver provides door-to-door assistance to the rider for healthcare appointments only. Given increasing frailty with older seniors, the availability of such extra support becomes more important when addressing the mobility needs of older seniors.

While the other specialized services do not limit eligibility to the extent of the ADA paratransit programs, the other services may be limited to those seniors who are lower income. For example, the taxi subsidy programs in Fairfax County and in the cities of Fairfax and Falls Church target their taxi subsidy programs to seniors on low or moderate incomes.

Some of the other programs are available only to seniors who participate in specific human service programs, such as FASTRAN and Loudoun County's demand response transportation program managed by the Department of Social Services. Additionally, other jurisdictions including Alexandria, Arlington County, and Prince William County have specialized transportation programs for seniors, but these tend to be in support of specific senior center programs and activities; thus, eligibility is restricted to those seniors who are participating in the specific programs.

Eligibility, then, for the region's specialized transportation services varies by jurisdiction and/or program and may depend on functional mobility, participation in a particular senior or human service program, and/or income level.

The Impact of Federal Programs on Transportation for Older Adults, prepared for the AARP Public Policy Institute, by Nelson\Nygaard Consulting Associates, December 2004, page 26.

Service Area

The service areas of the various specialized transportation providers depend on the specific service sponsor, type of service, and type of provider. As noted above, MetroAccess, as an ADA program, serves the metropolitan region, specifically the jurisdictions that comprise the WMATA compact, and complements WMATA's fixed-route system according to ADA regulations. Alexandria's DOT Paratransit and Arlington's STAR, also ADA paratransit programs, serve predominately the Northern Virginia area but riders can travel throughout the Washington metropolitan region, with such trips scheduled on other MetroAccess transportation operators if they cannot be accommodated by the Arlington or Alexandria ADA services.

The service areas of the specialized services that are taxi-based, user-side subsidy programs (such as the numerous taxi voucher programs) are essentially unrestricted. Users can request trips to destinations of their choice, and they are restricted only in their ability to pay for the trips with their allotted vouchers. Given that most of the taxi voucher programs are targeted to lower-income seniors, it is likely that such seniors have limited ability to pay for longer distance trips.

Alexandria's Senior Taxi program is a variation on the taxi subsidy programs. This program, provided through Senior Services of Alexandria on a contract basis to the city of Alexandria, subsidizes taxi trips within the city for a set fare of \$1.50 as well as trips within a five-mile radius of the city for a fare of \$2.00. The taxi operators are paid the full meter rate for the trips. Unlike the taxi voucher programs, the Alexandria program has established service area parameters, essentially ensuring that the taxi trips are relatively short and therefore less costly.

The specialized services operated by volunteers tend to have less formal service areas than other specialized programs. Loudoun County's Red Cross transportation service, which includes volunteer drivers, serves medical and shopping trips within the county and various medical destinations outside the county and into the neighboring state. The other volunteer-based programs in Northern Virginia, however, including the Interfaith Care Givers transportation program in Prince William County seem to provide trips generally within the proximity of their "home" jurisdiction.

Specialized services that are designed to support senior-center programs or are funded through federal and state Area Agency on Aging (AAA) programs tend to be more restricted in terms of their service areas given their mission to support specific senior programs. These services typically function to transport seniors to specific centers or to local shopping areas.

One of the largest specialized transportation programs in the region, FASTRAN, serves Fairfax County as well as the city of Fairfax and city of Falls Church. Service is provided primarily to support specific human service agency programs including senior programs; thus, its service area is restricted to the facilities and sites where the human service programs operate. There is some limited local dial-a-ride service available during mid-day hours to low income residents including seniors, but this is constrained by capacity.

Since Loudoun and Prince William counties are not in the WMATA compact, MetroAccess does not provide service to those two jurisdictions.

The large service area of Loudoun County's demand response transportation program managed by the Department of Social Services. While many of the trips served are within Loudoun County, trips are provided to distant locations as central Virginia (Charlottesville), West Virginia, and DC.

Routing/Scheduling Structure

The type of routing/scheduling structure relates to the types of passengers who are served and the purpose of the transportation program. It also can have an important influence on operating costs, as will be discussed in the following section.

Typically, routing/scheduling for specialized and other paratransit services is characterized by whether the service operates as many origins to many destinations (many-to-many), many origins to few destinations (many-to-few), many origins to one destination (many-to-one), or some variation thereof. A specialized service that serves any pick-up and travels to any destination in the service area – many-to-many – provides a greater level of transportation service and options than one that is restricted at the pick-up end and/or at the destination end. In Northern Virginia, the specialized services that operate as many-to-many include MetroAccess and the other ADA paratransit services as well as the taxi voucher programs, where the user determines the trip ends. Such specialized services give seniors freedom to meet a wide range of trip needs.

The specialized services that limit pick-ups to only specific residential areas are designed to serve those areas, such as the Arlington County Senior Loop, set up to serve specific low-income senior housing facilities. Those with restricted destinations are typically designed to serve those destinations, such as the region's various senior center transportation programs. But because of their parameters, these programs do not serve the range of seniors' trip needs.

Relationship of Type of Transportation Service, Operating Costs, and Community Type

Relative transportation costs by type of transit service are discussed below. The impact of community type on transportation costs is also addressed.

The cost of providing public transportation, including services for seniors, is influenced by a number of factors. The type of service, specifically the mode of service, is a primary determinant, and other factors, particularly policy decisions that affect operations also impact costs.

In relation to the community types defined for the study region, it is not possible to specifically analyze the cost to provide service by the three community types, because of a lack of available data and the fact that the service areas of the providers encompass more than one community type. However, there are characteristics of transit service that both impact costs and are related to community type. Among these include the type or mode of transit service—fixed-route vs. paratransit—and the type of service area. In particular, whether the service operates in a more dense urban area, a suburban area, or a rural area influences costs to some degree in relation to the length of passenger trips. These characteristics are discussed below.

Type of Transportation Service: Fixed-Route vs. Paratransit

Fixed-route services are the least costly to provide on a per passenger trip basis, with service provided on a set schedule, traveling a set route. In urban areas, such services may typically carry over 20 passenger trips per vehicle hour, so that the operating costs are spread over relatively high vehicle loads. And the marginal cost of each passenger trip is very low, with a fixed-route bus able to absorb additional ridership until the bus is full and no more standees can fit. In addition, because the biggest cost component is driver wages, the bigger and fewer the buses, the cheaper the cost per passenger. This is not the case for paratransit and specialized transportation services, where passenger trips are individualized, with varying origins and destinations that may change day to day. The marginal cost of each additional trip can be as high as the full cost per passenger trip. The cost difference between the two types of public transportation on a per passenger trip basis is large: national data show the operating cost for a one-way unlinked passenger trip on paratransit is \$21.43 compared to \$2.68 on fixed-route.

Where specialized transportation services can adopt some of the characteristics of fixed-route/ fixed schedule service, such as some of the services in Northern Virginia, operating costs on a per passenger trip can be reduced. In Prince William County, OmniLink's flexible, route deviation service is an example of such a hybrid service. The fixed-route operator deviates up to ¾ mile off the regular route to pick up and drop off passengers. Of total OmniLink ridership in FY04, eight percent of trips were "off route" trips. The transit agency does not calculate the cost per deviated passenger trip; the FY04 average passenger cost based on *all* its local trips was \$9.23. The cost for the "off route" trips will be somewhat more than this average given the greater resources needed to serve the trips, but even at a somewhat higher cost than \$9.23, the cost is likely considerably less than a typical paratransit passenger trip.

The region's other specialized services that have characteristics of fixed-route service, such as those that serve senior centers with group trips on a fixed schedule/subscription basis, also can reduce their operating costs. The average per passenger trip cost for the senior center oriented services listed in Table 4-2 is \$5.72,9 considered low for a specialized trip.

In relation to community type, fixed-route service is more feasible in areas that are more densely developed, with a mix of residential and non-residential uses, and where there is a pedestrian environment that supports walking to and from bus stops or stations. In particular, the residential density is important, providing the opportunities to group trips traveling along major streets and travel corridors. Planning experience suggests that a minimum density of 2,000 persons per square mile is needed to support fixed-route service. Higher density and mixed-use development patterns are characteristics that would be found in Community Type 1, and some portions of Community Type 2 will have moderate to higher density residential development though less mixed use development. These types of environments are more amenable to fixed-route service. Flexible transportation service – paratransit and hybrid fixed-route service such as route deviation – is more feasible in rural environments, such as Community Type 3, where residential development is lower density and activity centers are limited and spread out.

⁷ To the extent that a paratransit system can group trips, the marginal cost per additional trip can be reduced.

⁸ From FY2003 National Transit Database.

⁹ Calculated as the average of Arlington County's two senior center services and the Prince William County senior center service: \$3.87, \$8.17, and \$5.12.

Type of Paratransit Service

Paratransit services including specialized services designed for seniors have many variants. The different specialized services for seniors in Northern Virginia, as identified in Table 4-2 attest to this. Important differences between the transportation services relate to the type of passenger served and service parameters, many of which are determined by policy decisions. The service parameters that have an important effect on transportation operating costs include the geographic area that is served, the type of routing/scheduling structure, and the type of provider. While the type of subsidy does not directly affect operating costs, it merits attention in a discussion of transportation operating costs.

Type of Service Area

The service area within which a specialized provider operates impacts costs and is a factor most directly related to community type. Service areas that are larger, such as many rural service areas, tend to have longer passenger trips, leading to higher operating costs relative to specialized services with shorter passenger trips. The specialized service with the largest service area in Northern Virginia appears to be Loudoun County Department of Social Services' specialized transportation. This program serves not only its relatively large "home" county but also destinations in central Virginia (Charlottesville), West Virginia, and DC. Most of Loudoun County has been categorized as Community Type 3, characterized as predominately rural or exurban. The large size of the service area contributes to the reported average trip distance of 20 miles and this in turn affects the relatively high per passenger trip cost of \$29.00.

Specialized services with smaller service area will have shorter trip distances. For example, Alexandria's DOT Paratransit program serves primarily the city of Alexandria and also other closer in Northern Virginia jurisdictions. Based on FY04 reported data, the average trip length is an estimated five to six miles. This shorter distance contributes to the average cost per passenger trip of \$18.10. The eastern portion of Alexandria is categorized as Community Type 1, with the rest as Community Type 2.

Arlington County's specialized service, STAR, provides an interesting example of service area size, community type, and trip length. The county itself is relatively small and largely urban, and significant parts of the county are categorized as Community Type 1. However, the average passenger trip length on STAR is an estimated 10 to 11 miles, longer than would be expected for the size and characteristics of the county. It is reported that about 40 percent of STAR passenger trips are to destinations outside the county, which contributes to the longer passenger trip length as well as the average cost per passenger trip of almost \$27.00.

Importantly, the service area is typically a policy decision, specifying the "boundaries" of where the vehicles and riders may travel. Where these boundaries are those of the jurisdiction, cities and counties that are geographically large will have large service areas and corresponding longer per passenger trip lengths. Often, such jurisdictions are rural or suburban, so that these jurisdictions may find their specialized transportation services somewhat more costly on a per passenger trip basis. Particularly for rural areas, the service area may have to stretch to include medical facilities that offer services unavailable in the rural jurisdiction, and the corresponding trips may be

quite long and costly. However, even smaller, more urban jurisdictions may have long passenger trip lengths that are more costly to provide, should they establish service area boundaries that go beyond their own borders to serve destinations that lie beyond (e.g., city of Fairfax's subsidized FASTRAN service) or to meet ADA mandates (e.g., Arlington County).

Routing/Scheduling Structure

The specialized services designed to focus only on limited destinations, that is, the many-to-one, many-to-few, or few-to-few routing/scheduling designs, will tend to have higher vehicle productivities (passenger trips carried per vehicle hour) and therefore lower per passenger trip costs. Such service designs incorporate aspects of fixed schedule/fixed-route service. As noted above, examples of such services include the various senior center transportation services in the region, which have a low per passenger trip cost.

FASTRAN, which provides primarily subscription service to predetermined destinations for human service, senior, and other program purposes, is able to effectively group trips. Its FY04 per passenger trip cost is \$18.39, considerably more than that of the senior center transportation programs, which is impacted by the fact that the FASTRAN vehicle fleet is used only for FASTRAN service, the greater number of destinations served, and the dispersion of destinations throughout the Fairfax County service area.

But significantly, FASTRAN's per passenger trip cost is 45 percent less than the cost per passenger trip of MetroAccess, the region's other large specialized transportation service. MetroAccess is not able to group trips to the extent of FASTRAN, its service area is considerably larger, and it operates with very prescribed parameters that are necessary to meet the legal requirements of the ADA but that limit its ability to contain costs. In fact, the characteristics of ADA paratransit that relate to its availability to eligible users to serve individualized trips from any origin to any destination within the region, the large size of the service area, and unconstrained capacity contribute to higher trip costs compared to other specialized transportation services. For FY04, the average cost per MetroAccess passenger trip was over \$33.00, the highest passenger trip cost of the specialized transportation services in the region.

The type of routing/scheduling structure is somewhat related to community type, in that the more densely developed areas, such as Community Type 1, provide greater opportunities for grouping passenger trips, which leads to higher vehicle productivity and lower per passenger trip costs. Additionally, in areas with a mix of residential and non-residential land uses, also characteristic of Community Type 1, the destinations and activity centers to which riders want access are more proximate compared to Community Types 2 and 3, which have a greater separation of land uses. The result is that transit trips linking riders to destinations will be shorter and less costly in areas with Community Type 1 characteristics.

Type of Operator

The type of transportation operator that provides the service day-to-day influences the operating costs. Services operated by *dedicated* providers, where the operator serves only the specified trans

portation program, for example, MetroAccess and FASTRAN, tend to be more costly. A primary reason for this is that the vehicles and drivers serve only the riders of the particular program. All of the operating costs are thus allocated to the particular program. With a *non-dedicated provider*, the operating costs can be spread over other programs, and the sponsoring transportation program pays only for the hours, miles, or parts of the day that are needed.

One of the least costly non-dedicated providers are taxis. Taxi drivers are independent contractors so there are no direct labor costs. Additionally, taxi services have lower vehicle operating costs, given the predominant vehicles in use are sedans rather than paratransit vans, the latter being more expensive to operate because of higher maintenance and fuel costs.

The type of operator is not directly related to community type. However, there may be fewer choices for transportation operators in more rural areas given that overall demand for transportation service is less, relative to more populated areas. This may mean that, in Community Type 3 areas, it is less feasible to use non-dedicated providers, if such providers do not have adequate other business to support their operations.

Type of Subsidy

The method used to subsidize the specialized transportation program may not have a direct impact on operating costs but deserves merit in a discussion of costs. Where the transportation program requests specific services from an operator, typically with a contractual agreement, the subsidy to provide the service is paid directly to the providers – a *provider-side* subsidy. This may be in the form of a per hour cost or a per mile cost or some combination thereof.

A *user-side* subsidy, on the other hand, provides funding to the users and allows them, within the parameters of the program, to decide how to spend their transportation dollars. The taxi voucher programs in Northern Virginia are examples of user-side subsidies. From the perspective of a sponsoring agency, such programs may be attractive as the level of subsidy can be adjusted depending upon policy decisions and funding availability. It can be difficult, however, to obtain much operating data about the taxi voucher programs, as often the sponsoring agency does not have or receive information about the number of trips that are provided or other measures of effectiveness. In many cases, the only information available is the number of coupon books sold. The lack of data hampers complete evaluations of such programs and their effectiveness.

The type of subsidy has no direct relationship to community type. However, similar to type of provider, there may be fewer transportation operators in more rural areas, such as Community Type 3, and this may impact the ability to implement user-side subsidy programs.

Balancing Cost-Effective Transportation Improvements and Senior Mobility Needs

Specialized transportation services are an important component of the overall public transportation network, and there are various types of specialized services, differentiated by their purpose as well as their operating characteristics and type of community in which they operate.

Specialized transportation services that are designed with characteristics of fixed-route/fixed scheduled service are more cost-effective on a per passenger basis than those that are designed without such aspects. Specifically, the ability to group trips, serve limited destinations, and operate on somewhat of a scheduled basis will help ensure more cost-effective passenger trips. However, the specialized services that are more individualized, providing trips throughout their service area on a "many-to-many" basis, provide for greater travel flexibility and allow for more rider assistance from the driver, which is important for frail seniors. By their nature, these types of specialized services are more costly on a per passenger trip basis. Yet, such individualized trips may be those that have been referred to as "quality of life" or "life enhancing" including trips to visit family and friends or to cultural events. These types of trips are important for seniors, and research shows that real needs exist for these trips.¹⁰

In addition, costs for specialized transportation are influenced by the type of community in which they operate. The characteristics of Community Type 1, which include moderate to high density with mixed land uses and a pedestrian-oriented environment, support the feasibility of fixed-route transit service and specialized services with fixed-route attributes. Such transit services are less costly relative to other types of service on a per passenger trip basis given that greater grouping of riders is possible, trip lengths are shorter, and sidewalks and pathways ensure walking access to transit stops and stations. The characteristics of Community Types 2 and 3, which include lower densities, more segregated land uses, and, in rural and exurban areas, limited commercial and service activities, result in more limited opportunities to group riders and longer trips to access services and destinations. Transit services for such communities will tend to have lower productivities and longer trip distances, leading to higher operating costs on a passenger trip basis.

Development of appropriate and cost-effective public transportation services to meet the increasing need for senior transportation must balance the diversity of seniors' mobility needs and look to community design and land use policies that support effective transit and mobility solutions.

PROJECTION OF FUTURE TRANSPORTATION NEEDS

10

The estimated trips of Northern Virginia seniors age 75 and older can be projected based on population projections and current transportation usage by mode as determined from the study's telephone survey. Table 4-3 shows the senior population age 75 and older in Northern Virginia as of the year 2000 and projections for 2010, 2020, and 2030.

Total estimated annual trips are shown, estimated as one-way trips and including all types of trips such as walking; these are estimated based on seniors' responses by jurisdiction to the query in the study's telephone survey on mode usage for the previous week. Some researchers have postulated that total trip-making by seniors in future years will be greater than current rates, given high rates of mobility of today's adults who will be tomorrow's seniors. To the extent that this happens, the estimates of total trips may be understated.

Transportation Disadvantaged Seniors – Efforts to Enhance Senior Mobility Could Benefit from Additional Guidance and Information, Report to the Chairman, Special Committee on Aging, US Senate, by the GAO, August 2004

Table 4-3: ESTIMATED ANNUAL ONE-WAY TRIPS OF SENIORS 75+

Total all all an	Elderly (75 +)	Total Est.	Est. Fixed Route	Est. Specialized
Jurisdiction	Population	Trips	Trips	Transp. Trips
		2000		
Arlington County	9,475	8,554,000	334,000	66,000
Fairfax County	32,415	27,998,000	218,000	150,000
Loudoun County	4,136	3,290,000	20,000	58,000
Prince William County	4,983	3,348,000	4,000	16,000
Alexandria	5,910	5,388,000	124,000	68,000
City of Fairfax/City of Falls Church	2,181	1,876,000	14,000	1,000
Manassas City/Manassas Park	947	828,000	6,000	1,000
NOVA	60,047	51,280,000	720,000	360,000
		2010		
Arlington County	11,702	10,760,000	456,000	80,000
Fairfax County	37,998	33,428,000	282,000	174,000
Loudoun County	9,330	7,558,000	52,000	128,000
Prince William County	11,705	8,012,000	10,000	36,000
Alexandria	6,664	6,188,000	154,000	76,000
City of Fairfax/City of Falls Church	3,293	2,884,000	24,000	2,000
Manassas City/Manassas Park	2,362	2,102,000	16,000	2,000
NOVA	83,055	70,928,000	996,000	498,000
		2020		
Arlington County	15,286	14,206,000	642,000	104,000
Fairfax County	49,393	43,916,000	394,000	222,000
Loudoun County	16,943	13,870,000	102,000	228,000
Prince William County	19,437	13,446,000	20,000	58,000
Alexandria	6,859	6,438,000	172,000	78,000
City of Fairfax/City of Falls Church	4,125	3,652,000	32,000	2,000
Manassas City/Manassas Park	3,503	3,150,000	24,000	2,000
NOVA	115,547	98,678,000	1,386,000	694,000
		2030		
Arlington County	22,162	20,864,000	972,000	154,000
Fairfax County	63,338	57,046,000	530,000	294,000
Loudoun County	23,723	19,672,000	148,000	330,000
Prince William County	35,860	25,128,000	38,000	110,000
Alexandria	6,924	6,582,000	180,000	80,000
City of Fairfax/City of Falls Church	4,932	4,422,000	42,000	2,000
Manassas City/Manassas Park	5,464	4,976,000	40,000	4,000
NOVA	162,403	138,692,000	1,948,000	974,000

Notes: Population projections provided by NVTC: NOVA data form VA Employment Commission age ratios applied to MWCOG Round 6.4A population forecasts; Fairfax Co. projections from Fairfax Co. Dept. of Systems Management for Human Services. Arlington County projections from Arlington County Dept. of Planning Housing and Development.

Trip estimates based on study's telephone survey results, with annualized estimates projected from respondents' answers to query on trip-making by mode for previous seven days.

Estimated annual trips on fixed-route and specialized transportation are also projected, again based on the telephone survey responses by jurisdiction. Importantly, these estimates assume that trip-making and modal use rates remain at levels reported in the study's telephone survey. Given national trends in recent years of decreasing use of transit by seniors, this assumption may not hold true. And if proportionally more of Northern Virginia's seniors are living in the more rural parts of the region in future years, it will be increasingly more costly to provide effective public transit options to meet seniors' transportation needs.

On the other hand, if concerted efforts are made to improve the ability of public transportation to meet the needs of seniors and if seniors make housing decisions based in part on the availability of non-driving transportation alternatives, seniors' mobility may be improved. Significantly, this study has found that seniors who live in more urbanized, mixed use areas of Northern Virginia (e.g., Arlington and Alexandria) are more mobile than their counterparts in the rural parts of the region as measured by total weekly trips and use of public transportation.

Projection of the rough costs to meet the transportation needs of Northern Virginia seniors into the future can also be made. While the projected numbers of trips on fixed-route transit are greater than those for specialized transportation, it is the costs for specialized transportation that deserve attention, given that the operating cost for a specialized transportation trip is eight times that of a fixed route trip, based on national data. For the cost projections, two different cost averages have been developed: one based on the specialized transportation services in Northern Virginia that are able to effectively group passengers for greater cost-effectiveness and the second for those specialized services in the region that are more individualized, providing "many-to-many" service. Both types of specialized services are needed to meet the range of senior mobility needs. Using the two groupings of services, specialized transportation trips in the Northern Virginia region cost between \$9.00 and \$23.00 per one-way trip.

Using the cost range of \$9-\$23 per specialized transportation trip, it can be roughly estimated that the costs for providing specialized transportation in the NVTC region may fall between \$4.5 million to \$11.5 million in 2010 and between \$8.8 million to \$22.4 million by 2030. These estimates are in current dollars. While it must be recognized that some seniors, particularly as they become older and more frail, will require more costly and individualized transportation services to maintain mobility, transportation improvements and community design policies can be developed that will work towards a range of options to meet future mobility needs. These options, presented in the following section, acknowledge that seniors' transportation needs vary, as they do for all individuals, and that funding for public transportation is not unlimited.

RECOMMENDATIONS

This final section of Chapter 4 provides recommendations in several areas that are intended to improve public transportation services in the region as well as the built environment that supports transportation to better meet the mobility needs of seniors in the short and longer-term future. The recommendations are grouped into the following three categories: encouraging and supporting greater use of fixed-route transit; supplemental transit services; and improvements to the built environment.

1. Recommendations to Encourage and Support Greater Use of Fixed-Route Transit

Recommendations in this area cover a mix of programs and activities, ranging from a centralized information and referral service to more costly, technology-oriented strategies such as smart cards for fare payment.

Centralized Information and Referral for Public Transportation

Public transportation in Northern Virginia is a complex network of regional and local fixed-route systems operating bus and rail services that is supplemented by many different specialized transportation services provided by a large number of public and non-profit agencies. Getting infor-

mation on what services are appropriate for what types of travel and how to use a particular service is often not an easy task.

Information resources are available but they may not include information on both fixed-route and specialized services, they may not be current, and there is not always a "real person" component since much of the information is provided through websites. For example, WMATA has a "trip planner" function on its website (www.wmata.com) that provides information on its fixed-route services as well



as those of the jurisdictions in the region. Several of the jurisdictions provide information on available transit services, including specialized transportation, through their websites. But such sources may not be available to seniors if they do not have computer access, and the sources do not include the full range of information and assistance that would be most helpful for seniors.

The NVTC study has confirmed that seniors have difficulty obtaining transit information. More than one-third of telephone survey respondents (36%) reported problems in obtaining information on transit fares, routes, and schedules. Problems obtaining transit information were also noted by various participants in the focus groups and in-depth interviews (referred to as the qualitative research phase) who said that access to information about public transportation was a barrier to the use of public transportation.

Additionally, the dependability of public transit, an important desired feature by many participants can be tied to access to information. For example, one participant said that seniors cannot rely on a service if they don't know where it is or when it runs. Several participants noted they had tried to call different services but were frustrated navigating automated menus. One participant suggested that there be a universal toll-free number for information on transit in Northern Virginia that seniors and others could call for transit information.¹¹

It is noted that the transit industry has championed the adoption of a "511" number, similar in concept to 411 for telephone information, that provides statewide information on transit services. A number of states have adopted the program, including Virginia. Highway and public transportation information for part of the state is available by dialing 511 from any phone in Virginia (or 1-800-578-4111) and by accessing the electronic version at www.511va.org. Those seeking transit information are connected to WMATA's customer information line.

This problem with information was repeated in the study's focus group held for professionals that work with seniors (referred to as the "brokers" focus group); a number of the participants in the brokers focus group said that seniors often have great difficulty with automated information services and would greatly benefit from a "real person" to answer their questions and guide them to appropriate transportation resources. One participant even suggested that such a service should go beyond information and referral and actually schedule trips for seniors. Such a service, where a centralized broker would actually schedule and book trips for seniors on the appropriate transportation service, goes far beyond information and referral in terms of logistics and feasibility. The Portland, Oregon region has a program with similarities to this concept, called Ride Connection. Ride Connection is a formalized and coordinated network of specialized transportation providers that supplements what the region's public transit agency provides. Ride Connection's network of providers includes private and non-profit transportation providers and volunteers. With a mission of mobility management – finding the appropriate transportation service within the region or within its own network that can provide the trip that the individual needs - Ride Connection includes a scheduling function and directly schedules a small number of trips to selected providers in its network.

Lack of accessibility and availability of information on public transportation may impact the study finding that while an estimated 86 percent of older seniors live within one-quarter mile of a transit route, 12 only 52 percent of seniors reported, through the telephone survey, that they live within one-quarter mile of a bus or rail stop. This is not to suggest that any senior who lives within one-quarter mile of a bus route can use transit service to meet their travel needs. But given the telephone survey finding that more than 60 percent of seniors (63%) indicated no difficulty walking one-quarter of a mile, it is likely that many more seniors who currently do not use fixed route transit could potentially do so.

Concept: The first recommendation suggests pursuit of a centralized information and referral service for Northern Virginia on both fixed-route and specialized transportation services. This service would build and keep current a database of all available public transportation services available to seniors in the region and specific information on how to access and use such services. Information on transportation services provided through non-profit and volunteer organizations could also be included. This service would assist seniors in navigating the various and sometimes confusing choices for transportation. Importantly, it is NVTC's and the advisory team's strong recommendation that the service include a "real person" component. While the information should be available through the Internet, not all seniors have access to this technology and many seniors need the "human element" to help understand the information.

Significantly, the notion of centralized information and referral was one of several primary recommendations that emerged from a WMATA study of specialized transportation in the Washington, DC metropolitan region in 2004. The recommendation was called a "clearinghouse" by that study and included the provision of information on accessible fixed-route bus and rail services as well as information on specialized transportation in the region. The notion of customized trip planning for users was also part of the study's clearinghouse recommendation.

Estimated by GIS analysis, which may slightly overstate proportion of seniors within ¼ mile of a bus route, given that data are based on census block data; if any part of the block falls within ¼ mile of a route, all of the block's population is included.

WMATA is pursuing implementation of a regional information and referral clearinghouse, with funding allocated for planning and development in Fiscal Year 2005-06. As this point, WMATA anticipates that planning and development, including efforts needed for IT (information technology) and determination of the most appropriate organization to operate the clearinghouse, will continue through FY06, with implementation in the beginning of FY07. Current planning also anticipates that the regional clearinghouse will be implemented as a three-year demonstration project, with ongoing operations and funding after that time to be determined in conjunction with the jurisdictions in the WMATA compact. It is not clear if the WMATA concept includes "real" people who would answer phone calls and provide help.

Implementation and Resources: Implementation of an information and referral service could build on existing transportation information resources. For example, Fairfax County's electronic *Transportation Guide to Northern Virginia* lists a variety of transportation services, including public and private bus and specialized services (available at www.fairfaxcounty.gov/dsb/tran_2001.htm) but appears somewhat dated and is not comprehensive for the region. Arlington County also has a directory of various transportation resources available to its elderly and disabled residents.

NVTC would need to determine which organization would spearhead the effort to develop the information and referral service for the region, provide the service, and maintain the currency of the information. It is estimated that a regional information and clearinghouse effort could be implemented within one to two years. Funding resources for development are estimated at \$150,000 to \$200,000 but will depend to a great extent on the level of effort needed to automate the database. Ongoing costs would include maintenance of the database and ensuring its currency. This should be relatively low cost, with annual costs for a technology support person estimated at about \$60,000. However, staffing of the information assistance service would be a more significant ongoing cost. Annual labor costs per staff member is estimated at approximately \$40,000. Assuming staffing of about three to five persons plus staffing for technology support, the annual staff costs are estimated at around \$180,000 to \$260,000 (does not include administrative overhead costs).

Another approach, which may be more cost effective, would be to support WMATA's efforts to implement the regional clearinghouse recommendation from its 2004 study. While it is premature to plan exactly how this would work given that WMATA is still in the early planning and development stage for the clearinghouse, there is a precedent for WMATA and the jurisdictions to work cooperatively to coordinate development and implementation of a regional database. Such cooperation is occurring between WMATA and the local jurisdictions in development of a database on all fixed route bus stops in the region, with efforts made to ensure that each transit system database is compatible with that of WMATA. This type of coordinated approach could be used if NVTC and the Northern Virginia jurisdictions determined that they would pursue an information and referral service on their own, with coordination at the outset to ensure that all information collected and automated would then be compatible with WMATA's regional clearinghouse.

Travel Training

Travel training for seniors and persons with disabilities has proven its effectiveness at many different transit agencies around the country. Travel training targets those individuals who want to learn how to use fixed-route service. This may involve group training sessions where specific information on how to ride a bus is provided to attendees. Often, a transit vehicle is brought to the training location so that trainees can practice getting on and off, including using the wheelchair lift, and the trainees may take a practice bus trip together.

Travel training may also involve one-on-one training, where the trainer will take an actual trip or trips on transit with the trainee. Such training is tailored to the specific individual, who may be able to choose the trip that he or she wants to take. These programs may give special names to the trainers. For example, the transit agency in Phoenix, Arizona, which has recruited volun-

teer trainers through the local Area Agency on Aging, calls its trainers "pilots" or "navigators." In Eugene, Oregon, the transit agency has recruited regular riders to provide individualized training, through its Bus Buddy program.

Travel training was suggested as an option to improve public transportation in the region at several of the focus groups as well as the focus group for brokers. This option was very well-received and participants indicated that it could help seniors



use fixed-route transit, particularly the individualized training. It was suggested that seniors could be trained to train other seniors, essentially peer training. It was also suggested that high school students could be trained to function as trainers for seniors, as part of schools' community service requirements.

WMATA provides instruction for fixed-route transit use through its *Metro Is Accessible* program, referring to the training as *Metro system orientation* rather than travel training. With staff from WMATA's Office of ADA, the transit agency provides group orientation sessions to a wide range of organizations and user groups as well as individualized orientation, predominately for persons with disabilities. The trainer will provide instruction from the person's home to a specific destination by bus or rail or both, lasting from several hours or up to a day. Individualized orientation for persons with visual impairments is provided on a contract basis for WMATA by two local organizations that have certified orientation and mobility (O&M) trainers.

Since the start of the *Metro Is Accessible* program in December 2003, WMATA indicated that it has provided approximately 60 orientation sessions, which include both group sessions and individualized instruction.

Fairfax County provides travel training, using its new Mobile Accessible Travel Training (MATT) bus. The MATT bus was renovated and designed specifically for training senior citizens to travel safely and independently on regional transit systems (see www.fairfaxcounty.gov/fcdot/mattbus). Fairfax County staff report that since initiation of travel training in 2004, roughly 50 to 100 seniors have been trained, either on the MATT bus or on actual bus and rail services. Training has been group training, as staffing resources do not provide adequate time to offer individualized

training. To date, the county has not determined the number of trained seniors who continue to use fixed route.

Concept: Conceptually, travel training can be seen as a next step after information and referral. Once senior has information about a particular transportation service that may be appropriate for that senior's travel needs, the senior may need assistance in learning to use the service. This is particularly true for fixed-route service, which can be intimidating for anyone, young or old, unfamiliar with the service.



It is recommended that travel training include both group sessions as well as individualized training. Some of the training could be provided by volunteers, as is done in various communities.

Implementation and Resources: Implementation of travel training should be coordinated with an information and referral service. Information on specific travel training could be available through a central information and referral service, which would provide a specific referral to a training program appropriate for the transit service that can meet the person's travel needs. The actual training will need the involvement of the individual transit systems in the region, which would supply trainers, either staff or volunteers, to conduct the training. Travel training must also include training on how to transfer among transit providers in the region.

Based on available data, it has been estimated that individualized travel training for a person with a disability is about \$1,000 per person if provided through a transit system. ¹³ However, it will likely not take the same length of time to travel train a senior as a person with a disability. The actual times will vary significantly depending on the specific seniors, their training needs, and their level of mobility. For planning purposes, it can be estimated that individualized travel instruction would be one full day at a minimum. To the extent that volunteer trainers are used, costs could be reduced.

^{13 &}lt;u>Specialized Transportation Study – Final Report</u>, prepared for the Washington Metropolitan Area Transit Authority, by KFH Group, Inc. and TranSystems, April 13, 2004.

Seamless Coordinated Public Transportation

Many of the participants in the qualitative research phase would like to see the various local public transportation services "consolidated," noting that it would be easier to get around without the often confusing and difficult multiple transfers that may be required. On a more basic level, getting around on the different transit service is difficult because rider information varies by providers. Some of the focus group participants noted that the formats of the bus schedules vary by provider, making it difficult to try to figure out *how* to transfer among transit systems.

Concept: A "seamless," coordinated public transportation system would pull together the various local transit services into a more integrated system to facilitate regional travel and transferring, as well as marketing and public information. Significantly, WMATA has spearheaded the Regional Fare Collection Integration project since 2001, an ambitious project that will allow riders to transfer "seamlessly" among the 17 different fixed route systems in the Washington and Baltimore region, including Metrorail and Metrobus and the six fixed route providers in Northern Virginia. Costing approximately \$150 million region wide, the project, once implemented, will allow transit riders to use SmarTrip cards with stored value to ride any of the region's fixed route services and to transfer among them. The basic functions of the SmarTrip cards are planned for implementation by 2006. Enhanced functions for the cards, such as automatic deductions from the card-holder's account such as occurs with the highway *EasyPass* transponder, will follow.

A common fare card will greatly facilitate transferring among systems, as well as data collection on ridership and transit trip patterns that will enhance planning capabilities. Seniors will still need an accessible and effective source of information in order to access public transit and to learn what routes to take on which fixed route systems for their trips. This latter function would be provided through a centralized information and referral service, described above. Moreover, they may need help learning how to ride transit and negotiate transfers. This could be provided through individualized travel training, also described above.

Implementation and Resources: Detailed development of the integrated fare system is underway, with actual implementation expected sometime in 2006. Northern Virginia's effort is managed through NVTC, with the Northern Virginia share of the total cost estimated at about \$6 million. This effort includes fully integrating local provider fare collection technology and procedures into the regional system. New resources are not necessary for this recommendation.

Targeted Marketing and Incentives for Seniors

Some transit agencies have tried specific marketing campaigns to attract seniors, including, in many cases, fare incentives to encourage use. San Diego, California implemented and sponsored for several years a very well-received marketing strategy aimed specially at younger seniors, to encourage them to try transit before they get to a point where they must restrict or give up driving. The marketing campaign, known as *Seniors On the Go*, gave seniors throughout San Diego a free week of public transit during June, with targeted marketing and informational materials that provided, among others items, specific directions on how to take transit to various local popular destinations, such as the historic shopping district known as Old Town. One of the objectives was

to make transit *fun*. In the campaign's first year, 90,000 seniors picked up the Transit Information Kits and nearly 50,000 seniors actually used transit. In the second year, 100,000 kits were distrib-

uted and more than 60,000 seniors took transit trips during the free week. Funding for the campaign was provided by several sources, including the San Diego transit agency, AARP, and several private sponsors such as a major grocery store chain. All participants in the campaign had great enthusiasm for the project. Survey results showed that almost 25 percent of participating seniors were firsttime-ever transit users.¹⁴ A staff member from one of the sponsoring organizations commented that "the transit centers were a sea of gray hair" during the free week. Reportedly, the seniors felt very comfortable trying transit that week as there was a real sense of "safety in numbers."

Orange County, California provides another example of a comprehensive marketing campaign to encourage seniors to ride transit. Called Senior Marketing and Outreach



Program, the Orange County transit agency's campaign began in 2002 with a specific objective of increasing senior ridership. Targeting first the 30 different senior centers throughout the large county and then senior housing facilities, the campaign created marketing and informational materials tailored to each community in the county, so that seniors would have transit information specific to their own community. And similar to the San Diego marketing campaign, Orange County provided information on how to take transit to various popular destinations that seniors like to frequent –trying to make transit *fun*. Over the first year or so of the campaign, the transit agency spent approximately \$200,000 on outside assistance for developing marketing materials and consulting assistance; the second year involved primarily transit agency staff time and inhouse marketing materials. Efforts were considered successful: the transit agency saw increased senior ridership, from about 4 percent of total ridership in 2001 to about 10 percent by 2005. 15

Concept: It is recommended that NVTC consider sponsoring a comprehensive marketing campaign targeted to seniors, and specifically including younger seniors, to encourage fixed route transit use. Such a campaign should follow implementation of other recommendations, including the information and referral service, travel training, and senior sensitivity training for drivers, to help improve the "infrastructure" of public transit before a marketing campaign.

TCRP Report 70, Guidebook for Change and Innovation, Transportation Research Board, Washington, D.C., 2001, pages II-113 – II-115.

The transit agency acknowledges that a small proportion of the reported increase may stem from implementation of more sophisticated fareboxes yielding more accurate ridership counts.

Implementation and Resources: Implementation would involve detailed planning and development, including the identification of other relevant organizations that could share sponsorship and funding. Other efforts would be needed to design, print, and distribute the marketing and information materials, and there would be follow-up evaluation of ridership impacts. Staff time of sponsoring organizations would also be necessary. Additional costs would include the foregone revenues with the provision of free-fares, should this be included as part of the campaign. Costs will depend to a great extent on the amount and design of marketing materials and whether such materials can be produced "in-house" by a participating organization. It is estimated that such a campaign would be planned and implemented within one to two years of concerted planning within a direct budget (not including staff time) of less than \$100,000.

Senior Sensitivity Training for Drivers

The drivers of public transportation and other alternatives such as taxis were discussed by participants during the qualitative phase of the research. Discussion focused on the ability of drivers to help seniors, including both the drivers' willingness and their ability to do so given the type of transit mode. Additionally, when describing their ideal transportation system if they could no longer drive, many of the participants included characteristics of the type of driver they would like: the driver should be pleasant and patient, safe, knowledgeable of the area and able to speak English. Some said they would like to have the same driver each day, so they can feel comfortable with the driver and develop rapport.

The need for more and better driver training received considerable attention during the broker focus group. Among the many comments included the following: transportation providers must have a "supportive" attitude to seniors, as they often "hate" not being able to drive themselves; providers need to be kind, patient, and trained to know that seniors will often move a lot more slowly. One participant suggested that the driver training include a dialogue between drivers and seniors, which would foster improved understanding.

Fixed-route transit systems recognize that their drivers are often not specifically trained to meet the needs of seniors, such as taking extra time and care when serving them.¹⁶ While most public transportation providers give sensitivity training to their drivers, focusing on appropriate ways to serve and respect riders with disabilities, there may not be specific training on serving seniors.

The importance of courteous and caring drivers is specifically recognized in the Beverly Foundation's *Five A's of Senior Friendly Transportation*: "acceptability," one of the five "A"s addresses the importance of user-friendliness, which includes transit operators who are courteous and helpful and conditions such as vehicle cleanliness.¹⁷

Additionally, research on improving fixed route transit services to meet the needs of seniors found that "drivers," as a service attribute, are very important to seniors. ¹⁸ While adding additional

TCRP Report 82, Improving Public Transit Options for Older Persons, Vol 2, Final Report, Transportation Research Board, 2002.

¹⁷ Transportation Alternatives for Seniors: High Cost Problems and Low Cost Solution, by the Beverly Foundation, Pasadena, CA, 2003. The 5 A's include: availability, accessibility, acceptability, affordability, and adaptability.

How Best to Serve Seniors on Existing Transit Services, by Koffman and Salstrom; paper presented at the Annual Meeting of the Transportation Research Board, January 2002.

transit service was rated as the improvement that would likely have the greatest impact on increasing senior ridership, other improvements could have a major impact on senior ridership as well. Of a variety of service attributes that were tested in the research (e.g., fares, bus stop information, telephone information, vehicle cleanliness, service frequency, on-time performance, reliability, and drivers), drivers were among the most important attribute for seniors. Moreover, seniors rated service attributes in general as more important than non-seniors, suggesting that service improvements for the most highly ranked attributes, which include drivers, will have a greater impact on senior ridership than non-senior ridership.

Concept: Driver training for the region's transportation providers should specifically include information on effectively serving seniors. This is particularly true for fixed route providers, though driver training for all modes would benefit from a renewed focus on serving seniors. Much of this training will be similar to material for training drivers on serving persons with disabilities, but should specifically recognize and acknowledge senior riders, with their need for patience and reassurance and often extra time to board, get seated, and then alight the vehicle. Training should also include something as seemingly basic as providing a friendly face to boarding passengers. The bus driver is typically the first face-to-face contact the rider has with the transit system.

Given that the transit systems are responsible for ensuring driver training, NVTC should encourage the systems to focus driver training attention on the specific needs of seniors. NVTC can encourage the transit systems to use available materials on driver training, such as those provided through Easter Seal's Project ACTION.¹⁹ NVTC might also develop a "speakers bureau," with volunteer seniors who would be willing to speak to drivers during their training, and this could be coordinated with the local transit systems.

A more intensive version of this concept would involve the development of a special driver training module on senior sensitivity that could be provided to the local transit systems for incorporation into their own training. This effort would need to include coordination with the local transit systems to find out more specifically what their current sensitivity training involves and what additional aspects would be useful and effective. Such a focused training session on senior sensitivity training might involve a one to two hour module, depending upon current training curricula, with an instructor lesson plan, visual and other aides and materials, and possible inclusion of role playing and/or a guest senior or seniors to provide the riders' perspective. Development of this type of session would need professional assistance, bringing experience in development of training curricula. Alternatively, professional staff from a local organization serving seniors may also be willing to develop such a training module, working collaboratively with training staff from one or more transit systems.

Implementation and Resources: Implementation of driver sensitivity training is the responsibility of local transit agencies. At the first level, NVTC's role could be encouragement and support. The transit systems should be encouraged to use available materials through Project ACTION and contact their local senior centers and/or Area Agency on Aging to solicit input on

Among resources available through Project ACTION includes a Facilitator Manual for Transportation Solutions for Caregivers, which presents a training session on providing transportation to seniors, and a Solutions Package for Adult Day Services Transportation Programs. While these are not targeted specifically to a transit driver, they are useful and could be adapted for transit driver training.

other material and specifics that might be included with local driver training to enhance drivers' sensitivity to seniors. Transit agencies should also be encouraged to bring in and involve seniors as guest speakers to share their perspective on transit use and effective measures to assist seniors. This could be done individually by the transit systems or through a centralized "speakers bureau" that could be developed by NVTC. The guest speakers would then be included as part of ongoing driver training. This is a low cost strategy that could yield positive results in improved customer service to seniors.

At the more intensive level, this concept would include development of a driver training module on senior sensitivity, which would involve professional or donated time to prepare a brief driver training session on sensitivity to the needs of seniors.

Low Floor Buses

20

The most distinguishing difference between a low floor bus and a conventional "high floor" bus is the boarding and alighting. With the lowered floor, there are no steps for entry and passengers in

wheelchairs enter by ramp, rather than a lift. The ease of entry and exit is a major advantage to a low floor bus. Seniors and other riders do not have to climb up and down three 9-12 inch steps. A rider boards and alights by stepping off the curb on to the bus, which is typically less than 3 inches above the curb.

Another advantage of low floor buses is a shorter dwell time, that is, the time spent at stops for passenger boarding and alighting, since passengers are able to get on and off more easily. This provides an operating time saving over the length of the route.

More than one-fourth of seniors responding to the telephone survey indicated that *boarding a vehicle* is a problem with public transportation. When issues with public transportation were probed during the qualitative phase of the research, a number of the participants indicated that getting on a bus is problematic. One participant noted that a "satisfying transportation option" is one where she will be able to simply "get on the bus."

Figure 4.1: Low Floor Bus



Figure 4.2: Standard Bus



Since their deployment in the US in the early 1990s, low floor buses have become increasingly popular. Many transit agencies recognize the improved potential such buses have for all riders, not just seniors and others who may have difficulty with large bus steps. Transit riders generally like the ease of boarding and alighting, and seniors and persons with disabilities have shown an even stronger preference.²⁰

TCRP Report 41, New Designs and Operating Experience with Low-Floor Buses, Transportation Research Board, Washington, DC, 1998.

Within the region, WMATA has a policy to acquire only low floor buses with new bus purchases. Currently, of their 1,440 buses, 21 percent are low floor, and by 2005/2006, with expected delivery of new buses, half of the buses will be low floor. Among the fixed route providers in Northern Virginia, there are few low floor buses currently operating. The city of Falls Church's fixed route service, known as George, uses 30-foot low floor buses. The Fairfax Connector, however, currently has no low floor vehicles, but reported that it has plans to move towards acquisition of such vehicles.

The cost of a low floor bus is somewhat more than a regular bus. Moreover, the seated capacity is slightly less, with 31-40 seats in low floor buses versus 43-45 for standard buses, given design changes necessitated by the lowered floor.

Concept: The acquisition of low floor buses for the region's fixed-route providers would enhance convenience for all riders, but particularly many seniors and others with mobility limitations, as boarding and disembarking the bus are significantly easier with a low floor vehicle. Additionally, with the easier entry and exit, there are operating time savings given the shorter time needed at stops for passengers to get on and off. NVTC should recommend to the region's fixed route providers that they seriously consider acquisition of low floor buses for applications where this type of vehicle is appropriate.²¹

Implementation and Resources: This strategy is one that would be adopted and implemented by the region's fixed route transit providers. NVTC should recommend to the transit providers that they consider acquiring low floor buses to improve service and passenger convenience.

Service Routes: Local Community Routes, Designed for Seniors, Using Smaller Vehicles

The popularity of local neighborhood or community routes, operating with smaller vehicles and designed to link concentrations of senior residences with retail, medical and other facilities, grew across the country with reports from Sweden in the early 1990s of the effectiveness of that country's *service routes*. Service routes are essentially routes designed to connect senior housing and areas with concentrations of seniors with local shopping, medical offices and other destinations, typically operating on smaller streets and with smaller vehicles.

Several jurisdictions in Northern Virginia operate such neighborhood services targeted to seniors, though they may not be known as service routes. Arlington County, for example, operates "Senior Loop" service, which has three "loop" routes that operate scheduled service to link four senior housing facilities with local grocery stores. Alexandria also has scheduled service over pre-determined routes that are designed for seniors. Given the higher density and mixed use environments that exist in these two jurisdictions, such scheduled, route services are more feasible than in areas with lower densities and more segregated land uses. Within its suburban environment, Fairfax County also operates specialized services that are essentially service routes. Known as

Low floor vehicles may not be appropriate in areas with difficult terrain or with high-crowned roadways.

FASTRAN "shopping clubs," the County operates several different services designed to link senior housing facilities with local grocery stores. Depending on the type of senior housing, these shopping services operate on a scheduled basis with no need for advance reservations or, where housing is more dispersed, seniors must call in advance for the service.

The concept of service routes was introduced in the qualitative research phase of the study as one of four service concepts to serve seniors. More than two-fifths of the participants indicated that the concept was appealing, with just under half saying they would likely use such a service. Those that were positive about the concept included seniors who live in senior communities and either have or are familiar with a similar transportation service. Many of these participants said the service was easy and convenient to use. A number of these seniors say service routes would be useful as a supplement to other modes, given that there would still be various other individualized locations to which seniors need access (e.g., medical appointments that are not close by). However, some of the participants indicated that they could not use such a service given their limited ability to walk; such participants need personalized door-to-door service. Still others remarked that the bus could not efficiently serve their subdivisions of single family homes.

Concept: Service routes can be implemented in areas where there are concentrations of seniors that need improved access to local shopping and other retail and activity centers. Service routes may be provided in addition to regular fixed route services. Service routes may also be provided as mid-day transportation in areas with concentrations of seniors where regular fixed route service operates only during peak periods.

For preliminary planning purposes and as a prototype of the type of planning that could be conducted to determine areas for service route consideration, this study has used Fairfax County as an example. Assessing the suburban parts of Fairfax County classified as Community Type 2 for this study, concentrations of elderly, defined as census block groups with more than 300 seniors 75 years and older, have been identified and then existing fixed route services reviewed. This analysis has found that among the six "senior concentrated areas" in Fairfax County, one may merit consideration of service routes given existing conditions; this is the Mantua area, an older neighborhood east of the city of Fairfax. Appendix 4 provides a detailed description of the analysis used to identify the senior concentrated areas, including maps of the identified areas.

Given the expected growth in senior transportation needs, it might be useful for the region's jurisdictions to periodically assess their local demographics with a specific focus on senior transportation needs, using a planning process similar to the one used here and described in Appendix 4. Should trends evolve where neighborhoods "age" with seniors remaining in their homes as long as they can, there will be naturally occurring concentrations of seniors and senior transportation needs. Such neighborhoods have been called NORCS, or, naturally occurring retirement communities. These neighborhoods may then be considered for some type of specialized transportation service, such as service routes.

Implementation and Resources: Planning and start up of a service route or routes would require more detailed service planning at the transit system or jurisdictional level. This would involve more closely examining the specific locations within the areas shown to have higher

concentrations of seniors, such as senior housing or apartment buildings, and locations of neighborhood retail areas and medical facilities. Existing transit services would also need to be assessed, to determine the level of service provided to that local area and the types of destinations that are served. These analyses will identify possible areas that deserve specialized services.

Planning should also involve input from the senior community. This might come from seniors and staff at the local senior centers or organizations that serve seniors. Such input can help determine the specific retail areas that seniors would like to access.

Once origin and destination locations are determined, route planning will need to balance coverage with length of route. Extra time will need to be built into the route schedule to allow the driver time to assist with boarding and disembarking, and as needed, with packages. The schedule of the route may have variations, to expand the destinations that are served, so that on Mondays, Wednesdays, and Fridays, for example, the route may focus on local shopping and retail areas. On Tuesdays and Thursdays, the route may serve the library, post office, and other such locations. Schedules should be set to provide choice and flexibility, with at least three to four round trips per day, possibly more depending on the length and travel time of the route.

The cost for a service route will depend on the number of service hours that are operating, the number of vehicles required, and the type of operator. For example, a route that operates 9 hours per weekday (from 9 am to 6 pm) with two vehicles in service and is operated by a private operator could cost roughly from \$280,000 to \$346,000²² on an annual basis.

Other Transit Service Recommendations

Northern Virginia's transit services have largely been designed to cater to the working-age population. The spine of the system, Metrorail, is designed to bring commuters to jobs in the downtown business district. Virginia Railway Express, PRTC's OmniRide and Loudoun County Transit also accommodate commuters' schedules and employment destinations (downtown D.C., the Pentagon, Rosslyn, and Crystal City). Many local bus lines are routed to bring passengers to the Metrorail system, with the most frequent service during the peak morning and afternoon commuting hours. Many bus routes in the Northern Virginia suburbs do not offer mid-day or evening service.

During the focus groups, the study team repeatedly heard from seniors that they would like more convenient transit service. They specifically mentioned the desire to travel outside the rush hour period. More than one focus group participant mentioned the desire to attend Kennedy Center or after-hours Smithsonian Museum events such as films and lectures, but did not feel comfortable driving after dark. Taxis were considered too expensive for some or the pickups unreliable, especially for those using government subsidized vouchers. Nearly half of survey respondents reported a problem with public transportation "going where one needs to go."

Given that Northern Virginia's senior population has more than tripled in the past 30 years, and is expected to grow to 14 percent of the total population, transit providers are strongly recommended to review their bus routes and schedules with an eye toward the specific needs of seniors,

especially mid-day service to shopping centers and medical facilities. As pointed out in Chapter 2, daily travel for older adults peaks in the late morning between 10:00 AM and noon. Over 60 percent of seniors' daily travel is done between 9:00 AM and 3:00 PM. Seniors take a significantly higher percentage of daily trips for shopping as compared to younger adults and they take a higher percentage of trips for medical reasons.²³ Commuters may also benefit from these service changes. The Northern Virginia Transportation Authority found that in 2005, the single most common home-to-work commute is *within* the inner suburbs, which include Fairfax County and the independent cities of Fairfax and Falls Church (22%), and the third most common commute is *within* the outer suburbs (13%).²⁴

In addition to more mid-day and evening service and designing bus routes to connect residential areas populated by seniors and nearby shopping, transit providers could ease seniors' travel by providing benches at bus stops and conveniently placing bus stops close to the front door of popular destinations. For example, where feasible, the bus should be routed onto a frontage road where passengers can board and alight close to the entrance of the store, rather than having to walk across an expansive parking lot to reach a stop along a major arterial. As this recommendation may entail scheduling and other technical problems for some routes, the better solution can be found in recommendations pertaining to the built environment. Land use decisions that foster compact, mixed-use development eliminate these large surface parking areas between the street and storefront, enabling transit agencies to provide front-door service without the bus ever needing to leave the street.

2. Recommendations for Supplemental Transportation Services for Seniors

Recognizing that fixed-route services, even with improvements, cannot meet the needs of seniors who are more frail and need more personalized assistance as well as those who do not live nea fixed-route service, supplemental service must be available. Recommendations in this area include volunteer transportation services and taxi subsidy services.

Volunteer Transportation Services

The concept of volunteer transportation has private citizens voluntarily providing rides in their own private cars to seniors who need trips. Typically, there is an organization that matches volunteers with transportation needy seniors. Such an organization usually schedules the trips and screens driving records of volunteers. There may be modest fares for the service or donations accepted. Volunteer transportation programs exist throughout the region and there are many variants to the programs (see, for example, volunteer programs in Arlington, Loudoun, and Prince William counties in Table 4-2).

Volunteer transportation was introduced to participants of the study's qualitative research phase as one option to improve service for seniors. Several of the participants had experience with such programs, including serving as volunteers to drive other less mobile seniors. One participant

Collia, Demetra V., Joy Sharp and Lee Giesbrecht. The 2001 National Household Travel Survey: A Look into the Travel Patterns of Older Americans. Journal of Safety Research 34 (2003) p. 461-470.

²⁴ Inner Suburb to District is the second most common commute pattern. Thirty-eight percent of all Northern Virginia commuters work in the District of Columbia, Arlington, or Alexandria. QSA Research and Strategy. Public Opinion About Transportation Issues in Northern Virginia. A telephone survey report prepared for the Northern Virginia Transportation Authority. October 2005. p.13 & 18.

noted that he has served as a volunteer driver for a program and in exchange has gained "credits" so that his wife can use the service when he was not available to drive.

One of the advantages of volunteer transportation is that it more closely resembles the preferred travel mode for the region's seniors – that is, travel by private car – than many other transportation options (except for driving oneself). For those seniors who cannot use fixed-route service either because of availability or mobility limitations, or they need more assistance than provided through other specialized transportation services, a volunteer transportation program may be ap-

propriate. However, there is the issue of recruiting an adequate number of volunteer drivers to provide an effective service. Some communities are reportedly more successful than others in recruiting individuals to provide rides for seniors. To some extent, the ability to find volunteers may depend on the level of reimbursement that is provided to volunteers. With the dramatically increased cost for gasoline, some sort of reimbursement for volunteer drivers may be more important now than in the past.



Volunteer transportation service gained mixed reactions from the participants in the qualitative research phase of the study. Generally, while they believed that such a

25

service would provide personalized transportation service – an important characteristic for most of the participants – they had concerns about training and safety issues. There were also concerns about the concept being "too idealistic" and that, because volunteers do not have the commitment of paid employees, it may not be completely dependable.

Volunteer transportation programs have gained significant attention in recent years, particularly as a way to supplement existing public specialized transportation services and an important service in rural areas with limited public transportation. These volunteer programs are able to provide the highly personalized assistance needed by some older and frail seniors that most public specialized transportation services cannot provide. For example, the volunteer driver, in addition to driving a senior to and from a medical appointment, can help the senior into and from the doctor's office and may also wait with the senior during the appointment. A volunteer may also be able to provide a *series* of trips for a senior, that is, from home to a medical appointment, from the medical appointment to the pharmacy to fill a prescription, and then back home. This is called *trip chaining* and is difficult if not impossible for a public provider to provide this higher level of service, given that each trip, with a unique origin and destination, must be booked and scheduled individually. A recent GAO report²⁵ found that such trips with multiple destinations as well as trips where packages must be carried are among the unmet trip needs for seniors who cannot drive themselves.

Concept: To provide the more personalized transportation that many older seniors need, it is recommended that NVTC support the development of a new funding resource for volunteer

Transportation Disadvantaged Seniors – Efforts to Enhance Senior Mobility Could Benefit from Additional Guidance and Information, Report to the Chairman, Special Committee on Aging, US Senate, by the GAO, August 2004.

transportation services for seniors. Funding support could be accomplished by providing funding to existing programs, or alternatively through an innovative volunteer program modeled after the program in Portland, Maine.

Implementation and Resources: There are at least two approaches to implementing volunteer transportation services in Northern Virginia. The first approach would be to support the existing programs, of which there are several, enabling them to serve more seniors who need specialized transportation. There is currently some public financial support for several of the region's volunteer programs: Prince William County, for example, provides funding on a contractual basis to a local non-profit agency that uses volunteers to provide transportation to those who cannot use the county's public bus service.

Support could be provided through a grant program possibly through the state, with an established funding level that could be used to support qualified awardees on an annual basis. To support its state's volunteer transportation programs, Maryland has just established a pilot Senior Rides Demonstration Program in the 2005 legislative session. This grant program is providing \$100,000 for the first year of the demonstration to qualified volunteer transportation programs that serve low and moderate-income seniors. The program is planned to provide funding for three additional years as well. In its inaugural year, Maryland awarded funding to five non-profit agencies, out of eight applications submitted and evaluated, to support existing or recently-started volunteer transportation programs. Importantly, as part of the application process, organizations are required to demonstrate their risk management strategies to address liability and help ensure driver and rider safety, and they must provide periodic reports on their progress and service. The organization must also contribute no less than 25 percent of total costs for its volunteer transportation service.

NVTC could support development of a similar grant program, designed to provide support to currently operating or new volunteer transportation programs. The grant program could be designed to support any particular policy or programmatic strategies that might be desired for the region. For example, volunteer transportation services could be useful to provide the longer distance, interjurisdictional trips than many of the local specialized transportation programs cannot provide because of service area boundaries. The service might be available to all transportation-needy seniors, with a sliding scale of rider fees, recognizing that lower and moderate income seniors have more limited ability to pay for the service. Needs for a specialized transportation program to serve more than only low and moderate-income seniors were identified through the project's qualitative research phase, with one participant in the brokers focus group noting that income restrictions "leave some seniors stranded."

A second approach would be a more formalized, region wide volunteer transportation program, such as that developed by ITN Network of Portland, Maine. This program, developed through research funded by several government agencies and AARP, establishes a non-profit agency that can be joined by anyone in the community who supports transportation for seniors. Members who use the service open accounts and pay for their rides by the mile. Transportation is provided by both volunteers and paid drivers. This model envisions that public funds are used to start up the service and then private funds are used for sustainability, coming both from fares and

voluntary local community support, rather than public subsidy. There are several features unique to the model, including: CarTrade, where older people who stop driving may trade their no-longer-used vehicle to pay for their rides; Transportation Social Security, where volunteer drivers store credits for their own future mobility needs; and gift certificates from adult children that seniors can use for their transportation needs. A number of ITN replications have been planned, including in Santa Monica, CA, Orlando, FL, and Mercer County, NJ. The Santa Monica replication is the furthest along, with service start-up expected by spring 2006, after one year of detailed planning and development.

The formal ITN model is proprietary, and there are requirements for replication of the program. Pursuit of the ITN model involves, first, an application process, which includes an analysis of the community or region to determine the suitability of the ITN model. The analysis includes, among other aspects, review of demographics, description of leadership and entrepreneurial skills to guide the effort, fundraising and resource development potential, and availability of existing transportation resources. Should the ITN model be determined appropriate, based on the application and analyses, the next steps are start-up costs and more detailed planning and development. The start-up cost has been identified as \$125,000, with \$35,000 provided to ITN for training and support and \$90,000 for the first year's planning and development. Funding for the first year can come from public sources, but ongoing costs must not be public subsidy. After the first year, there are ongoing but diminishing yearly costs for the replication, which provide for, among other things, the computer support from the ITN headquarters in Maine. For planning purposes, it was estimated by ITN staff that it would take a community approximately five years and roughly \$500,000 to begin the process and reach a fully sustainable ITN replication.

Taxi Subsidy Services

Five jurisdictions in Northern Virginia currently sponsor and fund subsidized taxi services. With these programs, the jurisdictions sell coupons or vouchers to qualified seniors, often those of low or moderate income, at a predetermined discount for their use on private taxi services. Some of the jurisdictions purchase coupon books that have been discounted for seniors by the taxi company, and others print their own coupons for program use. The taxi drivers accept the coupons at their cash value and redeem them at their companies. There is typically very limited data on the use of the programs, often just the number of coupon books that have been sold. The lack of data hampers complete evaluation of the programs and their effectiveness in meeting senior transportation needs.

The characteristics of subsidized taxi service fit many of those desired most strongly by seniors for their transportation if they cannot drive themselves or get rides from family or friends. In the qualitative research, senior participants repeatedly stated that they prefer personalized transportation that provides service door-to-door with little advance notification.

However, current taxi subsidy programs do not always meet seniors' expectations or trip needs. Participants in the qualitative research



phase noted that taxis are not always reliable for return trips, sometimes leaving seniors stranded at doctors' offices or other locations. Some also noted that drivers sometimes seem not to like the coupons as payment. There have also been reports of drivers refusing to accept the coupons for payment. Other participants noted that drivers are not always respectful of the seniors. And it was mentioned that seniors do not always understand tipping procedures; without tips, taxi drivers are less enthusiastic about the "coupon" trips.

Respondents to the telephone survey also provided perspective on taxi services (though the survey did not distinguish *subsidized* services). Respondents who had used taxis in the past month (somewhat less than 15% of respondents) indicated that the most significant problem with taxis was their costs, and other problems included taxis being late, communicating with drivers, and taxis not showing up.

Given that taxi service is privately provided and drivers are essentially independent businesses, with each driver trying to earn adequate income within the taxi rate structure that is regulated by the jurisdictions, costs for taxi service will be significantly more than public transit modes such as bus and rail. Yet even with the subsidy, some of the participants in the qualitative research noted that the cost for trips was high. According to one of the Northern Virginia cab companies, an average taxi trip in the region for the senior voucher programs is roughly five to six miles, with a cost of about \$10.00. A 20 percent tip would mean a total trip cost of about \$12.

Use of coupons for payment was met with mixed reviews by focus group participants when the concept of subsidized taxis was raised. On the positive side, some participants said that they could keep some coupons in reserve, to use as needed. And also, it was mentioned that the taxi service could be used as a supplement when needed, for example, in bad weather, rather than as a primary mode of transportation.

Concept: It is recommended that NVTC pursue several strategies to improve the current taxi subsidy programs. These strategies have the potential to improve the administration of the programs, easing payment procedures for riders, drivers, and taxi companies, and also provide data on program use to assess program effectiveness. The strategies also attempt to address taxi reliability and driver sensitivity to seniors.

The first strategy is a pilot project to support a more sophisticated payment scheme for taxi subsidy trips that would improve administration and data collection. This would involve the use of a swipe (or transaction) card, a card reader in the taxis, and an Internet web application to support the collection of data. This type of automated payment scheme would provide several benefits: it would eliminate the need for dealing with paper coupons, easing payment for the riders and drivers as well as administrative efforts for both the jurisdiction and taxi company; it allows faster payment to the taxi companies from the sponsoring jurisdictions, which should decrease taxi companies' costs associated with the subsidized programs; and it will provide comprehensive data on usage, something that the jurisdictions do not have now.

The swipe card is similar in size to a credit card, with a magnetic stripe. The card can be designed as a debit card, with the ability to add funds to the card (funds from the rider, sponsor, or both)

or as a credit card. Importantly, the card is designed only for the taxi subsidy program, with no rider name, address, social security number, or other important identifying information embedded on the card. The rider is identified on the card by a unique number given for the program. The rider uses the card to pay the driver, and the tip can be included in the payment. The card reader may range from a Nextel phone with a card reader capability to a more sophisticated mobile data terminal with GPS (Global Positioning Satellite) and electronic receipts, the latter being roughly \$1,000 per unit. It is also possible to provide the information over two-way radio dispatch if that is the only technology used by the cab company. The Internet web application provides the link between the card and reader, collecting data on the trips. At least one company that has developed the software for the automated swipe cards will also serve as the "administrator" of the program, adding funds to the cards as needed and developing reports on usage. Alternatively, the public agency sponsor can administer the program, with access provided to the web application to carry out the administrative functions. The payment scheme can be customized for the program sponsor, for example, the public agency may want to subsidize trips only up to a set dollar amount. The cards would then be programmed with this restriction.

Costs for the automated payment scheme include: the cost of the cards, which ranges from \$0.40 to \$1.00 per card; costs for the card readers, which go up to \$1,000 for the more sophisticated machines; and the web application, which will vary by the volume of trips, but ranges very roughly from \$0.50 to \$4 per trip, depending upon how much of the administrative function that the software company handles. Taxi companies are increasingly improving their own technology with more sophisticated meters and mobile data terminals and may be encouraged to upgrade should public agency sponsors require the technology for the subsidy programs. So, depending on the taxi companies that might be involved, the public agency costs may be focused on the cards, web application, and subsidy for the users rather than the in-vehicle hardware.

The second strategy addresses issues that seniors reported when discussing the taxi subsidy programs during this study. These include: problems with coupon payment, the reliability of taxi service, and driver training issues. In terms of the coupons, for some of the taxi companies, it appears that the drivers are not able to redeem the coupons at their face value. This is likely a key reason that drivers appear not to like the subsidized trips. Based on a national survey by the Taxi, Limousine, and Paratransit Association, 60 percent of taxi companies charge their drivers a "processing fee" for redeeming payment by credit card, vouchers, and coupons; on average, the processing fee is 5.7 percent of the face value of the non-cash payment. Reportedly, the processing fee tends to be higher with the smaller taxi companies. However, 40 percent do not charge such fees.

One approach to address this issue would be to ensure that the price that the jurisdictions pay for the coupon books for the subsidy programs allows the drivers to redeem the coupons at their face value, so that if the driver is paid \$15 in coupons for a trip, he would get \$15 in cash at the end of his day, rather than \$13.50 or some other discounted amount. This strategy may increase the costs of the subsidy programs to the jurisdictions, but it will also mean that the programs will be more attractive to drivers, which in turn should improve their willingness to provide the coupon trips and therefore improve service to seniors (and other coupon users).

26

It is unlikely that the taxi swipe card could be integrated with the regional SmarTrip card at least in the short term, due to cost and technology issues.

The reliability of taxi service is impacted by many factors, many of which are not controlled by the taxi companies since the drivers are independent contractors. Recognizing this, a few ideas are offered that may help improve reliability:

- Working cooperatively with the taxi companies, consideration could be given to placing signage at large medical complexes and other major destinations that indicates where taxi riders should wait for their cab. This may help drivers and riders "find each other" and avoid missed trips or drivers thinking the rider is a "no-show."
- If seniors have cell phones, they should be encouraged to use them when taking taxis. If the taxi dispatcher has the cell phone number of a rider, it could be very useful if there are issues in finding the rider and her correct pick-up location or even finding the rider at locations with numerous people. For return trips home, seniors can also use their cell phones if they need to call about a late cab, which means they would not have to go back inside and risk missing their cab if it comes while they've gone inside to phone.
- Seniors should be encouraged to give tips for taxi service. During this study's focus group research, it was mentioned that seniors do not always understand tipping procedures. Information on the taxi subsidy program provided to eligible seniors should make clear how the seniors can tip and that they should tip as appropriate (can the coupons be used for tips? what is the appropriate amount to tip? can a combination of coupons and cash be used? etc.). Taxi drivers will be more willing to take the coupon trips, often shorter and less profitable than other trip types, if the seniors provide tips, and this may help service reliability.

In terms of driver training and understanding senior riders, the cab companies that participate in the taxi subsidy programs should be encouraged to provide initial and ongoing periodic training to drivers on sensitivity to seniors. Similar to the concept discussed above on senior sensitivity training for transit drivers, there should be a minimum level of training for taxi drivers who provide the subsidized service on serving seniors. Such training need not be lengthy but would emphasize the need for patience, clear speaking, and provision of assistance in getting into and out of the taxi vehicle. A training session could also involve a senior or seniors to share their perspective on taxi travel to help drivers better understand their senior customers.

Implementation and Resources: Implementation of the first strategy, a pilot to test use of the automated payment scheme for the subsidy program, would be the responsibility of both a sponsoring jurisdiction and the participating cab company or companies. Efforts would include arrangements with a provider of the swipe cards and web application and coordination with participating cab companies to ensure the capability to read the cards. Details for program administration would need to be worked out. Also, information and marketing would be needed to inform the seniors of the program changes. The city of Baltimore's Commission on Aging uses such an automated payment scheme for its taxi subsidy program and, according to a program manager, while there was resistance from the seniors initially, over time the riders grew to appreciate the cards, their ease of use, and the fact that a lost card can be replaced with its remaining value, something not possible when coupons were lost or misplaced.

Addressing the fact that not all coupons translate dollar for dollar for the drivers is a strategy that could be pursued immediately, and would also need to be addressed if the option of automated

payment cards is pursued, as efforts should be made to ensure that the administrative fees associated with the scheme do not fall disproportionately on the drivers. The sponsoring jurisdictions should ensure that their programs are structured so that the taxi drivers do not receive discounted payment for seniors' discounted travel. This may involve greater costs for the jurisdiction, which will depend on the additional purchase price that might be needed and the volume of coupons that are purchased and redeemed, but may make the drivers more willing to serve the seniors and provide more reliable service.

Suggestions for improving service reliability involve coordination with taxi companies on whether signage at large activity centers with multiple entrances would be helpful and, if appropriate, installation by the jurisdiction or the activity center of signs at the specified locations. The other suggestions are targeted to the senior users of the taxi programs, with specific information on program use, thus would be implemented by the sponsoring jurisdictions. These are very low cost strategies.

Senior sensitivity training for taxi drivers would be pursued by the taxi companies. This is envisioned as a short session that would provide useful suggestions and tips to drivers on how the taxi coupon programs work and how to effectively serve seniors, providing good customer service to the seniors and improving their own profitability. If a "seniors speakers bureau" is developed to augment transit driver training as suggested in an earlier recommendation, this resource could be made available to the taxi companies as well.

3. Recommendations for the Built Environment

The success of the transportation system is highly dependent on the degree to which the built environment supports its success. As discussed in the previous chapter, the built environment does appear to have some effect on the mobility of seniors. Seniors who live in urban/town, mixed-use areas served by public transportation take more trips each week and are more likely to get out of their homes on a given day than seniors from more suburban, exurban, and rural areas. It is also projected that much of the growth in the senior population over the next several decades will occur in the suburban and exurban areas of Northern Virginia rather than in the more urbanized areas of Arlington and Alexandria. According to the AARP, most elderly persons are capable of leading fairly independent lives, and prefer to remain in their own homes and neighborhoods. Aging-in-place enables people to maintain local friendships and ties in the community, shop and obtain medical care in familiar places, and rely on neighborhood support networks fostered over many years for assistance. As such, the following proposed measures aim to positively affect the built environment of communities yet to be developed, as well as to retrofit existing communities in ways that make them more compatible with the needs of seniors.

The underlying premise of these recommendations is the desire to create life-cycle communities. These communities offer housing choices appropriate to persons of all ages (families with children, college students, single professionals, empty nesters, and seniors). These communities are also designed as walkable centers of commerce and housing and their density and layout is supportive of frequent and convenient transit services. The measures proposed offer quality of life improve-

ments for all generations. They are organized around the various levels of planning and project review typical in Virginia: comprehensive planning, administrative review and legislative review at the state and local levels. Achieving truly, multi-generational communities in each jurisdiction will require the understanding and buy-in by planners and decision-makers involved at each level of the development review process. Jurisdictions can review their planning processes and choose those measures most appropriate to their unique planning environment. Unfortunately, it is beyond the scope of this current research to inventory the extent to which each locality (county, city, and town) has already considered or implemented the following proposed measures.

Concept 1: Start with the Comprehensive Plan

Local comprehensive plans should explicitly address the housing and transportation needs of a growing senior population. The comprehensive plan, established through community dialogue and debate, is a jurisdiction's guide for land development and redevelopment decisions and is the foundation for the zoning ordinance and subdivision regulations. The vision it establishes provides direction to property owners as to the desired use and character of property in all locations of the community. The comprehensive plan strengthens the local hand in negotiations with developers. Strong policy and direction in local comprehensive plans can help to avert piecemeal approvals that, when taken together, fail to attain the critical elements that a life-cycle community requires.

The comprehensive plan should spell out the projected number of seniors expected to reside in the jurisdiction during the planning horizon, estimate the number and location of the those expected to age-in-place, and articulate a vision for how those naturally occurring retirement communities can be made more "life-cycle" and pedestrian-friendly. The comprehensive plan should also designate the preferred location of senior housing in areas that offer convenient transit service and where shops and services, such as medical facilities and beauty salons, are within a short walking distance. A recently approved amendment to Loudoun County's comprehensive plan recognizes

the importance of offering seniors the option of aging-in-place within their community through the application of a "universal design concept" and encouraging the provision of a variety of housing choices in both existing neighborhoods and proposed developments.²⁸ Specifically, the policy states that the County will develop incentives to encourage the provision of a certain percentage of units designed to meet the changing needs of seniors within all new residential developments. The plan amendment also directs that all new proposals for retirement communities demonstrate safe and convenient pedestrian and/or bicycle

Figure 4.3: Mixed-use, transit-oriented development near Clarendon Metrorail Station in Arlington County



²⁸

Universal Design Concept is basically designing homes to adapt to a person's changing needs. For example, wider doorways that can accommodate a wheelchair; stacking closets with a collapsible floor toaccommodate an elevator in the future. This type of design allows a person to age in place and adapt their home to their changing needs and is much less expensive then trying to renovate your home at the time it is needed.

facilities that connect to surrounding amenities and that these communities integrate transit facilities such as shuttle or mini-bus service and/or work with local and regional transit providers to ensure senior access to local and regional amenities and services.

Planning for transit-oriented development (TOD) is becoming an increasingly common element of local comprehensive plans in Northern Virginia. Moorefield Station in Loudoun County, MetroWest in Fairfax County, and Potomac Communities in Prince William County are just a few of the projects under review or development across the region. Arlington County is a recognized leader in transit-oriented development for its Rosslyn-Ballston corridor. TOD communities will help to address the mobility needs of seniors in coming decades, especially to the extent that they include senior and affordable housing components. TODs are compact, mixed-use, walkable communities centered around and supportive of a transit stop. Frequent and convenient transit service cannot happen without transit-oriented development. The intensity of the TOD will vary depending on the type and frequency of transit service to be supported: the design principles will not.

Conventional wisdom among transit analysts is that a minimum of seven dwelling units per acre is need to support bus service every thirty minutes, and 15 dwelling units per acre can support bus service every ten minutes. ²⁹ Densities upward of 50 or more dwelling units per acre will support Metrorail service to an urban downtown or suburban center. As important as density are design considerations. The pedestrian environment must not only be negotiable, but also inviting. This can be done only through attention to details (zoning that allows for street level activity such as outdoor seating in front of coffee shops, ground floor retail with windows oriented toward the sidewalk, pedestrian scale lighting, sidewalk furniture, parking that is relegated underground or behind buildings, and road design measures that slow traffic down to 30 miles an hour or less). Transit-oriented and other forms of mixed-use development serve to reduce the distance between origins and destinations and thus facilitate walking trips.

Concept 2: Zone for Housing Choices

Zoning is the basic means of land use control employed by local governments. Each jurisdiction divides its land area into districts and spells out the permissible uses and buildings, the required setbacks, height restrictions, lot coverage, minimum lot sizes, and density of such uses. Where applicable, the zoning ordinance describes the special exception uses of each district—a list of otherwise nonconforming uses that would be allowed in residential zones after a special review. The zoning ordinance should support the vision of the comprehensive plan through the proper location and definition of zoning districts.

One means of creating additional housing options for seniors in their existing communities is the designation of accessory units, or granny flats, as special exception uses within residential zoning districts. Granny flats are apartments within single-family homes or on the premises (i.e., over the detached garage). Their use has been highly controversial in many localities across the country as homeowners have fought vigorously to protect their communities from a perceived reduction in property values that are believed to result with increased density and introduction of non-standard housing units. Neighborhood concerns such as these can be at least partially mitigated through

29

a special exception process, whereby the property owner would need to bring his/her proposal before the planning board (planning commission, board of supervisors and/or city/town council) where it would be subject to discretionary review by citizens and the planning board to ensure that it conforms with zoning intent for that district. The special use exception process allows jurisdictions to retain control over location and quality. Each application for an accessory apartment may be studied on an individual basis according to specified criteria such as location and lot size, parking requirements, homeowner's eligibility, space and dimensional requirements and design specifications. The special exception application must go through a legislative review (by a planning board) and thus would be subject to community input, minimally via a public hearing, from its future neighbors.

The Fairfax County zoning ordinance allows "accessory dwellings in all residential districts that allow single family detached dwellings in order to provide the opportunity and encouragement for the development of a limited number of small housing units designed, in particular, to meet the special needs of persons who are elderly and/or disabled." The County recognizes the need of elderly homeowners to obtain, through tenants in accessory units, rental income, companionship, security, and services, and thereby to enable them to stay more comfortably in their homes and neighborhoods they might otherwise consider leaving. Elderly persons can also rent accessory dwelling unit from another property owner, presumably at an affordable price.

Another zoning approach used by Arlington County to achieve mixed-use development in its Columbia Pike corridor is the application of a form-based code in a defined overlay district. Developers in the corridor may either redevelop according to their existing zoning or choose the community-preferred form-based code and receive expedited project review and better design options. Instead of focusing on what is undesirable, form-based codes concentrate on the community's design vision through basic rules that specify a range of acceptable building types. These codes concentrate first on the visual aspect of development: building height and bulk, façade treatments, the location of parking, and the relationship of the building to the street and to one another. In essence, form-based codes emphasize the appearance and qualities of the public realm, the places created by buildings. Form-based codes emphasize mixed-use and a mix of housing types to bring destinations into close proximity to housing and provide housing choices to meet many individuals' needs at different times in their lives. Arlington's form-based code has been designed to support pedestrian-oriented development that will foster a vital main street through a lively mix of shopfronts, sidewalk cafes, and other commercial uses at street level, bordered by canopy shade trees and upper-story residences and offices. Arlington County has combined its land use code with convenient mid-day bus service approximately every seven minutes. This zoning method has been used to revitalize the Columbia Pike corridor: it is relevant to new development as well.

Concept 3: Negotiate Senior-Friendly Proffers

Proffers are voluntary commitments that a developer makes to the County to offset the impacts of a proposed development. They typically include monetary contributions toward capital facilities such as schools, parks, libraries, roads and other public facilities. They may also include dedication

Appendix 5, Fairfax County Board of Supervisors' Policy on Accessory Dwelling Units, Fairfax County Zoning Ordinance, July 2005.

of property for the future siting of schools, parks, trails, roads, and other facilities, and/or agreements to construct public facilities that will serve future development. Proffers are negotiated as part of rezoning or special exception review.

If they are not already doing so, local planners should negotiate for the following types of transit proffers that will positively affect the mobility of seniors: private shuttle service, public transit capital contributions, ongoing transit operating contributions, and construction or monetary contributions toward bus shelters and benches along routes. Pedestrian proffers should include the construction of sidewalks to recommended design standards, park benches, street trees, pedestrian-scale lighting and other sidewalk amenities to enhance the walking environment.

Concept 4: Build Pedestrian-Friendly Streets

In the past decade increased emphasis has been placed on the creation of pedestrian friendly streets. Efforts to make street environments more comfortable to pedestrians and other non-auto users have been underway under the terminology smart streets, context-sensitive design, complete streets, walkable or livable communi-

ties, and neo-traditional town planning. Underlying these efforts is a recognition that the design of the street environment can influence mode choice. Good design can benefit non-auto users of the system (pedestrians, bicyclists and transit users) without compromising travel conditions for those traveling by car.

The NVTC telephone survey revealed that the second most popular means of senior travel, after travel by car is, pedestrian travel. Those seniors living in more walkable, mixed-use areas are more than "The current design process does not always result in the desired consistency in roadway alignment or driver behavior along these alignments. The desired product of good geometric design is a roadway alignment and cross section that will encourage the driver to operate safely and consistently with the function of the facility. Further, an ideal geometric design is both consistent with the context of the setting and cost-effective."

-- National Cooperative Highway Research Program, Alternatives to Design Speed for Selection of Roadway Design Criteria, Active Project 15-2

three times more likely to travel to a destination on foot than those from suburban communities and more than five times more likely than those from exurban areas. The following recommendations on street design complement efforts to build transit-oriented development and other mixed-use communities. The creation of a walkable community requires detailed attention to the design of the street cross-section (including the sidewalk), as well as the bordering land use. As a whole, these street design elements serve to slow vehicular traffic and create a sidewalk and crosswalk environment that is both comfortable and attractive from the perspective of the pedestrian.

Achievement of a high quality pedestrian environment in suburban areas requires a new and integrated vision for land use and transportation, one less car-centered and more human-centered. In figure 4.4, Dan Burden of Walkable Communities, Inc. offers a vision for how a major arterial in Albemarle County could be redesigned in stages to align with an evolving land use vision.

Figure 4.4: An integrated land use and transportation vision can create a sense of place for all users.



Existing Streetscape



Intermediate Improvements



Final Streetscape

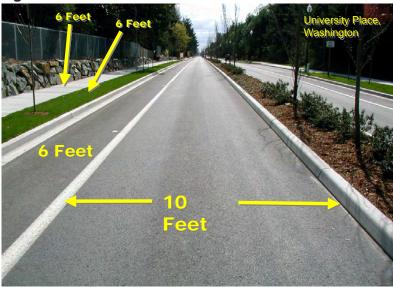
Source: Thomas Jefferson Planning District Commission

Narrow streets and travel lanes. Many roads and streets in Northern Virginia are over-designed; the result, vehicular travel moving at speeds greater than the posted speed limit. Pedestrians are most comfortable when they have their own dedicated space and where adjacent vehicular traffic moves at a speed no greater than 25 to 30 miles per hour. This perception coincides with traffic safety statistics. Increased speed puts pedestrians at higher risk. A ten-mile-per-hour increase in speed, from 20 mph to 30 mph, increases the risk of death for a pedestrian in a collision ninefold. If a car traveling 20 miles per hour hits a pedestrian, there is a 95 percent chance that the person will survive. However, if the same car is traveling 30 mph, the pedestrian's chances of survival are reduced to 45 percent. Older pedestrians, because of their frailty, are at even greater risk of fatality than younger travelers.

Often over-designed roads can be redesigned with fewer travel lanes and narrower travel lanes without compromising capacity and traffic flow. Ten or eleven foot travel lanes, rather than the

customary 12 foot lane, can help to slow traffic, as drivers no longer feel as unconstrained in their maneuverability space. The addition of six or seven foot striped bike lanes add space for emergency response vehicles and buses to turn. Excess traffic lanes can be replaced by turn lanes and a landscaped median in between intersections. In this way vehicular capacity is maintained while reducing the number of speed violators. Those who wish to speed will be held back by the majority of drivers who will choose to keep

Figure 4.5: Recommended Lane and Sidewalk Widths



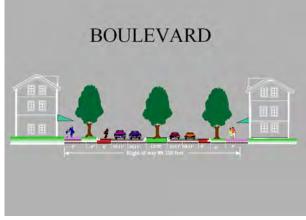
Source: Dan Burden, Walkable Communities, Inc.

their speed within what they perceive to be a safe driving speed.

In high traffic corridors, multilane arterials and collectors can be designed as boulevards where travel lanes are segmented by landscaped medians and pedestrian refuge islands (see Figure 4.6).

Integrated street network. Keeping streets down to a size that the average senior can comfortably cross requires an integrated street network. The typical suburban, hierarchical street network has maximized residential cul-de-sacs at the expense of street connectivity and route choice. Streets that are laid out in well-connected patterns, at a pedestrian scale, provide alternative vehicular and pedestrian routes to every destination. Because of this connectivity, travelers from several neighborhoods are not all required to all use the same arterial roadways. Ample connections spread traffic throughout the system and enable collector and arterial roads to be designed for less traffic than if they had to carry the full load from all adjoining streets. Thus, even arterials can be designed to

Figure 4.6: Collector and arterial roadways can be designed as boulevards to carry traffic without compromising the pedestrian environment.





Source: Dan Burden, Walkable Communities, Inc.

carry less volume than would be required in the traditional suburban development pattern, thus making it easier to design the street in scale with pedestrian movement.

Sidewalks and Street Amenities. An unbroken network of sidewalks forms the foundation of a comfortable and safe pedestrian environment. Sidewalks on both sides of the street are appropriate for mixed-use areas and along streets where vehicular traffic travels 25 mph or more. Sidewalks in residential areas should be a minimum of five feet wide.³² The preferred sidewalk width in a downtown or other activity area is 12 feet, at least six feet of which should be clear of obstructions. This width allows two pedestrians to walk side by side, or someone in a wheelchair to pass another pedestrian comfortably. More width is desirable to accommodate bus shelters, sidewalk cafes, and other outdoor retail.³³ Seniors, and others, benefit from the inclusion of park benches, public restrooms, drinking fountains, artwork, fountains, and other similar elements in downtown and activity center environments. These elements help to create more attractive and functional environments for pedestrians.

Continuous Separation from Traffic. Pedestrians not only benefit from properly sized sidewalks but also from measures that separate them from traffic. Wherever possible, sidewalks should not be constructed adjacent to streets but set apart by a landscape, or other, buffer. Street trees between the street and sidewalk reduce the drivers' perceived width of the road and thus may reduce vehicular speed. They also provide a shaded canopy for pedestrians. Parallel parking also provides a buffer and tends to slow the typical driver. Traffic engineers, planners, urban designers, drivers and pedestrians can all agree on the desirability of reducing the number of driveway crossings along a commercial roadway. The result is safer conditions for all users and a more aesthetic environment.

Figure 4.7: Ample buffering of the main road creates a relaxing pedestrian environment.



Source: Dan Burden, Walkable Communities, Inc.

Crosswalks and Signal Timing. As our population ages, street crossings should be designed with the senior pedestrian in mind. Signal timing that allows slower seniors sufficient time to safely cross the street is essential. Walking rates among the general population are generally 2.5 to 6.0 feet per second with an average of 4.0 feet per second, according to the Manual on Uniform

³² Dan Burden, Walkable Communities, Inc.

³³ National Center for Bicycling and Walking. Creating Walkable Communities. www.walkbike.org.

Traffic Control Devices (MUTCD). However, many studies acknowledge that the speed is significantly slower for older pedestrians. In a 2001 publication, the Federal Highway Administration (FHWA) recommends a conservative design guideline of 2.8 feet per second be used to accommodate the shorter stride and slower gait of less capable (15^{th} percentile) older pedestrians, and their exaggerated "start up" time before leaving the curb. 35

Arlington County has recently reengineered many intersections to include curb bulb-outs that force vehicular traffic to slow down around corners [See figure 4.8].

For higher capacity intersections, the integration of pedestrian refuge islands can make it easier and safer to cross the street on foot. Particular attention needs to be paid to the design of channelized right-turn lanes. The crosswalk within the channelized area should be located as close as possible to the approach leg to maximize the visibility of pedestrians before drivers are focused on scanning for gaps in traffic on the intersecting roadway.³⁶

Bulb-outs reduce the distance a pedestrian must cross at an intersection.

Figure 4.8: Bulb-outs

Source: Dan Burden, Walkable Communities, Inc.

SUMMARY OF RECOMMENDATIONS

Recommendations are made in a number of areas to improve public transportation services and mobility for seniors in Northern Virginia. Table 4-4 summarizes the recommendations and Table 4-5 shows the recommendations by community type. These recommendations build on the study's quantitative and qualitative research, demographic analyses, review of existing specialized services, related literature on senior transportation, and experience in the transit industry.

The recommendations focus efforts in three areas. First, recommendations are made to encourage and support increased use of fixed route transit by seniors through a number of different strategies, including: a centralized information and referral service that includes "real people" as well as electronic information; travel training; coordinated fixed-route service with "seamless" transferring, an improvement already planned with the Regional Fare Collection Integration Project; targeted marketing and incentives for seniors; senior sensitivity training for drivers; low floor buses; and

National Center for Bicycling and Walking. Creating Walkable Communities. www.walkbike.org.

³⁵ U.S. Department of Transportation. Federal Highway Administration. Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians. Publication No. FHWA-RD-01-051. May 2001.

³⁶ U.S. Department of Transportation. Federal Highway Administration. Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians. Publication No. FHWA-RD-01-051. May 2001.

service routes in selected areas with concentrations of seniors. These recommendations recognize that the region has many existing public transportation services, including extensive fixed-route service in the more urbanized parts of the region, and use of existing services by seniors could be increased if seniors are given more support. Generally, the recommendations are appropriate for all parts of the region, specifically the three community types, but have more potential where there are more transit services. Some of the recommendations, however, should be focused to the most appropriate group of seniors or part of the region. For example, the market segmentation analysis from the study's telephone survey suggests that the "car riders" group, 25 percent of the market, should be the focus of the marketing campaign to encourage seniors to try transit before they get to the age when they find they must curtail or give up driving. Similarly, the recommendation for service routes would need to be tailored to existing services and land use considerations. Service routes are neighborhood-based routes, using smaller buses, designed to serve seniors and provide access to local shopping and other services, and are more cost-effective than paratransit services.

The second set of recommendations focuses on supplemental specialized services for seniors, including volunteer transportation and taxi subsidy services, recognizing that some seniors, particularly older seniors who become more frail, are not able to use fixed route services. Volunteer transportation is increasingly being recognized as an important component of the specialized transportation infrastructure for seniors and persons with disabilities, and efforts should be made to increase the role of volunteer transportation in Northern Virginia. Volunteer drivers can provide the more difficult to serve trips, such as those for very frail seniors, longer distance trips for specialized medical care, and multiple "chained" trips (e.g., a trip to the doctor, to the pharmacy, and then home). These types of trips are difficult for public transportation to provide. While increased volunteer transportation is important throughout the region, it may be particularly important in the more rural parts of the region – Community Type 3 – given more limited options in such areas and the longer distances of many trips.

Another supplemental specialized transportation service is provided through the region's various taxi subsidy programs. These programs provide the more spontaneous trips that seniors need and trips are typically not restricted by jurisdictional boundaries. Specific improvements to taxi services are recommended to address fare payment, reliability, and driver sensitivity. Taxi subsidy programs take advantage of existing transportation providers and subsidy levels can be adjusted for seniors of different income levels, with deeper subsidies provided to lower income seniors. Subsidized taxi services are relatively cost-effective compared to specialized services that require vehicles and drivers dedicated only to serving seniors and other target groups.

Among the transit service recommendations, it is noted that route deviation and dial-a-ride services are not included. Route deviation, while useful in extending the coverage of fixed-route service particularly in suburban and rural areas (e.g., Prince William County), has limitations for specialized transportation needs. The deviations are restricted to those within a relatively short distance from the routes and to those that can be made without compromising the overall route schedule. Moreover, riders may need to walk up to several blocks, depending on the distance of the deviations, to access service. When the different service concepts were presented to seniors in the study's focus groups, route deviation was considered the least appealing. Dial-a-ride service, used in a number of communities to serve seniors and persons with disabilities, is not recommended

primarily because of costs. It is a relatively costly service on a per passenger basis when provided on a dedicated basis. Given the wide variety of existing specialized services in the region, it is recommended that steps be made to improve current services and their ability to meet the needs of seniors before new door-to-door services are contemplated.

The third and last set of recommendations addresses land use and community design to improve transportation and mobility for seniors. Solid comprehensive plans that explicitly address the community's changing demographics and senior housing and transportation needs will set the stage for the zoning ordinance and subdivision and site plan review. Accessory dwelling units, or granny flats, provide seniors with a rental housing option in their community or the means to generate rental income themselves. Transit oriented development should be planned and built across Northern Virginia to reduce overall auto dependency and increase the efficiency and convenience of using public transportation by people of all ages. Attention to street design that fosters walking and transit use is fundamental to TOD and can increase seniors' transportation options in all types of communities.

TABLE 4-4

SUMMARY OF RECOMMENDATIONS BY IMPLEMENTATION EFFORT AND RESOURCES

	Recommendations	Implementation	Resources
1. E	. Encourage and Support Increased Use of Fixed Route Transit by Seniors	e of Fixed Route Transit by Seniors	
	Centralized Information and Referral	Short term.	Moderate cost.
		Could be implemented within one to two years, building on current Northern Virginia transit information databases.	If NVTC pursues on own: estimated at \$150,000-\$200,000 for development and implementation. Ongoing costs will depend on level of staffing; for planning purposes etaff of 3 to 5 nucleochast control cost in \$150,000 \$250,000
		Alternatively, could coordinate with WMATA's Regional Clearinghouse project that plans to create a centralized information/referral service for the region.	priposes, stair of 5 to 5 plus techniology support court cost up a recoord-section on annual basis. Expected that costs would be less if NVTC coordinates with WMATA's project.
•	Travel Training	Short term.	Low to moderate cost, depending on number of seniors who are trained.
		Currently being conducted by some of the region's transit agencies (e.g., WMATA, Fairfax Connector).	disabilities. Costs per senior trainee likely less.
		Information on travel training should be available and possibly coordinated through the centralized information and referral service.	To the extent that volunteer trainers are used, costs will be reduced.
•	Seamless Coordinated Transportation	Medium term. Regional Fare Collection Integration Project was initiated in 2001; NVTC leads effort in Northern Virginia. Implementation of "seamless" SmarTrip Card expected in 2006, facilitating inter-transit system transferring across the metropolitan region.	High cost; resources already allocated and are being spent for Regional Fare Collection Integration Project.
		Seniors will need support and encouragement to use; this can be provided through centralized information/referral and travel training.	
•	Targeted Marketing and Incentives for Seniors	Short term. Campaign could be planned and implemented in 1 to 2 years.	Moderate cost. Direct costs (not including staff time) estimated at up to \$100,000.
			Costs will depend on the extent and nature of marketing materials. Costs will also include foregone farebox revenues to the extent that free-fares are included in promotions.
•	Senior Sensitivity Training for Drivers	Short term. Implemented by transit agencies. NVTC can encourage and support, with referrals of training materials and "senior speakers bureau." More intensive version of recommendation would involve development of driver training module on senior sensitivity, which could be made available to transit systems, either with professional assistance or with donated time from local professionals who work with seniors.	Low cost.

	Recommendations	Implementation	Resources
•	Low Floor Buses	Short to medium term. Transit agencies responsible for vehicle acquisition.	Depends on number of vehicles purchased. One standard transit coach estimated to cost \$350,000. Low floor version generally somewhat more.
•	Service Routes	Short term to medium term. Jurisdictions responsible for transit service planning and provision.	Depends on level and extent of service provided. Costs include ongoing operational costs and may also include capital costs for vehicles. Costs to operate one smaller vehicle roughly estimated at \$140,000-\$173,000 (includes capital) on annual basis.
•	Mid-day and evening service, conveniently located bus stops at store entrances with benches/shelters	Short term as budgets allow Jurisdictions/WMATA responsible for transit service planning and provision.	Depends on level and extent of service provided. Can roughly assume a cost of \$55 to \$125 per revenue hour per bus to operate.
7	2. Supplemental Transportation Services for Seniors	s for Seniors	
•	Volunteer Transportation Services	Short to medium term. Implementation will depend on funding mechanism developed to support volunteer transportation, and whether support is provided to existing programs or a new, formal volunteer program, following the ITN Network model, is implemented. Implementation of the formal ITN Network model requires detailed developmental planning and start-up costs estimated at \$125,000.	Moderate cost. At an estimated \$10-\$15 per volunteer-provided trip, \$100,000 would provide support for roughly 6,700 to 10,000 additional volunteer-provided trips. This can be compared to the 12,500 trips provided in FY04 by the 3 volunteer-based programs identified through the study and supported with public funding.
•	Taxi Subsidy Services	Short to medium term. Certain improvements could be implemented within 1 year, including restructuring coupon costs for jurisdictions to ensure drivers coccing fair payment for the trice that we regide to company.	Low to moderate costs. A new payment structure for the coupons would increase costs to the jurisdictions, potentially up to 10% more.
		divers receive tair payment for the trips they provide to coupon	Implementation of swipe card technology will involve new administrative costs that
		users. Implementation of swipe card technology for taxi payment would take longer, involving the need for technology enhancements and training.	implementation of swipe card recultioningly will involve new autilitisative costs that will vary by volume of trips and degree of administrative effort handled by the jurisdictions vs. the swipe card software company. At the low end, if there are 5,000 subsidized taxi trips, costs will be at least \$2,500 more plus additional staff time for program administration; at the higher end with 5,000 subsidized trips, costs will be \$20,000 more.
ω.	3. Land Use and Community Design		
•	Comprehensive Plan	Short to medium term All local jurisdictions currently have comprehensive plans. Addition of language for senior housing, transportation, and other service needs can be added at next update of planning process.	No cost
•	Zone for Housing Choices	Short to medium term Jurisdictions may update zoning ordinance with new zoning regulations that meet senior needs. Suggestions include accessory dwelling units and form-based codes.	No to low cost Can be implemented by zoning staff. As expertise and resources require, may need to seek outside assistance.
•	Senior Friendly Proffers	Short to medium term Senior friendly transit and pedestrian proffers can be sought be local jurisdictions today.	No cost to local jurisdiction. Cost born by developers who agree to proffers. Cost depends on type of proffer provided from low cost bus shelters to high cost private shuttle service.
•	Pedestrian Friendly Streets	Short to long term Many initiatives currently underway across Northern Virginia; however, the scope of the problem is large and will require many years effort.	No cost to high cost Some recommendations could actually save money in new areas under development (fewer and narrower travel lanes). Sidewalk costs range from about \$ 0.5 million per mile to \$1.5 million per mile, with the lower figure being for residential areas and the higher figure being for sidewalks along higher volume urban roadways with lots of utilities.

TABLE 4-5

SUMMARY OF RECOMMENDATIONS BY COMMUNITY TYPE

		Community Type	/De	
Recommendations	-	2.	33	Comments
	Urban/Town	Suburban	Rural/Exurban	
1. Encourage and Support Increased Use of Fixed Rou	ased Use of Fixed Ro	ute Transit by Seniors	niors	
Centralized Information and Referral	7	٨	7	Recommendation appropriate for entire Northern Virginia region, without distinction to community type. May be more useful to seniors living in Community Type 1 areas, since there are more transportation services available in more populated/urbanized areas of the region. However, seniors living in more rural parts of region also need information on what transportation services are available and how to access them.
Travel Training	7	7	7	Recommendation appropriate for entire Northern Virginia region, however given the more limited fixed-route services in Community Type 3, travel training will be more important in Community Types 1 and 2, with greater potential benefits.
Seamless Coordinated Transportation	7	٨	7	Recommendation is being pursued through Regional Fare Collection Integration Project, spearheaded by WMATA; Northern Virginia's effort managed by NVTC. Starting in 2006, riders will use SmarTrip cards to transfer among various providers in the greater DC region. To be effective for seniors, centralized information and referral (also recommended) and travel training (also recommended) are needed to support increased use of fixed-route service by seniors.
Targeted Marketing and Incentives for Seniors	7	<i>></i>		Recommendation suggests specific marketing/incentive campaign targeted to seniors living in Community Types 1 and 2, where fixed-route service is more prevalent. Objective of recommendation is to introduce/encourage use of fixed-route transit, with information and incentives tailored to seniors in different parts of the region. Well-planned, well-funded marketing campaigns have proven successful in other metropolitan areas in increasing senior ridership on fixed-route services.
 Senior Sensitivity Training for Drivers 	7	٧	٨	Senior sensitivity training for transit drivers is recommended particularly for transit systems serving Community Types 1 and 2, given the greater prevalence of transit services in these areas. However, transit systems in Community Type 3 could also benefit. Such training will support seniors' use of transit, including fixed-route services and specialized services.
Low Floor Buses	7	7	7	Low floor buses will improve service for seniors and other riders on all transit systems, throughout the region, providing ease of entry and exit from the vehicle and time-savings since passengers spend less time getting on and off the vehicle.

		F		
		community lype		
Recommendations	1. Urban/Town	2. Suburban	3. Rural/Exurban	Comments
Service Routes	7	7		Service routes have potential for Community Types 1 and 2, since a moderate level of density is required for effectiveness. Service routes can be provided in communities that have concentration of seniors needing access to local shopping and other services, with greater driver assistance to passengers than available with traditional fixed-route service. Recommendation appropriate for seniors who can travel reasonably independently with modest assistance getting on and off vehicle and with packages. Not appropriate for very frail seniors or for those who cannot travel independently.
Mid-day and evening service, conveniently located bus stops at store entrances with benches/shelters	7	7		Transit service can be provided most efficiently in urban/town and higher density suburban areas.
2. Supplemental Transportation Services for Seni	ervices for Seniors			
Volunteer Transportation Services	7	7	7	Recommendation appropriate for entire region, to serve seniors with more specialized needs, including older and frail seniors. May be particularly important in Community Type 3, since there are fewer specialized transportation services in more rural areas and local medical and other services more limited. Volunteer transportation can be very cost-effective option, with driver able to provide extra assistance and to serve multiple "chained" trips, needed by seniors.
Taxi Subsidy Services	7	7	7	Taxi subsidy programs exist, particularly in Community Type 1 and 2 jurisdictions, and should continue to be supported. Where taxi services are available in Community Type 3 areas, taxi subsidy programs should be considered. Specific recommendations are provided to make the services more effective and senior-friendly. Taxi subsidy programs build on the existing transportation infrastructure, they are flexible and can provide for the individualized trips needed by seniors, and subsidy level can be tailored to different income levels of seniors.
3. Land Use and Community Design	ign			
 Comprehensive Plan 	٨	1	7	Jurisdictional comprehensive plans cover their entire land area. Plans may primarily direct senior services and housing to be located in urban and suburban areas. Transportation services elements of plans should also address how the needs of seniors residing in rural area are to be met.
Zone for Housing Choices	7	7	7	Form-based codes most suited to mixed-use environments; however, they are suitable to dense urban areas, suburban, town and village centers. Accessory dwelling units could be allowed in all three types of communities.

	O	Community Type	/be	
Recommendations	-	2.	33	Comments
	Urban/Town	Suburban	Rural/Exurban	
Senior Friendly Proffers				Senior friendly proffers are appropriate for most residential and mixed-use rezoning applications.
(private shuttle service, transit capital and operating contributions, bus stop and sidewalk amenities such as benches shelters street	7	>		i ypicaliy, rezonings where transit and pedestrian profiers would be destred are not typically in areas designated rural in comprehensive plans.
trees, ped-scale lighting)				
Pedestrian Friendly Streets	>	>		Recommendations address urban/suburban street calming measures and pedestrian amenities.

Meeting the Transportation Needs of Northern Virginia's Seniors









Recommendations for Public Transit Systems and Other Mobility Providers

Part 2 - Appendices

Final Report March 24, 2006







Table of Contents - Appendices

Appendix 1	Detailed Demographic Tables	A1-1 – A1-12
Appendix 2	Quantitative Analysis Report: Results of Telephone Survey Questionnaire	A2-1 – A2-155 A2-156 – A2-169
Appendix 3	Qualitative Analysis: Summary of Focus Groups with Seniors and Brokers Focus Group Screening Questionnaire Focus Group Discussion Guide In-depth Interview Discussion Guide Handouts Travel Diary Senior Brokers Focus Group Meeting Summary Senior Brokers Focus Group Session Transcript	A3-1 - A3-61 A3-33 - A3-37 A3-38 - A3-41 A3-42 - A3-49 A3-50 - A3-59 A3-60 - A3-61 A3-62 - A3-79 A3-80 - A3-126
Appendix 4	Service Route Potential for Senior Concentrated Areas	A4-1 – A4-9
Appendix 5	Community Type Classification Community Type Map Letter to Planning and Zoning Director	A5-1 – A5-2 A5-3 A5-4 – A5-9
Appendix 6	Detailed Analysis of Census Migration Patterns	A6-1 – A6-29
Appendix 7	Advisory Team Membership	A7-1 – A7-2

Appendix 1 DETAILED DEMOGRAPHIC TABLES

Table A1.1: 2000 Regional Elderly Population (Number and Percent of Total Population)

Jurisdiction			Elderly Age Groups	sdno			Total Elderly		Total Elderly	
	Young Elderly (Age 65-74) Middle Elderly (Age 75-84)	Age 65-74)	Middle Elderly	(Age 75-84)	Old Elderly (85+)	y (85+)	Age 65 and older		Age 75 and older	er
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Arlington County	8,368	4.4%	6,945	3.6%	2,529	1.3%	17,843	9.4%	9,475	2.0%
Fairfax County	44,403	4.6%	25,493	2.6%	6,922	0.7%	76,818	7.9%	32,415	3.3%
Loudoun County	5,402	3.2%	3,143	1.9%	666	%9:0	9,538	2.6%	4,136	2.4%
Prince William County	8,490	3.0%	3,856	1.4%	1,127	0.4%	13,473	4.8%	4,983	1.8%
Alexandria	2,695	4.4%		3.3%	1,706	1.3%	11,605	%0.6	5,910	4.6%
City of Fairfax	1,624	%8.9		4.4%	388	1.6%	3,073	12.8%	1,449	%0.9
Falls Church	230	5.1%	527	5.1%	205	2.0%	1,262	12.2%	732	7.1%
Manassas	1,086	3.1%	299	1.7%	217	%9.0	1,902	5.4%	816	2.3%
Manassas Park	311	3.0%	108	1.0%	23	0.5%	442	4.3%	131	1.3%
NOVA	75,909	4.2%	45,936	2.5%	14,111	%8.0	135,955	7.5%	60,047	3.3%
Virginia	432,456	6.1%	272,611	3.9%	87,266	1.2%	792,333	11.2%	359,877	5.1%
United States	18,390,986	6.5%	12,361,180	4.4%	4,239,587	1.5%	34,991,753	12.4%	16,600,767	2.9%
Total NOVA Population		•		•		•				

Table A1.2: Projected 2010 Regional Elderly Population (Number and Percent of Total Population)

Jurisdiction			Elderly Age Groups	roups			Total Elderly	erly	Total Elderly	ırly
	Young Elderly (Age 65-74)	Age 65-74)	Middle Elderly (Age 75-84)	(Age 75-84)	Old Elderly (85+)	ly (85+)	Age 65 and older	older	Age 75 and older	older
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Arlington County	10,744	5.1%	7,804	3.7%	3,898	1.8%	22,446	10.6%	11,702	2.5%
Fairfax County	66,432	2.9%	28,394	2.5%	9,604	0.8%	104,431	9.5%	37,998	3.4%
Loudoun County	18,508	2.9%	6,427	2.1%	2,903	0.9%	27,838	8.9%	9,330	3.0%
Prince William County	20,367	5.2%	8,140	2.1%	3,565	%6:0	32,072	8.2%	11,705	3.0%
Alexandria	6,158	4.3%		3.1%	2,201	1.5%	12,822	%0.6	6,664	4.7%
City of Fairfax	1,935	7.7%	1,359	5.4%	768	3.1%	4,062	16.1%	2,127	8.4%
Falls Church	629	%0.9	720	6.4%	445	3.9%	1,845	16.3%	1,166	10.3%
Manassas	1,949	5.3%	949	2.6%		1.4%	3,423	9.3%	1,473	4.0%
Manassas Park	811	5.3%	802	5.2%	86	%9.0	1,700	11.1%	889	5.8%
NOVA	127,584	2.6%	59,059	2.6%	23,995	1.1%	210,638	9.5%	83,054	3.6%
Virginia	553,644	%6:9	305,416	3.8%	135,299	1.7%	994,359	12.4%	440,715	2.5%
United States	21,269,509	%6:9	12,850,746	4.2%	6,123,458	2.0%	40,243,713	13.0%	18,974,204	6.1%

Table A1.3: Projected <u>2020</u> Regional Elderly Population (Number and Percent of Total Population)

Jurisdiction			Elderly Age Groups	sdno			Total Elderly	lerly	Total Elderly	ərly
	Young Elderly (Age 65-74)	Age 65-74)	Middle Elderly (Age 75-84)	(Age 75-84)	Old Elderly (85+)	ly (85+)	Age 65 and olde	l older	Age 75 and older	older
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Arlington County	15,883	%8.9	10,382	4.5%	4,904	2.1%	31,169	13.4%	15,286	%9.9
Fairfax County	89,180	7.5%	39,516	3.3%	9,876	0.8%	138,573	11.6%	49,393	4.1%
Loudoun County	32,033	7.7%	11,848	2.8%	5,095	1.2%	48,976	11.7%	16,943	4.1%
Prince William County	33,271	7.7%	13,827	3.2%	5,611	1.3%	52,709	12.1%	19,437	4.5%
Alexandria	6,199	4.2%		3.2%	2,159	1.5%	13,058	8.8%	6,859	4.6%
City of Fairfax	2,371	9.2%	1,757	%8.9	874	3.4%	5,001	19.4%	2,630	10.2%
Falls Church	867	7.3%	952	8.0%	543	4.6%	2,362	19.8%	1,495	12.6%
Manassas	3,307	8.9%	1,675	4.5%	865	2.3%	5,847	15.7%	2,540	6.8%
Manassas Park	1,418	9.0%	802	5.1%	161	1.0%	2,381	15.1%	963	6.1%
NOVA	184,529	7.3%	85,460	3.4%	30,087	1.2%	300,008	11.9%	115,547	4.6%
Virginia	823,421	9.2%	408,766	4.6%	172,393	1.9%	1,404,580	15.8%	581,159	6.5%
United States	31,779,159	9.5%	15,583,824	4.6%	7,268,908	2.2%	54,631,891	16.3%	22,852,732	8.9%

Table A1.4: Projected <u>2030</u> Regional Elderly Population (Number and Percent of Total Population)

Jurisdiction			Elderly Age Groups	sdno.			Total Elderly	lerly	Total Elderly	erly
	Young Elderly (Age 65-74)	(Age 65-74)	Middle Elderly (Age 75-84)	(Age 75-84)	Old Elderly (85+)	ly (85+)	Age 65 and older	d older	Age 75 and older	older
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Arlington County	18,125	7.3%	15,179	6.1%	6,983	2.8%	40,287	16.1%	22,162	8.9%
Fairfax County	97,400	8.1%	50,562	4.2%	12,776	1.1%	160,738	13.4%	63,338	5.3%
Loudoun County	41,886	9.1%	16,912	3.7%	6,811	1.5%	62,609	14.2%	23,723	5.1%
Prince William County	44,974	9.8%	26,540	2.8%	9,320	2.0%	80,834	17.6%	35,860	7.8%
Alexandria	6,138	4.0%	4,948	3.3%	1,976	1.3%	13,062	8.6%	6,924	4.6%
City of Fairfax	2,173	8.6%	2,190	8.6%	919	3.6%	5,282	20.8%	3,109	12.2%
Falls Church	823	%2'9	1,224	10.0%	299	4.9%	2,647	21.7%	1,823	14.9%
Manassas	4,213	11.2%	2,995	8.0%	1,375	3.7%	8,583	22.9%	4,370	11.6%
Manassas Park	1,752	11.1%	802	5.1%	292	1.8%	2,845	18.0%	1,094	6.9%
NOVA	217,484	8.3%	121,353	4.6%	41,051	1.6%	379,887	14.5%	162,403	6.2%
Virginia	974,059	6.6%	619,563	6.3%	250,366	2.5%	1,843,988	18.8%	869,929	8.9%
United States	37,947,933	10.4%	23,902,504	%9'9	9,603,034	2.6%	71,453,471	19.7%	33,505,538	9.2%

Sources

Northern Virginia data from Virginia Employment Commission 5/2003 age ratios applied to MWCOG Round 6.4a population forecasts

Fairfax County Department of Systems Management for Human Services Adjustments

Arlington County Department of Planning, Housing and Development, March 2006 Virginia and United States Data from U.S.Census Bureau, Population Division, Interim State Population Projections, 2005.

(i. see endnote for more information)

Endnotes

i. The difference in population growth rates for Arlington and Alexandria is likely to be much less. For this study, Arlington and Fairfax County provided their own population projections. For all other jurisdictions NVTC applied the population age ratios provided by the Virginia Employment Commission to Metropolitan Washington Council of Governments Round 6.4a population projections.

Arlington County uses a shift-share method to project population by age. County demographers tabulate the most up-to-date population distribution by age for the state using US Census Bureau data. They then calculate the rates of growth or decline per age group for the years 2000-2030 and apply these rates to Arlington County's known population per age group for the year 2000. Each age group's share of the total population is determined for each year 2001 to 2030. Lastly, these ratios are then reapplied per year to the forecast population in Arlington County in each of these years. These total population forecasts are based on the Metropolitan Washington Council of Government's Round 7.0 forecasts.

The Virginia Employment Commission uses a baseline cohort-component method to project population by age to reflect recent trends in fertility, mortality, and migration.

Fairfax County uses the 2000 Census population subdivided by five-year age cohorts and sex as the base from which to project population, supplemented by age specific 1999 death rates from the Fairfax County Health Department, 1985-1990 Census Migration, the 2000 Census PUMS data set, and modified as necessary based on review of the 2001 through 2003 American Community Surveys conducted by the US Census Bureau.

Using a single methodology; namely, applying VEC population age ratios to the MWCOG Round 6.4a population forecasts for each jurisdiction would result in Arlington County showing an increase of 3300 individuals age 65 or older between 2000 and 2030. The share of this older population as a percentage of the total population would remain at 9%.

Table A1.5 EDUCATIONAL ATTAINMENT OF PERSONS 65 AND OLDER

100	Alexandria	Arli	Arlington	<u>ai</u>	City of Fairfax	Fairfax County	fax nty	Falls Church	ر د د	unopno-		Manassas	_	Manassas Park	Prince William	am	Northern Virginia	ern nia	Virginia	ji	U.S.A.	
al: Male:																						
65 years and over:	4,230 100%	6,821	1 100%	1,066	100%	33,190	100%	479		•	_	_	_	_	5,383	100%	56,092	100%	322,093	100%	14,382,370	100%
Less than 9th grade	381 9%	57	%8 6	46	4%	1,902	%9	15			_		_		638	12%	4,125	7%	70,708	22%	2,440,603	17%
9th to 12th grade, no diploma	474 11%	63	8 9%	96	%6	1,948	%9	19			_		_		663	12%	4,344	8%	48,279	15%	2,395,998	17%
High school graduate (includes equivalency)	563 13%	912	2 13%	195	18%	4,790	14%	69	14%	939 2	23% 145	5 20%	% 47	24%	1,458	27%	9,118	16%	71,471	22%	3,955,194	28%
Some college, no degree	619 15%	895	5 13%		14%	4,639	14%	94			_		_		939	17%	8,172	15%	45,838	14%	2,297,350	16%
Associate degree	123 3%	179	9 3%	20	2%	912	3%	18			_		_		204	4%	1,605	3%	99,79	2%	346,340	2%
Bachelor's degree	828 20%	1,391	1 20%	210	20%	8,696	26%	103			_		_		798	15%	12,990	23%	40,489	13%	1,617,192	11%
Graduate or professional degree	1,242 29%	(1	7 33%	346	32%	10,303	31%	161			_		_		683	13%	15,738	28%	38,542	12%	1,329,693	%6
Female:																						
65 years and over:	7,163 169%	10,394	4 152%	1,649	_	•	129%	_			`	_		_	7,531	140%	77,115	137%	468,474		20,596,602	143%
Less than 9th grade	1,049 25%	966	6 15%		11%		12%				_				1,077	20%	8,190	15%	92,125		3,419,954	24%
9th to 12th grade, no diploma	943 22%	926	6 14%	123	12%		12%	32	%	623 1	16% 178	8 24%	% 78	40%	1,350	25%	8,213	15%	83,787	%97	3,815,270	27%
High school graduate (includes equivalency)	1,705 40%	2,756	6 40%		29%	•	37%				_				2,555	47%	22,685	40%	143,819		7,225,499	%09
Some college, no degree	1,468 35%	2,311	1 34%		30%		29%				_				1,335	25%	16,297	29%	73,646		3,180,701	25%
Associate degree	221 5%	397	%9 /		11%		2%				_				199	4%	2,911	2%	11,594		518,056	4%
Bachelor's degree	1,125 27%	`	9 26%		20%		23%				_				613	11%	12,280	22%	41,058		1,513,275	11%
Graduate or professional degree	652 15%	1,209	9 18%	128	12%	3,728	11%				_				402	%/	6,539	12%	22,445		923,847	%9
Associates Degree or Higher Total Matalo	4191 36.8%	7172	2 41.7%	1038	38.2%	32851	43.2%	528 47	41.3% 2	2821 30.	30.2% 46	493 26.3%	02 %	14.8%	2899	22.4%	52063	39.1%	160894	20.4%	6248403	17.9%
Mare Female			5 49.5%		43.3%		39.0%		•							22.6%	21730	38.7%	75097	23.3%	2955178	20.5%

Source: Summary File 3, Census 2000, U.S. Census Bureau Table PCT25

Table A1.6 Number and Percent of Seniors by Age and Race

						Fairfax		Falls	7.0				. •	Manass	Prince		Northe	ı.ı				
	Alexar	ıdria	ton	Fairfax	City	Com		Church	ı,	Loudor		Manas		Park	Willian	_	Virginia	ia	Virgin		U.S.A.	
Age 65 and Older	_	1,605 9.0%	17,762 9.4%	2,753	, 2,753 12.8%	76,818	7.9%	1,262	12.2%	% 9,538 5.0	%	1,902 5.4%		442	13,473	4.8% 1.	35,555	7.5%	792,333	1.2%	34,991,753	12.4%
White/Not Latino		74.2%	78.3%	2,443	88.7%	62,793		1,140	90.3%	8,200	%	,605 8		367	10,847	30.5% 1	923 8	81.1%	640,113	%8.0	29,244,860	83.6%
Black		16.3%	8.9%	29	2.1%	2,945		28	2.5%	929	%	163		30	1,378	10.2%	8,749	6.5%	122,492	2.5%	2,822,950	8.1%
Asian		4.4%	%0.9	157	2.7%	6,810		28	4.6%	337	2%	92		18	542	4.0%	9,562	7.1%	14,436	.8%	800,795	2.3%
Latino (any race)		3.8%	5.7%	75	2.7%	3,248		30	2.4%	226	%	4		23	499	3.7%	2,600	4.1%	9,507	1.2%	1,733,591	2.0%
Age 75 and Older		4.6%	2.0%	1,298	%0.9	32,415		732	7.1%	4,136	4%	816		131	4,983	1.8%	59,853	3.3%	359,877	5.1%	16,600,767	2.9%
White/Not Latino		80.6%	83.2%	1,178	8.06	27,845		672	91.8%	3,644	%	712 8		108	4,130	32.9%	50,897 8	85.0%	296,265	2.3%	14,266,411	85.9%
Black		12.8%	8.0%	31	2.4%	1,042		12	1.6%	282	3%	20		6	457	9.5%	3,412	2.7%	53,453	%6:1	1,209,778	7.3%
Asian		3.5%	3.9%	51	3.9%	2,073		28	3.8%	98	3%	4		2	149	3.0%	2,990	2.0%	4,372	1.2%	306,644	1.8%
Latino (any race)		2.2%	4.0%	59	2.2%	1,113		16	2.2%	81	%0	12		80	184	3.7%	1,946	3.3%	3,469	%0.1	656,972	4.0%

Source: Summary File 1, Table P12, Census 2000, U.S. Census Bureau

Table A1.7 Limited English Proficiency in the Population Age 65 and Older*

	U.S.A.	1,385,817	4.0%
	Virginia	12,869	1.6%
Northern	Virginia	9,226	%6.9
Prince	William	612	4.7%
Manassas	Park	18	3.8%
_	Manassas	30	1.6%
	Londoun	272	2.9%
Falls	Church	63	4.9%
Fairfax	County	6,443	8.5%
City of	Fairfax	149	2.5%
	Arlington	942	2.5%
	Alexandria	269	6.1%
	7	Number	Percent

* Those who speak English "not well" or "not at all" Source: Summary File 1, Table P19, Census 2000, U.S. Census Bureau

Table A1.8: Number and Percent of Elderly Persons Below Poverty by Age and Race

	a		Ē	_	=		_	y Falls C		_	_	, Mar	ıas	Manass	as Park	Prince W			/irginia			\mathbf{OSA}	
	<u>_</u>	Ž +-	<u>~</u>	N N	oer Percen	-		Z				Z	٠	Number		Number						ш,	ercent
White, Not Hispanic < 65			_	3.6%	576 4	`				_		_		6 295		4,943							8.2%
Male	974 3.3%	_		3%	311	. 0	5,738 2.			_		_		, 126		2,155							7.4%
Female	1,348 4.3	% 1,8	,884 3.	3.9%	365 6	. 0						_		9 16		2,788							%0.6
White, Not Hispanic 65 to 74	76 2.1%	%	243 4.	5%	24 2	2.0%						_		,		184							6.2%
Male	33 2.0%	%	64 2.	2.4%	9	1.7%						_		,12		22							4.7%
Female	43 2.1%	%	79 5.	2%	15 2	2.2%				•		_		,======================================		127							7.5%
White, Not Hispanic 75+	189 4.8%	%	3.	3.9%	1	1.2%				_		_		,		222							%9.6
Male	41 3.0%	%	52 2.	%	0	%0:				•		_		,		63							2.9%
Female	148 5.7	%	29 4.	4.8%	1	.0						_		, 16		159							11.9%
White, Not Hispanic 65 and Older	265 3.5%	%	524 4.	4.0%	35 1	٠.						_		%		406							7.8%
Male	74 2.5	%	16 2.	3%	9	1.0%						_		,12		120							5.2%
Female	191 4.1	%	~	1%	26 2	٠.						_		6 27		286							%2.6
Black < 65 years	m	. 5	_	%0	6 06	\ 0				_				% 38		3,527							25.0%
Male		. 0	~	%0	64 12	۰,۰	2,897 8.:							ω «		1,536							23.2%
Female	2,127 15.6%	1,012	٥.	%0	26 5	5.9% 3								%		1,991							26.7%
Black 65 to 74 years	225 20.0%	7	16 14.29	5%										,	%0.0	88							21.4%
Male	118 23.3	%	35 10.5%	2%			79 8.	- %6	0.0					,	%0:0	17							17.5%
Female	107 17.3%	%	81 16.7%	. %2				- %	٠					,	%0.0	72							24.1%
Black 75+	135 20.7%	%	28 21.8%	8%	0	%0.0	.6 86	- %	0.0	•				,		52							26.6%
Male	22 12.6%	%	62 25.2%	5%	0	%0.0	13 4.	- %	•					,									19.6%
Female	113 23.7%	%	66 19.	4%	0	%0:		- %	0.0	•				,		52							30.1%
Black 65 and Older		% 2	244 17.	17.4%	0	%0.0		- %(0.0					,	%0.0	114							23.5%
Male		%	97 16.	8%	0	. 0								,	%0.0	17							18.3%
Female		1 %	17.	8%	0	. 0				_				,	%0:0	46							26.7%
Asian < 65		_		, %8	74 7					_				,	0.0%	449							12.6%
Male	_	_	_	3%	8 00	_	3,454 6.		_			_		,	%0:0	215							12.5%
Female	371 11.1%	% 1,102	٠.	3%	74 5	_						_		,	%0:0	234							12.7%
Asian 65 to 74 years	81 25.7	%	23 20.7%	%2	0	%0:						_		ψ, ,,	22.6%	23							11.6%
Male	2 2.2%	%	19 7.	%0.7	0	%0:						- 9	0.0	,		10							10.7%
Female	79 35.3%	%	04 32.1%	%	0	%0:	391 15.					- %	0.0	٠,	22.6%	13							12.2%
Asian 75 years and older	109 54.8%	%	27 50.8%	8%	8	22.2%	315 16.					- 9	0.0	,	0.0%								13.7%
Male	47 53.4%	%	47 57.3%	3%	0	%0:	160 20.					- 9											12.8%
Female	62 55.9%	%	80 47.6%	%9	8	44.4%				_		- %	0.0										14.3%
Asian 65 and Older	190 37.0%	% 2	250 29.6%	%9	8	6.3%				_		- %	0.0			23							12.3%
Male	_			9%	0	%0:						- 9	0.0			10							11.5%
Female		. 0		4%	8 10							,	0.0			13						- 1	13.0%
Hispanic < 65	2,609 14.3%	% 4,330 %			255 9	9.0% 11	11,311 11.0%	120	0 14.4%	622	2 6.4%	% 78	15.6%	95		2,128	8.1%	22,259		41,226	13.4%		22.8%
Male		۰ ،	`			•						96	0.7.7			000,							24.2%
Hispanic 65 to 74 years	,		· n c	0/0/	n C	۰.,						0 7				1,030							24.3 % 18 1%
Male Male	10 25 79	% %	ν α	7 3%		%0.0	82 10.					0 7	0.0			- 7							10.4 % 15.8%
Female	20 15.3%	۷ %	62 17.0%	200		%0.0		0/0				0 7	0.0			<u> </u>							10.0%
Hispanic 75 years and older	52 46.4%	۶ %	36 14.3%	3%		%0.0		%					0 0			,							27.5%
Male Male	37 72 5	2 %	21 13.8%	%6		%0.		2 %															17.9%
Female	15 24.6%	2 %	15 15.0%	%0		%0.0			0.0			,	0.0										24.2%
Hispanic 65 and Older	100 26.69	. ~	06 13.2%	5%		%0.		- %	0.0			,	0.0			17							19.6%
Male	56 44.8	: %	29 8.	%9		%0:	109 8.	- %	0.0			,	0.0			4							16.5%
Female	44 17.5	%	77 16.	%9	0	%0:		- %(0.0	%	6 5.69	- %	0.0			က							21.8%

66.2% 45.6% 66.2% 74.9% 77.3% 66.1% 77.3% 66.1% 33.8% 55.1% 25.1% 25.1% 25.1% 21.2% 21.3% 69,815,753 8,336,485 15,866,915 11,367,265 9,353,177 17,298,316 9,961,330 8,101,318 8, 68.1% 4.6.4% 68.1% 7.1% 83.5% 70.0% 80.7% 31.9% 21.9% 21.9% 16.5% 20.7% 223.447 435.005 441.267 310.4611 228.535 143.244 348.5629 861.234 258.004 259.004 259. 65.4% 41.9% 66.7% 73.8% 883.3% 882.2% 77.6% 77.6% 34.6% 58.1% 16.7% 16.7% 16.7% 12.8% 22.8% 22.8% Virginia 445,282 60,866 122,502 122,502 141,498 37,517 4,203 63,134 235,660 84,401 84,401 84,401 87,734 34,228 14,888 14,888 14,888 18,88 ### William Park William Park William | ### William | #### William | #### William | #### William | #### William | Manassas 8,203 69.8% 2 1,374 51.4% 1,148 82.38 22.38 80.2% 668 80.2% 61 75.3% 172 81.2% 24 54 30.2% 66 54 30.2% 66 54 17.8% 23 19 26.2% 22 17 16.2% 36 5 17.6% 22 5 17.6% 22 5 17.6% 22 5 17.6% 22 5 17.6% 22 5 17.6% 22 5 17.6% 22 5 18.8% 36 6 23 7 16.2% 36 7 16.2% 36 8 17.8% 22 19.8% 36 19.8% 36 19.8% 36 19.8% 36 19.8% 36 Loudoun Manass 17,539 79,4% 8,203 69,9823 71,66% 1,537 5 10,885 85,7% 2,148 87,985 85,7% 1,126 85,885 85,7% 1,126 87,987 2,148 87,987 2,148 87,987 2,1581 2,067 8,887 2,1281 2,067 8,487 1,299 44,387 1,438 2
 Alexandria
 Arlington
 Fairfax
 County
 Church
 Loudoun

 247.45
 40.0% 37.370
 43.3%
 5.550
 69.1%
 248.820
 70.9%
 2.708
 60.6%
 47.539
 79.4%

 3.552
 19.9%
 5.046
 20.6%
 91.%
 248.820
 70.9%
 2.708
 60.6%
 47.539
 71.69

 5.575
 38.5%
 8.464
 43.3%
 1.269
 67.6%
 65.176
 69.8%
 612
 58.5%
 16.328
 37.0%

 4.377
 5.65
 6.191
 6.55
 6.176
 69.8
 81.7%
 821
 68.57
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 10.855
 85.7%
 <t Householder 85 years and over Householder 85 years and over Householder 25 to 34 years Householder 35 to 44 years Householder 55 to 64 years Householder 55 to 64 years Householder 65 to 74 years Householder 75 to 84 years Renter occupied: Householder 25 to 34 years Householder 35 to 44 years Householder 45 to 54 years Householder 55 to 64 years Householder 65 to 74 years Householder 65 years and over Householder 65 years and over Universe: Occupied housing units Householder 75 to 84 years

NUMBER AND PERCENT OF HOUSEHOLDERS WHO OWN OR RENT THEIR HOMES (BY AGE)

Table A1.9

Source: Summary File I, Table H16, Census 2000, U.S. Census Bureau

	. A . 7 27.8%	3 17% 4 36%
	U.S	671 12% 8,128 14% 51,506 16% 2,395,633 17% 2,158 27% 25,641 33% 165,082 35% 7,327,224 36%
	nia 27.3%	16% 35%
	Virgir 216.588	51,506 165,082
	ern ia 24.9%	14% 33%
	Northern Virginia 33.769 24.9	8,128 25,641
	ce am 21.0%	12% 27%
	Prince William 2.829 21.0	671 2,158
	ssas rk 19.2%	14% 23%
	Mana Pa	26 59
	Manassas Manassas Manassas Park % 434 22.8% 85 19.2%	1 14% 3 29%
	, Ma 43	6 10
Sex	Loudoun 2.199 23.1%	13%
e by	Lou 2.199	515 1,684
e Alon	Falls Church 452 35.8%	99 21% 515 13% 353 45% 1,684 31%
o Liv	Fa Chu	99
er Wh	ax nty 21.7%	12% 29%
umber and Percent of Persons 65 and Older Who Live Alone by Sex	Fairfax County	10% 3,907 12% 26% 12,765 29%
s 65	City of Fairfax 536 19.5% 1	10% 26%
ersor		
it of P	Jton 35,7%	24% 43%
Percer	Arling 6.345	1,039 24% 1,660 24% 110 3,178 44% 4,685 43% 426
ır and	1 dria 36.3%	24% 44%
Iumbe	Alexar 4.217	1,039 3,178
Z		Male Female
Table A1.10 :	Total Persons	

Source: Summary File 1, Table P30, Census 2000, U.S. Census Bureau

Table A1.11 Disability Status	Disabi	lity S	tatus													
	Alexandria	Iria	Arlington	City of Fairfax	Fairfax County	ax ıty	Falls Church	ч	Londoun	Man	Manassas	Manassas Park	Prince William	Northern Virginia	Virginia	U.S.A.
Seniors that report having no disability	g no disabili	ty														
65 years and older	6416		10301 62.9%	61.2% 10301 62.9% 1614 67.6%	50068	%6.79									436797 57.9%	19368508 58.1%
Male	2,657	66.1%	4,290 65.9%	713 72.7%	23,086	71.0%		76.1% 2	2,787 72.0%	392	28.9%	98 49.7%	3,246 62.0%	37,607 69.1%	186,202 59.6%	8,306,636 59.6%
Female	3,759	58.1%	6,011 61.0%	901 64.1%	26,982	65.5%	507 6								250,595 56.8%	56.8% 11,061,872 57.0%
Seniors that report difficu	ılty going ou	tside the	home alone du	e to a physical, i	mental, o	r emotion	al condi	ition lasti	ng six mon	hs or mo	re					
65 to 74 years	728	13.3%	906 11.5%	108 8.1%	4166	6.5%	23	4.4%	521 9.7	% 137	12.5%	71 21.3%		7788 10.5%		2433426 13.3%
Male 268 11.6% 362 10.3% 27 4.6% 1690 8.1% 0 0.0% 215 8.2% 83 16	268	11.6%	362 10.3%	27 4.6%	1690	8.1%	0	%0.0	215 8.2	83	16.2%	35 21.2%	466 12.4%	3146 9.1%	25011 12.9%	1009746 12.3%
Female	460	14.5%	544 12.4%	81 10.8%	2476	10.8%	23	8.3%	306 11.29	% 54	9.3%	36 21.3%				1423680 14.2%
75 years and over	1256	25.1%	2087 24.7%	253 24.1%	7340	24.6%	174 2	5.4%	872 24.7	% 143	24.2%	52 37.7%				4362091 28.9%
Male	304	17.8%	613 20.5%	48 12.2%	1947	%9.91	45 2	2.7%	213 17.19	30	19.7%	4 12.5%		3555 17.8%		1329382 23.3%
Female	952	29.0%	1474 26.9%	205 31.3%	5393	29.7%	129 2	%5.97	659 28.9	% 113	25.7%	48 45.3%				
65 and Older Men & Women	men															
Source: Summary File 3, Tables PCT 27-31, Census 2000, U.S. Census Bureau	ables PCT 2.	7-31, Cens	us 2000, U.S. C	Zensus Bureau												

Table A1.12 Elderly Persons Near and Far from Transit 1/8 mile

		Total Population	pulation	Near Transit*	ansit*	Far From Transit**	Transit**	Potential Transit Market	nsit Market
	County	92 +	75+	65 +	75+	65 +	75+	65 +	75+
51013	Arlington	17,762	9,432	16,203	8,570	1,559	862	10,933	5,199
51059	Fairfax	76,818	32,415	57,957	24,806	18,861	7,609	39,105	15,050
51107	Londonn	9,538	4,136	4,475	2,047	5,063	2,089	3,019	1,242
51153	Prince William	13,473	4,983	7,790	3,166	5,683	1,817	5,256	1,921
51510	Alexandria	11,605	5,910	11,253	5,765	352	145		3,498
51600	City of Fairfax	2,753	1,298	2,226	1,074	527	224	1,502	652
51610	Falls Church	1,262	732	1,204	869	58	34		423
51683	Manassas	1,902	816	1,224	222	678	239	826	320
51685	Manassas Park	442	131	359	109	83	22	242	99
Total		135 555	59 853	102 691	46.812	32 864	13 041	69 289	28 400

Table A1.13 Percentage of Elderly Near and Far from transit

		Near	Near Transit*	Far From Transit**	Transit**	Potential Transit Market	sit Market
	County	92 +	75+	+ 59	75+	92 +	75+
51013	Arlington	91.2%	%6.06	8.8%	9.1%	92%	22%
51059	Fairfax	75.4%	76.5%	24.6%	23.5%	51%	46%
51107	Londoun	46.9%	49.5%	53.1%	20.5%	32%	30%
51153	Prince William	57.8%	63.5%	42.2%	36.5%	39%	39%
51510	Alexandria	92.0%	97.5%	3.0%	2.5%	%59	29%
51600	City of Fairfax	80.9%	82.7%	19.1%	17.3%	22%	20%
51610	Falls Church	95.4%	95.4%	4.6%	4.6%	64%	28%
51683	Manassas	64.4%	70.7%	35.6%	29.3%	43%	43%
51685	Manassas Park	81.2%	83.2%	18.8%	16.8%	22%	20%
Total		75.8%	78.2%	24.2%	21.8%	51%	47%

*1/8 mile from a bus route or metrorail station **Not

**Not 1/8 mile from a bus route or metrorail station

individual. If any part of a block falls within .125 miles from a bus route it is included in near transit Limitation: This data is based on census blocks and not the actual location of each elderly

section. Source: Census 2000, US Census Bureau

Elderly Persons Near and Far from Transit 1/4 mile Table A1.14

		Total Pc	Total Population	Near Transit*	ansit*	Far From Transit**	Transit**	Potential Transit Market	nsit Market
	County	+ 59	75+	+ 59	75+	e2 +	75+	+ 59	75+
51013	Arlington	17,762	9,432	17,291	9,175	471	257	11,667	5,566
51059	Fairfax	76,818	32,415	65,685	28,114	11,133	4,301	44,320	17,056
51107	Londoun	9,538	4,136	5,028	2,263	4,510	1,873	3,393	1,373
51153	Prince William	13,473	4,983	8,981	3,526	4,492	1,457	090'9	2,139
51510	Alexandria	11,605	5,910	11,605	5,910	•	1	7,830	3,586
51600	City of Fairfax	2,753	1,298	2,642	1,240	111	58	1,783	752
51610	Falls Church	1,262	732	1,262	732		1	852	444
51683	Manassas	1,902	816	1,521	629	381	137	1,026	412
51685	Manassas Park	442	131	421	125	21	9	284	76
Total		135,555	59,853	114,436	51,764	21,119	8,089	77,213	31,405

Table A1.15 Percentage of Elderly Near and Far from transit

		Near	Near Transit*	Far From Transit**	Transit**	Potential Transit Market	sit Market
	County	+ 59	+9/	+ 59	+92	+ 59	75+
51013	Arlington	97.3%	97.3%	2.7%	2.7%	%99	%69
51059	Fairfax	85.5%	%2'98	14.5%	13.3%	28%	23%
51107	Londonn	52.7%	54.7%	47.3%	45.3%	%98	33%
51153	Prince William	%2'99	70.8%	33.3%	29.2%	45%	43%
51510	Alexandria	100.0%	100.0%	%0.0	%0:0	%29	61%
51600	City of Fairfax	%0.96	95.5%	4.0%	4.5%	%59	28%
51610	Falls Church	100.0%	100.0%	%0.0	%0:0	%29	61%
51683	Manassas	80.08	83.2%	20.0%	16.8%	54%	20%
51685	Manassas Park	95.2%	95.4%	4.8%	4.6%	64%	28%
Total		84.4%	% 9.98	15.6%	13.5%	21%	25%

*1/4 mile from a bus route or metrorail station

**Not 1/4 mile from a bus route or metrorail station

Limitation: This data is based on census blocks and not the actual location of each elderly individual. If any part of a block falls within .25 miles from a bus route it is included in near transit section. Source: Census 2000, US Census Bureau

Appendix 2 QUANTITATIVE ANALYSIS REPORT

Meeting the Transportation Needs of Northern Virginia Seniors

Final Report

Prepared for:





Date: March 20, 2006

Job #: 05-532A

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Table of Contents

Page#

Background & Objectives	2
Methodology	က :
ngs nic Profile	7
	13
	4
Public Transportation	26
	36
	44
	50
	57
	58
	78
	83
	86
Public Transportation	89
	98
	10
Community Type	7
	13
	17
	20
) sportation	24
	27
Problems Getting Places.	29
ation	32
Segmentation 1.	35
Segment 1: Experienced Urban Commuters	
Segment 2: Car Riders	
Segment 3: Transportation Dependents	
Segment 4: Active & Varied	
Segment 5: Autopilots	

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Appendix Questionnaire

Background & Objectives

Northern Virginia in order to impact planning and strategic policy development with the results of commissioned market research. The According to the Transportation Equity Act of the 21st Century, the number of older Americans is expected to double over the next 25 ransportation must shift to meet the needs of this growing group of people. But, where is this shift headed and exactly what are the often, why not? By 2025, about 14% of Northern Virginia's residents will be of retirement age. In seeking to be proactive regarding needs of seniors, specifically those 75 years and older? How mobile are they? How often do they use public transportation? If not senior mobility, NVTC commissioned WB&A Market Research to conduct quantitative and qualitative research among seniors in ransportation options. The Northern Virginia Transportation Commission (NVTC) recognizes that in the near future public years. Many of these elderly individuals will face mobility issues as time goes by creating a large demand on appropriate overall objectives of this research were as follows:

- Determine travel needs and preferences among seniors 75+;
- Determine transportation services available and utilization rates;
- Determine attitudes towards public transportation options;
- Collect information in regards to dwelling unit and convenience of public transportation; and
- Collect feedback about isolation issues facing this population in particular.

What follows is a summary of the results from the quantitative phase of this research.

Methodology

In order to meet the research objectives, telephone interviews were conducted among seniors age 75 and older in Northern Virginia. Interviews were conducted between April 26 and May 31, 2005 by professional WB&A interviewers from WB&A's central telephone facility located in Crofton, Maryland.

In order to qualify for the study, respondents had to be at least 75 years of age and live in one of the following areas:

- Arlington County
- Fairfax County
- Loudoun County
- Prince William County
- City of Alexandria
- City of Falls Church
- City of Fairfax

City of Manassas

City of Manassas Park

challenges. Travel does not decrease with age until after or about the age of 75 years. The "younger" elderly substitute work trips with The 75 and older age cohort was chosen because NVTC wanted to reach the population must likely to have confronted transportation personal trips. After 75, vision and hearing problems, physical movement problems and reduced energy may explain observed lower rates of travel among the elderly (Genevieve Giuliano, "Travel Patterns of the Elderly: The Role of Land Use." METRANS Transportation Center, University of Southern California. July 2003).

Respondents were contacted from listed sample of households identified to have someone 75 years of age or older. Three-fourths of If a respondent was otherwise eligible but could not speak due to a physical or other disability, interviews were conducted with either their caregiver or someone else who was able to answer questions about that person's transportation needs (4% of interviews) those contacted (75%) qualified. Interviews averaged about 17 minutes in length. The overall response rate was 45.1%.

When reading the charts in this report, note that some charts may not equal 100% due to rounding or because multiple responses are allowed. Within the charts and graphs of this report, subtext letters are used to show where statistical differences exist at the 95% confidence level

Methodology (continued)

Due to the relatively small sample sizes of these areas, Fairfax City/Falls Church and Manassas City/Manassas Park were collapsed into two jurisdictions for the purpose of analysis.

subject to sampling error. The maximum sampling error of the data for the Total Sample of 1,636 interviews is ±2.4 percentage points In research, because the entire population is typically not interviewed but rather a sample of that population is surveyed, the data are at the 95% confidence level. However, depending upon the data being examined, the fluctuation may differ.

		40%	30%	20%	10%	1%
		or	o	ō	ō	or
If the percentage found is around:	20%	% 09	<u>%02</u>	80%	% 06	%66
Then, the standard error, in percentage points would be:						
Total Sample (n=1,636)	±2.4	±2.4	±2.2	±1.9	±1.5	±0.5
Arlington County (n=236)	±6.4	±6.3	₹2.8	±5.1	±3.8	±1.3
Fairfax County (n=662)	±3.8	±3.7	±3.5	±3.0	±2.3	₹0.8
Loudoun County (n=167)	±7.6	±7.4	±7.0	±6.1	±4.6	±1.5
City of Alexandria (n=189)	±7.1	±7.0	∓6.5	±5.7	±4.3	±1.4
Cities of Falls Church & Fairfax (n=100)	49.8	9.6±	0.6∓	±7.8	∓5.9	±2.0
Prince William County (n=212)	∓6.7	9.9∓	±6.2	±5.4	±4.0	±1.3
Cities of Manassas/Manassas Park (n=70)	±11.7	±11.5	±10.7	±9.4	±7.0	±2.3

For example, if a question in the study asked among the Total Sample yielded a percentage of 20%, then we can be sure 95 out of 100 times that the true percentage would lie between 18.1% and 21.9% (20% \pm 1.9 percentage points).

Thus a sample size of 100 or 200 can provide valuable information on a segment of a population. However, this subgroup would be subject to sampling error (as with all subgroups) as outlined in the chart above.

Methodology (continued)

Three community types are analyzed in this report. They are defined as follows:

Community Type 1: A walkable urban, or town, mixed-use community.

designed for safe pedestrian crossing. Street traffic is slow enough as to not be intimidating to a senior pedestrian with limited agility. Examples of the walkable urban or town, mixed-use community type would include the Rosslyn-Ballston transit-oriented development an integrated mix of use. Ideally, residents would be within one-half mile of commercial retail and services. Nine percent of Northern network of sidewalks, crosswalks, and trails that encourage walking. Roads are generally two to four lanes wide and intersections urban or town, mixed-use community type unless a fair amount of pedestrian activity could be observed in 2005. Another criterion Manassas. In order to draw the distinction between the mixed-use and suburban community types, an area was not placed in the The urban/town community type is characterized by a walkable urban, or town, mixed-use community with a complete pedestrian corridor in Arlington County; pedestrian friendly, mixed-use areas of Reston in Fairfax County; and the historic downtown area of Virginia's senior population age 75 and older was found to reside in community type I.

Community Type 2: A suburban residential community type characterized by a separation of retail and commercial services from the residential areas.

would qualify under the suburban residential community type. While sidewalks may link homes and the shopping center, seniors may find the distance too great or barriers such as surface parking lots, fast moving vehicular traffic, and wide intersections not conducive For instance, a residential subdivision bordered by a commercial strip shopping center that offers a grocery store and other services A suburban residential community type is characterized by a separation of retail and commercial services from the residential areas. for walking. Most of Northern Virginia's senior population falls within Community Type 2 (82%).

Community Type 3: A rural/exurban community type.

This community type would be characterized by areas where farming, forestry, and ranchette activities occur and where single family Most of this community type is found in western Loudoun County and in Prince William County, although Fairfax County has some homes on large lots are located. Few, if any, retail or service activities are located in these areas, with most located at crossroads. and area in this community type. Nine percent of Northern Virginia's seniors live in rural/exurban areas.

Methodology (continued)

Since the research design sought to reflect the true senior population of Northern Virginia, it was necessary to use the accepted statistical practice of applying weighting factors to assure that the completed interviews would actually represent the relative populations of the universe of the Northern Virginia senior population.

		NIN	UNIVERSE			COMP	COMPLETES			TAR	TARGETS			WEIGHTS	
	T1	T2	Т3	Total	11	Т2	Т3	Total	ш	Т2	Т3	Total	T1	Т2	Т3
Arlington County	533	816	-	1349	104	132	0	236	99	100	0	165	0.62500	0.75758	-
Fairfax County	193	6585	463	7241	23	533	92	299	24	807	22	888	0.45283	1.51407	0.75000
Loudoun County	110	629	134	823	28	123	16	167	14	71	16	101	0.50000	0.57724	1.00000
City of Alexandria	222	683	-	905	42	147	0	189	22	84	0	111	0.64286	0.57143	-
City of Falls Church	84	20	1	134	12	13	0	25	10	9	0	16	0.83333	0.46154	-
City of Fairfax	42	435	-	478	4	71	0	75	9	54	0	29	1.25000	0.76056	-
Prince William	-	1461	524	1985	0	108	104	212	0	179	64	243	-	1.65741	0.61538
Manassas City	72	268	6	349	12	40	2	54	6	33	1	43	0.75000	0.82500	0.50000
Manassas Park	-	92	5	81	0	13	3	16	0	6	1	10	-	0.69231	0.33333
Total	1256	10953	1136	13345	255	1180	201	1636	154	1343	139	1636			
Note: T1=Tvpe 1: T2=Tvpe 2: T3=Tvpe 3	T3=Tvpe 3														

Note: T1=Type 1; T2=Type 2; T3=Type 3

American Association of Retired People (AARP), Understanding Senior Transportation. This study was conducted among seniors Where applicable, the results of this study have been compared to seniors age 75 and older from the 1998-1999 study by the from across the United States.

Detailed Findings: Demographic Profile

Demographic Profile

Respondents were asked a series of questions in order to develop a demographic profile of seniors age 75 and older in the Northern Virginia area. These responses were compared to the 1998-1999 AARP study Understanding Senior Transportation, that analyzed seniors from across the United States.

- uncommon for telephone research to skew to a slightly higher income. Higher income households are less transient and are Respondents are typically White (92%) females (61%) with a median income of about \$50,000 (\$48,700). Note: It is not more likely to have telephones.
- Respondents in this study are more educated and have higher incomes than seniors 75 or older across the United States.
- About one-half of the respondents (48%) are college educated, while only about 21% of seniors nationwide are college educated.
- One-half of the respondents (50%) have household incomes of \$30,000 or more, compared to 18% nationwide.
- The vast majority (84%) own their own home, having lived in their home for almost 30 years (mean of 27.8 years).
- Respondents were weighted by jurisdiction and community type.
- Reflective of the area as a whole, more than one-half (54%) are from Fairfax County, while Prince William and Arlington Counties are the next two most represented jurisdictions (15% and 10% respectively).
- More than eight in ten (82%) are from a Type 2 community, while 9% are from Type 1 communities and 8% are from Type 3 communities.

Demographic Profile (continued)

				۵	Demographics	S					
					Jurisdiction				٥	Community Type	6
	Total	Arlington	Fairfax County	Londoun	Alexandria	FC/Fx City	PW	Manassas/ Man. Park	Type 1	Type 2	Type 3
==	(1636)	(B) (236)	(C) (662)	(D) (167)	(E) (189)	(F) (100)	(G) (212)	(H) (70)	(I) (255)	(J) (1180)	(K) (201)
Jurisdiction											
Arlington County	10%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	41%	11%	ı
Fairfax County	57	n/a	n/a	n/a	n/a	n/a	n/a	n/a	21	45 _{IK}	38
Loudoun County	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17	10	80
Alexandria	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16	12	
Net: FC/Fx City	S)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	7	
Falls Church	_	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	_	
Fairfax City	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	_j	
Prince William County	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	,	6	52,
Net: Manassas/Man. Park	က	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	4	2
Manassas City	ო	n/a	n/a	n/a	n/a	n/a	n/a	n/a	ຸ່ນ	κŤ	_
Manassas Park	_	n/a	n/a	n/a	n/a	n/a	n/a	n/a		_	_
Land Use Type	700	740/	700	70/	7000	760/		70/	6/0	6/0	۵/۵
- ypd - 1	0/6	++/OCDEFH	9 7	00/ I	20/ 77	20 /OC	٠ ;	20/ /-	5 <u>(</u>	5 (٥ (<u>-</u> !
Type 2	82	26	81_{BG}	74_{BG}	78_{BG}	84 _{BDG}	51	76 _{BG}	n/a	n/a	n/a
Type 3	∞	•	7	10			49 _{срн}	7	n/a	n/a	n/a
Gender											
Male	39%	36%	41%егн	36%	33%	26%	39%FH	24%	30%	37%1	43%1
Female	61	64	29	64	67 _C	74 _{CG}	61	76 _{CG}	70 _{JK}	63	22
Age											
75 to 79	44%	36%	46% _B	40%	39%	39%	47% _B	57%BDEF	41%	42%	53% _U
80 to 84	35	36⊬	84 ∓	38н	35⊬	40 _H	36⊬	23	34	36	31
85 or older	17	26 _{CDFG}	15	17	$22_{\rm cG}$	16	4	17	20 _K	18 _x	12
Don't know/Refused	4	ო	2	4	2	2	7	က	4	4	က

Base=Total Sample
Note: Letters indicate statistical differences at the 95% confidence level
n/a=Not applicable
REG,S4,D1,D5

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Demographic Profile (continued)

				Demog	Demographics (continued)	ıtinued)					
					Jurisdiction				Ŏ	Community Type	е
	Total	Arlington	Fairfax County	Loudoun	Alexandria	FC/Fx City	PW	Manassas/ Man. Park	Type 1	Type 2	Type 3
=	(1636)	(B) (236)	(C) (662)	(D) (167)	(E) (189)	(F) (100)	(G) (212)	(H) (70)	(I) (255)	(J) (1180)	(K) (201)
Ethnicity		Ì					Ì				·
White	95%	%88	93% _B	93% _B	%88	96% _{BE}	94% _B	96% _{BE}	%88	95%	97% ¹
Black/African-American	က	8срген	7	7	7 _{CDG}	က	က	က	7 _{JK}	ဇိ	_
American Indian/Alaskan	V	,	٧	_		,	1		,	Ÿ	1
Asian	Ÿ	•	~		_	1	,		_	۲ ۲	Ÿ
Other	_	_	_	2	2	,	,	_	2	_	Ÿ
Don't know/Refused	က	က	4 ₽	2	5	~	က		2	ఙ	_
Hispanic Origin											
Yes	1%	<1%	1%	1%	1%	1	1%	1%	<1%	1%	1%
No	26	26	96	96	98°	86	86	66	86	26	86
Refused	2	က	က	7	_	7	_	ı	7	7	_
TA::001:00											
Less than high school	4%	3%	2%	2%	5 %c	2%	9% _{BCDF}	11%BCDF	4%	3%	%9
High school degree	19	16	16	16	16	27 _{BCDE}	28 _{BCDE}	33 _{BCDE}	18	19	20
Vocational/Technical	က	6 _G	က	က	က	4	2	7	S.	က	4
Some college	24	20	23	31 _{BCEF}	20	19	29 _{BE}	29	18	25,	24
Net: College degree	48	53 _{GH}	$53_{\rm GH}$	47 _{GH}	55 _{GH}	46 _{GH}	30 _H	19	53	48	44
4-year college degree	52	26 _{GH}	23 _{GH}	20	24⊬	24⊬	16	1	56	21	19
Post graduate studies	26	27 _{GH}	31 _{6н}	27 _{GH}	31 _{GH}	22 _H	4	7	56	26	25
Refused	2	က	2_{E}	-	~	2	2	~	7	2	_
Income											
Less than \$30K	17%	18% _F	14%	16%	16%	10%	26%BCDEF	29% _{CDEF}	18%	16%	16%
\$30K to \$49K	18	18	18	41	19	13	21	20	20	18	16
\$50K to \$74K	15	16 _H	14 _H	19 _H	18 _H	18 _H	12 _H	4	13	16	12
\$75K or more	17	19 _{GH}	20 _{GH}	19 _{GH}	17 _{GH}	13	10	7	41	17	20
Don't know	9	2	9	9	က	11 _E	2	9	2	9	7
Refused	28	25	29	28	26	35	26	34	31	27	29
Mean	\$54,400	\$54,600 _{GH}	$\$57,900_{GH}$	$$57,200_{GH}$	$$55,000_{GH}$	$$57,300_{GH}$	\$43,100	\$36,800	\$50,000	\$54,600	\$56,700
Median	\$48,700	\$49,200	\$52,400	\$55,100	\$50,400	\$55,400	\$37,900	\$31,400	\$43,900	\$49,300	\$50,000
Base=Total Sample											

Base=Total Sample Note: Letters indicate statistical differences at the 95% confidence level D2,D3,D4,D6

Demographic Profile (continued)

					Demog	Demographics (continued)	ntinued)					
						Jurisdiction				ŏ	Community Type	e
		Total	Arlington	Fairfax County	Londoun	Alexandria	FC/Fx City	PW	Manassas/ Man. Park	Type 1	Type 2	Type 3
			(B)	(C)	(a)	(E)	(F)	(9)	Œ	(E)	(r)	3
	n= (1	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(02)	(255)	(1180)	(201)
Type of Home												
Own home/condo		84%	84% _D	87% _{DH}	%89	83% _D	95%всредн		73%	%08	84%	89% ¹ 1
Rent		9	8	Σ _F	11 _{CFG}	8	~		21 _{BCEFG}	13 _{JK}	ě,	-
Assisted living facility		က	4	ო	10всен	2	•		_	4	4	1
Live w/ someone else		က	7	ო	9	2	2	4	4	2	က	719
Subsidized housing		_	,	٧	2	_		_	ı	,	_	,
Other		<u>\</u>	,	•	,	_	•	,		,	٧	,
Don't know/Refused	-	က	7	3	7	_	7	$4_{\rm E}$	1	7	ო	7
Time in Home												
5 years or less		13%	$15\%_{ t F}$	11% _F	43%всегдн	17% _{CF}	2%	13% _F	24%cFG	$23\%_{ m JK}$	15%	12%
6 to 10 years		10	9	8	32всеген	10 _F	က	17 _{BCEF}	13.	4	10	16,
11 to 20 years		7	12	12_{D}	7	16 _{рн}	13	15 _{DH}	9	18,	10	17,
21 to 30 years		17	$17_{\rm D}$	19 _{DF}	∞	21 _{DF}	7	17 _D	17	19	16	24 _J
31 to 40 years		25	27 _{DEН}	26 _{рен}	7	$16_{\rm D}$	27 _{рен}	$20_{ m D}$	4	4	25 _{IK}	13
41 years or more		22	$22_{\rm D}$	22_D	က	17 _D	41всревн	17 _D	23 _D	12	23 _{IK}	17
Don't know/Refused		7	~	7	~	_	1	~	က	~	7	ı
Mean (in years)		27.8	28.6_{DEG}	$28.9_{ m DEGH}$	10.6	$24.4_{ m D}$	35.6 _{всребн}	25.1_{D}	24.1 _D	20.5	27.7 _{IK}	24.3,
Median (in years)	•••	30.0	30.5	30.0	2.0	25.0	40.0	25.0	24.0	18.0	30.0	25.0
Base=Total Sample												

Base=Total Sample Note: Letters indicate statistical differences at the 95% confidence level Q30,Q31

NVTC (A) (1636
than high school school degree ational/Technical e college degree College degree Hyear college degree Post graduate studies sed

Demographic Profile (continued)

Base=Total Sample
Note: Letters indicate statistical differences at the 95% confidence level
NVTC: D1,D3,D4,D5,D6; AARP: Q32,Q33,Q37,Q40,Q42

Detailed Findings: *Mode Usage*

Mode Usage - Overall

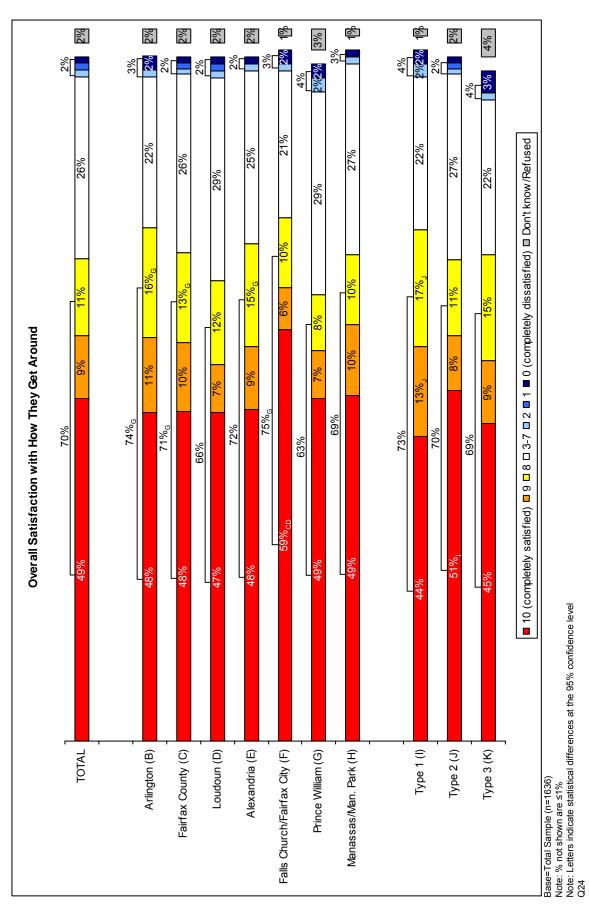
transportation. Overall, seniors tend to be satisfied with how they get around, and are highly dependent on cars (either theirs or Northern Virginia seniors were asked several questions in order to develop a profile of how they get around - i.e., how they use someone else's).

- Seven in ten seniors (70%) are satisfied with how they get around, giving a rating of 8 to 10 on a 0 to 10 satisfaction scale, while conversely, only 2% report being dissatisfied (giving a rating of 0 to 2).
- However, Northern Virginia seniors (70%) are less likely to report being satisfied (8 to 10 on an 11-point satisfaction scale) than are seniors from across the United States (79%).
- About eight in ten Northern Virginia seniors (79%) drive themselves at least occasionally, and for more than six in ten (64%) driving themselves is their primary means of transportation.
- By far, Northern Virginia seniors driving themselves accounts for the greatest proportion of total trips taken (63% of all trips). Furthermore, seniors take an average of between five and six trips per week by car (mean of 5.4).
- Seniors who live in Type 2 and Type 3 communities are more likely to drive a car than those who live in a Type 1 community (79% and 82% respectively vs. 70%).
- Almost nine in ten seniors (88%) said that they occasionally travel in a car or other vehicle driven by someone else, doing so an average of about two times a week (mean of 2.2).
- In fact, a car driven by someone else is the primary means of transportation for more than two in ten respondents (22%) and accounts for 25% of trips taken by seniors in Northern Virginia. I
- One in eight seniors (12%) use Metrorail or VRE at least occasionally. Use of other means of public transportation is limited, with fewer than one in twenty using public bus service (5%), transportation provided for people with disabilities (4%) and/or senior or community vans (2%)
- None of these public transportation modes account for more than 1% of all trips taken by seniors.

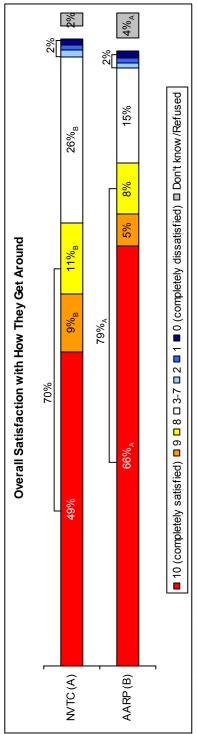
Mode Usage - Overall (continued)

- Respondents from Type 1 communities are the most likely to use fixed route service (which includes public buses, Metrorail and VRE), while respondents from Type 3 communities are the least likely:
- Metrorail/VRE Type 1 (21%) vs. Type 2 (12%) vs. Type 3 (1%)
- Public bus service Type 1 (11%) vs. Type 2 (4%) vs. Type 3 (1%)
- Arlington County respondents are more likely than those from any other jurisdiction to use transportation for people with disabilities (11% vs. 1%-5%), while those from Loudoun County tend to be more likely to use senior or community vans (9% vs. 0%-4%).
- When asked about the areas greatest transportation challenges, seniors are split between public transportation (36%) and driving (35%) concerns.

Mode Usage - Overall (continued)



A2-17



Base=Total Sample (NVTC n=1636; AARP n=1844)
Note: % not shown are ≤1%
Note: Letters indicate statistical differences at the 95% confidence level
NVTC: Q24; AARP: Q24

Mode Usage - Overall (continued)

				Mode U	Mode Usage - Past Month	Month					
					Jurisdiction				ŭ	Community Type	9
			Fairfax					Manassas/			
	Total	Arlington	County	Londonn	Alexandria	FC/Fx City	ΡW	Man. Park	Type 1	Type 2	Type 3
		(B)	(2)	(D)	(E)	(F)	(9)	(H)	(=)	(7)	(X
=u	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(70)	(255)	(1180)	(201)
Car driven by other	88%	%28	%68	%28	%28	%68	%28	%28	%68	%88	%06
Drove car	62	69	80 _B	78 _B	80 _B	85 _B	92	74	20	167	82
Walked	36	55срген	$36_{ m G}$	38 _G	48 _{CG}	40 _G	16	40 _G	62 _{JK}	$37_{\rm K}$	41
Taxi	12	30срген	10 _G	12 _G	25 _{срғен}	∞	က	9	25 _{JK}	1 3	2
Net: Fixed Route ¹	13	29среген	12 _G	80	21срвн	$13_{\rm G}$	2	O	25 _{JK}	14 _×	2
Metrorail/VRE	12	26срген	11 _{DG}	2	19срен	11 _G	4	9	21 _{,K}	12 _k	2
Public bus	4	9сен	က	2	8 ce	10 _{сен}	2	က	11 ₹	4,	-
Disabled transportation	4	11среген	က	5	4	-	5 ⊦	4	ğ	2	7
Bike	ო	2	ဗ	2	က	3	2	9	2	က	_
Senior/Community van	2	3	-	9всеге	4	-	2	•	4	Ř	7

Base=Total Sample
Multiple Responses Accepted; Top Mentions
Note: Letters indicate statistical differences at the 95% confidence level
1Net is the total proportion of respondents who reported any or all subcategories within that net; may include multiple responses

Mode Usage - Overall (continued)

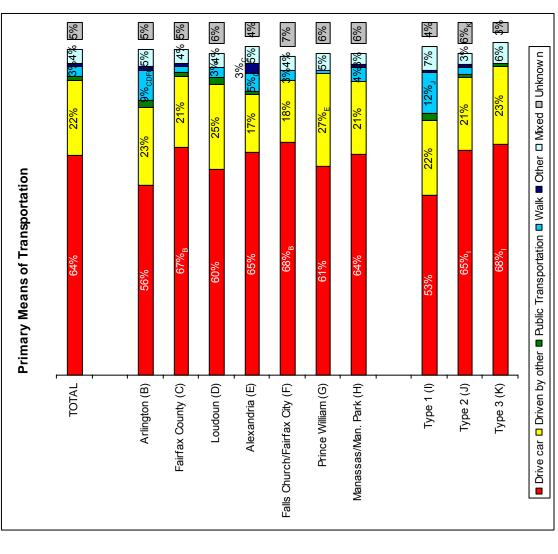
			Mean	Number of	Trips by Mo	Mean Number of Trips by Mode - Past Week	Veek				
					Jurisdiction				ŭ	Community Type	e
			Fairfax					Manassas/			
	Total	Arlington	County	Londoun	Alexandria	FC/Fx City	PW	Man. Park	Type 1	Type 2	Type 3
		(B)	(O)	(D)	(E)	(F)	(9)	Œ	€	(F)	(X
=u	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(02)	(255)	(1180)	(201)
Drove car	5.4	4.9	5.8_{BG}	5.0	5.1	$5.6_{ m G}$	4.5	5.3	4.8	5.4	5.4
Car driven by other	2.2	2.1	2.2	2.1	2.3	2.1	2.0	2.1	2.3	2.1	2.3
Walked	0.8	1.6 _{CDG}	0.7 _G	0.8 _G	1.3 _{CDG}	1.1 _{cs}	4.0	1.4cg	2.3 _{JK}	0.7 _K	0.4
Тахі	0.1	0.2 _{CDFG}	0.1 _G	0.1	0.3 _{CDFG}	0.0	0.0	0.1 _G	0.2 _{JK}	$0.1_{\rm K}$	0.0
Metrorail/VRE	0.1	0.3средн	0.1 _G	0.0	$0.2_{\mathtt{CDG}}$	0.1 _G	0.0	0.0	0.2 _{JK}	$0.1_{\rm K}$	0.0
Public bus	0.0	0.1 _{ce}	0.0	0.0	0.1 _{cG}	0.0 _G	0.0	0.0 _G	0.2 _{JK}	0.0	0.0
Disabled transportation	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Senior/Community van	0.0	0.0	0.0	0.1 _c	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Bike	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1 _B	0.0	0.0	0.0
Total Average	8.5	9.2 _{DG}	8.8	8.1 _G	9.3_{DG}	$8.8_{\scriptscriptstyle G}$	6.9	8.9 _G	$10.0_{\rm lu}$	8.4	8.1
Median	2.0	8.0	2.0	2.0	7.5	2.0	0.9	2.0	8.0	2.0	2.0
Base=Total Sample											

Base=Total Sample Multiple Responses Accepted; Top Mentions Note: Letters indicate statistical differences at the 95% confidence level Q3

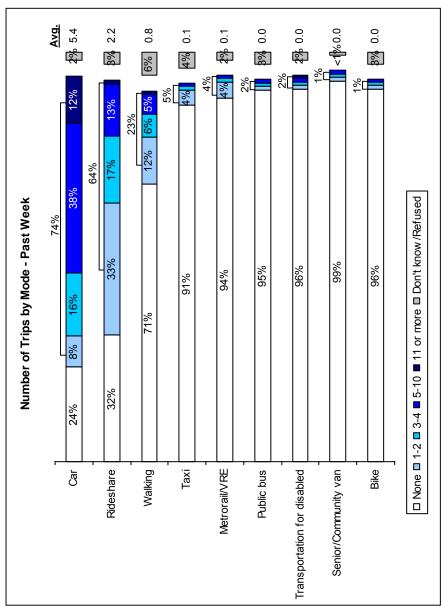
Mode Usage - Overall (continued)

			Propo	rtion of Tri	ps by Mode	Proportion of Trips by Mode - Past Week	¥				
					Jurisdiction					Community Type	a
	Total	Arlington	Fairfax	Loudoun	Alexandria	FC/Fx Cifv	Md	Manassas/	Type 1	Tvne 2	Tvne 3
		(B)	(0)	(C)	(E)	(F)	(9)	Œ			3
=0	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(70)	(255)	(1180)	(201)
Drove car	63.0%	23%	66% _{BE}	61%	25%	64%	%59	29%	48%	64%	¹ %99
Car driven by other	24.9	22	25	26	24	24	53	23	22	25	28
Walked	9.8	17 _{cG}	7	6	13 ₆	11	2	15 _G	22 _{JK}	∞	2
Taxi	1.0	ო	_	-	က	7	~	_	2	_	7
Net: Public Transportation ¹	2.2	9	2	က	4	-	-	_	5	7	,
Net: Fixed Route ¹	4.1	5 °	-	_	က	-	٧ ۲	-	4	_	<u>۸</u>
Metrorail/VRE	6.0	ო	_	<u>^</u>	7	_	V	<u>۲</u>	7	—	<u>^</u>
Public bus	0.5	~	7	_	-	√	1	<u>۲</u>	2	<u>۲</u>	ı
Disabled transportation	0.5	-	₹	-	~		۸	<u>۲</u>	-	_	<u>^</u>
Senior/Community van	0.3	7	7	-	-		٧		^	₹	
Bike	0.3	-	₹	-	<u>^</u>	-	۸	-	<u>^</u>	۲	<u>^</u>
Base=Total Sample Multiple Responses Accepted; Top Mentions Note: Letters indicate statistical differences at the 95% 1Net is the total proportion of respondents who reporte Q3	Mentions ferences at the ondents who re	95% confidence level	ce level Il subcategorie	es within that r	net; may includ	o confidence level ed any or all subcategories within that net; may include multiple responses	nses				

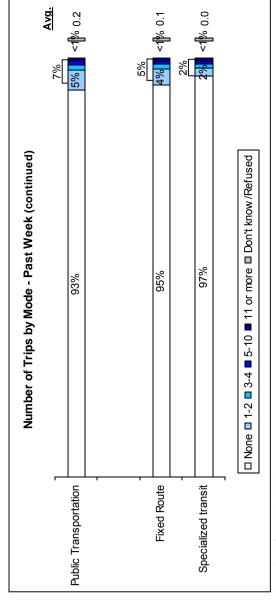
Mode Usage - Overall (continued)



Base=Total Sample (n=1636)
Note: % not shown are ≤2%
Note: Letters indicate statistical differences at the 95% confidence level
Q2/Q3



Base=Total Sample (n=1636) Note: % not shown are ≤2% Note: Letters indicate statistical differences at the 95% confidence level Q3



Mode Usage - Overall (continued)

Base=Total Sample (n=1636) Note: % not shown are ≤1% Note: Letters indicate statistical differences at the 95% confidence level Q3

Mode Usage - Overall (continued)

		Are	a's Great	Area's Greatest Transportation Challenges	ortation	Challenge	Š					
				ゔ	Jurisdiction					HDS	S	
	Total	Arl.	Fairfax County	Loudoun	Alex.	FC/ Fx City	PW	Man./ Man Pk	Exnt.	Good	Fair	Poor
		(B)	(C)	(D) (141)	(E)	(F)	(G) (122)	(H)	(L)	(M) (441)	(N) (295)	(0)
Net: Any¹	75%	%69 (7.7.)	%9 <i>L</i>	81% _B	75%	%02 20%	74%	(SS)	(55) (65%	75%	78% 78%	77% 77%
Net: Public transportation1	36	36	35	45 _{CE}	33	33	40	37	56	35	40∟	41∟
Public transportation not available/reliable	23	20	19	38 _{BCE}	23	28	35 _{BCE}	34	20	23	25	24
Lack of convenient stops	12	7	13	0	∞	17	œ		9	13	12	14 _L
Cost of public transportation	2	7 _D	2	2	9	2	က		3	က	8∟м	4
Getting on/off public transportation	က	က	2	4	2	1	7	က	_	က	_	4 _x
Not enough info about public transportation	~	7	-	1		ı	ı	ı	ı	-	_	7
Not enough seniors qualify for FASTRAN	7	,	-	ı	,	,		,	,	-		•
Not enough shelters	V	_	_	ı		ı				_	_	<u>^</u>
Net: Driving1	32	58	38 _B	32	38	30	8	58	38	38	34	32
Traffic congestion	22	19	27 _B	23	29 _B	20	53	20	59	56	26	23
Inconsiderate/Aggressive drivers	တ	9	10 _B	80	12 _B	9	80	9	6	10	6	7
Older drivers driving impaired	4	4	4	က	2	4	7	9	4	4	4	2
Parking	က	က	က	_	2	2	က	•	_	4 ₽	က	2
Poor roads	_	_	_	2	_	1	_		က	_	₹	_
Having to give up driving	_	_	⊽	-	•	7	_		⊽	-	_	₹
Driving without fear	<u>\</u>	_	<u>\</u>	_	_			က	_	_	₹	<u>۸</u>
Being disabled/disabled in general	9	7 _{DG}	7 _{DG}	2	2	9	7	က	2	9	9	7
Traveling alone	4	2	4	9 _E	7	ı	9	က	7	က	9	7∟M
Net: Walking ¹	4	ე _©	ည်	4	4	9	_	က	4	4	2	က
Poor/Lack of sidewalks	7	က	$3_{\rm EG}$	2	_	1	_		3	က	က	_
Crossing streets	7	က	2	_	က	9		က	_	2	က	_
None	22	31 _D	24	19	22	30	56	35	35 _{NO}	22	22	23
Base=Those Asked												

Base=Those Asked
Multiple Responses Accepted; Top Mentions
Note: This was an open-ended question without prelisted responses
Note: This was an open-ended question without prelisted responses
Note is the total proportion of respondents who reported any or all subcategories within that net; may include multiple responses
Q12

Mode Usage - Overall (continued)

Area's Greatest Transportation Challenges (continued)	ortation	Challenges .	(continued)	
		ò	Overall Satisfaction	on
	Total	Satisfied	Neutral	Dissatisfied
		(K)	(L)	(M)
=u	(1218)	(843)	(323)	(30)*
Net: Any¹	%52	72%	82% _K	75%
Net: Public transportation ¹	36	33	43 _×	64 _{KL}
Public transportation not available/reliable	23	20	29 _K	50 _{KL}
Lack of convenient stops	12	1	11	19
Cost of public transportation	2	4	7	2
Getting on/off public transportation	က	4	က	8
Not enough info about public transportation	-	_	2	ю
Not enough seniors qualify for FASTRAN	7	7	-	,
Not enough shelters	<u>^</u>	<u>^</u>	~	ı
Net: Driving ¹	35	35 _M	38 _M	15
Traffic congestion	25	25 _M	29 _M	7
Inconsiderate/Aggressive drivers	o	ω	O	2
Older drivers driving impaired	4	4	က	80
Parking	ო	2	4	ı
Poor roads	-	_	_	ı
Having to give up driving	_	_	√	ı
Driving without fear	₹	_	Ÿ	ı
Being disabled/disabled in general	9	9	∞	2
Traveling alone	4	က	αŤ	7
Net: Walking¹	4	က	2	•
Poor/Lack of sidewalks	7	2	က	ı
Crossing streets	2	2	2	•
None	22	28 _L	18	25

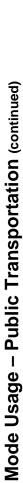
None Base=Those Asked

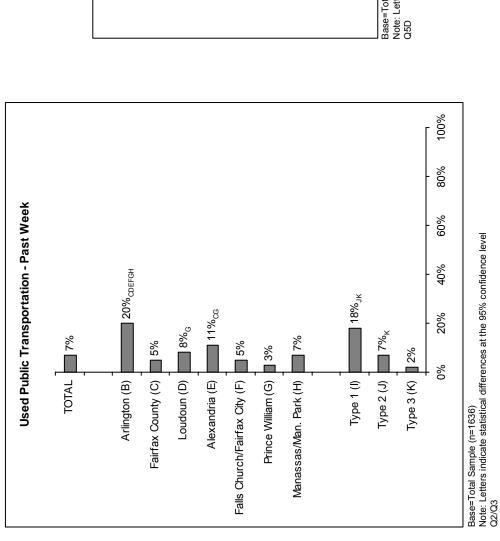
*Caution: Small Base
Multiple Responses Accepted; Top Mentions
Note: This was an open-ended question without prelisted responses
1 Net is the total proportion of respondents who reported any or all subcategories within that net; may include multiple responses
Q12

Mode Usage - Public Transportation

transportation for people with disabilities and senior or community vans - in the past month and the past week. They were also asked Northern Virginia seniors were asked whether they had used one of four types of public transportation – public buses, Metrorail/VRE, if they had ever used public transportation prior to the age of 65.

- About one in six seniors (17%) have used public transportation in the past month, while fewer than one in ten (7%) have used public transportation in the past week.
- while conversely, those living in Type 3 communities are the least likely (2%). Seven percent of those living in Type 2 Seniors who live in Type 1 communities are the most likely to have used public transportation in the past week (18%), communities have used public transportation in the past week.
- Furthermore, Arlington County residents are the most likely to have used public transportation in the past week (20% vs.
- In total, more than six in ten seniors (63%) have never used public transportation before, and another two in ten (19%) have used it in the past but are not currently doing so.
- About one in ten seniors (9%) are currently using public transportation at least occasionally but had never used it in the past, while a similar proportion (8%) use public transportation at least occasionally now had done so when they were younger.





Don't know / Refused 1%

Never use 63%

Use of Public Transportation Now &

Prior to Age 65

Use now & prior 8%

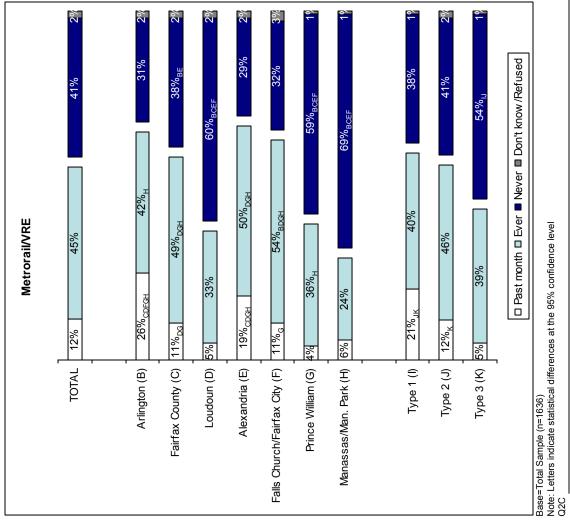
Use now but

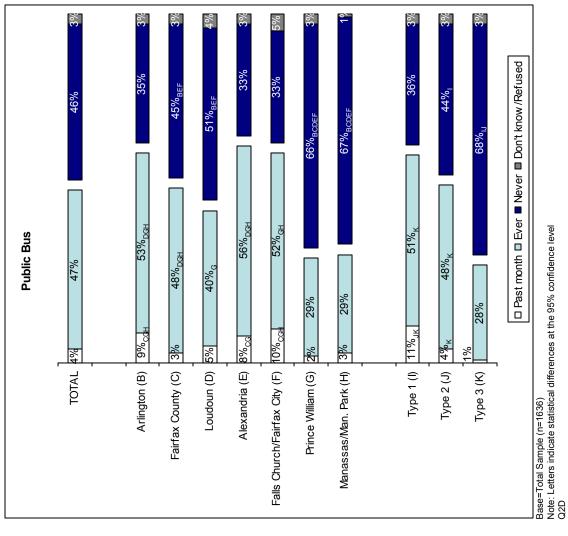
Not use now but use prior

19%

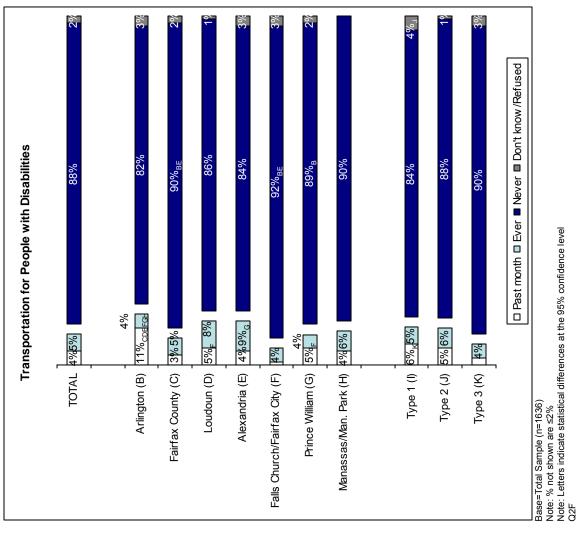
not prior

Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Q5D

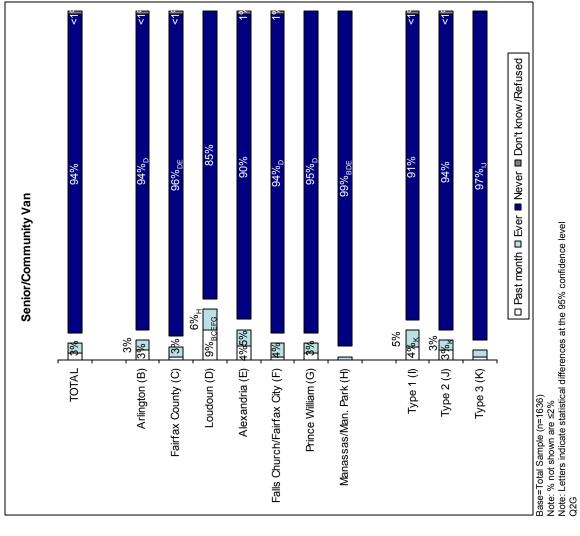




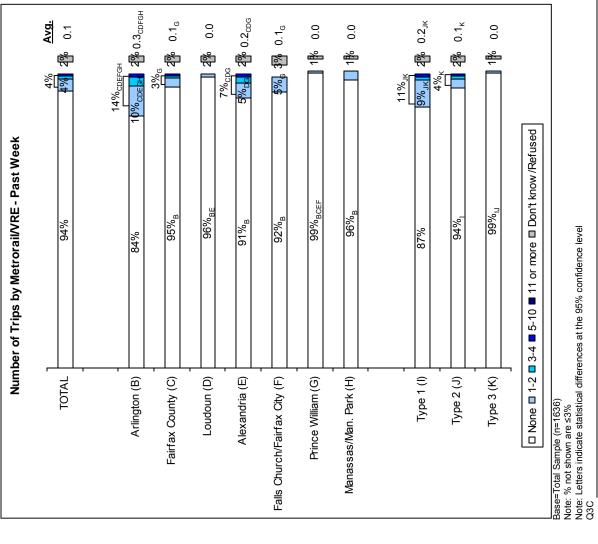
Mode Usage - Public Transportation (continued)



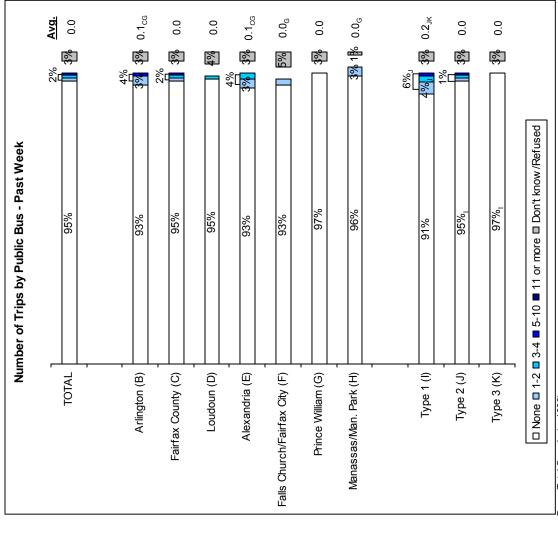
Mode Usage - Public Transportation (continued)



Mode Usage - Public Transportation (continued)

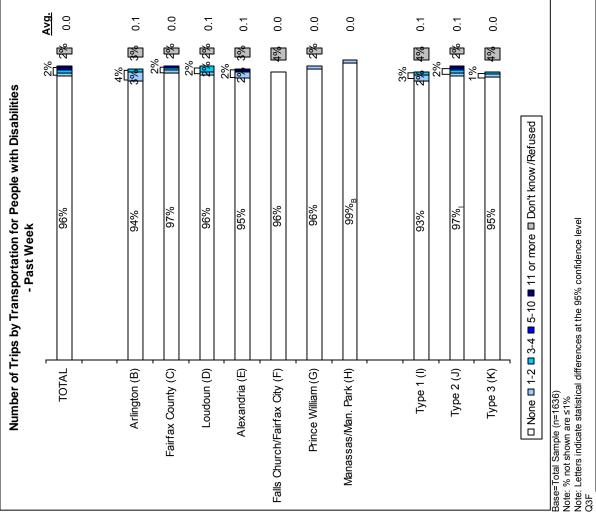


Mode Usage - Public Transportation (continued)

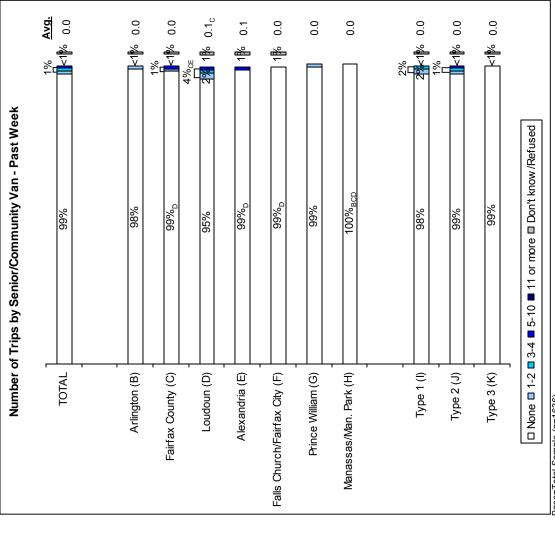


Base=Total Sample (n=1636) Note: % not shown are ≤2% Note: Letters indicate statistical differences at the 95% confidence level Q3D

Mode Usage - Public Transportation (continued)



Mode Usage - Public Transportation (continued)

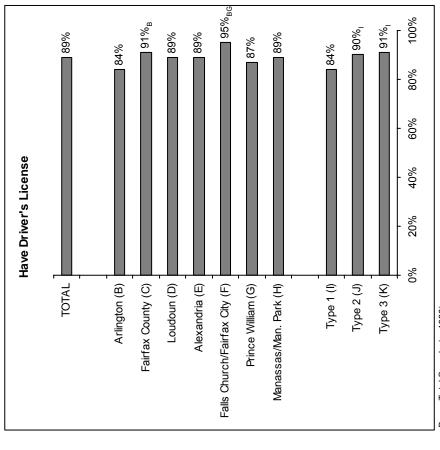


base=Total Sample (n=1636) Note: % not shown are ≤1% Note: Letters indicate statistical differences at the 95% confidence level Q3G

Mode Usage - Driving

Northern Virginia seniors were asked about the presence of drivers in their household.

- About nine in ten seniors (89%) currently have a driver's license.
- Northern Virginia seniors in this study (89%) are slightly more likely to have a driver's license than similar seniors across the United States (84%)
- Those living in Type 1 communities are slightly less likely to have a driver's license (84% vs. 90%-91%).
- problems (28%), they are no longer confident in their driving because of their age or diminished reaction times (27%) and/or When asked why they do not have a driver's license, those who do not most often said this was because they have vision because they never learned how to drive (26%)
- About six in ten Northern Virginia seniors (59%) live with someone else. Of those who live with someone else, about eight in ten (82%) live with someone else who drives.
- Furthermore, nine in ten households (90%) have at least one person with a driver's license.
- diminished reaction times (20%), vision problems (18%) and/or that they have family members who will drive them where they need general physical problems (42%). Other notable reasons for not driving included a lack of confidence in driving attributed to age or When asked, respondents who have driver's licenses but do not drive themselves most often said they did not do so because of to go (11%).
- About one in twenty Northern Virginia seniors (6%) do not have a driver's license nor do they live with someone else who drives, compared to the national average of 13% among seniors 75 or older.



Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Q6

Reasons Did Not Drive Themselves - Past 7 Days

Physical problems (general) (42%)

Not confident in driving (20%)

Have vision problems (18%)

Family members drive me (14%)

Don't have car (11%)

Prefer to be driven (6%)

Too much traffic (6%)

Base=Those Who Have Driver's License But Haven't Driven in Past 7 Days (n=222) Multiple Responses Accepted; Top Mentions Note: This was an open-ended question without prelisted responses Q7

Reasons Do Not Currently Have Driver's License

Have vision problems (28%)

Not confident in driving (27%)

Physical problems (general) (16%)

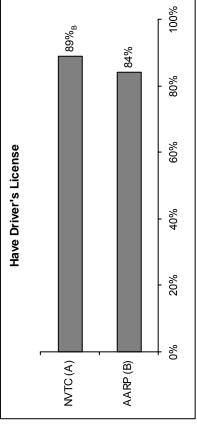
Never learned to drive (26%)

Let license expire (14%)

Get driven where I need to go (14%)

Don't have car (6%)

Base=Those Who Do Not Have a Driver's License (n=177)
Multiple Responses Accepted; Top Mentions
Note: This was an open-ended question without prelisted responses
Q8



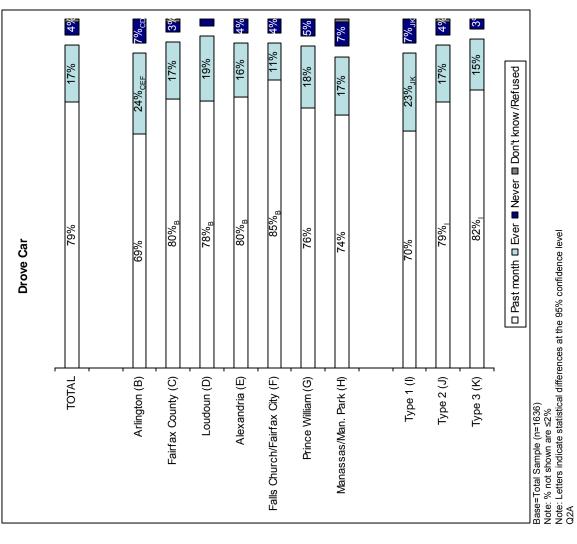
Base=Total Sample (NVTC n=1636; AARP n=1844) Note: Letters indicate statistical differences at the 95% confidence level NVTC: Q6; AARP: Q6

Mode Usage - Driving (continued)

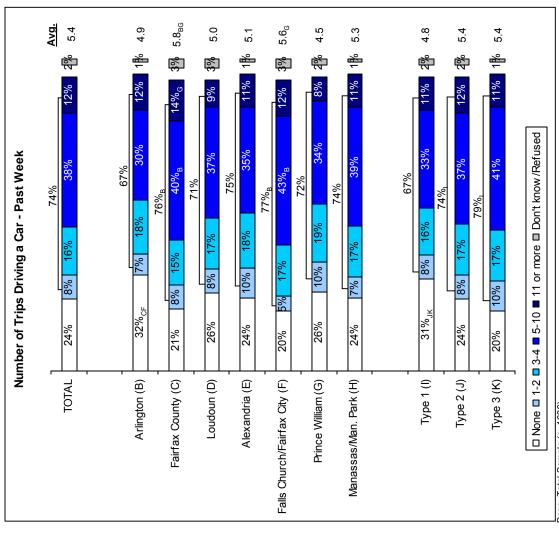
				Drive	Drivers in Household	hold					
					Jurisdiction				ŭ	Community Typ	е
	Total	Arlington	Fairfax County	Loudoun	Alexandria	FC/Fx City	PW	Manassas/ Man. Park	Type 1	Type 2	Type 3
		(B)	(C)	(Q)	(E)	(F)	(9)	Œ	€	(r)	(X)
People in Household n=	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(20)	(255)	(1180)	(201)
One	39%	44% _G	39%	37%	51% _{CDFG}	35%	32%	46% _G	$54\%_{ m JK}$	39% _K	72%
Two	49	44	50 _E	52	42	57 _{вен}	52 _E	40	36	491	60 ₁
Three	7	8 _{DF}	7 _{DF}	2	2	က	10 _{DF}	4	ဇ	7,	Ø
Four or more	8	က	က	7_{E}	2	4	9 _E	7	2	ဇ	7⊔
Don't know/Refused	7	_	7	2	,	_	_	ო	_	7	1
Mean (# of people)	1.8	1.9	1.8	1.9	1.8	1.8	1.9_{c}	1.8	1.8	1.8	2.0,
Median (# of people)	2.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0
2,01,00											
Household Drive Car	(096)	(129)	(394)	(102)	(95)	(64)	(143)	(36)	(114)	(962)	(151)
None	17%	16%	15%	17%	16%	23%	15%	28%	17%	17%	15%
One	71	20	74 _H	20	73	72	89	56	75	71	69
Two	80	12 _{DF}	7 _F	2	96	7	10⊧	œ	9	80	0
Three	7	_	7	5	_	က	ო	9	~	7	က
Four or more	_	_	7	4	•		က	က	~	_	4
Don't know	٧	,	۲	,	_	•	_	1	1	,	1
Mean (# of people)	1.0	1.0	1.0	1.1F	0.9	0.8	1.1F	1.0	0.9	1.0	1.11
Median (# of people)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total Drivers in											
Household n=	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(70)	(255)	(1180)	(201)
None	11%	18%cFG	10%	11%	13%	%2	%6	13%	19% _{JK}	11% _K	2%
One	46	46	45	43	51	51	42	57 _{DG}	52_{K}	46	36
Two	36	29	38 _{BH}	37 _H	32 _H	38 _H	39 _{BH}	20	25	35,	46 _I
Three	4	9	ဇ္ဂ	4	က	_	7 _F	ო	7	4	9
Four or more	7	₹	2	4	_	2	2	4	~	7	4
Don't know/Refused	7	_	7	7	_	_	_	က	~	7	1
Mean (# of people)	1.4	1.2	1.4_{BE}	1.5_{BE}	1.3	4.1	1.5_{BE}	1.3	1.1	1.4	1.7"
Median (# of people)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0

Base=Total Sample ¹Base=Those With Others Living in Their Household Note: Letters indicate statistical differences at the 95% confidence level Q2a,Q27,Q29

Mode Usage - Driving (continued)



Mode Usage - Driving (continued)



Base=Total Sample (n=1636)
Note: Letters indicate statistical differences at the 95% confidence level Q3A

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Other Drivers in Household	S	n Househo	<u>0</u>
		Sur	Survey
		NVTC	AARP
		(A)	(B)
People in Household	<u>II</u>	(1636)	(1844)
Mean (# of people)		1.8	1.6
Total People in			
Household Drive Car	밑	(1457)	(1550)
One		49%	69%∀
Two		43 _B	28
Three		$5_{\rm B}$	2
Four or more		$2_{\rm B}$	_
Don't know/Refused		$2_{\rm B}$	√
Total People in	,		
Household Drive Car ²	Ш	(177)	(584)
None		54%	80%∀
One		37 _B	17
Two		က	ო
Three		4	_
Four or more		_	1
Don't know/Refused		2	

Base=Trotal Sample Base=Licensed Drivers

Base=Licensed Drivers

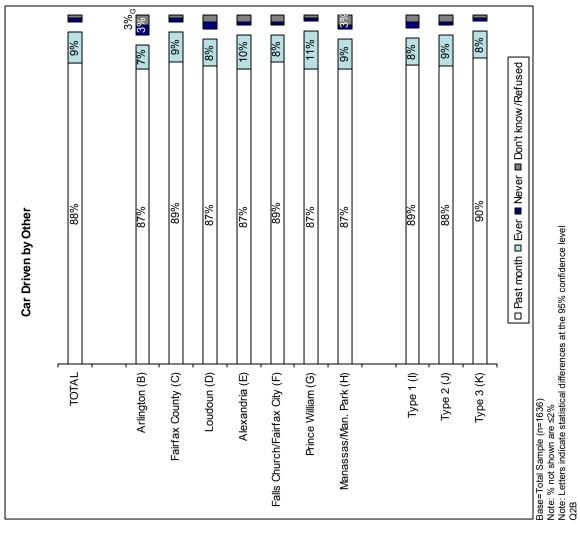
Base=Those Who Are Not Licensed Drivers

Note: Letters indicate statistical differences at the 95% confidence level NVTC: Q27,Q29; AARP: Q39,Q10a/b

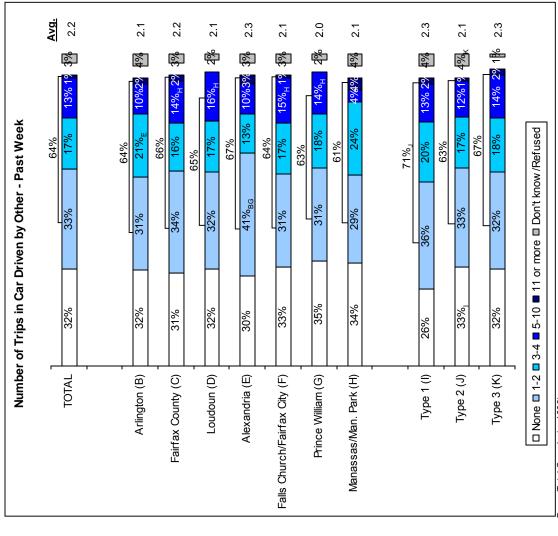
Mode Usage - Ridesharing

Northern Virginia seniors were asked a series of questions about the people who drive them. Respondents who are driven by others 65%) most often depend on their children or spouses for transportation.

- Those driven by someone else in the past seven days were most often driven by their child (35%) or spouse/significant other (33%).
- Furthermore, the age of the other person driving most often typically fell into one of two age groups, 35 to 54 years of age (33%) and 75 or older (31%).
- Respondents reported that more than one-half of those who drive them most often (56%) are females.
- Among the 35-54 year olds who most often drive respondents, more than one-half are females (56%).
- Conversely, more than six in ten of those 75 years or older who most often drive respondents (62%) are males.
- More than one-half of those who most often drive respondents (54%) do not live with the respondent.
- Those driven most often by their child average about three trips per week being taken by another driver (2.9). Male and female children who are their parent's most frequent driver take their parents on a roughly equal number of weekly trips (3.1 and 2.8 respectively).



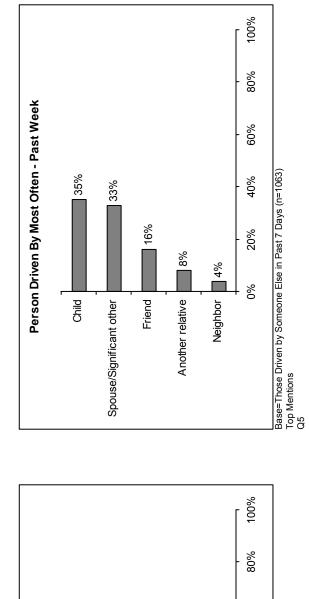
Mode Usage - Ridesharing (continued)



Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Q3B

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Mode Usage - Ridesharing (continued)



Person Driven By - Past Week

38%

Child

34%

Spouse/Significant other

19%

Friend

%6

Another relative

2%

Neighbor

Base=Those Driven by Someone Else in Past 7 Days (n=1063) Multiple Responses Accepted; Top Mentions Q4

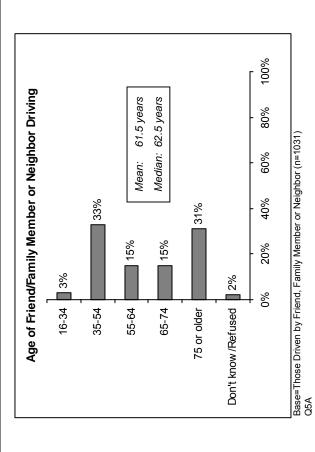
%09

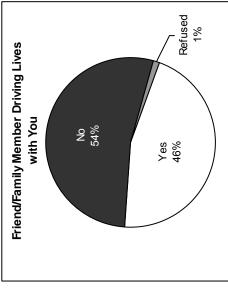
40%

20%

%0

Mode Usage - Ridesharing (continued)

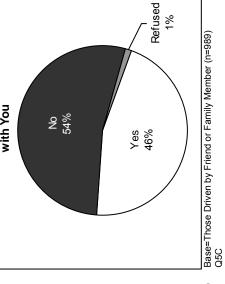




Gender of Friend/Family Member or

Neighbor Driving

Male 43%



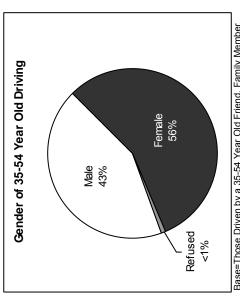
Base=Those Driven by Friend, Family Member or Neighbor (n=1031) Q5B

Female 56%

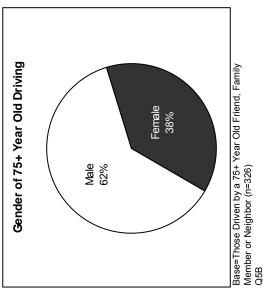
Refused 1%

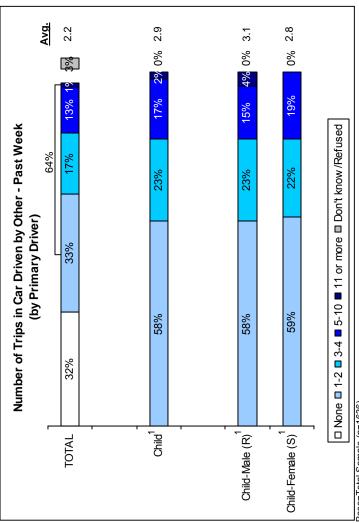
WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Mode Usage - Ridesharing (continued)



Base=Those Driven by a 35-54 Year Old Friend, Family Member or Neighbor (n=336) Q5B





Base=Total Sample (n=1636)

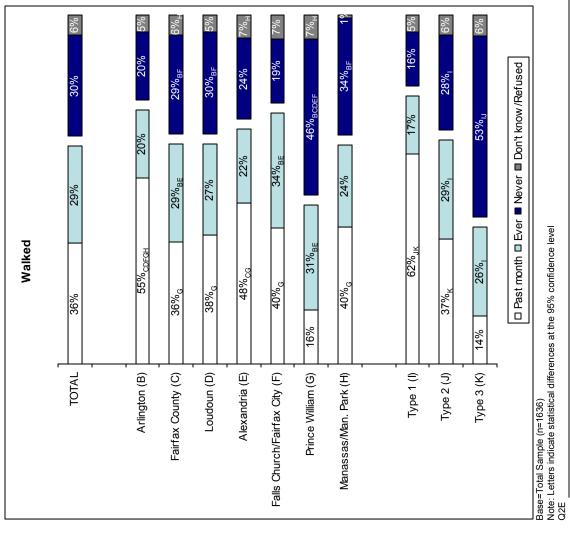
1Base=Those Who Were Driven by Child Most Often (n=362)

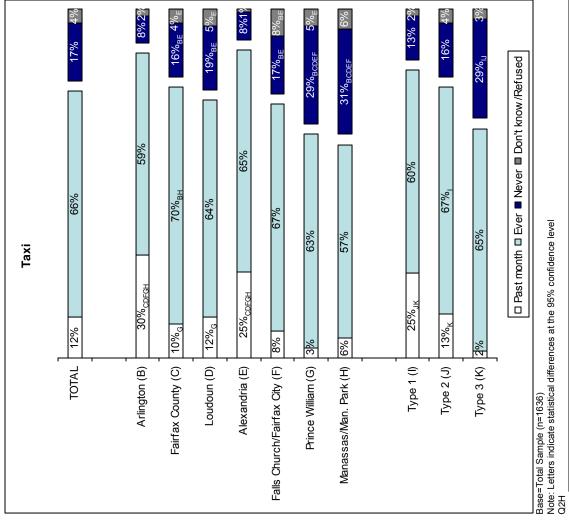
Note: Letters indicate statistical differences at the 95% confidence level Q3B

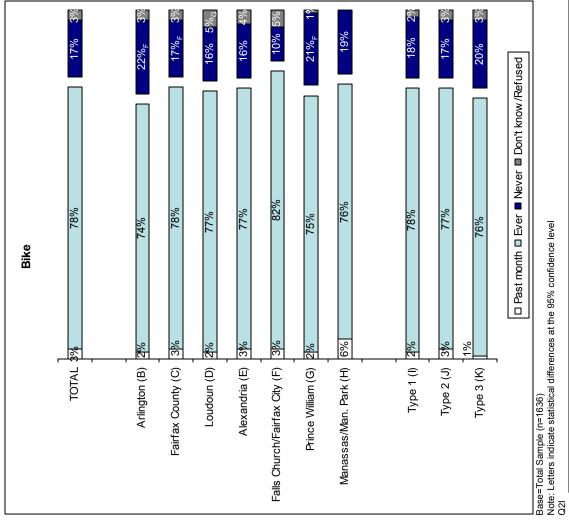
Mode Usage - Other Modes

Northern Virginia seniors were asked how often they walk to get to a destination, use a taxi and/or ride a bike.

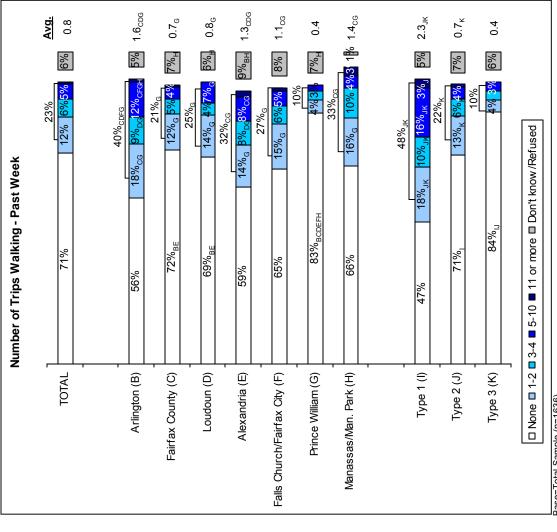
- More than one-third walk at least occasionally to get to a destination (36%), with seniors living in Type 1 communities, and Arlington County residents in particular, being the most likely to walk.
- Type 1 (62%) vs. Type 2 (37%) and Type 3 (14%).
- Arlington County (55%) vs. other jurisdictions (16%-48%)
- One in eight Northern Virginia seniors (12%) use taxis at least occasionally, and as with walking, Type 1 seniors are the most likely to use taxis at least on occasion (25% vs. 13% Type 2 and 2% Type 3).
- Among the different jurisdictions, Arlington County and Alexandria seniors are more likely to use taxis (30% and 25% respectively vs. 3%-12%).
- Only a small proportion of seniors (3%) use bicycles as a mode of transportation.





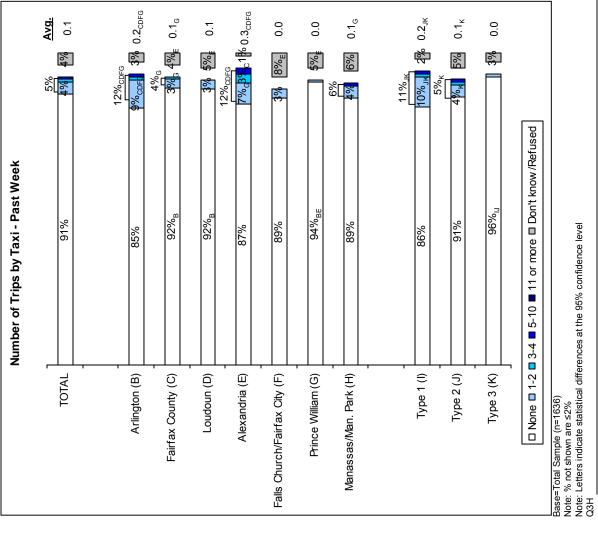


Mode Usage - Other Modes (continued)

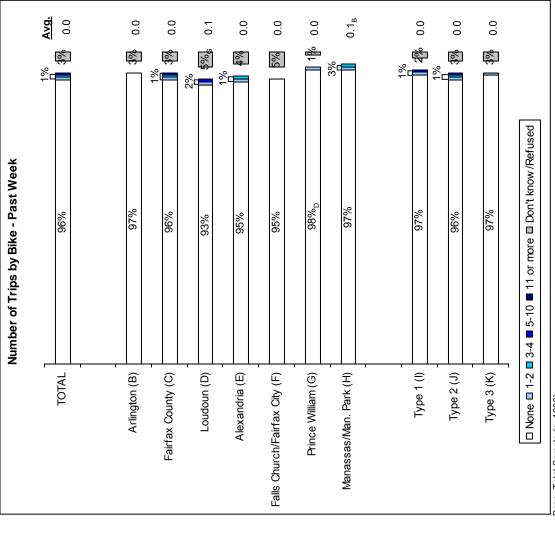


Base=Total Sample (n=1636)
Note: % not shown are ≤2%
Note: Letters indicate statistical differences at the 95% confidence level
Q3E

Mode Usage - Other Modes (continued)



Mode Usage - Other Modes (continued)



base=Total Sample (n=1636)
Note: % not shown are ≤1%
Note: Letters indicate statistical differences at the 95% confidence level
Q3A

Detailed Findings: Mobility Issues

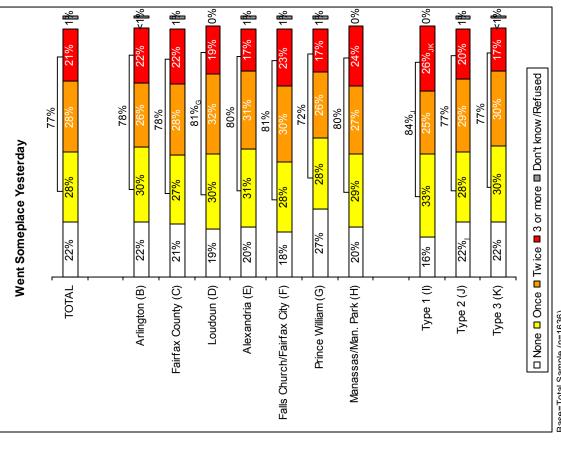
Mobility Issues - Overall

problems getting where they want to go. Seniors in Northern Virginia are comparatively very active, and while where they live is a factor as those living in more urbanized areas typically go out more, Northern Virginia seniors seem to be limited more by their available Northern Virginia seniors were asked a series of question about their own mobility – how often they get out and if they have any transportation than by where they live.

- More than one-half of the respondents (53%) make five or more trips out of their home each week.
- Northern Virginia seniors in this study (53%) are more likely to go out five or more times each week than are similar seniors nationwide (45%)
- Respondents living in Type 1 communities are more likely than others to make five or more trips per week (60% vs. 48%-
- Furthermore, those with household incomes of \$30,000 or more are twice as likely as those whose income is less than \$30,000 to make five or more trips away from their home each week (62% vs. 31%).
- More than three-fourths of the respondents (77%) went someplace the day before they were interviewed.
- More than one-third of Northern Virginia seniors (36%) say they have problems getting to one or more places they typically try to
- Northern Virginia seniors in this study are slightly more likely than seniors across the United States to report having problems going places.
- Respondents who depend upon others as their primary means of transportation are more likely to report having problems getting to different destinations than are those who primarily drive themselves, walk or use public transportation.
- There appears to be no correlation between land use type and having problems getting places.
- In fact, the only potential problem area where there was more than a three percentage point difference by land use type was with getting to volunteer activities, where 17% of Type 3 respondents reported a problem, versus 12% Type 2 and 10% Type 1. Still, this is not a statistically significant difference.

- Those living in Type 1 communities are more likely to report living near essential services, while those living in Type 3 communities tend to be less likely.
- Live within one-quarter mile of a public bus or rail stop Type 1 (77%) vs. Type 2 (56%) vs. Type 3 (5%)
- Live within one-quarter mile of a food store Type 1 (71%) vs. Type 2 (43%) vs. Type 3 (15%)
- Live within one-quarter mile of a drug store Type 1 (74%) vs. Type 2 (42%) vs. Type 3 (11%)
- Live within one-quarter mile of their doctor's office or other health care provider Type 1 (18%) and Type 2 (14%) vs. Type

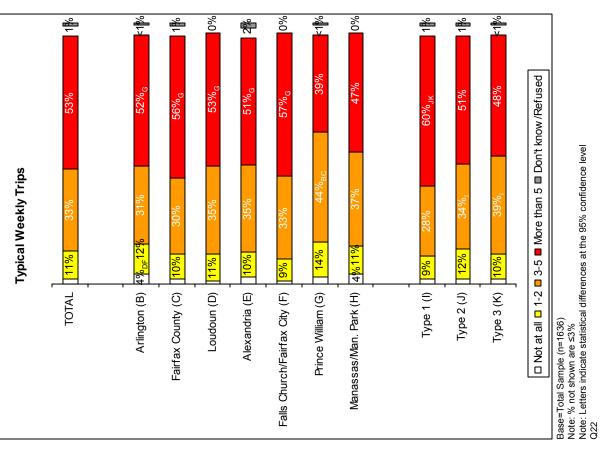
Mobility Issues – Overall (continued)

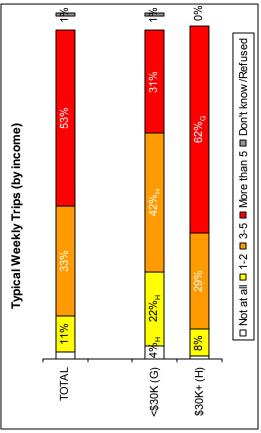


Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Q21

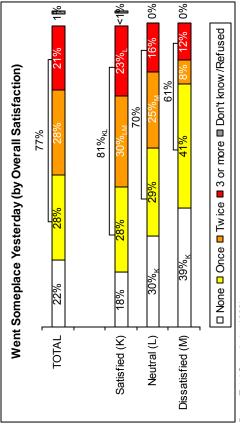
WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Mobility Issues - Overall (continued)

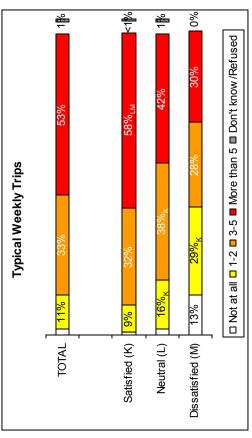




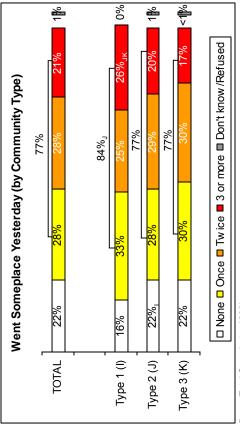
Base=Total Sample (n=1636)
Note: % not shown are ≤2%
Note: Letters indicate statistical differences at the 95% confidence level
Q22



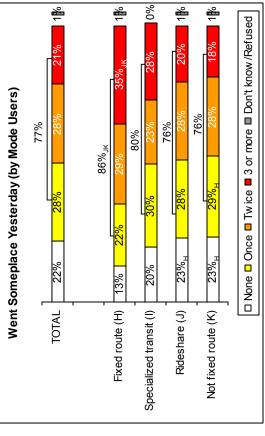
Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level NVTC: Q21; AARP: Q4



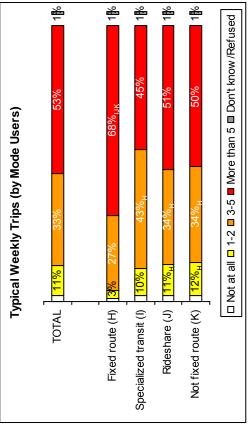
Base=Total Sample (NVTC n=1636; AARP n=1844)
Note: Letters indicate statistical differences at the 95% confidence level
Note: % not shown are ≤2%
NVTC: Q22; AARP: Q5



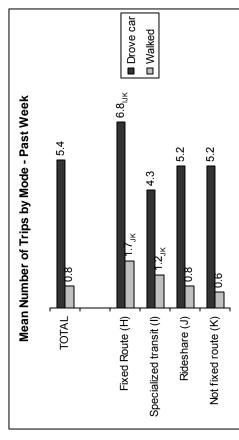
Base=Total Sample (n=1636)
Note: Letters indicate statistical differences at the 95% confidence level Q21



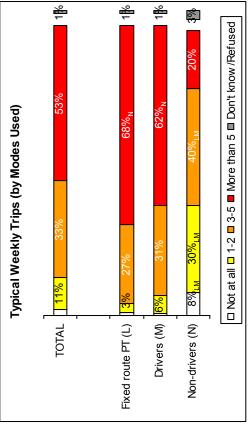
Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Q21



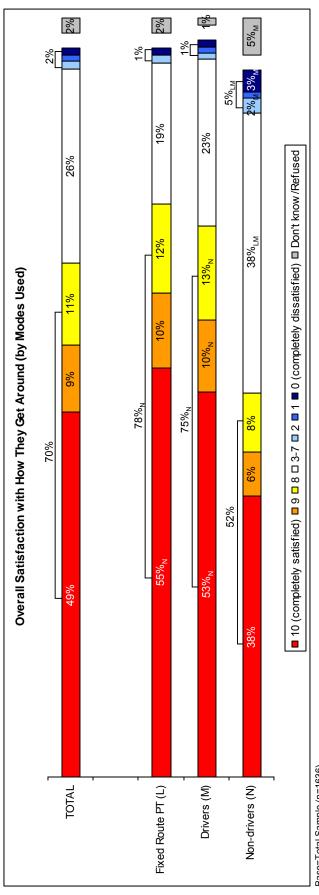
Base=Total Sample (n=1636)
Note: Letters indicate statistical differences at the 95% confidence level
Note: % not shown are =2%
Q22



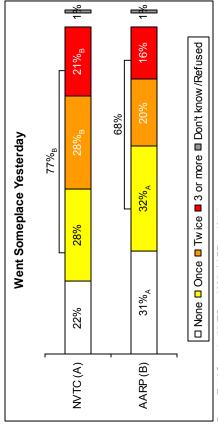
Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Q3a,e



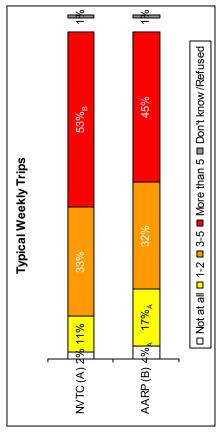
Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Note: % not shown are ≤2% Q22



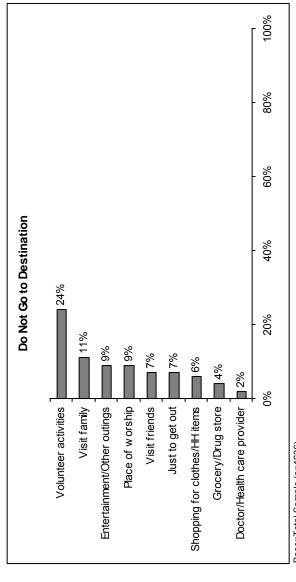
Base=Total Sample (n=1636)
Note: % not shown are ≤1%
Note: Letters indicate statistical differences at the 95% confidence level Q24



Base=Total Sample (NVTC n=1636; AARP n=1844) Note: Letters indicate statistical differences at the 95% confidence level NVTC: Q21; AARP: Q4



Base=Total Sample (NVTC n=1636; AARP n=1844) Note: Letters indicate statistical differences at the 95% confidence level NVTC: Q22; AARP: Q5



☐ Often ☐ Sometimes ■ Never 82% 83% 83% 84% 85% 87% 88% 88% **Transportation Problems by Destination** Shopping for clothes/HH items 6% 13% 17% 5% 11% - 15% 5% 10% 17% 5% 12% - 16% 5% 11% - 13% Just to get out 5% 9% - 12% 5% 8% Volunteer activities 4%8% Place of worship Doctor/Health care provider Visit friends Grocery/Drug store Entertainment/Other outings Visit family

Mobility Issues - Overall (continued)

Base=Those Answering (n=1234-1606) Note: Don't know not included Q23

Mobility Issues - Overall (continued)

Tra	nspc	Transportation Problems by Destination	blems by D	estination		
				Primary Means	Means	
		Total	Car	Rideshare	Public Transp.*	Walk
Shopping for clothes/HH items	=	(1534)	(B) (1010)	(C) (314)	(D) (14)	(E) (53)
Net: Have problems Offen		18% 6	15% 3	28% _B	19% 4	24% 15°
Sometimes		13	12	19	- 12	ි ර
Entertainment/Other outings Net: Have problems	= =	(1501) 17%	(992) 16%	(310) 22% _B	(16) 13%	(52) 25%
Often Sometimes		5 12	12	9 8 13	4 0	10
Visit family Net: Have problems Often	<u> </u>	(1451) 17% 5	(957) 16% 4	(299) 18% 8 _B	(13) 29% 12	(49) 21% 15
Sometimes		7	12	10	17	7
Doctor/Health care provider Net: Have problems Often Sometimes	n=	(1606) 16% 5 11	(1029) 12% 3 10	(344) 24% _B 8 _B 16 _B	(15) 29% 10	(57) 24% 8 16
Visit friends Net: Have problems Often Sometimes	n=	(1518) 15% 5 10	(1004) 12% 3	(302) 23% _B 9 _B	(15) 15% 4	(53) 21% 5
Just to get out Net: Have problems Often Sometimes	=u	(1535) 13% 5 9	(1004) 9% 2 7	(316) 25% _B 12 _B 13 _B	(16) 13% 10	(57) 19% 12 _B
Grocery/Drug store Net: Have problems Often Sometimes	n=	(1576) 12% 5 8	(1032) 9% 3 6	(322) 21% _B 9 _B 12 _B	(14) 15% -	(56) 13% 6 7
Base=Those Answering						

Base=Those Answering
Note: Don't know not included
*Caution: Small Base
Note: Letters indicate statistical differences at the 95% confidence level
Q23

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

(E) 12% 7 2 % (54) 6% 1 Transportation Problems by Destination (continued) Primary Means Public Public Transp.* (11) 20% 15 (304) 17%_{BE} 9_{BE} 8_B (C) (217) 20%_B 9_B (987) 7% 2 4 (1498) 9% 4 5 (1234) 12% 4 8 Ī Ш Volunteer activities Net: Have problems Often Places of worship Net: Have problems Often Sometimes

Mobility Issues - Overall (continued)

Sometimes
Base=Those Answering
Note: Don't know not included

*Caution: Small Base
Note: Letters indicate statistical differences at the 95% confidence level Q23

Mobility Issues – Overall (continued)

Total Artington Fairfax Loudoun Auxandria F.OFK City PW I I I I I I I I I		_			Tran	sportation	Transportation Problems by Destination	by Destinati	ion				
ground clothes or lettings Total (1534) Artington (County (Co							Jurisdiction				٥	Community Type	e
gfor clothes or lottings (E) (C) (D) (E) (F) (G) lottings n= (1534) (226) (618) (153) (1777) (95) (200) nment/Other 18% 20%s 21% 17% 15% 16% 18% 18% nment/Other 13 11 14 _E 18 8 11 12 nment/Other 15% 20%s 17% 19%s 15%s 11%s			Total	Arlington	Fairfax County	Londoun	Alexandria	FC/Fx City	PW	Manassas/ Man. Park	Type 1	Type 2	Type 3
March Marc		L		(B)	(C)	(D)	(E)	(F)	(B)	Œ	(=)	(r)	3
19% 14% 20% 21% 17% 15% 15% 18% 18% 18% 19% 18% 19%	Snopping for clotnes or household items	<u> </u>	(1534)	(226)	(618)	(153)	(177)	(92)	(200)	(65)	(239)	(1105)	(190)
Inflit 6 3 6 _B 3 8 _B D 4 6 Inflit 11 14 _E 18 _E 8 11 12 Inment/Other 13 (1501) (216) (600) (158) (173) (96) (193) Inment/Other 17% 15% 20% 17% 19% 15% 15% Inment/Other 17% 15% 20% 17% 19% 15% 15% Inment/Other 17% 15% 20% 17% 19% 15% 15% Inflimes 17% 14% 18% 15% 11% 11% 11% Inflimes 11 12 12 11 11 11 11% 14%	Net: Problem		18%	14%	20%B	21%	17%	15%	18%	18%	18%	18%	17%
nument/Other 13 11 14E 18E 8 11 12 nument/Other 11 14E 18E 8 11 12 n 17% 15% 20% 17% 19% 15% 15% n 5 5 6 6 8 7 4 n 17% 15% 20% 17% 19% 15% 15% n 5 6 6 8 7 4 n 114 14 11 7 10 n 1450 (597) (151) (163) (86) (193) n 6 6 6 5 10 11% 11% n 1660 (234) (841) (166) (188) (39) (209) lenimes 1 12 12 11 11 11% 14% n 6 5 4 6 5 <th>Often</th> <th></th> <th>9</th> <th>က</th> <th>9 9</th> <th>က</th> <th>8_{BD}</th> <th>4</th> <th>9</th> <th>က</th> <th>4</th> <th>9</th> <th>က</th>	Often		9	က	9 9	က	8 _{BD}	4	9	က	4	9	က
Inmenu/Other (1501) (216) (600) (158) (173) (96) (193) Inmenu/Other 17% 15% 20% 17% 19% 15% 15% Inmedimes 12 11 14+ 11 11 7 4 Initial Initiali	Sometimes		13	7	14 _E	18 _E	80	7	12	15	4	12	4
17% 17% 17% 17% 19% 173 19% 11% 19% 19% 11% 11%	Entertainment/Other	,	1	((000)	((i	()		í	3		í
Care 17% 15% 20% 17% 19% 15% 15% 15% 15% 15% 15% 15% 15% 15% 15% 15% 15% 15% 16% 15% 16%	outings	 	(1901)	(216)	(009)	(158)	(1/3)	(96)	(193)	(69)	(241)	(1073)	(187)
The care of the control of the contr	Net: Problem		17%	15%	20%	17%	19%	15%	15%	15%	18%	17%	19%
Care 12	Often		2	2	9	9	80	7	4	က	9	9	2
Care 17%	Sometimes		12	7	14 _F	1	1	7	10	12	12	12	14
care 17% 18% 18% _G 15% 21% _{GH} 13% 11% 11 12 12 11 11 9 8	Visit family	٦	(1451)	(198)	(284)	(151)	(163)	(86)	(193)	(63)	(216)	(1050)	(185)
Care n= (1606) (234) (641) (166) (188) (99) (209) 16% 14% 18% 14% 14% 9% 14% 5 6 5 4 6 2 5 11 9 148EFG 10 9 7 9 15% 11% 19%BDGH 11% 15% 13% 11% 5 4 5 5 5 10 7 14BDGH 617) (155) (180) (96) (195) n= (1535) (225) (617) (155) (180) (96) (195) 5 1 5 5 4 6 5 4 5 5 5 13% 12% 12% 14% 12% 10% 12% 5 1 5 5 4 6 9 10 7 12% 12% 12% 12% 12% 12% 12% 12% 12% 12% 12% 12% 12% 12% 12% 12% 12%	Net: Problem		17%	18%	18% _G	15%	21% _{GH}	13%	11%	11%	16%	17%	15%
Care n= (1606) (234) (641) (166) (188) (99) (209) 16% 14% 18% _F 14% 14% 9% 14% 5 6 5 4 6 6 2 5 5 11 9 148EFG 10 9 7 9 15% 11% 19% _{BDGH} 11% 15% 13% 11% 5 4 5 5 3 4 10 7 148DGH 617 (155) (180) (96) (195) 13% (225) (617) (155) (180) (96) (195) 5 1 5 5 4 6 13% 12% 12% 14% 12% 10% 12% 5 5 7 8	Often		2	9	9	5	10рген	က	က	ო	9	9	4
reare n= (1606) (234) (641) (166) (188) (99) (209) 16% 14% 18% _F 14% 14% 9% 14% 5 6 5 4 6 2 5 5 11 9 14 _{BEFG} 10 9 7 9 15% 11% 19% _{BDGH} 11% 15% 13% 11% 5 4 5 5 5 3 4 10 7 14 _{BDGH} 6 9 10 7 13% 12% (617) (155) (180) (96) (195) 13% 12% 15% 4 6 _B 4 7 _B 5 1 5 _B 4 6 _B 4 7 _B	Sometimes		7	12	12	1	11	o	80	80	10	7	10
Care 1606													
16% 14% 18% _F 14% 14% 9% 14% 9% 14% 5 6 6 5 4 6 6 2 5 5 1 1 1 9 148 _{EFG} 10 9 7 9 9 7 9 9 1 1 1 1 9 148 _{EFG} 10 9 7 9 9 7 9 9 1 1 1 1 1 1 1 1 1 1 1 1 1	Doctor/Health care provider	Ę	(1606)	(234)	(641)	(166)	(188)	(66)	(508)	(69)	(251)	(1159)	(196)
n= (1518) (218) (618) (157) (172) (94) (194) 15% 11% 19% _{BDGH} 11% 15% 13% 11% 5 4 5 5 3 4 10 7 14 _{BDGH} 6 9 10 7 13% (225) (617) (155) (180) (96) (195) 5 1 5 _B 4 6 _B 4 7 _B	Net: Problem		16%	14%	18% _F	14%	14%	%6	14%	13%	15%	15%	17%
n= (1518) (218) (618) (157) (172) (94) (194) (194) (15% 11% 19%BDGH 11% 15% 13% 11% 11% 19%BDGH 11% 15% 13% 11% 11% 10 7 14BDGH 6 9 10 7 1 13% 115% 115% 115% 1165) (180) (96) (195)	Often		2	9	2	4	9	2	2	က	4	Ŋ	4
n= (1518) (218) (618) (157) (172) (94) (194) 15% 11% 19% _{BDGH} 11% 15% 13% 11% 5 4 5 5 5 3 4 10 7 14 _{BDGH} 6 9 10 7 13% (225) (617) (155) (180) (96) (195) 13% 12% 15% 4 6 _B 4 7 _B	Sometimes		=	6	14 _{BEFG}	10	6	7	6	10	12	10	13
15% 11% 19% 11% 15% 13% 11% 11% 15% 13% 11% 11% 10 7 14% 16 9 10 7 1 13% 11% 1 13% 11% 1 12% 125) (617) (155) (180) (96) (195) 1 5 8 4 6 6 4 7 8	Visit friends	<u>_</u>	(1518)	(218)	(618)	(157)	(172)	(94)	(194)	(65)	(538)	(1089)	(190)
n= (1535) (225) (617) (155) (180) (96) (195) (18% 12% 12% 12% 15	Net: Problem		15%	11%	19%врен	11%	15%	13%	11%	8%	17%	14%	16%
n= (1535) (225) (617) (155) (180) (96) (195) (18% 12% 10% 12% 12% 15% 1 5s 4 6s 4 7s	Often		2	4	2	2	2	ဇ	4	ო	7	4	4
n= (1535) (225) (617) (155) (180) (96) (195) 13% 12% 15% 14% 12% 10% 12% 5 1 5 _B 4 6 _B 4 7 _B	Sometimes		10	7	14врдн	9	თ	10	7	S	10	10	12
13% 12% 15% 14% 12% 10% 12% 5 1 5 _B 4 6 _B 4 7 _B	Just to get out	Ī	(1535)	(225)	(617)	(155)	(180)	(96)	(195)	(67)	(241)	(1104)	(190)
5 1 5 _B 4 6 _B 4 7 _B	Net: Problem		13%	12%	15%	14%	12%	10%	12%	12%	13%	13%	14%
	Often		2	~	5 _B	4	6 _в	4	7 _B	ო	2	2	2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Sometimes		6	7	10 _G	10	9	9	9	о	∞	6	6

Base=Those Answering Note: Don't know not included Note: Letters indicate statistical differences at the 95% confidence level Q23

				Transportation	tation Prok	lems by De	Problems by Destination (continued)	ontinued)				
						Jurisdiction				ű	Community Type	e e
	-			Fairfax					Manassas/			
		Total	Arlington	County	Londoun	Alexandria	FC/Fx City	ΡW	Man. Park	Type 1	Type 2	Type 3
			(B)	(<u>၁</u>	(D)	(E)	(F)	(<u>9</u>	(H)	€	(C)	<u>공</u>
Grocery/Drug store	<u> </u>	(1576)	(227)	(636)	(159)	(183)	(26)	(208)	(99)	(247)	(1137)	(192)
Net: Problem		12%	12%	14% _{DH}	%8	15% _H	11%	12%	%9	13%	12%	11%
Often		2	4	2	2	7 _H	7	4	2	4	δχ	2
Sometimes		8	8 _D	9 _{DF}	က	80	4	8	2	6	7	10
Volunteer activities	Ī	(1234)	(178)	(203)	(133)	(143)	(82)	(146)	(46)	(191)	(868)	(145)
Net: Problem		12%	8%	14% _{BH}	15% _H	13% _H	13%	11%	4%	10%	12%	17%
Often		4	2	4	7 _B	9	2	4		S.	4	9
Sometimes		8	7	6	∞	7	80	7	4	2	∞	-
Place of worship	П	(1498)	(214)	(298)	(155)	(173)	(67)	(197)	(64)	(232)	(1076)	(190)
Net: Problem		%6	%8	10%F	12%⊧	%6	4%	%8	%9	%6	10%	%2
Often		4	4	4	9	2	7	4		2	4	ო
Sometimes		5	2	9	9	4	2	4	9	2	2	4
Base=Those Answering									•			

Base=Those Answering Note: Don't know not included Note: Letters indicate statistical differences at the 95% confidence level Q23

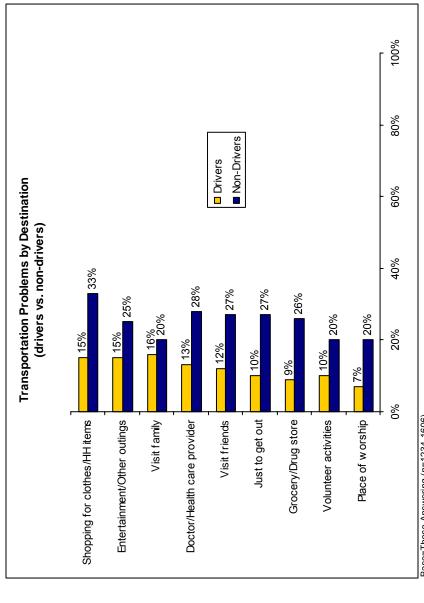
36% 8.3 1.2 **Transportation Problem Index** Average number of destinations Average number of problems Having problems

Respondents average visiting 8.3 of the nine possible destinations. Each respondent has problems getting to an average of 1.2

destinations, with more than one-third (36%) saying they have problems getting to at least one destination.

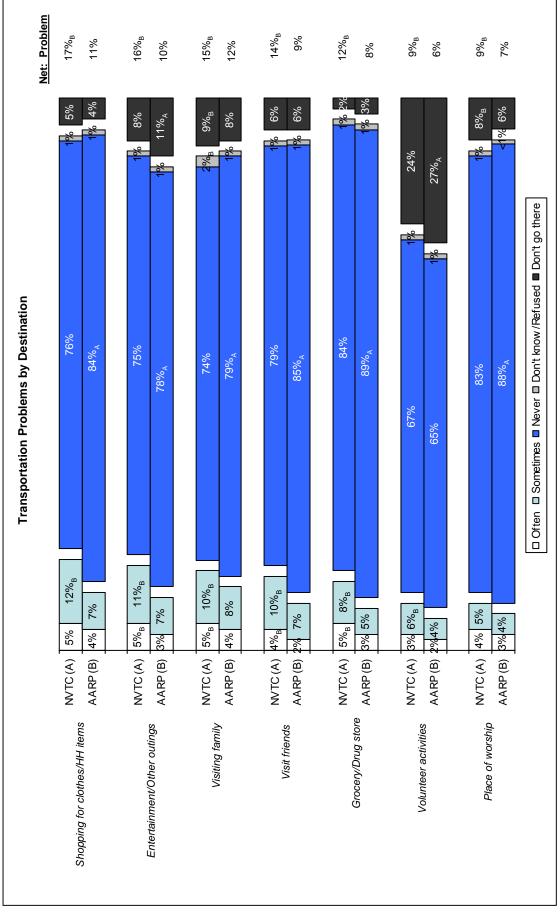
Base=Total Sample (n=1636) Q23





Base=Those Answering (n=1234-1606) Note: Don't know not included Q23

Mobility Issues - Overall (continued)



Base=Total Sample (NVTC n=1636; AARP n=1844) NVTC: Q23; AARP: Q25

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

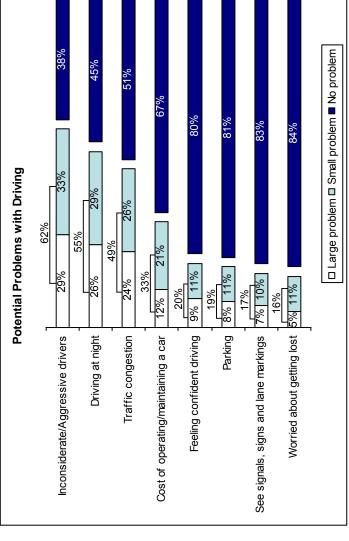
				Within	One-Quarter	r Mile					
					Jurisdiction				ŏ	Community Typ	96
			Fairfax					Manassas/			
	Total	Arlington	County	Londonn	Alexandria	FC/Fx City	PW	Man. Park	Type 1	Type 2	Type 3
		(B)	(C)	(D)	(E)	(F)	(9)	(H)	(I)	(r)	(X
=U	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(02)	(255)	(1180)	(201)
Public bus/rail stop	25%	77%срен	$50\%_{\mathrm{DG}}$	$32\%_{ m G}$	77%срдн	74%срвн	21%	53% _{DG}	77%JK	56%	2%
Food store	43	56 _{CDG}	40 _G	37	54 _{CDG}	50_{DG}	32	63 _{cDG}	71 _{JK}	43 _K	15
Drug store	41	64 _{CDEG}	$38_{\scriptscriptstyle \mathrm{G}}$	34 _G	53 _{CDG}	62 _{cDG}	24	60 _{CDG}	74 _{JK}	$42_{\rm K}$	7
Doctor's office/Health care	12	15	1	20_{cg}	14	13	ဝ	19	18 _×	14 _K	7

Base=Total Sample Mutiple Responses Accepted Note: Letters indicate statistical differences at the 95% confidence level Q26

Mobility Issues - Driving

Northern Virginia seniors were also asked if they have any problems in relation to driving.

- About one-half or more of the respondents who were able to answer reported the following as problem areas with driving:
- Inconsiderate or aggressive drivers (62%),
- Driving at night (55%), and/or
- Dealing with traffic congestion (49%).
- In addition, one-third (33%) said that the cost of operating and maintaining a car is a problem.
- which they live. Furthermore, the only area where community types varied was with parking, where respondents from Type 1 Interestingly, respondents were no more or less likely to report having problems with driving regardless of the jurisdiction in communities were more likely to report having a problem (30% vs. 18%-19%).
- However, licensed drivers in Northern Virginia were more likely than those from across the United States to report having problems with certain aspects of driving.
- Dealing with traffic congestion (47% vs. 17%),
- Parking (17% vs. 14%),
- Feeling confident about driving (16% vs. 12%), and/or
- Being worried about getting lost (15% vs. 9%).



Mobility Issues - Driving (continued)

Base=Those Answering (n=1538-1618) Note: Don't know not included Q10

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Total							luris diction	Luisdiction				om/T viidinmao	
derate/Aggressive Indig County County Condition			ļ		Fairfax	-	ours drive	2,1,0,1	1	Manassas/	1	T	1
derate/Aggressive (1560) (233) (641) (161) (188) (97) (207) (63) (251) blow 62% 63% 68% 63% 67% 60% 56% 66% <t< th=""><th></th><th>-</th><th>Ola</th><th>(B)</th><th>(C)</th><th>(D)</th><th>(E)</th><th>(F)</th><th>(9)</th><th>(H)</th><th>- jye -</th><th>(c)</th><th>(K)</th></t<>		-	Ola	(B)	(C)	(D)	(E)	(F)	(9)	(H)	- jye -	(c)	(K)
blem 1 (590) (233) (641) (161) (188) (97) (207) (63) (251) ge problem 29% 33 31, 36,- 68% 63% 67% 60% 66%<	Inconsiderate/Aggressi	ve ve											
Second State Controller C	drivers Not: Droblem	<u>II</u>	(1590)	(233)	(641)	(161)	(188)	(97)	(207)	(63)	(251)	(1142)	(197)
Septimon 24 31 27 30 27 35 35 35 35 35 35 35 3	ישפר. דוסטומוו		02.0	02.70	02.0	% OO	02.0	0/ /0	00 %	30%	% 90 90	02.0	2 2
at night n= (1538) (311, 36cH 38cH 36cH 34, 24 19 32 blown at night n= (1538) (220) (620) (156) (180) (94) (198) (68) 243 24 27 31 28 34k 24 27 31 28 34k 32 61%	Large problem		29	31	27	30	27	33	3 9 ℃	37	33	58	31
at night n= (1538) (220) (620) (158) (180) (94) (198) (68) (243) oblam 56% 53% 54% 62% 56% 56% 59% 53% 61% ge problem 26 26 25 28 24 27 31 28 34* congestion 1 (1603) (234) (647) (161) (186) (39) (209) (68) 34* perotion 24 22 20 23 49% 50% 50% 45% 53% 51% 251 ge problem 24 26 29 23 18 27 26 26 operating and ning a car 12 11 10 11 10 14 27 26 26 ge problem 21 22 29 23 28% 41% 41% 27 26 ge problem 12 11 10 <th>Small problem</th> <th></th> <th>33</th> <th>31⊬</th> <th>36_{GH}</th> <th>38_{GH}</th> <th>36_{GH}</th> <th>34⊬</th> <th>24</th> <th>19</th> <th>32</th> <th>33</th> <th>32</th>	Small problem		33	31⊬	36_{GH}	38 _{GH}	36 _{GH}	34⊬	24	19	32	33	32
Operation 55% 53% 54% 62% 56% 56% 59% 53% 61% ge problem 26 25 28 24 27 31 28 34* all problem 29 27 29 34 32 30 27 25 27 ge problem 49% 46% 50% 50% 45% 53% 51% 52% ge problem 24 25 29 23 36% 53% 51% 52% operating and la problem 26 24 26 29 23 36% 41% 52% operating and la problem 12 11 10 11 10 14 22 28 34% 41% 52% 26 operating and la problem 12 24 26 29 23 36% 43% 41% 26 19 26 operating and la problem 12 11 10 11	Driving at night	Ë	(1538)	(220)	(620)	(158)	(180)	(94)	(198)	(88)	(243)	(1107)	(188)
ge problem 26 26 25 28 24 27 31 28 34.к congestion n= (1603) (234) (647) (161) (186) (98) (209) (68) (251) bloam 49% 46% 50% 45% 53% 53% 51% 52% ge problem 24 25 20 23 18 27 32- 26 all problem 26 24 26 29 23 35% 51% 52% operating and problem 12 11 10 14 22 26 19 26 operating and problem 12 11 10 14 22 26 19 26 all problem 21 21 22 22 11 14 22 26 19 15 bloam 21 21 22 22 22 23 24 23 24 23 <th>Net: Problem</th> <th></th> <th>, 22%</th> <th>, 23%</th> <th>54%</th> <th>, 62%</th> <th>, 26%</th> <th>, 26%</th> <th>29%</th> <th>53%</th> <th>, 61%</th> <th>, 22%</th> <th>53%</th>	Net: Problem		, 22%	, 23%	54%	, 62%	, 26%	, 26%	29%	53%	, 61%	, 22%	53%
Second condition 29 27 29 34 32 30 27 25 27 27 29 29 29 27 25 27 25 27 25 25 25	Large problem		56	26	25	58	24	27	31	58	34.≅	25	5
congestion n= (1803) (234) (847) (161) (186) (98) (209) (68) (251) both 49% 50% 50% 45% 53% 53% 51% 52% ge problem 24 22 25 20 23 18 27 32° 26 nall problem 26 24 26 29 23 35°H 26 19 26 operating and initial a car n= (1578) (226) (639) (161) (183) 35°H 41% Bere 43%e 26 planting a car n= (1578) (226) (639) (161) (183) (36) (206) (68) (243) planting a car n= (1578) (226) (639) (161) (183) (366) (206) (68) (243) planting a car n= (1589) (226) (643) (162) (185) (206) (69) (207) (Small problem		29	27	29	8	32	30	27	25	27	30	32
Operating and problem 1 (1503) (2574) (1677) (1777) (1777) (1777) (1777) (1777) (1777) (1777) (1777) (1777) (1777) (1777) (1774)	Traffic conception	ļ	(1603)	(734)	(647)	(161)	(196)	(80)	(000)	(89)	(264)	(1151)	(408)
operating and problem 1 2	Net Problem	<u> </u>	40%	46%	50%	70,0	45%	(30) 53%	53%	(50) 51%	52%	48%	58%
operating and notion 1 2 2 2 3 35EH 2 19 2 operating and notion 1 (1578) (226) (639) (161) (183) (95) (206) (68) (243) billow 33% 31% 32% 28% 34% 41%ee 43%e 39%u ge problem 12 11 10 11 10 14 22ecpe 19 15 confident 1 21 22 22 18 20 19 24 23 confident 1 20 14 22ecpe 19 24 23 bdem 20% 22% 19% 23% 16% 17% 23% 28%u 28%u 28%u ge problem 9 12 14 8 11 11 10 10 1 1 1 1 1 1 1 1 1	l arde problem		24 2	200	25.	8 8	23 %	, 2	22 %	32.2	% 2% % 2%	200	600
operating and ning a car (1578) (226) (639) (161) (183) (95) (206) (68) (243) (243) bolem 33% 31% 32% 28% 34% 41% _{EGE} 43% _{EGE} 39% _U ge problem 12 11 10 11 10 14 22 _{EGCE} 19 15 confident 1 21 22 22 18 20 19 24 23 confident 1 20 19 22 22 18 20 19 24 23 confident 1 20 17% 23% 28% 28% 28% 28% ge problem 9 12 8 10 8 6 12 17 10 10 1 1 1 1 1 1 1 1 1 1 1 1 2 2 23% 28% 28% 28% </td <td>Small problem</td> <th></th> <td>26</td> <td>24</td> <td> 26</td> <td>53</td> <td>73</td> <td>35_{EH}</td> <td><u>-</u>5</td> <td>19</td> <td><u>-</u>26</td> <td>25</td> <td>58</td>	Small problem		26	24	 26	53	73	35 _{EH}	<u>-</u> 5	19	<u>-</u> 26	25	5 8
Operating and Initial and Initi	bue saiterand to teach												
bollem 33% 31% 32% 28% 34% 41% bee 43%e 39% _J ge problem 12 11 10 11 10 14 22 bee 19 15 confident 21 22 22 18 20 19 24 23 confident n= (1589) (226) (643) (162) (185) (98) (206) (69) 25% bblem 20% 22% 19% 23% 16% 17% 23% 28% _J ge problem 9 12 8 10 8 6 12 17°F 18 Jk all problem 15% (224) (645) (164) (186) (207) (68) (246) (74) ge problem 8 12co 7 5 8 9 11 12 ge problem 8 12co 7 5 8 9 11 14	maintaining a car	Ī	(1578)	(226)	(629)	(161)	(183)	(62)	(506)		(243)	(1141)	(194)
ge problem 12 11 10 14 22 _{BCDE} 19 15 confident confident confident n= (1589) (226) (643) (162) (185) (98) (206) (69) (251) (251) confident confident n= (1589) (226) (643) (162) (185) (98) (206) (69) (251) (251) bblem 20% 22% 19% 23% 17% 23% 28% 28% 28% 28% 28% 28% 28% 28% 24% 24% 24% all problem 19% 224 (164) (186) (99) (207) (68) 246 24 all problem 8 12cp 7 5 8 9 11 12 14 _{Jr} all problem 8 12cp 7 5 8 9 11 12 14 _{Jr}	Net: Problem		33%	31%	32%	32%	28%	34%	41% _{BCE}		39%	31%	38%
confident 1 21 21 22 22 18 20 19 24 23 confident n= (1589) (226) (643) (162) (185) (98) (206) (69) (251) (75) bblem 20% 22% 19% 23% 17% 23% 28% 28% ge problem 9 12 8 10 8 6 12 17% all problem 11 10 12 14 8 11 11 10 10 1 15% 224 (645) (164) (186) (99) (207) (68) (246) 1 25% 17% 22% 23% 21% 20% 22% 30% 2 30% 4 4 4 4 4 4	Large problem		12	7	10	1	10	41	22 _{BCDE}		15	11	16
confident n= (1589) (226) (643) (162) (185) (98) (206) (69) (251) (69) blem 20% 22% 19% 23% 16% 17% 23% 28% ₂ ge problem 9 12 8 10 8 6 12 17 _{cr} 18 _{jk} all problem 11 11 11 11 10 10 sblem 19% 25% _c 17% 22% 23% 21% 20% 22% 30% _{jk} ge problem 8 12co 7 5 8 9 11 12 14 _{jk}	Small problem		21	21	22	22	18	20	19		23	20	22
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Feeling confident												
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	driving	L	(1589)	(226)	(643)	(162)	(185)	(86)	(206)	(69)	(251)	(1142)	(196)
oblem 9 12 8 10 8 6 12 17 _{GF} 18 _{JK} solicit 1 10 12 14 8 11 11 10 10 n= (1593) (224) (645) (164) (186) (99) (207) (68) (246) (186	Net: Problem		20%	22%	19%	23%	16%	17%	23%	28%	28%」	19%	20%
n= (1593) (224) (645) (164) (186) (99) (207) (68) (246) (190) (208	Large problem		6	12	∞	10	80	9	12	17 _{CF}	18 _{JK}	8	6
n= (1593) (224) (645) (164) (186) (99) (207) (68) (246) (199) (207) (68) (246) (199) (25% _c 17% 22% 23% 21% 20% _{JK} 30% _{JK} 30% _{JK} 25% _c 17% 5 8 9 11 12 14 _{JK} 14 _{JK}	Small problem		7	10	12	4	∞	7	7	10	10	7	7
19% 25% _C 17% 22% 23% 21% 20% 22% 30% _{JK} oblem 8 12 _{CD} 7 5 8 9 11 12 14 _{JK}	Parking	Ī	(1593)	(224)	(645)	(164)	(186)	(66)	(207)	(89)	(246)	(1150)	(197)
8 12co 7 5 8 9 11 12 14 _{3K}	Net: Problem		19%	$25\%_{\mathrm{C}}$	17%	22%	23%	21%	20%	22%	30%	19%	18%
	Large problem		∞	12_{CD}	7	2	80	6	17	12	4 _X	7	7
$ 11 13 11 16 15 12 10 10 16_{J}$	Small problem		11	13	11	16	15	12	10	10	16յ	11	11

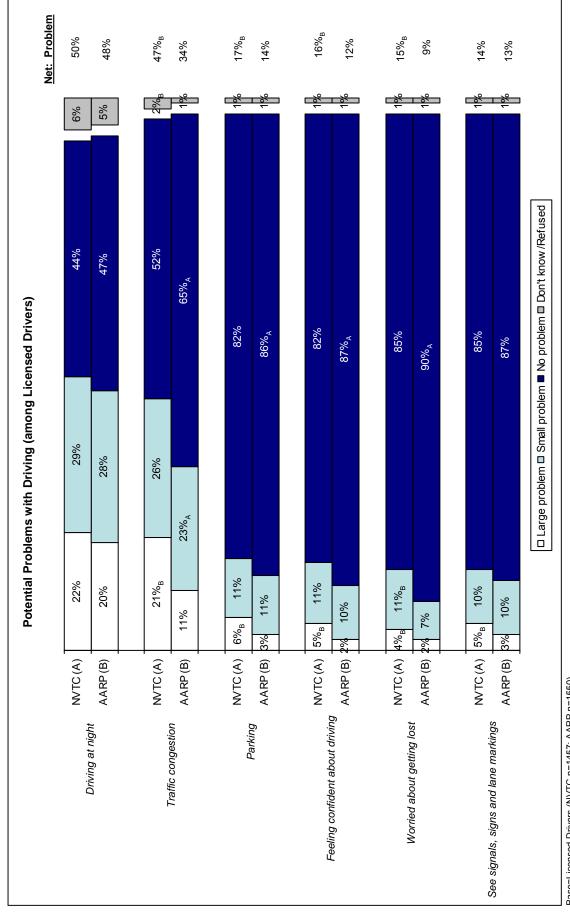
Mobility Issues - Driving (continued)

Mobility Issues - Driving (continued)

					Inrigalition		(===			Community Type	95
			Fairfax					Manassas/		(· (· · · · · · · · · · · · · · · · ·	
	Total	Arlington	County	Londoun	Alexandria	FC/Fx City	ΡW	Man. Park	Type 1	Type 2	Type 3
		(B)	(O)	(Q)	(E)	(F)	9	Œ	€	(T)	3
gns and			(010)		(007)	í ó	. ((10)	(254)	7 7 7	, (60
lane markings	(2101) =11		(700)	(001)	(189)	(86)	(Z IO)	(O.)	(107)	(001 1)	(401)
Net: Problem	17%	16%	16%	20%	22%	17%	16%	20%	$22\%_{K}$	17%	13%
Large problem	7	7	9	9	œ	9	7	1	10 _×	9	4
Small problem	10	o	10	41	4	1	6	6	12	1	80
,											
Worried about getting lost	n= (1618)	(233)	(653)	(166)	(188)	(86)	(210)	(70)	(252)	(1166)	(200)
Net: Problem	16%		17%	19%	13%	13%	15%	21%	17%	16%	16%
Large problem	2	9	2	∞	4	က	9	o	9	2	ß
Small problem	7	10	12	7	0	10	10	13	12	7	12

Base=Those Answering Note: Don't know not included Note: Letters indicate statistical differences at the 95% confidence level Q10

Mobility Issues – Driving (continued)



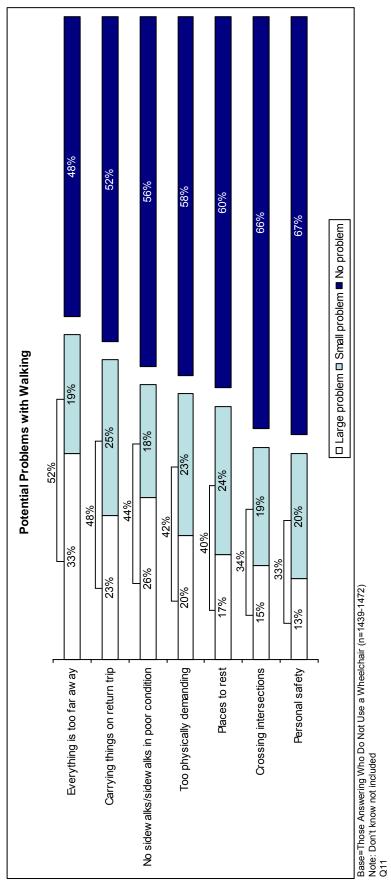
Base=Licensed Drivers (NVTC n=1457; AARP n=1550) NVTC: Q10; AARP: Q13

Mobility Issues - Walking

destinations. While a notable proportion did report having problems, other than simply being too far from anything, where they live Northern Virginia seniors who do not use a wheelchair were asked if they had any problems with seven aspects of walking to appears to have little correlation with problems with walking.

- At least one-third of the seniors who do not use a wheelchair and were able to answer reported having problems with each of the following:
- Everything is too far away (52%),
- Carrying things on their return trip (48%),
- No sidewalks or sidewalks are in poor condition (44%),
- Walking is too physically demanding (42%),
- Having places to rest (40%),
- Crossing intersections (34%),
- Personal safety (33%).
- Not surprisingly, those living in Type 2 or Type 3 community types were more likely than their Type 1 counterparts to say that everything being too far away is a problem for them walking to destinations (53% and 58% respectively vs. 39%).

Mobility Issues - Walking (continued)



Mobility Issues - Walking (continued)

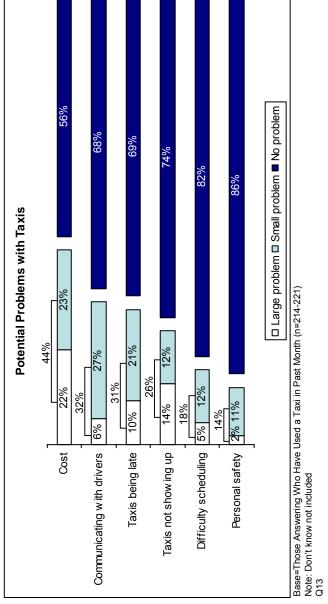
				Potential Pr	Potential Problems with Walking	h Walking					
			ш		Jurisdiction				Ö	Community Type	9
	Total	Arlington	Fairfax County	Londoun	Alexandria	FC/Fx City	PW	Manassas/ Man. Park	Type 1	Type 2	Type 3
		(B)	(0)	(D)	(E)	(F)	(<u>B</u>)	(H)	€	(r)	3
Everything is too far away	(1455)	(211)	(286)	(149)	(168)	(95)	(184)	(65)	(236)	(1046)	(173)
	, 52%	41%	$54\%_{BE}$	57% _{ВЕН}	,45%	57% _{BE}	57% _{ВЕН}	42%	39%	53%	58%
Large problem	33	23	35вен	41вегн	24	27	42вегн	23	24	33	45 _{IJ}
Small problem	19	18	19	16	18	29 _{BCDEG}	15	18	15	$20_{\rm K}$	13
Carrying things on	(1443)	(210)	(575)	(159)	(172)	(00)	(178)	(64)	(233)	(1043)	(167)
Ε	48%	46%	47%	(135) 56%	51%	(35) 48%	46%	20%	47%	(1043) 50%	41%
Large problem	23	19	22	30 _B	22	24	24	28	24	24	19
Small problem	25	27	25	26	29	24	21	22	23	26	22
No sidewalks/sidewalks in											
poor condition	(1472)	(216)	(283)	(153)	(173)	(94)	(182)	(65)	(238)	(1065)	(169)
Net: Problem	44%	40%	$48\%_{\mathrm{BG}}$	20%	42%	39%	40%	38%	48%	43%	47%
Large problem	56	21	29 _{BEF}	32_{BEF}	21	16	28₅	23	27	24	33,
Small problem	18	19 _G	$20_{ m G}$	18	$20_{ m G}$	$23_{\rm G}$	12	15	21	19	14
Too physically											
demanding n=	(1471)	(214)	(594)	(151)	(170)	(63)	(184)	(65)	(236)	(1060)	(175)
Net: Problem	,45%	38%	41%	47%	44%	47%	43%	45%	45%	43%	40%
Large problem	20	16	18	21	24	15	23	26	20	20	17
Small problem	23	21	23	56	20	32 _{ЕĞН}	21	18	22	23	23
Places to rest	(1439)	(211)	(278)	(149)	(171)	(88)	(178)	(63)	(231)	(1038)	(170)
Net: Problem	40%	39%	39%	50%	42%	36%	44%	41%	45%	40%	45%
Large problem	17	7	16	20 _B	15	12	26 _{BCEF}	27 BCEF	17	16	21
Small problem	24	28 _{GH}	23	30 _{GH}	27 _{GH}	24	18	41	56	24	21
Crossing intersections n=	(1469)	(214)	(286)	(154)	(173)	(63)	(183)	(99)	(240)	(1057)	(172)
Net: Problem	34%	34%	34%	$43\%_{\text{CEF}}$	29%	26%	37%⊧	35%	38%	34%	33%
Large problem	15	13	14 _F	25 _{BCEF}	14	∞	19 _F	24₅	18	15	15
Small problem	19	21⊬	20 _H	18	15	18	19	7	20	18	18
Personal safety n=	(1456)	(214)	(283)	(151)	(170)	(92)	(183)	(63)	(234)	(1053)	(169)
Net: Problem	33%	32%	33%	40%	34%	32%	39%	29%	37%	33%	39%
Large problem	13	7	14 _B	15 _B	6	12	$20_{ m BE}$	17 _B	15	12	18,
Small problem	20	25 _H	20 _H	25 _H	25 _H	20	19	7	22	21	21
Base=Those Answering Who Do Not Use a Wheelchair - Note: Don't know not included	t Use a Whee	Ichair – Note: Do	n't know not inc	luded							

Base=Those Answering Who Do Not Use a Wheelchair – Note: Don't know not included Note: Letters indicate statistical differences at the 95% confidence level Q11

Mobility Issues – Taxis

Northern Virginia seniors who have used a taxi in the past month were asked if any of six areas were problems for them when using taxis.

- More than four in ten of those able to rate (44%) said that the cost of taxis is a problem. Note: 'Those able to rate' does not include those who said they did not know or refused to answer this question.
- Furthermore, more than one-fourth said that being able to communicate with drivers (32%), taxis being late (31%) and/or taxis not showing up (26%) were problems for them.



Mobility Issues - Taxis (continued)

Mobility Issues - Taxis (continued)

Mobility Issues – Public Transportation

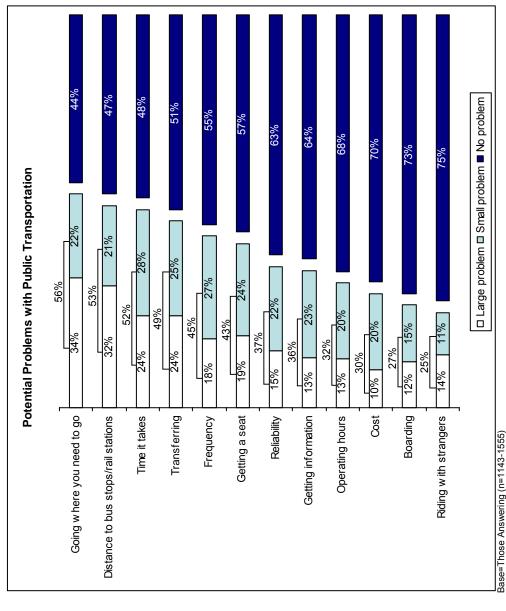
Northern Virginia seniors were asked if they have problems with a series of aspects related to public transportation. Where seniors live appears to have a significant impact on the problems they face.

- About one-half or more of the seniors answering reported having problems with the following aspects of public transportation:
- Public transportation going where they need to go (56%);
- The distance to bus stops or rail stations (53%);
- The time it takes to use public transportation (52%); and/or
- Transferring between routes (49%).
- In addition, one-fourth or more of the seniors reported having problems with the following:
- The frequency of service (45%);
- Being able to get a seat (43%);
- Reliability (37%);
- Getting information about fares, routes and schedules (36%);
- The operating hours of public transportation (32%);
- Cost (30%);
- Boarding a vehicle (27%); and/or
- Riding with strangers (25%).
- Northern Virginia seniors in this study were more likely than similar seniors nationwide to report having problems with different aspects of public transportation.
- Northern Virginia seniors who do not use public transportation were more likely than those who do to report having problems.
- those who used fixed route service to report having problems. In fact, the proportion of those who use specialized transportation Those who use specialized transportation (transportation for the disabled and senior/community vans) were more likely than reporting having problems is similar to those who do not use public transportation at all.

Mobility Issues - Public Transportation (continued)

- There were little differences by gender, with similar proportions of males and females reporting having problems.
- The less urbanized the community they live in, the more likely respondents were to report having problems with the following aspects of public transportation:
- The distance to bus stops or rail stations Type 1 (38% reported having problems) vs. Type 2 (51%) vs. Type 3 (74%)
- The operating hours of public transportation Type 1 (26%) and Type 2 (32%) vs. Type 3 (40%)
- Cost Type 1 (21%) vs. Type 2 (29%) and Type 3 (34%)
- Riding with strangers Type 1 (24%) and Type 2 (23%) vs. Type 3 (34%)
- However, those living in Type 1 and Type 2 communities were more likely than those living in Type 3 communities to have a problem with boarding vehicles (33% and 27% respectively vs. 20%)
- The problem areas respondents have with public transportation varies by jurisdiction.
- The following jurisdictions are more likely to have problems in certain areas:
- Loudoun County Distance to bus stops or rail station; frequency of service; reliability and operating hours of public transportation
- Prince William County Distance to bus stops or rail stations; operating hours of public transportation and riding with
- Fairfax County Distance to bus stops or rail stations and operating hours of public transportation
- The City of Manassas and Manassas Park Operating hours of public transportation and riding with strangers
- Conversely, the following jurisdictions are less likely to have problems in certain areas:
- Arlington County Public transportation going where you need to go; distance to bus stops and rail stations; frequency; reliability; operating hours and cost
- Falls Church and the City of Fairfax Distance to bus stops and rail stations; frequency and operating hours of public transportation A
- City of Alexandria Distance to bus stops and rail stations

Mobility Issues - Public Transportation (continued)



Base=Those Answering (n=1143-1555) Note: Don't know not included Q15

Mobility Issues - Public Transportation (continued)

				Potentia	Il Problem	s with Publi	Potential Problems with Public Transportation	tation				
	Г					Jurisdiction				ŭ	Community Type	96
		Total	Arlington	Fairfax County	Londoun	Alexandria	FC/Fx City	PW	Manassas/ Man. Park	Type 1	Type 2	Type 3
Going where			(B)	(C)	(D)	(E)	(F)	(9)	(H)	€	(r)	(X)
you need to go	Ë	(1397)	(209)	(554)	(135)	(171)	(88)	(181)	(58)	(228)	(1001)	(168)
Net: Problem		26%	41%	58% _B	$64\%_{BEF}$	$51\%_{ m B}$	49%	8%09	27% _B	49%	26%	25%
Large problem		34	20	36_{BE}	41 _{BEF}	26	28	41 _{BEF}	31	25	33	43 _{IJ}
Small problem		22	21	22	24	25	21	19	56	$25_{\rm K}$	23 _K	11
Distance to bus stops or												
rail stations		(1488)	(226)	(602)	(140)	(178)	(63)	(187)	(62)	(234)	(1082)	(172)
Net: Problem		23%	33%	$55\%_{\mathrm{BEF}}$	63%вегн	42%	42%	74%всрегн	44%	38%	51%	74%1
Large problem		32	18	34вегн	37 _{вегн}	19	22	53всрегн	19	18	30	55 _{IJ}
Small problem		21	15	21 _B	26 _B	$23_{\rm B}$	20	21	24	20	21	19
Time it takes	П	(1143)	(136)	(479)	(111)	(131)	(78)	(154)	(54)	(165)	(828)	(150)
Net: Problem		25%	49%	54%	9%09	47%	22%	52%	44%	26%	52%	51%
Large problem		24	20	25	28	24	18	25	22	25	23	25
Small problem		28	59	29	32	24	37_{E}	27	72	31	29	56
Transferring	<u>"</u>	(1373)	(208)	(541)	(137)	(165)	(83)	(177)	(62)	(218)	(991)	(164)
Net: Problem		46%	44%	51%	55%B	44%	43%	46%	45%	46%	49%	46%
Large problem		24	21	25 _{EF}	31 _{BEF}	16	16	27 _{EF}	23	22	24	24
Small problem		25	23	26	24	28	28	19	73	25	25	23
Frequency	Ë	(1300)	(197)	(511)	(130)	(161)	(83)	(164)	(54)	(202)	(945)	(150)
Net: Problem		45%	34%	45%BF	61%всегн	42%	31%	52%BF	44%	39%	45%	20%
Large problem		18	4	19 _{EF}	26 _{BEF}	12	10	22 _{EF}	20	15	17	25 _{IJ}
Small problem		27	19	27 _B	35_{BF}	30_{B}	22	$30_{\rm B}$	24	24	28	25
Getting a seat	<u>"</u>	(1382)	(211)	(558)	(132)	(166)	(88)	(171)	(55)	(218)	(666)	(165)
Net: Problem		43%	37%	42%	51% _{BE}	39%	40%	50% _{BE}	38%	38%	43%	47%
Large problem		19	16	18	20	13	18	25_{BE}	27 _E	17	18	21
Small problem		24	22 _H	24⊬	31⊬	26н	22	25⊬	1	21	24	26

Mobility Issues - Public Transportation (continued)

			Po	otential Pro	blems with	h Public Tra	tential Problems with Public Transportation (continued)	(continued)				
	Γ					Jurisdiction					Community Type	e
		Total	Arlinaton	Fairfax County	Loudoun	Alexandria	FC/Fx City	Md	Manassas/ Man. Park	Type 1	Tvpe 2	Tvne 3
: :	-		(B)	(O)	(a)	(E)	(F)	(e)	Ξį			\(\frac{2}{5}\)
Keliability	 	(1340)	(502)	(532)	(133)	(166)	(88)	(157)	(22)	(214)	(8/8)	(147)
Net: Problem		37%	%9Z	$38\%_{ m B}$	54%всегдн	33%	34%	$39\%_{\mathrm{B}}$	38%	31%	38%	41%
Large problem		15	7	$15_{\rm E}$	29 _{BCEF}	6	7	19_{BE}	16	4	15	19
Small problem		52	16	23 _B	26 _B	24 _B	23	20	22	17	23	22
			ĵ,	Ĉ	ĺ	ĵ.	Ó	3	í	í		ĺ
Getting information	<u> </u>	(1460)	(223)	(573)	(145)	(178)	(63)	(183)	(65)	(225)	(1058)	(177)
Net: Problem		36%	31%	38%∺	41% _H	30%	35%	32%	%97	36%	35%	33%
Large problem		13	10	13₅	17 _{EF}	o	9	15 _F	20 _{EF}	13	12	15
Small problem		23	21 _H	25∺	24⊬	21⊬	29 _H	20 _H	9	23	23	18
Operating hours	=======================================	(1341)	(204)	(533)	(134)	(165)	(88)	(164)	(53)	(217)	(296)	(157)
Net: Problem		32%	21%	33% _{BF}	40% _{BEF}	27%	22%	42% _{BCEF}	40% _{BF}	, 26%	32%	40% _U
Large problem		13	6	12	15	6	6	19 _{BCEF}	13	6	12	16
Small problem		20	12	21 _{BF}	25_{BF}	18	12	23_{BF}	26 _{BF}	17	19	24
700	2	(4402)	(040)	(693)	(100)	(764)	(10)	(470)	(4.7)	(910)	(4040)	(160)
Not: Broblem	<u> </u>	(1403)	(213)	(302)	(130)	(104)	(34)	(1/0)	(34)	21%	(0101)	(109)
Net. Ploblem		30%	1 @	3 I 70BE	3170B	62%	°,02	33.70BE	%10	%17	19.29.701 0	0470
Large problem		10	_	10 _{EF}	o	4	4	12_{EF}	ກ	9	ာ	ი
Small problem		20	12	21 _B	22_B	18	21 _B	$23_{\rm B}$	22	15	20	25
Boarding	=	(1555)	(232)	(620)	(158)	(182)	(62)	(202)	(99)	(243)	(1124)	(188)
Net: Problem		27%	28%	25%	32%	76%	23%	30%	36%	$33\%_{K}$	27%K	20%
Large problem		12	10	10	12	12	80	16	21 _{BCF}	15	1	10
Small problem		15	18	15	20	4	15	14	15	18 ¥	16 _x	7
Riding with strangers	<u> </u>	(1545)	(228)	(620)	(155)	(184)	(96)	(198)	(64)	(247)	(1108)	(190)
Net: Problem		25%	20%	24%	23%	20%	21%	33% _{BCDFF}	39% _{BCDFF}	24%	23%	34%
Large problem		14	13	13	7	12	7	22BCDEF	22 _F	4	13	19
Small problem		7	7	12	12	80	4	11	17	10	10	15
H-000												

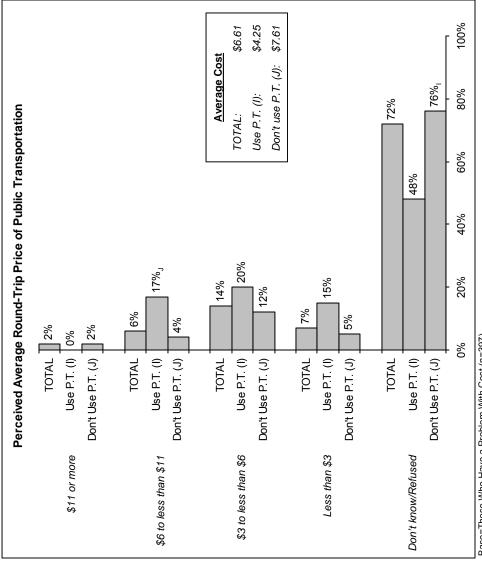
Mobility Issues - Public Transportation (continued)

Potent	tial	Problem	s with Publ	ic Transpo	Potential Problems with Public Transportation (continued)	tinued)	
			Use F Transpo	Use Public Transportation		Route	
		Total	Yes	N _O	Fixed	Special	Neither
or o			(=)	(r)	(P)	(Ö)	(R)
e		(1391)	(263)	(1128)	(202)	(80)	(1128)
		26%	49%	58%	43%	64% _P	58%p
Large problem		34	23	36,	17	41 _P	36 _Р
Small problem		22	26	21	56	23	21
Distance to bus stops or							
		(1490)	(272)	(1219)	(509)	(84)	(1219)
Net: Problem		53%	39%	26%	33%	54% _P	26%p
Large problem		32	21	35	17	30 _P	35 _P
Small problem		21	19	22	16	24	22 _P
		(0,77)	27	(007)	(700)	(700)	(0,000)
Tille it takes	 <u> </u>	(1143)	(311)	(1132)	(524)	(102)	(1132)
Net: Problem		25%	39%	25%	32%	73%pr	52% _P
Large problem		24	က	24,	4	ı	24 _P
Small problem		78	35	28	27	73 _{PR}	28
Transferring na		(1367)	(254)	(1114)	(196)	(62)	(1114)
Net: Problem		49%	33%	52%	, 52%	52% _P	52% _P
Large problem		24	12	27,	4	30 _P	27 _P
Small problem		25	21	25	21	22	25
Frequency		(1293)	(262)	(1031)	(204)	(79)	(1031)
Net: Problem		45%	39%	47%	34%	52% _P	47%p
Large problem		18	4	19,	80	26 _P	19 _P
Small problem		27	25	28	56	56	28
		(0001)	(990)	(4446)	(606)	(04)	777
#I	 <u> </u>	(1000)	(200)	(6111)	(202)	(0)	(6111)
Net: Problem		43%	31%	45%ı	26%	45% _P	45% _P
Large problem		19	œ	22	4	17 _P	22 _P
Small problem		24	22	24	22	28	24

Mobility Issues - Public Transportation (continued)

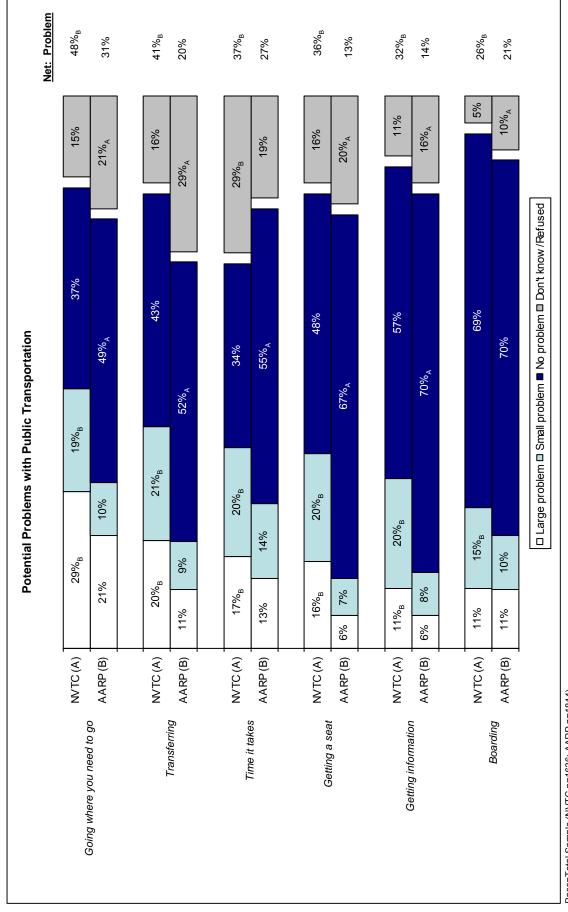
Pote	entia	I Problem	Potential Problems with Public Transportation (continued)	lic Transpo	rtation (con	tinued)	
			Use P	Use Public		41.0	
		ŀ	Iranspo	Iransportation	, i	Koute	Nette en
		lotal	Yes	No	FIXed	Special	Neitner
Reliability	II	(1336)	()	(J) (1077)	(P)	Ø£	(R) (1077)
Net: Problem		37%	27%	39%	25%	32%	39% _P
Large problem		15	10	16	7	19 _P	16 _P
Small problem		22	17	23 ₁	17	13	23 ₀
Getting information	I	(1448)	(797)	(1180)	(202)	(83)	(1180)
Net: Problem		36%	28%	38%	%9Z	33%	38%
Large problem		13	12	13	ξ ω	19 _P	13 _P
Small problem		23	17	24 ₁	18	4	24 _{PQ}
Operating hours	Щ	(1334)	(256)	(1078)	(200)	(78)	(1078)
Net: Problem		32%	25%	34%	21%	30%	34% _P
Large problem		13	80	14	9	12	14 _P
Small problem		20	16	21	15	18	21₽
Cost	Ē	(1404)	(269)	(1135)	(204)	(88)	(1135)
Net: Problem		30%	25%	31%	21%	35% _P	31% _P
Large problem		10	6	10	2	17 _P	10 _P
Small problem		20	17	21	16	18	21 _P
Boarding	٣	(1553)	(275)	(1278)	(211)	(88)	(1278)
Net: Problem		27%	20%	29%	13%	38% _P	29% _P
Large problem		12	5	13	-	14 _P	13 _P
Small problem		15	15	15	12	24 _P	15
:			:	;	:	į	;
Riding with strangers	Ē	(1538)	(274)	(1264)	(211)	(87)	(1264)
Net: Problem		72%	17%	26%	13%	28% _P	26% _P
Large problem		4	10	15	80	16 _Р	15 _P
Small problem		11	7	12	2	12 _P	12 _P
Base=Those Answering							

Mobility Issues – Public Transportation (continued)



Base=Those Who Have a Problem With Cost (n=397)
Note: Letters indicate statistical differences at the 95% confidence level
Q16

Mobility Issues – Public Transportation (continued)



Base=Total Sample (NVTC n=1636; AARP n=1844) NVTC: Q15; AARP: Q17

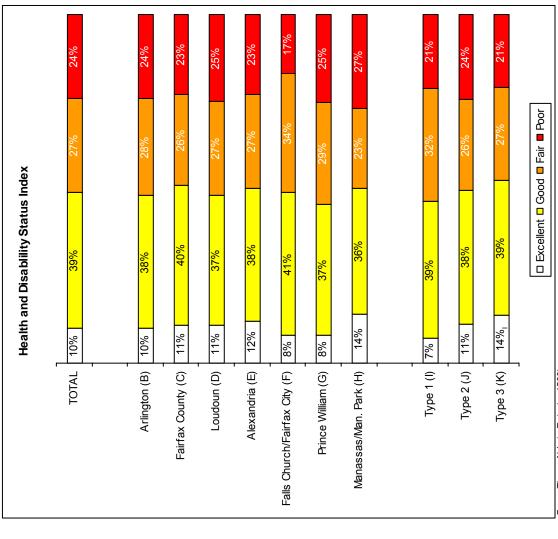
Detailed Findings: Health & Wellness

Health & Wellness

the number of life activities they have difficulty with. To calculate this formula, subtract 1 from the overall rating they give their health Northern Virginia seniors were asked a series of questions in order to measure their overall health status. The Health and Disability Status Index (HDS), used by the AARP, rates individual's overall health by a combination of their personal overall health rating and (1-5) for each of the five life activities they say they have difficulty with. For example. If they rate their overall health as "very good" (4) and they say they have difficulty with two life activities, their HDS score would then be 2 (i.e., 4-2=2). The scores, which can range from 5 to -4, break down as follows:

- 5 = Excellent
- 3 or 4 = Good
- 1 or 2 = Fair
- 0 to -4 = Poor
- One in ten respondents (10%) have an HDS of excellent, and an additional 39% have an HDS of good. However, one-fourth have an HDS of fair (27%) or poor (24%).
- While the proportion with an excellent HDS is equal to the national average for their age group (10%), Northern Virginia seniors age 75 or older are more likely than those nationwide to have a poor HDS (24% vs. 16%).
- Those with a poor HDS are likely to vary from the rest of the senior population in a number of areas:
- They are more likely to have a household income below \$30,000 (31% vs. 11%-14% of those with a higher HDS).
- They are more likely to rely on others for transportation (93% vs. 83%-88%) and are less likely to use most other predominant modes of transportation – i.e., driving (54% vs. 78%-95%), walking (23% vs. 33%-50%) and public transportation (10% vs. 17%-22%). Д
- They are also less likely to have walked anywhere in the past week (82% vs. 64%-72%).
- They are less likely to have a driver's license (79% vs. 88%-95%).
- However, there are no differences by community type except those in Type 1 communities tend to be more likely to have an excellent HDS (14% vs. 7% Type 1 and 11% Type 2).

Health & Wellness (continued)

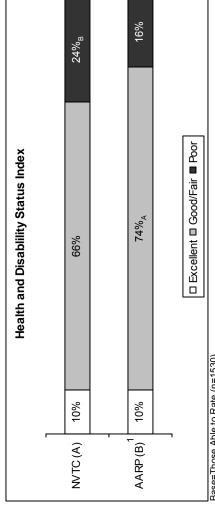


Base=Those Able to Rate (n=1530)

Note: 7% were unable to be rated

Note: Letters indicate statistical differences at the 95% confidence level

D8/D9



Health & Wellness (continued)

Base=Those Able to Rate (n=1530)

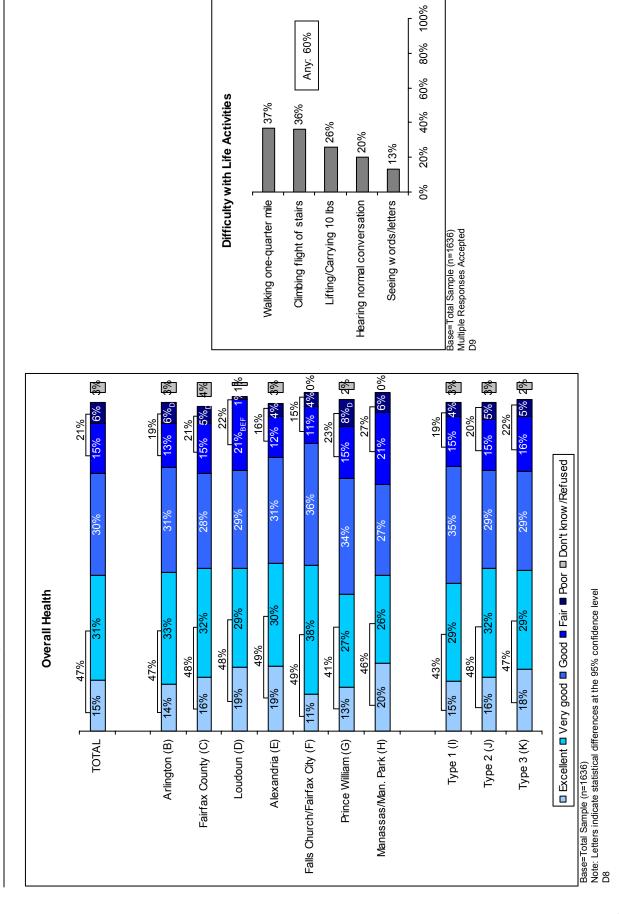
Note: 7% of the NVTC respondents were unable to be rated

1Base=Total Sample (n=1844)

Note: Letters indicate statistical differences at the 95% confidence level

NVTC: D8/D9; AARP: Q27, Q29

Health & Wellness (continued)



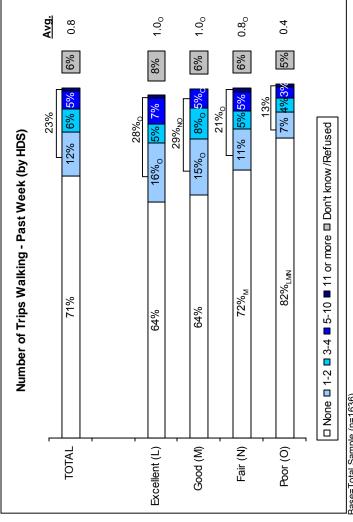
Health & Wellness (continued)

HDS	by Aging i	HDS by Aging in Place and Wealth	l Wealth		
			HDS	S	
	Total	Excellent	Good	Fair	Poor
		(T)	(M)	ĵ.	0
=u	(1636)	(163)	(280)	(416)	(361)
Time in Home					
5 years or less	13%	10%	12%	16%	16%
6 to 10 years	10	7	o	1	6
11 to 20 years	11	1	12	13	11
21 to 30 years	17	22	19	16	15
31 to 40 years	25	59	25	24	24
41 years or more	22	20	23	19	25 _N
Don't know/Refused	7	_	√ V	_	₹
Mean (in years)	27.8	28.9	$28.6_{\rm N}$	26.0	28.1
Median (in years)	30.0	30.0	30.0	28.0	30.0
Income					
Less than \$30K	17%	14%	11%	14%	31%LMN
\$30K to \$49K	18	20	18	16	20
\$50K to \$74K	15	16	16	16	12
\$75K or more	17	28 _{NO}	$22_{\rm o}$	17 ₀	6
Don't know	9	_	ษี	8∟м	9
Refused	28	20	30 _{LO}	30 _{Lo}	21
Mean	\$54,400	\$61,300°	$\$61,000_{\circ}$	$$56,500_{\circ}$	\$40,600
Median	\$48,700	\$57,100	\$56,800	\$52,500	\$35,000

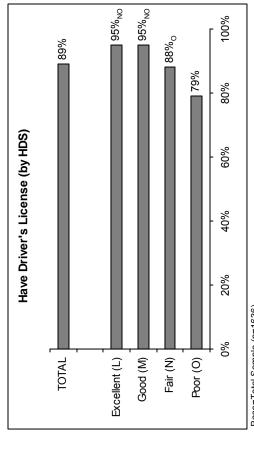
Base=Total Sample Note: Letters indicate statistical differences at the 95% confidence level Q31,D6

Health & Wellness (continued)

		Mod	e Usage –	Mode Usage - Past Month	Ļ			
		0	Overall Health			HDS	S	
		Excellent						
	Total	Very Good	Good	Fair/Poor	Excellent	Good	Fair	Poor
		(=)	(C)	(X)	(L)	(M)	Ź)	(0)
=u	(1636)	(29)	(492)	(334)	(163)	(280)	(416)	(361)
Car driven by other	%88	%98	¹ %06	%68	83%	%98	%88	93%LMN
Drove car	62	87 _{JK}	78 _K	09	95 _{NO}	92 _{NO}	78°	54
Walked	36	4 7 7	$37_{\rm K}$	24	20 _{NO}	45 _{NO}	33°	23
Net: Public transportation ¹	18	20 _K	20 _K	∞	20°	22°	17 ₀	10
Metrorail/VRE	12	16 _{JK}	11 _×	2	18 _{NO}	17 _{NO}	10°	2
Public bus	4	ý	ģ	-	4	50	50	2
Disabled transportation	4	4	9	2	7	4	2	2
Senior/Community van	7	7	က	က	-	_	က	က
Taxi	12	11	15	11	17 _M	10	41	12
Bike	3	4	2	2	6 _N	4	1	2
Base=Total Sample Multiple Responses Accepted; Top Mentions Note: Letters indicate statistical differences at the 95% confidence level 'Net is the total proportion of respondents who reported any or all subcategories within that net; may include multiple responses Q2	Mentions erences at the 9 ndents who repc	5% confidence le	evel Ibcategories wi	ithin that net; m	ay include multipl	le responses		

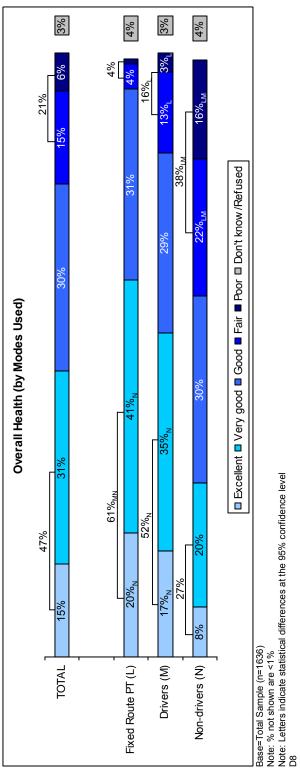


base=Total Sample (n=1636) Note: % not shown are ≤1% Note: Letters indicate statistical differences at the 95% confidence level Q3E



Health & Wellness (continued)

Base=Total Sample (n=1636) Note: Letters indicate statistical differences at the 95% confidence level Q6

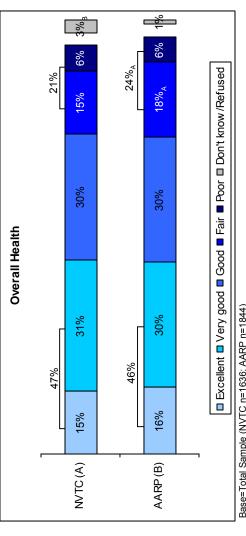


alth & Wellness (continued)

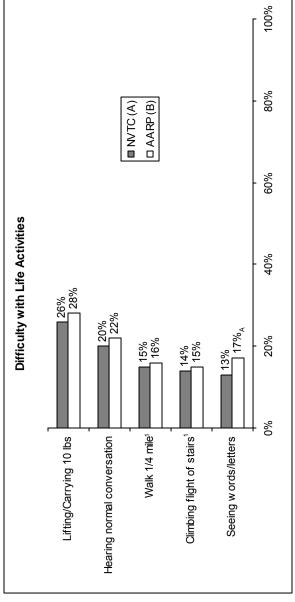
				Types	Types of Help Needed	ded					
					Jurisdiction				O	Community Type	Э с
	F		Fairfax	1	15.00		1	Manassas/	,	i i	F
	lotal	Ariington	County	Loudoun	Alexandria	PC/FX City	¥	Man. Park	l ype 1	l ype z	lype 3
		(B)	() ()	<u>(</u>)	(E)	(F)	(D)	Ξį	€	(C)	₹ (
=0	(1636)	(236)	(662)	(167)	(189)	(100)	(212)	(70)	(255)	(1180)	(201)
Net: Any¹	31%	33%⊧	30%⊧	32%⊧	32% _F	21%	35% _F	30%	35%	30%	30%
Cane, crutch or walker	25	25	24	26	28	20	27	21	28	24	22
Person to travel with	4	16 _F	15 _F	4	12	œ	15	20 _F	15	4	16
Net: Wheelchair ¹	∞	∞	∞	∞	∞	ဖ	7	9	ø	∞	1
Non-electric wheelchair	9	7	Ŋ	9	9	ß	∞	4	5	9	∞
Electric wheelchair/ scooter	ю	ю	å	ю	ю	_	ζ	~	7	ю	ū
Person to help get in/out of vehicles	۲	10	_	10	10	2	∞	13	10	7	1
Person to help get in/out of home	5	9	Ŋ	4	9	က	Ŋ	0	9	5	⁶ 6

Base=Total Sample
Multiple Responses Accepted
Note: Letters indicate statistical differences at the 95% confidence level
'Net is the total proportion of respondents who reported any or all subcategories within that net; may include multiple responses D7

Health & Wellness (continued)



Base=Total Sample (NVTC n=1636; AARP n=1844)
Note: Letters indicate statistical differences at the 95% confidence level
NVTC: D8; AARP: Q27



Base=Total Sample (NVTC n=1636; AARP n=1844)
'Base=Do Not Use Apparatus (NVTC n=1212; AARP n=data not available)
Multiple Responses Accepted
NVTC: D9; AARP: Q29

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Detailed Findings: *Profiles*

NOTE:

The tables on the following pages show comparisons between various subgroups. Variables shown are those on which the corresponding subgroup stands out. If a variable is missing, this means that a significant proportion of the corresponding subgroup did not give this answer.

Profiles - Community Types

Community Type 1 (9% of market)

predominantly drive themselves (48% of trips), rideshare (22%) or walk (22%) in order to get around. However, they drive themselves the least of any community type, while they are the most likely to use fixed route transportation (25%) and also tend to be more likely to use specialized transit (8%) as well. Type 1 seniors are more likely than other to have problems with driving, and in particular are Those who live in Community Type 1 are more likely to live in Arlington (41%) than those who live in other community types. They the most likely to have problems with the cost (39%), parking (30%), feeling confident driving (28%) and being able to see signals, signs and lane markings (22%). While they have few problems with public transportation, they are more likely than others to have problems with being able to board vehicles (33%).

Community Type 2 (82% of market)

themselves (64% of trips), rideshare (25%) or walk (8%). One in seven (14%) use fixed route transportation, while 6% use specialized transportation. In particular, at least one-half have a problem with public transportation going where they need to go (56%) and/or the Community Type 2 seniors are the most likely to live in Fairfax County (45%). Their predominant means of transportation is to drive transit on occasion. While they are less likely than others to have problems with driving, they do tend to have problems with public distance to bus stops and rail stations (51%). In addition, almost three in ten have a problem with the cost of public transportation (29%) and/or boarding public transportation vehicles (27%). Walking is also a problem for some, about one-half saying that everything is too far away (53%) and/or that carrying things on their return trip is a problem (50%).

Community Type 3 (8% of market)

Community Type 3 seniors can most often be found in either Prince William (52%) or Fairfax (38%) Counties. They also rely most on driving (66% of trips) and ridesharing (28%). Few use fixed route and/or specialized transportation (5% and 2% respectively). While their health is as good if not better than those in other community types, Type 3 seniors are the most likely to use a wheelchair (11%) transportation. Specifically, they are as or more likely to have problems with each of the following than those in other community and/or to require help getting in and out of their homes (9%). For Type 3 seniors, traffic congestion is a particular problem when driving (58%), and everything being too far away when walking (58%). Yet they are the most likely to have problems with public

- Distance to bus stops and rail stations (74%),
- Frequency of service (50%),
 - Operating hours (40%),
- Cost (34%), and
- Riding with strangers (34%).

Profiles – Community Types (continued)

	Overview of Community Types	mmunity Types	
	Type 1 (9%)	Type 2 (82%)	Type 3 (8%)
=u	(255)	(1180)	(201)
Jurisdiction	Arlington (41%), Falls Church (5%), Man./Man. Park(5%)	Fairfax Co. (45%)	P.W. (52%), Fairfax Co. (38%)
Community Type	,	,	1
Proportion of Trips	Car (48%), Rideshare (22%), Walk (22%)	Car (64%), Rideshare (25%), Walk (8%)	Car (66%), Rideshare (28%), Walk (5%)
Used Fixed Route PT-Past Month	25%	14%	2%
Used Specialized Transit-Past Month	%8	%9	2%
Aids Used			Help in and out of home (9%) Net: Wheelchair (11%)
Problems Driving	Cost (39%)		Traffic condestion (58%)
)	Confidence (28%)		
	Parking (30%)		
	Seeing signals/signs/lane markings (22%)		
Problems Walking		Everything is too far away (53%)	Everything is too far away (58%)
		Carrying things (50%)	
Problems w/ Public Transportation	Boarding a vehicle (33%)	Going where you need to (56%)	Distance to stops/stations (74%)
		Distance to stops/stations (51%)	Frequency of service (50%)
		Cost (29%)	Operating hours (40%)
		Boarding a vehicle (27%)	Cost (34%)
			Riding with strangers (34%)
Typical Weekly Trips (3+ times)	%28	85%	87%
Time in Home	20.5 years	27.7 years	24.3 years
Overall Satisfaction w/ Getting Around	73%	%02	%69
Average Income	\$50,000	\$54,600	\$56,700
Overall Health (Excellent/Very good)	43%	48%	47%
НДЅ	Excellent (7%), Poor (21%)	Excellent (11%), Poor (24%)	Excellent (14%), Poor (21%)

Profiles – HDS

As a senior's HDS declines, they begin to report more and more problems with transportation and their means of transportation changes.

Excellent HDS (10% of market)

most likely to use fixed route public transportation (19%) and, not surprisingly, the least likely to use specialized transit (3%). They are also the least likely to report problems with driving, walking or public transportation. They are the most mobile, with 95% taking three or more trips per week out of their homes, and are the most satisfied with their ability to get around (90% satisfied). In addition, they Driving themselves is the primary means of transportation for those with an excellent HDS (69% of trips). They are also among the are among the wealthiest, with an average household income of over \$60,000 per year.

Good HDS (39% of market)

problems with their ability to get around. Those with a good HDS are more likely than those in better health to have problems with the transferring between routes (39%) and getting information about fares, routes and schedules (32%). They also start to have problems transportation (19%). In addition, one in twenty use specialized transportation (5%). However, those with a good HDS do have some cost of operating and maintaining a car (28%) and parking (14%). Those with a good HDS start to have problems with public ransportation going where they need to go (53%), distance to bus stops and rail stations (49%), frequency of service (41%). Those with a good HDS are also most likely to drive themselves (69% of trips taken), and two in ten use fixed route public with walking, in particular with the following:

- Everything being too far away (46%),
- Carrying things (37%),
- Being too physically demanding (23%),
- Having places to rest (28%),
- Personal safety (28%), and
- Crossing intersections (25%)

While those with a good HDS travel as frequently as those with an excellent HDS (94% leave their homes three or more times per week), their satisfaction with their ability to get around decreases (80% satisfied).

Profiles – HDS (continued)

Fair HDS (27% of market)

Those with a fair HDS decrease their driving (61% of trips) while increasing the amount they rideshare (27%). One in eight (12%) use fixed route public transportation, while 7% use specialized transit. Once a senior reaches a fair HDS, they become more likely to use aids. In particular a cane, crutch or walker (27%), a person to travel with (12%) and/or need help in and out of vehicles (6%). Having no sidewalks or having sidewalks in poor condition becomes a problem (52%). They also add many additional problems with the use of public transportation:

- The time it takes (53%),
- Getting a seat (47%),
- Reliability (41%),
- Operating hours (37%),
- Cost (33%),
- Boarding a vehicle (33%), and
- Riding with strangers (26%).

A significant proportion of those with a fair HDS begin to report additional problems with driving, including driving at night (60%), traffic even more so than those in poorer health. However, it should be noted that as seniors' health declines further, their amount of driving Interestingly, those with a fair HDS are also the most likely to say they have problems with inconsiderate or aggressive drivers (65%), congestion (54%), confidence (24%), seeing signals, signs and lane markings (21%) and being worried about getting lost (19%). alls off significantly. Only two-thirds of seniors with a fair HDS (66%) say they are satisfied with how they get around

Those with a fair HDS are the most likely to live in a Type 1 community (12%). Fewer than nine in ten (86%) get out of their homes three or more times each week.

Poor HDS (24% of market)

They use more aids than healthier seniors, now being the most likely to use wheelchairs (25%) and needing help in and out of their Driving accounts for less than one-half of the trips taken by those with a poor HDS (48%), while conversely, the proportion of their (49%) are satisfied with their ability to get around. About seven in ten (71%) get out of their homes three or more times per week. trips through ridesharing increases (40%). Only a few use fixed route public transportation (4%), and 7% use specialized transit. nomes (15%). Sharing the same problems with transportation as those with a fair HDS, only in greater numbers, about one-half Also of note, those with a poor HDS have the lowest average household incomes (\$40,600)

Profiles - HDS (continued)

		Overview of HDS		
	Excellent (10%)	Good (39%)	Fair (27%)	Poor (24%)
=u	(163)	(200)	(416)	(361)
Jurisdiction	Fairfax Co. (57%)	Fairfax Co. (56%)	Fairfax Co. (51%), P.W. (16%)	Fairfax Co. (52%), P.W. (18%)
Community Type	Type 2 (83%)	Type 2 (82%)	Type 1 (12%), Type 2 (80%)	Type 2 (84%)
Proportion of Trips	Car (69%), Rideshare (19%), Walk (9%)	Car (69%), Rideshare (18%), Walk (9%)	Car (61%), Rideshare (27%), Walk (9%)	Car (48%), Rideshare (40%), Walk (6%)
Used Fixed Route PT-Past Month	19%	19%	12%	4%
Used Specialized Transit-Past Month	3%	2%	7%	7%
Aids Used			Cane, crutch or walker (27%)	Cane, crutch or walker (67%)
			Person to travel with (12%)	Person to travel with (37%)
			Help in/out of vehicles (6%)	Help in/out of vehicles (21%)
				Net: Wheelchair (25%)
				Help in/out of home (15%)
Problems Driving		Cost (28%)	Driving at night (60%)	Driving at night (70%)
		Parking (14%)	Traffic congestion (54%)	Traffic congestion (57%)
			Cost (37%)	Cost (44%)
			Confidence (24%)	Confidence (35%)
			Parking (24%)	Parking (29%)
			Seeing signals, etc. (21%)	Seeing signals, etc. (31%)
			Getting lost (19%)	Getting lost (23%)
			Inconsiderate/Aggressive drivers (65%)	
Problems Walking		Everything too far away (46%)	Everything too far away (60%)	Everything too far away (68%)
		Carrying things (37%)	Carrying things (59%)	Carrying things (71%)
		Physically demanding (23%)	No/Poor sidewalks (52%)	No/Poor sidewalks (57%)
		Places to rest (28%)	Physically demanding (56%)	Physically demanding (81%)
		Crossing intersections (25%)	Places to rest (51%)	Places to rest (67%)
		Safety (28%)	Crossing intersections (44%)	Crossing intersections (54%)
			Safety (40%)	Safety (47%)

Profiles - HDS (continued)

	Over	Overview of HDS (continued)		
	Excellent (10%)	Good (39%)	Fair (27%)	Poor (24%)
Problems w/ Public Transportation		Going where you need (53%)	Going where you need (59%)	Going where you need (68%)
		Distance to stops/stations (49%)	Distance to stops/stations (56%)	Distance to stops/stations (69%)
		Transferring (39%)	Time it takes (53%)	Time it takes (65%)
		Frequency (41%)	Transferring (55%)	Transferring (72%)
		Information (32%)	Frequency (48%)	Frequency (55%)
			Getting a seat (47%)	Getting a seat (58%)
			Reliability (41%)	Reliability (50%)
			Information (37%)	Information (48%)
			Operating hours (37%)	Operating hours (40%)
			Cost (33%)	Cost (42%)
			Boarding a vehicle (33%)	Boarding a vehicle (57%)
			Riding with strangers (26%)	Riding with strangers (35%)
Typical Weekly Trips (3+ times)	%96	94%	%98	71%
Time in Home	28.9 years	28.6 years	26.0 years	28.1 years
Overall Satisfaction w/ Getting Around	%06	%08	%99	49%
Average Income	\$61,300	\$61,000	\$56,500	\$40,600
Overall Health (Excellent/Very good)	100%	73%	34%	4%
HDS		-		•

Profiles – Driving

Drivers (79% of market)

satisfied with their ability to get around (75% satisfied vs. 52%). Drivers are wealthier, with an average household income of nearly transportation (15% vs. 8%). Drivers also are more likely to take three or more trips each week (93% vs. 60%). They are more Driving accounts for (72%) of drivers total trips. Interestingly, drivers are more likely than non-drivers to use fixed route public \$60,000 versus less than \$40,000 for non-drivers.

Non-Drivers (21% of market)

specialized transit (10%). They are more likely than drivers to use a variety of aids to help them get around and are also more likely to more likely to have a poor HDS (54% vs. 16%). While non-drivers predominantly live in Type 2 communities, a significant proportion report having a variety of problems with driving, walking and public transportation. And not surprisingly, non-drivers are significantly Non-Drivers are far more likely to rideshare (71% of trips vs. 19%) and walk (16% vs. 8%). They are also twice as likely to use live in Type 1 communities (13%).

Profiles – Driving (continued)

n= Jurisdiction		Non-Drivers
	Univers (79%)	(24%)
	(1276)	(361)
Jurisdiction	(1273)	(100)
Community Tyna	Fairfax Co. (56%)	Fairfax Co. (50%), Arl. (14%)
Community 13pc	Type 2 (83%)	Type 1 (13%), Type 2 (80%)
Proportion of Trips Car (7	Car (72%), Rideshare (19%), Walk (8%)	Rideshare (71%), Walk (16%), Taxi (5%)
Used Fixed Route PT-Past Month	15%	%8
Used Specialized Transit-Past Month	2%	10%
Aids Used		Cane, crutch or walker (55%)
		Person to travel with (45%)
		Help in and out of vehicles (26%)
		Net: Wheelchair (24%)
		Help in and out of home (17%)
Problems Driving		Driving at night (69%)
		Traffic congestion (66%)
		Cost (42%)
		Confidence (48%)
		Parking (36%)
		Seeing signals/signs/lane markings (36%)
		Worried about getting lost (25%)
Problems Walking		Everything is too far away (66%)
		Carrying things (63%)
		No/Poor sidewalks (58%)
		Too physically demanding (62%)
		Places to rest (60%)
		Crossing intersections (56%)
		Safety (51%)

Profiles – Driving (continued)

	Overview of Driving (continued)	
	Drivers	Non-Drivers
	(%62)	(21%)
Problems w/ Public Transportation		Going where you need to (62%)
		Distance to stops/stations (64%)
		Transferring (64%)
		Getting a seat (49%)
		Reliability (46%)
		Getting information (42%)
		Cost (36%)
		Boarding a vehicle (54%)
		Riding with strangers (36%)
Typical Weekly Trips (3+ times)	93%	%09
Time in Home	28.5 years	25.2 years
Overall Satisfaction w/ Getting Around	75%	52%
Average Income	\$58,200	\$39,400
Overall Health (Excellent/Very good)	52%	27%
HDS	Excellent (12%), Poor (16%)	Excellent (3%), Poor (54%)

Profiles - Public Transportation Use

The following is a comparison of fixed route public transportation and specialized transit users, of which their may be some crossover, versus non-users of public transportation.

Fixed Route Users (13% of market)

mobile, with almost all (95%) taking three or more trips each week. Fixed Route Users are the happiest with their ability to get around are the least likely to use aids and the least likely to report problems with driving, walking or public transportation. They are the most about one in ten (11%) use specialized transit. However, driving still accounts for the greatest proportion of their trips (59%). They Fixed route public transportation users are more likely than others to live in Type 1 communities (18%). In addition to fixed route, (78% satisfied). They are also the healthiest (7% poor HDS) and wealthiest (\$62,100 average income)

Specialized Transit Users (6% of market)

While more than four in ten trips by specialized transit users are taken by driving (45%), almost two in ten are taken either by senior or community vans (9%) or by transportation for people with disabilities (9%). In addition, about one-fourth (26%) occasionally use fixed route public transportation. Specialized transit users are the most likely to require a variety of aids in order to get around.

Specialized transit users report a variety of problems with getting around. Two-thirds (66%) say that they have a problem with driving are the least satisfied with their ability to get around (51%). They are the least healthy (29% poor HDS) and have the lowest average specialized transit users are the most likely to report having a problem with the time it takes (73%). Overall, specialized transit users at night. In addition, they are the most likely to say they have problems carrying things when walking (58%), crossing intersections (44%) and/or with their personal safety when walking (40%). Along with a variety of other problems with public transportation, nousehold incomes (\$47,500).

Profiles – Public Transportation Use (continued)

Non-Users of Public Transportation (82% of market)

specialized transit users. While not as frequently, non-users also report problems with driving at night (56%). They are the most likely accounts for the majority of their trips (65%), while ridesharing accounts for another 26%. They use aids almost as frequently as do to report finding walking to be too physically demanding (46%). Non-users also report the greatest number of problems with public Those who do not use any form of public transportation are the most likely group to live in Type 3 communities (9%). Driving transportation, among which they are the most likely to have said each of the following are problems:

- Reliability (39%);
- Getting information about fares, routes and schedules (38%);
- Operating hours (34%);
- Riding with strangers (26%).

Overall, seven in ten (70%) are satisfied with how they get around. Non-users of public transportation tend to be the least mobile, with 84% getting out of their homes three or more times a week. Their health status is similar to that of specialized transit users, with about one-fourth (26%) having a poor HDS.

Profiles - Public Transportation Use (continued)

	Overview of Public Transportation Use	Transportation Use	
	Fixed Route (13%)	Specialized Transit (6%)	Neither (82%)
=u	(234)	(102)	(1325)
Jurisdiction	Fairfax Co. (50%), Arlington (22%)	Fairfax Co. (36%), Arl. (22%), P.W. (19%), Loudoun (13%)	Fairfax Co. (56%), P.W. (16%), City of Fairfax (4%)
Community Type	Type 1 (18%), Type 2 (79%)	Type 2 (83%)	Type 2 (83%), Type 3 (9%)
Proportion of Trips	Car (59%), Rideshare (18%), Walk (13%), Metrorail/VRE (5%)	Car (45%), Rideshare (24%), Walk (13%), Senior/Community van (9%), Trans. For Disabled (9%), Taxi (4%)	Car (65%), Rideshare (26%), Walk (7%)
Used Fixed Route PT-Past Month	100%	79%	%0
Used Specialized Transit-Past Month	11%	100%	%0
Aids Used		Cane, crutch or walker (31%)	Cane, crutch or walker (27%)
		Person to travel with (18%)	Person to travel with (15%)
		Help in and out of vehicles (10%)	Help in and out of vehicles (8%)
		Net: Wheelchair (8%)	Net: Wheelchair (9%)
		Help in and out of home (6%)	Help in and out of home (5%)
Problems Driving		Driving at night (66%)	Driving at night (56%)
Problems Walking		Everything is too far away (56%)	Everything is too far away (54%)
		Carrying things (58%)	Carrying things (49%)
		Too physically demanding (38%)	Too physically demanding (46%)
		Places to rest (45%)	Places to rest (42%)
		Crossing intersections (44%)	Crossing intersections (35%)
		Safety (40%)	
Problems w/ Public Transportation		Distance to stops/stations (54%)	Distance to stops/stations (56%)
		Going where you need to (64%)	Going where you need to (58%)
		Transferring (52%)	Transferring (52%)
		Time it takes (73%)	Time it takes (52%)
		Getting a seat (45%)	Getting a seat (45%)
		Frequency (52%)	Frequency (47%)
		Boarding a vehicle (38%)	Getting information (38%)
		Cost (35%)	Reliability (39%)
		Riding with strangers (28%)	Operating hours (34%)
			Boarding a vehicle (29%)
			Cost (31%)
			Riding with strangers (26%)

Profiles - Public Transportation Use (continued)

	Overview of Public Tran	Overview of Public Transportation Use (continued)	
	Fixed Route (13%)	Specialized Transit (6%)	Neither (82%)
Typical Weekly Trips (3+ times)	95%	%88	84%
Time in Home	26.6 years	19.2 years	28.4 years
Overall Satisfaction w/ Getting Around	78%	51%	%02
Average Income	\$62,100	\$47,500	\$53,500
Overall Health (Excellent/Very good)	61%	38%	45%
HDS	Excellent (15%), Poor (7%)	Excellent (6%), Poor (29%)	Excellent (10%), Poor (26%)

Profiles - Ridesharing vs. Public Transportation

The following is a comparison of fixed route public transportation and specialized transit users, of which their may be some crossover, with those who rideshare but do not use public transportation. This market does not include those who do not use any of these means of transportation.

Ridesharers (73% of market)

aids to get around, and this makes them similar to Specialized Transit Users. Almost six in ten (57%) report having problems driving do not trust public transportation's reliability (39%), have a problem getting information on fares, routes and schedules (38%) and/or physically demanding (47%). They also report the most problems with public transportation, and are the most likely to say that they (10%). Ridesharing accounts for 30% of their trips, second only to driving themselves (62%). Ridesharers have to use a variety of have a problem with the operating hours (34%). Ridesharers tend to be the least mobile, with 84% taking three or more trips each While the majority of ridesharers live in Type 2 communities, they are the most likely of any group to live in Type 3 communities at night. They report having a variety of problems with walking, and in particular are the most likely to report that walking is too week. They are also among the least healthy (28% poor HDS).

Fixed Route Users (13% of market)

about one in ten (11%) use specialized transit. They are the least likely to use aids and the least likely to report problems with driving, walking or public transportation. They are the most mobile, with almost all (95%) taking three or more trips each week. Fixed route users are the happiest with their ability to get around (78% satisfied). They are also the healthiest (7% poor HDS) and wealthiest Fixed route public transportation users are more likely than others to live in Type 1 communities (18%). In addition to fixed route, (\$62,100 average income).

Specialized Transit Users (6% of market)

About one in seven trips by specialized transit users are taken either by transportation for people with disabilities (9%) or by senior or community vans (5%). In addition, about one-fourth (26%) occasionally use fixed route public transportation. Specialized transit users also require a variety of aids in order to get around.

problems with walking and using public transportation. In addition to the other problem areas they report, specialized transit users are Iwo-thirds (66%) say that they have a problem with driving at night. Similar to ridesharers, specialized transit users report a variety of the most likely to say they have problems carrying things when walking (58%), and with boarding a public transportation vehicle 38%). Overall, specialized transit users are the least satisfied with their ability to get around (51%). They are among the least nealthy (29% poor HDS) and have the lowest average household incomes (\$47,500)

Profiles - Ridesharing vs. Public Transportation (continued)

	Overview of Ridesharing vs. Public Transportation	vs. Public Transportation	
	Ridesharing (No Public Transportation) (73%)	Fixed Route (13%)	Specialized Transit (6%)
=u	(1170)	(234)	(102)
Jurisdiction	Fairfax Co. (56%), P.W. (16%), City of Fairfax (4%)	Fairfax Co. (50%), Arl. (22%)	Arl. (22%), P.W. (19%), Loudoun (12%)
Community Type	Type 2 (82%), Type 3 (10%)	Type 1 (18%), Type 2 (79%)	Type 2 (83%)
Proportion of Trips	Car (62%), Rideshare (30%), Walk (7%)	Car (59%), Rideshare (18%), Walk (13%), Metrorail/VRE (5%), Bus (3%)	Car (45%), Rideshare (24%), Walk (13%), Trans. For Disabled (9%), Senior/Community Van (5%), Taxi (4%)
Used Fixed Route PTPast Month	1	100%	26%
Used Specialized Transit-Past Month	-	11%	100%
Aids Used	Cane, crutch or walker (29%)		Cane, crutch or walker (31%)
	Person to travel with (17%)		Person to travel with (18%)
	Help in and out of vehicles (9%)		Help in and out of vehicles (10%)
	Net: Wheelchair (10%)		Net: Wheelchair (8%)
	Help in and out of home (6%)		Help in and out of home (6%)
Problems Driving	Driving at night (57%)		Driving at night (66%)
Problems Walking	Everything too far away (56%)		Everything too far away (56%)
	Carrying things (50%)		Carrying things (58%)
	Too physically demanding (47%)		Too physically demanding (38%)
	Places to rest (43%)		Places to rest (45%)
	Intersections (36%)		Intersections (44%)
Problems w/ Public Transportation	Going where you need to (58%)		Going where you need to (64%)
	Distance to stops/stations (56%)		Distance to stops/stations (54%)
	Transferring (53%)		Transferring (52%)
	Frequency (47%)		Frequency (52%)
	Getting a seat (46%)		Getting a seat (45%)
	Reliability (39%)		Cost (35%)
	Getting information (38%)		Boarding a vehicle (38%)
	Operating hours (34%)		Riding with strangers (28%)
	Cost (31%)		
	Boarding a vehicle (31%)		
	Riding with strangers (26%)		

Profiles – Ridesharing vs. Public Transportation (continued)

	Overview of Ridesharing vs. Public Transportation (continued)	blic Transportation (continued)	
	Ridesharing (No Public Transportation) (73%)	Fixed Route (13%)	Specialized Transit (6%)
Typical Weekly Trips (3+ times)	84%	%56	%88
Time in Home	28.2 years	26.6 years	19.2 years
Overall Satisfaction w/ Getting Around	%69	78%	51%
Average Income	\$53,600	\$62,100	\$47,500
Overall Health (Excellent/Very good)	45%	61%	38%
HDS	Excellent (9%), Poor (28%)	Excellent (15%), Poor (7%)	Excellent (6%), Poor (29%)

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Profiles - Walking

Walkers (36% of market)

transportation. The only area where they are more likely than non-walkers to have problems with driving is with parking (23%). They Walkers are more likely than others to live in Type 1 communities (16%). Walking accounts for about two in ten of their trips (19%). One-fourth (25%) use fixed route public transportation, while 8% use specialized transit. They are less likely than non-walkers to are more active than non-walkers, with 93% taking three or more trips per week compared to 82% of non-walkers. They are also require any kind of aid to get around. Not surprisingly, they are less likely to have problems with walking as well as with public more satisfied with how they get around (74% vs. 67%).

Non-Walkers (64% of market)

Non-walkers are more likely to live in Type 3 communities (11%). Driving is their primary means of transportation, accounting for almost seven in ten trips (69%). Fewer than one in ten use fixed route public transportation (7%) and/or specialized transit (4%). They require a variety of aids to get around. They are also more likely than walkers to report problems with walking and public transportation. Non-walkers are also typically less healthy than are walkers (29% poor HDS vs. 15%).

Profiles - Walking (continued)

	Overview of Walking	
	Walkers (36%)	Non-Walkers (64%)
=	(623)	(1013)
Jurisdiction	Fairfax Co. (54%), Arl. (15%), Alex. (9%)	Fairfax Co. (54%), P.W. (19%)
Community Type	Type 1 (16%), Type 2 (81%)	Type 2 (83%), Type 3 (11%)
Proportion of Trips	Car (56%), Rideshare (20%), Walk (19%)	Car (69%), Rideshare (29%)
Used Fixed Route PT-Past Month	25%	4%
Used Specialized Transit-Past Month	%8	4%
Aids Used		Cane, crutch or walker (30%)
		Person to travel with (18%)
		Help in and out of vehicles (10%)
		Net: Wheelchair (11%)
		Help in and out of home (6%)
Problems Driving	Parking (23%)	
Problems Walking		Everything too far away (60%)
		Carrying things (53%)
		Too physically demanding (53%)
		Places to rest (47%)
Problems w/ Public Transportation		Going where you need to (59%)
		Distance to stops/stations (60%)
		Transferring (53%)
		Frequency (47%)
		Getting a seat (47%)
		Reliability (40%)
		Operating hours (35%)
		Boarding a vehicle (32%)
		Riding with strangers (28%)
Typical Weekly Trips (3+ times)	93%	82%
Time in Home	26.3 years	28.6 years
Overall Satisfaction w/ Getting Around	74%	%29
Average Income	\$57,600	\$52,600
Overall Health (Excellent/Very good)	54%	43%
HDS	Excellent (14%), Poor (15%)	Excellent (8%), Poor (29%)

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Profiles – Problems Getting Places

Problems (36% of market) vs. No Problems (64% of market)

respectively). However, those reporting transportation problems are twice as likely to use specialized transit (8% vs. 4%). Those without problems are more likely to use a car for a greater proportion of their trips (67% vs. 55%). In addition, those without Similar proportions of those with and without transportation problems use fixed route public transportation (13% and 14% transportation problems are more likely to...

- Be satisfied overall with how they get around (82% vs. 49%),
- Take three or more trips each week (88% vs. 81%),
- Have larger household incomes (\$57,400 vs. \$49,400), and
- Be in better health (15% poor HDS vs. 40%).

Profiles – Problems Getting Places (continued)

Overview of Tho	Overview of Those With vs. Those Without Problems Getting Places	s Getting Places
	Problems (36%)	No Problems (64%)
=u	(595)	(1041)
Jurisdiction	Fairfax Co. (55%)	Fairfax Co. (54%)
Community Type	Type 2 (82%)	Type 2 (82%)
Proportion of Trips	Car (55%), Rideshare (29%), Walk (10%)	Car (67%), Rideshare (23%), Walk (8%)
Used Fixed Route PT-Past Month	13%	14%
Used Specialized Transit-Past Month	%8	4%
Aids Used	Cane, crutch or walker (36%)	
	Person to travel with (20%)	
	Help in and out of vehicles (12%)	
	Net: Wheelchair (12%)	
	Help in and out of home (9%)	
Problems Driving	Inconsiderate/Aggressive drivers (71%)	
	Driving at night (67%)	
	Traffic congestion (65%)	
	Cost (44%)	
	Confidence (33%)	
	Parking (30%)	
	Seeing signals/signs/lane markings (28%)	
	Worried about getting lost (24%)	
Problems Walking	Everything too far away (66%)	
	Carrying things (60%)	
	No/Poor sidewalks (56%)	
	Too physically demanding (55%)	
	Places to rest (54%)	
	Crossing intersections (51%)	
	Safety (48%)	

Profiles – Problems Getting Places (continued)

Overview of Those Wi	Overview of Those With vs. Those Without Problems Getting Places (continued)	tting Places (continued)
	Problems (36%)	No Problems (64%)
Problems w/ Public Transportation	Not going where you need to (70%)	,
	Distance to stops/stations (68%)	
	Time it takes (63%)	
	Transferring (64%)	
	Frequency (57%)	
	Getting a seat (52%)	
	Reliability (50%)	
	Getting information (48%)	
	Operating hours (42%)	
	Cost (41%)	
	Boarding a vehicle (43%)	
	Riding with strangers (34%)	
Typical Weekly Trips (3+ times)	81%	%88
Time in Home	26.5 years	28.5 years
Overall Satisfaction w/ Getting Around	49%	82%
Average Income	\$49,400	\$57,400
Overall Health (Excellent/Very good)	37%	53%
HDS	Excellent (5%), Poor (40%)	Excellent (13%), Poor (15%)

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Profiles - Satisfaction with Transportation

Satisfied (71% of market)

satisfied to drive for a greater proportion of their trips (66% vs. 55%). They are also more likely to use fixed route public transportation (15% vs. 10%). In addition, those who are satisfied are more mobile than the less satisfied (90% 3 or more trips per week vs. 79%). Those satisfied with their means of getting around most likely live in Type 2 communities (82%). They are more likely than the less

Less Than Satisfied (29% of market)

problems with walking, driving and using public transportation. They are also less healthy than more satisfied seniors (41% poor HDS Those less than satisfied with how they get around most often live in Type 3 communities (83%). While driving is their primary means of transportation, the less satisfied are more likely to rideshare a greater portion of their trip (31% vs. 22%). They are also more likely to occasionally use specialized transit (10% vs. 4%). Not surprisingly, those who are less satisfied report a greater number of

Profiles - Satisfaction with Transportation (continued)

Satisfied Less than Satisfied (17%) (12%) (12%) (12%) (146) (1	Over	Overview of Satisfaction with Transportation	tation
Type 2 (82%) Type 2 (82%) Type 2 (82%) Type 2 (82%) SPT-Past Month		Satisfied (71%)	Less th
Fairfax Co. (55%) Type 2 (82%) Same	=u	(1146)	(456)
Type 2 (82%) Sept.—Past Month Transit-Past Month Transit-Past Month 4% 99	Jurisdiction	Fairfax Co. (55%)	Fairfax Co. (52%), P.W. (18%)
nth Car (66%), Rideshare (22%), Walk (9%) 15% 4%	Community Type	Type 2 (82%)	Type 3 (83%)
15% 4%	Proportion of Trips	Car (66%), Rideshare (22%), Walk (9%)	Car (55%), Rideshare (31%), Walk (8%)
Transit-Past Month 4%	Used Fixed Route PT-Past Month	15%	10%
	Used Specialized Transit-Past Month	4%	10%
	Aids Used		Cane, crutch or walker (38%)
			Person to travel with (24%)
			Help in and out of vehicles (12%)
			Net: Wheelchair (13%)
			Help in and out of home (9%)
	Problems Driving		Inconsiderate/Aggressive drivers (72%)
			Driving at night (66%)
			Traffic congestion (64%)
			Cost (47%)
			Confidence (29%)
			Parking (27%)
			Seeing signals/signs/lane markings (28%)
			Worried about getting lost (25%)
Carrying things (61%) Sidewalks (56%) Too physically demanding Places to rest (57%) Crossing intersections (Problems Walking		Everything too far away (66%)
Sidewalks (56%) Too physically demanding Places to rest (57% Crossing intersections (Carrying things (61%)
Too physically demanding Places to rest (57% Crossing intersections (Sidewalks (56%)
Places to rest (57% Crossing intersections (Too physically demanding (60%)
Crossing intersections (Places to rest (57%)
Dublic cafety (16%			Crossing intersections (51%)
מיטיד) עומשים מוומשי			Public safety (46%)

Profiles - Satisfaction with Transportation

Overview	Overview of Satisfaction with Transportation (continued)	(continued)
	Satisfied (71%)	Less than Satisfied (29%)
Problems w/ Public Transportation		Going where you need to (74%)
		Distance to stops/stations (72%)
		Time it takes (66%)
		Transferring (67%)
		Frequency (61%)
		Getting a seat (54%)
		Reliability (53%)
		Getting information (50%)
		Operating hours (43%)
		Cost (44%)
		Boarding a vehicle (43%)
		Riding with strangers (35%)
Typical Weekly Trips (3+ times)	%06	%62
Time in Home	28.4 years	25.8 years
Average Income	\$56,200	\$51,100
Overall Health (Excellent/Very good)	53%	31%
HDS	Excellent (13%), Poor (17%)	Excellent (3%), Poor (41%)

Detailed Findings: Segmentation

Segmentation

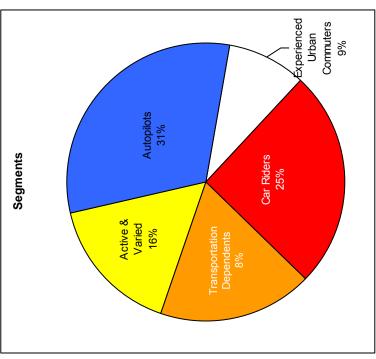
Concurrent segmentation was used to determine segments of the Northern Virginia seniors age 75 and older. After screening four different segmentation possibilities, the final solution involves two sets of basis variables:

- Current transportation usage: What modes they use and how often they use each mode.
- Mobility: How often they get out and about, and where they have problems.

The result is five segments of area seniors as follows:

- 1. Experienced Urban Commuters (9% of the market)
- Car Riders (25%)
- 3. Transportation Dependents (18%)
- 4. Active & Varied (16%)
- 5. Autopilots (31%)

As can be seen by the names, there are two segments of people who predominantly drive themselves (2 and 5) two segments who will use a variety of means of transportation (1 and 4) and one segment that is very dependent on others to get around (5). Each of these offer different levels and types of opportunities as outlined on the following pages.



Base=Total Sample (n=1636)

	NO	Overview of Segmentation	ation		
	Experienced Urban Commuters	Car Riders	Transportation Dependents	Active & Varied	Autopilots
Jurisdiction	Arl. (37%), Alex. (20%)	Fairfax Co. (42%), P.W. (15%)	Fairfax Co. (38%), P.W. (17%)	Arl. (16%), Fairfax Co. (42%), Alex (16%)	Fairfax Co. (45%), P.W. (16%)
Community Type	T1 (41%), T2 (58%)	T2 (75%), T3 (16%)	T1 (15%), T3 (13%)	T1 (23%), T2 (71%)	T2 (75%), T3 (15%)
Proportion of Trips	Car (27%), Rideshare (24%), Walk (25%), Taxi (9%), Rall/VRE (7%)	Car (68%), Rideshare (30%)	Rideshare (94%)	Car (58%), Rideshare (15%), Walk (26%)	Car (89%), Rideshare (10%)
Used Fixed Route	52%	17%	%8	21%	%9
Used Specialized Transit	21%	%2	%9	%9	1%
Aids Used	Cane, etc. (27%)	Net: Wheelchair (6%)	Cane, etc. (58%)		
	Person to travel with (15%)		Person to travel with (49%)		
	Help in/out of vehicles (8%)		Help in/out of vehicles (32%)		
	Net: Wheelchair (8%)		Net: Wheelchair (28%)		
			Help in/out of home (23%)		
Problems Driving	Traffic cong. (55%)		Night driving (71%)		
	Confidence (35%)		Traffic cong. (66%)		
	Parking (31%)		Cost (40%)		
	See signals, etc. (28%)		Confidence (49%)		
			Parking (34%)		
			See signals, etc. (34%)		
			Getting lost (26%)		

	Overvie	Overview of Segmentation (continued)	(continued)		
	Experienced Urban Commuters	Car Riders	Transportation Dependents	Active & Varied	Autopilots
Problems Walking	Intersections (44%)	Everything too far away (53%)	Everything too far away (70%)		Everything too far away (55%)
	Safety (41%)		Carrying things (67%)		Too physically demanding (46%)
			Sidewalks (61%)		Places to rest (43%)
			Too physically demanding (71%)		
			Places to rest (62%)		
			Intersections (55%)		
			Safety (51%)		
Problems w/ Public Transportation		Distance to stops/stations (50%)	Going where you need to (67%)		Distance to stops/stations (57%)
		Getting a seat (43%)	Time it takes (60%)		Getting a seat (43%)
			Distance to stops/stations (69%)		Reliability (38%)
			Transferring (67%)		
			Frequency (55%)		
			Getting a seat (54%)		
			Reliability (55%)		
			Information (45%)		
			Operating hrs. (43%)		
			Cost (41%)		
			Boarding (57%)		
			Strangers (37%)		
Typical Weekly Trips (3+ times)	%06	98%	54%	92%	%88
Time in Home	21.7 years	25.9 years	24.8 years	24.3 years	29.6 years
Overall Satisfaction w/ Getting Around	64%	72%	49%	82%	%92
Average Income	\$55,000	\$58,600	\$40,700	\$59,700	\$55,100
Overall Health (Excellent/Very good)	%09	51%	%27	28%	%09
НВЅ	Excellent (9%), Poor (23%)	Excellent (13%), Poor (17%)	Excellent (2%), Poor (58%)	Excellent (15%), Poor (10%)	Excellent (12%), Poor (17%)
		,	` ` `	,	

		Demographics	SS		
			Segment		
	Segment 1: Experienced		Segment 3:	Segment 4:	
	Urban Commuters	Segment 2: Car Riders	Transportation Dependents	Active & Varied	Segment 5: Autopilots
	(B) (153)	(C) (408)	(D) (297)	(E) (269)	(F) (509)
Jurisdiction					
Arlington County	37%cder	11%	14%	16% _F	10%
Fairfax County	25	42 _B	38 _B	$42_{\rm B}$	45 _B
Loudoun County	7	7	12 _B	10	o
Alexandria	20 _{CDF}	10	6	16 _{CDF}	10
Net: FC/Fx City	2	7	2	9	9
Falls Church	2	2	2	_	_
Fairfax City	ო	2	က	5	9
Prince William County	_	15 _{BE}	17 _{BE}	6 _B	16 _{BE}
Net: Manassas/Man. Park	2	2	4	2	ო
Manassas City	2	က	က	4	က
Manassas Park	-	~	_	-	~
ŀ					
Community I ype					
Type 1	41% _{CDEF}	%6	$15\%_{\mathrm{CF}}$	$23\%_{ ext{CDF}}$	10%
Type 2	28	75 _B	72_{B}	71 _B	75 _B
Type 3	τ-	16 _{BE}	13_{BE}	е _в	15_{BE}
Gender					
Male	41% _D	35% _D	21%	49% _{CDF}	40%p
Female	59	$65_{\rm E}$	79 _{BCEF}	51	³ 09
Age					
75 to 79	39% ^D	45% _D	28%	$55\%_{\mathrm{BCDF}}$	46% _D
80 to 84	37	36	32	31	37
85 or older	18	13	36 _{BCEF}	7	41
Don't know/Refused	c)	$2_{\rm E}$	4	က	က
Base-Total Sample					

Base=Total Sample
Note: Letters indicate statistical differences at the 95% confidence level n/a=Not applicable
REG,S4,D1,D5

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

	nt 1: Segme	Jurisdiction		
n= n= African-American can Indian/Alaskan				
n= city African-American can Indian/Alaskan	Seament 2:	Segment 3:	Segment 4:	Seament 5:
n= (; African-American can Indian/Alaskan	Car Riders	Dependents	Varied	Autopilots
zity African-American can Indian/Alaskan	(C) (408)	(D) (297)	(E) (269)	(F) (509)
African-American can Indian/Alaskan				
African-American can Indian/Alaskan	95% _D	88%	93% _D	93%
can Indian/Alaskan	7	6 ce	7	4
	,	_	٧	,
		_		_
Other 3	~	_	~	۲
Don't know/Refused 3	က	4	က	7
Education				
Less than high school 1%	2%	7% _{BCF}	4%	4%
High school degree	15	30 _{BCEF}	13	19 _E
Vocational/Technical 3	5	2	4	ო
Some college 14	27_{BE}	26 _{BE}	19	26_{BE}
Net: College degree 61 _{CDF}	49 _D	30	59_{CDF}	48 _D
4-year college degree 25 _D	21 _D	12	32_{CDF}	22_{D}
Post graduate studies 36 _{DF}	28 _D	18	28 _D	26_{D}
Refused 3	7	က	~	_
Income				
Less than \$30K	14%	28% _{BCEF}	12%	15%
	15	18	16	$21_{\rm c}$
	$15_{\rm D}$	6	15 _D	17_D
\$75K or more 20 _D	$20_{\rm D}$	6	$20_{\rm D}$	$17_{\rm D}$
Don't know 4	9	13 _{BCEF}	က	က
Refused 24	$30_{ m D}$	24	34_{BDF}	27
Mean 55,000 _D	$58,600_{\scriptscriptstyle m D}$	40,700	$59,700_{\scriptscriptstyle m D}$	$55,100_{\scriptscriptstyle D}$
Median 49,500	55,100	34,600	26,000	49,200
>10 Years in Home 62%	71%	64%	%69	80% _{BCDE}

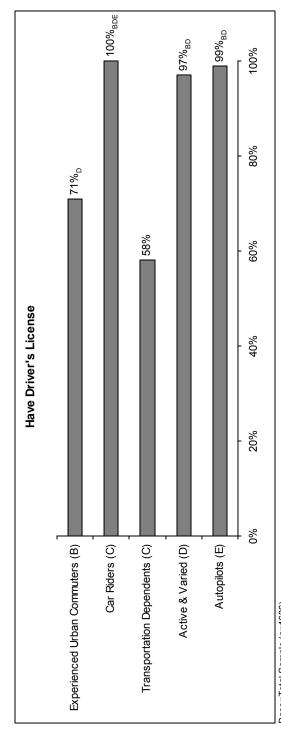
Segmentation (continued)

Segment 1:	Segment 2: Car Riders (C) (408) 91%F 100BDE 27 DF 9F 15 DF 3 3 3 3 3 3 5 5 8 68%B	Segment 3: Segment 3: Transportation Dependents (D) (297) 97%BCEF 8 17 8 17 2 4 4 11	Segment 4:	Segment 5:
Segment 1: Experienced Urban Commuters (B) (153) 86% 54p 75cpr 67cpr 44cpr 75cpr 44cpr 75cpr 44cpr 75cpr 42cpr 62cpr 62cpr 62cpr	Segment 2: Car Riders (C) (408) 91%F 100 BDE 27 DF 9F 15 DF 3 3 3 3 3 3 3 3 68%B	Segment 3: Transportation Dependents (D) (D) (297) 97%BOEF 8 17 8 11 2 2 4 4 1 3	Segment 4: Active & Varied (E) (269) 99 _{BCDF} 13 _F 13 _F 4 _F 6 _{CDF} 2	Segment 5: Autopilots (F) (F) (509) 80% 100BDE 16 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Duban Commuters (B) (153) 86% 54p 75cpr 67cper 44cper 26cper 18cper 4 9cpe 27% 24F 25cp 9per 7	Segment 2: Car Riders (C) (C) (408) 91%F 100BDE 27DF 9F 15DF 3 5 2 3	Transportation Dependents (D) (297) (297) 97% _{BCEF} 8 17 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Active & Varied (E) (269) (269) 99 80 80 99 80 90 90 90 90 90 90 90 90 90 90 90 90 90	Segment 5: Autopilots (F) (509) 80% 100вре 16 5 4 2 2 1 1
(B) (153) 86% 540 75cpf 67coef 44coef 18coef 4 9coef 27% 24F 25co	(C) (408) 91%F 100 _{BDE} 27 _{DF} 9 _F 15 _{DF} 3 3 3 5 68%B	(D) (297) 97% _{BCF} 8 8 1 1 2 2 4 _F 3	(E) (269) 90%F 95 _{BD} 13F 13F 19DF 5F 4F 6 _{CDF}	(F) (509) 80% 100 _{BDE} 16 5 2 2
86% 54b 75cpF 67cpeF 44cpeF 26cpeF 18cpeF 4 9cpe 25cp 9cpeF		97% 8 17 17 1 4 4 5 3	90%F 95gp 99gcpF 13F 19pF 5F 4F 6cpF	80% 100 _{6DE} 16 5 5 1
540 75cpr 67cper 44cper 26cper 18cper 4 9cpe 27% 24r 25cp 9cper		8 t	95 _{BD} 99 _{BCDF} 13 _F 19 _{DF} 5 _F 6 _{CDF}	100 _{BDE} 16 2 1 2 1
75°0F 67°00F 44°00E 18°00E 4 9°00E 27% 24° 25°0		o C α τ α 4 τ ω	99 _{BCDF} 13 _F 19 _{DF} 5 _F 4 _F 6 _{CDF}	00000 9000 90000 9
67 coef 44 coef 26 coef 18 coef 4 9 coef 27 % 24 c 25 co		: ∞ ← 01 ♣ ← w	13 _F 19 _{DF} 5 _F 4 _F 6 _{CDF}	. ro 4 0 - 0 ·
4400EF 260DEF 180DEF 4 90DE 27% 250D		← 0 4 ← w	19 _{DF} 5 _F 4 _F 6 _{CDF}	40 - 0 -
26cder 18cder 4 9cde 27% 24r 25cd 90er		0 4 - 6	5. 4. 2. 2.	0 - 0 -
18 _{ODEF} 4 9 9 27% 24 _F 25 _{OD} 9 9 9		4 t w	4 _F 6 _{CDF}	- 2 -
4 9 _{CDE} 27% 24 _F 25 _{CD} 9 _{DEF}		← ო	6 _{CDF}	7 .
9 _{CDE} 27% 24 _F 25 _{CD}	3 68% _B	ო	7	ı
27% 24 _F 25 _{CD} 9 _{DEF}	68% _B			
27% 24F 25cp 9DEF	68% _B			
24 _F 25 _{CD} 9 _{DEF}	C	,	58% _B	89% _{BCE}
25 _{CD} 9 _{DEF}	30c	94 _{BCEF}	15	10
9 DEF	_	4	26 cD	1
1	1	₹	<u>~</u>	V
	₹		<u>^</u>	<u>^</u>
	₹	~	٧	₹
	1	1	1	₹
	₹	₹	٧	,
	٧	<u>^</u>	<u>^</u>	₹
Primary Means of Transportation				
	75% _B	,	79% _B	91% _{BCE}
20 _{CEF}	12 _{EF}	82 _{BCEF}	2	က
	₹	ı	1	ı
	1	₹	10 _D	ı
Other 6 _F	•	,	,	V
	7 _{EF}	4	2	က
Unknown 3	2	13 _{BCEF}	4	က

Base=Total Sample
Multiple Responses Accepted; Top Mentions
Note: Letters indicate statistical differences at the 95% confidence level
Q2,Q3

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500





Base=Total Sample (n=1636)
Note: Letters indicate statistical differences at the 95% confidence level Q6

Segmentation (continued)

	Types	Types of Help Needed	pepe		
			Jurisdiction		
	Segment 1: Experienced		Segment 3:	Segment 4:	
	Urban	Segment 2: Car Riders	Transportation Dependents	Active & Varied	Segment 5: Autopilots
=u	(B) (153)	(C) (408)	(D) (297)	(E) (269)	(F) (509)
Net: Any¹	39%cef	25% _{EF}	72% _{BCEF}	12%	19% _E
Cane, crutch or walker	27 _{EF}	20 _E	58 _{BCEF}	თ	16 _E
Person to travel with	15 _{CEF}	7 _E	49 _{BCEF}	က	9
Net: Wheelchair ¹	8⊞	6 _{EF}	28 _{BCEF}	-	2
Non-electric wheelchair	7₽	3 _{EF}	23 _{BCEF}	-	-
Electric wheelchair/ scooter	ю	2	11 _{BCF}	1	-
Person to help get in/out of vehicles	8	4 _F	32 _{BCEF}	7	-
Person to help get in/out of home	2	2	23 _{BCEF}	_	1

Base=Total Sample
Multiple Responses Accepted
Note: Letters indicate statistical differences at the 95% confidence level
1Net is the total proportion of respondents who reported any or all subcategories within that net; may include multiple responses
D7

Segmentation (continued)

	Potential	Potential Problems with Driving	th Driving		
			Segments		
	Segment 1: Experienced		Segment 3:	Segment 4:	
	Urban Commuters	Segment 2: Car Riders	Transportation Dependents	Active & Varied	Segment 5: Autopilots
Inconsiderate/Addressive	(B)	(O)	(D)	(E)	(F)
drivers	(146)	(398)	(282)	(264)	(200)
Net: Problem	9%69	,62%	64%	, 65%	.29%
Large problem	40 _{CEF}	26%	43 _{CEF}	28	23
Small problem	29	$36_{\rm D}$	21	38 _D	36 _D
	Ć	300	(17)	Ć	(007)
Driving at night	(142)	(384)	(271)	(253)	(488)
Net: Problem	%AC	93%	/ I %BCEF	%I.G	%1.6
Large problem	32 _{CEF}	21	54 _{BCEF}	17	19
Small problem	27 _D	32_{D}	18	$34_{ m D}$	32 _D
		į	;	:	
Traffic congestion	(145)	(403)	(288)	(564)	(203)
Net: Problem	55% _{CF}	43%	66% _{BCEF}	49%	44%
Large problem	30 _{CEF}	18	45 _{BCEF}	17	17
Small problem	25	25	21	$31_{\rm D}$	27
:					
Cost of operating and naintaining a car n=	(146)	(392)	(272)	(566)	(499)
	34%	32%	40% _{CF}	36%	28%
Large problem	14	10	23 _{BCEF}	10	o
Small problem	21	22	17	26 _{DF}	19
Fooling confident					
driving	(146)	(406)	(265)	(266)	(206)
Net: Problem	35% _{CEF}	14%	49%BCEF	14%	10%
Large problem	17 _{CEF}	2	36 _{BCEF}	5_{F}	2
Small problem	18 _{EF}	12	13	6	80
	Ĉ.	í	(C)	Ç	Ć
Parking n=	(143)	(405)	(273)	(264)	(508)
ואמן: דוסטומו	3 I 70CEF	0/01	S470CEF	0/01	0/4-
Large problem	17 _{CEF}	2	$20_{ m CEF}$	4	4
Small problem	4	13	4	12	o

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

	Ро	tential Probl	ems with Dr	Potential Problems with Driving (continued)	()	
				Segments		
		Segment 1:				
		Experienced		Segment 3:	Segment 4:	
		Urban	Segment 2:	Transportation	Active &	Segment 5:
		Commuters	Car Riders	Dependents	Varied	Autopilots
		(B)	(C)	(D)	(E)	(F)
See signals, signs and						
lane markings	Ī	(146)	(407)	(284)	(268)	(204)
Net: Problem		28% _{CEF}	12%	34% _{CEF}	16%⊦	10%
Large problem		14 _{CEF}	2	20 _{CEF}	4	က
Small problem		41	10	14⊧	12	∞
Worried about						
	Ī	(151)	(406)	(286)	(267)	(208)
Net: Problem		21% _F	18%⊧	26% _{CEF}	13%	10%
Large problem		8 _{CF}	က	13 _{CEF}	က	က
Small problem		13	15 _F	13₅	10	7

Base=Those Answering
Note: Don't know not included
Note: Letters indicate statistical differences at the 95% confidence level
Q10

Segmentation (continued)

		Potential Problems with Walking	blems with	Nalking		
		Ī		Jurisdiction		
		Segment 1: Experienced	.6 450	Segment 3:	Segment 4:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		Commuters	Car Riders	Dependents	Active & Varied	Autopilots
Everything is too far away	II	(B) (138)	(C) (373)	(D)	(E)	(F) (480)
Net: Problem		43% _E	53%BE	70% _{BCEF}	31%	55% _{BF}
Large problem		$25_{\rm E}$	32 _E	54 _{BCEF}	13	37 _{BE}
Small problem		17	21	17	17	18
Carrying things on return trip	٦	(137)	(365)	(203)	(263)	(475)
Net: Problem		46%	47% _E	67% _{BCEF}	36%	49%E
Large problem		18	21 _E	45 _{BCEF}	12	23 _E
Small problem		28	56	21	24	56
No sidewalks/sidewalks in						
poor condition	Ī	(138)	(375)	(209)	(262)	(488)
Net: Problem		46%	40%	61% _{BCEF}	40%	42%
Large problem		28 _E	21	45 _{BCEF}	16	25 _E
Small problem		18	19	15	23 _{DF}	17
Too physically demanding	٦	(138)	(377)	(204)	(262)	(490)
Net: Problem		34%	40%F	71%RCFF	21%	46% _{RF}
Large problem		10 _E	17 _{BE}	47 _{BCEF}	4	21 _{BE}
Small problem		24	23	24	17	25 _E
Dlaces to rest	Į	(130)	(362)	(206)	(263)	(469)
Net: Problem		40%	36%	62%	28%	43%6
Large problem		12 _E	14 _F	36 _{BCEF}	ည်	18-
Small problem		27	22	26	22	25
Crossing intersections	=	(138)	(374)	(202)	(263)	(489)
Net: Problem		44% _{CEF}	33% _E	55% _{BCEF}	24%	78%
Large problem		21 _{CEF}	11	40 _{BCEF}	o	1
Small problem		23	22_{DE}	15	16	18
Personal safety	=	(138)	(373)	(203)	(258)	(484)
Net: Problem		41% _{CEF}	31%	51% _{CEF}	27%	31%
Large problem		17 _{EF}	12	29 _{BCEF}	80	6
Small problem		25	20	22	19	22

Base=Those Answering Who Do Not Use a Wheelchair Note: Don't know not included Note: Letters indicate statistical differences at the 95% confidence level Q11

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Segmentation (continued)

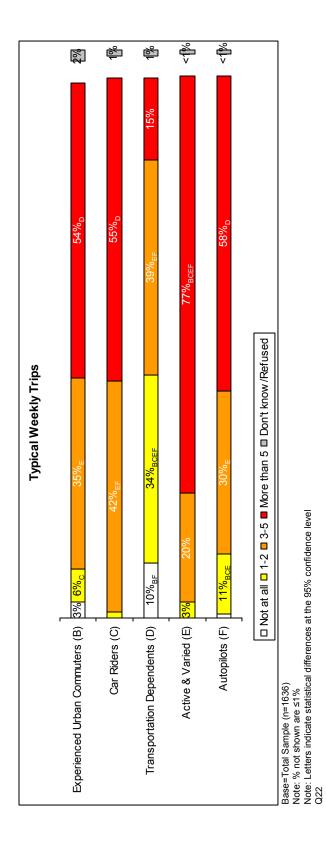
Pote	ential Proble	Potential Problems with Public Transportation	ic Transportat	tion	
			Segments		
	Segment 1: Experienced Urban Commuters	Segment 2: Car Riders	Segment 3: Transportation Dependents	Segment 4: Active & Varied	Segment 5: Autopilots
	(B)	(C)	(D)	(E)	(F)
you need to go	(144)	(340)	(240)	(236)	(437)
Net: Problem	44%	.22%	67% _{BCEF}	53%	55% _B
Large problem	20	34_{BE}	43 _{BCEF}	25	35_{BE}
Small problem	24	18	24	29 _{CF}	20
Distance to bus stops or					
rail stations	(146)	(369)	(259)	(253)	(461)
Net: Problem	31%	20%BE	69% _{BCEF}	$42\%_{ m B}$	57% _{BCE}
Large problem	18	29_{BE}	49 _{BCEF}	17	34 _{BE}
Small problem	13	21 _B	20	24 _B	22 _B
Time it takes		(264)	(220)	(188)	(417)
Net: Problem	32%	55%B	60% _{BEF}	47%	51% _B
Large problem	20	24 _E	32 _{CEF}	15	24€
Small problem	17	31 _B	28	31 _B	28 _B
Transferring n=	(138)	(336)	(245)	(225)	(429)
Net: Problem	41%	45%	67% _{BCEF}	40%	46%
Large problem	18	18 _E	50 _{BCEF}	12	21 _E
Small problem	23	27_D	17	29 _D	25 _D
Frequency n=	(139)	(314)	(231)	(223)	(393)
Net: Problem	36%	45%	55% _{BCEF}	40%	43%
Large problem	4	17	29 _{BCEF}	12	16
Small problem	24	27	26	28	27
Getting a seat	(144)	(338)	(250)	(235)	(415)
Net: Problem	32%	$43\%_{BE}$	54% _{BCEF}	34%	43% _{BE}
Large problem	80	16 _{BE}	37 _{BCEF}	œ	19 _{BE}
Small problem	24	28 _D	18	26_{D}	24 _D

Base=Those Answering
Note: Don't know not included
Note: Letters indicate statistical differences at the 95% confidence level
Q15

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Potei	ntial	Problems wi	th Public Tra	Potential Problems with Public Transportation (continued)	continued)	
				Segments		
		Segment 1: Experienced Urban Commuters	Segment 2: Car Riders	Segment 3: Transportation Dependents	Segment 4: Active & Varied	Segment 5: Autopilots
Reliability Net: Problem	Ë	(139)	(335)	(231)	(228) 31% _B	(407)
Large problem		, 0	14 _{BE}	29 _{BCEF}	2	15 _{BE}
Small problem		13	19	26 _B	24 _B	23 _B
Getting information	۳	(145)	(364)	(258)	(244)	(448)
Net: Problem		33%	34%	45%BCEF	34%	32%
Large problem		12	1	22% _{BCEF}	1	10
Small problem		21	23	23	23	22
Operating hours	=	(142)	(323)	(230)	(236)	(410)
Net: Problem		28%	30%	43% _{BCEF}	27%	30%
Large problem		7	10	21 _{BCEF}	6	12 _B
Small problem		21	20	23	17	18
Cost	=	(146)	(349)	(246)	(236)	(426)
Net: Problem		16%	28% _B	41%BCEF	24%	28% _B
Large problem		က	7	17 _{BCEF}	9	96
Small problem		12	21 _B	24 _B	18	19 _B
Boarding	=	(147)	(383)	(272)	(262)	(491)
Net: Problem		24%	22% _E	57% _{BCEF}	16%	22% _E
Large problem		10 _E	9	36 _{BCEF}	4	8 _E
Small problem		14	16	21 _{BEF}	12	14
Riding with strangers	=	(148)	(382)	(276)	(257)	(479)
Net: Problem		20%	24% _E	37% _{BCEF}	18%	23%
Large problem		6	4	24 _{BCEF}	6	12
Small problem		11	11	13	6	11

Base=Those Answering
Note: Don't know not included
Note: Letters indicate statistical differences at the 95% confidence level
Q15



Segmentation (continued)

	Trans	Transportation Problems by Destination	oblems by D	estination		
				Segments		
		Segment 1: Experienced		Segment 3:	Segment 4:	
		Urban Commuters	Segment 2: Car Riders	Transportation Dependents	Active & Varied	Segment 5: Autopilots
Shopping for clothes/HH items Net: Have problems Often Sometimes	<u> </u>	(B) (141) 23%ce 9cer 13	(C) (394) 15% 11	(D) (244) 34% _{BCEF} 13 _{CEF} 20 _{CEF}	(E) (265) 11% 3	(F) (490) 16% _E 3
Entertainment/Other outings Net: Have problems Often Sometimes	П	(141) 28%cer 12cer 16e	(382) 17% _E 5 _E 12	(240) 17%cer 12cer 14	(258) 10% 2 9	(480) 14% 3 11
Visit family Net: Have problems Often Sometimes	П	(131) 21% _E 8	(362) 15% 4 10	(238) 21%ce 11cer 11	(252) 12% 5 7	(468) 17% 4 13 _E
<u>Doctor/Health care provider</u> Net: Have problems Often Sometimes	Ë	(151) 23%cef 7 16cef	(401) 11% 3 8	(283) 28%cer 11cer 17cer	(267) 10% 2 8	(504) 12% 3
Visit friends Net: Have problems Often Sometimes	П	(141) 23%cer 11cer 13	(389) 12% 3 9	(237) 25%cer 12cer 14e	(261) 9% 2 7	(490) 12% 2 10
Just to get out Net: Have problems Often Sometimes	Ë	(149) 17% _E 7 _E 10 _E	(385) 10% _E 3 _E 7	(247) 29% _{BCEF} 15 _{BCEF} 14 _{CEF}	(264) 5% 1 4	(490) 12%e 3 _E 9 _E
Grocery/Drug store Net: Have problems Often Sometimes	Ë	(150) 17%cer 7ce 9	(401) 8% 2 6	(254) 28% _{80EF} 13 _{CEF} 15 _{CEF}	(267) 6% 1 5	(504) 10% 4 _E 6

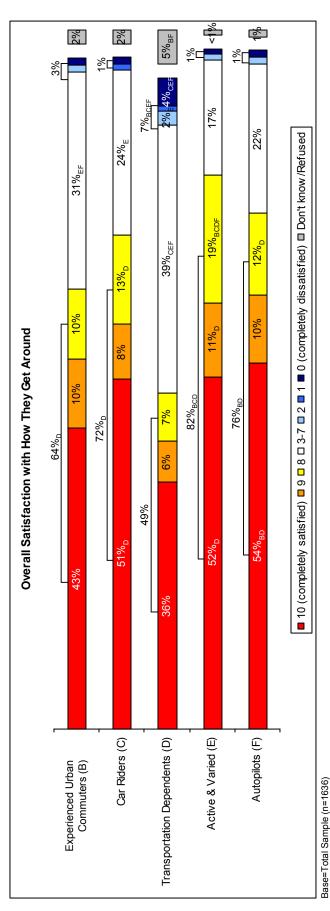
Base=Those Answering Note: Don't know not included Note: Letters indicate statistical differences at the 95% confidence level Q23

WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

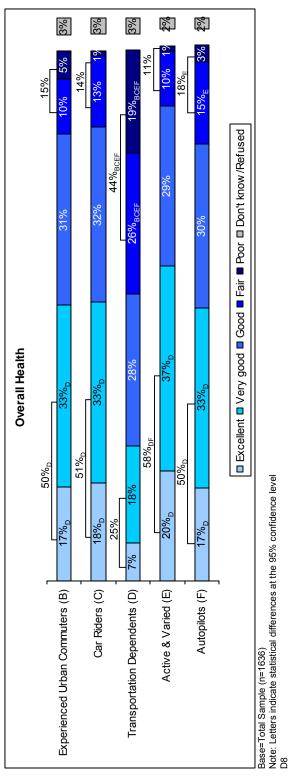
Segment 5: Autopilots (F) (404) 10% 3 (480) 8% 2 5 Segment 4: Active & Varied (E) (235) 8% 2 6 (257) 4% 2 3 Transportation Problems by Destination (continued) Segment 3:
Transportation
Dependents Segments (240) 21%_{BCEF} 12_{BCEF} 9_{CEF} (D) (158) 25%_{BCEF} 13_{BCEF} 12_E Segment 2: Car Riders (380) 7%_E 3 (C) (317) 11% 3 Segment 1: Experienced Urban Commuters (141) 11%_E (B) (120) 13% 6 6 П 밉 Volunteer activities
Net: Have problems
Often Places of worship
Net: Have problems
Often Sometimes Sometimes

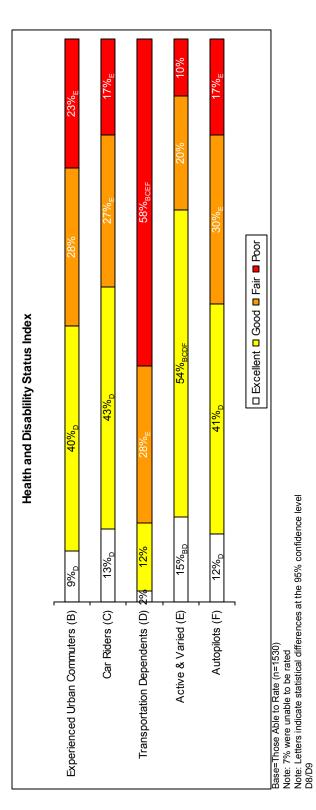
Segmentation (continued)

Base=Those Answering
Note: Don't know not included
Note: Letters indicate statistical differences at the 95% confidence level Q23



Base=Total Sample (n=1636) Note: % not shown are ≤1% Note: Letters indicate statistical differences at the 95% confidence level Q24





WB&A Market Research 2191 Defense Highway • Suite 401 • Crofton, MD 21114 • 410-721-0500

Appendix

WB&A Market Research Job #05-532A February 2005

Meeting the Transportation Needs of Northern Virginia's Seniors

QUOTAS (based on sample)				
Jurisdiction	Completed Interviews			
Arlington County	210			
Fairfax County	945			
Loudoun County	150			
City of Alexandria	150			
City of Falls Church	15			
City of Fairfax	30			
Prince William	100			
Manassas City	20			
Manassas Park	10			
Total	1,630			

INTRODUCTION AND SCREENER

ASK	(F)	/FR	YO	NF:
AUI			-	мь.

S1. Hello, my name is ________, from WB&A, a local research firm. We are calling people today/this evening to learn more about the transportation needs of seniors in your area. This is part of a very important study. Is there anyone in your household who is 75 years of age or older who I can speak to? (IF NECESSARY, READ: "We are conducting this research study on behalf of NVTC, a regional transportation agency that is working with Area Agencies on Aging. NVTC is the Northern Virginia Transportation Commission. All responses are kept strictly confidential. Your responses will be included with those from other people and reported in aggregate. You will never be identified as a respondent." IF SPEAKING TO A CAREGIVER/CARE ATTENDANT, READ: "When answering the questions in this survey, please answer them on behalf of the person in your household who is 75 years of age or older." CLARIFY 'NO' RESPONSES.)

01 Yes → SKIP TO S3
02 No → THANK & TERM

02 No
THANK & TERMINATE

O3 Person cannot speak due to physical/
CONTINUE

O3 Person cannot speak due to physical/ **CONTINUE** other condition

04 Person unavailable → SCHEDULE CALLBACK

IF PERSON CANNOT SPEAK [S1 (03)], ASK:

S2. May I speak to their personal caregiver, care attendant or someone who can answer questions regarding that person's transportation needs?

01 Yes → CONTINUE, REINTRODUCE

02 No → TERMINATE, CODE AS 'REFUSAL'

03 Person unavailable → RECORD PERSON'S NAME, SCHEDULE CALLBACK

ASK EVERYONE:

S3. In which county or jurisdiction do you live?

01	Arlington County	
02	Fairfax County	
03	Loudoun County	
04	City of Alexandria	
05	City of Falls Church	→ CONTINUE
06	City of Fairfax	
07	Prince William	
08	City of Manassas	
09	City of Manassas Park	
95	Other +	THANK & TERMINATE
98	Refused -	THANK & TERMINATE

- S4. Type of community (RECORD FROM SAMPLE, DO NOT ASK):
 - 01 Walkable/Mixed-use
 - O2 Primarily suburban
 - O3 Primarily rural

→ QUOTAS TO BE DETERMINED

MAIN QUESTIONNAIRE

Q1. DELETED

Q2. When was the last time you **[INSERT MODE]**? Would you say it was within the past month, within the past year, within the past two years, more than two years ago, or have you never used this service? **(READ MODES.)**

	MODES	Past month	Past year	Past 2 years	>2 years	Never	Rfsd	DK
a.	Drove a car or other vehicle	01	02	03	04	96	98	99
b.	Rode in car or other vehicle driven by someone else	01	02	03	04	96	98	99
c.	Used Metrorail or VRE (Virginia Railway Express)	01	02	03	04	96	98	99
d.	Used public bus service	01	02	03	04	96	98	99
e.	Walked to get to a destination	01	02	03	04	96	98	99
f.	Used transportation provided to people with disabilities who cannot use or get to public transportation	01	02	03	04	96	98	99
g.	Used a senior or community van, such as dial-a-ride, not transportation for persons with disabilities	01	02	03	04	96	98	99
h.	Took a taxi	01	02	03	04	96	98	99
i.	Rode a bike	01	02	03	04	96	98	99
k.	Insert other means	01	02	03	04	96	98	99

FOR EACH MODE USED IN PAST MONTH [Q2 (01)], ASK:

Q3. During the past seven days, how many trips did you take using each of the following means of transportation? (READ LIST. USE '98' FOR REFUSED AND '99' FOR DON'T KNOW.)

		# of Trips
a.	A car or other vehicle you drove yourself	
b.	Rode in car or other vehicle driven by someone else	
c.	Metrorail or VRE (Virginia Railway Express)	
d.	Public bus service	
e.	Walking to get to a destination	
f.	Transportation provided to people with disabilities who cannot use	
	or get to public transportation	
g.	A senior or community van, such as dial-a-ride, not transportation	
	for persons with disabilities	
h.	A taxi	
i.	A bike	
k.	Insert other means	
		TOTAL

IF DRIVEN BY SOMEONE ELSE IN PAST SEVEN DAYS [Q3B (01-95)], ASK:

- Q4. When you took a trip in the past seven days in a car or other vehicle driven by someone else, what was that person's relationship to you? Were they your...? (READ LIST. ACCEPT ALL THAT APPLY.)
 - O1 Spouse or significant other,
 - 02 Child,
 - 03 Another relative,
 - 04 Friend,
 - 05 Neighbor,
 - 06 A volunteer,
 - 95 Or someone else (specify)
 - 98 **DO NOT READ:** Refused

CONTINUE

SKIP TO Q5D

IF MORE THAN ONE ANSWER GIVEN IN Q4, ASK:

- Q5. Which of these people drove you <u>most often</u> in the past seven days? (**IF A TIE, PROBE**: "Which one of these people typically drives you most often?" **LIST ANSWERS GIVEN IN Q4. READ LIST IF NECESSARY. ACCEPT ONE RESPONSE ONLY.**)
 - O1 Spouse or partner,
 - 02 Child,
 - 03 Another relative,
 - 04 Friend,
 - 05 Neighbor,
 - 06 A volunteer,
 - 95 Other responses
 - 98 **DO NOT READ:** Refused
 - 99 **DO NOT READ:** Don't know

CONTINUE

→ SKIP TO Q5D

THOSE WHO RECEIVED RIDE MOST OFTEN FROM FAMILY MEMBER, FRIEND OR NEIGHBOR [{Q4 (01-05) AND NOT Q5 (01-99)} OR Q5 (01-05)], ASK:

- Q5A. What is the age of the person who drove you most often in the past seven days? **(READ LIST. STOP WHEN RESPONDENT SAYS 'YES.')**
 - 01 16 to 34 years old,
 - 02 35 to 54 years old,
 - 03 55 to 64 years old,
 - 04 65 to 74 years old, or
 - 05 75 years or older
 - 98 **DO NOT READ:** Refused
 - 99 **DO NOT READ:** Don't know
- Q5B. Is this person male or female?
 - 01 Male
 - 02 Female
 - 98 Refused

THOSE WHO RECEIVED RIDE MOST OFTEN FROM FAMILY MEMBER OR FRIEND [[{NOT Q4 (05-98) AND NOT Q5 (98-99)} OR Q5 (01-04)], ASK:

Q5C. Does this person live with you?

01 Yes

02 No

98 Refused

ASK EVERYONE:

- Q5D. At any point before you were 65 years old were you a regular user of public transportation?
 - 01 Yes
 - 02 No
 - 98 Refused
 - 99 Don't know
- Q6. Do you currently have a valid driver's license?
 - 01
 Yes
 →
 CONTINUE

 02
 No
 →
 SKIP TO Q8

 98
 Refused
 →
 SKIP TO Q10

THOSE WHO CURRENTLY HAVE A DRIVER'S LICENSE BUT HAVE NOT DRIVEN IN THE PAST SEVEN DAYS [{Q2A (02-96) OR Q3A (00)} AND Q6 (01)], ASK:

Q7. Why did you choose not to drive yourself in the past seven days? (PROBE & CLARIFY.)

THOSE WHO DO NOT CURRENTLY HAVE A DRIVER'S LICENSE [Q6 (02)], ASK:

Q8. For what reason do you currently not have a driver's license? (PROBE & CLARIFY.)

Q9. DELETED

ASK EVERYONE:

D7. Do you use or need any of the following? **(READ LIST.)**

					Don't
		Yes	No	Refused	know
a.	A cane, crutch or walker	01	02	98	99
b.	An electric wheelchair or scooter	01	02	98	99
c.	A non-electric wheelchair	01	02	98	99
d.	A person to travel with you	01	02	98	99
e.	A person to help you get in and out of your home	01	02	98	99
f.	A person to help you get in and out of vehicles	01	02	98	99

Q10. I'm going to read to you a list of some difficulties people have when driving. Whether or not you are currently driving, please tell me whether you would consider each of these a large problem, a small problem or no problem at all for you? (READ LIST. RANDOMIZE)

	Large problem	Small problem	No problem	Refused	Don't know
a. The cost of operating and maintaining a car	03	02	01	98	99
b. Dealing with traffic congestion	03	02	01	98	99
 c. Being worried about getting lost 	03	02	01	98	99
d. Inconsiderate or aggressive	03	02	01	98	99

	drivers					
e.	Being able to see signals, signs and lane markings	03	02	01	98	99
f.	Parking	03	02	01	98	99
g.	Feeling confident about driving	03	02	01	98	99
h.	Driving at night	03	02	01	98	99

THOSE WHO DO NOT USE A WHEELCHAIR [D7B (02-99) AND D7C (02-99)], ASK:

Q11. Thinking about walking to get to a destination, please tell me whether you would consider each of these a large problem, a small problem or no problem at all for you? **(READ LIST. RANDOMIZE.)**

		Large problem	Small problem	No problem	Refused	Don't know
1	Valking is too physically emanding	03	02	01	98	99
1	Carrying things on your eturn trip	03	02	01	98	99
c. H	Having places to rest	03	02	01	98	99
	No sidewalks or sidewalks re in poor condition	03	02	01	98	99
e. C	Crossing intersections	03	02	01	98	99
f. E	Everything is too far away	03	02	01	98	99
g. P	ersonal safety	03	02	01	98	99

ASK EVERYONE:

Q12. What do you think are the greatest transportation challenges for seniors in this area? **(PROBE & CLARIFY.)**

THOSE WHO HAVE USED A TAXI IN THE PAST MONTH [Q2H (01)], ASK:

Q13. Thinking about taking a taxi, please tell me whether you would consider each of these a large problem, a small problem or no problem at all for you? (READ LIST. RANDOMIZE.)

		Large problem	Small problem	No problem	Refused	Don't know
a.	Cost	03	02	01	98	99
b.	Taxis being late	03	02	01	98	99
c.	Being able to communicate with drivers	03	02	01	98	99
d.	Personal safety	03	02	01	98	99
e.	Taxis not showing up	03	02	01	98	99
f.	Difficulty scheduling a taxi when you wish to travel	03	02	01	98	99

THOSE WHO HAVE A PROBLEM WITH THE COST OF TAXIS [Q13A (02-03)], ASK:

Q14. What (do you/would you have to) typically pay for a round-trip by taxi? (DO NOT ACCEPT RANGES. USE 99.98 FOR REFUSED AND 99.99 FOR DON'T KNOW. READ FIRST STATEMENT IF USED TAXI IN PAST YEAR [Q2H (01-02)], OTHERWISE READ SECOND STATEMENT.)

\$		

ASK EVERYONE. READ FIRST STATEMENT IF THEY HAVE USED PUBLIC TRANSPORTATION [Q2C,D,F OR G (01)], OTHERWISE READ SECOND STATEMENT:

Q15. (Thinking about public transportation, please tell me whether you would consider each of these a large problem, a small problem or no problem at all for you?/Even though you do not currently use public transportation, if you were to use public transportation would you consider each of these a large problem, a small problem or no problem at all for you?) (READ LIST. RANDOMIZE.)

		Large problem	Small problem	No problem	Refused	Don't know
a.	Distance to bus stops or rail stations	03	02	01	98	99
b.	Boarding a vehicle	03	02	01	98	99
c.	Being able to get a seat	03	02	01	98	99
d.	Getting information about fares, routes and schedules	03	02	01	98	99
e.	Riding with strangers	03	02	01	98	99
f.	The time it takes to use public transportation	03	02	01	98	99
g.	Cost	03	02	01	98	99
h.	Transferring between routes	03	02	01	98	99
i.	Public transportation going where you need to go	03	02	01	98	99
j.	Reliability	03	02	01	98	99
k.	Frequency of service	03	02	01	98	99
1.	Operating hours of public transportation	03	02	01	98	99

THOSE WHO HAVE A PROBLEM WITH THE COST OF PUBLIC TRANSPORTATION [Q15G (02-03)], ASK:

Q16. What (do you/would you have to) typically pay for a round-trip by public transportation? (DO NOT ACCEPT RANGES. USE 99.98 FOR REFUSED AND 99.99 FOR DON'T KNOW. READ FIRST STATEMENT IF USED PUBLIC TRANSPORTATION IN PAST YEAR [Q2C,D,F OR G (01-02)], OTHERWISE READ SECOND STATEMENT.)

\$		

Q17-Q20. DELETED

ASK EVERYONE:

- Q21. How many times did you go out <u>yesterday</u>? By going out, I mean leaving your house and yard, or apartment to go someplace else. **(READ LIST.)**
 - 01 None,
 - 02 Once,
 - 03 Twice, or
 - 04 Three or more times
 - 98 **DO NOT READ:** Refused
 - 99 **DO NOT READ:** Don't know

- Q22. How often would you say you go out in a typical week? (READ LIST.)
 - 01 Not at all,
 - One or two times,
 - Three to five times, or
 - 04 More than five times
 - 98 **DO NOT READ:** Refused
 - 99 **DO NOT READ:** Don't know

Q23. Next I am going to ask about some different places you might go. For every destination, please tell me how often transportation problems interfere with your ability to go to each kind of place. If you don't ever go to a place mentioned, just tell me you don't go there. Would you say that transportation problems often, sometimes or never interfere with your going...? (READ LIST. RANDOMIZE. *ALWAYS ASK ITEM I LAST.)

		Often	Sometimes	Never	Don't go there	Refused	Don't know
a.	To your doctor or other health care provider	03	02	01	96	98	99
b.	To visit your family	03	02	01	96	98	99
c.	To visit friends	03	02	01	96	98	99
d.	To your place of worship	03	02	01	96	98	99
e.	To the grocery or drug store	03	02	01	96	98	99
f.	Shopping for clothes or household items	03	02	01	96	98	99
g.	To entertainment or other outings, such as going out to eat or to the movies	03	02	01	96	98	99
h.	To volunteer activities	03	02	01	96	98	99
i.	Just to get out and about*	03	02	01	96	98	99

Q24. Overall, how satisfied are you with how you get around when you want or need to go someplace? Using a scale from 0 to 10, where 0 means you are completely dissatisfied, 5 means you are neither satisfied or dissatisfied, and 10 means completely satisfied, how satisfied are you with how you get around?

1	nplet isfied	-							mple satis	-	Rfsd	DK
10	09	08	07	06	05	04	03	02	01	00	98	99

Q25. DELETED

Q26. Do you currently live within **one-quarter mile** (about three city blocks) of...? **(READ LIST.)**

					Don't
		Yes	No	Refused	know
a.	A food store	01	02	98	99
b.	A drug store	01	02	98	99
c.	Your doctor's office or other health care provider	01	02	98	99
d.	A public bus or rail stop	01	02	98	99

Q27. Including yourself, how many people in total live in your household? (ENTER AS 2-DIGIT NUMBER. USE '98' FOR REFUSED AND '99' FOR DON'T KNOW.)

peo	nla
hen	hie

Q28. DELETED

THOSE WITH SOMEONE ELSE LIVING IN THEIR HOUSEHOLD [Q27 (02-95)], ASK:

Q29. Other than yourself, how many of the people living in your household regularly drive a car or other vehicle? (ANSWER SHOULD BE <Q27. ENTER 2-DIGIT NUMBER. USE '00' FOR NO ONE ELSE, '98' FOR REFUSED AND '99' FOR DON'T KNOW.)

ASK E	EVERY	
Q30.		of the following best describes your current living status? Do you? (READ LIST. PT ONE RESPONSE ONLY.)
	01 02 03 04	Own your own home or condominium; Rent a home or apartment; Live with another family member; Live in an assisted living facility, group home or other
	95 98	senior care facility; Or something else? (specify) DO NOT READ: Refused
	99	DO NOT READ: Refused DO NOT READ: Don't know
Q31.		ong have you lived in your current residence? (ENTER 3-DIGIT NUMBER. USE '000' LESS THAN ONE YEAR, '998' FOR REFUSED AND '999' FOR DON'T KNOW.)
		_ years
		DEMOGRAPHICS
	confide	
D1.	Gender	(ASK IF NECESSARY):
	0.1	M.1.
	01 02	Male Female
	02	remaie
D2.	Are yo	u of Hispanic or Latino origin?
	01	Yes
	02	No
	98	Refused
D3.	Do you	consider yourself to be? (READ LIST. ACCEPT ONE RESPONSE ONLY.)
	01	White,
	02	Black/African-American,
	03	American Indian or Alaskan Native,
	04	Asian,
	05	Native Hawaiian or Other Pacific Islander,
	95	Or of some other racial background
	98	DO NOT READ: Refused
	99	DO NOT READ: Don't know
D4.	What is	s the highest level of education you have completed? (READ LIST.)
	01	Less than a high school diploma,
	02	High school graduate,
	03	Technical or vocational school,
	04	Some college or 2-year degree,

people

- 05 4-year college degree, or
- O6 Post graduate studies
- 98 **DO NOT READ:** Refused

D5. In what year were you born? (ENTER 4-DIGIT NUMBER. USE '9998' FOR REFUSED AND '9999' FOR DON'T KNOW.)

D6. Please stop me when I reach <u>your</u> total personal annual income? Please include income received from Social Security, pensions, annuities and investments when thinking of your personal annual income. Is it...? **(READ LIST.)**

- 01 Less than \$30,000,
- 02 \$30,000 to less than \$50,000,
- 03 \$50,000 to less than \$75,000, or
- 04 \$75,000 or more
- 98 **DO NOT READ:** Refused
- 99 **DO NOT READ:** Don't know

D7. MOVED TO BEFORE Q10

- D8. How would you rate your overall health now? (**READ LIST.**)
 - 05 Excellent,
 - 04 Very good,
 - 03 Good,
 - Fair, or
 - 01 Poor
 - 98 **DO NOT READ:** Refused
 - 99 **DO NOT READ:** Don't know
- D9. Do you have difficulty with any of the following? **(READ LIST. IF D7A-C (01), DO NOT ASK D9D OR E. RANDOMIZE.)**

		Yes	No	Refused	Don't know
a.	Seeing the words and letters in an ordinary newspaper even when wearing glasses	01	02	98	99
b.	Hearing what is said in a normal conversation even when using a hearing aid if you use one	01	02	98	99
c.	Lifting or carrying something as heavy as 10-pounds, like a bag full of groceries	01	02	98	99
d.	Climbing a flight of stairs without resting	01	02	98	99
e.	Walking one-quarter mile, or about three city blocks, without assistance	01	02	98	99

D10. What is your home zip code? (USE '99998' FOR REFUSED.)

D11.	Can w	re contact you in the future to get your opinion on other senior transportation issues?
	01 02	Yes No/Don't know
IF ZIP	CODE	IN D10 DOES NOT MATCH ZIP CODE IN SAMPLE, ASK:
D12.		is the name of the street you currently live on? (IF INCORRECT, RECORD NEW RMATION.)
	Street	:

READ TO EVERYONE:

Those are all the questions I have. Thank you very much for your cooperation. For quality control purposes, you may receive a follow up phone call from my supervisor to verify that I have completed this interview. Can I please get your name or initials so they know who to ask for if they call back?

RECORD NAME AND CONFIRM PHONE NUMBER FOR SUPERVISOR VERIFICATION.

Appendix 3 QUALITATIVE ANALYSIS

Summary of Focus Groups with Seniors and Brokers Focus Group

MEETING THE TRANSPORTATION NEEDS OF NORTHERN VIRGINIA SENIORS QUALITATIVE RESEARCH AMONG SENIORS

Final Report

Prepared for:



Prepared by:

Job #: 05-532B

Date: March 1, 2006

Table of Contents

	Page #
Background and Objectives	A3-3
Methodology	A3-4 – A3-7
Research Caveat/Limitations	A3-8
Detailed Findings	A3-9 – A3-32
Isolation & Personal Issues	A3-10 – A3-14
Ideal System	A3-15 – A3-20
Testing Services	A3-21 – A3-31
Information Sources and Other Issues	A3-32
Appendix	
Screening questionnaire Focus group discussion guide In-depth interview discussion guide. Handouts	A3-38 – A3-41 A3-42 – A3-49
Travel Diary	

Background and Objectives

According to the Transportation Equity Act of the 21st Century, the number of older Americans is expected to double over the next 25 years. Many of these elderly individuals will face mobility issues as time goes by creating a large demand on appropriate transportation options. The Northern Virginia Transportation Commission (NVTC) recognizes that, in the near future, public transportation must shift to meet the needs of this growing group of people. But, where is this shift headed and exactly what are the needs of seniors, specifically those 75 years and older? How mobile are they? How often do they use public transportation? If not often, why not? By 2025, more than 18% of Virginia's residents will be of retirement age. In seeking to be proactive regarding senior mobility, NVTC commissioned WB&A Market Research to conduct quantitative and qualitative research among seniors in Northern Virginia in order to impact planning and strategic policy development with the results of commissioned market research. The overall objectives of this research were as follows:

- Determine travel needs and differences among seniors 75+;
- Determine transportation services available and utilization rates;
- Determine attitudes towards public transportation options;
- Ascertain the factors that would make public transportation more convenient to seniors;
- Collect information on the connection between land use and senior travel patterns;
- Collect feedback about isolation issues facing this population in particular.

What follows is a summary of the results from the qualitative phase of this research.

Methodology

Focus Groups

A total of four focus groups were conducted among seniors living in the following Northern Virginia jurisdictions: the counties of Arlington, Fairfax and Loudoun, and the cities of Alexandria, Fairfax, and Falls Church. These focus groups were conducted on July 18, 20 and 21, 2005. The following table illustrates the schedule and make-up of each focus group:

Location	Participant Type	Date	Time	# of Participants
Alexandria, VA	Mix of Drivers and Non-Drivers	7/18	11:00 AM	10
Fairfax, VA	Primarily Non-Drivers	7/20	10:30 AM	8
Fairfax, VA	Primarily Drivers	7/20	12:30 PM	12
Fairfax VA	Mix of Drivers and Non-Drivers (from Loudoun County)	7/21	11:00 AM	11
			Total	41

All participants were recruited on the telephone by professional WB&A interviewers from WB&A's central telephone facility located in Crofton, Maryland. Respondents were recruited from a list of those who participated in the quantitative phase of this research and at that time said they would be interested in taking part in future research.

In order to qualify, participants had to meet the following criteria:

- Recall how many trips they had taken in the previous seven days,
- Do not work in market research, advertising, public relations or for a car rental company, airline or airport, and
- Have not attended another focus group in the past six months.

Because all participants had participated in the previous phase of research, it had already been determined that each was at least 75 years old. In addition, in order to ensure that the research was conducted among diverse and often underrepresented portions of the population, an emphasis was put on recruiting participants who had household incomes of less than \$30,000 per year and/or who were ethnic minorities. Preference was also given to those who reported using other forms of transportation besides driving oneself.

Respondents were mailed a travel diary approximately one week prior to the groups. They were asked to fill out this diary during that week, detailing the trips they had taken, and to bring the completed diary with them to the group. The primary purpose of the diary was to get the participants thinking about their personal transportation.

All groups were moderated by Steve Markenson, President of WB&A and a professional focus group moderator. All focus groups were held in focus group facilities that allowed the clients to view the proceedings. The discussions lasted approximately 2 hours each, and the participants were paid \$60 each as an incentive for participation. Because of the nature of this research, some respondents were unable to provide their own transportation to the groups. Respondents who were unable to find their own means of transportation were offered transportation, free of charge. This service was provided by the Loudoun County Department of Social Services, Alexandria DOT Paratransit Service and FASTRAN. If respondents were still unable or unwilling to attend, they were invited to participate in a different qualitative phase of this research – in-depth telephone interviews.

Methodology (continued)

In-Depth Interviews

Those who were invited to the focus groups but who were unable or unwilling to attend were then asked to participate in an in-depth telephone interview. WB&A conducted 23 in-depth telephone interviews among seniors age 75 and older, or with the caregivers of those who could not themselves participate (i.e., they had physical/cognitive limitations too great to allow them to take part in a telephone interview).

Interviewing was conducted from July 18 through July 23, 2005 by professional WB&A Market Research interviewers calling from WB&A's central telephone facility located in Crofton, Maryland. Interviews averaged about 30 minutes in length.

Prior to the interviews, participants were mailed four travel concepts (see Appendix) and asked to read them in preparation for the interview. In addition, participants who completed the interview were given \$25 as an incentive for participation.

Methodology (continued)

The table below illustrates focus group and in-depth telephone interview participants' characteristics.

	Profile of	Participants			
			Gro		
	Total	Arlington/ Alexandria	Fairfax Area	Loudoun County	In-Depths
n=	(64)	(10)	(20)	(11)	(23)
	(5.7)	(10)	()	(11)	()
Means of Transportation					
Driven by other	43	7	16	5	15
Drive car	31	7	13	7	4
Walk	22	6	6	3	7
Fixed route	9	4	2	2	1
Specialized transit	6	2	1	1	2
Community Type					
Type 1 (urban/town walkable, mixed-use)	21	7	5	4	5
Type 2 (suburban)	46	3	12	6	15
Type 3 (rural/exurban)	7	-	3	1	3
Valid Drivers License					
Yes	49	9	18	9	13
No	15	1	2	2	10
Times Out/Typical Week					
None	2	_	-	-	2
1 or 2	- 12	_	1	3	8
3 to 5	17	3	6	3	5
More than five	33	7	13	5	8
Overall Satisfaction w/ Getting Around					
Satisfied (8-10)	42	7	14	6	15
Neutral (3-7)	18	3	6	4	5
Dissatisfied (0-2)	1	<u>-</u>	-	-	1
Don't know	3	-	-	1	2
Gender					
Male	21	2	10	5	4
Female	43	8	10	6	19
Ethnicity					
White	52	7	17	9	19
Black/African-American	3	1	1	-	1
Other	5	1	1	1	2
Refused	4	1	1	1	1
Income					
Less than \$30,000	18	6	5	3	4
\$30,000 or more	36	3	13	8	12
Don't know/Refused	10	1	2	-	7
HDS					
Excellent	7	1	3	-	3
Good	, 18	2	6	5	5
Fair	20	5	5	4	6
Poor	17	2	5	2	8
Not available	2		1	-	1

Methodology (continued)

The table below is a summary of the travel diaries.

Travel Diaries Trotal Arlington/ Alexandria Fairfax Area Cour	
Total Alexandria Fairfax Area Cour	
n= (64) (10) (20) (11 Trips by Means of Transportation Σ = (231) (61) (111) (59 Drive car 153 38 65 50 Driven by other 72 20 40 12 Walk 20 14 5 1 Fixed route 10 6 3 1 Specialized transit 7 1 6 -3 1 Taxi 1 - 1 - 1 - Taxi 1 - 1 - 1 - - 1 -	
Trips by Means of Transportation $Σ$ = (231) (61) (111) (59 Drive car 153 38 65 50 Driven by other 72 20 40 12 Walk 20 14 5 1 Fixed route 10 6 3 1 Specialized transit 7 1 6 - Taxi 1 - 1 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - 12:00 pm to 2:59 pm 65	
Drive car 153 38 65 50 Driven by other 72 20 40 12 Walk 20 14 5 1 Fixed route 10 6 3 1 Specialized transit 7 1 6 - Taxi 1 - 1 6 Taxi 1 - 1 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - Before 6:00 am 1 - 1 - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 -	.)
Drive car 153 38 65 50 Driven by other 72 20 40 12 Walk 20 14 5 1 Fixed route 10 6 3 1 Specialized transit 7 1 6 - Taxi 1 - 1 6 Taxi 1 - 1 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - Before 6:00 am 1 - 1 - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 - - 1 -	3)
Driven by other 72 20 40 12 Walk 20 14 5 1 Fixed route 10 6 3 1 Specialized transit 7 1 6 - Taxi 1 - 1 6 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - 6:00 am to 11:59 am 118 35 51 32 12:00 pm to 2:59 pm 65 15 37 13 3:00 pm to 6:59 pm 40 10 17 13 7:00 pm to midnight 7 1 5 1 Trips by Length Σ= (231) (61) (111) (59 Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 <td>•</td>	•
Walk 20 14 5 1 Fixed route 10 6 3 1 Specialized transit 7 1 6 - Taxi 1 - 1 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 1 - 1 1	
Fixed route 10 6 3 1 Specialized transit 7 1 6 - Taxi 1 - 1 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - 1 - 1 - 1 - 1 - - 1 -	
Specialized transit 7 1 6 - Taxi 1 - 1 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - 6:00 am to 11:59 am 118 35 51 32 12:00 pm to 2:59 pm 65 15 37 13 3:00 pm to 6:59 pm 40 10 17 13 7:00 pm to midnight 7 1 5 1 1 5 1 1 5 1 1 7 1 5 1	
Taxi 1 - 1 - Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 1 - - 1 -	
Trips by Start Time Σ= (231) (61) (111) (59 Before 6:00 am 1 - 1 - 6:00 am to 11:59 am 118 35 51 32 12:00 pm to 2:59 pm 65 15 37 13 3:00 pm to 6:59 pm 40 10 17 13 7:00 pm to midnight 7 1 5 1 Trips by Length Σ= (231) (61) (111) (59 Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	
Before 6:00 am 1 - 1 - 6:00 am to 11:59 am 118 35 51 32 12:00 pm to 2:59 pm 65 15 37 13 3:00 pm to 6:59 pm 40 10 17 13 7:00 pm to midnight 7 1 5 1 Trips by Length Σ= (231) (61) (111) (59 Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	
6:00 am to 11:59 am 118 35 51 32 12:00 pm to 2:59 pm 65 15 37 13 3:00 pm to 6:59 pm 40 10 17 13 7:00 pm to midnight 7 1 5 1 Trips by Length Σ= (231) (61) (111) (59 Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1))
12:00 pm to 2:59 pm 65 15 37 13 3:00 pm to 6:59 pm 40 10 17 13 7:00 pm to midnight 7 1 5 1 Trips by Length Σ = (231) (61) (111) (59 Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ = (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	
3:00 pm to 6:59 pm 40 10 17 13 7:00 pm to midnight 7 1 5 1 Trips by Length Σ = (231) (61) (111) (59 Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ = (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	<u> </u>
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	3
Trips by Length $Σ$ = (231) (61) (111) (59 Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	3
Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	
Less than 1 hour 36 11 12 13 One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	2)
One to less than two hours 45 11 24 10 Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	•
Two to less than four hours 69 15 38 16 Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	
Four hours or more 68 22 37 9 Unknown 3 2 - 1 Trips by Other Person Σ= (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	
Unknown 3 2 - 1 Trips by Other Person Σ = (72) (20) (40) (12 Spouse/Significant other 23 6 16 1	
Trips by Other Person $Σ$ =(72)(20)(40)(12Spouse/Significant other236161	
Spouse/Significant other 23 6 16 1	
	<u>?</u>)
Child 10 5 12 2	
CIIIIQ	
Friend 9 2 4 3	
Neighbor 7 1 5 1	
Relative 3 1 2 -	
Other 11 5 1 5	
Location of Trips $\Sigma = (231)$ (61) (111) (59)	3)
Grocery/Drug store 64 16 33 15	•
Other shopping 55 8 28 19	
Movie/Dining 39 9 22 8	
Medical/Doctor 30 5 19 6	
Church 20 8 9 3	
Visit friends/family 19 5 11 3	
Barber/Beauty salon/Hairdresser 9 4 5 -	
Gym/Sports/Exercise 6 - 6 -	
Arts/Museums 5 - 4 1	
Other/Unknown 87 30 27 30	
Aids Used n= (37) (8) (20) (9)	١
Aids Used n= (37) (8) (20) (9) Cane, crutch or walker 7 - 6 1	
Electric wheelchair or scooter	
Non-electric wheelchair 2 - 2 -	
Person to travel with 8 2 4 2	
Person to get in and out of home 4 1 3 -	
Person to get in and out of nome 4 1 3 -	
None 27 5 14 8	

Research Caveat/Limitations

Qualitative research methods consist of conducting in-depth interviews with a small but targeted group of participants. In this case, participants represented those age 75 and older residing in Northern Virginia.

Typically, qualitative research is used to provide answers to attitudinal questions, as well as to provide insight and in-depth understanding of consumer perceptions and opinions.

By nature, this research method does not usually allow for statistical analysis and interpretation. Rather, it is a tool for decision-making purposes. The findings from this type of research should be used to provide insight and direction into decision-making rather than as the sole basis for decision-making.

Qualitative research tends to provide answers to questions like "Why?" and "How?" whereas quantitative research tends to provide answers to questions such as "How many?" or "How much?"

The statements made in this report, including the conclusions and implications or any recommendations, are based upon the attitudes and opinions of the participants and are not necessarily projectable or generalizable to the population-at-large.

Please note that respondent rating scores are shown as percentages instead of the actual number of respondents in order to allow the reader to more easily compare actual relationships between scores. It is very important to understand that this is qualitative data, based on extremely small samples and cannot be extrapolated to the population as a whole.

Detailed	Findings

Isolation & Personal Issues

Once focus group participants were seated and properly introduced to one another, they were brought into a general discussion about their personal travel habits. In-depth participants were asked a similar set of questions.

Satisfaction with Getting Out

The majority of focus group participants, drivers and non-drivers alike, get out of their house at least once a day, and many will leave their homes a few times a day. Participants go out for a variety of reasons, some of the most common being to go shopping, to the doctor, for volunteer work, a place of worship, a beauty parlor or hair salon, or to dinner or a movie. In addition, a few participants said they still work.

- A myriad of other reasons were given for getting out, including visiting with friends, for exercise, (particularly walking), to go to clubs and social organizations, to play golf, and/or to go to museums, the theater or other cultural events.
- Those who did not go out every day cited several reasons for staying at home, most having to do with what they saw as limited transportation options, weather as a barrier (humidity in the summer, cold or snow in the winter) and/or the physical demand of going out.

Many of the in-depth participants would like to get out often but do not do so. In fact, while many of the focus group participants get out daily, the majority of in-depth participants only get out one to three times a week. For them barriers include health issues, money and/or weather.

- Money is a barrier both for using specialized public transportation and for the cost of operating and maintaining a car.
- Several also said they cannot leave their house without someone accompanying them.
- It should also be noted, however, that a few in-depth participants who only get out of their homes in a limited fashion do so by choice, saying they are happy to stay home and do such things as spend time with their spouses or other family members or do things around the house.

When in-depth participants do get out, their trips often include shopping, medical appointments, visiting friends and family, and other social commitments (clubs, etc.).

Those who did not drive themselves relied on a variety of means to get around, with the most common being their spouse, other family members or friends. Other common means of getting around included taxis, Metrorail, and both community and local bus and van services.

All but one of the focus group participants was a driver at one point. Currently, participants fall into one of the following three groups:

- 1. Current, full-time drivers who drive themselves to many if not all of their destinations;
- 2. Drivers who have chosen to curtail their driving, limiting it to certain times or certain situations; and
- 3. Non-drivers who have given up driving altogether.

Among **those who currently drive**, several said they are aware a time will come when they may no longer be able to drive. Many said that traffic conditions are the major problem they have with driving currently.

- However, several did say they do not want to give up driving. As one Arlington/Alexandria participant put it, if someone took away his car "you may as well bury me." In addition, the in-depth participants who drive take a great deal of pleasure and pride in the fact that they are still able to do so.
- Several drivers said they were frustrated with the volume of traffic, and one Fairfax area participant in particular said he was furious that more money is not spent for more roads in the area.
 - While not specifically in reference to spending on more roads, probing that was done in the Loudoun County group revealed that many participants are aware that a large proportion of seniors vote, and because of this they feel that their needs should be met.
- A few participants said they like to drive every day because it helps to keep them alert.
- In addition, a few Fairfax area participants said that they currently volunteer to drive other, less mobile seniors. Each said that they would use this service themselves if they needed to, and one said that he currently does it in order to earn "credit" so his wife can use the service.
- One Alexandria/Arlington participant said that she almost did give up driving when she had difficulty getting in and out of her vehicle. However, she was able to purchase a more accessible van that she describes as "wonderful," and was obviously quite pleased to be able to continue to drive.

Both focus group and in-depth participants **who have cut back on their driving** have done so in several ways. Many avoid driving at night or during rush hour traffic.

- Some drivers said they simply will not drive after dark, while others said they will only drive at night in areas they are familiar with. In fact, many in-depth participants only go out at all by themselves during the day, and for a few that means it's the only time they go out, period.
 - Conversely, a few participants said that they prefer to drive at night because there is typically less traffic.
- In addition, a few participants from Arlington/Alexandria said they will only drive, day or night, to places with which they are familiar, citing anxiety when they cannot find their way. Other participants in this group concurred, saying they like driving on "autopilot," meaning they are so familiar with their route they do not have to think about how to get where they are going.
- Several in-depth participants said that, while they drive, their driving is limited to just the area in which they live. This has confined their life to a very small geographic area.
 - In particular, one participant said that she has great difficulty going anywhere because she is very limited in her ability to drive and lives in a rural area "far away for someone who feels uncomfortable on the road."

- Several drivers admitted to having adjusted their plans based on traffic. For example, a few Alexandria/Arlington participants said they never make plans during rush hour.
 - In another example, one Loudoun County participant said that he and his wife used to go to dinner and movies in the evening, however they go to lunch and to movies in the afternoon now because they are not comfortable driving at night.
 - A few participants also avoid driving in Washington, DC altogether.
- Other reasons cited for cutting back on driving included the cost of gasoline and difficulty finding and cost of parking.

Those who do not drive often have to rely on friends and family to get around, as well as public transportation and taxis. Opinions of public transportation and taxis were varied, and while friends and family are seen as reliable, many non-drivers do not want to be a burden on others.

- "Frustration" was a word often used by those who have had to give up driving, with some saying that giving up driving has been the single greatest hardship of aging. A few said they miss driving more than anything else. Participants who had to give up driving said they did so either because of failing eyesight or diminishing reflexes. A few spoke of how they gave up driving after serious accidents and "totaled" cars.
 - For some, it became a difficult trade-off of risking driving vs. losing independence. As one indepth participant put it, "I wish I would of kept driving. I would have been more independent but I don't know if I would of been gone (from my home) that much. I never did like to drive that much. I still have a license, I just don't drive. I didn't get a license until I was older and by that time the traffic around here scared me and so when I was driving my mouth would get dry and I just drove because I had to get somewhere. I also got a car so my daughter would learn how to drive. When she learned how to drive real well, I just let her drive me."
- Spouses, children and neighbors are those who participants would typically rely on for transportation if they cannot drive. While no one said they have been turned down for rides or that they have experienced any animosity, several said they have chosen not to go out rather than ask others, especially if they feel they are "putting people out." A few said they feel embarrassed to call a friend or neighbor and ask for a ride. A few others were limited, not because their friends and neighbors would not give them a ride, but because their friends and neighbors *could* not.
 - For example, one Fairfax area participant said that she depends on her daughter exclusively for transportation, but that her daughter does not typically get home from work until 7:00 pm. This has resulted in the participant becoming much less active.
 - Another in-depth participant said that she hates having to be a burden on her daughter. "I depend on my daughter and she comes to the door and we get into the car. You know, it's just great, but of course you know I can't do this continuously. I just feel bad and I want to find another way of doing it. Not that she is complaining, believe me she's not but I just think it's not fair."

- Many non-drivers, particularly those in Arlington/Alexandria and the Fairfax area, said that they use public transportation, and generally their opinion of local transportation is positive. Many current users of public transportation said it is "good" to "excellent."
 - However, in general, Loudoun County participants were far more negative toward public transportation, one even using the term "horrendous." Providing more buses, smaller buses, hub-to-hub service, bus stop signs, park benches and shelters at bus stops were some suggestions given for improving public transportation service.
 - In comparison, several Loudoun County participants said that they have private community services available to them, and they consider these services to be very good. These services provide transportation to grocery stores, pharmacies, the District of Columbia and occasionally to special events. Some have to pay for this service while others do not. Those who do not have to pay indicated they are pleased about this, while those who do have to pay said they think it is fair for them to have to do so. However, all admitted that these services can be limited, often only running at certain times or days and not taking them everywhere they need to go (e.g., individual medical appointments).
 - Several participants said they do not like it that most public transportation and taxi services will
 not wait at places like doctors' offices and stores for a round-trip return, and that scheduling
 return trips without a vehicle waiting can prove to be difficult.
- A lack of familiarity with the area and with public transportation systems is a barrier for many non-driving in-depth participants. Many rely on friends and/or family to get out when they cannot drive. Several said they would like to know more about transportation options for seniors, but they are not sure how to go about doing that.
 - As one in-depth participant said, "I have to depend on my daughter and it's coming to a point where...she has a job she is a single mother and I feel very bad taking her away from her job. I drive but I am two or three years living here. I come from New York and I never, I don't know whatever possessed me but I never thought of checking the transportation facilities here."

Several drivers said they would consider using public transportation if it were available to them. They defined 'availability' as public transportation coming to or near their home, being accessible, and running at hours that are convenient to them.

- Several Fairfax area participants said that they cannot get to public transportation. In particular, a few participants said that they would like to use public transportation but that no buses come into their respective subdivisions.
- Being unable to walk to public transportation is also seen as a barrier by a few in-depth participants.
- Another obstacle to public transportation use brought up by some participants was being able to get
 information on transportation. A few Fairfax area participants said that they had tried to call
 different services, but were frustrated having to navigate an automated menu. A Loudoun County
 participant suggested publishing transportation information in local newspapers.
- Many participants did say they would prefer it if the myriad of local public transportation services could be consolidated. Several think that there are redundancies in the systems, and that it would be

easier to get around without having to transfer from one system to the next. A few also said that having to transfer from system to system is confusing.

- An Arlington/Alexandria participant said she would use her local bus service, but she has difficulty getting on and off the bus. Interestingly, she blamed herself, saying it is 'her fault' and not the fault of the service. Others in this group said they also have difficulty maneuvering on buses.
- Bus stops not being marked and public transportation services taking too long were other reasons given for not using public transportation or not using it more often.

Possible Means of Getting Out More Often

While the majority of participants said that they can generally get out as much as they want, there were some who are limited somewhat by time (i.e., not during rush hour or at night), other physical limitations (e.g., cannot walk), financial (e.g., the cost of parking, gas or taxis) or by limited transportation options. When asked what might help them get out more, very personalized transportation was mentioned most often. Some examples provided by participants included trips to medical appointments, into the District of Columbia to see the Smithsonian or the Kennedy Center, and to stores where the vehicle would wait for them.

Ideal System

The Ideal

Participants were asked to describe their ideal transportation system, and were encouraged not to think of their car. Interestingly, many participants focused more on improving existing services than on creating new ones.

- Common themes of frequency, personal and dependable service were characteristics of many of
 the systems suggested by both focus group and in-depth participants. Keeping the cost
 reasonable and providing information about the service were also important to many
 participants.
- Interestingly, many in-depth participants noted the ability to transfer between systems as part of their ideal service. When describing their ideal, they just wanted a service that would link them to existing services (e.g., Metrorail). As one participant put it, all they need is "just a seat."

Several respondents, concerned either about how **frequently** they could get service or **how soon the service would be able to take them where they needed to go**, said their ideal service would be on-call – one that is "reactive to your needs." For example, one Fairfax area participant said she would like a limousine service because she could always rely on it to get her where she needs to go when she needs to go there. In fact, personal service was an attribute used to describe many of the ideal systems.

- Most participants agreed that, for any specialized transit, they would like a service that they have to schedule no more than one day in advance. And for many, even a 24 hour lead time was said to be too far in advance. Several participants, particularly current drivers, said they are never sure when or where they are going to want to take a trip, and that having to plan one day or more in advance could be very limiting. Still, others said that while advanced notice may be limiting, quality door-to-door transit would still be a good service to have. However, a few participants did say they believe such a system would be too expensive to be practical.
- Frequency was also said by some to be an important attribute for an ideal fixed route service. As an example, one Fairfax area resident said that she would like a rapid transit service that runs every 10 minutes.
- For a few in-depth participants, frequency means running every day of the week as well as throughout the day, so that they may use the system as a substitute when a friend or family member is unavailable.
- A few participants also suggested extending the hours of existing services and having more frequent service on weekends.

For many participants, **personal service** in their ideal means of transportation went beyond door-to-door to mean how they are treated by the service overall and by their actual driver. In fact, door-to-door service was the single most frequently mentioned feature by in-depth participants, as well as being a common feature for many focus group participants.

As one Arlington/Alexandria participant described it, her daughter is her ideal means because her
daughter has "my best interests at heart." For a few participants, personal service meant the driver
showing common courtesy and being polite. For others, it was coming to the door of their home or
to the curb if they are at a store, because having to walk a distance, particularly when carrying
packages, is a problem for some.

- The majority of the in-depth participants said they would like a service that comes to their door. In fact, many said that taxis are their ideal form of transportation. Many also want a service that can help people in and out of vehicles and in and out of their homes. A few participants use family and friends as their primary means of transportation because that person will help them.
- A few others said they would always like to have the same driver so that they can feel comfortable and develop a relationship/rapport with the driver. As a Fairfax area respondent put it, she wants someone "with a sense of humor," someone she can talk to. Other attributes to describe the ideal driver were...
 - > A driver who speaks English,
 - > Knows the area,
 - Clean and neat.
 - Pleasant.
 - > Patient, and
 - A safe driver.
 - For a few in-depth participants, a "safe driver" means more than avoiding accidents, it means how that driver handles their passengers. As one participant said, a driver must be someone "who would understand and be considerate. I wouldn't want to be on the bus if the driver didn't care whether I got on or off safely. Safety is very important."
- For a few in-depth participants, personal service means being able to take someone with them (i.e., a caregiver, family or friends) who can help them out or simply accompany them on their trip.

Dependability was brought up repeatedly by participants. Dependability was defined by participants as both showing up and arriving to the final destination on-time.

- Some in-depth participants pointed out that, if they are going to schedule their life around a service, that service has to be on a schedule they can count on.
- Several participants said they have had trouble with fixed route and specialized services that would take them to where they were going adequately, but then the participant would be left waiting for their return trip, sometimes in areas where the respondent was uncomfortable to wait or had no place to wait. Ideally, they would like a specialized service that would either wait for them or return ontime, or a fixed route service that runs frequently and maintains its schedule.
- An Arlington/Alexandria participant gave the Red Top taxi service as an example of a system that maintains good on-time performance by having cars located throughout the area.
- Another Arlington/Alexandria participant said that a system that runs frequently would not force riders to figure out the schedule and work around it (a positive).
- However, it should be noted that a few participants did not want to hold either the systems or drivers accountable for not arriving on-time, understanding that traffic can be unpredictable.

For some, dependability was inexorably tied to getting good **information** on a service. As one Arlington/Alexandria participant put it, you cannot rely on a service if you do not know where and when it is running. A few said that their ideal service would be proactive in getting information to the public, not putting all of the responsibility for learning about the service on riders.

- Some participants said that they are not well informed now. According to them, schedules are inaccurate, not kept up-to-date and with each service having a different schedule format, it makes it difficult to learn and tie together multiple modes. Furthermore, many participants did not know where to go to even find the schedules.
- Many in-depth participants suggested increased advertising in local newspapers and on local television, saying that these are their primary sources of information.
- Several participants said they would use the Internet to learn about services if information was
 available, and one suggested having a Web site that would allow riders to enter their origin and
 destination and the Web site would then list the modes and schedule they should use (similar to what
 is currently provided through WMATA's Ride Guide on www.wmata.com). Ideally, this system
 would link all modes in Northern Virginia.
- Other suggestions for disseminating information included the following:
 - Keep the schedules succinct,
 - Provide a universal toll-free number for Northern Virginia transit that people could call for information.
 - Print information and scheduling telephone numbers on the side of buses, and
 - Mail schedules to everyone.
- The information itself would need to detail the schedule and cost. For any new service, a few participants said that it would have to ensure them that the service was legitimate and trustworthy. "It would have to basically spell it out really clearly, what the cost is. Who's running this, the source of this? So it doesn't appear as a scam or a come-on. The taxi appears at the door and suddenly you're at a finance seminar you didn't want to go to. Something really clearly laid out. I would say the format of you sending it that is very clear."

Cost, while not being among the first things mentioned by most participants in describing their ideal transportation, was still something of an issue, particularly when discussing a taxi or other specialized service. However, cost was not necessarily defined as being "free," but as being "economical" – i.e., make it something they can afford. Some said they would like to have a government subsidized taxi service for seniors who cannot drive.

- Many said that any senior transportation service (fixed route or specialized) should be either partially
 or fully subsidized by local or county governments. A few others said that such a service could be
 run through local churches or other philanthropic organizations.
- Many of the in-depth participants who said their ideal transportation service is a taxi or other door-to-door service said that such a system should be at least partially subsidized. However, it should be

noted that the in-depth participants had read the four test concepts, which included subsidized taxis, prior to being interviewed.

- While participants expressed more concern for controlling the costs of specialized transit and taxis, several also said that the costs of fixed route transit needs to be reasonable as well. A few in-depth participants said they would not even consider taxis and would only consider a fixed route service because they believe fixed route services are less expensive.
- While most did not seem to have a problem with paying tips for taxi service, a few participants said that tips should not be assumed.
- For some participants, their concerns about transportation costs were tempered by an awareness of rising gasoline prices. This was said to be a particular problem for transportation services that have to cover a large geographic area.

Participants provided some other suggestions for elements that would make up their ideal service, including the following:

- Have clean and comfortable vehicles:
- Provide service to medical appointments;
- Have moving sidewalks and crosswalks;
- Have service that better serves "fringe" areas;
- Create more hubs tying systems together, and move those hubs closer to points of interest;
- Have a cross-county bus service;
- Have buses that are easier for the disabled to access (e.g., more buses that will lower to allow access);
- Offer a service where other seniors volunteer to drive you and earn credits so they can get rides themselves or for others when needed:
- Have room on vehicles for wheelchairs and walkers as well as to carry baggage;
- And finally, offer any service that would reduce stress on the rider.

When asked if anything similar to their ideal currently exists, reactions were mixed:

- Many said that a taxi is similar to their ideal in that it provides door-to-door service and the drivers will generally be helpful. However, cost was an issue, particularly for longer distance trips. Furthermore, a few Fairfax area participants who have used a taxi voucher program did not like having to pay the tax on the cost of the ride. In addition, most participants said that taxis are not reliable for return trips.
 - One in-depth participant also gave the following example of their ideal currently existing, but also noted its limitations: "We have a small cab company in Fairfax City, it is called White Top

Cap. They are not as large and independent as the Yellow Cab service and I find they are frequently more responsive to my needs than the Yellow Cab. The only problem with them is that they don't have as many cabs and if it's especially inclement weather and a heavy demand on cab service, they can't accommodate you as quickly as you want to be accommodated."

- Others said that an inexpensive system that can get someone across counties quickly is not realistic, citing current systems that promise impossibly fast trips. According to these participants, traffic and other factors make it too difficult to accurately schedule inter-county commutes.
- Two bus systems in particular were cited as being good examples of participants' ideal transportation. A few participants said that DART is very good about providing information to its riders. A few Fairfax area participants specifically named the #23 McLean-Crystal City Metrobus line as an example of a safe and reliable bus. Another Arlington/Alexandria participant cited the Kennedy Center shuttle service as an excellent transportation service, saying that it is inexpensive and saves her additional money on parking.
- A few in-depth participants said that some senior centers provide door-to-door or neighborhood bus services that are reliable.

Satisfying Transportation Options

Participants were asked to complete three sentences that described what a satisfying transportation option is and is not to them.

A. A satisfying transportation option is one that is...

• Some answers typical of what participants said were as follows:

"Regularly and frequently scheduled, and on-time. Available at late hours as well as normal hours."

"Getting you where you need to go safely, conveniently and in a timely fashion."

"Car or bus, easy to access right from my front door at a convenient time for me."

"I will be able to get there and get on the bus."

"Getting you where you want to go with a minimum amount of stress and flurry!"

- Safety, on-time performance, being instantly available and convenient to use were most often given by participants as the definition of a satisfying transportation option. Convenience takes on many forms for participants. According to one Fairfax area participant, with an opinion shared by others, a convenient option must make it easy to estimate how long it will take to get from point A to point B. For others, it means being there when they need it and getting them where they want to go. Another Fairfax area participant said that this means running at later hours, while for a Loudoun County participant it means running often so that it would always be there when they need it.
- B. A satisfying transportation option is one that results in...

- Some answers typical of what participants said were as follows:
 - "Ability to get out to the places and events that I want to go."
 - "Getting passengers where they want to go and get him back home safely."
 - "Getting to an appointment on time (with) no long waiting time for pick-up."
 - "Getting to and from (my) destination in a timely, comfortable way."
 - "Getting where you want to go at the time you want to be there safely."
- In general, participants indicated they want transportation that will result in them getting to their destination quickly and without a long wait by a quiet and comfortable means. A few participants said that it is important that transportation systems work to save time that belongs to riders their time as part of being reactive to riders' needs. As one Fairfax area participant said, "Transportation doesn't run your life, you're not a slave." Reducing wait time to get a ride and reducing the length of the trip were means suggested to accomplish this.

C. A satisfying transportation option is one that does not result in...

- Some answers typical of what participants said were as follows:
 - "Missed appointments, long waits and no-shows!"
 - "An accident or (getting) lost and unable to make your appointment."
 - "Spending too much time in going to and from than necessary."
 - "An emotional upheaval for the passenger. A trying emotional experience."
 - "(Being) late for appointments with a long, unnecessary ride. Believing the driver is not familiar with the area."
- Primarily, participants indicated that they do not want to have to wait long for transportation and
 have the trip result in their being late for wherever they are going. They also do not want to spend
 unnecessary time in the vehicle (i.e., by getting lost or stuck in traffic). In addition, many
 participants said they would be particularly dissatisfied with having to wait for transportation for
 their return trip.

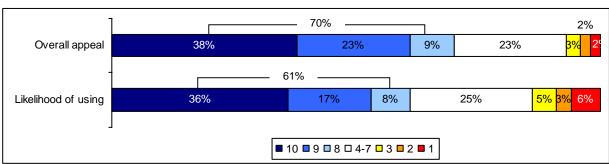
Testing Services

Respondents were given four new transportation ideas (in random order) and were asked to give their opinion of each idea. They were also asked to rate how appealing they found the system to be and how likely they would be to use it, using a 10-point scale where 10 means very appealing or very likely and 1 means not at all appealing or not at all likely.

Please note that the number or percentage of participants answering a certain way has been cited in various instances only for the purpose of adding perspective to a statement, NOT for the purpose of quantitative analysis.

CONCEPT - Subsidized taxi service

- Taxi sedans and vans are used. A wheelchair accessible taxi can be requested.
- Passenger requests service the same way anyone requests a taxi telephoning for a trip when you need one. Currently, wheelchair users are encouraged to schedule their rides one day in advance to ensure availability.
- Taxi provides pick-ups in front of your home and takes you directly to the curb in front of your destination.
- Some drivers are willing to help you get in and out of the taxi and sometimes to and from your door.
- *Trip is not shared with other riders, unless you bring a companion.*
- Cost for taxi voucher trip depends on the subsidy provided by your city or county. In Fairfax County, coupon books worth \$30 are sold for \$10 to eligible seniors. This means that a one-way trip that cost \$15.00 on the meter would actually cost you \$5.00, with an additional cost for the tip (recommended 15% on \$15 or \$2.25). The total charge for the one-way trip (\$17.25) would cost you \$7 with the coupons.



Base=Total Participants (n=64)

Fairfax area participants, as well as the in-depth participants, were generally very positive about the subsidized taxi service concept, while Loudoun County and Arlington/Alexandria participants were more mixed in their views. Participants liked the flexibility it provides along with the reduced cost. However, there was concern over the cost to the taxpayer. As one Loudoun County participant put it, "Great for me, bad for the taxpayer." For others, it had the appeal of "getting something for nothing."

• Some participants had used subsidized taxi service in the past, and their experiences were generally positive. One Fairfax area participant did say, however, that their wife had used a subsidized taxi service while in the hospital and even with the discount it was still very expensive. A few others without past experience also expressed concerned that the system would still be expensive.

There were several other aspects of the service seen by many to be positives:

- One advantage seen by many participants was that this service would come into areas not reached by traditional public transportation.
- Another positive was that the vans would be accessible to those with disabilities.
- While some concern was expressed about the dependability of the service vis-à-vis standard taxi service, several participants said they thought this would encourage taxi services to provide better service for seniors since seniors would be increasing their use.
- Furthermore, several saw this as superior to volunteer services because they would not feel as "guilty" about using the service as often as they need to. For example, according to two in-depth participants:
 - "Because it's not volunteer, you feel like you can call them whenever you need them."
 - "(People) would rather pay full price and get full service. This (subsidized taxi service) does that but of course the state helps out. A lot of people would prefer this rather than depending on volunteers and others."

The coupons themselves met with mixed reactions. Those who did not like the coupons said they would be complicated to use and calculate the cost. A few who did not like the service said they might consider it except for the coupons. Conversely, many did not mind the coupons, saying that the service's staff/drivers would be helpful in explaining how to use the coupons. In addition, some participants said the coupon system would be an advantage. They could keep the coupons in reserve, using them as needed. They would use the taxi service not as their primary means of transportation, but as a supplement (e.g., in bad weather or at night when they cannot drive).

- Additionally, some participants were concerned that, when using the subsidized program, they may
 not receive the level of service from drivers they would otherwise. The thought being that drivers
 may look down on them for using the service, or may not earn as much money as drivers would
 normally for a full-fare ride.
 - "The drivers seem to think it's charity or something. I don't think it is. It's just a senior perk."
 - "The drivers for some reason don't like it (subsidized service). I don't know if they don't get as much money for it or what but they kind of sneer at it."

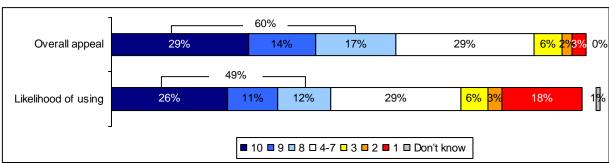
A few in-depth participants were concerned with whether the drivers would be able to help them in and out of vehicles as well as from the curb to where they were going. "Sometimes these buildings are far away to walk in and they also have a lot of steps" said one in-depth participant.

A few other questions were raised by participants, which included the following:

- Would there be a limit to the distance one could travel?
- Would it go into the District of Columbia?
- How would eligibility be determined?

CONCEPT - Volunteers in the community provide transportation to seniors who need rides

- Volunteers use their own cars.
- Passengers request trips in advance through an organization that matches volunteers with seniors needing rides typically requests are made one to several days in advance, although some programs allow for same-day scheduling and service.
- Volunteer driver can provide help getting in and out of the car and to the destination.
- Trip is usually not shared with other riders.
- Cost to the passenger will vary. Examples: Passengers pay \$3 to \$5 per one-way trip depending on their trip distance.



Base=Total Participants (n=64)

Overall, participants were generally mixed in their opinions of the Volunteer Driver concept. While they perceive that they would get personalized service, there were concerns about training and safety issues.

- Many said it is either a great idea, a good idea for some trips or at least a step in the right direction. A few, however, said the idea is too "utopian" and "idealistic." In their opinion, volunteers would never have the level of commitment that paid employees would (others, however, said that volunteer dedication would not be a problem). Said one in-depth participant...
 - "What a nice idea but volunteers are volunteers and therefore I didn't see it as workable. It's dependent on someone being willing to do this and there are individuals who sacrifice their lives for other people, the 'volunteer for everybody and everything' and they are what I call a living saint, but these people are rare. Then there are inconsistencies. Some people can volunteer for a limited amount of time in their lives. (Then something) changes and they can no longer volunteer. Therefore there has to be someone to pick up the slack. I would say it's great and I know it's possible but it's the undependability of it."
- In the end, about one-half of the participants said they would be likely to use such a service, although many added the caveat that they would not necessarily use it now, but would if they eventually could not transport themselves.

Some expressed concern as to how safe the drivers and vehicles would be. In all four focus groups and in many of the in-depths, when presented with the Volunteer Driver concept, participants asked about safety-related issues:

- What happens if there is an accident?
- Who are the volunteers? Are they honest and reliable?
- Would the drivers be licensed and trained to deal with passengers with special needs (e.g., disabled)?
- Who would supervise the volunteers?
- Are the vehicles inspected?
- Some participants said the volunteers should be specially licensed (others were noncommittal to this). A few also assumed the vehicles would be inspected by the overseeing agency. Others were not so sure, and said they would not want to risk riding unless they were sure both the vehicles and drivers were safe.

Some participants had other questions about how the service would actually work:

- Would they be available for round trips?
- Can you do multiple trips?
- Would they leave your community or county?
- How or how well would volunteers know the area?
- Who will pay for the gasoline?
- In regards to gasoline, a few participants said they did not think the \$3-\$5 fee would adequately pay for it. Some suggested government subsidies, while others said that it should be paid for through donations.

These concerns were summed up best by one in-depth participant, "I have a number of questions about that. About the volunteers helping you in and out of the car and all that sort of thing. What about insurance for the volunteers? Are they licensed drivers? Are they certified licensed chauffer or whatever it is the state requires to transport people? All those things about insurance and about their qualifications (for) driving a passenger around for hire; that bothers me a little bit. That's not clearly indicated what sort of abilities they have. Again, do they do (it) only in Loudoun County? And how does it get them to come back again? Two things I do a lot of is I go shopping for food and other items of personal need and I go to my doctors appointments and the doctors appointments are mostly in Loudoun County, but there are also three or four that are outside of the county in Fairfax. Again, how do I get there from here? Do these services take me that far away?"

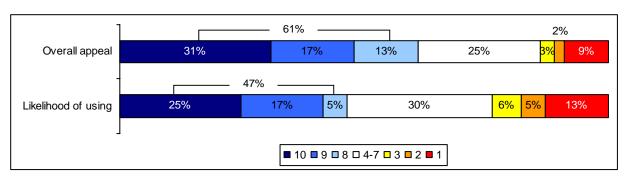
A few participants also expressed almost a sense of guilt at having to ask for assistance from others. In addition, the having to depend on others was seen as frustrating and embarrassing. As one in-depth participant said...

- "I come from New York and I am so independent it's disgusting and to be put in this position now is really hard for me."
- However, others said it made them feel more independent, citing the flexibility they do not have now as they depend on public transportation and/or friends and family with limited availability.

Several participants said that they have had previous experience with similar systems, either as volunteers and/or as users, and that such systems worked quite well. Some participants, however, said they would feel "embarrassed" having to ask others for "favors" (this included both current drivers and non-drivers).

CONCEPT - Small buses travel on routes purposefully designed to link areas where concentrations of seniors live to local shopping areas and medical facilities. Service is operated on a scheduled basis

- Small buses, accessible to passengers in wheelchairs, are used.
- Trips do not have to be requested in advance. Pickup times occur at the same times on the same days each week.
- In one type of service route, a bus would pick up at an apartment building at 10:15 every Tuesday and take them to the grocery store, returning at noon. The same bus on Thursdays would take seniors to the shopping mall, returning at 1:00...
- In another type of service route, buses would come by only two days each week (for example Tuesdays and Thursdays) every 30 minutes between 9:30 and 3:30, always using the same route going by residences, stores, and medical facilities within the same general area.
- Routes are designed to minimize walking to and from the bus. This means, for example, the bus would stop right in front of the door of the apartment complexes and the main stores, rather than on the street.
- Bus driver provides help in getting on and off the bus, but not to and from building entrances.
- Trips would be shared with other seniors and possibly younger persons with disabilities.
- Cost for trip may be the same or somewhat more than a regular bus trip for example, \$2.00.



Base=Total Participants (n=64)

Of the four transportation ideas presented in the focus groups and in-depth interviews, participants were the most polarized in their opinions of this service. Those who live in senior communities were very positive toward the idea. In fact, many already had a similar system available to them through their community. Many said it is easy and convenient to use.

- A few also said they like that this system does not inconvenience the general public, since it is a senior-only system. Non-seniors would not be forced to wait while seniors board and depart vehicles. (For more on this, see the following subsection on Route Deviation Service.)
- Many in-depth participants particularly liked the idea that there would be someone there to help passengers on and off the vehicles.
- Those who do not live in senior communities said that there simply are not enough seniors in their area to justify such a service.

A few participants are familiar with similar systems, and those who are had high praise for them. For example, according to one in-depth participant, "We visit up to Pennsylvania and one little town we go to you see buses all of the time taking seniors to the bank or to the drug store, you know, just all over and they get on and off. They seem very happy to be traveling that way so I just think it's a good thing to have for people."

Those who like the idea of this service saw it as being a supplement to other modes, not as their primary mode. One of the concerns expressed was that this system would not take them to individual destinations (e.g., medical appointments). It also might not be good for last minute trips or trips of unpredictable length. As pointed out by some in-depth participants...

- "I would have to know more about the times because you know shopping is an unpredictable thing. If you can get in and out of the store in 15 minutes or an hour depending on what time of day it is and how many people are in line in front of you at the checkout counters."
- "Usually when you are (shopping) you want to look around, you don't want to feel too pressured in the sense that 'oh, we have to hurry because the bus is going to be here in thirty minutes!' When you are actually shopping, you want to concentrate on shopping and not time."

However, many said it could be useful trips to cultural activities, such as to the Smithsonian museums. And, others said it would, in fact, be very good for shopping trips. For trips like these, according to one Arlington/Alexandria participant, such a system would make it easier to avoid missing your return trip since you could just look for others who came with you.

- Some Loudoun County participants did not see reaching individual medical appointments as a
 problem. According to them, many doctors are concentrated in certain areas. A few
 Arlington/Alexandria participants also said that it might work for those who go to medical
 appointments where many doctors are concentrated.
- One proposal made by a few Arlington/Alexandria participants would be to have the service drop people off anywhere along the route. This would allow people to go to some individual appointments.

The cost was also a concern for some. Those with higher incomes generally said the cost would not be prohibitive, but several of those with lesser incomes that a \$4 for a round-trip is expensive. A few said they would only use it if they had to do so.

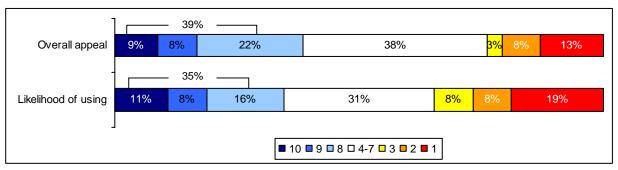
Furthermore, several in-depth participants said they would be concerned about the overall cost to
government. Such a system would have to serve too many areas to be cost effective. However, a
few others said they think the limited number of days the system runs would keep it from being
underutilized.

A final barrier to use for some, regardless of where they live, is their own limitation in walking. A few said they could not use any service that would involve them walking much past their front door, so unless the service would come directly to their home it would be impractical for them.

Additional questions were raised as to the geographic area such a service would serve. Some said it would have to link to the Metro services, while a few said it would have to serve several counties/jurisdictions.

CONCEPT - Bus service that operates on a regular route, with deviations allowed so the bus driver can travel off the route (from several blocks to up to 3/4 mile) to pick up and drop off passengers who request a deviation

- Mid-size buses, accessible to passengers in wheelchairs, are typically used.
- Passenger requests a deviation in advance for example, several hours or possibly up to one day in advance. A set number of deviations are allowed, so that the bus can stay on its schedule.
- Bus may come close to your house or possibly to the curb in front of your house for a deviation trip, depending on where you live.
- Driver provides very limited, if any, help in getting on and off the vehicle.
- Once on board, seniors would ride with the general public.
- Cost for a trip is typically more than a regular bus fare for example, if the regular fare is \$1.00, the deviation may cost another \$1.00, for a total of \$2 a one-way trip.
- This route would offer free transfers to transit routes providing connections to other parts of the region.



Base=Total Participants (n=64)

The Route Deviation Service received the most negative reviews by participants both in the focus groups and the in-depth interviews. Many did not want to be a "burden" on the general public, forcing people to wait while the bus took them off-route to their destination. Many participants also found it difficult to believe that the bus would be able to stay on schedule while making deviations. Those who did like the idea said that it would be easier than using a normal bus service, which typically requires a longer walk to the bus stop.

- Many of the seniors said they seek to be as independent as possible, and in that said they do not want to be a "burden" on others. Much concern was expressed that other people would be greatly inconvenienced and angry if they were forced to wait. "I would image the passengers would be annoyed unless they got used to it if it happened frequently" according to one in-depth participant.
- Several said they do not think this system would be practical for those who work, and that seniors would be a minority of the passengers while people who are traveling to and from work would be the majority. They do not want to make others late for work on their behalf. As said by one Loudoun County participant, "What about the 20-something whose boss will be mad?" According to them, it would be unfair to others and create more resentment toward seniors. Several participants suggested having the system be senior-only so as to not inconvenience others. Yet others said they do not want to be separated, saying they enjoy being around others.
 - In addition to inconveniencing others, some (but not nearly as many) were concerned that they
 themselves would be inconvenienced. A few said they were worried about being late for
 appointments or missing connecting routes.
 - According to one in-depth participant, "I am going to be in the same bus with a lot of other people...I will be subject to a lot of stops that I may or may not like. (It will) take a lot of my day, take a lot of my time which I may or may not like to give up."
 - Another in-depth participant said that both seniors and the general public would be burdened by such a system. According to him, "We are in the same situation where the seniors and the disabled and whatever else you have in wheelchairs riding with the general public. You're going all over Hell's green acre and these people get tired."
- Even when reiterated to them that the system would only accept a certain number of deviations in order to stay on schedule, most participants did not believe it was possible. A few said that the service would be slowed down greatly trying to navigate their neighborhoods.
 - Put simply by one in-depth participant, "If he has to make a detour of three-quarters or a mile and then three-quarters back, that is a mile and a half. He isn't going to be able to keep any kind of schedule."

- Others said that having to board and drop-off disabled passengers would further slow the bus down. Traffic would be yet another obstacle, and some said it might work better in off-peak hours. However, some participants did say that if it could stay on schedule they would be more interested in the service.
 - Some participants said they do not think that this system would be accessible for the disabled. This was particularly a problem for some in-depth participants, several of whom said they had wheelchairs, walkers, dialysis machines or other apparatus they have to bring with them. Others, however, thought it might have a lift or lower itself so people can board.

Not everyone, however, disliked the idea. The idea that it would come directly to their home is very appealing. A few said a slight delay for deviations is not bad compared with having to walk farther. It also opens up options for some, as pointed out by an in-depth participant, "The deviations, in other words you will have more choices of destinations." And for a few others it might be the difference between anyone's inconvenience and not getting out at all.

• Some participants also said they had used similar systems in the past (e.g., FASTRAN, Omnilink) and while staying with a schedule was a problem, it was very good when it did work. And even a few Fairfax area participants who were generally negative to the idea said they thought the system should be tried on a small scale and then expanded if and when the problems were worked out.

Paying for Services

When asked what they thought of a debit card style system for paying for public transportation, which could be pre-paid or deducted from an account, participants were mixed in their reactions. Most said they would prefer to pay cash, but some said they like the idea, particularly for buses. Interestingly, while focus group participants were overwhelmingly in favor of paying for services in cash rather than by any other means, indepth participants were more mixed. Many liked the idea of using a card. However, most said they would rather have that card be prepaid versus any other form.

A few said that they have had experience with taxi vouchers. Some said that they would definitely consider such a system, while others wondered if it would come with a senior discount.

Information Sources and Other Issues

Participants were asked what information sources they use to learn about what is going on in their community and how to get around.

- In order to learn about what is going on in the area, participants primarily rely on a combination of word-of-mouth, community newspapers and the Washington Post, television and radio. Some also use community centers and organizations as sources of local information.
 - It should be noted that most of the Loudoun County participants said they are new to the area and are not as familiar with where to look for information.
 - Word-of-mouth can be both a positive and a negative for a transportation service, however. As
 one in-depth participant said, "If I weren't happy I would tell everyone else about it and try
 somebody else out."
- For information on transportation options, participants said they rely even more on word-of-mouth. Several also check community newspapers or newsletters, and a few will look in community centers, local government buildings or on the Internet.

The afternoon Fairfax area focus group, the Loudoun County focus group and a few of the in-depth participants were asked about travel training. Travel training provides seniors the opportunity to learn how to use the public transportation system through a hands-on learning experience. Trainers board buses with seniors at senior centers and teach interested seniors the ins and outs of using the system while riding to and from a destination of their choice. The travelers-in-training will identify a bus stop near their residence, learn to read bus schedules and route maps, learn how to pay the fare and how to signal the driver to stop, as well as other bus travel skills. The bus delivers seniors to a Metrorail station where they learn how to determine the fare and purchase Metrorail fare cards, read the system map, and board the trains to travel by rail.

Most participants said this is a great idea. In fact, one Loudoun County participant joked that there
would be so much interest the "(telephone) line would be busy all day." A few others said it would
be a good part of a community "welcome wagon." The only concerns expressed by a few were over
who would pay for this service.

In all four focus groups as well as in many of the in-depths there were concerns about how many of the ideas would be paid for. Some were concerned with raising taxes. However, as mentioned earlier, most of the Loudoun County participants (the only group to be directly probed on this) said that seniors vote in large numbers, and because of this, politicians should focus on seniors' needs. A few other participants said that any individual transportation plans should be tied to larger plans for the community. As said one Fairfax are participant, "Transportation can't be divorced from land use policy."

Appendix	

WB&A Market Research Job #05-532B June 2005

Time Started:	
Time Finished:	
Total Time:	

Meeting the Transportation Needs of Northern Virginia Seniors - Recruitment Screener-

Respon	dent's	Name:			
Addres	s:				
City:			State:	Zip:	
Teleph	one Nu	ımber: ()			
Respon	dent II	D#:Recruiter:			
Date of	Group	p/Interview: Time of	Group/Inte	erview:	
		AME ON SAMPLE:			
survey	recent	me is with WB&A, a local market resely with us on behalf of the NVTC (Northern Virginia quick follow-up survey that should only take a few	Transporta	tion Commission	
1.		ng the past seven days, how many trips did you take uportation? (READ LIST. USE '98' FOR REFUSI			
	b. c. d. f.	A car or other vehicle you drove yourself Rode in car or other vehicle driven by someone else TOTAL OF A+B Metrorail or VRE (Virginia Railway Express) Public bus service Transportation provided to people with disabilities cannot use or get to public transportation A senior or community van, such as dial-a-ride, not transportation for persons with disabilities TOTAL OF C+D+F+G Walking to get to a destination	who	# of Trips	
2.		NOT ASK: Primary means of transportation (RECO	ORD ONE	RESPONSE C	ONLY.)
	01 02	Car (if Q2A+B is greatest) Public transportation (if Q2C+D+E+C is greatest)	→	CHECK O	HOTAS
	02	Public transportation (if Q2C+D+F+G is greatest) Walk (if Q2E is greatest)	7	CHECK Q	UUIAS
	04	Mixed (if the two greatest in Q2 are equal)			
	99	Don't know/Refused (if don't know/refused to all	in ()2) →	THANK &	TERMINATE

01	Taxi			
02	Bike			
95	Other (specify):			
98	Refused			
99	Don't know			
annı	our total personal annual income uities and investments less than O RESPONDENTS IN EACH	\$30,000 or is it \$30	,000 or more? (N	MAKE SURE THA
01	Less than \$30,000			
02	\$30,000 or more			
98	Refused			
99	Don't know			
REC	CORD, DO NOT ASK: Gend	er		
01 02		ET A MIX	of the following i	industries? (READ
01 02	Male Female you or does anyone in your house Advertising Market Research	Sehold work in any of the sehold work in any	No 02 02	Refused 98 98
01 02	Male → GE Female	Sehold work in any o		
01 02	Male Female you or does anyone in your house Advertising	Yes 01 01 01 01	No 02 02 02 02 02	98 98 98 98 98
01 02 Do y	Male Female you or does anyone in your house Advertising Market Research Public Relations Public Transportation IF YES OR REFUSED en was the last time you participe T.)	Yes 01 01 01 01 01 01 01 01 01 01 01 01 01	No	Refused 98 98 98 98 98 ND TERMINATE. ussion or focus grou
01 02 Do y	Male Female you or does anyone in your house Advertising Market Research Public Relations Public Transportation IF YES OR REFUSED en was the last time you particip	Yes 01 01 01 01 01 01 01 01 01 01 01 01 01	No 02 02 02 02 02 02 98), THANK A	Refused 98 98 98 98 98 ND TERMINATE. ussion or focus grou
01 02 Do y	Male Female you or does anyone in your house Advertising Market Research Public Relations Public Transportation IF YES OR REFUSED en was the last time you participe T.)	Yes 01 01 01 01 01 TO ANY (01 OR exted in a market res	No	Refused 98 98 98 98 98 ND TERMINATE. ussion or focus grou
01 02 Do y	Male Female you or does anyone in your house Advertising Market Research Public Relations Public Transportation IF YES OR REFUSED en was the last time you particip T.) Within the past 6 months	Yes O1 O1 O1 O1 O1 TO ANY (01 OR Dated in a market res THAN CONT	No	Refused 98 98 98 98 98 ND TERMINATE. ussion or focus grou

8. **DO NOT ASK:** Group type

01	Arlington/Alexandria	→	Monday 7/18 11:00 am
02	Fairfax City/Falls Church/Fairfax County [Q2 (02-04)]	→	Wednesday 7/20 10:30 am
03	Fairfax City/Falls Church/Fairfax County [Q2 (01)]	→	Wednesday 7/20 12:30 am
04	Loudoun County	→	Thursday 7/21 11:00 am

INVITE QUALIFIED RESPONDENT TO GROUP:

We are conducting a research focus group discussion among area residents regarding their opinions of and experier with transportation in this area. This is <u>not</u> a sales meeting of any kind – no one will try to sell you anything as a re of your participation. This is part of a research study on this subject and we would like to include your opinions.

The discussion is scheduled to take place on **[INSERT DATE]** at **[INSERT TIME]** at **[INSERT FACILITY]**. As a token of our appreciation, you will receive \$60 for taking the time to share your opinions with us. In addition, (a meal/light snack) will be served. The discussion will last about 2 hours and we think you may find it interesting to share your experiences and ideas with others. In addition, if you arrive at least 15 minutes before your scheduled session time, you will be entered into a drawing for an additional \$60. And, if necessary, we can provide transportation for you to this group.

9. Would you be able to attend this discussion?

01 Yes	CONTINUE
--------	----------

02 No/Don't know **→ SKIP TO IDI INVITATION**

THOSE WHO CAN ATTEND FOCUS GROUP [Q9 (01)], ASK:

10. Would you need transportation to be provided for you to this discussion?

01 Yes **→ SKIP TO Q11**

02 No **→ SKIP TO FOCUS GROUP INFORMATION SECTION**

99 Don't know → CONTINUE

THOSE NOT SURE WHETHER THEY NEED TRANSPORTATION [Q10 (99)], READ:

If you do need transportation to the group discussion, feel free to give us a call at 1-800-383-2324 ext. 532. We jus ask that you let us know at least two business days in advance. (SKIP TO FOCUS GROUP INFORMATION SECTION.)

THOSE WHO NEED TRANSPORTATION [Q10 (01)], ASK:

11. Someone will contact you a few days before the group discussion to tell you the name of the transportation company you should be expecting and what time to expect them. Will you be bringing a wheelchair with y

01 Yes

02 No

12. Will a spouse or aide be accompanying you in the vehicle for the purpose of assisting you?

01 Yes

02 No.

99 Don't know

FOCUS GROUP INFORMATION SECTION:

So that I may send you a confirmation letter with the location and directions, may I please have your name and complete mailing address, including zip code? Also, I'd like to confirm your telephone number. (RECORD ON FRONT OF SCREENER)

Along with the confirmation letter we are going to send you a travel diary. For the week prior to the group discuss we would like for you to just record what trips you take, and then bring this diary to the discussion so we can talk about your travel experiences.

Since we are extending only a limited number of invitations to this discussion group, if for some reason you canno attend, please call our office at 1-800-383-2324 ext. 532 so that we can invite another participant. Thank you for y time and we look forward to having you at the discussion. **(END SCREENER.)**

SCHEDULE OF GROUPS:

Group	Day	Date	Time	Location	Respondent Type (Q2)	City (Q8)
1	Mon.	7/18	11:00 am	Metro Research Services 1729 King Street Suite 302 Alexandria, VA 22314	10 car 4 other	Arlington/ Alexandria
2	Wed.	7/20	10:30 am	Metro Research Services 9990 Lee Highway Suite 110 Fairfax, VA 22030	14 other	Fairfax City/ Falls Church/Fairfax County
3	Wed.	7/20	12:30 pm	Metro Research Services 9990 Lee Highway Suite 110 Fairfax, VA 22030	14 car	Fairfax City/ Falls Church/Fairfax County
4	Thur.	7/21	11:00 am	Metro Research Services 9990 Lee Highway Suite 110 Fairfax, VA 22030	7 car 7 other	Loudoun County

IN-DEPTH-INTERVIEW INVITATION:

We are also conducting more detailed telephone interviews among area residents regarding their opinions of and experiences with transportation in this area and would very much like to hear your opinions and suggestions.

Each interview will last no longer than 30 minutes and you will be paid \$25 for your time and participation. We that you will find the discussion very interesting. I would like to schedule a date and time that would be convenied with you when we could call you back to complete this interview. Between July 18 and July 24, when would be a good day and time for you to take part in this interview? (CHECK GRID FOR AVAILABILITY OF DAY/TIME

01 Participating → RECORD DATE & TIME ON FRONT OF SCREENER

02 Cannot participate **THANK & TERMINATE**

READ TO EVERYONE:

Thank you for your time and we look forward to talking to you on [INSERT DATE] at [INSERT TIME].

Meeting the Transportation Needs of Northern Virginia Seniors Focus Group Discussion Guide

I. Introduction (10 minutes)

- A. Purpose of meeting: To discuss your travel needs and preferences so that the Northern Virginia Transportation Commission might work with its partners to design better transportation services for seniors.
- B. About focus groups:
 - 1. Independent, 3rd party (no vested interest).
 - 2. Discussion will last about $1\frac{1}{2}$ to 2 hours.
 - 3. Audio taping -- speak up.
 - 4. Two-way mirror; associates viewing.
 - 5. Don't have to raise hands, but speak one at a time.
 - 6. No right or wrong answers, only your opinion.
 - 7. It's okay to have a different opinion or feel different from someone else. And when you do please say so. Everyone is different, so they think different things.
 - 8. If I have to interrupt you, it is to keep us moving along, not to be rude.
 - 9. If you have to leave the room (e.g. to use restroom), please don't leave all at once, and pleacome back!
 - 10. Turn off cell phones/pagers (or put on vibrate).
- C. Respondent introductions:
 - 1. Name (or preferred nickname)
 - 2. Where live in area? How long?
 - 3. Ice breaker

II. Isolation & Personal Issues (15 minutes)

Objective: Determine the threshold number of trips below which seniors' quality of life is impacted.

- A. How often do you like to get out-of-your house?
- B. How satisfied are you with your ability to get around when you want or need to go someplace?
 - 1. If satisfied, how often do you go out?
 - 2. If not satisfied, how often do you go out?
- C. Why do you not get out more often?
 - 1. Does the lack of transportation prevent you from going to the places you want to go?
 - a. What places are these?
 - b. What time of day/evening/night?

III. Ideal System (30 minutes)

Objective: Determine the characteristics of the ideal senior transportation service (non-driver). Understand what people want versus what they need in this service, and where opportunit exist for new service or improving existing services.

- A. Describe your ideal transportation option if you could not drive? (HAVE RESPONDENTS WR DOWN.)
 - 1. **PROBE FOR ATTRIBUTES:** Convenient, courteous staff, safe, information that was e to understand, etc.
 - 2. How does it work?
 - 3. What amenities does it have?
 - 4. Where would you get the information about it?
 - 5. What information do you need to use the service?
 - 6. Where does it take you? When? What time of day?
 - 7. What does it cost?
 - 8. How do you pay for it?
 - 9. Who travels with you?
- B. If you could change anything about your existing transportation options, what would it be?
- C. A satisfying transportation option is one that is... (HAVE RESPONDENT WRITE ANSWER FIRST, THEN DISCUSS.)
- D. A satisfying transportation option is one that results in... (HAVE RESPONDENT WRITE ANSWER FIRST, THEN DISCUSS.)

- E. A satisfying transportation option is one that does <u>not</u> result in... (HAVE RESPONDENT WRIT ANSWER FIRST, THEN DISCUSS.)
- F. Facilitator works to have participants prioritize the most important attributes and outcomes.
- G. Does anything similar to this ideal currently exist?

IV. Testing Services (30 minutes)

Objective: Test interest in new transportation ideas and means of payment.

Note: Section A will apply to each concept to be tested. There will be separate handouts/description for each concept.

- A. Present concept. Read concept to participants. Have participants rate concept on appeal and likelihood to use on handout.
 - 1. What is your initial reaction to this concept?
 - 2. What, if anything, do you find appealing? Why do you say that?
 - 3. What, if anything, is not appealing to you? Why do you say that?
 - 4. How does this compare to your current means of getting around? Why is that?
 - 5. Is there anything confusing or difficult to understand about the concept?
 - 6. Overall, how appealing is this concept?
 - a. Is it something that you would consider investigating further if it were available in this area?
 - 7. How likely would you be to use this form of transportation?
- B. When paying for transportation services, how would you prefer to pay?
 - 1. Would you be willing to use a debit card that debits from a bank account or from a special account, which you've already pre-paid? **(Show of hands)**
 - a. If you were shown how to use one, how likely would you be to use it?
 - 2. Do you or have you ever used taxi vouchers?
 - a. Would you be willing to use a taxi voucher?
 - b. If you were shown how to use one, how likely would you be to use it?

V. Information Sources (10 minutes)

Objective: Learn how people learn about transit, what people need to know and how to develop bette information sources.

- A. How do you get information about things going on in your community?
- B. How do you prefer to learn new tasks, like using transit? (e.g., brochure, try it with a friend)
- C. How do you get information about getting around the community?
 - 1. What types of information would you need in order to use transportation? (e.g., signage, schedules on pamphlets, posted schedules)
 - 2. Where would you look for this information? **PROBE:** Do you pay attention to newspape inserts? Brochures at the library? The Internet? Is direct mail useful?

VI. Closing (10 minutes)

- A. Suppose you were elected to your local transportation board. What changes would you make to lot transportation? (MODERATOR LEAVES ROOM.)
- B. Any comments or suggestions you can make to or about public transportation in particular?
- C. Thank you for your time and opinions. You can collect your honorarium from the host. Announce raffle winner.

WB&A Market Research Job #05-532C June 2005

Time Started:	
Time Finished:	
Total Time:	

Meeting the Transportation Needs of Northern Virginia Seniors - In-Depth Interview Questionnaire -

Respondent's Name:
Address:
City: State: VA Zip:
Telephone Number: ()
Respondent ID#:Interviewer:
AOV FOR MANE ON CAMPLE
ASK FOR NAME ON SAMPLE:
Hello, my name is with WB&A calling on behalf of the NVTC (Northern Virginia Transportation Commission). I am calling you for your scheduled interview about the transportation needs of seniors in this area. Again, a reminder that as a thank you for completing this interview we will send you \$25.
ISOLATION & PERSONAL ISSUES
Q1. First, how often do you <u>like to</u> get out of your house?
Q2. How satisfied are you with your ability to get around when you want or need to go someplace? (PROBE How often do you go out?")
Q3. Why do you not get out more often? Does a lack of transportation prevent you from going to the places you want to go? (PROBE: "What places are these? What time of day/evening/night?")
IDEAL CYCTEM
IDEAL SYSTEM

Q4. Can you please describe your ideal transportation option if you could not drive? (PROBE FOR ATTRIBUTES: Convenient, courteous staff, safe, information that was easy to understand, etc. IF 'MY OWN CAR,' ASK AFTER INITIAL RESPONSE: "Suppose your car wasn't available to you?")

FOLLOW UP WITH EACH OF THE FOLLOWING:

a.	How does it work?	
b.	What amenities does it have?	
υ.	what amenities does it have?	
c.	Where would you get the	
	information about it?	
d.	What information do you	
۵.	need to use the service?	
e.	Where does it take you? When? What time of day?	
	when? what time of day?	
f.	What does it cost?	
	How do you pay for it?	
g.	flow do you pay for it:	
h.	Who travels with you?	

Q5. If you could change anything about your existing transportation options, what would it be?

Q6.	Q6. Could you please finish the following sentences: (RECORD ANSWER THEN DISCUSS BE ASKING NEXT SENTENCE. HAVE THEM PRIORITIZE A-C.)					
	a. "	A satisfying transportation option is one that is				
	b. ".	A satisfying transportation option is one that re	sults in"			
	c. ".	A satisfying transportation option is one that do	es <u>not</u> result in"			
Q7.	Does	anything similar to this ideal currently exist? V	What is it?			
		Testing S	ERVICES			
Q8.		were titled Concept L, M, N and O. Did you re	ation concepts that we mailed to you a few days ago. eceive these in the mail, and if so, do you have them v			
	01	Received and have them	CONTINUE			
	02	Received, but do not have them now	ASK THEM TO GET CONCEPTS			
	02	No, did not receive	READ: "That's okay, I can read them to you now."			

ROTATE CONCEPTS L-O

	CONCEPT L - Volunteers in the community provide transportation to seniors who need rides READ CONCEPT.				
a.	What is your initial reaction to this concept?				
b.	What, if anything, do you find appealing? Why do you say that?				
c.	What, if anything, is not appealing to you? Why do you say that?				
d.	How does this compare to your current means of getting around? Why is that?				
e.	Is there anything confusing or difficult to understand about the concept?				
f.	Is it something that you would consider investigating further if it were available in this area?				

Q9. On a scale of 1 to 10, where 10 means this form of transportation would be "very appealing" and 1 means form of transportation would be "not at all appealing," how appealing would this form of transportation be you?

Ver	у ар	peal	ing		No	Not at all appealing					DK
10	09	08	07	06	05	04	03	02	01	98	99

Q10. Again on a scale of 1 to 10, where 10 means you would be "very likely" and 1 means you would be "not at likely," how likely would you be to use this form of transportation?

Ver	y lik	ely			Not at all likely Rfs						DK
10	09	08	07	06	05	04	03	02	01	98	99

CC	NCEPT M - Subsidized taxi ser	vice. READ CONCEPT.
a.	What is your initial reaction to this concept?	
	uns concept.	
b.	What, if anything, do you find appealing? Why do you say that?	
c.	What, if anything, is not appealing to you? Why do you say that?	
d.	How does this compare to your	
	current means of getting around? Why is that?	
e.	Is there anything confusing or difficult to understand about the	
	concept?	
f.	Is it something that you would consider investigating further if it	
	were available in this area?	

Q11. On a scale of 1 to 10, where 10 means this form of transportation would be "very appealing" and 1 means t form of transportation would be "not at all appealing," how appealing would this form of transportation be you?

Ver	у ар	peal	ing		Not	t at a	II ap	peal	Rfsd	DK	
10	09	08	07	06	05	04	03	02	01	98	99

Q12. Again on a scale of 1 to 10, where 10 means you would be "very likely" and 1 means you would be "not a likely," how likely would you be to use this form of transportation?

Ver	y lik	ely			Not at all likely Rfsd						
10	09	08	07	06	05	04	03	02	01	98	99

- Q13. Would you be willing to use a debit card that debits from a bank account or from a special account, which you've already pre-paid? **(PROBE:** "If you were shown how to use one, how likely would you be to use
- Q14. Do you or have you ever used taxi vouchers? **(PROBE:** "Would you be willing to use a taxi voucher? I were shown how to use one, how likely would you be to use it?")

	on routes designed to link areas where concentrations of as and medical facilities. READ CONCEPT.
a. What is your initial reaction to this concept?	
b. What, if anything, do you find appealing? Why do you say that?	
c. What, if anything, is not appealing to you? Why do you say that?	
d. How does this compare to your current means of getting around? Why is that?	
e. Is there anything confusing or difficult to understand about the concept?	
f. Is it something that you would consider investigating further if it were available in this area?	

Q15. On a scale of 1 to 10, where 10 means this form of transportation would be "very appealing" and 1 means t form of transportation would be "not at all appealing," how appealing would this form of transportation be you?

Ver	у ар	peal	ing		No	t at a	ıll ap	Rfsd	DK		
10	09	08	07	06	05	04	03	02	01	98	99

Q16. Again on a scale of 1 to 10, where 10 means you would be "very likely" and 1 means you would be "not at likely," how likely would you be to use this form of transportation?

Ver	y lik	ely				No	t at a	Rfsd	DK		
10	09	08	07	06	05	04	03	02	01	98	99

		perates on a regular route, with deviations allowed so bus p off passengers who request deviation. READ CONCEPT.
a.	What is your initial reaction to this concept?	
b.	What, if anything, do you find appealing? Why do you say that?	
c.	What, if anything, is not appealing to you? Why do you say that?	
d.	How does this compare to your current means of getting around? Why is that?	
e.	Is there anything confusing or difficult to understand about the concept?	
f.	Is it something that you would consider investigating further if it were available in this area?	

Q17. On a scale of 1 to 10, where 10 means this form of transportation would be "very appealing" and 1 means form of transportation would be "not at all appealing," how appealing would this form of transportation be you?

Ve	ry ap	peal	ing		Not	t at a	II ap	Rfsd	DK		
10	09	08	07	06	05	04	03	02	01	98	99

Q18. Again on a scale of 1 to 10, where 10 means you would be "very likely" and 1 means you would be "not a likely," how likely would you be to use this form of transportation?

Vei	y lik	ely				Rfsd	DK				
10	09	08	07	06	05	04	03	02	01	98	99

Q19. When paying for transportation services, how would you prefer to pay?

INFORMATION SOURCES

- Q20. How do you get information about things going on in your community?
- Q21. How do you prefer to learn new tasks, like using transit? (e.g., brochure, try it with a friend)
- Q22. How do you get information about getting around the community?
- Q23. What types of information would you need in order to use transportation? (e.g., signage, schedules on pamphlets, posted schedules)
- Q24. Where would you look for this information? **(PROBE:** Do you pay attention to newspaper inserts? Brochures at the library? The Internet? Is direct mail useful?)

READ TO EVERYONE:

This concludes our survey. Thank you for your time and opinions. So that I can send you our thank you of \$25, c I please get your full address? (RECORD ADDRESS ON FRONT OF SCREENER.)

Handout #1

Describe your ideal transportation option if you could not drive

Handout #2

A satisfying transportation option is one that is
A satisfying transportation option is one that results in
A satisfying transportation options is one that does not result in

Transportation Concept L

Volunteers in the community provide transportation to seniors who need rides.

- Volunteers use their own cars.
- Passengers request trips in advance through an organization that matches volunteers with seniors needing rides – typically requests are made one to several days in advance, although some programs allow for same-day scheduling and service.
- Volunteer driver can provide help getting in and out of the car and to the destination.
- Trip is usually not shared with other riders.
- Cost to the passenger will vary.
 Examples: Passengers pay \$3 to \$5 per one-way trip depending on their trip distance.

What is your initial reaction to this concept? (Please explain)

How appealing would this form of transportation be to you?										
Very	appealing						Not	at all app	ealing	
10	09	80	07	06	05	04	03	02	01	

How likely would you be to use this form of transportation?										
Very	likely							Not at all	likely	
10	09	80	07	06	05	04	03	02	01	

Transportation Concept M

Subsidized taxi service.

- Taxi sedans and vans are used. A wheelchair accessible taxi can be requested.
- Passenger requests service the same way anyone requests a taxi – telephoning for a trip when you need one. Currently, wheelchair users are encouraged to schedule their rides one day in advance to ensure availability.
- Taxi provides pick-ups in front of your home and takes you directly to the curb in front of your destination.
- Some drivers are willing to help you get in and out of the taxi and sometimes to and from your door.
- Trip is not shared with other riders, unless you bring a companion.
- Cost for taxi voucher trip depends on the subsidy provided by your city or county. In Fairfax County, coupon books worth \$30 are sold for \$10 to eligible seniors. This means that a one-way trip that cost \$15.00 on the meter would actually cost you \$5.00, with an additional cost for the tip (recommended 15% on \$15 or \$2.25). The total charge for the one-way trip (\$17.25) would cost you \$7 with the coupons.

What is your initial reaction to this concept? (Please explain)

How appealing would this form of transportation be to you?										
Very	appealing						Not	at all app	ealing	
10	09	80	07	06	05	04	03	02	01	

How likely would you be to use this form of transportation?										
Very	likely							Not at all	likely	
10	09	80	07	06	05	04	03	02	01	

Transportation Concept N

Small buses travel on routes purposefully designed to link areas where concentrations of seniors live to local shopping areas and medical facilities. Service is operated on a scheduled basis.

- Small buses, accessible to passengers in wheelchairs, are used.
- Trips do not have to be requested in advance. Pickup times occur at the same times on the same days each week.
- In one type of service route, a bus would pick up at an apartment building at 10:15 every Tuesday and take them to the grocery store, returning at noon. The same bus on Thursdays would take seniors to the shopping mall, returning at 1:00...
- In another type of service route, buses would come by only two days each week (for example Tuesdays and Thursdays) every 30 minutes between 9:30 and 3:30, always using the same route going by residences, stores, and medical facilities within the same general area.
- Routes are designed to minimize walking to and from the bus. This means, for example, the bus would stop right in front of the door of the apartment complexes and the main stores, rather than on the street.
- Bus driver provides help in getting on and off the bus, but not to and from building entrances.
- Trips would be shared with other seniors and possibly younger persons with disabilities.
- Cost for trip may be the same or somewhat more than a regular bus trip – for example, \$2.00.

What is your initial reaction to this concept? (Please explain)

How app	ealing wo	ould this fo	orm of tran	nsportatio	n be to yo	u?			
Very	appealing]					Not	at all app	ealing
10	09	80	07	06	05	04	03	02	01

How likely would you be to use this form of transportation?											
Very	likely							Not at all	likely		
10	09	80	07	06	05	04	03	02	01		

Transportation Concept O

Bus service that operates on a regular route, with deviations allowed so the bus driver can travel off the route (from several blocks to up to 3/4 mile) to pick up and drop off passengers who request a deviation.

- Mid-size buses, accessible to passengers in wheelchairs, are typically used.
- Passenger requests a deviation in advance for example, several hours or possibly up to one day in advance. A set number of deviations are allowed, so that the bus can stay on its schedule.
- Bus may come close to your house or possibly to the curb in front of your house for a deviation trip, depending on where you live.
- Driver provides very limited, if any, help in getting on and off the vehicle.
- Once on board, seniors would ride with the general public.
- Cost for a trip is typically more than a regular bus fare

 for example, if the regular fare is \$1.00, the
 deviation may cost another \$1.00, for a total of \$2 a one-way trip.
- This route would offer free transfers to transit routes providing connections to other parts of the region.

What is your initial reaction to this concept? (Please explain)

How app	ealing wo	uld this fo	orm of trai	nsportatio	n be to yo	u?			
Very	appealing]					Not	at all app	ealing
10	09	80	07	06	05	04	03	02	01

How like	ly would y	ou be to	use this fo	orm of tran	nsportatio	n?			
Very	likely							Not at all	likely
10	09	80	07	06	05	04	03	02	01



Travel Diary

IR	RIP 1: Date:						
A.	TIME OF TRIP?		START:	FINISH:			
B. MEANS OF		1. Drove a Car					
	TRANSPORTATION? (PLEASE CIRCLE ALL	2. Ro	2. Rode in a car or something else driven by someone				
	THAT APPLY)	3. Us	3. Used Metrorail, VRE or public bus service				
		4. Wa	4. Walked to get to destination				
		5. Us	ed transportation provide	ed to people with disabi			
		6. Us	6. Used a senior or community van, such as dial-a-ri				
C.	IF SOMEONE ELSE DROYOU, WHO DROVE?	VE					
D.	IF YOU TOOK A TAXI, DII YOU USE A TAXI VOUCH		YES	NO			
E.	WHERE DID YOU GO ON YOUR TRIP?						
F. DID YOU USE ANY OF THE FOLLOWING? (PLEASE CIRCLE ALL THAT APPLY.)		1. A cane, crutch or walker					
		٧١	2. An electric wheelchair or scooter				
		1.)	3. A non-electric wheelchair				
			4. A person to travel with you				
			5. A person to help you get in and out of your				
			6. A person to help you get in and out of vehic				
G.	COMMENTS:						

Senior Brokers Focus Group Meeting Summary

August 18, 2005

Acknowledgements

The Northern Virginia Transportation Commission (NVTC) wishes to thank Fairfax County staff members Steven Sheard, Steve Yaffee, and Carol Erhard for their extraordinary support of this effort. These individuals helped to set the agenda, write focus group questions, and provide technical support on the software. They graciously made themselves and the Fairfax County Decision Support Center available for this study. Steve Markenson of WB&A Market Research provided excellent facilitation service.

Background and Objectives

On August 18, 2005, twenty-one professionals and volunteers met at the Fairfax County Decision Support Center to discuss the transportation needs of seniors in Northern Virginia. The individuals invited to participate in this focus group were brokers (professionals and volunteers) in direct contact with seniors and well aware of their transportation needs. The participants work for public, volunteer, and private organizations that provide seniors and adults with disabilities transportation service information and referral or actual transportation. A list of participants and their organizations is attached.

NVTC's objective for this focus group was to gain insights on the transportation needs of seniors that currently are not being adequately met. Participants were asked to describe an ideal transportation system for seniors and recommend short-term (the next five years) and long-term (over the next 25 years) solutions.

The Fairfax County Decision Support Center is a state-of-the-art facility that offers collaborative technology services to make meetings more efficient and productive. Participants were each assigned a workstation where they were asked to type in answers to specific questions posed.

This meeting summary is intended to provide an overview of the key messages received from focus group participants. A complete printout of all comments provided by participants through their workstation can be found is attached.

The Ideal Transportation System for Seniors

A Satisfying Transportation Options is:

Participants were asked to describe an ideal transportation system for seniors by focusing on satisfying transportation options. Accessibility, easy-to-use, reliable and available ranked as the top responses. Transportation providers should care for the well being of the individual by being supportive, providing safe transportation, making the system individualized, and assisting with mobility needs.

An accessible system should be sensitive to the needs and abilities of seniors. **Accessibility** was defined by participants according to the quality of service, whether the system serves a large geographic service area, and whether it accommodates riders' physical limitations.

- Participants would like seniors to have a system that operates seven days a week and during the evenings. Seniors who drive in the day may not drive in the evening (7-11pm). The non-peak service times need to be focused on seniors.
- The individual needs to physically access the vehicle. This may require assistance from the driver or an escort. The vehicles also need to be handicapped accessible.
- Vehicles should be well-maintained so that they are working properly and are dependable.

A complicated transportation system can discourage seniors. **Ease of use** was the second most important characteristic of a suitable system. This includes activities from scheduling appointments to handling fares.

- The individual should be able to schedule an appointment without a significant amount of lead-time. One or two days advance scheduling at the most. Same day service is ideal.
- Taxi drivers need to be responsive and accept the vouchers presented by the senior. Taxi drivers often show irritation with coupons, causing some seniors to feel intimidated.

Participants scored **reliability** and **availability** as a key element in a transit system for seniors. A reliable service was defined as one that runs on-time for both the outbound and return trip.

- Seniors need a reassurance from a live person that the vehicle will show on-time.
- A lack of reliability and availability of a service can cause anxiety, stress, frustration, and discourage ridership. Seniors need to get to locations on time in a stress free environment, feeling safe and reassured the driver will return from them.

Affordability was fairly important, but did not rank among the highest responses. However in discussion, cost was a significant issue for poor seniors and those in fear of depleting all of their resources.

A Satisfying Transportation Option Results In:

Participants were asked to list characteristics of what a satisfying transportation option results in. Decreased stress for the senior passenger would be the best result. This reduction would be obtained by a system that is safe, on-time, and comfortable. Seniors want to manage their lives independently and this is possible with a less stressful transit system. Participants indicated a stressful experience could build anxiety and frustration among its customers and ultimately discourage ridership entirely.

The **safety** of the senior is dependant on the service provider (driver) and the vehicle used to transport the seniors.

- Participants indicated that seniors worry about arriving at their destination safely. A senior's family members also need to be confident that the transportation their loved one receives is safe.
- There has to be a level of security with the driver and the vehicle. Seniors fear being jostled into wheelchair vans.

Reaching a destination **on-time** is very relieving for a senior. A service that is regularly tardy can cause distrust in the reliability. This can be very stressful if a senior only has one transportation option.

- A late arrival may mean a refusal of medical service or the senior may have to wait many hours for the next opening.
- The wait time for a ride should be no more than 5 or 10 minutes. 15 minutes would be the maximum amount of time.
- If seniors are being stranded numerous times, the word will spread to other customers and they will not use the service again.

Participants indicated a senior's **comfort** would greatly reduce the level of stress.

 A warm, assisting attitude of the service provider would make the senior feel more comfortable, lowering stress levels.

A satisfying; therefore successful, transportation option may enable seniors to remain in their own homes for as long as they desire. A lack of adequate transportation may severely limit a senior's housing choices.

A Satisfying Transportation Option Does NOT Result In:

Participants were asked to list characteristics of what a satisfying transportation option does not result in. The reported characteristics reinforced the ideals of a satisfying transportation services from the first two questions posed. The main negative characteristics discussed included: high stress and anxiety, missed appointments or being stranded, and high costs.

Most of the characteristics described rely highly on good customer service. Seniors are looking for drivers that provide a comfortable, stress free environment. They also need services to take them to a variety of venues and that offer extended hours of operation.

This question lead participants into a discussion of availability and funding for transportation services.

- It was reported that in one jurisdiction, limited transportation funding has resulted in intergeneration "wars" over resources. Younger individuals with disabilities fight against the senior population for resources to fund appropriate services. Another participant pointed out that MetroAccess has to compete against Metrorail and Metrobus for funding.
- Metrorail is not a satisfying option for many seniors because it is primarily designed to serve commuters to the central business district.

<u>Transportation Needs Identification</u>

Participants were asked to provide general and specific examples of the transportation needs of their senior clients that are not currently being met or to describe the types of transportation challenges their clients experience.

Destinations Not Served:

1. Types of destinations not served by existing transportation options.

Some of the responses are as follows:

"Areas outside of one's county"

"Walter Reed Medical Center"

"Long distance trips"

"Beauty/barber shop, church, drug store, appointments outside area"

One participant who is familiar with the decision-making for county policies gave an in-depth explanation of this problem. As an increasing number of seniors give up driving, they are left "marooned and isolated or dependent on others (if available) for meeting their travel needs." This participant cited the root of the problem as dispersed development patterns coupled with minimum transit availability, and suggested that the county invest in "low-cost, widely diffusible transit modes" that would benefit seniors and the general population.

2. Longer trips

- There is a need for long distance transportation (greater than 60 miles).
- One participant lists the facilities in the County where seniors reside or make frequent visits:

"...senior housing facilities, senior centers, community centers, adult day care facilities, and large commercial properties where physicians, specialists, and grocery stores are located."

3. Inter-jurisdiction Paratransit

 Many participants indicated seniors need to be able to travel out of their jurisdiction. For example one comment was: "Metro only serves jurisdictions that are part of its compact."

Inaccessible Infrastructure:

Some seniors are unstable and have trouble walking, requiring door-to-door service from providers. They also need assistance carrying packages such as groceries. Some seniors may require a knock on the door if they have trouble remembering pick-up times.

1. Inaccessible Infrastructure:

Responses are as follows:

"Many of the bus stops do not have benches for people to sit and wait or be protected from the weather"

"Curb cuts that do not align with bus stops that may be mid-street or no curb cut where bus shelter is located"

"Difficult getting bus drivers to make stop announcements which assists all customers, but especially seniors and customers who are blind or who have cognitive disabilities and need assistance orienting themselves as they travel on the bus so they know at what stop to get off."

"Wheelchair lifts that break down frequently"

- 2. Few door-to-door Options:
 - Responses are as follows:

"Significant problems for people with minimal mobility"

"This is a very important concern for independence"

3. Bus Deviation is an important service for those who cannot wait on a street corner for an extended amount of time. Some areas do not have transit within miles. The problem is that people move out to these areas with no transit and later want transit to come to them.

Eligibility Limitations:

- 1. Eligibility limitations regarding income, age or disability leave some stranded, without the service they need.
 - Occasionally there are no transportation options for low-income seniors; public transportation may not reach their neighborhoods or they may be unable to even afford discounted transportation.
 - Even seniors who can afford the taxi fee are worried about having enough money.
 - Seniors have to qualify by income level, age, and disability to be eligible for special transportation services. One participant explained that the number of different services, each with its own qualifying standards is confusing for industry professionals. S/he recommended increased consistency among providers to make it simpler to access these various options.

- Several participants suggested a fee scale for higher income seniors, allowing them to receive service as well.
- 2. The existing services for seniors have several limitations. For example MetroAccess only serves people with disabilities and requires a certification of the disability. This certification expires every three years, even for individuals permanently disabled.
 - Participants commented on the existing services:

"MetroAccess does not serve seniors unless they have a disability."

"In Alexandria, the in-town trips are available to all seniors age 60+ without regard to income for medical appointments and grocery shopping."

"Although seniors 75+ have options for lower cost taxi's many people under this age are also in need"

Assistance Needs:

- 1. Door-to-Door Service
 - The overall response from participants is that transportation services should at least offer door-to-door services. Some participants would like to see more door-through-door services. "Many of the transportation services do not provide assistance for seniors with packages, getting in and out of the vehicle."
- 2. Training for Paratransit Drivers
 - Drivers need more training on how to assist seniors and people with disabilities. Drivers need to display some sense of sensitivity to a senior's physical limitations or mental disability.
 - One participant recommends having seniors at the training sessions so a
 dialogue can take place. "Service providers need to be kind, patient, and
 trained to know that older people will probably operate a lot slower than
 younger people." A language barrier may cause further frustration for the
 rider and driver.
 - Healthy seniors need a personal escort to demonstrate how to navigate the bus/rail systems.

Service Span Hours:

Participants indicated service hours need to be extended to the late afternoon, evening, and weekend hours. The paratransit services should mirror the general availability of transit services now in existence. An adequate volunteer service is also important. Currently the limited number of volunteers affects the availability of the service provided.

Cost:

1. High Fares

- Participants suggest the use of an "easy pass" for seniors, similar to what
 is used for toll roads. There needs to be a uniform method of payment
 accepted by each of the transportation vendors.
- Many seniors cannot afford the price of transportation. The income requirement should be abolished. Many people are left behind because they require an escort and cannot afford it.

2. Operational Costs

 Agencies costs increase on a daily basis. The cost of gasoline, additive equipment, and labor are a few examples of operation expenses. One participant suggested an emergency fund be in place to meet the growing needs.

Reliability

- 1. Participants were posed the following questions: Is the service dependable? Does the bus show up when it is scheduled? Does the taxi provide a return trip as requested? How much stress is caused by lack of certainty in how the service will perform?
 - Responses are as follows:

"Frequently not picked up for appointments with enough time to meet deadline. Also left waiting at the doctors office for return transportation to home."

"Drivers not always sure of destination"

"Many times seniors wait for a while, go back in their homes to make calls and then the transportation comes and leaves them because they are not outside waiting." "A lot of stress is caused by unreliable service"

"They end up feeling trapped in a system that is not good for them, but they have no other choice."

2. Taxi Driver versus Private Drivers

- Participants indicated that taxi drivers cause tremendous stress for the senior. "Taxi services provide unreliable service." There is also a shortage of wheelchair accessible taxis.
- Participants favor volunteer private drivers. "Private drivers offer the greatest dependability."
- Both services need to meet the needs of the senior. Providers need to be well trained and on-time. Only a ten-minute window is acceptable.

Ease of Use:

Participants were asked: "Can seniors easily locate understandable information, or are they required to make call to multiple agencies and individuals?"

- 1. There is still little written information that presents a compilation of all providers' services available to seniors. While there is considerable information on fixed-route services available over the internet, most seniors do not use the technology and thus cannot access this information. Sometimes there is too much information to comprehend over the phone. Foreign accents of information line operators can also add confusion for the senior with poor hearing. Some systems are complicated because of the operating conditions. A senior has to find out: "Do they qualify? Where will the service take them? Who do they have to contact in order to get the service?"
- 2. Participants made suggestions to improve the ease of use of a system:
 - "More medical and personal services that come to seniors like 'wills on wheels' and 'meals on wheels'."
 - "Where possible, have a live person answer phone—voice mailbox options are hard to hear for seniors and difficult to maneuver."
 - "Ensure that information is simple, easily read and is sensitive to non-English speaking seniors."

 "For each transportation option there should be, ideally, a mentor program teaching the rider how to use the system most effectively."

Convenience:

Participants were asked the initial question: Does the service take seniors where they need to go when they need to go?

1. Extended Service Hours

- Transportation providers need to extend the hours of their service to include 7-11pm and weekends.
- 24-hour service also needs to be available.

2. Special Trips

- Seniors often need service to other areas such as John Hopkins in Maryland.
- Emergency medical appointments need same day service.

Other:

The following are responses from participants identifying needs not already addressed:

- "A change in attitudes of elected officials regarding the importance of the transportation of seniors."
- "Assisted living facilities are resistant to their residents being able to use non-facility transportation services even if the resident is mobile."
- "We have found that even though adult care facilities advertise as offering transportation, they often do not provide it on an as-needed basis."
- "We need to address ESL (English as a Second Language) for seniors and the unique issues that will arise with language and cultural barriers."

Potential Solutions:

Potential solutions were discussed among the participants in an open forum. Elected officials need to recognize the need and fund the solutions accordingly. Public transportation needs to be improved for every user. The design of communities need to be discussed and planned by land use and transit

individuals. Some participants advocated for planned communities with mixed-use development where everything would be conveniently located near everything else (medical facilities, stores, senior housing), less spread out and easier to get to. One participant added that age-segregated communities are not an ideal solution—intergenerational communities are better. Even in well-planned communities, more sidewalks accessible to seniors and persons with disabilities are needed. Someone offered that additional regulations are needed to put builders and transit providers together to develop infrastructure. S/he offered the example of where Fairfax County built a homeless shelter on Route 29 without any nearby bus service. Someone else mentioned that transit proffers are not negotiated in all jurisdictions.

<u>Transportation Concepts</u>

Participants were presented with five different transportation concepts. They were asked to list the advantages and disadvantages of each.

Concept L: Volunteers in the Community provide transportation to seniors who need rides.

Passengers request trips one to several days in advance through an agency, matching them with an appropriate driver. Some same day scheduling may be possible. Volunteers would use their own cars and provide help getting in and out of the car and to the destination. Trips are not shared with other riders. Cost to passenger will vary depending on distance.

1. Advantages:

- Participants stated this option cares for the whole individual. It is a
 reliable, accessible, personal, comfortable, safe, and simple service.
 Since it would be a private ride of the senior, the driver can be for flexible
 to help them with their needs. This also provides some much-needed
 one-on-one attention for the passenger.
- The ability to match a driver to a particular passenger was also favored by participants. This would allow a passenger to request a person, for example, men might prefer a male driver. It would also be "possible to develop a relationship with someone." The passenger would be able to build a trust with the driver, lowering that passenger's stress level.
- Several participants indicated that the cost of the service was affordable. "This has a potential to provide a low cost solution to a big need."
- The same day service would also be beneficial to the customer. This service could serve as a back up for missed trips. "There is a lot of interest in using same day service."

2. Disadvantages:

- Cost is also listed as a disadvantage for low-income seniors if they need numerous trips.
- Many of the disadvantages are for the volunteer. The volunteer will have to pay for the gas and afford the increasing prices. They may also have to pay for increasing their liability insurance.
- Since the volunteers are using their own vehicle there are less chances that it will be wheelchair accessible. "Can this service meet all types of physical disability needs?"

Concept M: Subsidized Taxi Service

This service provides wheelchair accessible taxi sedans and vans upon request. Passengers would schedule a trip the same way anyone would request a taxi. Wheelchair users are encouraged to call one day in advance. This would be a curb-to-curb service. Some drivers are willing to help the passenger get in and out of the taxi and sometimes to and from your door. Trips can be shared with other riders unless the passenger brings a companion. Cost of taxi voucher trip depends on the subsidy provided by the passenger's city or county.

1. Advantages:

- Participants found this concept to be more flexible for seniors.
 Passengers do not have to schedule a trip far in advance, which gives them a sense of normalcy.
- The "door-to-door service is very desirable." This concept would be acceptable as another option for seniors.
- Wheelchair accessibility is also thought to be a great asset by the participants.
- The drivers are familiar with most routes in the area and already have liability insurance.

2. Disadvantages:

 Currently this system is unreliable. The drivers show up late, leaving a senior to stand outside in various weather conditions.

- This is an impersonal form of transportation. "Many drivers lack sensitivity to the needs of seniors, are unable to assist with disabilities, frequently have heavy accents, and are not understood by seniors."
- This option is also thought to be too costly for low-income passengers.
- Wheelchair accessible vehicles are not always available. Passengers may require more assistance since this service is not always door-to-door.

Concept N: Service Routes

Small Buses travel on routes purposefully designed to link areas where concentrations of seniors live to local shopping areas and medical facilities. Service is operated on a scheduled basis.

This service operates small, wheelchair accessible buses. Pickup times occur at the same times on the same days each week and trips do not have to be requested in advance. Routes are designed to minimize walking distance to and from the bus. Bus drivers would provide help getting on and off the bus, but not to and from building entrances. Trips would be shared with other seniors and those with disabilities. The cost of the trip would be comparable to a regular bus trip.

1. Advantages:

- Most participants indicated this was a good concept for those mobile seniors living in an apartment complex. Seniors would have the opportunity to meet others in the complex and assist others with needs.
- The cost of this service is considered inexpensive.
- The structured schedule allows the passenger to plan their appointments around this transportation.
- "Trying out this system may encourage seniors who are able to begin to use Metorbus or local bus service to get around for other trips."

2. Disadvantages:

- This service is limited to those passengers who do not need assistance to the building entrance and those who live on the route of the bus. This service would leave out most of the population in single-family homes.
- There is concern for how long the passenger will be riding on the bus. "What if the bus is full?"

The destinations of the service are also limited.

Concept O: Route Deviation

Bus service that operates on a regular route, with deviations allowed so the bus driver can travel off the route (from several blocks to up to ¾ mile) to pick up and drop off passengers who request a deviation.

A mid-size bus, accessible to passengers in wheelchairs would typically be used. The deviation requests need to be made in advance from several hours to one day. The bus may come close to the passenger's home or possibly to the curb in front of their home. Driver provides limited, if any, help getting on and off the vehicle. Senior would ride with the general public and the cost for a trip is more than a regular bus fare. This route would offer free transfers to transit routes providing connections to other parts of the region.

1. Advantages:

- Participants found this concept to be an excellent idea. "With accessible bus stops, this is an idea that could meet the needs of a significant number of seniors."
- This is an affordable option of transportation for independent seniors.
- It is also a benefit to have seniors interacting with the general public.

2. Disadvantages:

- Passengers need to be educated on how to use the system. This service can be inconvenient and some seniors maybe reluctant to use the bus.
- This requires advance planning and the driver on the return trip my not be aware of the deviation.
- Seniors still have to wait in weather conditions. The wheelchair accessibility remains a limitation. Seniors who need assistance would be at a disadvantage.

Concept P: Travel-Training

Travel training provides seniors the opportunity to learn how to use the public transportation system through a hands-on learning experience. Trainers would ride with seniors to and from a destination explaining how the system worked. The bus delivers seniors to Metrorail stations where they learn how to determine

the fare and purchase Metrorail fare cards, read the system map and board the trans to travel by rail.

1. Advantages:

- Many participants found this to be an "excellent" option, giving the senior some independence.
- The one-on-one concept is good for those seniors who need individual attention. The senior needs to be matched appropriately with a trainer who speaks the same language.
- "Travel training would provide an opportunity for passengers to learn to use public transportation rather than to depend on paratransit or senior transit services."

2. Disadvantages:

- This option is not feasible for seniors with special needs.
- There needs to be an incentive for the senior to try this option.
- There may be too much information for the senior to comprehend. It takes the right kind of trainer for the senior to feel comfortable.

Discussion Exercise

Participants were told they had been appointed to the Northern Virginia Transportation Authority, the regional body responsible for deciding which solutions to pursue. They were asked to come to consensus on the solutions to pursue for the next five years and over the next 25 years.

Recommendations included establishing a broker system where seniors could get one-stop information on transportation services available to them in the region and schedule rides on those services, measures that would improve the accessibility of public transportation, and recommendations on the best means of getting information to seniors. They recommended that funding decisions be guided by an assessment that quantifies the extent of the different transportation needs of seniors.

Participants indicated the limitations of just one solution. A solution for Arlington might not work for Prince William County. The services should be built on existing infrastructure. "One size doesn't fit all localities or all seniors." The main focus of the services should be to enhance the quality of life of passengers by providing quality transportation services.

Public officials need to be convinced that the population is aging, and that seniors want to age in place and maintain mobility. The adult councils and commissions on aging should be used to lobby public officials. Officials should role-play people with disabilities to see the impacts upon mobility.

Recommended Measures to Improve Senior Mobility

- Public transportation in general needs to be improved and seniors need to be included in the design of services. Public transit needs to be promoted. There should be disincentives for driving single-occupancy vehicles.
- Increase the accessibility of public transit by bus by installing sidewalks, bus shelters and benches, posting schedules, purchasing low-floor buses that do not require users to step up to get on the bus, and providing an attendant to help with boarding.
- Use a universal debit card accepted by all providers (regional SmarTrip card accepted on all buses and taxis).
- Riding transit needs to be simple. Voice announcers should be operational.
- The unanimous decision of the group was to fund travel-training. Use high-school volunteers to learn transit and train folks. Also, "train seniors to help seniors."
- Volunteer driver programs were also accepted, but participants still emphasized the need for more funding.
- Developments should be responsible for sponsoring shuttle services.
- Provide one central location for travel information for seniors. A broker should match seniors with rides using a computerized system. Home visits maybe required to assist some seniors in filling out an application. Fund a broker to coordinate all the discussed concepts and refer seniors to the option that best fits their needs. Users are registered with information indicating their needs and capabilities. Bilingual staff would be needed.
- Provide a senior travel kit explaining how to get to various destinations. It should also be translated into different languages.
- Information should be distributed to senior centers, senior housing, NORCs, churches/synagogues, etc.

- The Area Agencies on Aging are good sources of information, but there are still many resources that need more funding.
- Most seniors get information about transportation options by word of mouth.
- Seniors should be aware that the services cannot accommodate everyone because of the lack of funding.

Senior Brokers Focus Group Session Transcript 8/18/05

	Agenda - NVTC
8/18/2005	
10:00 AM	WELCOME & INTRODUCTION
10:05 AM	SESSION SIGN-IN & INTRODUCTIONS (Topic Commenter)
	Today's attendance.
10:15 AM	REVIEW AGENDA & GROUND RULES
	Facilitator discusses agenda for the session and review ground rules.
10:20 AM	HOW ARE YOU INVOLVED? (Topic Commenter)
	Provide information about your involvement in transportation issues for
	seniors. What senior transportation services, if any, does your organization
	provide?
10:30 AM	IDEAL SYSTEM (Topic Commenter)
	Participants will identify the qualities of a satisfying transportation system for
40 40 13 5	seniors.
10:40 AM	TRANSPORTATION NEEDS IDENTIFICATION (Categorizer)
	Participants will identify the transportation needs of seniors that are currently
11.00 43/	unmet and provide an idea of the extent of those needs.
11:00 AM	TRANSPORTATION SOLUTIONS (Categorizer)
	Participants will participate in a brainstorming session to identify potential solutions to meet the needs of seniors.
11:10 AM	TRANSPORTATION CONCEPT L (Categorizer)
11:10 AW	Participants evaluate advantages and disadvantages of a potential solution
	already proposed.
11:15 AM	TRANSPORTATION CONCEPT M (Categorizer)
11.13 AW	Participants evaluate advantages and disadvantages of a potential solution
	already proposed.
11:20 AM	TRANSPORTATION CONCEPT N (Categorizer)
	Participants evaluate advantages and disadvantages of a potential solution
	already proposed.
11:25 AM	TRANSPORTATION CONCEPT O (Categorizer)
	Participants evaluate advantages and disadvantages of a potential solution
	already proposed.
11:30 AM	TRANSPORTATION CONCEPT P (Categorizer)
	Participants evaluate advantages and disadvantages of a potential solution
	already proposed.
11:35 AM	BOARD EXERCISE
	Participate in a role-playing exercise serving as members of the board that has
	to decide which solutions to pursue.
11:55 AM	SESSION FEEDBACK (Topic Commenter)
12:00 PM	WRAP UP & ADJOURN MEETING

SESSION SIGN-IN & INTRODUCTIONS (Topic Commenter)

Participant Instructions

Please provide us with your Electronic Business Card information.

DOUBLE CLICK on sheet of paper and key in your information in the edit window at the bottom. Then click on SUBMIT and CLOSE.

Thank you.

1. ELECTRONIC BUSINESS CARD (Name, Organization, Title, Phone #, E-mail)

Steve Sheard

GDSC

Technographer

207-6960

Steven, {#13}

Louise Armitage

Human Services Coordinator

City of Fairfax {#14}

Janice Holmblad

Shepherd's Center of Oakton-Vienna

Executive Director

703-281-5088

jholmblad@scov.org {#15}

MaryAnn Griffin

City of Alexandria

Director, Office of Aging and Adult Services

703 838-0921 {#16}

Pat Williams

President, GraceFul Care, Inc.

Chairman, Herndon Dulles Chamber of Commerce

703-904-3994 Pat@GraceFulCare.com {#17}

Rikki Epstein

WMATA

ADA Project Officer

202-962-1125

repstein@wmata.com {#18}

Buffy Ellis KFH Group, Inc. Sr Transportation Planner 301-951-8660 bellis@kfhgroup.com {#19}

Michael Artson FASTRAN Transportation Planner 703-324-7071 michael.artson@fairfaxcounty.gov {#20}

Cheryl Johnson
PRCR - Office of Senior Adult Programs
Countywide Director of Senior Centers
703-228-4746
cejohnson@arlingtonva.us {#21}

Nancy Sutton Loudoun Volunteer Caregivers, A Faith in Action Program Executive Director 703-779-8617 NSutton@LVCaregivers.org {#22}

Michele G. Campbell Arlington Agency on Aging Aging Services Specialist 703-228-1729 mcampb@arlingtonva.us {#23}

Linda Peterson Coordinated Services Planning - DSMHS Social Worker II 703-324-5448 Linda.Peterson@fairfaxcounty.gov {#24}

Marion Pontzer
Fairfax County Department of Health
Public Health Nurse
(703)237-6011
marion.pontzer@fairfaxcounty.gov {#25}

Marion Jacknow Fairfax Area Agency on Aging Director, Older Worker Employment Program (703) 324-5426 {#26} Joan DiCostanzo
Jewish Council for the aging
Senior HelpLine
I & R
jdicostanzo@jcagw.org
301-255-4213 {#27}

Louise Armitage
Human Services Coordinator
City of Fairfax
703 385 7894
LArmitage@fairfaxva.gov {#28}

Denis P. Paddeu
Fairfax County Dept. of Transportation
Transportation Planner III
703-324-1439 Voice
Denis.Paddeu@fairfaxcounty.gov
Denis #17 {#29}

Mary Cadden Manager, Connect-A-Ride Jewish Council for the Aging 11820 Parklawn Drive, Suite 200 Rockville, MD 20852 301-255-4207 mcadden@jcagw.org {#30}

john r hudson dfs/dspd program mamager 703-324-5874 john.hudson@ fairfaxcoubty.gov {#31}

Nelfred Tilly Blanding
DSMHS
Regional 4 Community Developer
703-324-5252
Tilly.Blanding@fairfaxcounty.gov {#32}
Member, Fairfax County Long Term Care Council {#33}

Jerry Kieffer
Senior Employment Resources & Transportation Consultant
Annandale, VA 22003
(703) 591-8328
Kiefpubl@aol.com {#34}

Lin Wagener
PWAAA
Dir., Prince William AAA
703-792-6406 lwagener@pwcgov.org {#35}
marion.jacknow@fairfaxcounty.gov {#36}

RAYMOND T. JOHNSON, OFFICE OF TRANSIT SERVICES AND PROGRAMS 5100 CITY OF ALEXANDRIA, VIRGINIA {#37}

Mary M. Jackson Past President Herndon-Reston FISH 703-391-0105 {#38}

RAYMOND T. JOHNSON, URBAN PLANNER OFFICE OF TRANSIT SERVICES AND PROGRAMS 301 KING STREET, ROOM 5100 AlexaNDRIA VA 22314 703-838-3800 Raymond.Johnson@alexandria.va.us.gov {#39}

HOW ARE YOU INVOLVED? (Topic Commenter)

1. How are you involved in transportation issues for seniors? What senior transportation services, if any, does your organization provide? (Please identify your organization)

I work at a senior center with assessments and referrals--I give information to seniors and their families. My org. doesn't supply any transportation services. I am with the Fx. Health Dept. Sometimes home visiting seniors and providing resource information. Our agency provides volunteer non-emergency transportation for frail seniors and adults with disabilities. In addition to medical, we also provide transportation to the grocery store, bank, and any support service that is necessary for QUALITY of life. Our volunteers use their own vehicles and are not re-imbursed for mileage.-Loudoun Vol. Caregivers

Provide information on the available transportation services, assist them in getting into these services, as well as advocate for new /better programs to serve the needs. We do not

provide direct transportation services but do fund several of the options that are provided by contractors. Participate in the CoA Transportation committee. staff to fairfax area disability services board which advises the board of sups on matters related to people with disabilities and their access to sevices and community life. advocate for access for all age groups. also serve on council of gov. access for all committee.

PWAAA provides transportation in County vehicles to our adult day care and senior centers programs, funds a volunteer organization to do one on one transportation, and PWAAA runs a tour bus program (35 capacity) in our own tour bus and trips go all over the Country.

Provider of bus and rail transportation. Oversee a project to educate people with disabilities and senior citizens about using public transportation. Conduct presentations and briefings to consumers and service providers about accessible public transportation options. Conduct free bus and rail system orientations to help people with disabilities and senior citizens learn how to use Metrobus and Metrorail. Ensure that Metro is in compliance with the Americans with Disabilities Act, and work to enhance accessibility of Metrobus and Metrorail. Reduced Fare Program for Seniors. -- Metro Office of ADA Programs

I contractually purchase both FASTRAN Dial-a-Ride and Seniors on the Go services from Fairfax County for City of Fairfax residents. I also help certify people for the CityWheels paratransit service in the City, provide information and referral to callers about MetroAccess and arrange transportation assistance through FISH or other volunteer avenues.

our org takes calls from seniors looking for transportation services. we provide referrals to various transportation agencies such as fastran, seniors on the go, metro access. We also do direct referrals to area community based organizations we work with (they use us as a screening base) who provide limited volunteer transport services. I work for a human service transportation program that transports seniors to Adult Day Care Centers, and Senior Centers. In addition, we transport low income seniors to medical appointments and for essential shopping.

I manage the Connect-A-Ride program for Montgomery County, MD. This is an Information and Referral service for seniors and/or their caregivers in Montgomery County, MD. In addition, we're helping to pilot a new program sponsored by the Jewish Federation/Community Partners, Smooth Riding, which is a program aimed at NORCs. My office manages and operates a special transportation program. we have three 28-passenger buses and 2 wheel accessible vans. the programs transports seniors to the senior centers, grocery shopping, personal shopping, recreation and special events.

the city of Alexandria funds a senior taxi program for residents age 60+ that provides transportation to medical appointments within the city and within a 5 mile radius outside

of the city and grocery shopping within the city. seniors pay \$1.50 per one way trip, with unlimited access to the number of trips that they may take.

Out of the DFS/Fairfax Area Agency, I direct and coordinate an Older Worker Employment Training Program for persons age 55 and over of very limited income. These persons work/train in community public and private non profit agencies throughout Fairfax County. Most use public transportation to get to and from their training sites - and use public transportation in the evening to get to and from vocational training in the area schools. Our agency often coordinates the transportation for these people.. I am involved with educating and assisting seniors with transportation provided to them. We offer discounted transportation services to senior in the county. We provided senior nutrition program transportation, super senior taxi, and senior center adult transportation program.

DSMHS

I am not directly involved with senior transportation issues in my job, rather indirectly as I serve the community-at-large in region 4. I've been in this particular position for 2 months and as of yet this has not come up as a significant problem---not to say that it is not. My agency ddeals with this issue through the CSP workers who take calls each day relating to residents needs. I've dealt with this issue in other positions that I've had in the county.

PROVIDE PARATRANSIT SERVICES TO PERSONS WHO HAVE DISABILITIES, MANY OF WHICH ARTE ELDERLY. OVER ONE THIRD OF OUR CLIENTS LIVE IN HOUSING FOR THE ELDERLY.

GraceFul Care is an agency providing nonmedical assistance and companonship for our seniors/elders, with a 2 hour minimum and no maximum. I have 60 caregivers and need more! Every day we receive at least 5 calls for assistance, and 99% of the time, transportation is required, if not daily, at least weekly. Our group of caregivers is mostly a college-educated group, as opposed to a custodial group of caregivers. Our clients want a mature helper, whose language they can understand.

Our agency provides information and referrals for public, volunteer and private transportation in Montgomery and Prince Goerge's Country, Washington, DC and Northern VA. One dept. call Connect-/A-Ride provides this just for Montgomery County. For the other areas we try to give options and often that is challenging due to the financial situation of the senior who is calling and the avilability of transportation and the senior's need/disabilities/transportation destination such as going outside of their county....NOVA to Washington, DC, for example.

In cases where they need groceries and want to go shopping we will give other options such as calling a place that delivers groceries, etc.

Shepherd's Center of Oakton-Vienna. Volunteers from our organization provide transportation to medical appointments. Volunteers also provide transportation to non-

essential locations, grocery and other shopping, library, our programs activities, hair appointments, visits to spouse or firends in nursing care. Volunteers are mostly adults over 50.

Services are for people over 50. Transportation provided in volunteers personal vehicles. I am employed with the FC Department of Transportation and am responsible for all services and rousources related to seniors and transit. My position was indentified as part of something called the Senior Initiative whihc was a compliation effort generated by a County work group in late 1998 -99. The final report was provided to the BOS and County Executive in 1999 and was the first written acknowledgment that the County was going to face a significant increase in the number of seniors who were residing or going to reside in the County. Currently, I oversee a subsidized taxicab program for income-eligible seniors in the County as well as urruently developing a Travel Training program to re-orient or teach seniors how to use the fixed-route system here in Northern VA I became involved with senior transportation issues when I served as Staff Director of the 1981 White House Conference on Aging. I served also as a transportation consultant on emerging transportation issues for mqny years. Served as a member of the Fx Commisssion on Aging and presented a senior transportation issues report with recommendations to the County Brd. of Supervisors in the lqte 1980's.

IDEAL SYSTEM (Topic Commenter)

1. A satisfying transportation option is:

reliable, easy to access, hours of operation meet the needs of the clients {#4} easy to use, not complicated {#5} accessibility and availability to most seniors, better hours of service {#6} ez to use, reliable, accessible, door to door {#7}

Complete accessibility for all people. Getting to and from where you need to go without difficulty. Ease of use. Good customer service. Dependable and reliable. {#10}

getting to the appointment on time and returning home in a timely manner. Any help needed for mobility is provided {#11}

One that is accessible, safe, convenient, affordable and widespread. {#12}

one that meets the clients needs {#13}

a ride that is as efficient and economical as if I drove it myself, picks me up at my house when I need to be picked up, reassures me they will be there {#14}

Transportation that is to my avail at times that I need it, easy to access, easy to use. {#16}

individualized, supportive, available when needed, caring, accessible {#17}

handicapped accessible sensitive to the needs and abilities of seniors easy to use timely pickup {#18}

a system that operates 7 days a week A reliable system {#20}

one that reaches all areas in PWC and the cities of Manassas and Manassas Park. It would have escorted transportation available to all seniors on a sliding fee scale. {#21}

SAFE, EASY AND ACCESSABLE TRANSPORTATION {#22}

- . buses that travel frequently between the hours of 7 AM and 11 PM
- . a taxi system that is responsive and shows up on time or shows up at all.
- . a provider that can assist people in and out of the vehicle used. {#27}

one which is affordable, easily accessible, doesn't require significant lead time (greater than a day or two to schedule), available regardless of income, on time, provides services to a variety of venues--social, medical, grocery store, etc, multi-lingual {#37}

Availability of a reliable, convenient, all weather means of enabling seniors to get to jobs, places of recreation, shopping, and government and other services. {#47}

being reassured that someone IS coming to pick me up! {#50}

Help to get my groceries into my house. Help to get into the doctor's office and out. {#61}

2. A satisfying transportation option results in:

being picked up on time; feeling safe in the source of transportation; can afford the transportation; can get in and out of the transportation vehicle. {#9}

getting where you need to get on time and without worry {#15}

getting to destination safely and on time {#19}

Being able to get out and where you want to go on time and with ease. {#23}

non-stress with transportation, feeling that the person still has independence {#25}

arriving at my destination on time and relaxed, allowing me to go all the places I need to go $\{#28\}$

having the client picked up on time and transported to the destination in a manner that is comfortable for them and not stressful. {#29}

An individual(s) who can access the myriad of resources and amenities through the use of a viable and flexible transit system. {#31}

a reliable service--getting to appointments on time and being picked up when requested {#32}

all older adults being able to remain in thir own homes for as long as they desire older adult able to get where they want to go $\{\#33\}$

etting to destination safely; on time and being able to get in and out of vehicle; not having a difficult time setting p appointment to get the transportation. {#34}

low cost reliable {#35}

ease and stress free feeling - picked up on time and arrive on time. {#41}

Delivering a service that has the outcome I expect and need---timeliness, safe, comfortable and stress-free. {#43}

satisfied customers. In the case of seniors those customers are also their family caregivers who are trying to see that their older relative gets the services he or she needs, allowing the daughter or son to work without worry. {#44}

good customer service, satisfied customers, getting to destination on time, feel safe and secure with the service, high use {#45}

getting to and from the destination on time without fear or intimidation from the provider

who may be irritated by the method of payment if it is other than cash {#51}

- . Getting where you need to go and be on time.
- . Having options. {#52}

CLIENTS BEING ABLE TO GET TO VARIOUS ACTIVITIES IN THEIR LIVES AND HAVING THE INDEPENDENCE TO MANAGE THEIR OWN AFFAIRS. {#53}

3. A satisfying transportation option does NOT result in:

DELAYED OR MISSED TRIPS {#8}

limited availability or being cost prohibititive to the senior {#24}

anxiety, missed appointments {#26}

frustrated, stranded riders, {#30}

denial of services, poor customer service, not being able to get to where you need to go on time {#36}

distress, anger, upsetment, accidents, etc. {#38}

my standing outside in the heat or cold or rain, being forgotten about, missing my appointment, {#39}

A frustrating system that does not meet the needs of the user. {#40}

anxiety, missed or late appointments, a cost decision between transportation and other necessities {#42}

missed trips unreliable equipment {#46}

feeling stressed due to not being picked up on time or getting to destination on time. {#48}

expensive, inaccessible either physical or because of time of need, frustratation, missed appointments {#49}

anxiety over being picked up on time, denial of services, missing appointments {#54}

Undue stress on my physical and emotional well-being. {#55}

being picked up late; disrespect by the driver; being over charged; not be ing able t get trasportation when needed. {#56}

population wars or one age group against another in order to get limited transportation. There needs to be enough available for older adults and younger disabled. {#57}

unsatisfied customers, under utilized service, frustration, limitations of service {#58}

persons being stranded, missing appointments, too costly for regular use, unavailable to persons of moderate income, break down {#59}

- . Being left standing by the curb on a freezing night.
- . Arranged transportation not showing up at all. {#60}

METRORail is not a satisfying option for many seniors because its rail lines qre too few and don't go to the daily destinations that many seniors wish to relqe to. It can't be diffused, as are the residences of most seniors because its construction and O/M costs are too high. {#62}

TRANSPORTATION NEEDS IDENTIFICATION (Categorizer)

DESTINATION not served

1. Destinations not served: Types or specific destinations not served by existing transportation options.

Areas outside of the County {#26}

Walter Reed Medical Center {#27}

long distance {#28}

long distances, other counties, DC area {#30}

Beauty /Barber shop, Church, Druug Store, appointments outside area {#31}

Veterans Hospital in D.C. {#32}

UVA medical center {#36}

DESTINATION IN WASHINGTON, D.C., MARYLAND AND AREAS SOUTH OF THE NORTHERN VIRGINIA AREA ARE NOT IN THE SERVICE AREA. {#41}

The community transportation availability is far too limited for the entire population. For seniors, the situation is much more difficult, because increasing numbers of them use automobiles less and less or not at all. That leaves many of them marooned and isolated or dependent on others (if available) for meeting their travel needs.

The County policymaking level has failed to recognize the simple fact that the community living pattern is widely diffused, whereas the transit availabilty is sharply constrained on account of the very high construction and O/M costs. Until the County recognizes that it must invest in low cost, widely diffusable transit modes, we aren't going to meet the needs of increasing numbers of seniors, as well as the population in general. Moreover, current transportation planning will not result in any meaningful reduction of traffic congestion.

All we are doing now is try to stretch around a patchwork of transportation services that are going to be too expensive, too fragmented, and too service-limited to have much useful effect.

Sorry for this dose of negative perspective. But reality is reality, and I have been a close-up witness to the process of decision-making for a long time, and I can't point to a lot of sustainable progress. {#213}

2. Long distance transportation-ie, more than 60 miles

All facilities in the County where seniors either reside or frequent, to include senior housing facilities, senior cneters, community centers, adult day care facilities, and large commercial properties where physicians, specialists, grocery stores are located. {#68}

- 3. Shopping areas/centers; any service in most of PWC for drs., appts., etc.
- 4. Metro only serves jurisdictions that are part of its compact
- 5. New rural developments in westers fairfax county

suburban neighborhoods are auto dependent {#110}

- 6. they really need to broaden the areas they serve too many pockets where no service exists
- 7. limited things for which this transportation may be used. for many visiting friends and/or having one's hair done is as important as going to the grocery store
- 8. outer suburban areas have more limited bus service available
- 9. some local paratransit service does not travel to other jurisdictions (i.e., many only take people from a place in Arlington to another place in Arlington, but if a person needs to go to DC, it doesn't cross jurisdictional boundaries)

INACCESSIBLE infrastructure

1. Inaccessible Infrastructure: examples - vehicles without wheel chair lifts, bus stops without sidewalk access or benches to sit on, no access to restrooms, etc.

Many bus stops do not have benchs for people to sit and wait or be protected from the weather {#46}

frequency of trips so that public transportation becomes second nature {#141}

2. currently few door to door options

this is a significant problem for people with minimal mobility difficulties {#63}

agree - this is needed much more. Anything that keeps an older person as independent as possible for as long as possible is a much less expensive service for a person/family that having to go into a facility. {#80}

this is a very important concern for independence {#148}

- 3. visual impairments complicates fare exchange and trust
- 4. buses that lower down
- 5. Lots of problems with bus stop accessibility for people with disabilities, lack of accessible pathways, sidewalks and curb cuts

curb cuts that do not align with bus stops that may be mid street or no curb cut where bus shelter is located. inadequate size of paved area surrounding bus shelter {#85}

- 6. wheelchair lifts that break down frequently
- 7. need buses that go off main route, more into the neighborhoods
- 8. all of the above are accurrate!

Accessible transit stops is the paramount issue here. No matter how sophistcated and comprehensive a transit system is, is isn't worth squat if you can't get to it safely. {#102}

- 9. Accessibility for disabilities. Sufficient shelter at sites regarding bad weather conditions.
- 10. reservations require too much advance notice; no live person to answer the phone at the reservations line or being on hold for an extended period of time. again no evening and weekend hours for rides
- 11. Bus stops need more with benches.

12. SERVICE PROVIDES CURB TO CURB SERVICE RATHER THAN DOOR TO DOOR SERVICE

13. right now about 50% of Metrobuses have an audio stop announcement system. Difficulty getting bus drivers to make stop announcements which assists all customers, but especially seniors and customers who are blind or who have cognitive disabilities and need assistance orienting themselves as they travel on the bus so they know what stop to get off

concern about being rushed {#217}

ELIGIBILITY limitations

1. Eligibility limitations: income or disability limitations that leave some stranded, without the services they need.

Some low income populations can not even afford the discounted transportation and the public transportation does not run in their neighborhoods. {#55}

perhaps offer sliding scale payment system so seniors with higher income can receive service as well {#101}

2. Middle income adults

services should not require eligibility {#97}

- 3. MetroAccess does not serve seniors unless they have a disability
- 4. many programs are based on the ADA eligibilty leaving many people without service
- 5. Although seniors 75 + have options for lower cost taxi's many people under this age are also in need
- 6. Ensure that all seniors regardless of age are included

We have a myriad of transportation options here; however, many have restrictions and limitations (income, age, etc.) thta would confuse the best of people. I work in this industry and I'm confused sometimes. There must be some consistency among the providers that would make it simplier to access these options. {#136}

7. consider sliding fee scale for higher income seniors who also need service

```
i agree {#165}
```

8. in Alexandria, the in town trips are available to all seniors age 60+ without regard to income for medical appointments and grocery shopping

nice if purpose of trip was not limited {#175}

9. There are seniors who can easily afford to pay a taxi fare, but are still terribly worried that they won't have enough money - depression mentality

```
agree {#173}
```

boomers may change dynamic of tight fist...not sure {#187}

10. NO COMMENT

- 11. worry about isolating seniors from mainstream, but reliable transit worth it
- 12. Recertification for chronic conditions that won't get better

ASSISTANCE needs

1. Human assistance needs: For seniors who need door-to-door, or door-through-door assistance, an escort for a trip, help carrying packages, etc.

```
many of the transportation services do not provide assistance for senior with packages, getting in and out of the vehicle (unless wheelchair bound). {#76} t his is very important to quality of life concerns {#81}
```

2. More door through the door escorted service

```
Agreed! {#117}
Agreed {#172}
```

3. Paratransit drivers need more training on how to assist seniors and people with disabilities so they provide more effective customer service and assistance as needed

```
seniors seldom get assistance getting on or off of bus--drivers lack sensitivity to physical disabilities {#106}

This is very true. {#131}

A general education of the public would also help, i.e., in addition to transportation providers. {#183}
```

4. I understand hospitals are going to relay on day care centers to take patients into the centers during recovery - to save hospital/medicare costs!

Well- Medicare will be running a 3 yr. trial in 5 area (not here) of funding medical model adult day care centers. For the patient that is capable of attending the group program, it is much more rewarding than a hospital setting or being alone and receiving a visititing nurse so this may be a coming thing and it may be good! {#169}

5. THE CLIENT HAS TO PROVIDE THEIR OWN PERSONAL CARE ATTENDENT.

do not assure that senior gets into their home--left on curb usually. {#118}

When a client needs to provide their own personal care attendant, it drives up cost-cost of the attendant plus cost of the transportation. {#199}

especially difficult for very old singles living alone, i agree {#205}

6. need door to door [not just curb to curb]; need for escorted service that is affordable

very important for elderly {#211}

7. Door to door is vital and cost sensitive services

This population is growing at a fast pace, which means that there will be a greater number in this population who will need assistance. Transit resources will have to alter the way in which it does business to accommodate a population that will simply need more and more assistance. {#155}

- 8. training between the drivers and perhaps have seniors there so a discussion and dialogue can take place.
- 9. We need personal escorts to show seniors who are healthy but can't drive how to navigate the bus system for the first time or the Metro which is impossible to figure out.
- 10. Cannot overestiamte the significance of vendor service providers having a "supportive" attitude to these seniors who "hate" not being able to hop into their car any longer Service providers need to be kind, patient, and trained to know that older people will probably operate a lot slower than younger people. Also With over 50% of the community population being foreign, they will need a lot of patience to understand the rider/driver.

SERVICE SPAN hours

1. Service span: the days or hours do not meet seniors' needs.

not available during late afternoon and evening hours. Seldom available on weekends. {#95}

- 2. Some local jurisdiction paratransit service does not operate on weekends and evenings when seniors need and want to travel
- 3. more than 8 to 4; add evenings and weekends with a reasonable amount of time in advance for reservation. this allows seniors freedom to make plans and allows them flexibility

Budget restraints prohibit offering service outside of 8-4pm {#122}

4. should mirroe general availability of transit services ie now it would be 6 am to 12pm

- 5. this is a really serious problem they need expanded hours
- 6. some programs are very limited in hours of service only day time and not everyday
- 7. limited by the # of volunteers available to provide service
- 8. need for night time service when seniors are reluctant to drive themselves
- 9. perhaps there can be "only" evening hours for some vendors.

10. SAME DAY SERVICE

11. There should be enough "coverage" that allows seniors to use service when it is needed. Volunteer management is also important

Transit must provide a level of service during non-peak hours to meet the needs of this population. This would include mid-day, evening, weekend and holiday, times when the target population is comfortable traveling. {#171}

12. NO COMMENT

COST

1. Cost: example - the fare is too high.

have an "easy pass" similar to what is used on toll roads {#61}

have a pass system that allows for "x' number of uses {#71}

need to be available to all seniors and not just those meeting income requirements. Many seniors are unable to drive {#74}

i agree {#113}

2. for volunteer agencies, the cost of gas is becoming an issue

The Government should take over most transportation because of cost {#98} I agree with the initial comment. I don't agree that Government should take over most transportation; however, incentives might be given to providers, including volunteers, to defray costs. {#129}

- 3. "affordable" is a relative term, depending upon one's income and the frequency that they need to use the service. "affordability" is therefore a relative term
- 4. There is great need financial wise to facilitate the transportation need which is in great need in our area.

- 5. often times even those w/ higher income may not be able to afford it particularly when they have a lot of out of pocket medical expenses
- 6. if need to go far for medical appointment, can be extremely expensive for low-income person.
- 7. needs to be an easy way for agencies to support payment for poor people, that is accepted by all transportation vendors.
- 8. FAAA offers volunteer transportation but only for about 3-4 trips per month for free, if people call a week ahead. Sometimes seniors need help the same or next day this is an unmet problem.
- 9. Operational cost keeps increasing on a daily basis, i.e Gasoline, Adaptive equipment, labor, etc. There should be emergency fund, to meet these needs.
- 10. Many people fall in between in the cracks--need escort and can't afford it.
- 11. I agree.
- 12. THE COST TO THE CLIENT CONSIST OF A CO-PAYMENT. THERE IS NO RELATIONSHIP BETWEEN WHAT THE TRIP MAY COST AND WHAT THE THE CLIENT PAYS.
- 13. I agree.
- 14. for some seniors even the 2.00 co pay for ADA transport is too much for them, especially if they have a medical problem and are going for treatments everyday or even every other day in addition to other doctor visits.

If it's inexpensive, they will come. {#179}

- 15. Metro Reduced Fare Program for seniors enables seniors to travel on Metrobus and Metrorail for half the regular fare at all times
- 16. No senior should be denied the best service offered due to cost
- 17. We need huge funding for the county Senior Express program, which provides escorted transportation for seniors, charging based on income.
- 18. The taxi voucher for the Seniors on the Go program run out too fast program needs more \$\$\$

agree. benefit should reflect the % of income going to transportation {#190}

RELIABILITY

1. Reliability: Is the service dependable? Does the bus show up when it is scheduled? Does taxi provide a return trip as requested? How much stress is caused by lack of certainty in how the service will performs?

frequently not picked up for appointments with enough time to meet deadline. Also left waiting at doctors office for return transpo to home. Drivers not always sure of destination or how to get there {#65}

Some services are more dependable than others Traffic problems contribute to the reliability issue Small transportation budgets add to the problem {#78}

driver shortage for some of the taxi services provide unreliable service poor dispatcher (giving wrong address & directions) {#123}

many times senior wait for a while go back in their homes to make calls and then the transportation comes and leaves them because they are not outside waiting. {#135}

a lot of stress is caused by unreliable service, it is more of a trust issue than anything else. If they can not depend on the transportation service available to them some have no one else to depend on so how are they suppose to get around. They end up feeling trapped in a system that is not good for them, but they have no other choice. {#161}

- 2. Fastran needs to revamp to become reliable too many stories of people waiting too long
- 3. vehicle must show up when it promises to. no more than a `10 minute window is acceptable
- 4. not always reliable need well trained providers
- 5. private drivers offer greatest dependability
- 6. often taxi driver doesn't show up ...tremendous stress
- 7. Service set-up by an agency that is not familiar with the client's locale often leads to missed appointments, ie the cancer society sets up transportatin for clients in Loudoun and assigns the service to a Fairfax provider
- 8. reliability of bus lifts and elevators in rail stations is also very important to keep customers using the regular bus and rail systems
- 9. critical that seniors who often feel vulnerable are not left waiting alone

10. BECUASE OF INCREASING TRAFFIC CONGESTION, IT IS INCREASINGLY MORE DIFFICULT TO MAINTAIN A HIGH LEVEL OF ON TIME PERFORMANCE

11. All drivers, whether private or public, should be properly trainined to handle the needs of seniors

Seniors have little problem making use of a transit resource to travel to a destination; the frightening part is the return ride, whether it's a para-transit, cab, bus or rail trip. That is the issue which must be addressed. {#195}

- 12. many times it is the return trip that is the problem, they get to the appointment but the ride doesn't show up to bring them home.
- 13. Private vendors should be eligible for subsdise; when they provide services to the public, in order to make more accessibility for those in need, instead of putting the load to the recipients
- 14. there is a shortage of w/c accessible taxi's and many individuals wait for an excessive amount of time for a ride, this seems to be a bigger problem in the evening hours.
- 15. unfortunately the mention of Metro Access and Fastran brings groans due to very poor reliability experiences. Do the programs need more money, drivers, vans?

EASE of USE

1. Ease of use: example - can seniors easily locate understandable information, or are they required to make call to multiple agencies and individuals?

many seniors aren't connected to new technology {#39}

have friendly phone access to information {#44}

They can call the County Area Agency on Aging {#45}

seniors not always able to understand information given over telephone--little written information. Unable to understand foreign accents {#47}

some systems are complicated to use because of the conditions under which the service is provided; do they qualify? where will the service take them? who do they have to contact in order to get the service? where do they get the application for service? {#193}

2. if disabled not always

agree {#180}

Clear and comprehensive signage, and lots of it! {#200}

- 3. reservations have to be available for more than 8 a.m. to 4 p.m. and should not require a large amount of advance notice
- 4. often; need person to help.
- 5. how about more medical and personal services that come to seniors like "wills on wheels" amd "meals on wheels"
- 6. often times the service is booked in advance and the service is not available for the time they need.
- 7. speak too fast when need to make choices on telephone
- 8. NO OMMENT
- 9. Some seniors continue to live in their own homes and are mentally slower and have difficulty assimilating information.

```
agree. {#184}
agree {#188}
```

- 10. There's a lot of good information on the Internet and agency websites about available transportation options, but many seniors do not use this method of obtaining information
- 11. many phone systems are frustrating to seniors when they can't get through to a person and have to go through a bunch of voice menus to eventually obtain the information they need

```
agree strongly {#192}
they are often confused about which agency they are speaking to, and what agency provides what service...... {#206}
```

- 12. multiple providers, multiple regulations, equal confusion and not using service
- 13. where possible, have a live person answer phone--voice mail box options are hard to hear for seniors and difficult to maneuver

```
YES! {#196}
```

- 14. it can take several phone calls of explainations of the program before the senior feels comfortable in their own ability to navigate the systems.
- 15. For each transportation option there should be, ideally, a mentor program teaching the rider how to use the system most effectively.

16. Ensure that information is simple, easily read and is sensitive to non-english speaking seniors

CONVENIENCE

1. Convenience: Does the service take seniors where they need to go when they need to go?

life is more than just going to the doctor. {#29}

. Currently bus service is very infrequent during the day and non existent in the evening, i.e. 7 - 11PM in areas of the county:
. {#56}

some services only take them to the senior centers in their area and they want to go to a special event at another center or take a class at another center in the county. {#208}

2. not always

needed at other hours than available {#40}

3. service needed from 7am to 10pm, with most service from 9 to 4

Service needs to be available 24/7. For example, if a senior would need to be in Baltimore at Johns Hopkins at 8 or 9 AM, they might have to leave home by 5:30 or 6 AM. {#84}

agree with this. {#204}

4. some serivce needs to be available to get to Maryland - Johns Hopkins for example

excellent point - often they need transport out of the area. {#60}

- 5. the transportation needs to be available when and where seniors want to go; weekday hours only without evenings and weekends do not mean "convenience" for many. also, depending upon how much advanced notice one must give to make a reservation might make service inconvenient
- 6. Convenience means different things to different people. Depending how mobile the senior is, convenience could mean escorted door to door service. For others, it may mean curb to curb.
- 7. no they often need service on the weekends

So true. {#207}

8. RESERVATIONS HAVE TO MADE A DAY IN ADVANCE. THERE IS NO SAME DAY SERVICE

- 9. many transportation options are not available on the evenings and weekends
- 10. some same day service needed for emergency medical appointments fopr example
- 11. This is a gap that needs addressing

Not right now. Until we factor in the needs of this population on a scale closer to those of the commuters, it will not work. {#210}

OTHER

- 1. Other: needs not already identified.
- 2. a change in attitudes of elected officals regarding the importance of the transportation needs of seniors

I AGREE...OUR COUNTY OFFICIALS THINK THAT SENIORS WOULD BE COMFORTABLE RIDING WITH HIGH SCHOOL STUDENTS {#139}

what about assisted living facilities? we have found that they are reisistent to their residents being able to use non-facility transportation services even if the resident is mobile {#159}

We have found that even though adult care facilities advertise as offering transportation, they often do not provide it on an as needed basis. {#186}

- 3. transportation needed by seniors being released from a hospital stay....frequently they are only given a few hours notice and families and agencies cannot operate in that short time span
- 4. Proper training for all drivers

elected officials want these seniors to have these things, but there's a huge cost to do his right. {#216}

- 5. Prior to forming all recommendations, I encourage this group to have a good size focus group of "older users" of the transportation systems comprised of all economic groups, ages, aneducation and different languages.
- 6. we need to address ESL for seniors and the unique issues that will arise with language and cultural barriers

TRANSPORTATION SOLUTIONS (Categorizer)

DESTINATION not served

1. Destinations not served: Types or specific destinations not served by existing transportation options.

INACCESSIBLE infrastructure

1. Inaccessible Infrastructure: examples - vehicles without wheel chair lifts, bus stops without sidewalk access or benches to sit on, no access to restrooms, etc.

ELIGIBILITY limitations

1. Eligibility limitations: income or disability limitations that leave some stranded.

ASSISTANCE needs

1. Human assistance needs: For seniors who need door-to-door, or door-through-door assistance, an escort for a trip, help carrying packages, etc.

SERVICE SPAN hours

1. Service span: the days or hours do not meet seniors' needs.

COST

1. Cost: example - the fare is too high.

RELIABILITY

1. Reliability: Is the service dependable? Does the bus show up when it is scheduled? Does taxi provide a return trip as requested? How much stress is caused by lack of certainty in how the service will performs?

EASE of USE

1. Ease of use: example - can seniors easily locate understandable information, or are they required to make call to multiple agencies and individuals?

CONVENIENCE

1. Convenience: Does the service take seniors where they need to go when they need to go?

OTHER

1. Other: solutions to needs not already identified.

TRANSPORTATION CONCEPT L (Categorizer)

ADVANTAGES

1. one to one service

reliability, accessibility, more personal service {#23}

It always pleases the rider if they're the only one in the vehicle. It work fine if one has advanced notice of a need to go somewhere. {#32}

senior customer can get the one to one attention needed; help with bags, getting in and out of the car, additional stops if needed. {#33}

- 2. this is an excellent idea so long as the volunteers are provided liablity insurance
- 3. easy to use
- 4. personal service
- 5. Flexible
- 6. senior will most likely feel more comfortable
- 7. isolated seniors become connected to their community
- 8. easy to use and understand
- 9. cost is low.
- 10. human factor is beneficial' presumably volunteers are people oriented
- 11. Insurance liability
- 12. possible to develop a relationship with someone
- 13. 1 on 1 attention reliability affordable
- 14. people can be "matched" with people: men may request a man.
- 15. enhances pesonal relationships between caring community members and seniors

- 16. Same day service could be used as back-up for missed trips
- 17. members of the community become resposible for helping each other....neighbors helping neighbors in need
- 18. You have the personal care of a trained volunteer who will know your needs. Safe, reliable, simple and straight-forward service
- 19. the cost seems within a range that's affordable.
- 20. A Volunteer transportation program provided by a non-profit organization is a great, cost effective way of providing one on one transportation. Local governments need to understand the gov't needs to help fund it!!!
- 21. advantages: this has the potential to provide a low cost solution to a big need. if the senior and volunteer are matched [and the same volunteer can be used for multiple trips] there would be a continuity of service.
- 22. Language barriers can be responded to by people being matched with a person who speaks their language.
- 23. some availability of same day service is good. there's a lot of interest in pursuing same day service
- 24. senior and driver both gain. Sets example for others to begin doing this.
- 25. Bigger cars SUVs may need stools for riders to use when boarding
- 26. Can work with County to handle denied trips
- 27. This is the ideal. This is what would have happened long ago in a small town and without the exchange of any money. It's the "good old days" all over again!
- 28. A volunteer system can be frustring and unreliable because you must rely on recruiting and keeping the volunteers.
- 29. Provides people who are looking for interesting volunteer opportunities to have them.
- 30. Disadvantages: These volunteer services can get to be very complex logistical activites that can lead to unreliabilty and poor morale among the users of the services
- 31. seniors will like not having to share a ride
- 32. could be a non fee- for service. the value of a volunteer hour is currently over \$20. If government supported these volunteer agencies, they would get "more bang for their buck"

33. There are now a growing number of groups that do this for a fee - about \$15-\$25 per hour.

34. A GOOD WAY TO PROVIDE TRANSPORTATION WITHOUT HAVING TO HAVE A RARGE BUDGET.

DISADVANTAGES

1. Volunteers will not be able to afford the gas.

Age of some of the volunteers, most of the time they are seniors themselves because they are the ones not working and have the time to volunteer {#60}

- 2. may be too costly for some low income seniors
- 3. wheelchair accessibility
- 4. are there any liability issues with volunteers using their own cars?
- 5. carrying groceries
- 6. Volunteers bear the burden of liability insurance.

liability to driver, need training regarding disabilities, difficulty in knowing destinations of rider and special needs {#53}

- 7. cost
- 8. NOT ENOUGH VOLUNTEERS!
- 9. accessibility of volunteers' vehicles for seniors who use wheelchairs or other mobility devices
- 10. the availablitlity of volunteers to provide this service
- 11. cost

There are several concerns: often, the volunteer is older than the rider; automobile liability is huge; there may not be enough volunteer riders when theyey're needed. {#58}

- 12. vol may be older and not able to physically assist the person as much as needed.
- 13. Shortage of volunteers who have the time to drive people places. In my experience, most people who would make excellent volunteers are working.

14. liability concerns?

Agreed. I don't know what the liability would be for the volunteer. {#54}

- 15. based on
- 16. doesn't allow for those last minute appointments that come up
- 17. why not underwrite cost by government which\
- 18. Limited on wheelchair individuals
- 19. volunteers need training in order for this to be successful
- 20. availability?
- 21. liability needs to be picked up by larger org
- 22. Can this service meet all types of pysical disabilitiey needs?
- 23. none--it's a great idea
- 24. Background checks
- 25. would require extensive funding for the agency to recruit, train and manage volunteers. agency would need to maintain liability insurance for the volunteers as well as the additional care insurance.
- 26. Need a form that let's organization know the needs of the senior prior to setting up person with driver.
- 27. wheel chair and excessively heavey weight
- 28. iWho will pay the increased liability nsurance?
- 29. Driver might be needed at most
- 30. More cars on the road.
- 31. VOLUNTEER

TRANSPORTATION CONCEPT M (Categorizer)

ADVANTAGES

1. affordable

drivers know most routes in area, have liability insurance {#17}

do not have to plan way inadvance, can be spontaneous which gives a sense of normalcy to life {#25}

Flexibility; unlimited hours of service; w/c accessible vehicles upon request; everyone loves a ride right in front of their home and at a substantial discount. {#30}

more affordable than if they had to pay the full amount. {#70}

- 2. easy to use
- 3. wheelchair accessible
- 4. this is a great idea for maneuverability in neighborhoods
- 5. Only certain number of coupon books allowed within a timeframe.
- 6. good that accessible taxis can be requested
- 7. based on your own schedule
- 8. This would be another option and the more options available the better.
- 9. the accessibility of the vehicles is good and wheelchair vehicles can be requested
- 10. provides service to all levels of need
- 11. taxi drivers are not all trained to show respect to seniors
- 12. door to door service very desirable
- 13. taxis aren't always on time
- 14. available 24 hours a day
- 15. It is wheelchair accessible, door to door service, drivers that will help you get in and out if taxi and from your door, cost effective with county coupons
- 16. can speak with supervisor if there are problems.

- 17. why?
- 18. would be able to get same day service

19. THE RIGHT TYPE OF VEHICLE IS USED TO PROVIDE TRASPORTATION DEPENDING ON THE LEVEL OF MOBILITY OR DISABILITY

20. People are USED to taxis and likely to embrace this solution!

DISADVANTAGES

1. How often do people only go "one-way?"

cost is still expensive for low income seniors that would be \$12.25 round trip {#50}

- 2. expensive
- 3. impersonal

many drivers lack sensitivity to needs of seniors, unable to assist with disabilities, have heavy accents frequently and are not understood by seniors, different driver for each trip {#51}

- 4. not door to door
- 5. Everyone needs round trip.
- 6. \$15 round trip, 2 or 3 times a week is costly for someone on fixed income
- 7. drivers vary in their personal skills
- 8. Drivers are independent contractors

Limitations in number of coupons due to financial constraints; language and ethnic barriers deter ridership {#57}

- 9. some drivers not so friendly & helpful
- 10. are there a sufficient number of accessible taxis that can be used? Some jurisdictions do not have any or not many accessible taxis
- 11. Fairfax limits taxi vouchers not nearly enough available for each person each year much more funding needed.
- 12. advance notice forw/c users wont improve availability

- 13. Background checks on drivers
- 14. # of books available
- 15. Limited for people with developmental disabilities
- 16. Currently it is unreliable: Drivers either do not show up or show up 30+ minutes late and seniors are freezing standing in front of their home or not there anymore.
- 17. driver being paid for service
- 18. Again, such plqns require the creation of a complex, structure, often difficult to manage and sustain.
- 19. who are eligible seniors?
- 20. language barriers
- 21. Many people will need a GUARANTEE of door to door transportaition.
- 22. Some drivers may not be willing to help seniors get in and out of the taxi and with their stuff
- 23. Would require training and high standard for the cab driver. Inconsistency of how they treat people.
- 24. drivers sometimes refuse or give passangers a hard time about the use of coupons
- 25. Requires a lot of dialogue of from people who have "language issues" and cann easily be understood either driver or drivee.
- 26. attitude of taxi drivers is sometimes intimidating to seniors
- 27. Private business seeking to maximize profits conflicts with public service transportation
- 28. taxi vouchers are more affordable to many seniors
- 29. taxi drivers need to be trained to treat senior with respectr.
- 30. This will not work for the people with "short term memory loss" or Alzheimer's.
- 31. if a companion accompanes the client.....what is the additional cost?
- 32. not a shared trip. a lot of seniors don't like to share a trip

- 33. continue to have the same limitations of only curb to curb and not door-to-door. new assurance that drivers are able to help passenger into and out of the vehicle. not "escorted". I think that the use of vouchers is not a good idea, though they are used in mnay juridisdictions
- 34. where is accountability when things don't work
- 35. need better institutional controls with recourse for poor taxi service
- 36. Not door-to-door when someone might nned help.
- 37. language
- **38. Driver Training Issues**
- 39. tip issue not lcear to passenger
- 40. same day service is good for most (except wheelchair users)
- 41. Users have to be in touch with the sysytem twice ormore--one in lining up the original trip and then, later, in trying to get a ride back home or to a new destination.
- 42. Not all drivers willing to help you with mobility issues, must tip driveron your own, scheduling amy be an issue.
- 43. SOMETIME THERE IS NO RELATIONSHIP BETWEEN THE ACTUAL COST OF THE TRIP AND WHAT THE CLIENT PAYS

TRANSPORTATION CONCEPT N (Categorizer)

ADVANTAGES

- 1. for seniors that are mobile this is a great service.
- 2. encourages people meeting people in their own facility
- 3. Good idea
- 4. a good adjunct but inadequate stand alone service

good but need better hours of service; seniors could plan medical appts around bus schedules {#29}

5. seniors like structure and planning in advance

This is good as long as there is accessibility on the streets to the buses. The cost is reasonable as well. {#32}

- 6. "N" is a more useful approach for many reasonable able seniors--less so more more disbaled seniors.
- 7. wheelchair accessibility a real plus
- 8. Great idea
- 9. seniors can assist each other
- 10. easy to use, no certification process
- 11. great idea for those living along the route the bus takes
- 12. I like this and feel it would be well received by seniors.
- 13. encourages independence espeically the every 30minutes concept
- 14. trying out this system may encourage seniors who are able to begin to use Metrobus or local bus service to get around for other trips as well
- 15. Cost is very doable.
- 16. it's a scheduled event they always know when the service is provided
- 17. relatively inexpensive
- 18. great for those who live in this type of building
- 19. Sounds like system used by senior residences that have their own buses. It works for apartment buildings.
- 20. INEXPENSIVE MEANS TO PROVIDE TRANSPORTATION.
- 21. very affordable
- 22. this would be a great "gift" from famiy members for the senior....a gift certificate idea
- 23. do it now! but as a supplement to other more specialized modes
- 24. Provides choices for people who are in a physical condition to be able to take advantsage of these opportunities.

- 25. accessible for all seniors including wheelchair users
- 26. individual doesn't need to ask for ride
- 27. Good way for seniors to meet other seniors.
- 28. I wild hope that the system could be operated on a daily basis, and frequently during the day.
- 29. open it to all with priorities to elders and pwd
- 30. Given the limited time spans each bus may want to have one or two helpers to assist people on and off the bus.
- 31. I believe this idea should and could be mainstreamed, i.e., used by everyone.
- 32. This type of community circulating servce should be encouraged
- 33. excellent concept and good availiability. regularness of the route system allows flexibility and independence for seniors who want to plan to come and go as they wish. the cost of \$2.00 is reasonable, especially when one considers the driver helps them to get off and on the bus
- 34. Bus schedule has regular times for pick up so seniors will know when they can use service. Seniors are within areas they are familiar, no prior requests for service, 2 different service routes.
- 35. I like the idea of seniors meeting other seniors opportunity to make new friends (sho shop at the same time) and not feel so isolated.
- 36. like that seniors don't have to reserve in advance
- 37. I favor service that helps connect seniors to a wide variety of destinations

DISADVANTAGES

1. limitation of service area and hours of service

service hours very limited, need to assist to building entrance; {#42}

seniors would have to taylor their needs to those days only. {#44}

what about seniors from different ethnic backgrounds that may not want to go to those stores and needs are in another area. {#75}

- 2. Does not get seniors to their specialists, and they have many.
- 3. not available to the whole community, so if you live in a single family home you are out of luck.
- 4. limited to those on the route
- 5. does not address the rural community
- 6. Seniors would have to live in a apartment complex
- 7. getting groceries in and out of cuilding problematic
- 8. CLIENTS WOULD BE REQUIRED TO SEAT ON A VEHICLE FOR EXTENDED PERIOD OF TIME
- 9. Would require funding from feds, state, localities. Localities are resistent and view transportation as "a big black hole" into where more and more \$\$\$\$ needs to be poured.
- 10. will not benefit those who have appt's at different times
- 11. segregation of popolulations, why not have this be available for anyone, with reduced senior fee
- 12. It is difficult for those in wheelchair (manual)

Restricted hours when needs are not being met; restricted catchment service areas. {#63}

- 13. Seniors are not grouped like this. There is one senior or more in every block of our county.
- 14. may not be possible for some seniors to use this service if they are less able to get around independently
- 15. if one is ill on the day the service comes, they miss opportunity to grocery shopping or the mall.
- 16. limited to destinations
- 17. why should it cost more than a regular bus trip?
- 18. Too many limitations.
- 19. Limited pickup locations

- 20. what about seniors who want to remain in their own homes that aren't in clustered areas
- 21. what if the bus is full?
- 22. limited to certain times and days of the week
- 23. limitations imposed
- 24. No evening services
- 25. Time could be limited
- 26. Seniors, like the rest of us, do not use the obvious, closest shoppping center and medical facility.
- 27. wheel chaoir inaccess
- 28. You must go when service is offered
- 29. see none, except that drivers are limited to help off and on the bus and cannot do door-to-door help
- 30. No weekend services
- 31. what about accessibility to other areas outside route.
- 32. Biggest disadvantage seems to be for fragile seniors who have specific destinations and would require transfers.

TRANSPORTATION CONCEPT O (Categorizer)

ADVANTAGES

- 1. Excellent idea. We use this same idea for bussing our children to school.
- 2. a good adjunct to fixed route service

This is the ideal system! With accessible bus stops, this is an idea that could meet the needs of a significant number of seniors. {#13} good if it isn't the only service available. more cost advantages {#20}

3. Currently exists in PW County

- 4. gives more options to the rider
- 5. inexpensive
- 6. Another option
- 7. with general pop
- 8. good for seniors who are pretty much independant
- 9. Great alternative
- 10. deviations are good and this might be an adjunct to other forms of transportation
- 11. Great idea. Mainstream for all who travel--not just seniors.

agree....we need to get the general public using public transportation {#43}

- 12. affordable
- 13. good idea for another option for transportation.
- 14. Would work very well for those not needing an escort or assistance carrying a mjor batch of groceries.
- 15. Good idea, flexible, sensitive to time
- 16. THIS TYPE OF SERVICE WOULD REQUIRE FEWER VEHICLES AND DRIVERS IN ORDER TO PROVIDE THE SERVICE
- 17. socialization w/ general public
- 18. good for someone who otherwise would not take a bus because the stop isperceived as too far
- 19. affordable cost. good to interact with the general public. free transfers are good
- 20. using regular public transportation buses is very positive and is more cost effective for the jurisdiction that providing paratransit service
- 21. Provides yet another option . This is good as there are so many people who have varying needs.
- 22. using existing bus service rather than additional vehicles
- 23. affordable

24. cost effective

DISADVANTAGES

1. education about public transportation is needed for people used to having the independence of their own vehicle

again I would ask how does a system like this get explained to the senior and for those nonenglish speaking seniors {#52}

0 {#60}

- 2. some elders reluctant to use bus, lack experience
- 3. impersonal
- 4. limited # deviations per day so one cannot count on service availability

difficult for frail seniore to ride with general public. Need assisitance getting on and off {#37}

- 5. difficult for tose who are in need of more assistance.
- 6. inconvenient
- 7. need to make sure seating is available.....OR people observe the use of seats designated for seniors and adults with disabilities
- 8. Wheelchair accessibility remains a major limitation
- 9. limited driver help on and off the bus. some walking required
- 10. some seniors who need additional assistance would not be able to take advantage of this option

Those needing assistance would be at a disadvantage; how about a free ride for a companion to assist? Hours of availability would be important too so seniors can travel at times that are comfortable for them. {#54}

- 11. Would the senior be able to be guarantted the deviation?
- 12. lift reliability an issue
- 13. requires advance planning
- 14. not good for seniors who require more physical assistance

- 15. may seem too complicated to senior
- 16. could not be only option as many seniors cannot climb stairs to bus seat
- 17. potentially frustrating if senior feels rushed
- 18. Need to know what part of the senior population this effects--is this the best way to provide for seniors or is their a larger group with different transportation needs...whose needs get met first?
- 19. This is done in PWC, but it is so limited that most cannot be served. Not always available because of the limit of deviations allowed on a route in a given period of time.
- 20. Sounds a little costly. A deviation trip may not provide the door to door service that a senior needs
- 21. but driver might not remember request for return
- 22. Seniors still have to wait in the 95% heat, rain, subzero weather if it's not door to door.
- 23. what about on the other end of the trip, can the route be deviated there also.
- 24. Independent seniors would benefit a lot.
- 25. need to be on bus route

26. THE TIME OF ARRIVAL WOULD VARY DAY TO DAY FOR SOME CLIENT WHO MAKE TO SAME TRIPS OVER ANF OVER

27. many seniors reluctant to travel on buses, attitudinal issues

TRANSPORTATION CONCEPT P (Categorizer)

ADVANTAGES

1. great idea....encourages independence

good idea if seniors would be willing {#9}

This is a important component to meeting the needs of our growing senior population. It should be expanded and funded appropriately. {#12}

education certainly would create more independence and comfort with the system {#17}

Wonderful idea! {#20}

2. seniors will not be bothered to do training

I disagree. If promoted well, seniors will attend and have fun learning. It needs to be a "social" gathering. {#48}

- 3. encourages independence
- 4. Great for those who are willing and able.
- 5. excellent idea
- 6. Everyone needs the class on how to navigate Metrorail.
- 7. Excellent idea! Training is needed on both sides of this issue.
- 8. Definitely encourages independence.
- 9. Excellent, excellent, excellent. Again another option that will appeal to some and not others.
- 10. Fabulous idea and extremely effective. Metro's Office of ADA Programs provides this. Free bus and rail orientations for senior citizens and people with disabilities who want to learn how to travel by bus and rail.
- 11. good idea for ALL riders, not just sseniors. could make seniors feel more comfortable navigating the complex [and sometimes scary system]
- 12. excellent for the younger senior and/or who do not have mobility issues.
- 13. Provides seniors with the concept of regaining their lives to go where they want.
- 14. those who are able to use the system would benefit from this training and make them less fearful of using
- 15. I like the one-on-one concept because each senior learns in a different way and at a different pace.
- 16. would need incentive to take training like a free lunch or movie
- 17. very much in agreement
- 18. Ideal have trainer do a practice run from the senior's house with her/him.
- 19. TRAVEL TRAINING WOULD PROVIDE AN OPPORTUNITY FOR PASSENGER TO LEARN TO USE PUBLIC TRANSPORTATION RATHER THAN TO DEPEND ON PARATRANSIT OR SENIOR TRANSIT SERVICES.

- 20. An option that would be useful to a small number I believe. Pariticipating on a committee in Fairfax looking at needs of other ethnic groups of all ages, usingf the transportation system is particularly difficult to Hispanics and other who have no or limited English skills.
- 21. It is helpful for seniors to learn how to navigate public transportation so it's not so overwhelming and scary
- 22. Sounds good. Effective implementation will be the key. I think the best training location would be the senior centers, where there would be lesser distracttions that would likely be the case on a moving vehicle.

DISADVANTAGES

1. Most seniors that I know will not use rail service.

Would need to accommodate for different languages in the training {#29} metrorail may seem a little scary to some seniors {#38}

2. only for those who would be able to navigate the system

majority of seniors would not use metrorail--way too difficult and unreliable. {#30}

- 3. does it take into account changes in mental and physical ability
- 4. not feasible for seniors with special needs, but great for the "healthy" senior
- 5. assumes that there is adequate public transportation

Staffing is paramount. Outdated views regarding seniors and transit need to be addressed in transit facilities. {#53}

- 6. most lack experience w/ bus and rail will take alot to overcome apprehensions
- 7. may be hesitant to try this training needs to be made fun
- 8. It does not mention for those who wheelchair-bound individuals

wheelchair users {#42}

- 9. some seniors may not be able to take advantage of this opportunity if they are more frail
- 10. I personally would love the opportunity of being one of the trainers. What an interesting volunteer opportunity!

- 11. Must be able to learn a variety of instructions to navigate the system.
- 12. How this is taught is extrememly important to avoid frustration.
- 13. Doesn't take into account traveling in heat like we have this summer.
- 14. realistically, how many seniors could be trained. this seems VERY labor and cost intensive. there is limited applicability for seniors who are impaired
- 15. what about developing partnerships with other seniors
- 16. Tailored for those who can handle this kind of independence. This could prove stressful.
- 17. Doesn''t work for seniors with short term memory loss and dementia and physical limitations.
- 18. Most seniors are slow to move; metro rail will be a major challenge for them.
- 19. Once learned, a senior could then help other seniors.
- 20. makes a lot of assumptions about ability level
- 21. Basically a very good idea for one segment.
- 22. frail seniors probably couldn't use
- 23. different languages required for the training
- 24. could be confusing over time
- 25. Probably would be used by only a small portion of the older population.
- 26. SENIOR RIDERS MAY OVER ESTIMATE THEIR ABILITIES AND OVER TAX THEIR ABILITIES.
- 27. 75 and older people who haven't used public transportation in the past will be a hard sell.

SESSION FEEDBACK (Topic Commenter)

Participant Instructions

To answer a question, DOUBLE CLICK on it and key your comment in at the bottom of the sheet of paper.

Click on the SUBMIT button when you are finished and then on the PREVIOUS or NEXT button to go to another question.

1. WHAT WENT WELL TODAY?

reasonably well organized. might to be good to prepare people with a more thouough overview of the work that has been done thus far and exactly what the goals of the session are {#36}

everyone had a chance to speak and to be heard common needs and solutions did arise {#37}

went well - you all were very easy to understand and animated {#42}

I liked the diversity of group {#43}

stayed on track with all questions--enough time for feedback but not so much that people rambled {#49}

Thank you. I thought the meeting was well run and gave us all an opportunity to share our ideas and listen to others. {#51}

I apprecijate the fact that there was staff here in the CDSC to help us along. {#52} EVERYTHING WENT WELL {#53}

Everyone had a chance to contribute and there a diversity of ideas to consider {#57} enjoyed the discussion at the end {#59}

Good group participation led by facilitator. Lots of good information shared by group members. Learned a lot from others {#60}

staff was very organized and helpful {#61} Wonderful way to glean a LOT of information in a short period of time. {#65}

2. WHAT WOULD YOU CHANGE WHEN WE DO THIS AGAIN?

begin on time and be respectful of the fact that we committed to being here for only 2 hours. snacks would have been a nice touch {#39}

awesome technology - very interesting process. {#44} a longer session {#46}

allow for a bit more time {#48}

Need more time...maybe expand to 2 days {#50}

last part needs work/focus {#56}

Set up something without time constraints! {#63}

N/A {#64}

more instructions about parking {#66}

ALLOW A LONGER TIME PERIOD {#71}

Longer session to hammer through a more cohesive plan for the future. Would have helped to know the results of the senior interview study. {#72}

Give participants a preview of what's to come so they can think about it before hand. I think you'd have more thoughtful and throught-provoking ideas submitted. {#73}

very impressive use of technology and discussion {#74}

Take a little bit longer from mid-session on to gather all the input in writing. There seemed to be more time per quesiton at the start. I would really eliminate more of the spoken commentary to make time for more written replies and for time to read those replies and comment further. {#76}

I couldnt get much info from the rear of the class {#77}

3. WAS THIS TECHNOLOGY A USEFUL TOOL FOR DECISION MAKING?

yes and no, I think it helped to get all the thoughts down on paper, but didn't leave time to really discuss issues. {#38}

yes. {#40}

it was an interesting experience and easy to use {#45}

yes, however I feel that the explanations of use took up too much time {#47}

yes - it worked very well for this - great tool {#54}

I LOVE THIS TOOL! I wish all the organizations I meet with used this format. {#55}

without a doubt!!! very user friendly {#58}

The tool was great and the teamwork of all the folks who put this together was terrific. {#62}

TECHNOLOGY ALLOW EVERONE TO SEE THE COMMENT OF OTHERS {#68}

Great tool. Would be good for all meetings where input is wanted. {#75}

4. OTHER COMMENTS?

Facilitator and staff were helpful {#41}

would like to see the results and comments {#67}

Overall a well thought theough training {#69}

My organization is planning a forum with the screening of the documentary of "The Open Road" addressing the aging of Baby Boomers and the impact on communities, including developing creativ solutions. I am looking for participation and funding). {#70} Want to see the results and comments.

Thought the facilitator and organization of the meeting was excellent. {#78}

Appendix 4 SERVICE ROUTE POTENTIAL FOR COMMUNITIES WITH CONCENTRATIONS OF SENIORS

APPENDIX 4 Service Route Potential for Senior-Concentrated Areas

To identify communities with concentrations of seniors that might benefit from service routes, or other specialized services, this study assessed census data within areas defined as Community Type 2¹ to find areas with a relatively high senior population and then reviewed existing transit services and general land use. Communities with concentrations of seniors have been defined for purposes of this assessment as census block groups with 300 or more persons age 75 and older, based on the 2000 decennial census. The age of 75 was chosen to be consistent with the definition of senior for the telephone survey and focus groups. The threshold of 300 was chosen based on the relative distribution of this age group across the Northern Virginia region.² Using these parameters, this assessment found 12 communities with concentrations of seniors in the Northern Virginia region, referred to as senior concentrated areas.

In transit service planning studies, the assessment of concentrations of seniors and other target populations who might be transit users typically uses not only the absolute number of the target population but also the density of the target population. However, for this assessment, density has been included by virtue of the fact that the analysis has focused only on Community Type 2, which has been defined in part based on population density. In order to avoid duplication of analysis, the identification of senior concentrated areas has used actual numbers of seniors within Community Type 2 areas.

For each of the senior concentrated areas identified, brief descriptions are provided below that identify transit routes serving the area, specific locations of retirement communities and other senior housing which can help determine wherein the block group transit service may be most needed, and existence of shopping and other destinations within a walkable distance and environment, or specifically from senior housing complexes within that senior concentrated area. Maps of the senior concentrated areas are attached. To develop the maps, the following resources were used: for retirement communities and other senior housing – The U.S. Department of Housing and Urban Development on-line Subsidized Apartment Database, information from NVTC, and public listings; and transit routes – as obtained from NVTC, or generated based on publicly available information.

Additional analysis was directed toward those senior concentration areas that are located within Fairfax County, which hosts the majority of the regional population located in Community Type 2. Staff from FASTRAN, the major specialized transportation provider in Fairfax County, was contacted to review FASTRAN service within each of these areas in the county and review the potential for considering additional service. It is noted that the county's FASTRAN program provides a range of specialized services within the county, including group trips, shopping trips,

¹ Community Type 2 is defined as moderate density/suburban areas with a separation of retail and commercial land uses from residential areas and an environment not conducive to significant pedestrian activity.

² As a reference point, a recent study of concentrations of seniors in the Baltimore region used a threshold of 250 seniors in a census block group to define a concentration of seniors of "moderate intensity."

and senior center trips and limited many-to-many dial-a-ride service. There are thirteen senior centers in the county, each of which is provided with one round-trip per week by FASTRAN to serve destinations at their discretion. This trip is typically used for grocery shopping trips. Some of the identified senior concentrated areas receive some FASTRAN service.

Senior Concentrated Areas in Fairfax County

The senior concentrated areas within Fairfax County are briefly identified below.

Lorton Senior Concentrated Area

- Transit service to Springfield Mall, Springfield Metro, and Route 1 corridor to Huntington Metro
- Retirement Communities: Belvoir Woods (participates in FASTRAN program, other transit nearby but not directly served)
- Lower income communities served by FASTRAN dial-a-ride service
- No shopping destinations within walking distance

West Springfield Senior Concentrated Area

- Transit service to west along Old Keene Mill, downtown Springfield, Springfield Metro, Western Alexandria, Van Dorn Street Metro
- Retirement Communities: Greenspring Village (provides own transportation services, not served by other transit)
- No shopping destinations within walking distance

Burke Senior Concentrated Area

- No fixed-route transit service
- Retirement Communities: Heatherwood (small center, served by own transportation system, not served by other transit)
- Burke Lake Gardens (subsidized) ½ mile south of block group (also not served by transit), participates in the FASTRAN program
- Burke Cove, to the west of the block group, is a larger community that participates in the FASTRAN program
- Shopping Destinations: Burke Town Plaza across from Burke Lake Gardens, long walk from Heatherwood and rest of the block group

Mantua Senior Concentrated Area

- CUE Transit service throughout Fairfax City area, and Metrobus service along Lee Highway corridor to Fair Oaks shopping areas to west and Ballston to east.
- Retirement Communities: Virginia Continuing Care and Sunrise (adjacent to each other), both served by fixed-route transit
- No scheduled group or shopping trips through FASTRAN

- Fairfax Circle shopping within walking distance of retirement communities, Pan Am Shopping Center (groceries) long walk to north
- Based on existing conditions, community should be considered for possible additional specialized service for seniors

Bailey's Crossroads Senior Concentrated Area

- Heavy transit service in all directions
- Retirement Communities: Washington House, Goodwin House, Goodwin House West (all served by transit)
- Goodwin House West and several other unrestricted apartment communities served by the FASTRAN shoppers shuttle, funded partly through an economic development authority grant
- All retirement communities in walking distance to shopping for convenience groceries and specialty needs, though environment not conducive to walking for major groceries or drug stores.

McLean Senior Concentrated Area

- Fixed-route transit service along Old Dominion Drive (north end of block group) to Ballston, Shirlington, and Crystal City to east, and McLean and Tysons Corner to west.
- Retirement Communities: Vinson Hall in block group (with own transportation service), the Sylvestery, just to west
- Chesterbrook Shopping Center (grocery and drugstore) directly across from Vinson, not walkable from Sylvestery

Other Senior Concentrated Areas

Occoquan Senior Concentrated Area

- Served by one PRTC Route, with connections to the Potomac Mills shopping area and the Route 1 corridor in Woodbridge
- Retirement Communities: Westminster @ Lake Ridge (not served by fixed route transit)
- No shopping destinations within walking distance

Landmark Senior Concentrated Area

- Transit service to Springfield area, Mark Center, and Old Town Alexandria
- No official retirement communities
- Van Dorn Plaza (supermarket and drugstore) within walking distance

Pentagon City Senior Concentrated Area

• Heavy transit service and Metrorail access

- No official retirement communities
- All types of shopping destinations within walking distance

Western Arlington Senior Concentrated Area

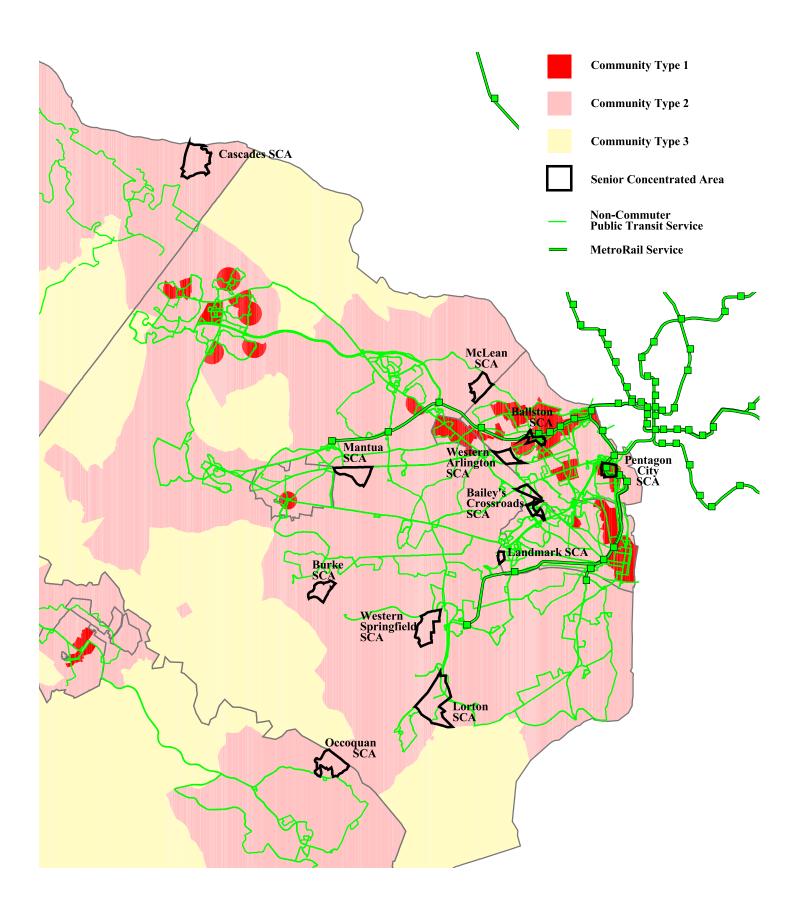
- Transit service at edges of the area, to Western Alexandria, Pentagon City, Rosslyn-Ballston Corridor, and Fairfax
- Retirement Communities: Sunrise, on Wilson Boulevard (served by east-west transit route)
- Small shopping center with convenience retail within walking distance, grocery shopping over ½ mile to east

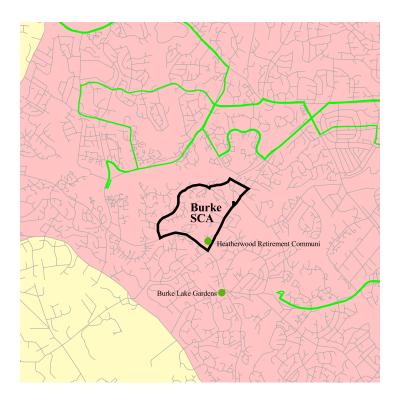
Ballston Senior Concentrated Area

- Heavy transit service and Metrorail access
- Retirement Communities: The Jefferson (in block group), Brighton Gardens and The Carlin just outside block group, all are served by transit
- All types of shopping destinations within walking distance

Cascades Senior Concentrated Area

- No current fixed-route transit service
- Paratransit service available through Virginia Regional Transit, and some service provided by Falcon's Landing
- Retirement Communities: Falcon's Landing
- No shopping within walking distance





Fair Lakes

Vienna
Mietro

Fair Lakes

Sumps Assessit Luine

Hospital

Downtown
SCA

Fair fax

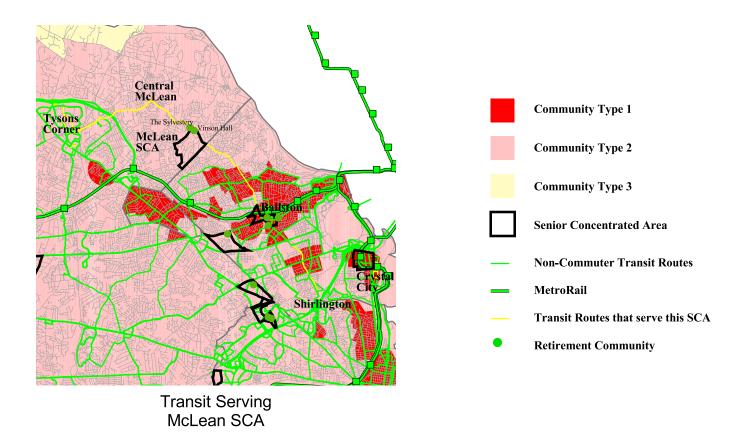
Mantua

Downtown
SCA

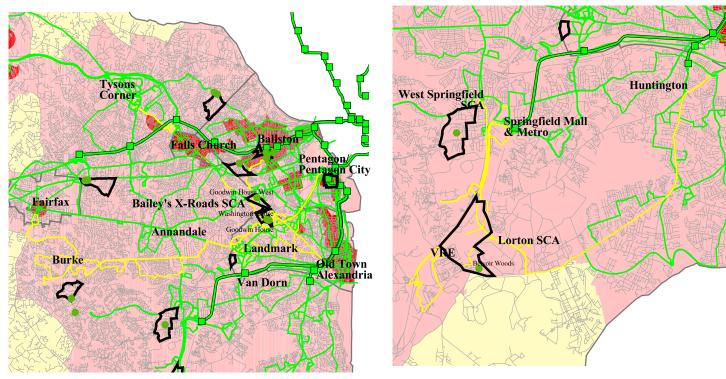
Fair fax

Transit Serving Burke SCA

Transit Serving Mantua SCA

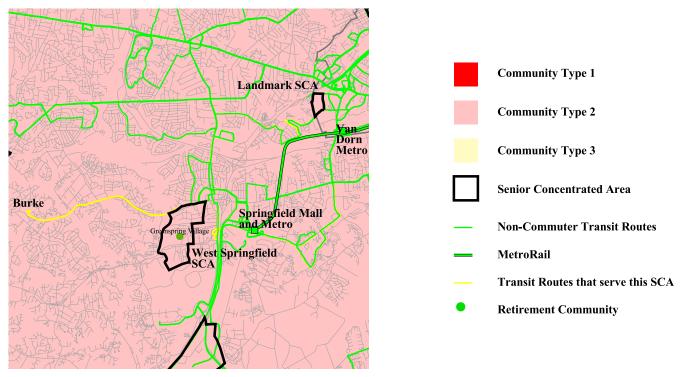


Senior Concentration Areas in Fairfax County



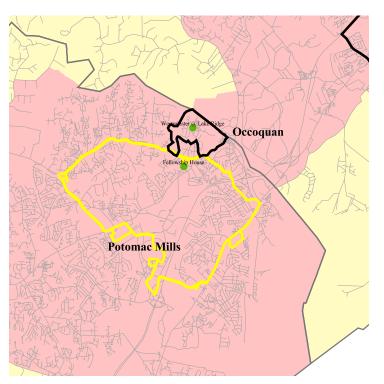
Transit Serving Bailey's Corssroads SCA

Transit Serving Lorton SCA

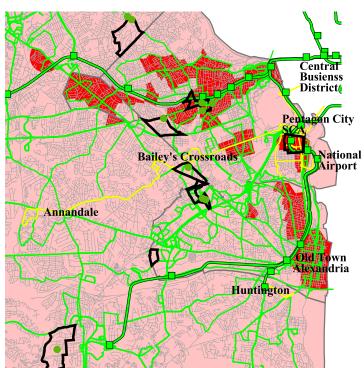


Transit Serving W. Springfield SCA

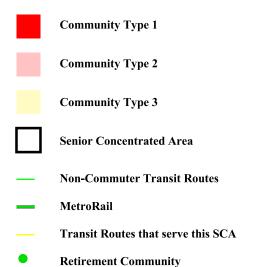
Senior Concentration Areas in Fairfax County



Transit Serving Occoquan SCA

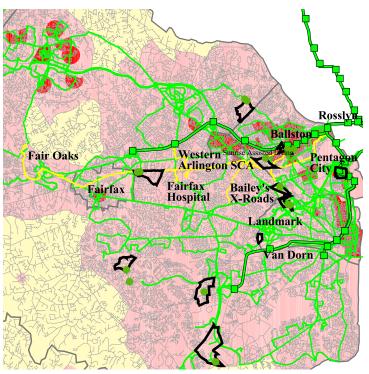


Transit Serving Pentagon CIty SCA

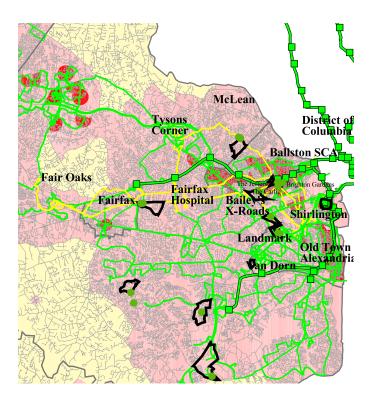


Bailey's
Crossroads
Van Dorn Metro
Springfield
Kingstowne

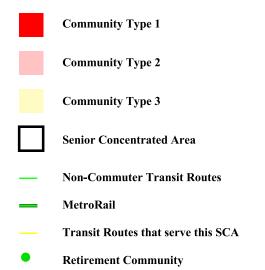
Transit Serving Landmark SCA

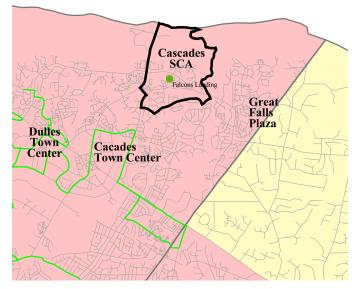


Transit Serving Western Arlington SCA



Transit Serving Ballston SCA





Transit Serving Cascades SCA

Senior Concentration Areas in Northern Virginia

Appendix 5 COMMUNITY TYPE CLASSIFICATION

Appendix 5 Methodology Underlying Community Type Classification

Among the project goals of the Northern Virginia Senior Transportation and Mobility Study include two related to land use: (1) to identify differences in the travel patterns of seniors by the type of community (urban/town/mixed use vs. suburban/separation of land uses) where they reside; and (2) to assess the impacts of land use patterns and community type on senior mobility. To accomplish these goals, the study has included efforts to categorize the region into a limited set of community types that reflect meaningful distinctions of land use patterns that may affect travel and mobility.

Based on a preliminary assessment of community types and knowledge of the region, three community types were defined by NVTC:

- Type 1: Moderate density/suburban or town to high density/urban with a walkable environment and mixed land uses.
- Type 2: Moderate density/suburban with a separation of retail and commercial land uses from residential areas and an environment not conducive to significant pedestrian activity.
- Type 3: Low density exurban or rural land use with limited commercial and service activities.

To determine the physical boundaries of these community types, the consultant used the following sources:

- 1996 Metropolitan Washington Council of Governments (COG) Regional Land Use Plan.
- 2000 Census block group data,
- Individual input from local land use planners at each of the nine jurisdictions in the NVTC study area.

The COG Plan provided necessary information about types of land use in the region, helping to create an initial community type layer by separating suburban from rural areas, urban from suburban areas, and commercial from residential areas. These land uses could not be used to identify community types on their own, however, because (1) the COG information is somewhat dated, (2) the document is a plan rather than an inventory of existing land uses, and (3) land use definitions vary slightly between jurisdictions.

For this reason, Census block group data was overlaid with the COG Plan to help isolate those areas with current and particular land use characteristics that are consistent in definition across the region. Several scenarios were developed based on different types of available census information, presenting a variety of options for community type designations. The differences in the scenarios related to the definition of Type 1, the urban/town/mixed use category.

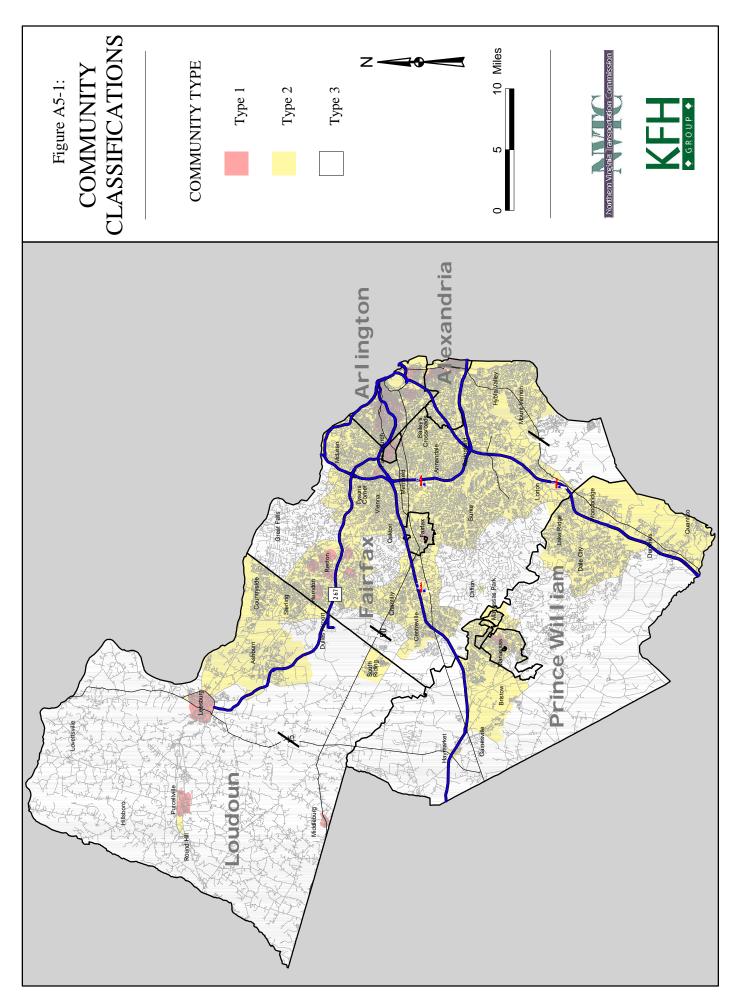


The different scenarios were provided to each of the nine jurisdictions in the study area, requesting review by the local land use planners to obtain any input they might have. Based on further assessment and after the review by the local planners, a preferred scenario was selected and minor modifications made to reflect the input of the local planners. The resulting categorization includes three community types, described below and shown in Figure A5-1:

- Type 1 includes all areas that are:
 - o within a block group that contains some area considered to be "high density mixed use" according to the COG Plan.
 - o within a block group where at least 10% of the existing housing units were built before 1940, and with a population density of at least 2,000 persons per square mile.
 - o within an area that does not contain either of the above parameters, but was recommended to be included in the Type 1 category by local land use planners because of unique aspects of the local environment.
- Type 3 composed of all block groups where a significant portion of the land use is considered "rural" according to the COG Plan, or where otherwise designated by local land use planners.
- Type 2 includes all remaining land area.

Essentially, community Type 1 includes those areas of the northern Virginia region characterized as higher density, mixed land use, and a more pedestrian environment relative to other parts of the region. Community Type 2 is characterized as more suburban, with a greater separation of land uses. Community Type 3 can be characterized as more rural or exurban. This categorization of community types enables the study to assess differences in seniors' trip-making and mobility across the region and provides for a *relative* differentiation of land use types. It is not intended to reflect or suggest land use implications or zoning for the jurisdictions. The differentiation of community types is intended specifically to help the study understand whether there are differences in senior mobility that are affected by characteristics of the communities in which they reside and to help frame recommendations that might improve senior mobility in the future.





[Planning and Zoning Director] [Address]

Dear [planning director]:

The Northern Virginia Transportation Commission (NVTC) would like your land use expertise! We have recently initiated a study to better understand the specific transportation needs of seniors in Northern Virginia, by jurisdiction and land use type. To ensure a sound analysis, we'd like you to review our categorization of land use types.

Through our study we hope to identify gaps in coverage of existing and future transportation services, as well as to better equip public transit operators and social service providers with detailed knowledge of the important and growing market for senior transportation. This study includes a demographic analysis, a scientific telephone survey of 1630 Northern Virginia seniors age 75 and older, and follow-up focus groups with seniors.

The mobility of our aging population is now a pivotal transportation policy issue. The number of Northern Virginia residents age 65 and older is expected to more than double between 2000 and 2030. Today, approximately one out of every thirteen Northern Virginia residents falls within this age cohort. By 2030, we expect this ratio to become one out of every seven residents. The increase of more than 200,000 seniors within this time span will have significant policy and programmatic implications for our region.

Part of our research aims to test the hypothesis that seniors, especially those who do not drive, have greater levels of mobility if they live in walkable, mixed-use urban or town communities compared to single-use, residential communities in suburban, exurban, or rural areas. To test this hypothesis respondent addresses will be geocoded in ArcView and assigned a community type. We are asking that you review our preliminary categorization of three different land use/community types defined for the study:

1. A walkable urban, or town, mixed-use community. For this category, density is not as important as character. A complete

pedestrian network of sidewalks, crosswalks, and trails would encourage walking. Roads would generally be two to four lanes wide and intersections designed for safe pedestrian crossing. Street traffic should be slow enough as to not be intimidating to a senior pedestrian with limited agility. Examples of the walkable urban or town, mixed-use community type would include the Rosslyn-Ballston corridor in Arlington County; pedestrian friendly, mixed-use areas of Reston in Fairfax County; and the historic downtown area of Manassas. In order to draw the distinction between the mixed-use and suburban community types, an area should not be placed in the urban or town, mixed-use community type unless a fair amount of pedestrian activity can be observed today. Another criterion is an integrated mix of use. Ideally, residents would be within ½ mile of commercial retail and services.

- 2. A suburban residential community type characterized by a separation of retail and commercial services from the residential areas. Most of Northern Virginia's land area and population will fall within this community type boundary. For instance, a residential subdivision bordered by a commercial strip shopping center that offers a grocery store and other services would qualify under the suburban residential community type. While sidewalks may link homes and the shopping center, seniors may find the distance too great or barriers such as surface parking lots, fast moving vehicular traffic, and wide intersections not conducive for walking.
- 3. A rural/exurban community type. This community type would be characterized by areas where farming, forestry, and ranchette activities occur and where single family homes on large lots are located. Few, if any, retail or service activities would be located in these areas, with most located at crossroads. Most of this community type will be found in Loudoun and Prince William counties, although Fairfax County may have some land area in this community type.

I recognize that the built environment of our region is significantly more diverse than these three community types; however, we are constrained by the need to ensure a large enough sample size for each of the community types in order to produce statistically significant results by community type.

NVTC requests your department's assistance by reviewing the boundaries of these community types for your jurisdiction. It would be most helpful if someone from your staff knowledgeable about the current built environment could identify the community type boundaries using roads, census blocks or block groups, and/or other locator features that can be mapped in ArcView. As a starting point NVTC, with assistance from its consultant, the KFH Group, has mapped three possible options. A description of the methodology used for each is provided. The research team is leaning toward option two; however, we very much need the assistance of

jurisdictional land use planners to verify that the areas mapped meet the intent described in this letter.

Please respond with any adjustments that you think should be made so that we can finalize the boundaries of the three community/land use types for the study. We would like to finalize the sampling methodology by the end of March; however, some flexibility in the schedule exists. If you have questions about the study or the development of the three options attached, please do not hesitate to contact me by phone (703) 524-3322 or email (jana@nvtdc.org). We can provide ArcView shapefiles upon request.

Thank you for your assistance with this project. I hope that NVTC's research will provide Northern Virginia's jurisdictions and the planning profession with useful insights.

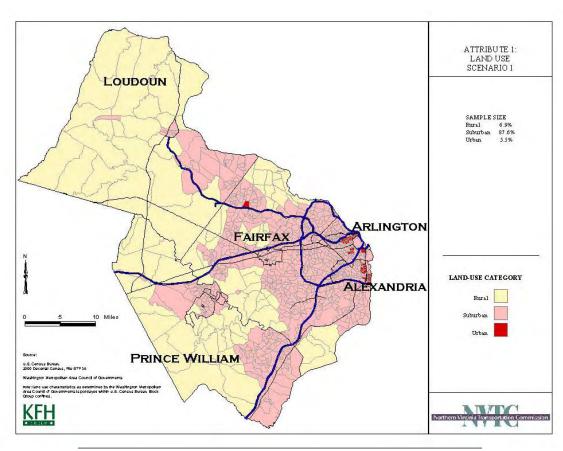
Sincerely,

Jana Lynott, AICP Senior Transportation Planner Northern Virginia Transportation Commission

Scenario 1

• Urban area defined by mix of land uses and environments conducive to walking - per discussions between NVTC and KFH Group

This scenario only includes, walkable, mixed-use areas as considered by the definition of an urban/mixed-use land use category described in the attached letter. The areas highlighted were included based on brief discussions with NVTC. They include communities in the Rosslyn-Ballston Corridor, the Jefferson-Davis Highway Corridor in Arlington and Alexandria, the Columbia Pike Corridor in Arlington, Old Town and Del Ray in Alexandria, and the Reston Town Center area in Fairfax County. The primary problem with this scenario is that the resulting sample size of persons 75 years and older and living in an urban/mixed-use area falls below the recommended 6%-7% as suggested by the market analysis team. It is likely this initial cut does not capture all walkable, mixed-use areas in this region.

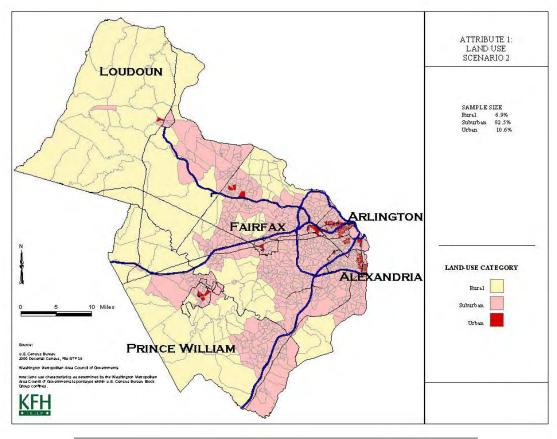


					75+
	Area		Population	Population	Sample
	(SqMi)	Population	Density	75+	Size
RURAL	294.8	173,013	587	4,061	6.9%
SUBURBAN	584.2	1,576,140	2,698	51,277	87.6%
URBAN	6.1	68,287	11,176	3,207	5.5%
	885.1	1.817.440	2.053	58.545	

Scenario 2

Urban/mixed use area or town defined by age of housing stock – per year 2000 census data

This scenario increases the proportion of 75 and older residents living in an urban/mixed use area by expanding the urban area to include older communities, which are presumed to consist of more walkable street amenities and have better connectivity between land uses. Based on year 2000 decennial census information, any block group with at least 10% of the housing stock built before 1940, and a population density of at least 2,000 persons per square mile has been included within the urban area land use classification in addition to those areas included in scenario 1. This has resulted in the addition of more inner suburban areas and the downtown areas of Leesburg, Herndon, Manassas, and Fairfax City. Currently, this is the preferred scenario by the study team because the sample size is adequate and the areas included in the urban/mixed use or town land use category are generally within the confines of the definition in the letter.

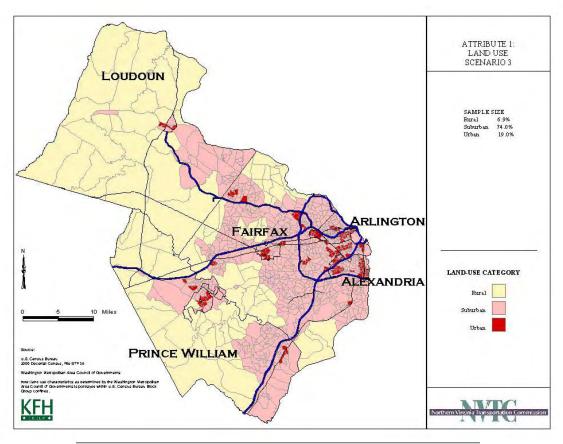


					75+
	Area		Population	Population	Sample
	(SqMi)	Population	Density	75+	Size
RURAL	294.8	173,013	587	4,061	6.9%
SUBURBAN	575.5	1,522,323	2,645	48,332	82.6%
URBAN	14.9	122,104	8,195	6,152	10.5%
	885.1	1,817,440	2,053	58,545	

Scenario 3

 Urban/mixed use area or town defined by population density and proximity to commercial retail and services – per year 2000 census data and 1996 MWCOG land use data

This scenario further increases the proportion of residents 75 years and older who live in an area classified as urban/mixed-use area or town by expanding that area to include all block groups with a population density of at least 5,000 persons per square mile and a commercial or mixed –use zone within or bordering the block group. Though this identifies more residents who live in mixed-use areas, it may not take into account the walkability of the area, which could make it inconsistent with the definition of an urban/mixed use area or town described in the attached letter.



					75+
	Area		Population	Population	Sample
	(SqMi)	Population	Density	75+	Size
RURAL	294.8	173,013	587	4,061	6.9%
SUBURBAN	560.4	1,354,144	2,416	43,336	74.0%
URBAN	29.9	290,283	9,695	11,148	19.0%
	885.1	1,817,440	2,053	58,545	

Appendix 6 DETAILED ANALYSIS OF CENSUS MIGRATION PATTERNS

General Mob	General Mobility for the Population Five Years and Older: 1995 to 2000	tion Five Years	s and Older: 199	95 to 2000
	Non-Movers	_	Out of County Movers	vers
	Number	Percent	Number	Percent
United States				
5 to 64 Total	115,195,593	52.3%	44,068,802	20.0%
55-64	17,652,103	73.9%	2,672,954	11.2%
65 and Older Total	26,831,885	77.2%	3,171,675	9.1%
55 and Older	44,483,988	75.9%		
Virginia				
5 to 64 Total	2,836,827	51.0%	1,434,627	25.8%
55-64	471,034	75.3%	80,704	12.9%
65 and Older Total	616,659	79.1%	76,704	8.6
55 and Older	1,087,693	77.4%		
Northern Virginia				
5 to 64 Total	671,689	46.8%	444,625	31.0%
55-64	108,913	%6'.29	33,301	20.8%
65 and Older Total	99,414	72.9%	22,390	16.4%
55 and Older	208,327	70.2%		
Arlington County/Alexandria				
5 to 64 Total	92,569	36.3%	106,661	41.8%
55-64	16,524	63.5%	6,286	24.2%
65 and Older Total	21,907	71.8%	5,423	17.8%
Fairfax County/city of Fairfax/Falls Church	-alls Church			
5 to 64 Total	396,531	48.8%	232,816	28.7%
55-64	68,411	68.5%	20,033	20.0%
65 and Older Total	61,734	73.8%	13,009	15.5%
Loudoun County				
5 to 64 Total	56,494	52.9%	26,529	24.8%
55-64	7,250	68.1%	2,224	20.9%
65 and Older Total	5,427	74.9%	1,039	14.3%
Prince William/Manassas/Manassas Park	assas Park			
5 to 64 Total	126,095	48.1%	78,619	30.0%
55-64	16,728	70.4%	4,758	20.0%
65 and Older Total	10,346	%2'69	2,919	19.7%

Northern Virginia In- Out-Migration for Persons Age 55 and Older, 1995-2000

)				
Region of Origin	Number of Movers	Percent of All Senior Movers To Northern Virginia	Region of Destination	Number of Movers	Percent of All Senior Movers Out of Northern Virginia
Midwest			Midwest		
East North Central	1,470	6.3%	East North Central	1,110	2.6%
West North Central	800	3.4%	West North Central	240	1.3%
Northeast			Northeast		
Middle Atlantic	4,140	17.6%	Middle Atlantic	2,220	5.2%
New England	1,750	7.4%	New England	1,170	2.7%
South			South		
East South Central	200	2.1%	East South Central	926	2.3%
South Atlantic	10,560	44.9%	South Atlantic	29,330	%6'89
Maryland	3,200		Maryland	3,420	
Virginia (not from NOVA)	2,900		Virginia (not NOVA)	12,740	
Florida	1,690		Florida	062'9	
DC	1,210		DC	068	
North Carolina	730		North Carolina	2,250	
Georgia	370		Georgia	390	
West Virginia	290		West Virginia	870	
Delaware	170		Delaware	360	
West South Central	1,070	4.6%	West South Central	1,750	4.1%
West			West		
Mountain	1,100	4.7%	Mountain	2,630	6.2%
Pacific	2,120	%0.6	Pacific	2,830	6.7%
Movers within					
Northern Virginia	10,680				

Source: Census 2000 Migration DVD. File C3_5IN_CROSS_TAB.txt.

Net Migration and Net Migration Rates by Age Group (1995-2000)

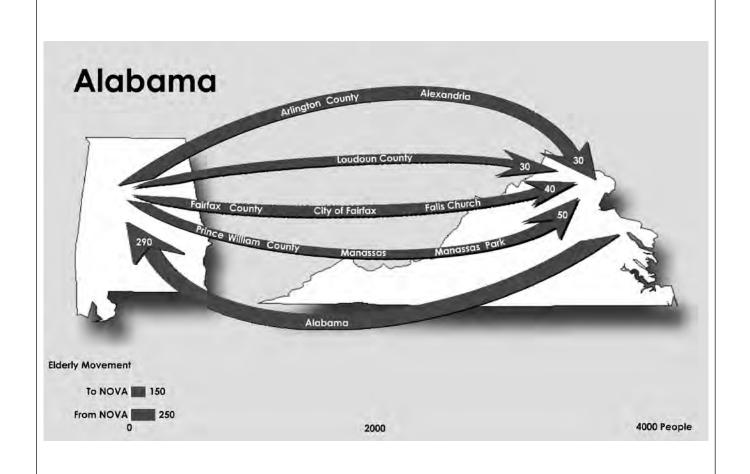
	Age 55-59	Age 60-64	Age 65 and Older Age 55 and Older	Age 55 and Older
Virginia¹ Net Migration Net Migration Rate	-1216	-1838 -6.7	6,937 8.9	3,883 2.76
Northern Virginia Net Migration Net Migration Rate				-19,040 -64

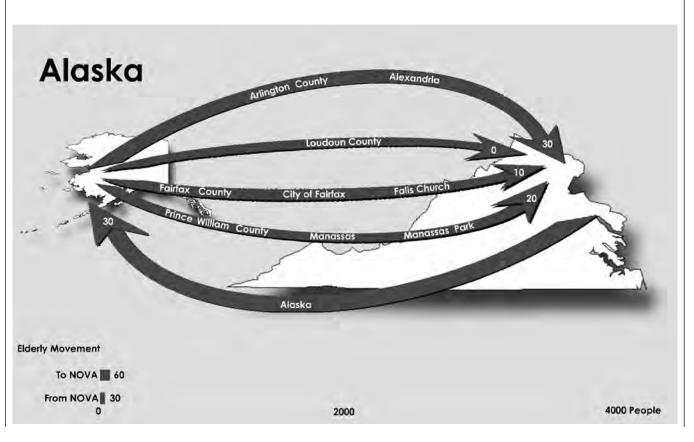
Source: Census 2000 Migration DVD. File B2_Table3_050.txt

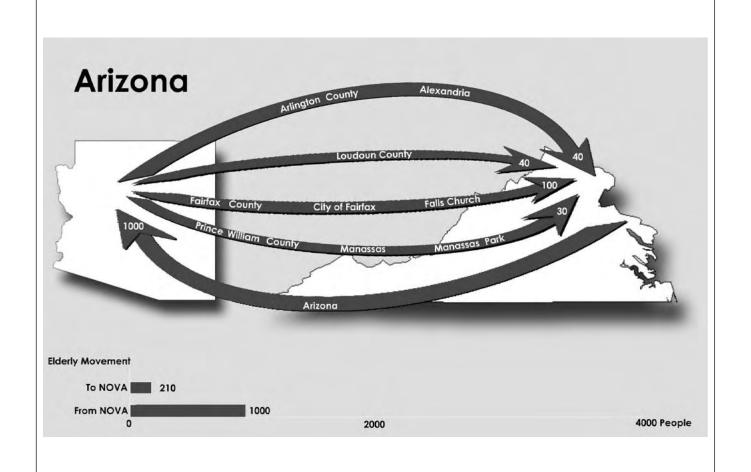
¹ The net migration rate divides net migration (inmigration-outmigration) for a given geography, by the approximately 1995 population for a specific age cohort for that given geography and multiplies the result by 1,000.

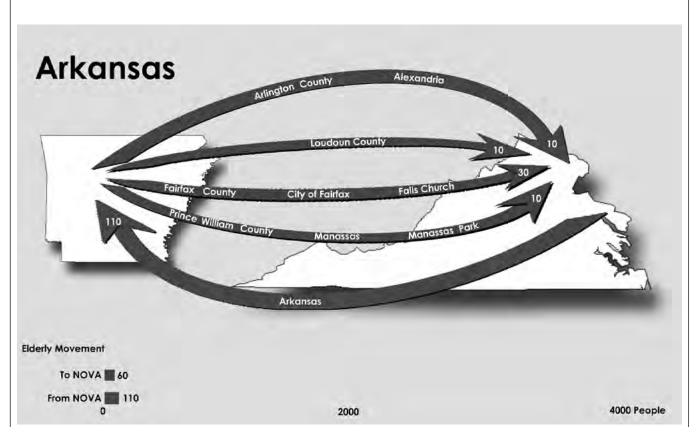
- Among Northern Virginia seniors age 55 and older who chose to move between 1995 and 2000, one quarter relocated to residences still in Northern Virginia. A
- 2000, Northern Virginia lost more than 19,000 residents age 55 and older. The largest net outmigration of seniors across the state, as well as Northern Virginia seniors who leave the state, occurred among persons in the 60-64 age group. One factor contributing to this pattern While Virginia attracts more seniors than it loses, Northern Virginia has a sizable negative net migration rate (-64). Between 1995 and s the actual decline in the population age 60-64 in 2000 as a result of depressed births in this pre-Baby Boom cohort. Д
- Virginia Department for the Aging. All other Northern Virginia jurisdictions experienced a negative net migration of seniors 65 and older.2 Loudoun County, Manassas, and Manassas Park experienced positive net migration for persons age 65 and older according to the A
- That vast majority of seniors (age 55 and older) who leave Northern Virginia remain in the South Atlantic region (68%). Of these, 43.4 percent relocate to other Virginia jurisdictions. Florida and Maryland also attract a significant number of Northern Virginia's seniors. A
- 48 percent were in the highest income bracket reporting an annual household income of \$75,000 or more. Only 13 percent of seniors that relocation decisions. Of all Northern Virginia residents age 55 and older that reported moving out of the region between 1999 and 2000, Why are seniors moving? The data cannot answer this question. For some, it may be because seniors wish to cash out on high home prices and move to less expensive parts of the country or it may be a desire to move to warmer climates. Income likely plays a role in moved out of the region were from the lowest income bracket, reporting an annual income less than \$25,000 per year. A
- parts of Virginia, Florida and DC sending the largest numbers of seniors). Looking outside this nearby South Atlantic region, 17.6 percent The greatest numbers of senior inmigrants to Northern Virginia came from the South Atlantic region (44.9 percent), with Maryland, other of Northern Virginia's immigrants during this period were from the Middle Atlantic states (New Jersey, New York, and Pennsylvania) A

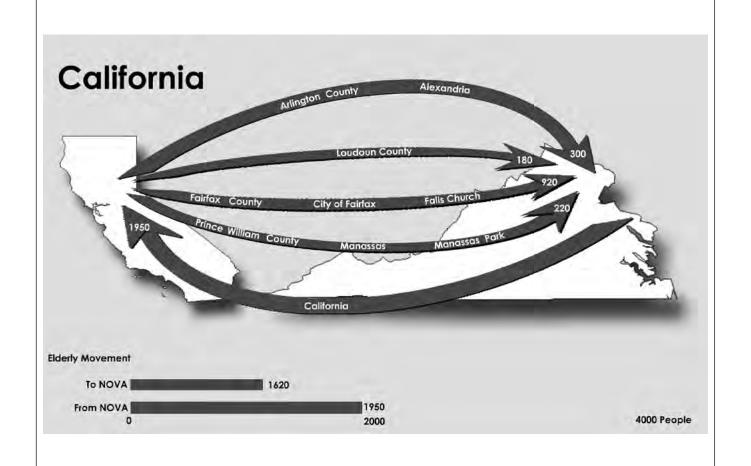
Note to researchers: only the flow data (z:/jana/eldermobility/censusmigration/elizabethsfiles/northernvirginiamigration2) can show the numbers of seniors (55 and older) that leave NOVA (to other counties in the state or out of state). However, this data set does not provide a breakdown by different age cohorts.

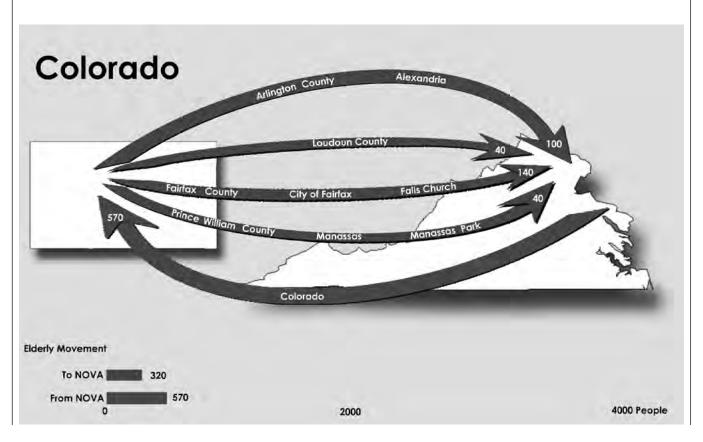


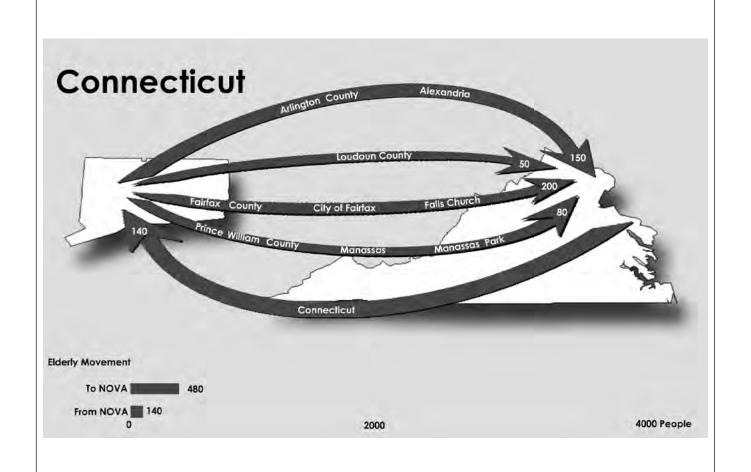


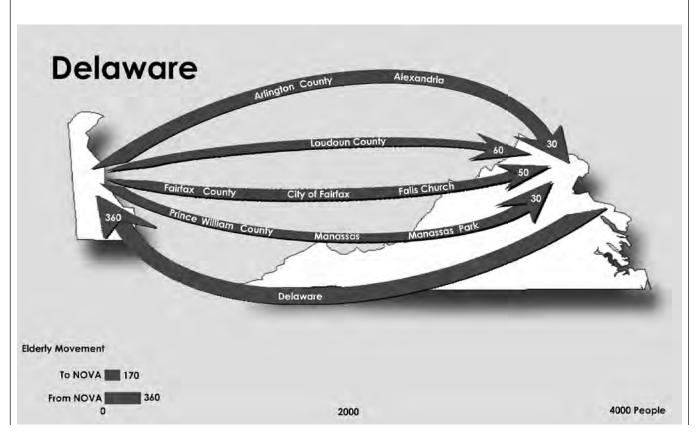


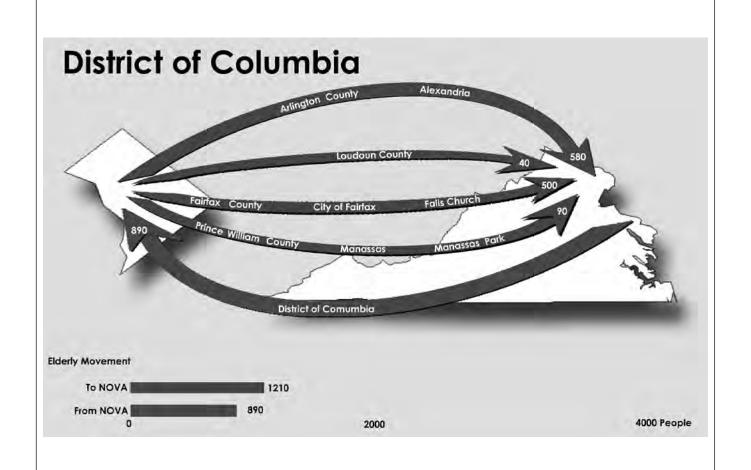


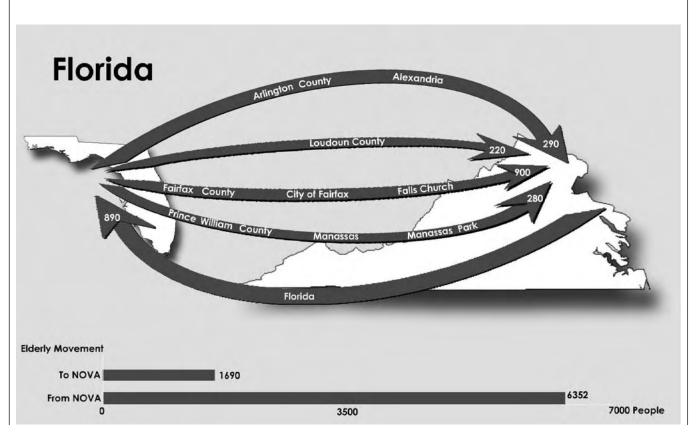


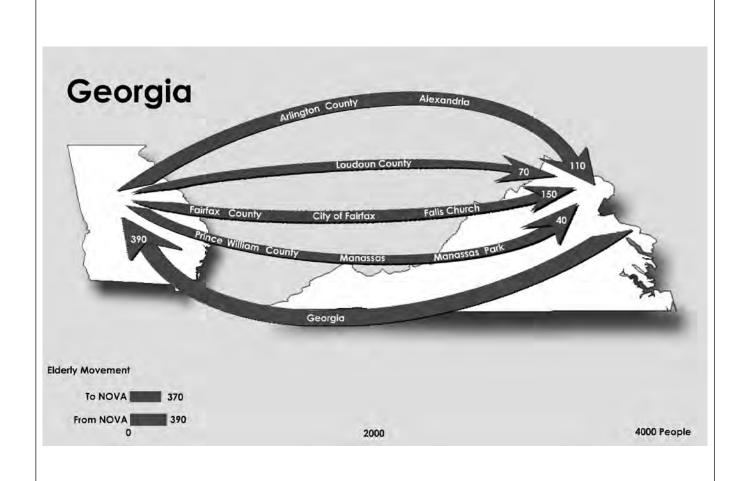


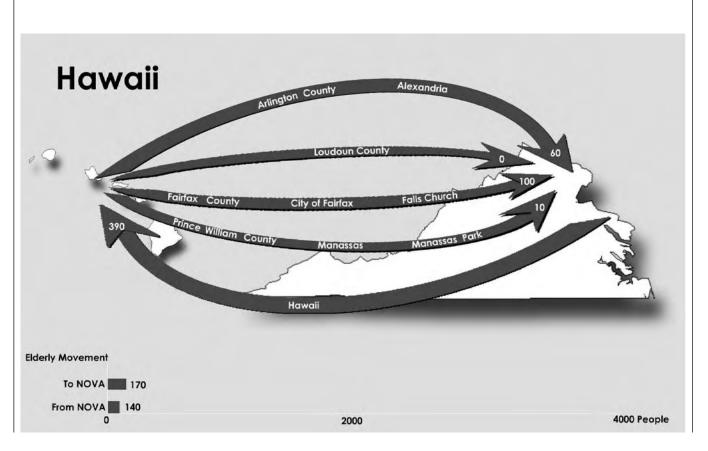


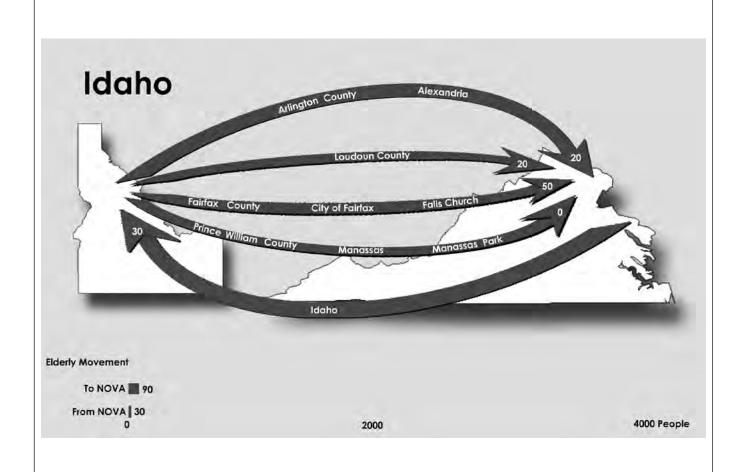


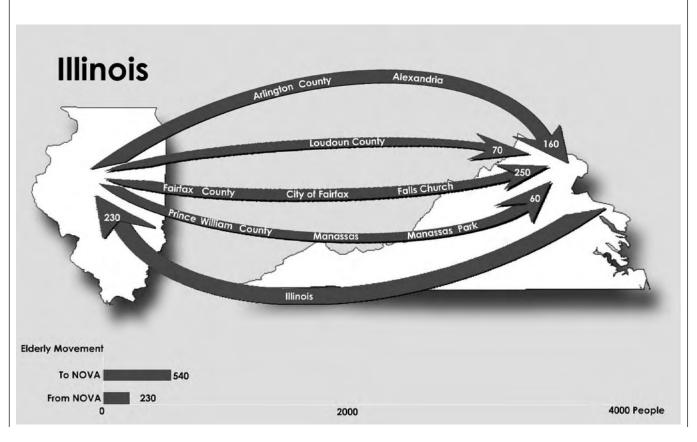


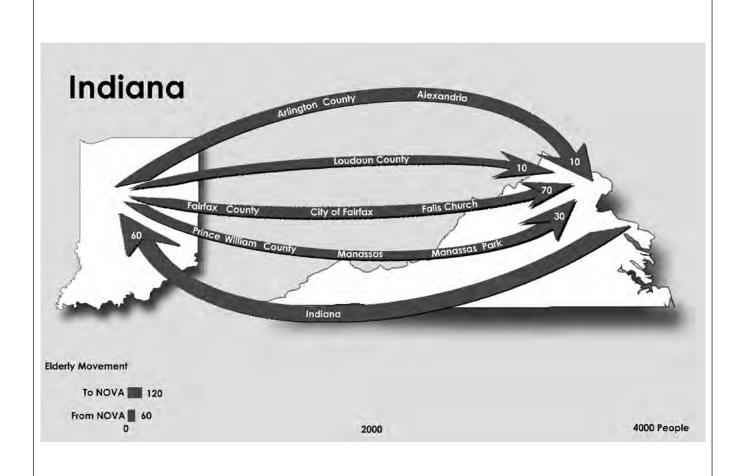


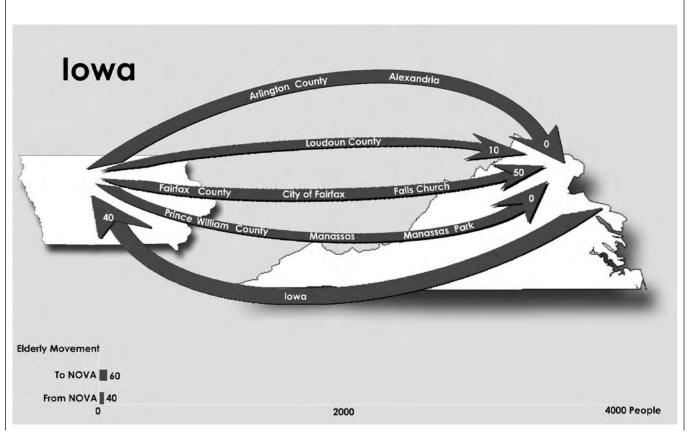


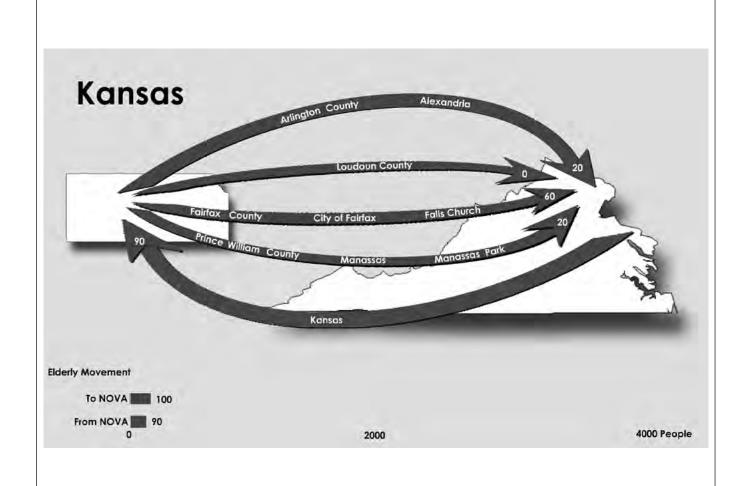


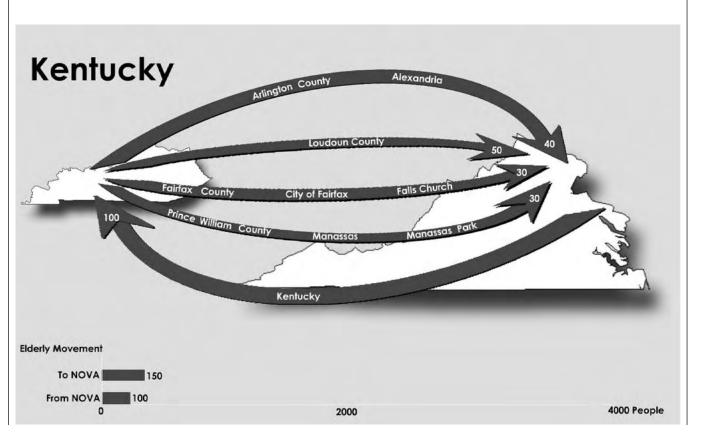


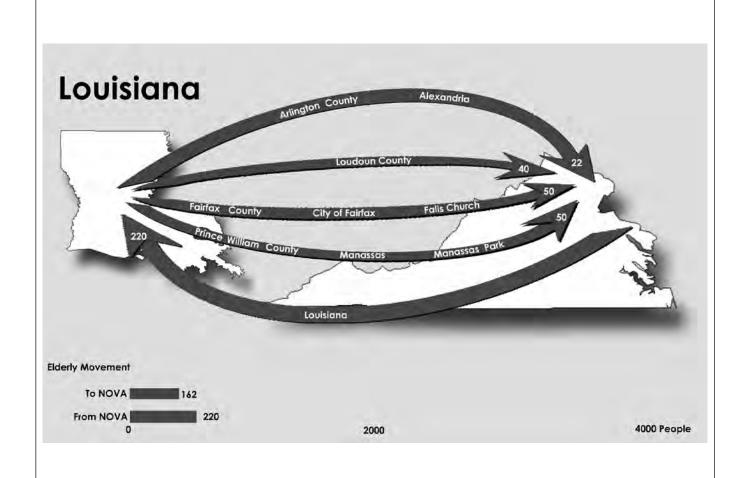


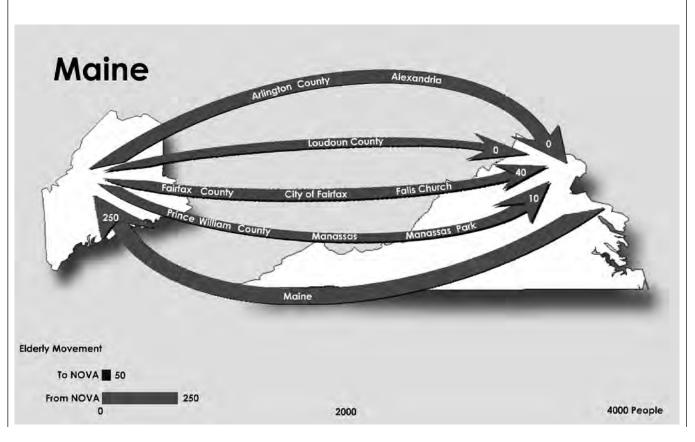


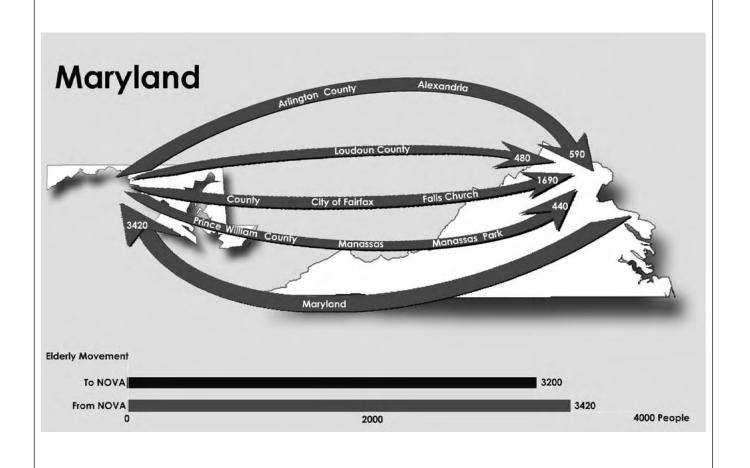


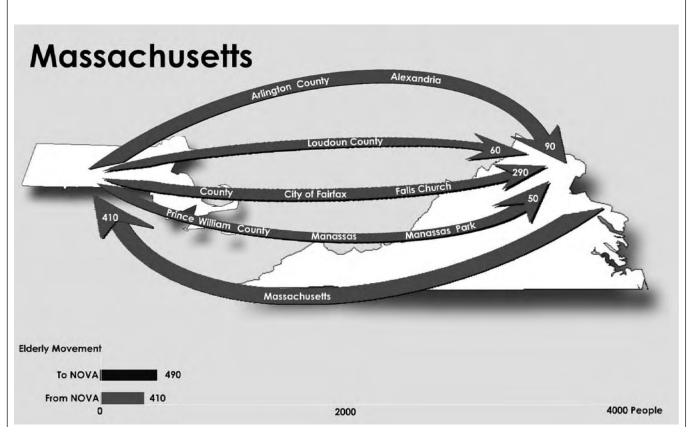


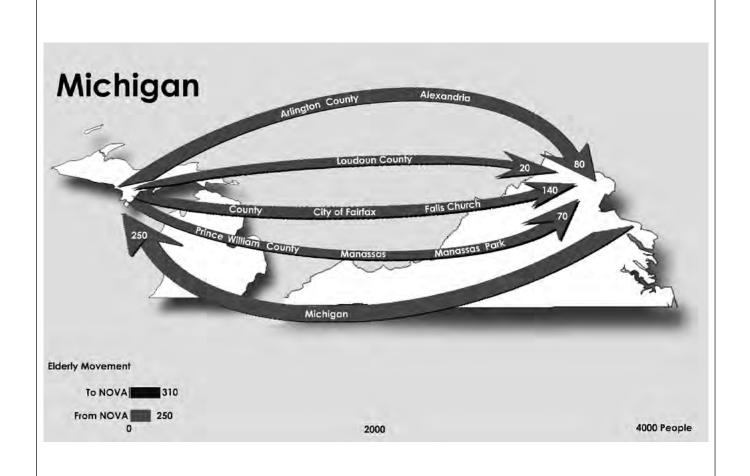


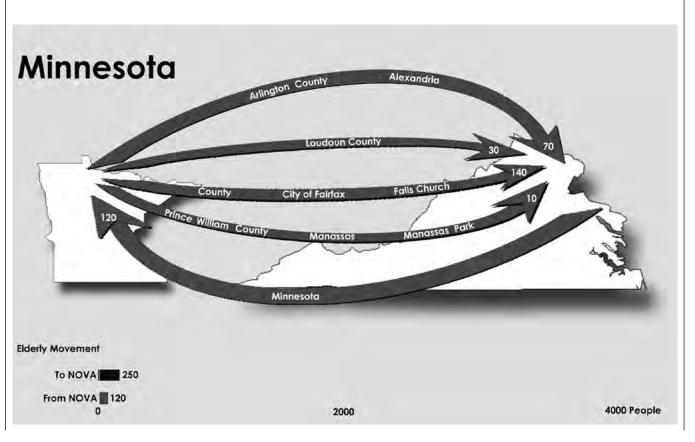


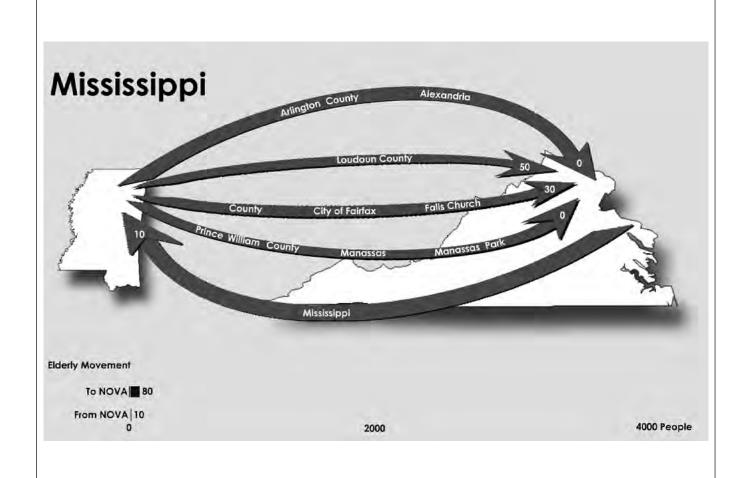


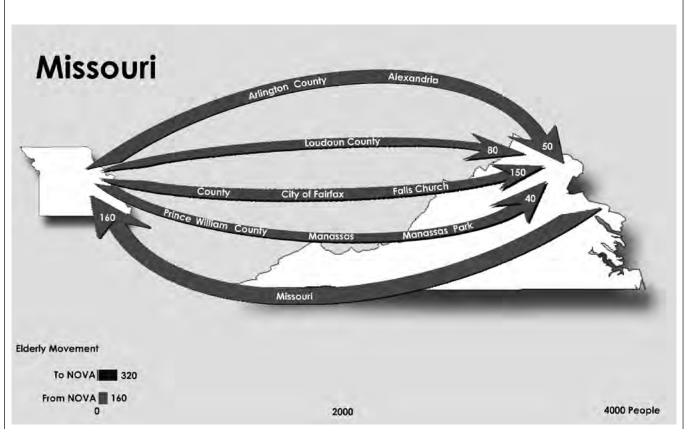


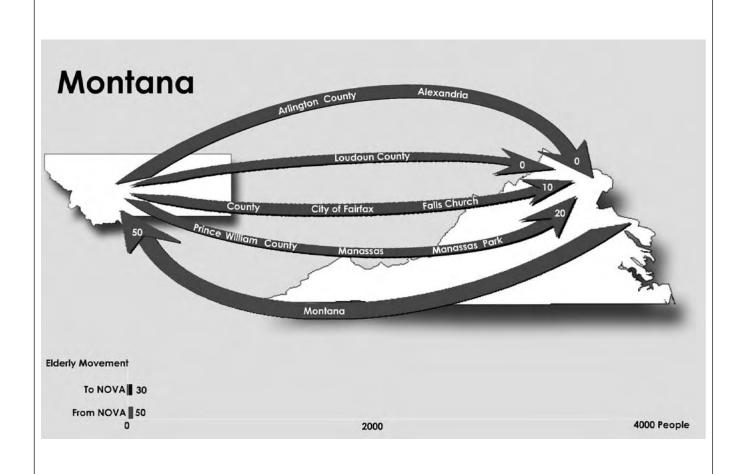


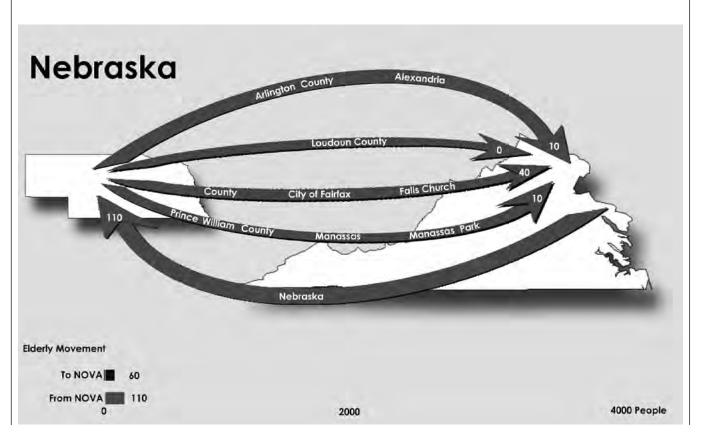


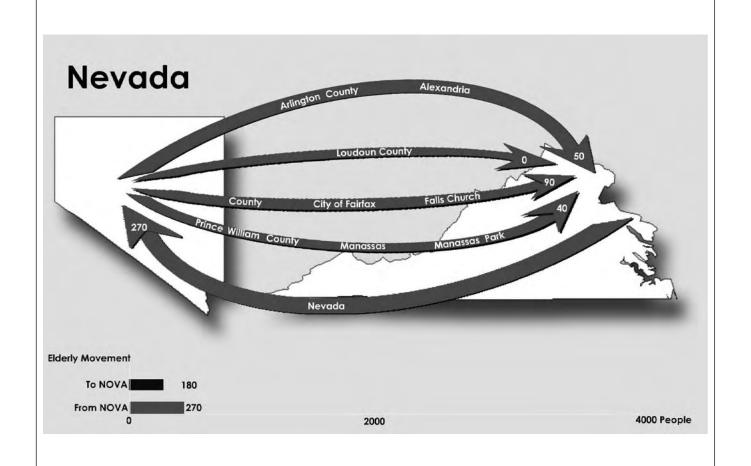


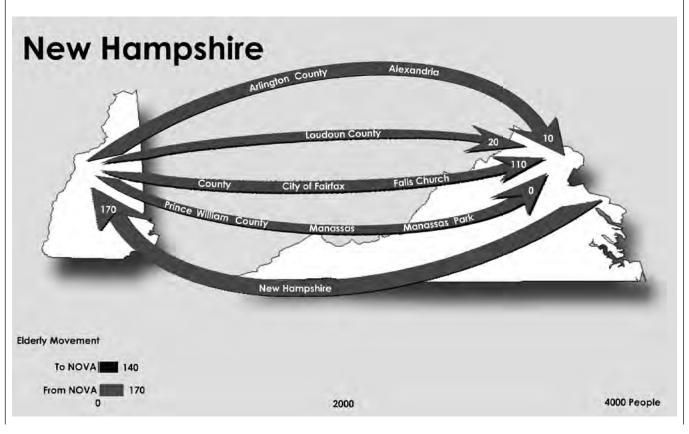


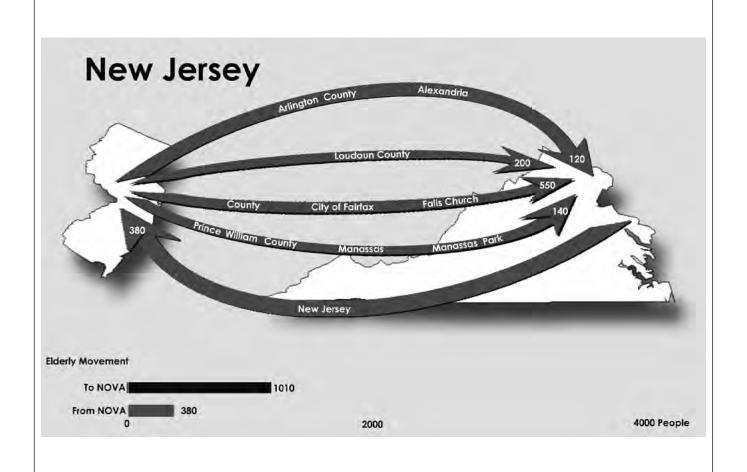


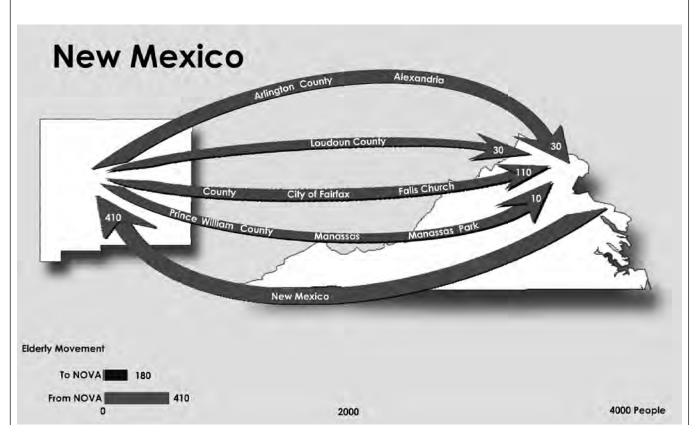


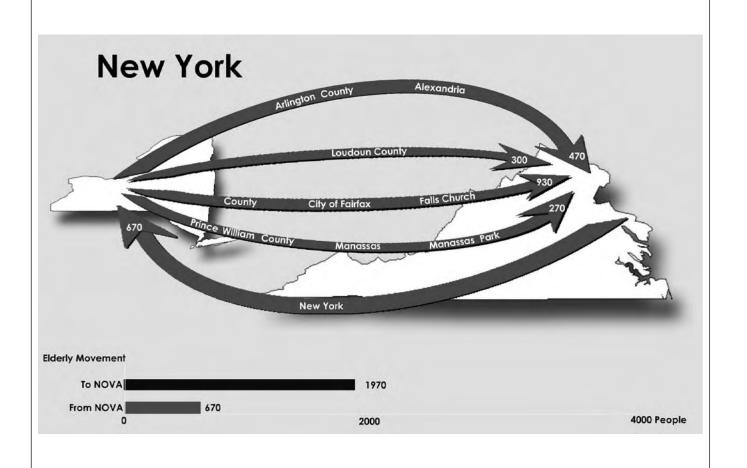


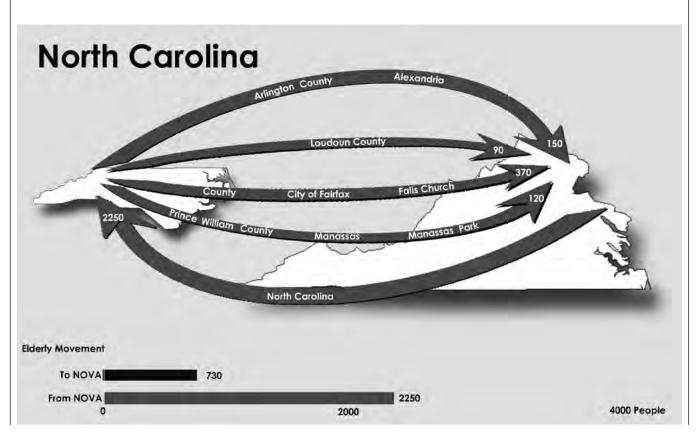


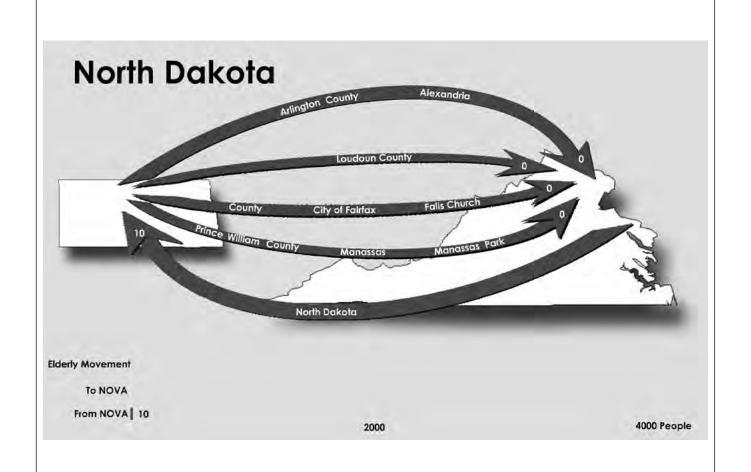


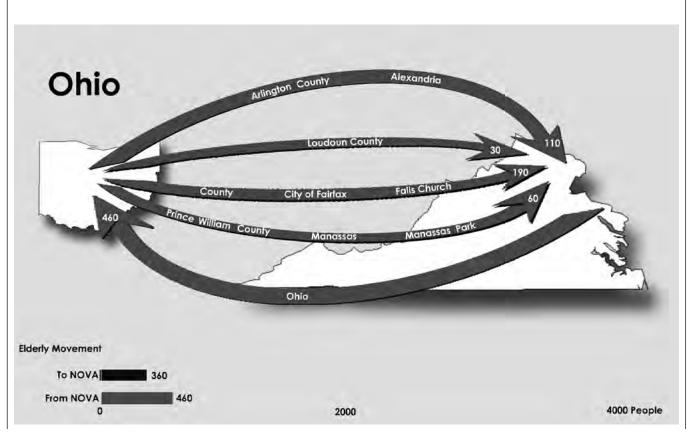


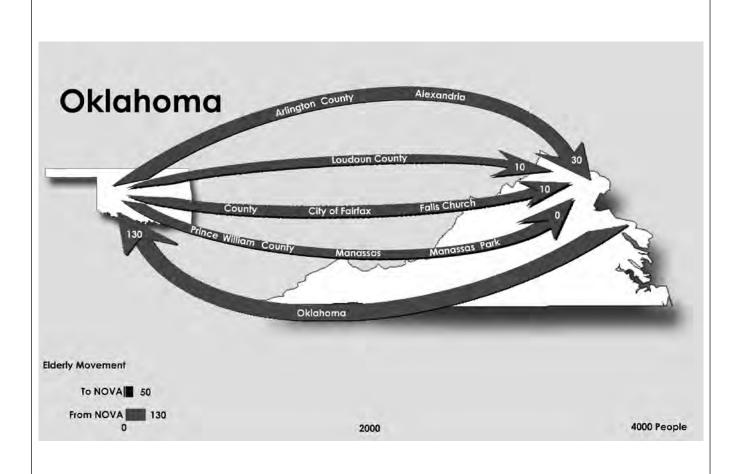


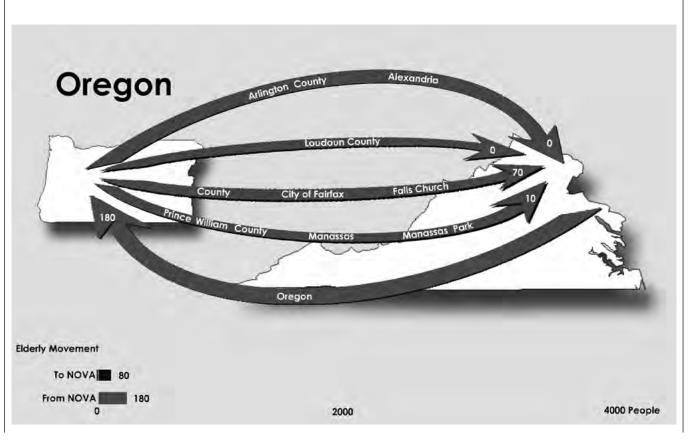


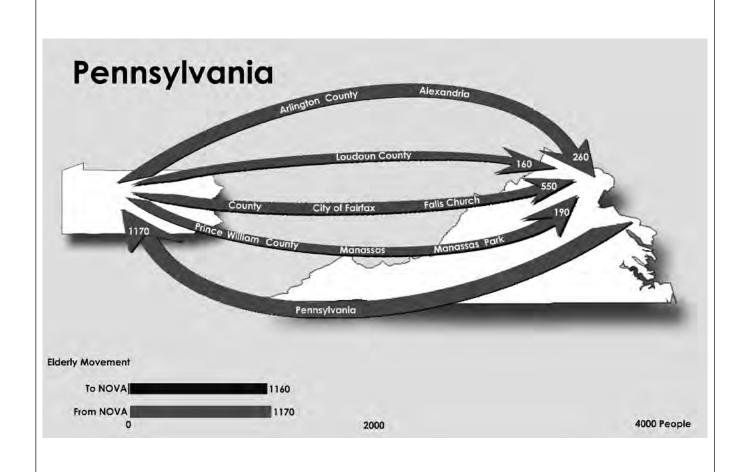


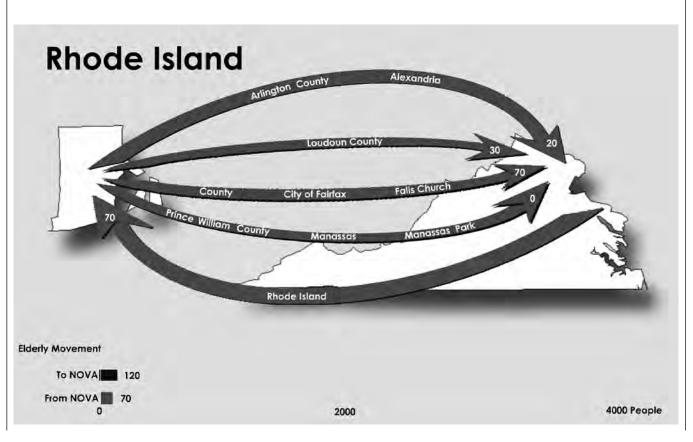


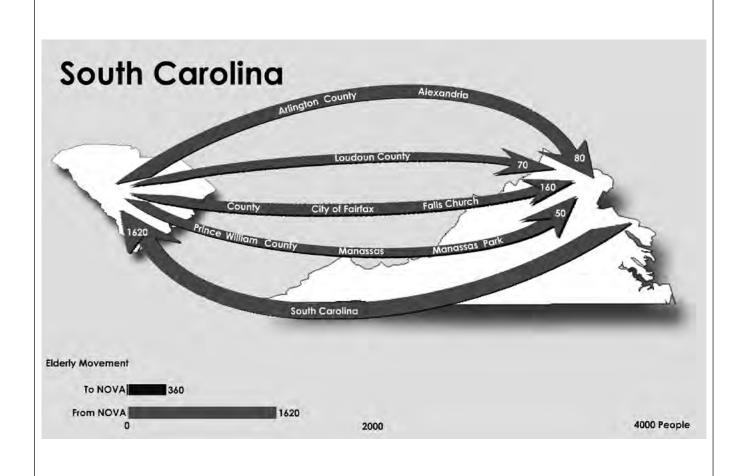


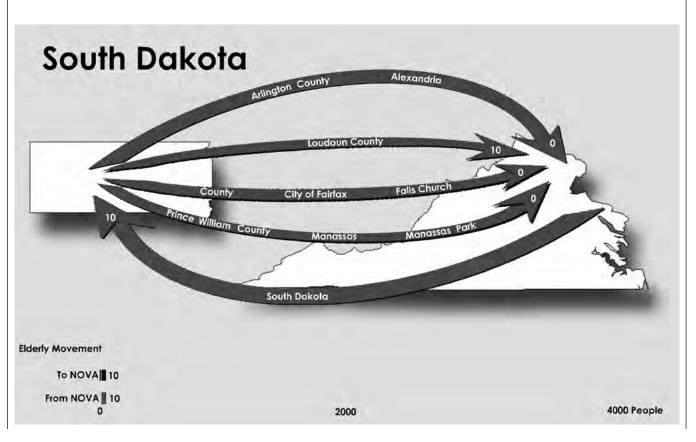


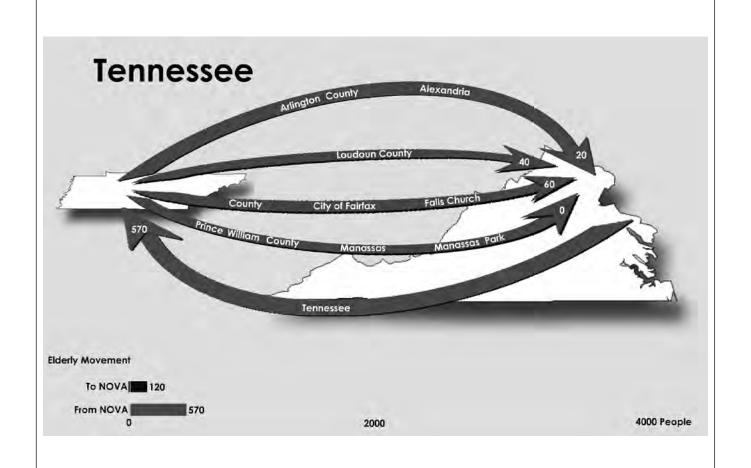


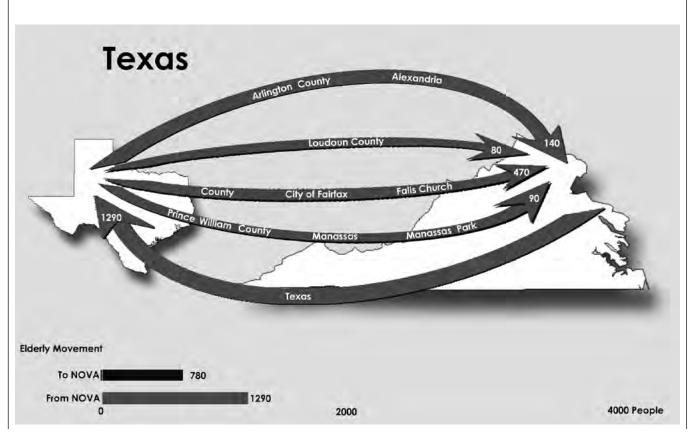


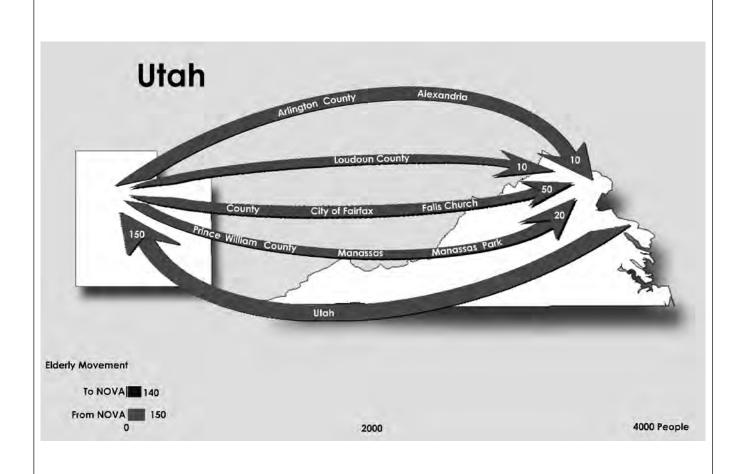


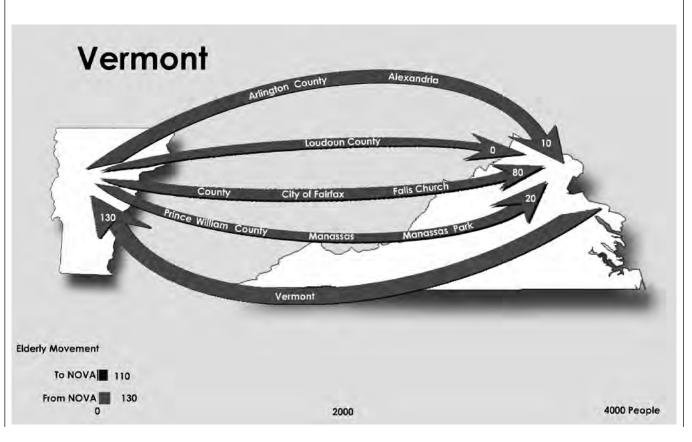


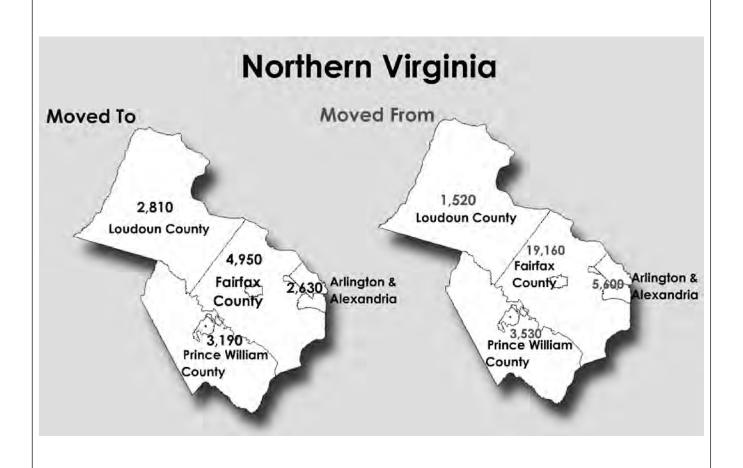


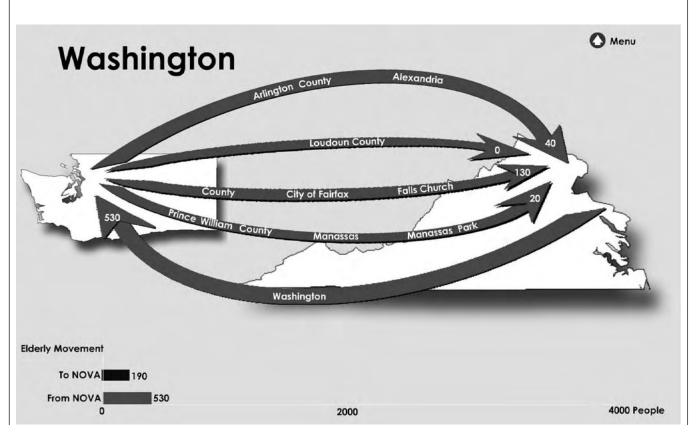


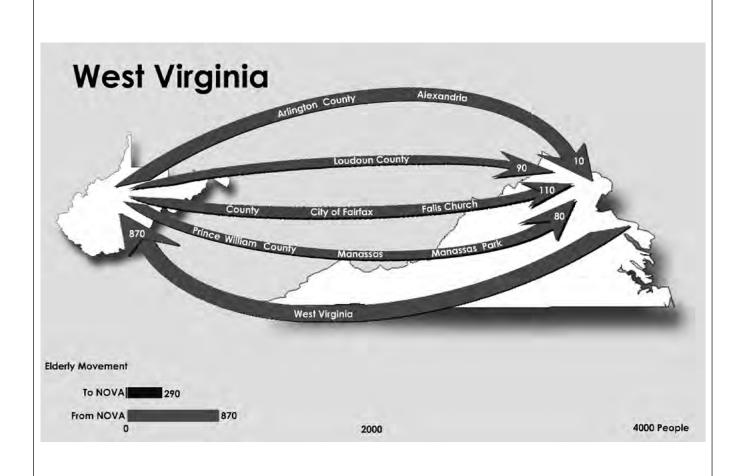


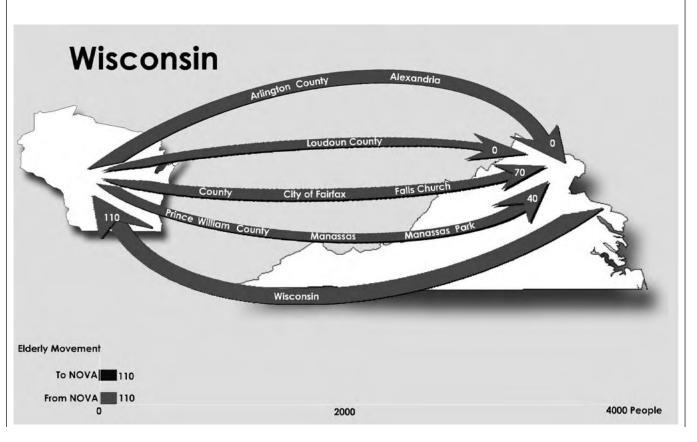


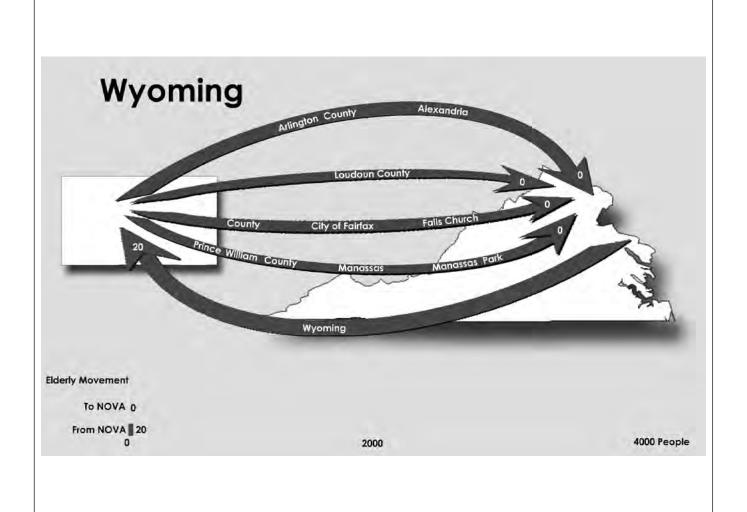












Appendix 7 SENIOR TRANSPORTAITON STUDY ADVISORY TEAM

Senior Transportation Study Advisory Team

First Name	First Name Last Name	Title	Organization Name
Donya	Bauer	Project Coordinator	Fairfax Area Agency on Aging
Rhonda	Dramstad	Care Coordinator	Loudoun County Area Agency on Aging
Buffy	Ellis	Consultant	KFH Group, Inc.
Carol	Erhard	Department of Systems Management for Human Services	Fairfax County
Letha	Flippin	Human Service Specialist	City of Falls Church
Scott	Gross	Transit Operations Manager	Loudoun County
Kristin	Haldeman	Transportation Economist	Washington Metropolitan Area Transit Authority
Irvin	Harried	General Manager	Arlington Star
Marilyn	Huddell	Program Manager	Loudoun County Agency on Aging
Wendy	Jia	Office of Transportation	Fairfax County
Raymond	Johnson	Urban Planner	City of Alexandria
Angela	Kearney	Consultant	WB&A Market Research
Wendy	Klancher	Department of Transportation Planning	Metropolitan Washington Council of Governments
Terri	Lynch	Director	Arlington County Area Agency on Aging
Jana	Lynott	Project Manager, Director of Transportation Planning	Northern Virginia Transportation Commission
Kelley	MacKinnon	ART Operations Manager	Arlington Transit
Steven	Markenson	Consultant	WB&A Market Research

Monday, March 06, 2006

First Name	First Name Last Name	Title	Organization Name
James	Maslanka	Chief of Transit Services	City of Alexandria
Betsy	Massie	Director of Grant & Project Management	Potomac and Rappahannock Transportation Commission
Adam	McGavock	Director of Transportation Projects	Northern Virginia Transportation Commission
Jeanna	Muhoro	DSS Position Seniors on the Go Training	Fairfax County Department of Transportation
Denis	Paddeu	Planner	Fairfax County Department of Transportation
Kevin	Pullis	Consultant	WB&A Market Research
Kala	Quintana	Director Public Outreach	Northern Virginia Transportation Commission
Elizabeth	Rodgers	Research Assistant	Northern Virginia Transportation Commission
Sharmila	Samarasinghe	Project Manager	Virginia Department of Rail & Public Transportation
Eric	Smith	Transit Operations Manager	Arlington County Department of Public Works
Susan Jane	Stack	Program Manager	Loudoun County Department of Social Services
Grace	Starbird	Director, Area Agency on Aging	Fairfax County Department of Family Services
Richard	Taube	Executive Director	Northern Virginia Transportation Commission
Don	Trilling		U.S. Department of Transportation (Retired)
Sadina	Vanison	Social Worker	Alexandria Aging
Lin	Wagener	Director	Prince William County Agency on Aging
Karen	Waterman	Transportation Project Manager	Potomac and Rappahannock Transportation Commission
Beth	Wiseman	Program Specialist	Department of Social Services
Steve	Yaffe	Planning Manager, FASTRAN	Fairfax County