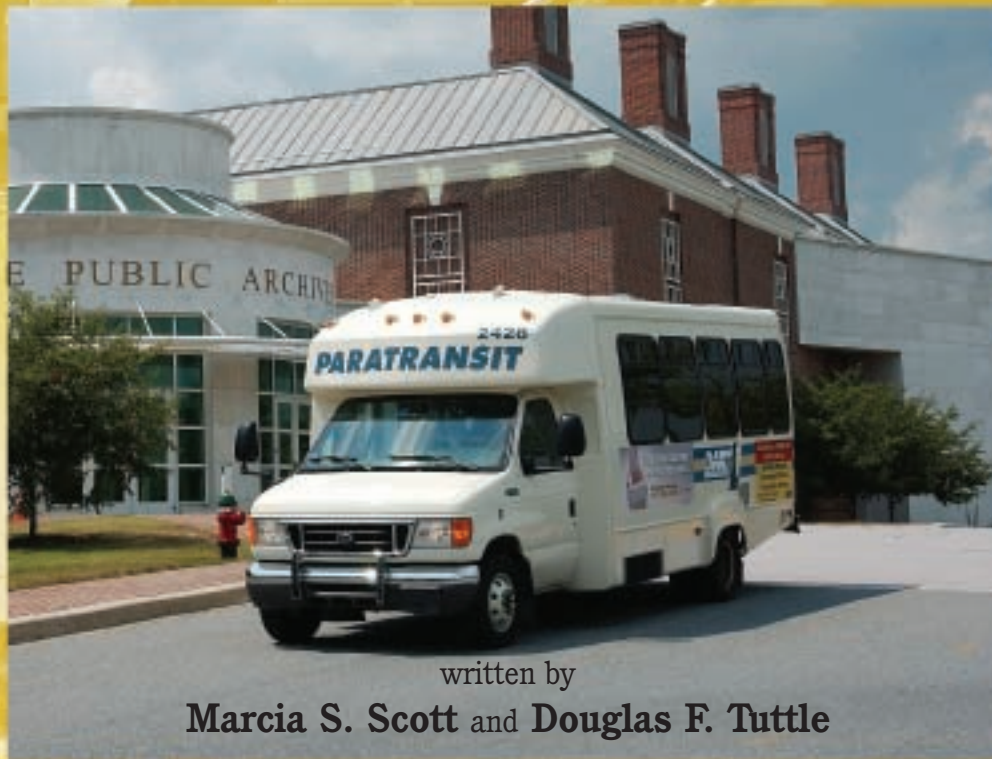


Framing the Issues of Paratransit Services in Delaware

FINAL REPORT
December 2007



written by
Marcia S. Scott and Douglas F. Tuttle

prepared by



Institute for Public Administration
College of Human Services, Education & Public Policy
University of Delaware

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prepared for the
Delaware Department of Transportation
and the
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www.ipa.udel.edu

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This work was sponsored by the Delaware Department of Transportation and prepared in cooperation with the Delaware Department of Transportation and the Delaware Transit Corporation. The contents of this report reflect the views of the authors who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views of the Delaware Department of Transportation or the Delaware Transit Corporation at the time of publication. This report does not constitute a standard, specification, or regulation.

Preface

As the director of the Institute for Public Administration (IPA) at the University of Delaware (UD), I am pleased to provide this report, *Framing the Issues of Paratransit in Delaware*. Components of this Phase I project consisted of:

- Review of national and regional issues to frame the issues of paratransit service.
- Site visit to the Delaware Transit Corporation to understand DART First State's operational policies and procedures.
- Demographic analysis to highlight national and local demographic trends impacting the growing demand for paratransit service.
- Literature review of agency-specific case studies and reports.
- Interview with Jeff Lougheed, representative for Trapeze software group.
- Collection of external state agency data and internal DART First State data to develop several GIS mapping prototypes in collaboration with UD's Center for Applied Demography and Survey Research. These scenarios identified generators of paratransit demand in Delaware and illustrated the importance of coordinating transit and land-use planning.
- Assessment of best practices that have been implemented successfully by other public transit agencies to cost-effectively provide ADA-mandated paratransit service. The best practices assessment is summarized in an Innovative Practices Matrix, which is included in the appendix of the report.
- Interview/site visit with Gary Frenze, president of the Delaware Express Shuttle to determine if private enterprise can provide a model that is applicable to the unique nature of public paratransit services in Delaware.

There were several deliverables for this project. A preliminary draft white paper and draft innovative practices matrix were prepared and submitted in mid-April 2007. Major points of the preliminary draft were presented in a PowerPoint presentation to Secretary of Transportation Carolann Wicks on April 13, 2007. A subsequent presentation was made to DART First State Executive Director Stephen Kingsberry and DelDOT Planning Director Ralph Reeb on April 23, 2007. IPA project staff obtained feedback on the preliminary report following these presentations, input from a meeting with Mr. Kingsberry and Development Director Kennard Potts on May 17, 2007, and written comments from DART First State staff members Bonnie Hitch and Stephen Welch. This feedback was incorporated into a final draft report, which was submitted and discussed at a meeting with Secretary Carolann Wicks on October 26, 2007. The final report was then prepared, which provides a report summary and an action plan with recommended short- and long-term strategies and a path forward.

Based on results from this comprehensive study, this report seeks to provide policy options for paratransit services that should be discussed and considered in the near future. A Phase II project is recommended to convene a study group to consider recommendations set forth in this report. The many people who contributed to the study and production of the report are acknowledged in the pages that follow.

Jerome R. Lewis, Director, Institute for Public Administration

Acknowledgements

IPA gratefully acknowledges the many professionals associated with Delaware Express, Delaware Department of Transportation, Delaware Transit Corporation, other state agencies, and our colleagues at the University of Delaware for their assistance and contributions to the study of *Framing the Issues of Paratransit Services in Delaware*. The extensive research, production of maps using Geographic Information System technology, and understanding of the complex issues impacting DART First State paratransit operations could not have been possible without their cooperation and collaboration.

Delaware Express Shuttle

Gary Frenze, President

State of Delaware

Delaware Department of Transportation

Ralph Reeb, Planning Director

Carolann Wicks, Secretary of Transportation

Delaware State Housing Authority

Karen Horton, Director

Delaware Transit Corporation

Larry Brokenbrough, Dispatch Operations

Richard Burton, Operations

Catherine C. Dennis, Planning Manager

Bonnie Hitch, Customer Service Manager

Stephen Kingsberry, Executive Director

Gary Morris, Scheduling Operations

Kennard L. Potts, Development Director

Belinda Strickland, Travel Trainer

Joe Watson, Service Development Planner

Stephen R. Welch, Special Projects and Service Analysis Manager

Kathy Wilson, Customer Service Operations

Luther Wynder, Reservations Operations

Office of State Planning Coordination

Michael Mahaffie, Delaware Geographic Data Committee Chair

Dorothy Morris, Planner/PLUS Coordinator

University of Delaware

Principal Investigators and Authors

Marcia S. Scott, IPA Associate Policy Scientist

Douglas F. Tuttle, IPA Policy Scientist

IPA Graduate Research Assistants

Susan Ambridge

Xuan Jiang

David Nelthropp

Technical Assistance and Professional Support

Mark Deshon, IPA Assistant Policy Scientist

Andrew Homsey, IPA Assistant Policy Scientist

John Laznik, CADSR Policy Specialist

Nicole Minni, IPA GIS Graphics Specialist

Troy Mix, IPA Policy Specialist

Lisa Moreland, IPA Assistant Policy Scientist

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Report Summary

Public transit agencies nationwide have struggled to develop cost-effective paratransit services and service delivery methods that both provide access to transportation and meet the mobility needs of disabled persons, as required under the Americans with Disabilities Act of 1990 (ADA). Paratransit service providers must meet the challenge of managing the delivery of complex service mandates in the face of increasing demand and customer service expectations, shifting demographics, and changing technology, compounded by the growing fiscal pressures of rising costs and increasing competition for revenues.

The state of Delaware has undertaken the task of providing a safe and efficient public transportation network that is affordable, supports mobility and access, and sustains a good quality of life for all Delawareans. Paratransit services in Delaware have presented the greatest operational and financial challenge to the Delaware Transit Corporation (DTC), a division of the Delaware Department of Transportation (DelDOT), operating under the name DART First State. The DART First State paratransit budget currently represents approximately 20% of DTC's \$80 million budget. As paratransit service demand and operating expenses continue to rise, paratransit costs will consume an even larger slice of DTC's budget in the future.

To help curb the increasing demand for and cost of paratransit service, public transit providers nationwide distinguish between ADA-mandated and non-ADA paratransit service. DART First State's paratransit service is dissimilar from other transit agencies not only by its statewide scope, but also by the extent to which it exceeds ADA requirements, discussed further in this report. Delaware is the only state in the nation that does not make the distinction between ADA-mandated and non-ADA paratransit. As a result of this policy, DART First State provides uniform paratransit service to all paratransit patrons statewide, irrespective of location, trip purpose, or the actual trip cost.

Delaware's policy decision to provide an unprecedented level of statewide paratransit services is a logical outcome of the application of socially responsible rationale. Delawareans in the policy-making arena believe that providing community-based support and services offer more cost-effective services, increased community options, and better quality of life to persons with disabilities. Established by Executive Order #50 on September 22, 2003, the Governor's Commission on Community-Based Alternatives for Individuals with Disabilities, is charged with improving Delaware's system of supports and services within the community for persons with disabilities and finding community-based alternatives to institutionalization (www.governor.delaware.gov/orders/webexecorder50.shtml).

Delaware's policy decision to have service delivery practices that significantly exceed the federal ADA mandate has proven to be costly. Paratransit ridership is expected to continue to increase by at least 11% each year. Confronted with projected exponential cost increases associated with paratransit operations, a population with increasingly elderly demographic characteristics, and burgeoning rural land development, DTC faces a "perfect storm" as it seeks to fund future paratransit service.

Framing the Issues of Paratransit Services in Delaware

If it is a given that DART First State will continue to provide paratransit service that exceeds federal mandates, the question then becomes not how to alter this course, but how to be smarter about confronting future challenges. One thought is to view paratransit from a holistic perspective. If paratransit is valued as a regional resource, should it be regarded as a subset of overall issues related to Delaware's social service, transportation, basic mobility, land use, and economic competitiveness needs? If a comprehensive system of community services and support for individuals with disabilities is advocated and the need for greater mobility options is acknowledged by policymakers, then should the cost burden for paratransit rest solely within the Transportation Trust Fund or should it be supported by Delaware's general fund? Should dedicated funding streams be identified to support transit operations and the capital transportation budget? These are critical questions. Another dilemma Delaware faces is that as more funds are spent on transit operations, fewer funds are available for capital transportation projects. At what point will this funding quandary jeopardize either the quality of transit services, the level of capital projects supported by the Transportation Trust Fund, or both? Policymakers need to consider long-term implications of existing service delivery policies and begin to frame paratransit as part of the family of larger statewide transit and land-use planning needs.

The purpose of this project is to frame the issues related to right sizing paratransit services in Delaware. This report reinforces the importance of providing a fully accessible transit system and mobility options to provide each Delawarean with opportunities to obtain a good job, education and training, and needed medical and social services. An overview is provided of issues regarding paratransit service delivery and challenges related to the demand-responsive nature of paratransit services, both nationwide and in Delaware. Paratransit service is demand driven. Pressures to grow the system are impacted by several factors, including high customer expectations and changing demographics. Innovative approaches that are being successfully utilized by other transit providers to manage paratransit growth and escalating costs are explored. It should be noted, however, that strategies adopted by any other specific transit agency may not be applicable in Delaware due to DART First State's unique span of statewide services, large geographic service area, development patterns involving the proliferation of demand generators in low-density areas, lack of available alternate transit modes, and other trends impacting paratransit use.

During the course of the project, it became apparent that there is a critical disconnect between transit and land-use planning. Geographic Information System (GIS) technology was used to develop mapping prototypes that demonstrate the important connection between transit and land-use planning. Opportunities exist to utilize and share GIS data among state agencies to more accurately plan for future paratransit service demands. Short- and long-term strategy recommendations are made to frame the issues of paratransit service in relation to the larger family of transit and land-use planning needs. The study concludes that a coordinated, long-term planning strategy is needed to correctly size the paratransit system, shape the distribution of paratransit travel demand, and reconfigure the transportation network. The concepts and issues addressed in this executive summary are explored in greater detail in the body of this report.

Background

The Americans with Disabilities Act of 1990 (ADA) requires public transit agencies to provide complementary paratransit service for disabled persons who are unable to use fixed-route transit because it is not accessible, the nature of their disability, or the inaccessibility of streets or bus stops. The term “complementary” means that the paratransit system must have service characteristics that mirror the fixed-route transit service and, in summary, must address:

- **Service Area** – provide next-day paratransit service to origins and destinations within a $\frac{3}{4}$ mile of the fixed-route system.
- **Response Time** – provide reservation services during normal business hours for next-day services within a one-hour time span of the requested service.
- **Fares** – charge no more than twice the comparable fixed-route fare.
- **Trip Purpose** – prevent prioritization or restrictions of paratransit trips based on trip purpose.
- **Hours and Days of Service** – provide paratransit service during the same operating hours and days as the fixed-route service.
- **Capacity** – prevent transit agencies from limiting the availability of service by constraints such as trip limitations, waiting lists, or restrictive operating practices.

In addition to providing complementary ADA paratransit service, the federal mandate also requires that all new fixed-route vehicles purchased be equipped with wheelchair lifts or ramps to provide full accessibility to persons with disabilities. As a result, most public transit agencies have replaced older, non-accessible buses and use paratransit vehicles to supplement their 100% accessible fixed-route fleets.

Distinction between ADA Complementary and Non-ADA Paratransit

ADA makes a distinction between two types of paratransit service: (1) complementary ADA paratransit service, which is required by public transit agencies to be in compliance with ADA, and (2) non-ADA demand-responsive paratransit services, which are offered by both public and private transit providers. It is important to differentiate between the delivery of complementary ADA paratransit service and non-ADA paratransit service beyond the fixed-route service area. Because ADA is a non-funded federal mandate, paratransit services that exceed the minimum ADA service area requirement stretch funding resources due to their significantly higher operational costs.

To ease the burden on transit operators that elect to provide paratransit service that operate above the level mandated by ADA, the Office of Civil Rights issued a guideline regarding premium service in 2002. The guideline clarifies that transit operators have the option to provide additional or “premium” levels of paratransit service that exceeds the minimum level of service required under ADA. For premium levels of paratransit service, “premium charges” may be established (www.fta.dot.gov/civilrights/ada/civil_rights_3895.html).

In Delaware, a policy decision was made to provide both the federally mandated ADA complementary paratransit service as well as non-ADA paratransit services. DART’s paratransit service delivery practices exceed the federal mandate by operating statewide—beyond the $\frac{3}{4}$ mile fixed-route service buffer—providing extended service hours and days above the fixed-route service schedule, and providing door-to-door service without screening for individual need

through the eligibility determination process. Within this public policy framework, DART First State administratively classifies and tracks the two levels of service. However, there is no distinction in service practices or fare policy for the higher level of service. The same fare is charged regardless of whether the trip is classified as complementary ADA or the more extensive non-ADA paratransit service. Because the average direct cost of a paratransit well exceeds \$25 per trip, and paratransit ridership continues to grow, substantial increases in the state subsidy are projected.

During the course of this project, it was made abundantly clear that Delaware is proud of its unprecedented level of paratransit services, which exceed federal ADA mandates. Because paratransit services foster personal independence of persons with disabilities, the bottom-line cost of paratransit is secondary to its social service asset. Therefore, recommended strategies focus on how transit planning can be integrated into the overall land-use planning equation, GIS and demographic data can be better integrated to identify demand generators and predict growth, demand-management strategies can promote operating efficiencies, and policy reforms and fare restructuring can promote fare equity and cost effectiveness of the overall bus transit system.

Review of Management Issues

A series of complex of issues were identified regarding the delivery of paratransit services in Delaware and are summarized below:

- Customers have high, and often unrealistic, service expectations. Most customers do not understand the limits of ADA and the distinction between ADA complementary and non-ADA levels of paratransit service.
- Disabled persons, senior citizens, and human service providers have placed pressures to grow DART First State's paratransit system.
- Paratransit ridership will continue to increase by at least 11% each year.
- DART First State, unlike other public transportation entities in the transit industry, provides paratransit statewide in a broad geographic service area.
- There is a significant gap between increasing paratransit needs and revenue growth.
- Despite the striking increases in paratransit ridership and costs, including capital and operating costs, the growth in funding resources has been limited. Transit fares for all modes have not increased since 1989 and require an average state subsidy of over \$25 per paratransit trip.
- Increases in the registration fees for all vehicle classes, driver's license fees, vehicle documentation fees, title fees, surcharges on traffic fines, tolls for all vehicle classes on I-95 and specified tolls on SR-1 have been approved in Fiscal Year 2008, with various effective dates. Other opportunities exist to improve service efficiency, reduce costs, and enhance revenues. A comprehensive assessment needs to be made of possible additional revenue enhancement opportunities. One example is an update of DTC's fare structure, because base bus fares determine the maximum fares for paratransit.
- Delaware's service delivery policies and practices exceed the federal ADA mandate; there is no distinction in service practices or fares for the higher level "premium" service.
- Delaware's demographic trends reveal an escalation of the elderly population, proliferation of active-adult communities, in-migration of retirees, and substantial draw of older persons to low-cost, remote areas.

- The attraction of disabled persons and seniors alike to affordable, rural housing and lower-density residential and non-residential development patterns has impacted the efficiency of paratransit services. Remote paratransit origins and destinations generate longer trip distances, decrease opportunities for ride sharing, and drive up higher costs per passenger mile.
- Redundant/duplicative non-ADA paratransit services exist. Opportunities have been identified to better coordinate the operation and delivery of human services transportation through the “United We Ride” planning initiative.
- Integration of GIS data among state and public agencies is needed to identify, map, assess, and better manage the impact of paratransit demand generators.
- Barriers to fixed-route accessibility include infrastructure barriers and the need for transit facility improvements and amenities.
- A disconnect exists between transit and land-use planning. The Preliminary Land Use Service (PLUS) process needs to be enhanced to focus on the impact of development on transit planning and services. *Strategies for State Policies and Spending* principles need to be applied to transit expansion and investment. Transit-supportive principles need to be incorporated into land-use planning.
- Continued implementation of Advanced Public Transportation Systems (APTS) and technological improvements are needed to help address growing service demands through greater operational efficiency.

Recommended Action Plan and Path Forward

In order to develop a path forward for paratransit service in Delaware, this report frames the issues related to service provision, examines current approaches by other paratransit service providers nationwide, and recommends an action plan with short- and long-term implementation strategies. Recommended short-term strategies (12 – 18 months), discussed beginning on page 55, are to:

- Proactively plan for transit growth.
- Promote transit-oriented development practices.
- Continue regional public transportation coordination.
- Optimize use of technology.
- Enhancing public information/outreach.
- Conduct a survey of infrastructure barriers to fixed-route bus stops.

Recommended long-term strategies (18 months+), detailed beginning on page 61, are to:

- Continue to build a GIS database.
- Implement demand-management strategies.
- Consider policy reforms.
- Adopt revenue reforms.

While the state of Delaware has a solid foundation of strategic planning, the project illustrated a fundamental disconnect between transportation, housing, and land-use planning. A comprehensive, integrated strategic planning process is needed to cooperatively address mutual issues related to paratransit and human services transportation in Delaware.

Introduction

A fully accessible transit system that connects individuals to jobs, goods, educational institutions, services, and social opportunities is critical to the quality of life of the disabled population and economic development of Delaware. The purpose of this project, “Right Sizing Delaware’s Paratransit System,” is to examine the scope and character of Delaware’s statewide paratransit service in relation to ADA mandates, identify trends and policies impacting service demands, and recommend options to address operational challenges.

In recent years, ridership and costs associated with DART First State’s paratransit service have increased considerably. The projected future growth of Delaware’s senior population, and a corresponding increase in the disabled population, will further stress the ability for DART First State to provide quality and cost-effective paratransit services in the future. Additional challenges to Delaware’s paratransit system have resulted from the unique geographic service area, funding constraints, demographic changes, current service policy framework, the entity’s interpretation of ADA paratransit mandates, and the vehicle- and labor-intensive nature of services. Because current DART First State paratransit service characteristics exceed ADA mandates, there are high service expectations by customers. In order to develop a path forward to reshape Delaware’s paratransit service operations, this study frames the issues of paratransit services in Delaware, examines current approaches to paratransit by other service providers, and assesses policy options and alternatives. Strategies are outlined to realign Delaware’s paratransit service system to meet growing service demands, while cost-effectively meeting ADA mandates.

Framing the Issues of Paratransit Services in Delaware

Transportation funding challenges in Delaware have been caused by a complex set of issues. Growth in the state has increased public transit demands and the need for capital investment in construction projects. Yet, the loss of federal funding, stagnation in the growth of state revenue sources, and inflationary costs has resulted in operating shortfalls. In response to these challenges, the Minner Administration has launched a multi-dimensional strategy to overcome the transportation funding challenges, accomplished several milestones, and reduced the shortfall by an estimated \$1.5 billion. “Right sizing” the state’s paratransit services is necessary to moderate the widening gap between available revenue and costs for services. Unless a path forward is developed to realign Delaware’s paratransit services in relation to escalating costs, essential DART First State fixed-route and paratransit services may be jeopardized. DART First State will need to develop service delivery and operating policies that maximize the use of resources while maintaining, if not improving, the level of service to customers. Innovative solutions, successfully implemented by other transit agencies, will need to be considered to enhance operating efficiencies of Delaware’s complementary paratransit service, mitigate paratransit service demands, and control escalating costs. Critical to addressing transportation funding challenges is an understanding of how paratransit services have been impacted by service demands, demographic trends, existing policies, and accessibility issues.

High Service Expectations

The demand-responsive nature of complementary paratransit services is intrinsically more labor exhaustive, vehicle intensive, and costly than fixed-route transportation and less efficient and effective. Because of the highly personalized and adaptive nature of paratransit services and the convenience of door-to-door transportation, customer groups such as senior citizens, persons with disabilities who do not meet ADA eligibility requirements, and human service agency clients have placed pressures to grow DART First State's paratransit system. Some mobility-limited individuals, who are capable of riding accessible fixed-route buses, like the convenience and may regard the DART First State paratransit system as an inexpensive taxi service. These individuals expect an unrealistic level of service that exceeds ADA regulations and, as a result, service demands are shifted away from severely disabled persons who have no other transportation options. While equal access to public transportation for persons with disabilities is an important right and quality-of-life factor, they must be educated as to the ADA-mandated limits of paratransit services, negative impact of growth on service efficiencies, and the true cost of paratransit services compared to traditional, fixed-route bus transportation.

Paratransit Demands in Delaware vs. Rising Costs

Paratransit Ridership Demands

Delaware's fixed-route and paratransit services are provided by DART First State, which is operated by the Delaware Transit Corporation (DTC), a division of the Delaware Department of Transportation (DelDOT). Unlike other transit entities that operate regionally, or within a metropolitan area, DART First State operates statewide with a land area of 1,982 square miles and provides transportation services in broad geographic and rural downstate areas. DART First State:

- Provides over 11 million transit service miles annually.
- Provides over 10 million passenger trips annually in rail and bus transit services.
- Operates a total of 90 fixed-bus routes, including 68 in New Castle County, 12 in Kent County, and 10 in Sussex County.
- Provided 791,755 annual system-wide paratransit trips in Fiscal Year (FY) 2006.
- Experienced a dramatic 46% increase in paratransit ridership in the five-year period from 2001 to 2005.
- Projects that paratransit ridership will increase an additional 11.2%, from 792,000 riders in FY 2006 to 840,643 riders in FY 2007.
- Estimates that an average direct cost is approximately \$25.70 per trip compared to 8,664,863 fixed-route bus trips with an average direct cost of approximately \$4.75 per trip.

(DART First State presentation, *Life Conference*, January 25, 2007; and "Joint Sunset Committee 2006 Final Report," Delaware Transit Corporation, June 2006).

Escalating Costs

Like other states, Delaware has experienced a significant gap between increasing transportation needs and revenue growth.

Framing the Issues of Paratransit Services in Delaware

- In the ten-year period between FY 1996 and FY 2006, DART First State paratransit growth exceeded 150% (DelDOT, November 17, 2006).
- Despite the projected growth in operating expenses for all modes of transit, revenue shortfalls exist and will require an estimated \$72.6 million state subsidy for all modes of transportation services by FY 2008 (Wicks, January 25, 2007).
- Increased paratransit demands required a 42% increase in the state subsidy between FY 2003 and FY 2007, to \$20 million (DelDOT, November 17, 2006).
- Paratransit ridership represented approximately 8% of all rail and transit riders in FY 2007, yet the FY 2007 paratransit budget comprised \$21.6 million or 31% of the total FY 2007 transit budget for all modes.
- Despite the solid increase in paratransit ridership and operating costs, the growth in funding sources has been limited. The recent approval of new motor vehicle increases (including registration costs, document fees, title fees, and driver's license fees), new traffic fine surcharges, and toll rate structure changes on I-95 and SR-1 are positive initiatives toward addressing and funding Delaware's transportation needs. According to DelDOT revenue forecasts, the fee increases will provide a total revenue increase of \$572,435,680 between FY 2008 – FY 2013 (DelDOT final FY 2008 revenue forecast).

However, while these revenue increases will bolster funding support for transportation projects and transit services, they will not fully address the funding gap for transit. An extensive audit of opportunities for revenue increases and cost reductions should be conducted to determine what level of investment is needed to (1) maintain the existing public transportation system, (2) provide incremental improvements, or (3) pursue enhanced mobility options. While opportunities exist to improve service efficiencies, reduce costs, and enhance revenues to further moderate the gap between increasing transportation demands and costs, it is recognized that broad-based support is needed before difficult management and policy and decisions are made.

Demographic Impacts

National Demographic Trends

Changing demographics in the United States will substantially impact public transportation and the demand for paratransit services. Many transportation providers, such as DART First State, must meet growing service demands and address growth outside traditional service areas, without corresponding increases in operating expenses or funding. As the "baby boomer" population ages and the number of Americans 85 and older increases significantly, the demand for paratransit services also will rise exponentially. Increasingly, public transportation providers will face challenges to provide accessible, affordable, and quality transportation service options to mobility-limited older individuals.

Disabled Population

According to the *2005 Disability Status Reports*, the percentage of working age individuals reporting a disability was 12.6% in the United States. The disabled population faces several economic disadvantages when compared to their non-disabled counterparts. The report notes distinct differences between people with and without disabilities with respect to 2005

employment rates, annual earnings, annual household income, poverty rates, and housing ownership rates. Public transit, including paratransit that is mandated to be no more than twice the cost of fixed-route service, provides an affordable transportation option for many economically disadvantaged disabled people.

Correlation between Poverty Status and the Disabled Population

There is a correlation between poverty status and disability. In 2005, there was a 15.3% difference in the poverty rate between working-age people with and without disabilities in the United States. The median labor earnings for working-aged disabled persons is reported to be \$6,000 less per year than non-disabled persons, and the difference in the median annual household income was reported to be \$26,000 less for working-age disabled persons. In 2005, the difference between the working-age disabled and non-disabled population living in owner-occupied housing was 7.4% (www.ilr.cornell.edu/edi/disabilitystatistics/StatusReports/2005-pdf/2005-StatusReports_US.pdf).

Growth in the Aging Population

In the United States, one of the most important demographic dynamics is the growth of the aging population. According to the U.S. Census Bureau, in 2000 there were a total of 35 million people in the United States aged 65 and older. Of this population, 18.5 million or 54% were 65–74 years old, 12.3 million or 35% were 75–84 years old, and 4.2 million or 12% were over the age of 85 (Gist and Hetzel, 2004). This historical trend in the growth of the aging population will continue well into the 21st century.

As seniors age, they face increasing driving and public transportation challenges. According to a 2004 national study written and published in coordination with AARP and the American Public Transportation Association (APTA):

- More than 50% of non-drivers 65 and older stay home on any given day.
- More than half of older non-drivers stay home on a given day in more spread-out areas, as compared with 43% in denser areas.
- For more than half of all adults, public transportation is not an option because service is not available in their area, particularly in rural and smaller towns (Bailey, 2004).

Aging Baby Boomers

The growth in the size and longevity of the baby boomer population is substantial. Baby boomers, those Americans born between 1946 and 1964, represented approximately 78 million of the 301 million people residing within the United States in 2000. In 2011, the first baby boomers will turn 65 and precipitate a rapid growth in the elderly population. According to a U.S. Census Bureau report:

- “The next 25 years will witness a doubling of the population of Americans age 65 and older. Americans 85 and older comprise the fastest-growing segment of the population” (APTA). The American Association of Retired Persons estimates that Americans aged 65 and older will become more dependent on public transportation as their age increases. Many baby boomers, who have never used public transit, will need to be “travel trained” to stay mobile (Hodder, 2006).
- Currently, 21% or 1 in 5 persons aged 65+ are unable to drive private automobiles. It is anticipated that this number will significantly increase due to the rise in the size of

Framing the Issues of Paratransit Services in Delaware

the elderly population as well as the growth in disabilities associated with age (Bailey, 2004).

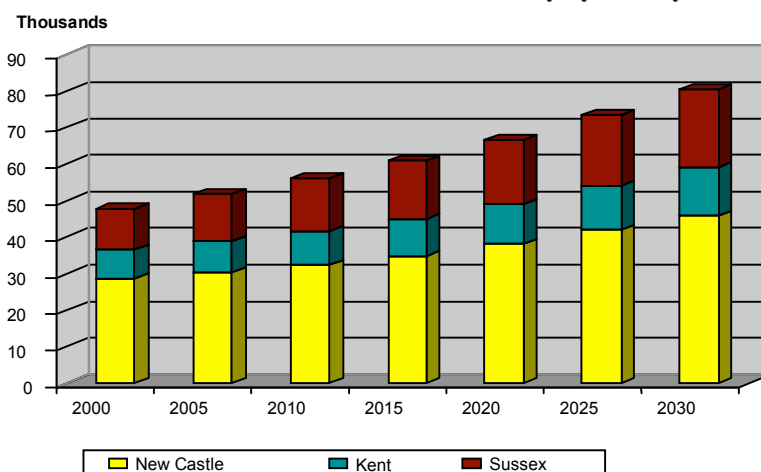
The aging of the “baby boomer” population will be of significant concern to policymakers. This growth in the baby boomer population will impact public policy decisions regarding health care, social services, housing, and specialized transportation.

Aging as it Relates to Disability

There is a correlation between aging and disability. Sensory problems, physical capabilities, mental issues, lack of self care, and difficulties leaving the home were the five categories of disabilities measured in the 2000 Census. Among these categories, physical disabilities were the most prevalent among people aged 65 and older. The percentage of the older population who reported each type of disability increased with age. The 2000 Census also indicates:

- 42% of the population 65 and older reported some type of long-term disability.
- Of the group aged 65–74 years, 32% reported at least one disability in contrast to 72% of people 85 years and older.
- The disability rate of the population 65 and older was at least three times the rate of the total population for three of the five categories of disability measured in the 2000 Census (Gist and Hetzel, 2004).
- As noted in the 2003 Delaware Center for Transportation report “DART First State Delaware Paratransit Services Study: A Review of Service Characteristics, Policy Implications and Options,” even though more variables than the presence of a go-outside-the-home disability are involved in the certification of an individual as eligible for ADA paratransit services, trends within this population demographic serve as a reasonable proxy for the growth that can be anticipated in DART First State’s potential paratransit customer base. The following figure illustrates projections of the population of Delawareans over the age of 16 with a go-outside-the-home disability, by county, through 2030.

Projected Population of Delawareans over Age 16 with a Go-Outside-the-Home Disability by County



Draw of Elderly to Rural Areas

A growing proportion of older adults are electing to reside in low-cost, affordable housing areas. Older adults residing in lower-cost rural areas face more extensive mobility challenges than their counterparts living in cities or suburbs. Since rural transportation covers vast service areas with a lower volume of riders, reliable and cost-effective service is problematic. In rural areas, 31% of transit trips are made by the elderly—a much higher proportion than in other areas (Community Transportation Association of America, 2000). As older adults choose to reside in low-cost, remote areas, there is a lack of accessibility to fixed-route public transportation. A 2002 AARP Public Policy Institute study found that in the suburbs less than half of the households are located within a half mile of a public transportation stop or station. In rural areas, public transportation accessibility drops to less than one in eight households. (Straight and Gregory, 2002).

Delaware Demographic Trends

Delaware mirrors national demographic trends with respect to the estimated size of its disabled population, growth in the aging and baby boomer population, correlation between age and disability status, and draw of elderly to low-cost, affordable housing areas. Unlike national trends, however, Delaware is among the “greyest” states in the nation. Delaware is attracting an in-migration of retirees at a higher rate than other states and ranks as the nation’s top tax-friendly state. As a result, the state has become a haven for new age-restricted communities that attract retirees and that may become future demand generators for paratransit.

Delaware’s Disabled Population

According to the 2000 Census, 9.4% of people in Delaware reported a disability compared to 9.7% in the United States. The county with highest percentage of persons reporting a disability was Sussex, followed by Kent and New Castle Counties.

Location	Disabled Estimate (%) of Base Population	Base Population (Men and Women Aged 16 – 64 Who Self-reported a Disability in 2000)	Disabled Estimate (%) of Total Base Del. Population
United States	9.7	178,687,234	
Delaware	9.4	497,601	
Kent County	11.3	77,786	1.8
New Castle County	8.4	325,489	5.5
Sussex County	11.5	94,326	2.2

(www.ilr.cornell.edu/edi/disabilitystatistics/census.cfm)

Delaware’s percentage of working-age disabled population in 2005 was 12.2% and closely mirrors that of the United States’ working-age disabled population. This means that in 2005, 60,000 of the 490,000 working-age individuals in Delaware reported one or more disabilities. Also in 2005,

- The highest prevalence rate among categories of people with disabilities was for “physical disabilities,” 7.6%.

- The employment rate of working-age people with disabilities in Delaware was 43.5% compared to 79.9% for the working-age non-disabled, a 36.4 percentage gap in the employment rate between the two groups

(www.ilr.cornell.edu/edi/disabilitystatistics/StatusReports/2005-pdf/2005-StatusReports_DE.pdf).

Housing Affordability and the Disabled Population

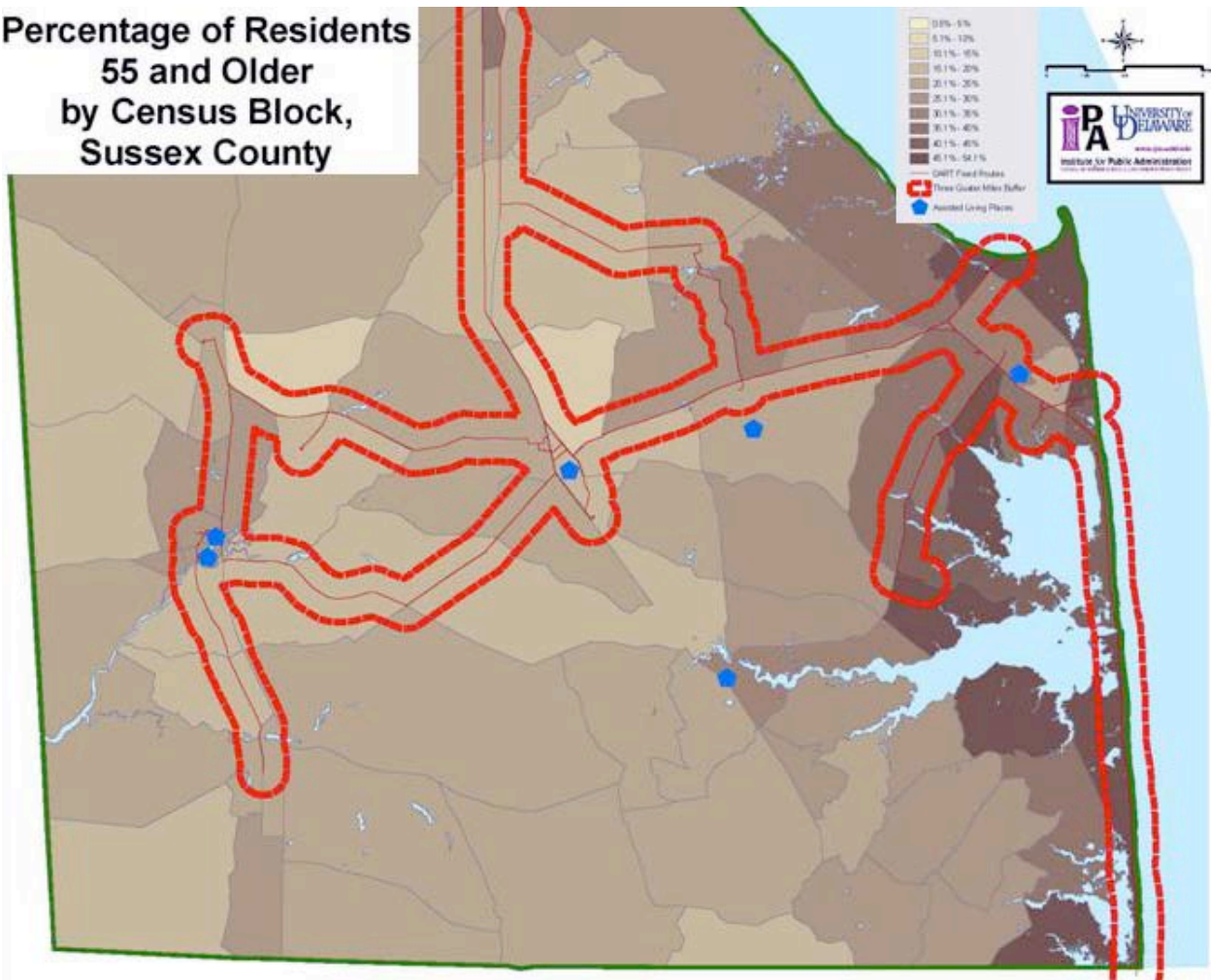
According to the *2005 Disability Status Reports*, in 2005 the percentage of working-age people in Delaware with disabilities living in owner-occupied housing was 69.2%, only 4.4% less than people without disabilities (www.ilr.cornell.edu/edi/disabilitystatistics/StatusReports/2005-pdf/2005-StatusReports_DE.pdf). While these statistics are not compelling, demographic trends reveal that older Delawareans are migrating to low-cost, remote rural areas where housing costs are more affordable.

Greying of Delaware

Delaware's elderly population is on the rise. Delaware's 65+ populations accounted for about 14% of the total population in 2005. The Delaware Population Consortium estimates that the state's 65 and older population will double, from 115,310 in 2005 to 237,950 in 2030. Regional trends are as follows:

- New Castle County's senior population comprised about 12% of its total population in 2005. In New Castle County, the 65 and older population is expected to rise 105% from 62,229 to 127,735 between 2005 and 2030.
- While Wilmington's overall population is expected to decline by 4% in the next 25 years, its senior population will rise approximately 19% during the same time period.
- Kent County's 65+ population represented 12% of its total population in 2005. Its senior population is also expected to rise 107%, from 17,343 in 2005 to 35,955 in 2030.
- Sussex County has the highest percentage of people aged 65 and older. In 2005, approximately 20% of Sussex County's total population was over the age of 65.
- Sussex County's overall population is experiencing a higher growth rate than that of Delaware and surrounding states. Its 65+ population is expected to rise 107%, from 35,738 in 2005 to 74,260 in 2030. With the largest geographic and most rural area in the state, expanding public transportation to serve both the general and elderly population will become a challenge.

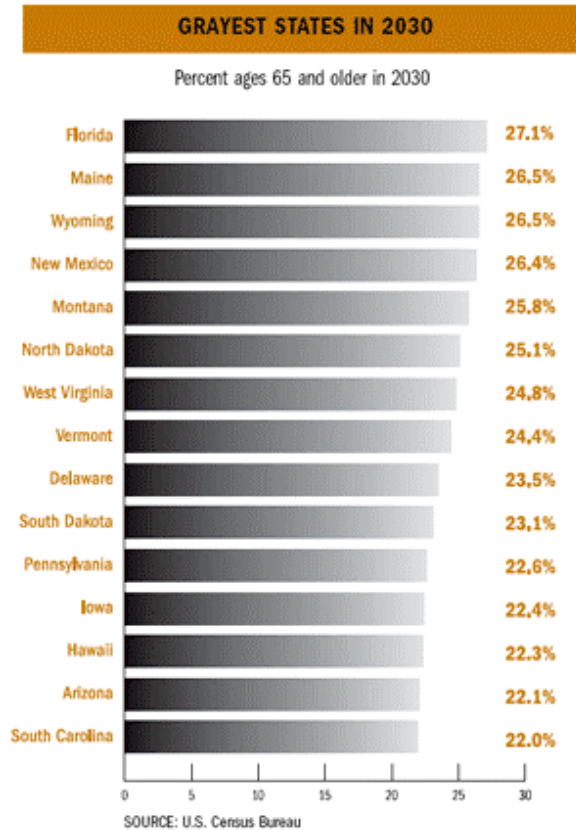
Percentage of Residents
55 and Older
by Census Block,
Sussex County



Migration to Delaware

Delaware is becoming a “hot spot” for retirees. Relative to other states, Delaware has a low cost of living, a tax-friendly reputation, and good quality of life. Sussex County, in particular, is becoming a mecca to seniors who are attracted to the amenities of the coastal resort area. The U.S. Census reports the following migration patterns:

- Between 1995 and 2000, Delaware had the fifth highest net migration rate (27.2%) for the population 65 years and older.
- Pennsylvania and New York were the top two states from which seniors migrated to Delaware.
- By 2030, the U.S. Census Bureau estimates that Delaware will be ranked as the ninth “greyest” state in the nation, with an estimated 23.5% of its population over the age of 65 (Perry, 2003).



Tax-Friendly Status of Delaware

Delaware is attracting retirees because older residents enjoy a lower tax burden than in other states. A *Retirement Living* article highlighted Delaware as one of the top five states where tax burden as a percent of income is the lowest (www.retirementliving.com/RLtaxes.html).

- Delaware is ranked the 48th lowest state in terms of tax burden to its residents. Neighboring states of Pennsylvania, Maryland, and New Jersey had relatively high tax-burden ranks; they ranked 24th, 19th, and 17th respectively.
- The purpose of property tax exemption policies, for senior citizens and disabled, is to promote fairness and equity for property owners who face financial hardship or live on a fixed income. However, many Delaware local governments have tax-exemption policies for senior citizens and disabled persons that are not need based. For example, Middletown currently provides a full tax exemption for all citizens ages 65 and older who have lived in the town for more than one year. These permissive property tax-exemption policies have become a draw for relocating retirees.

Kiplinger's magazine also reports that Delaware is a top “retirement-friendly” destination for seniors (Franklin, 2003).

- In a snapshot assessment, which compared total annual state and local tax burden of capital cities in each state, Dover was ranked first as the most tax-friendly capital city with Juneau, Alaska, ranking a distant second place.
- Sky-high property taxes caused Pennsylvania to be ranked last, with neighboring states of New Jersey and Maryland ranking in the bottom five of tax-friendly places.

Impact of Active-Adult Communities

Because of Delaware's tax-friendly status and resulting in-migration of retirees, there has been a recent proliferation of active-adult (55+) communities in Delaware. A report, prepared by the University of Delaware Center for Applied Demography & Survey Research, examined trip generation characteristics and traffic impacts of age-restricted communities in Delaware. The January 2006 report:

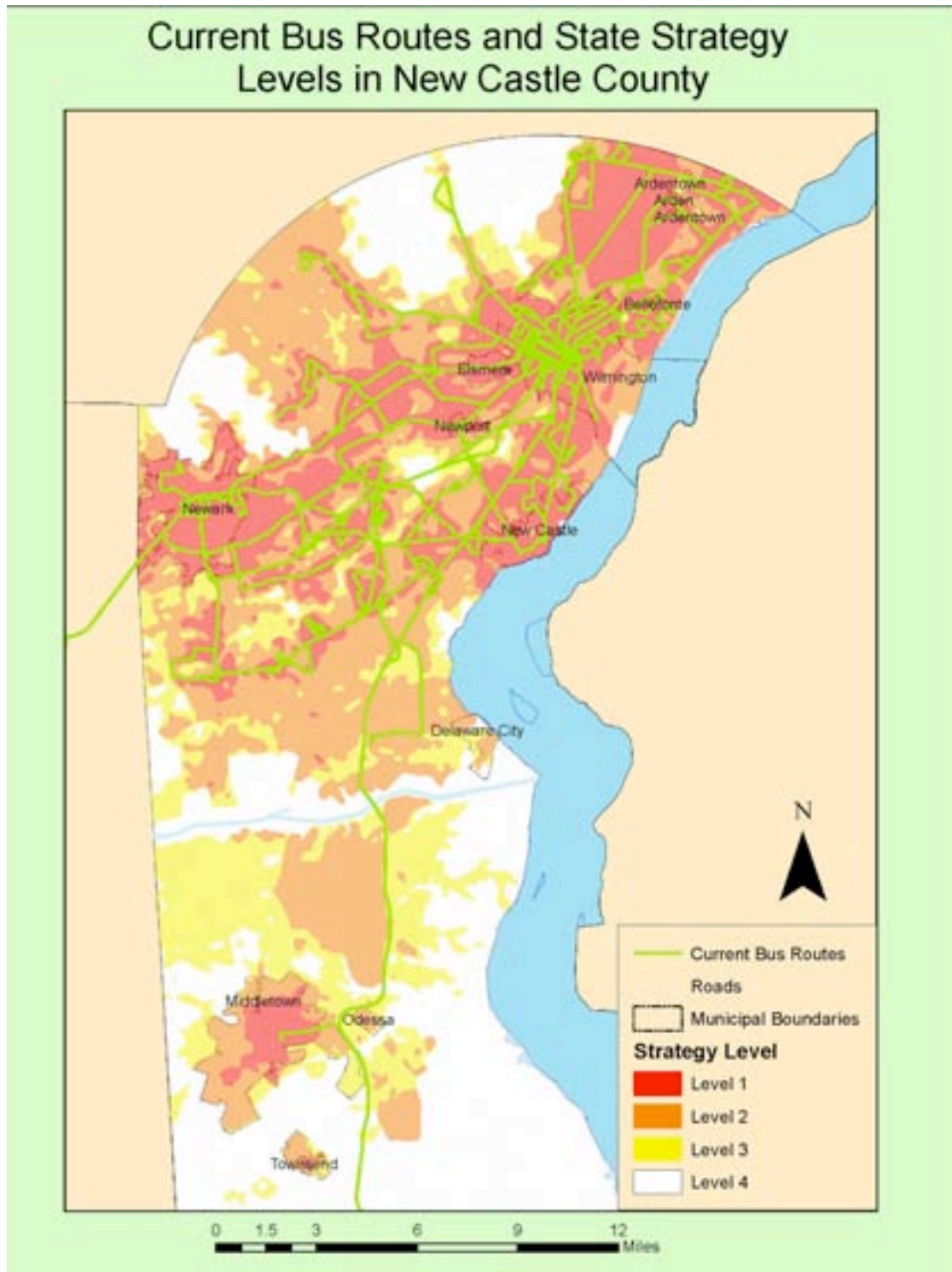
- Listed 29 active-adult communities in Delaware.
- Concluded that 29% of the Delaware households are eligible to live in age-restricted communities.
- Estimates that senior households take about two-thirds of the daily trips that average Delaware households take. The report cites data that shows a decrease of trips with age (Racca, 2006).

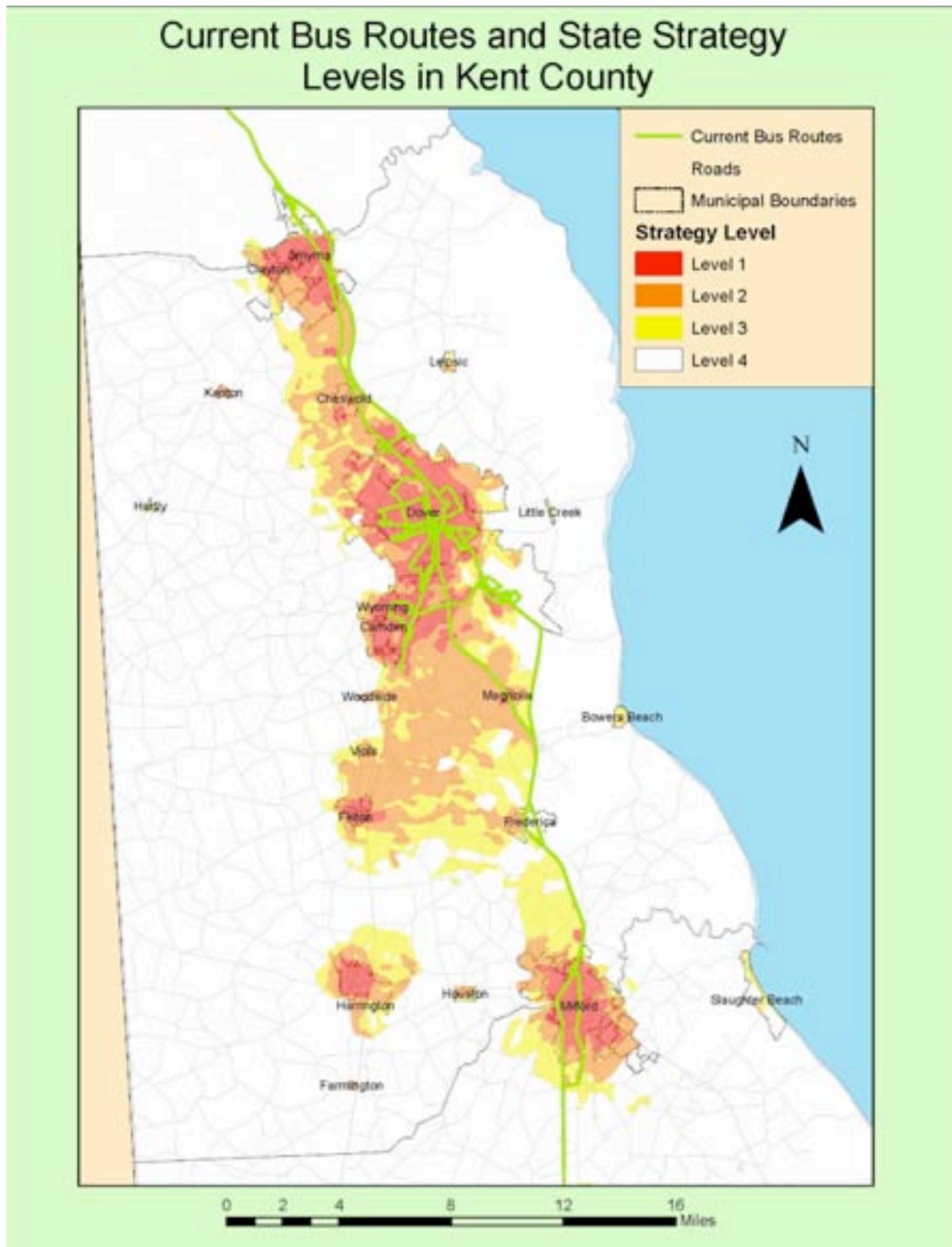
Information about the extent and location of age-restricted communities in Delaware is incomplete. IPA attempted to track the proliferation of age-restricted communities in Delaware through a phone survey of local governments and by using the Office of State Planning Coordination's GIS data base of reviewed Preliminary Land Use Service (PLUS) projects. At both state and local government levels, there is impartial, inconsistent, and/or inaccurate information as to whether planned age-restricted communities have actually been approved or built. This lack of information and inability to share data across statewide enterprise, contributes to the disconnect between transportation and land-use planning in Delaware (See Appendix A).

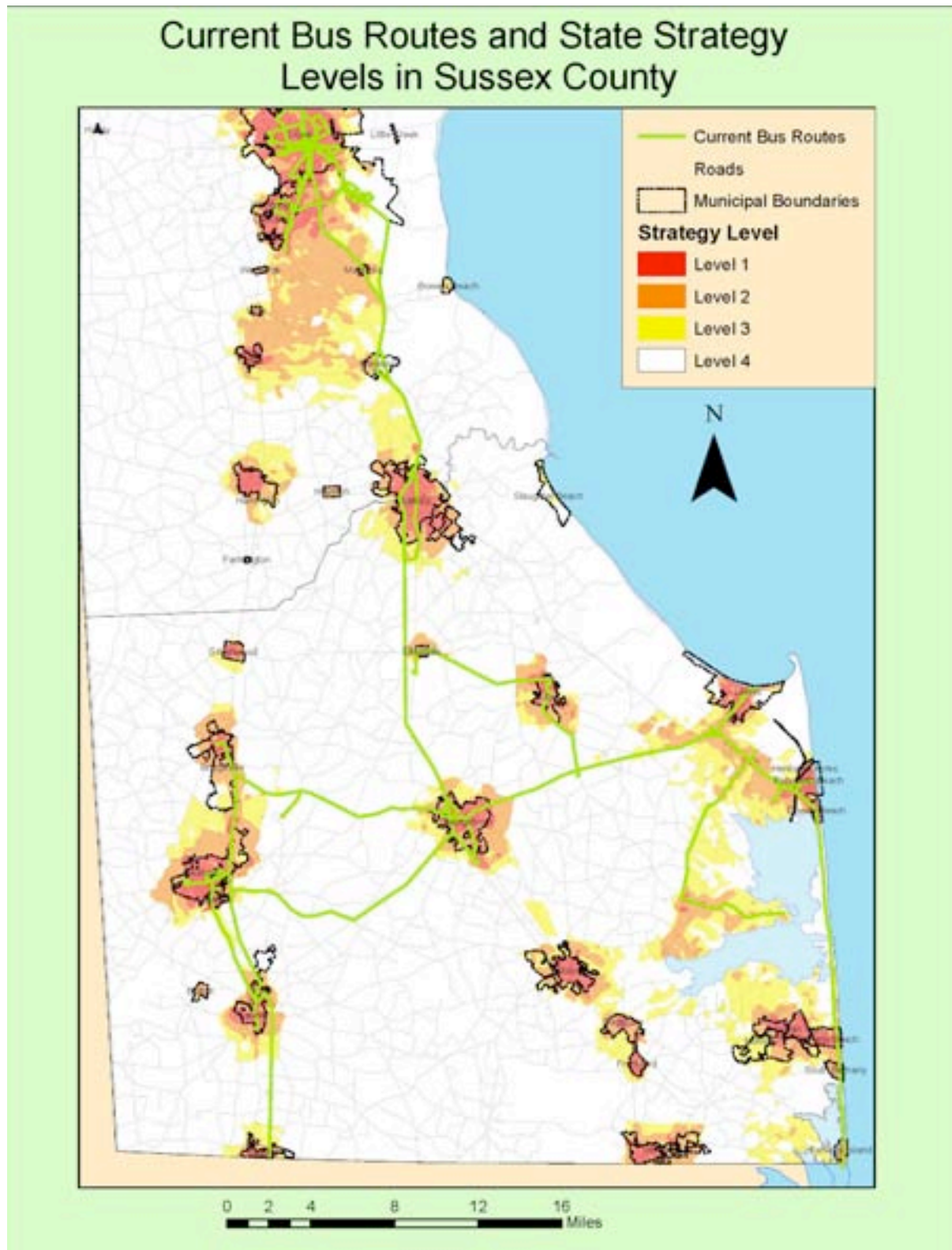
The study examines the extent to which active-adult communities impact transportation resources, namely roadway congestion and infrastructure improvements. However, the extent to which active-adult communities impact the public transportation system, particularly paratransit, is not examined. More study is needed to determine if 55+ communities become significant demand generators for paratransit as their residents age and lose travel independence and mobility.

Impact of Rural Development on Transportation Demands

Livable Delaware was introduced by Governor Minner's Administration in 2001 as a proactive strategy to curb sprawl and direct growth to areas that are most prepared for it in terms of infrastructure investment and planning. Delaware's local governments are required to develop and maintain up-to-date comprehensive plans to ensure that land use is planned and managed according to the principles set forth under Governor Minner's Livable Delaware agenda. The Preliminary Land Use Service (PLUS) process provides for state agency review of major land-use change proposals prior to consideration by local governments. While the PLUS process connects state policy to local decisions, the process is advisory only and does not usurp local responsibility for land decisions. Delaware's *Strategies for State Policies and Spending* are intended to direct investment and future development to existing communities, urban concentrations, and growth areas. The relationships between the State Strategy Investment Levels and the location of existing DART fixed-route bus service in Delaware's three counties are illustrated by the following maps.







Many rural areas in Delaware are succumbing to development pressures. A recent review of GIS-mapped PLUS sites, indicates that many new developments have been approved in rural areas that are not served by DART fixed routes. Since it is less costly to develop in rural areas, many active-adult communities are being constructed or planned for remote areas, which are not traditionally served by public transit. Unless DART First State extends costly fixed-route bus service to remote areas or begins to strictly interpret ADA paratransit eligibility provisions, rural development will significantly impact demands for paratransit services.

Policies Impacting Paratransit Demands

Service Delivery Policies

According to the Americans with Disabilities Act (ADA) of 1990, public transit agencies that operate conventional, or “fixed-route” service are required to provide ADA complementary paratransit service for disabled persons that are unable to use the fixed-route system. Under the law, there are three categories under which a disabled person is eligible for ADA complementary paratransit service:

1. The person is unable, as a result of a physical or mental impairment, to independently get on or get off a bus on the fixed route; or
2. The person needs the assistance of a wheelchair lift or other boarding assistance and is unable to get on, ride, and get off a bus, but such fixed-route bus is not available on the route when the individual wants to travel; or
3. The person has a specific impairment-related condition that prevents travel to or from a bus stop in the system (www.dartfirststate.com/paratransit/).

As required by law, complementary paratransit must:

- Have service characteristics that mirror the fixed-route service.
- Operate during the same areas and during the same hours.
- Charge no more than twice the comparable fixed-route fare.
- Provide “origin-to-destination”* service within three-quarters of a mile of any fixed-route system.
- Allow for accompaniment by a personal care attendant or companion.
- Provide for convenient scheduling and cancellations.

(ADA of 1990, Public Law 101-336, 104 Stat.327 (1990) § 222-224).

*www.fta.dot.gov/civilrights/ada/civil_rights_3891.html

DART's Paratransit Service Policy

DTC classifies and tracks usage of two categories of paratransit services, based on what is mandated by ADA. While DTC differentiates between the two levels of paratransit service administratively, it has not exercised its legal authority to make a distinction in the levels of service provided to its paratransit customers.

ADA Paratransit

Paratransit services that are provided to accommodate passengers with disabilities who are unable to use fixed-route service, and meet specific eligibility requirements, are called complementary paratransit services under the terms of ADA. DART refers to its complementary paratransit service, which is required by law, as ADA Paratransit. DART First State classifies

ADA Paratransit trips as those for which both the client pick-up and destination are within the 3/4-mile proximity buffer associated with fixed-route bus service and that operate during the regular service days and hours of the fixed-route system. The federal Department of Transportation (DOT) has clarified that complementary paratransit service for ADA paratransit eligible persons shall be “origin-to-destination” service. The Federal Transportation Administration website explains, “this term was deliberately chosen to avoid using either the term ‘curb-to-curb’ service or the term ‘door-to-door’ service and to emphasize the obligation of transit providers to ensure that eligible passengers are actually able to use paratransit service to get from their point of origin to their point of destination” (www.fta.dot.gov/civilrights/ada/civil_rights_3891.html). The federal DOT Disability Law Coordinating Council notes that in certain instances, provision of service may require service beyond strict curb-to-curb service and that the transportation may provide a higher level of service. It should be noted that DART First State’s ADA eligibility determination process does not screen a person with disabilities with respect to their need for either door-to-door or curb-to-curb service. Therefore, the higher level and more costly door-to-door service is provided in every instance.

Non-ADA Paratransit

DART First State categorizes non-ADA Paratransit as those trips not required by law and therefore not subject to the restrictions imposed on complementary paratransit services. DART First State non-ADA paratransit services exceed what is required under the law as follows:

- It operates without regard to the customers’ proximity to fixed-bus routes. This practice far exceeds the ADA mandate to address the transportation needs of disabled persons who are located within the 3/4-mile buffer of existing fixed-bus routes.
- It provides extended service outside of the regular fixed-route service schedule (service areas, hours, and/or days).

“Origin-to-destination” service is indiscriminately provided as door-to-door service in all cases, without screening for individual need through the paratransit eligibility determination process. Door-to-door service is more costly as it requires a higher level of driver training, customer service, and response time.

The typical DART First State paratransit customer is unaware of the differences between the two categories of paratransit services. Since DART First State distinguishes between the two categories of services for administrative purposes only, many paratransit customers are oblivious as to the extent to which trips are scheduled beyond what is required legally. Most transit agencies now distinguish between and charge for service levels that exceed ADA requirements. In fact, most other transit agencies would consider DART First State’s non-ADA paratransit service to be a “premium” or “enhanced” level of service and assess appropriate higher-level charges. DART First State has not established cost-sharing policies or surcharges for the more costly, resource-intensive, and geographically extensive non-ADA paratransit service.

Operating Policies

Eligibility Determination Process

ADA directs transit agencies to establish a process for determining complementary paratransit service eligibility in “strict” accordance with 49 CFR 37 (*Code of Federal Regulations*). ADA places the responsibility on each transit agencies to develop a process that limits eligibility to those who explicitly need paratransit services and cannot ride fixed-route buses. Most transit agencies develop a process for determining complementary paratransit eligibility in strict accordance with established criteria. Transit agencies that have tightened the paratransit eligibility process have found that it can manage the demand for complementary paratransit services.

In 2002, DART First State established a more comprehensive process for determining ADA paratransit eligibility. In accordance with ADA, DART determines paratransit eligibility based upon a review of the individual’s ability to navigate the fixed-route system as well as the accessibility of routes and stops to meet the individual’s transportation needs. The application form advises, “If your disability/medical condition prevents you from riding fixed-route buses, you may be eligible for Paratransit Service some or all of the time. If your disability just makes riding Fixed Route more difficult or inconvenient, you may not be eligible for Paratransit Service under the [ADA]” (www.dartfirststate.com/paratransit/app/).

Recent studies have focused on ADA eligibility process control models and the need to implement a stricter screening process by DART First State (Denson, Tressell, and Casey, 2004). DART First State has taken positive steps to tighten its ADA paratransit eligibility process. There are more in-person interviews being conducted to determine DART First State paratransit eligibility, denial rates have increased from approximately 1% to 10%, travel training is automatically conducted in cases where paratransit services are denied, and recertification is conducted every five years (IPA interview with DTC staff member, Bonnie Hitch, February 6, 2007). Still, a strict eligibility determination process will serve as a gatekeeper to grant unconditional paratransit eligibility status to only those who truly need it.

- Opportunities to further tighten DART First State’s ADA paratransit eligibility process are evident through observations that: Delaware law provides a level of service to renal care patients above what is mandated by ADA. The Delaware Code approves renal care patients as “Dialysis Only” and provides door-to-door transportation to and from a kidney dialysis center only. Paratransit services for other critical care patients do not have special authorization to receive paratransit services under Delaware law, but must be reviewed through that eligibility determination process. In Kent and Sussex Counties, persons aged 60 years and older without disabilities are approved on an “Elderly” status to travel door-to-door on paratransit on a space-available, shared-ride basis. In New Castle County, those customers certified as “Elderly” are not transported on paratransit due to capacity issues.
- Guidelines for times when in-person interviews are warranted as part of the paratransit eligibility process have been established, but the need for such interviews is left to the discretion of a reviewer. Other transit agencies have required in-person interviews as a mandatory part of the paratransit eligibility process.

DART First State's travel training program is offered only to persons who are denied paratransit service through the eligibility process. Travel training could also be effective for disabled persons who are granted conditional eligibility on a trip-by-trip basis. DART First State is presently in the process of developing guidelines to implement trip-by-trip eligibility.

Travel Training

A targeted travel training program can be expanded to target potential or future paratransit clients. This can be especially effective for transitioning functionally capable disabled or elderly persons to the fixed-route system. Targeted travel training programs are becoming more critical to provide public transit to the greying population, who were previously automobile dependent. Many elderly citizens are not familiar with how to ride public transit and need to be taught how to ride fixed-route buses. Such programs can be established in cooperation with major state service centers, centers of employment, senior centers, age-restricted communities, and/or other demand generators. Travel training can be an effective demand-management strategy to mitigate demand for non-essential paratransit services. Denson (1997) recommends several forms of travel training that will enable paratransit riders to transition to fixed-route service. These forms of travel training include information presentation, peer training, and formal training.

No-Show Policy in Relation to Advance Reservation Policy

To address the issue of chronic late cancellations of no-shows, DART First State adopted a new no-show policy in January 2007, based on input from the Elderly and Disabled Transit Advisory Committee (EDTAC). The new policy clearly explains the purpose, defines the prohibited pattern/practices, describes the consequences, and outlines the appeal process for late cancellations and no-shows.

Studies have recognized that the effectiveness of a no-show policy, however, may be limited by the transit agency's trip advance reservation policy. King County Metro (WA) modified its advance-reservation paratransit policy to reduce costs and man hours associated with cancellations and no-shows. DART First State conforms to the ADA mandate that requires transit agencies to provide for all complementary paratransit trips that are scheduled at least the previous day and up to fourteen days in advance (*Code of Federal Regulations*, 1991), (www.dartfirststate.com/paratransit/reservation/). As a result, there are at least 30–40 cancellations per day that impact DART First State's overall scheduling process. Cancellations are due to a client's change in travel plans or medical condition during the lengthy 14-day trip advance booking window.

DART First State should assess and evaluate the effectiveness of its no-show policy annually. The policy should be further assessed once the Integrated Voice Recognition (IVR) technology is fully operational. If warranted by a future assessment, the advance reservation policy may be amended to minimize the cancellation rate of pre-scheduled trips, increase the effectiveness of the newly adopted no-show policy, and increase trip productivity.

Fare Structure

The fare structure is the basis for determining how fares are charged. Types of structures are:

- Distance-based, which establishes fares based on the length of trips.

- Time-based, which establishes fares based on whether travel is made during “peak” or “non-peak” hours, or outside the normal fixed-route service day or hours.
- Quality-based, which establishes higher fares for demand-response trips than fixed-route trips (up to a maximum of twice the fare of a fixed-route trip as mandated by law).
- Premium-based, which establishes a different fee structure for non-ADA paratransit trips that are outside the ¾-mile fixed-route buffer.
- Incentive-based, which establishes a fare structure to encourage ridership on the fixed-route bus system.

In Delaware, the fare structure for paratransit is quality-based. According to DTC Special Projects and Service Analysis Manager Stephen Welch, “Paratransit customers pay \$2 per trip per county (with the exception of Kent County), which is approximately twice the fare of fixed-route customers. The actual paratransit fare is exactly twice the one-zone fare in Sussex County and slightly less than twice the one-zone fare in New Castle County. The state legislature provides funding in the annual budget epilogue to Kent County, which can be applied to public transit as Kent County desires, as agreed upon by DTC. The Kent County Government uses these funds to lower the paratransit fare to \$1 per trip in Kent County. This makes the paratransit fare the same as the fixed-route fare.”

The applicable paratransit fare is charged regardless of whether the trip is classified as an ADA- or non-ADA trip, whether they ride during high-demand peak hours, whether the trip is lengthy, or whether the trip is outside the normal fixed-route operating times or days. In addition, since fares for all modes of travel have not increased since 1989, the gap continues to widen between fares charged and the actual cost for paratransit service.

DART First State currently provides fare incentives for seniors and persons with disabilities to ride fixed-route buses. In New Castle and Sussex Counties, seniors and persons with disabilities riding fixed-route buses pay approximately 20–22% of the cost of the paratransit fare, while in Kent County seniors and persons with disabilities pay the same fare for riding fixed-route buses as paratransit.

Other Issues Impacting Paratransit Demands

Barriers to Fixed-Route Accessibility

The goal for most transit agencies nationwide is to control costs of ADA (complementary) paratransit services by transitioning disabled patrons capable of riding accessible buses to the fixed-route system. Disabled passengers who utilize fixed-route bus services experience greater travel predictability and dependability than travel via paratransit service. However, disabled persons who are able to ride regular buses may face barriers that prevent them from riding the fixed-route system.

Infrastructure Barriers

DART First State’s fixed-route buses are readily accessible to persons with disabilities, including individuals with wheelchairs. For people with disabilities, inaccessible bus stops can prevent the use of fixed-route bus service and lead to increased paratransit costs. Bus stop design,

placement, or physical barriers such as sidewalks or curb cuts are key factors in whether a disabled person can access the fixed-route system. Conditions that require complementary paratransit service to be made available are the lack of an accessible fixed-route bus stop on the needed route, architectural or environmental barriers that prevent travel to or from a bus stop, or a person's inability to board/travel without assistance.

Lack of Facility Amenities

In addition to facing barriers to using the fixed-route system, disabled persons who are able to ride the fixed-route system may be reluctant to do so because of the lack of amenities. Deterrents to disabled persons riding accessible fixed-route buses include the lack of visual/aural information systems, telecommunication devices, accessible parking and vehicle boarding areas, fare vending machines, and basic amenities such as lighting and shelter. A recent IPA survey revealed that Park-and-Ride lots, which could serve as transit service hubs, are poorly maintained and hard to find.

Disconnect between Transit and Land-use planning

Nationwide, proximity to public transit has become problematic as developers eye inexpensive land in outlying areas for residential or commercial development. Rural areas in Delaware, which are traditionally not served by fixed-route buses, are succumbing to development pressures. A report by regional economist Dennis Brown explored the usage of public transportation services in rural America. He noted that most rural places do not have significant access to transit, yet many transit-dependent individuals (e.g., the elderly, disabled, and individuals without cars) live in low-cost rural areas. To support this claim, Brown cites 2000 U.S. Census Bureau statistics that indicate that rural areas have higher levels of poverty and larger shares of disabled and elderly residents. The report also notes that the Delmarva Peninsula is among the nation's high-growth non-metro areas, which is classified as having significant recreation qualities. While the Delmarva Peninsula's amenities are attracting retirees in droves, Brown notes that rapid population growth can help reduce the typically high per-capita costs associated with rural public transportation and make this service more economically viable (Brown, 2004).

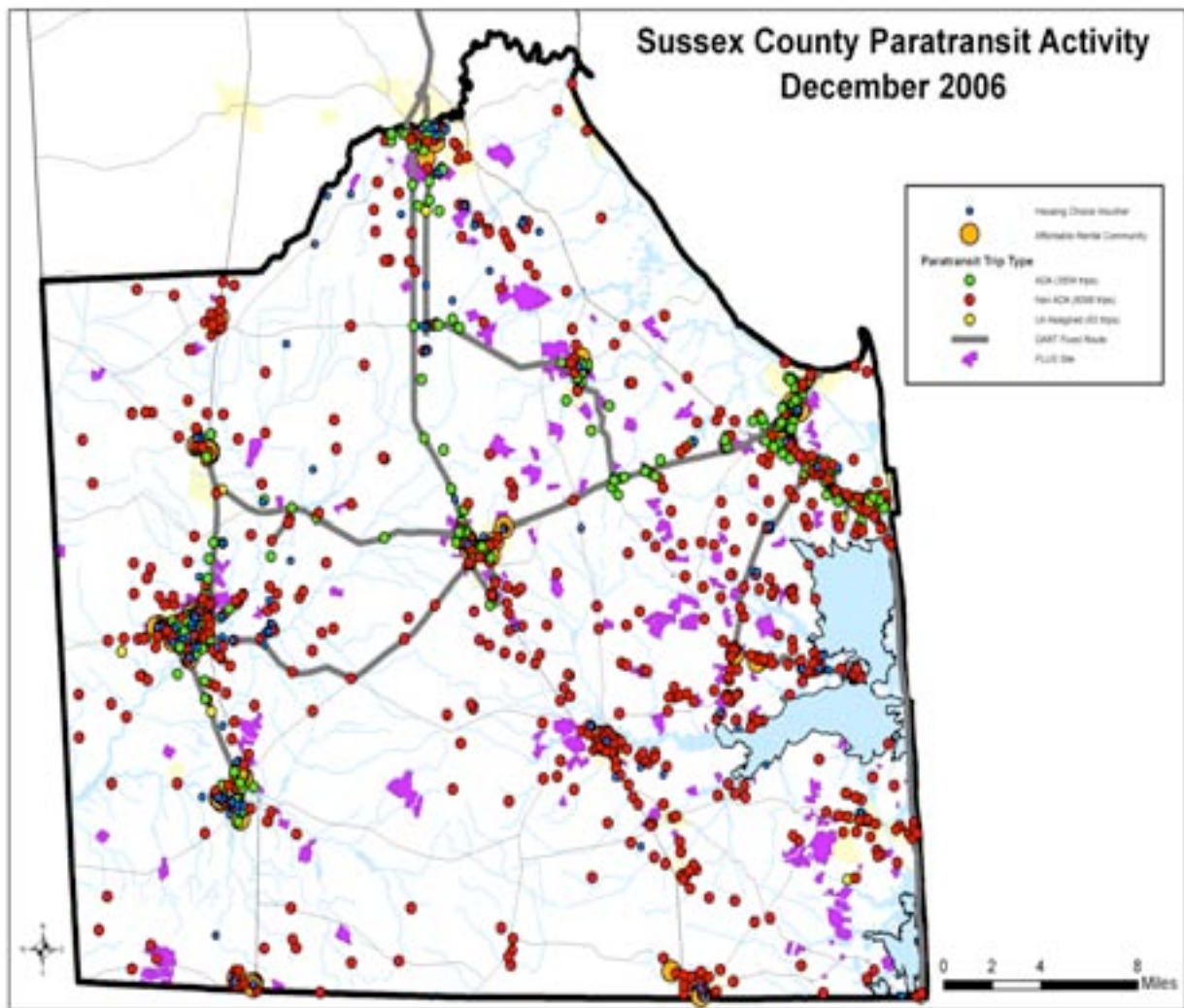
As previously noted, Livable Delaware was introduced by the Minner Administration in 2001 as a comprehensive strategy to curb sprawl and direct growth to areas most prepared for it in terms of infrastructure investment and thoughtful planning. Livable Delaware recognizes that development is inevitable, but provides smart-growth strategies to maintain Delaware's high quality of life while providing resources to manage growth. Accomplishments under the Livable Delaware agenda include the establishment of a Livable Delaware Advisory Council, assistance for local governments to support Comprehensive Land Use Plans that includes a transportation component, and legislation to improve land-use planning and growth management. The PLUS process, overseen by the Office of State Planning Coordination (OPSC), provides for state agency review of major land use change proposals prior to submission to local governments. In addition, long-term transportation plans developed by MPOs have focused on investment activities that improve the quality of life; promote accessibility, mobility, and transportation alternatives; and support economic activity and growth. Recent planning efforts have also focused on *Better Models for Development in Delaware*, community walkability, and mobility-friendly design standards.

Framing the Issues of Paratransit Services in Delaware

Despite these initiatives, land-use planning is disconnected from transit planning. The PLUS process provides for state agency review of major land use change proposals prior to approval by local governments. However, while the PLUS process connects state policy to local decisions, the state review process is advisory only and does not usurp local-level responsibility for land-use decisions. When new PLUS sites in rural areas were GIS-mapped in relation to the fixed-route system, it was observed that rural developments have become a significant “demand generator” for paratransit trips. This would not be the case in other states where complementary ADA paratransit service is limited to the $\frac{3}{4}$ -mile fixed-route buffer area and mirrors the operating schedule of the fixed-route system. It is also unclear to what degree that the PLUS process focuses on the extent to which new development will generate increased public transit demands, rather than just impacts to traffic and roadway infrastructure.

The following map of December 2006 paratransit activity in Sussex County, where non-ADA trips exceed ADA trips by more than a 2-to-1 margin, indicates the locations [in purple] of the PLUS sites identified by OSPC as parcels that are slated for residential development in the near future. The general lack of proximity to existing fixed-route bus service is clearly illustrated. Further analysis to determine the locations and scale of planned communities that are designated to be age restricted could provide additional data regarding future generators of demand for paratransit service.

Other noted Delaware development trends that demonstrate disconnects between land-use and transit planning include a recent proliferation of adult-restricted communities (55 years and older) outside of fixed-route areas, in-migration of retirees to rural areas of Sussex County, and a tendency to locate affordable housing in rural areas not served by public transportation.



Technology Challenges

Service planning and coordination, demand forecasting, and management of the demand-response nature of paratransit are among the many challenges that face public transit organizations. In an effort to control costs, meet service demands, and increase productivity, transit agencies seek technology solutions that will address needs of service planning, client management, scheduling and dispatch, and daily operations. The more these processes can be automated, the greater opportunities exist for increased operational efficiencies and performance enhancements (Trapeze Software Group, 2004).

Need to Optimize Trapeze Software

As a regional transportation provider, DART First State faces unique operating complexities such as maintaining several vehicle facilities and operations centers, struggling to integrate paratransit with fixed-route transit services, addressing diverse service planning needs, and keeping pace with growing paratransit and service demands. DART First State uses state-of-the-art Trapeze software to handle operating complexities, control resources, and optimize customer service.

Efficiency suffers, however, because numerous staff hours are devoted to manually adjusting scheduled trips due to cancellations, no-shows, and driver “call outs.” Scheduling operations are also impacted by union seniority protocols for driving assignments, vehicle capacity constraints, scheduling assumptions based on New Castle County travel times, cross-county trips connection priorities, and a policy not to designate the nature of each trip on the scheduling manifest. As a result, schedulers continuously massage the schedule to override the Trapeze software to compensate for limitations. Trapeze software applications should be assessed to ensure that services are running at optimum efficiency and are capable of adjusting to customer-demand levels. It should be noted that while ADA regulations prohibit “any restrictions or priorities based on trip purpose,” designating the purpose of the trip during the scheduling process is necessary for documenting service trends, identifying common trip destinations, and addressing service demands (*Code of Federal of Regulations*, 1991).

Need to Integrate Mapping Technology Data

DART First State captures an immense amount of current and historical data regarding types of customers, ridership levels, on-time performance, vehicle usage, pick-up and destination locations, ADA and non-ADA trips, trip booking and reservations, and trip scheduling and cancellations. The vast historical and statistical service data has been used in a reactive, rather than proactive mode to plan for paratransit service demands based on the identification of demand generators. In addition to spatially displaying service routes and response to customer service demands, mapping and planning software can be used to better analyze service data and predict service needs. DART First State’s GIS database and mapping technology may be integrated with GIS data from state agencies, local governments, MPOs, and the University of Delaware.

New Technology Needs

A new generation of technology is being introduced in the transit industry that can significantly improve paratransit service, reduce cost, and provide long-term management benefits. Obstacles to upgrade technology are costs, time analyzing costs/benefits, and implementation time. Most transit organizations implement new technology that builds on their current applications and produces demonstrable long-term benefits. Technological advancements are focusing on the interface of GIS with global positioning systems (GPS), greater automation of reservation functions, and the development of performance-enhancing technologies such as intelligent transportation systems (ITS). Automated fare collections systems also are being utilized by transit providers to reduce boarding time, relieve drivers and customers from handling cash, eliminate daily fare box audits, and enhance on-board security.

Coordination and Access to Public Transportation

Research indicates that there is often a duplication and/or lack of coordination among agencies that provide specialized transportation and paratransit services. Many agencies are unaware that they are providing identical or parallel services to clients within the same geographic service area. Human service agency clients may also lack awareness of what transportation services they are eligible to receive, which agencies provide human services transportation, what transportation options are available, and how to access service options. The lack of coordinated planning has resulted in service inefficiencies, gaps in service, and greater expenditures for transportation operations. Coordinating program resources for transportation services can lead to

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increased service availability and more cost-effective human services transportation services. The Federal Transportation Administration (FTA) has defined the coordination of specialized transportation services as a, "... process through which representatives of different agencies and client groups work together to achieve any one or all of the following goals: more cost-effective service delivery; increased capacity to serve unmet needs; improved quality of service; and, services which are more easily understood and accessed by riders" (FTA, 2000).

Benefits of coordinating transportation services include increased service levels, increased mobility, better quality of service, greater cost effectiveness, enhanced maintenance programs, better accountability, more equitable cost sharing between participating agencies and individuals, more professional delivery of transportation services, and safer transportation services.

To implement coordinated transportation systems, interagency cooperation and partnerships need to be established. Transportation providers need to identify similar client needs, inventory available transportation services, recognize opportunities for collaboration, and identify the potential for increased productivity and operating efficiencies (FTA, 2000).

In February 2004, a new Interagency Transportation Coordinating Council on Access and Mobility (CCAM) was established to launch a new federal initiative, "United We Ride." This program is designed to help states and communities overcome transportation coordination challenges and develop coordinated human service transportation systems. DTC was awarded a federal United We Ride grant and has worked with MPOs and representatives of 5310 agencies (that serve the disabled and senior population) to develop "Coordinated Human Services Transportation Plans."

Plans for New Castle, Kent, and Sussex Counties were issued in the summer of 2007. These plans recognize that there are gaps in human service transportation needs throughout the state, duplication of resources and services among transportation providers, need for centralized coordination among transportation providers, and a growing demand for additional transportation options for senior citizens. Among the recommendations were plans to improve the distribution of 5310 resources, explore a centralized coordination of and use of integrated technologies for community transportation needs, increase DART travel training to seniors/senior centers, pool information on available transportation services, fund a mobility coordinator, establish a mobility advisory board, and develop transportation options for seniors beyond fixed-route buses and paratransit. Strategies for further action are currently being assessed.

Innovative Practices

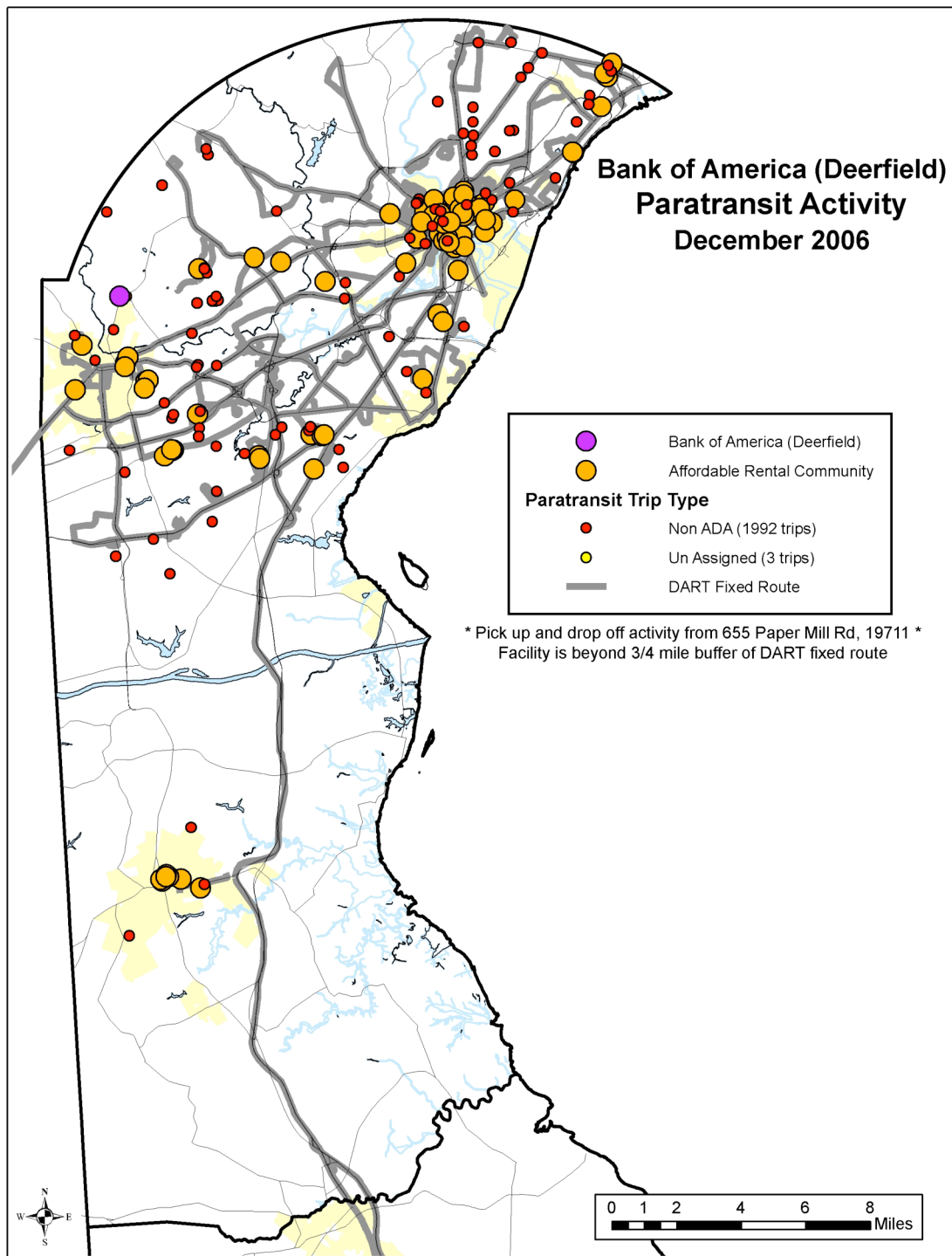
Nationwide, transit agencies have developed innovative approaches to provide more efficient and productive paratransit operations and manage growth as well as escalating costs. There is not one “best practice” solution that will address growing paratransit demands in Delaware. However, DelDOT and DART First State can assess the extent to which innovative strategies that have been successfully implemented by other transit agencies could yield positive results if applied in Delaware. Innovative practices are described below and summarized in an “Innovative Practices Matrix” (see Appendix B).

Involvement of Private-Sector Employers

Before looking “outside” for innovative practices, it is important to recognize a significant Delaware example of the successful involvement of a private sector employer in paratransit service demand reduction. During the month of December 2006, fully 22% of all paratransit trips in New Castle County involved origins, destinations or—in some cases—both, that lay more than three-quarters of a mile from a DART fixed-bus route and were therefore classified as “non-ADA.” The single largest generator of non-ADA paratransit trips in New Castle County during December of 2006, with 29% of all such non-ADA trips, was the Bank of America [formerly MBNA] Deerfield site located north of Newark in an area with no fixed-route bus service. The nearly 2,000 trips to and from this site in December of 2006 accounted for 6% of the total paratransit trips in New Castle County.

Subsequent to December 2006, the Bank of America initiated an employer-provided accessible transportation service for its personnel, resulting in a significant reduction in DART paratransit trips to and from the Deerfield site, as well its other Bank of America employment centers. During the month of May 2007, DART provided only 719 paratransit trips to and from the Bank of America Deerfield location.

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Public Information and Outreach

In order for human services transportation to be coordinated and to minimize increased reliance on the DART First State paratransit system as the “one-size-fits-all” transportation solution, more information and outreach is needed on available transportation options and services for disabled persons. Other transit agencies have conducted extensive public information and outreach initiatives to promote a greater understanding of ADA eligibility guidelines, promote use of the fixed-route bus system, and implement a range of accessible public and private transportation options.

King County Metro (Washington) has developed a *Regional Accessible Transit Guide* in text, graphics, and framed mode at their website to enable disabled persons to determine ADA transit eligibility for Metro ACCESS (www.findaride.org).

Utah Transit Authority (UTA) has developed a “Rider’s Guide” to provide concise information on UTA’s 100% accessible fixed-route and paratransit systems. The guide explains eligibility criteria, service policies, service operations, and limits of each type of service (www.rideuta.com/files/ridersGuide_11-05.pdf).

Washington Metropolitan Area Transportation Authority and Montgomery County, Maryland, have published a comprehensive guide to public, private, and nonprofit transportation in the Washington, D.C. Metropolitan region, state of Maryland, and northern Virginia. The document is available online and in alternative formats such as large print and Braille. A full menu of human services transportation services is listed with website links to participating providers. In addition, call centers have been established to provide assistance with completing applications, explain transportation options, and provide referral services. (www.wmata.com/accessibility/Accessible_Transportation_Options.pdf)

Paratransit Service Policies

Eligibility Determination Process

As previously stated, transit agencies are required by ADA to develop a process for determining complementary paratransit eligibility in strict accordance with established criteria. In order to manage the demand for complementary paratransit services, transit agencies must tighten the paratransit eligibility process. Loose interpretation of ADA paratransit eligibility provisions can, in fact, be costly to transit agencies.

Recently, DART First State has taken positive steps to tighten its paratransit eligibility process. There are more in-person interviews being conducted to determine DART First State paratransit eligibility, denial rates have increased from approximately 1% to 10%, travel training is automatically conducted in cases where paratransit services are denied, and recertification is conducted every five years. (IPA interview with DTC staff member, Bonnie Hitch, February 6, 2007). Still, in order to realize greater cost savings and use the eligibility process as a gatekeeper to paratransit services, DART First State will need to follow the lead of other transit agencies that determine paratransit eligibility and further qualify that person for the need for ADA- or non-ADA services. To further strengthen its paratransit eligibility process, DART First State

should institute policies to mandate in-person interviews for all applicants, require functional assessments to complement in-person interviews, implement guidelines to screen for trip-by-trip eligibility, and expand travel training to targeted populations such as senior centers or restricted-age communities.

In-Person Interviews

More transit agencies are conducting in-person interviews, as a mandatory component to the paratransit eligibility process, to more accurately determine whether an applicant for paratransit service meets ADA eligibility criteria. To assess the physical and functional travel abilities of potential paratransit riders, Easter Seals Project ACTION has developed a Functional Assessment of Cognitive Transit Skills (FACT) for use by transit agencies (MultiSystems, 2003).

Access Link is *NJ TRANSIT*'s ADA Paratransit service, which provides curb-to-curb service for eligible people with disabilities. Access Link service is comparable to the NJ TRANSIT local bus network, providing transportation during the same hours and days and at the same fares as the local bus network. In order to use Access Link, individuals must have a disability that prevents them from using the fixed-route bus service and certified as ADA-eligible for paratransit services. Potential applicants for Access Link must undergo an in-person interview to determine eligibility. The interviews are conducted by a network of local community-based organizations throughout the state known as "Assessment Agencies" (www.njtransit.com/tm/tm_servlet.srv?hdnPageAction=AccessLinkFAQSTo#b).

King County Metro has developed an "Are You Eligible for Paratransit Services?" worksheet to enable prospective clients to determine whether they are able to travel independently on an accessible fixed-route bus or if they may qualify and should complete an application for ADA paratransit services. Prospective clients can use the worksheet to determine if their disability prevents them from (1) riding a regular, fixed-route bus independently, (2) riding a lift-equipped bus, and/or (3) traveling to or from a bus stop. The second section of the worksheet helps prospective clients further determine the need for additional non-ADA paratransit services such as a personal assistant, door-to-door service assisted by the driver, and/or hand-to-hand service for individuals unable to be left alone (www.findaride.org/ratg/paratransit_eligibility.php). The worksheet also is a useful tool in determining trip-by-trip eligibility. Used as part of the ADA eligibility determination process, the worksheet is helpful to the agency in determining clients' qualification for trip-by-trip paratransit service eligibility.

Functional Assessments

Functional assessments are usually conducted in concert with in-person interviews. The **Washington Metropolitan Area Transit Authority (WMATA)**, the public transit system servicing the District of Columbia, suburban Maryland, and northern Virginia, provides complementary curb-to-curb MetroAccess paratransit service for disabled persons who are unable to use the regular transit system. In order to help prospective clients understand ADA eligibility guidelines and determine if they may be eligible to use MetroAccess paratransit, WMATA has developed an online ADA eligibility worksheet. Prospective clients are advised to first complete a five-question worksheet to personally assess whether they may be eligible for MetroAccess services. If their worksheet reveals that they may be eligible for paratransit services, the clients then proceed to complete an application and arrange to participate in an in-

person interview and functional assessment by a healthcare professional at an assessment site (www.wmata.com/metroaccess/worksheet.cfm).

As part of the eligibility process, **Utah Transit Authority (UTA)** reviews each application in person with applicants and discusses travel abilities and needs in more detail. At the interview, prospective clients may be asked to take an actual bus. The physical functional assessment consists of boarding and riding an accessible fixed-route bus, negotiating various inclines, surfaces, curb-cuts, and crossing streets. This provides UTA with evaluative information on each client's travel abilities and takes about 45–60 minutes (www.rideuta.com/ridingUTA/howToRide/ridersDisabilities.aspx).

Trip-by-Trip Paratransit Eligibility

In addition to conducting in-person interviews and functional assessments, many transit agencies are increasingly using trip-by-trip eligibility criteria for conditionally eligible clients. DART First State is in the process of developing guidelines to assess trip-by-trip eligibility. Unconditionally eligible individuals, through the eligibility screening process, are persons with disabilities who have been deemed functionally unable to ride fixed-route buses independently under any circumstance. However, a conditionally eligible status may be applied to individuals who are able to use regular fixed-route service for some trips, but may require paratransit for other trips or in special circumstances. Eligibility for paratransit trips is then determined on a trip-by-trip basis and is based on the individual's functional ability to independently use regular buses for some trips or part of a particular trip. Mandatory in-person interviews and functional assessments become a critical component of the paratransit eligibility process when determining paratransit trip-by-trip eligibility. In many instances, once an environmental or architectural barrier is removed on a particular route, the determination of conditionally eligible status may need to be revised for that route.

Westchester County Department of Transportation (N.Y.) provides a curb-to-curb, demand-responsive Bee-Line ParaTransit service on a trip-by-trip basis for conditionally eligible persons that do not have the *functional* capability to ride some fixed-route trips or particular routes. Trip-by-trip eligibility is determined following completion of an application, an in-person interview, and functional assessment by the Office for the Disabled (www.co.westchester.ny.us/paratransit/paratransit_eligibility_guidelines.htm).

Beginning in 2001 **King County Metro (Wash.) ACCESS** implemented trip-by-trip screening of ride requests for conditionally eligible riders. Under this policy, requests for paratransit service are reviewed on a trip-by-trip basis. Paratransit services may be granted for conditionally eligible individuals if certain conditions are present for a specific trip that prevents an individual from riding the bus. However, if the conditions are NOT present for a particular trip, then **ACCESS** transportation may not be approved. Circumstances that may be present for paratransit trip approval include uneven terrain to/from a bus stop, inability to use a bus lift at a particular stop, or lack of sidewalks to access a bus stop.

Travel Training

“Travel training is a short-term, comprehensive, intensive instruction designed to teach [people] with disabilities how to travel safely and independently on public transportation [vehicles and

facilities]” from home to a specific destination and back to home again (Grace, 1996). The goal of travel training is to:

- Improve disabled and elderly individuals’ opportunities for community integration through independent travel and the use of public transportation.
- Increase independent functioning to enhance opportunities for supported employment, education, and adult independent living options.
- Help passengers navigate the fixed-route system and increase their comfort level. Depending on the circumstances the ultimate goal is to steer some passengers away from paratransit use and onto more efficient, less costly fixed-route buses.

Originally, travel training programs were designed to build familiarity and comfort with the flexible-route system. Many transit agencies have also developed comprehensive or mandatory travel training as part of the eligibility determination process, particularly for disabled persons who have been denied paratransit service and must ride the accessible, fixed-route service. A newer trend is for transit agencies to proactively identify senior populations, who are unfamiliar with riding public transit and may be future paratransit clients, to provide comprehensive travel training including trip planning, boarding and exiting, using wheelchair lifts, gaining stranger awareness, learning emergency procedures, crossing intersections, and reading bus schedules.

Lane Transit District (LTD) in Eugene, Oregon, has established one of the most comprehensive travel training programs in the country. LTD contracts with a local nonprofit agency, Alternative Work Concepts (AWC), Inc., to provide travel training, “travel host” services, and training referrals. The following travel training services have been designed cooperatively by LTD and AWC:

- **One-on-One Destination Training** for those who need to navigate particular trips.
- **Orientation Training** for individuals who have never used fixed-route buses.
- **A “Travel Host” Program** to assist riders having difficulty making bus transfers. Two part-time travel hosts are stationed at a major transfer point, provide transfer assistance, and serve as travel ambassadors.
- **A “Bus Buddies” Program** using senior volunteers, who are familiar with the fixed-route service, as on-board companions to those unfamiliar with fixed-route buses.
- **Lift Training** to familiarize disabled individuals with accessibility features of buses (www.ltd.org/ridingltd/accessibleservices.html).

Paratransit Demand-Management Strategies

Complementary paratransit services, as defined by ADA, are designed to enhance the accessibility of public transportation to the disabled population. ADA never intended for complementary paratransit services to operate as a taxi service or meet the transportation needs of all persons with disabilities in all circumstances (www.fta.dot.gov/civilrights/ada/civil_rights_3895.html). Complementary ADA paratransit service in Delaware should focus on serving the needs of disabled persons who are not able to ride the fixed-route system. Action needs to be taken to minimize demand on the complementary ADA paratransit service and shift customers to accessible fixed-route services in strict accordance with ADA eligibility criteria.

Transitioning Non-ADA Paratransit Customers to Fixed Route

According to a *Transit Cooperative Research Program* report, persons with disabilities do not ride accessible, fixed-route services for a variety of reasons including the:

- Lack of knowledge about the availability of fixed-route services.
- Fear of crossing intersections or large roads in order to access the service.
- Ineffective transit system policies.
- Lack of training of fixed-route drivers about the needs of the disabled.
- Difficulties with bus transfers.
- Inadequate seating.
- Poor bus stop amenities and covered shelters.
- Perceived lack of security (Balog, 1997).

Disabled passengers who utilize fixed-route bus services experience greater travel predictability, dependability, and independence than traveling via paratransit service. The goal for most transit agencies nationwide is to control costs of ADA paratransit services by transitioning disabled patrons capable of riding accessible buses to the fixed-route system. As previously stated, in Delaware the average FY 2007 estimated direct cost per paratransit trip is \$25.70 compared to the average estimated direct cost of approximately \$4.75 per fixed-route bus trip. Therefore, each disabled passenger who is switched from paratransit to fixed-route services, means a cost savings to the state of approximately \$21.00 per trip. Transit agencies across the country have successfully implemented demand-management strategies to control the use of paratransit by patrons capable of riding the fixed-route system. The following discussion describes demand-management strategies such as mandated travel training, use of paratransit as a feeder service, route deviation, grouping of trips, enhanced travel options, fare incentives, and premium service.

Paratransit as a Feeder Service

In an effort to maximize efficiency and productivity and control the demand for complementary paratransit service, transit agencies are establishing paratransit as a feeder service to accessible fixed-route services. To employ paratransit service as a feeder service, the service area needs to be characterized by accessibility, a strict paratransit eligibility determination process, and the existence of a travel training program (Kausch, 2004).

In order for the feeder service to maximize efficiency and productivity, the transit agency needs to ensure the fixed-route stops are as accessible as possible for persons with disabilities. Accessible fixed-route stops make it easier for an agency to shift paratransit customers from complementary paratransit to fixed-route services. This can result in lower paratransit costs as vehicle miles and hours of service are reduced and other operating expenses decline. This also reduces duplication between paratransit and fixed-route systems. In addition to benefiting disabled passengers, accessible stops are also an added benefit to non-disabled passengers. A bus shelter or concrete pad might entice more of these individuals to patronize the transit system.

Capital Metro (Austin, Tex.) and *ACCESS (Pittsburgh, Pa.)* have successfully implemented a feeder system. In both cases, paratransit service provides transportation for a portion of a trip that lacks accessibility and then shifts passengers to a fixed-route bus for the remainder of the trip. In order for this demand-management strategy to work, a transit agency must confer to the individual a conditional or trip-by-trip ADA-eligibility status and conduct an environmental

assessment of each bus stop to identify accessibility barriers (www.capmetro.org/riding/sts.asp). ACCESS of Pittsburgh uses volunteers to conduct reviews of prospective pick-up and drop-off points to develop a profile of acceptable transfer points for feeder service (www.portauthority.org/PAAAC/CustomInfo/ACCESS/tabid/121).

Route Deviation or Flexible Fixed-Route Service

Route deviation, or flexible fixed-route service, is an innovative service category that combines features of fixed-route services with the ability to serve persons with specialized transportation needs. To meet ADA requirements, a flexible route service must be able to shift off the fixed route within the $\frac{3}{4}$ -mile limit designated by ADA without substantially altering fixed-route schedules or denying paratransit service to disabled customers. Generally, the service operates on a fixed schedule over a designated bus route. While there are bus stops along the route, the bus may deviate slightly from the established route in order to respond to a request for service. Pick-ups on the deviated route are curb-to-curb rather than door-to-door. Once the requested pick-up is made, the bus returns to the fixed route to serve the next bus stop. Route deviation works best in areas that do not have the population density to support an exhaustive fixed-route bus system, but where there are common public transportation needs oriented toward demand generators such as town centers or shopping malls (Kausch, 173).

Pierce Transit (Pierce County, Wash.) initiated a Bus PLUS service in 2003, which is designed to operate on a fixed-route schedule but provides opportunities to travel off the set route to meet specialized transportation needs. The service has been piloted and successful in specific service areas that do not meet established performance standards for fixed-route buses or in neighborhoods that do not have the population densities to support fixed-route services. The innovative service category has helped reverse the trend of a declining fixed-route ridership and an increasing paratransit ridership. Combined with travel training, revised eligibility determination, and transferring paratransit patrons onto the fixed-route system, the route deviation service has helped lower transit costs and moderate paratransit growth (www.piercetransit.org/DraftTDP.pdf).

DART First State instituted a pilot “Dover Hybrid Project” to maximize productivity of overlapping paratransit and fixed-route services in Kent County. Now called “Kent Go Link,” the program phased in service efficiencies over a three-year period to establish timed transfers for paratransit customers, improve on-time performance and manage increased demands, increase productivity of the night service in the Dover area, and provide flex routes to enable drivers to serve customers unable to access fixed-route bus stops. The program also serves as a model for instituting other innovative pilot transit services with full input, support, and cooperation from stakeholders and various community partners.

Commuter Express Service

The purpose of a commuter express service is to maximize service efficiencies during morning and afternoon peak hours of service to and from major employment destinations. Characteristics of a commuter express service include minimum stops, longer travel distances, and peak-hour service. To determine the need for a commuter express service, travel patterns to major employers on both the fixed-route buses and paratransit services need to be identified. While commuter express service is exempt from ADA complementary paratransit regulations,

investment in high-capacity transportation systems may help mitigate excessive demand for other transportation services, reduce congestion along major transportation corridors, and help mitigate peak-hour traffic congestion.

Subscription Services

According to ADA, no more than 50% of a transit agency's daily paratransit capacity may be reserved for subscription services. Subscription services are used by public transit agencies to provide routine trips to a customer to the same destination on a recurring basis. Subscription services can reduce scheduling time for routine trips and be beneficial in managing demand for paratransit services if a clearly defined subscription service policy is established and communicated. Effective subscription services address trip purpose (e.g., medical appointments, school, or employment), trip frequency, and trip route. These policies also need to address situations when a transit agency may cancel a subscription service, and penalties for excessive late cancellations of service or no-shows. DART First State currently utilizes subscription services and has implemented a policy to guard against excessive late cancellations of service or no-shows.

Cost-Effective Measures

No-Show Policies

Because of the demand-response nature of paratransit, excessive cancellations and no-shows are problematic to service providers. When a customer makes an advanced reservation but does not show up or cancels the service at the last minute, the cost and efficiency of the paratransit service is negatively impacted. ADA permits transit agencies to develop policies and procedures for penalizing eligible customers who develop a pattern of cancelled or missed paratransit trips. Specifically, transit agencies may suspend service “for a reasonable period of time” contingent on providing written notice and due process (*Code of Federal Regulations*, 1991).

Most transit agencies have instituted firm no-show policies to discourage last-minute cancellations and no-shows. Based on the degree or frequency of infractions, penalties are assessed with a possible suspension in service. Two transit agencies also provide incentives to reward customers for not missing scheduled trips. The ***Regional Transportation Commission (TRC) of Southern Nevada*** penalizes no-show riders, but also awards free coupons twice annually to customers who have good service records (www.rtcsonthernnevada.com/ots/paratransit/guide7.htm#noshow). ***UTA*** penalizes no-show customers by charging suspension points based on the type of violation, but also provides coupons that can be redeemed for the removal of points or a free ride for drivers arriving late—outside the “window of service” policy (www.rideuta.com/utaInfo/howToRide/ridersguide.aspx).

Advance Reservation Policy

Shortening the period for which advance reservations may be taken could help to discourage both cancellations and no-shows. ***King County Metro*** instituted a new advance reservation policy after realizing that 1 out of 5 scheduled trips were subsequently cancelled. In 2005, the window for booking paratransit trips was reduced to 1–3 days in advance instead of 4–7 days in advance. Anticipated benefits include cost savings and better customer service.

Accessible Service Options

Best practice models and innovative services across the county prove that a diverse set of accessible service options can be provided and tailored to specific needs of a community or service area. It is unrealistic to fully rely on a complementary ADA paratransit as the sole human service transportation provider to individuals with disabilities and the elderly. Accessible service options should be coordinated to eliminate a duplication of services and maximize resources. A menu of service options, to be coordinated among the public transit and human services transportation providers, is described below.

King County Metro provides a menu of enhanced special-need transportation services beyond its ADA complementary (*ACCESS*) paratransit service. Enhanced *ACCESS* provides more flexible and responsive services to meet the unique transportation needs of persons with disabilities who may need door-to-door or hand-to-hand service. The service provides an expanded service area and operating times.

Specialized Transportation Services

New Jersey Transit has an extensive system of registered private medical access vehicles (MAV) that supplement New Jersey Transit's ADA paratransit service, Access Link. MAVs tend not to have a specific service area and operate in dense, urban areas where the need and demand for service is greater. The primary source of funding for MAVs in New Jersey is Medicaid.

Also in New Jersey, each county operates its own transit service with ADA-mandated paratransit service. While operating characteristics and extent of service varies among county paratransit services, a substantial source of funding for community transportation services is casino revenue or Senior Citizen and Disabled Transportation Assistance Program (SCDRTAP). In 2005, approximately 85% of SCDRTAP funds were allocated to counties for specialized transportation services (Voorhees Transportation Center, 2005).

Nongovernmental organizations (NGOs) also make up a significant component of the overall human services transportation network. NGO providers in New Jersey offer demand-responsive services for senior citizens and people with disabilities as primary clients. Of the NGOs surveyed, none operated ambulances and less than one-quarter of the vehicles were wheelchair accessible. Usually operating within a county-wide service area, the NGOs indicated that their primary sources of funding included private foundations and state and county governments. To a lesser degree, NGOs received some funding support from fares, federal grants, Medicaid funding, and municipal governments (Voorhees Transportation Center, 2005).

Grouping of Trips

With assistance from human services transportation providers, many paratransit agencies are able to group trips for common destinations during off-peak hours. **LTD** provides a RideSource shopper service, in addition to its regular paratransit service, to provide a weekly shared-ride transportation service. During a set off-peak time and day, the shopping service picks up passengers at their homes or certain housing developments for grocery shopping trips.

In the *Washington, D.C. Metropolitan area*, the Jewish Council for the Aging, American Red Cross Montgomery County, and Jewish Social Service Agency provide door-to-door transportation on established routes for grocery shopping. Also, the American Cancer Society Road to Recovery Program provides transportation to ambulatory clients for radiation, chemotherapy, bone marrow transplants, and surgery (www.wmata.com/accessibility/Accessible_Transportation_Options.pdf).

Fare Strategies

Fare Incentives

To encourage persons with disabilities and senior citizens to ride fixed-route buses, some transit agencies are offering financial incentives. The *Washington Metropolitan Transportation Agency (WMATA)* and *Montgomery County (Md.)* instituted a new free-fare policy last July to provide free fares to senior citizens over the age of 65, ADA-certified disabled persons, and their companions. Free transfers to local buses and the Metrorail system are also provided (www.montgomerycountymd.gov/tsvtmpl.asp?url=/content/dpwt/transit).

Premium Fares

To encourage fixed-route ridership, other transit agencies are using fare strategies as disincentives to ride the more costly paratransit service. Premium fare surcharges may be applied for paratransit services that exceed ADA mandates. Examples of premium fares include peak-hour pricing, after-hours service surcharges, and service-area surcharges.

Santa Clara Valley Transportation Authority (VTA) distinguishes and charges more for premium service levels that exceed ADA minimum service requirements. The intent is to institute a more equitable fare system whereby customers who elect a higher level of non-ADA paratransit service are assessed surcharges to help offset higher costs of service. Surcharges are assessed for missed rides, trips beyond the ADA ¾-mile service corridor, and door-to-door service (www.vta.org/services/accessible_services.html#fares).

To restrict the growth of non-ADA paratransit services, *King County* passed an ordinance that requires a premium fare for service that exceeds the minimum ADA requirements. After implementation of the ordinance, the paratransit budget subsidy was reduced by \$3 million the following fiscal year.

Coordinated Human Services Transportation

Transit agencies are working closely with human service agencies to enhance travel options for mobility-limited populations. *King County Metro's* Community Partnership Program provides retired paratransit vans free-of-charge and an annual grant to offset costs to community service agencies. In exchange, the agency must agree to provide a driver, comprehensive insurance, and a minimum number of monthly paratransit rides.

New Jersey Transit has collaborated with two community agencies to institute "New Jersey Travel Independence." The program was designed to help reduce the cost of travel training and

integrate paratransit riders onto the fixed-route system. Agency volunteers assist people with disabilities develop skills and confidence needed to travel independently on fixed-route buses.

Working with eleven agencies throughout the Las Vegas area, the ***Regional Transportation Commission (RTC) of Southern Nevada*** has developed a cost-sharing program whereby agencies pre-pay their ADA-eligible clients' paratransit fares.

Performance-Enhancing Technology

Reservations and Scheduling

In terms of operations software, DART is currently using Trapeze Pass (Version 7.0/4.81) software to take paratransit trip requests, schedule paratransit service, and dispatch the service on a daily basis. During a site visit to the Delaware Transit Corporation on February 6, 2007, IPA project team members interviewed Bonnie Hitch, Kathy Wilson, Luther Wynder, Larry Brockenbrough, and Gary Morris to observe and better understand paratransit operations. The team learned that there is a multi-step process in scheduling each paratransit trip. First, reservationists take calls and input (book) the trips into Trapeze. Then, schedulers find an option for a trip "on the fly." Based on trip option information, an estimated time of arrival is determined, which incorporates a one-hour pick-up window. The formula estimates the window based on New Castle County travel times, which are impacted by a greater volume of trips each day and more traffic congestion. To compensate for this, the schedulers individually adjust the trip arrival times for locations in Kent and Sussex Counties.

Dispatching

Dispatchers use the Trapeze dispatch system to communicate and track the paratransit buses statewide. The paratransit vehicles are equipped with an Automatic Vehicle Locator (AVL) that can track the vehicles through the state. Smart CAD (computer-aided dispatch) is also used for voice, radio, and data communications. All drivers are given paper manifests that list their trips for the shift. If a driver "calls out" from work, the paper manifests must be adjusted manually to ensure all of the trip reservations are assigned.

Software Technology

Several counties and states have implemented up-to-date Trapeze software to manage their demand levels and costs. The ***Orange County Transportation Authority***, which services Orange County, California, incorporated the PASS program to manage their increasing demand and costs. This system "automatically qualifies each trip, ensuring that the client is eligible for the service..." ("Case Study: Orange County Transportation Authority"). Mobile Data Computers (MDCs) were also installed in all of the vehicles, which allow drivers to view their itineraries and communicate with the dispatch center. After installing the new program, Orange County reported an improvement in scheduling and productivity. They also expect a return on their investments in two years. Orange County's improvements were recognized when they received the "Outstanding Public Transportation System of the Year" award by the American Public Transit Association (Trapeze Group, 2006).

Maryland Transit Administration (MTA), which provides paratransit services to Baltimore City, Baltimore County, and Anne Arundel County, also incorporated PASS software to address poor on-time performance problems. Twenty-four percent of their scheduled trips were not showing up on time, which created a large number of customer complaints “in the neighborhood of several hundred per month” (Maryland Transit Administration). After implementing Trapeze PASS, MTA experienced an increase in performance and a drop in complaints. Their “on-time performance rate had increased from 76% to 92%, while the volume of trips had increased from 38,000 to more than 52,000” (Maryland Transit Administration).

South Coast Area Transit’s paratransit program, ACCESS, services Western Ventura County, California. They supply curb-to-curb transportation to senior citizens and the disabled. Many of their challenges occurred in the booking phase of the trip. Customers would have to wait “on hold” for up to 15 minutes just to be told they could not reserve a trip (“South Coast Area Transit”). Because the scheduling phase was such a complicated process, managers were unable to track data files and investigate complaints. To combat this problem ACCESS implemented the Trapeze PASS software to aid in the management of booking, dispatching, and scheduling of trips. After implementing the new software, “the overall costs of providing the service decreased 23%.” They also found that overall complaints decreased (Trapeze Group, 2005).

Capitol Area Rural Transportation System, serving Austin, Texas, took a slightly different approach to enhance service response. They had already implemented the Trapeze PASS program and wanted to improve it by adding AVLs and mobile data computers (MDCs). Instead of installing MDCs in all of the vehicles, they were put on one-third of the fleet. Since then, there have been “significant service improvements” (Trapeze Group, 2003). Due to the success of the initial program, the agency plans to add MDCs to the remainder of their vehicles.

Private companies are also using improved technology to better manage their services. **Delaware Express Shuttle** provides airport shuttle services to various airports in Delaware, New Jersey, Washington, D.C., New York, Maryland, and Pennsylvania. Charter buses also are available for transportation to various states throughout the country. Hudson Group’s HWEB Reservations Manager software is utilized by three Delaware Express Shuttle reservationists to schedule their daily reservations (Delaware Express). The software enables customers to make a reservation using a combination of the website, a new interactive voice reservation system (IVR) via touch-tone phone, fax, or live operator. According to Gerry Frenze, approximately 44% of their reservations are scheduled online.

Each driver is given a Blackberry at the start of the shift that is used to receive calls and communicate with the dispatcher. Delaware Express also uses MapPoint Web Service, a programmable web service hosted by Microsoft to integrate mapping, driving directions, and proximity searches into its HWEB Reservations Manager software to optimize customer service. Future plans call for equipping each Delaware Express vehicle with a GPS tracker to convey the vehicle’s location to the dispatcher. The proposed GPS system will enable Delaware Express to assign vehicles based on proximity to the pick-up, reroute vehicles in the event of a trip cancellation, or address special trip needs.

Technology Upgrades

DART First State already has the basic technological tools needed to improve the paratransit system. Having the most up-to-date software provides the basic tools they need to improve. Trapeze version 7.0 software has the following capabilities that may be useful to the paratransit system, as described by Jeff Loughheed, Trapeze representative, “Currently, an IVR system is in the final design stage by DART First State. This technology will give clients the ability to call and make reservations via phone,” (similar to the system implemented by the Delaware Express Shuttle).

The U.S. Department of Transportation Intelligent Transportation Systems (ITS) Program published “Automatic Vehicle Location Successful Transit Application: A Cross-Cutting Study” in 2000 assessing various transit technologies. In their research, ITS found that:

- New Jersey Transit’s IVR system reduced information request telephone wait time from 85 to 27 seconds and monthly calls increased by 40,000.
- San Diego County’s automated voice response system increased call handling productivity by over 21% (ITS, 2000).

Adding mobile data terminals (MDTs) to paratransit vehicles may be another option to improving service. Several of the agencies mentioned in the best practices section chose to purchase this technology. An MDT would be installed in each vehicle. This would enable dispatchers and drivers to communicate without the use of radios. Dispatchers would also have the ability to adjust the drivers’ itineraries as trips are cancelled. As mentioned previously, Orange County implemented MDTs and expects a return on their investment “in less than two years,” suggesting the money used to implement this program was worth the payoff (Trapeze Group, 2006).

ITS

Intelligent Transportation Systems (ITS) are performance-enhancing technologies used in surface transportation, including transit operations. Operational improvements and customer service enhancements can be realized through:

- **Smart Infrastructure** to link information between the transportation network and transportation agencies, develop smart bus shelters and stops with automated customer information, and better manage the flow of automated information between the transit center and vehicles.
- **Smart Cards** to institute the usage of automated fare collection equipment that uses smart cards to eliminate fare collection by drivers, enhance security to passengers, increase fare payment convenience, and automate vehicles that receive traffic or universal “smart” fare cards. Smart transit systems equip each vehicle with a real-time vehicle locator, vehicle occupancy tracker, and communications-based technology to improve demand-response operations. Smart card fare technology is also being utilized widely by transit agencies to eliminate the need for the exchange of money on board transit vehicles, free drivers from fare collection duties, enhance security, reduce the need for daily audits, and enhance customer service.

Transit Stop Inventory Technology

Automated Transit Stop Inventory Model

It is essential for transit agencies to keep an accurate inventory of transit stop data in order to assess bus stop attributes, including ADA compliance and accessibility for persons with disabilities. Transit stop inventories are also needed to prepare for Advanced Public Transportation System upgrades such as automatic vehicle locators, automatic passenger counters, computerized trip planners, and automatic voice annunciation systems. Traditional methods of manually collecting transit stop inventory data are labor intensive, time consuming, and prone to error. To address the need for up-to-date transit stop inventory data, the Florida Department of Transportation commission Florida International University's Lehman Center for Transportation Research to develop an Automatic Transit Stop Inventory Model (ATSIM). ATSIM is a user-friendly mobile-desktop system designed for field collection of transit stop data. Specifically designed to run on the HP iPAQ model (hw6945 or hw6925), it comes with a Global Positioning System (GPS) and built-in digital camera, and provides an automated method for collecting, updating, and managing transit stop data. ATSIM collects information on transit stop attributes, transfers files to an office desktop computer, and automatically generates shape files for GIS applications. ATSIM is one of three major components of the Florida Transit Information System (FTIS), which was designed to enhance transit planning and the plan for transit facilities and service improvements (www.ftis.org/atsim.html).

Use of GPS/GIS to Inventory Bus Stop Attributes

GRTC Transit, a public transportation agency serving Chesterfield County and Richmond, Virginia utilizes GIS/GPS to develop an in-house database of bus stops and routes and to better manage transit resources. As part of a demonstration grant, GRTC Transit received a portable GPS/GIS receiver and software from Leica Geosystems and GIS software from ESRI. GIGPS is used to identify exact locations of bus stops, collect data on to analyze the need for bus stop improvements, and plan for new stops. This technology has enabled the transit agency to plan for growth and keep its asset inventory current, which is essential for promoting use of the fixed-route system for persons with disabilities (American City & County, 2003).

GIS Mapping of Demand Generators

Demand generators are origins or destinations that generate a demand for frequent travel such as places of employment, medical centers, shopping centers, or high-density residential development. GIS mapping technology can be utilized to understand the purpose of trips, location of demand generators, and how resources can be maximized to service disabled passengers.

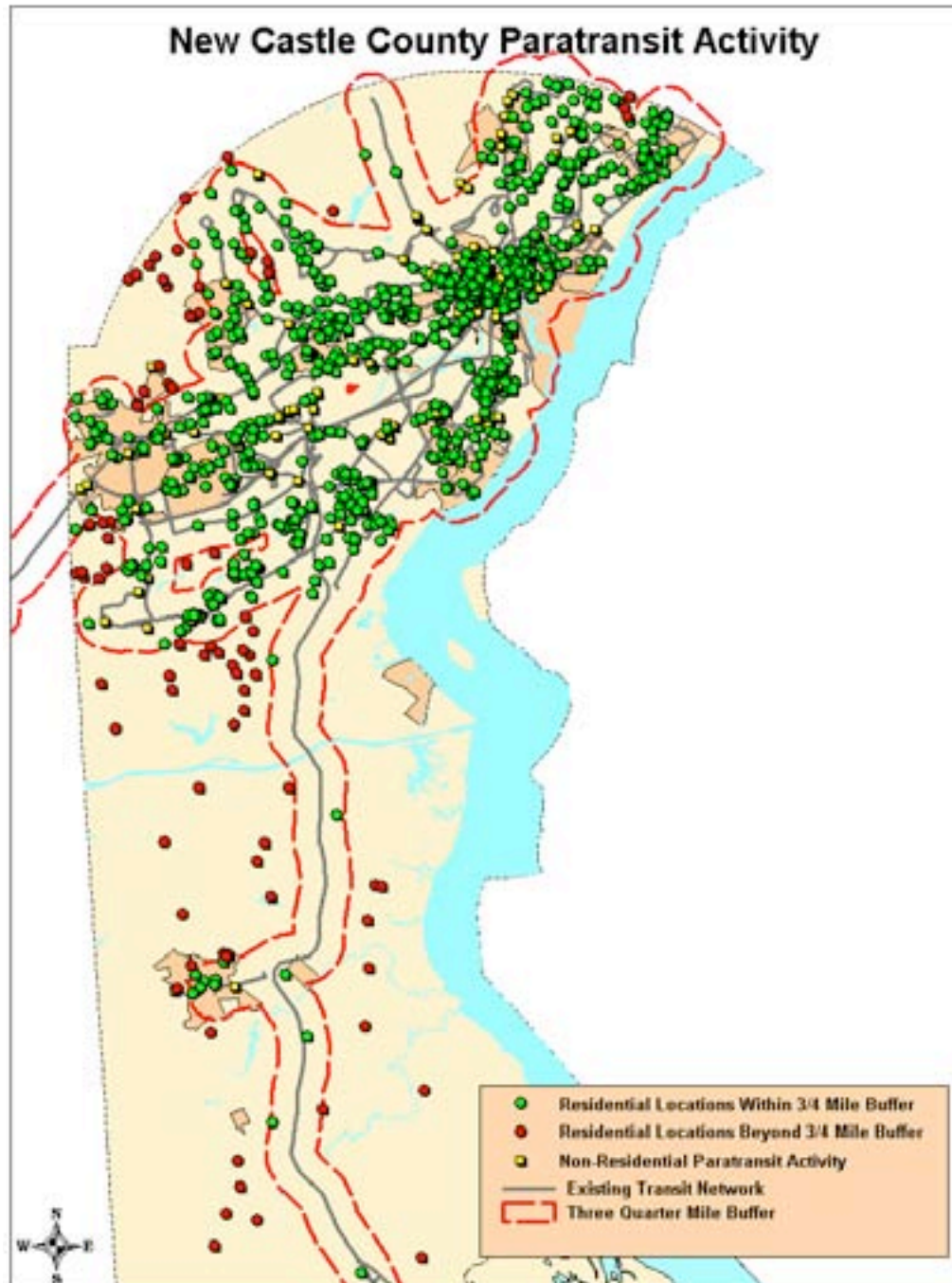
GIS mapping technology combined with Trapeze planning software can apply external data such as demographic information, type of housing stock, planned medical facilities, new roadways, other transit services, and planned residential and commercial development. IPA, in collaboration with UD's Center for Applied Demography and Survey Research (CADSR), has gathered external data and internal GIS data from DART First State to develop several GIS mapping prototypes. The resulting prototypes demonstrate the important connection between land-use and transit planning. This technology can be used to identify critical trends and demand

generators to estimate near- and long-term paratransit demands both geographically and demographically.

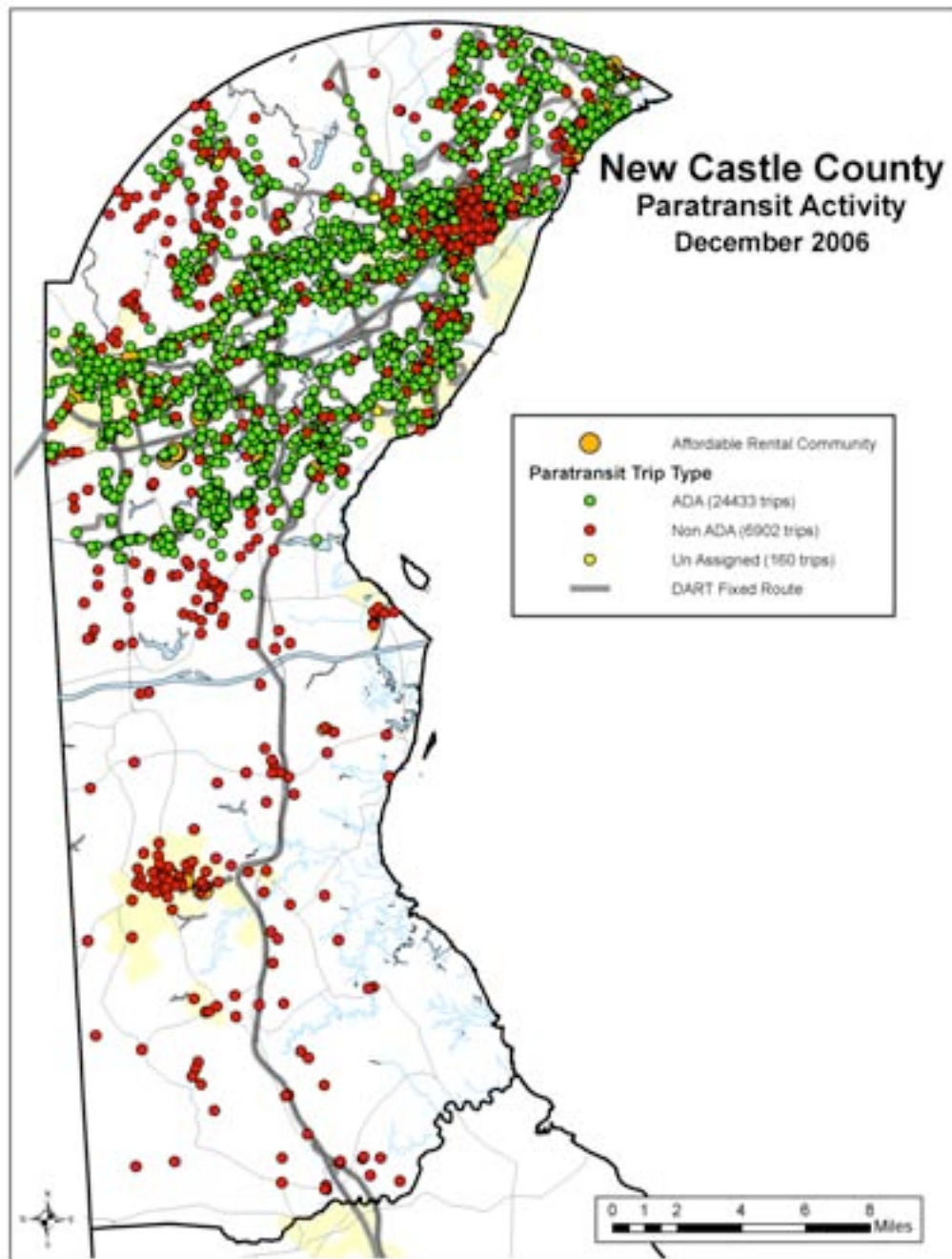
Examples of GIS Mapping Applications

Overall Paratransit Activity

The following GIS map of New Castle County from the 2003 Delaware Center for Transportation report “DART First State Delaware Paratransit Services Study: A Review of Service Characteristics, Policy Implications and Options” was produced by DART First State to illustrate residential locations being served by paratransit that were within (indicated in green) or beyond (indicated in red) the $\frac{3}{4}$ -mile ADA buffer zone.



The designation of a particular paratransit trip as ADA or non-ADA, however, depends upon the locations of both origin and destination in relationship to the $\frac{3}{4}$ -mile buffer as well as the time of the trip in relation to the regular fixed-route bus service schedule. The following map, created from the database being developed for the current project, presents all 31,495 paratransit trips in New Castle County during the month of December 2006—coded to indicate origins and destinations on the basis of the ADA or non-ADA nature of the particular trip.

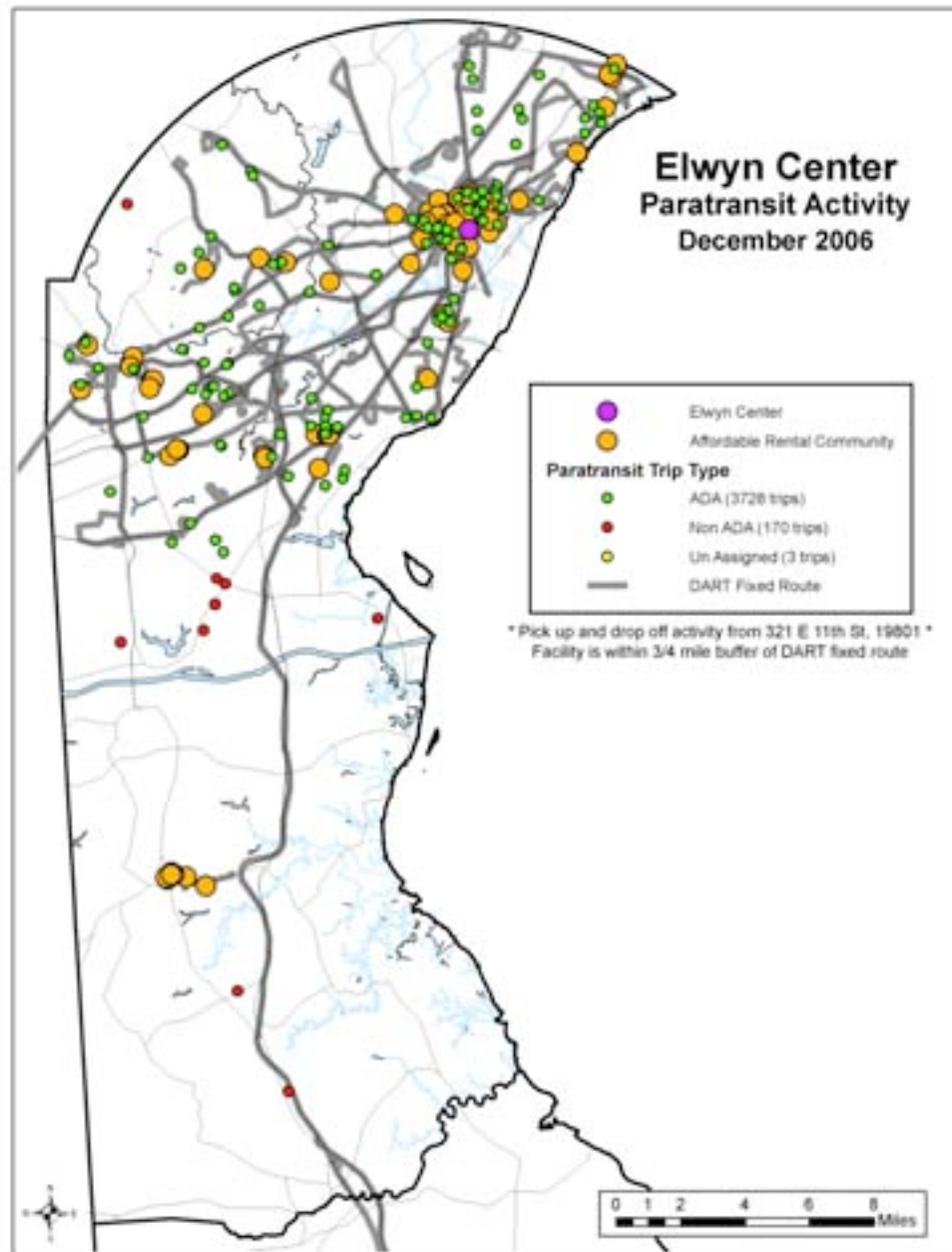


It should be noted that one-half of 1% of the trips are coded as “Unassigned.” This rather low error rate does not significantly impact the reliability of the overall data, but does provide an example of an opportunity for improvement.

Framing the Issues of Paratransit Services in Delaware

Current Demand Generators

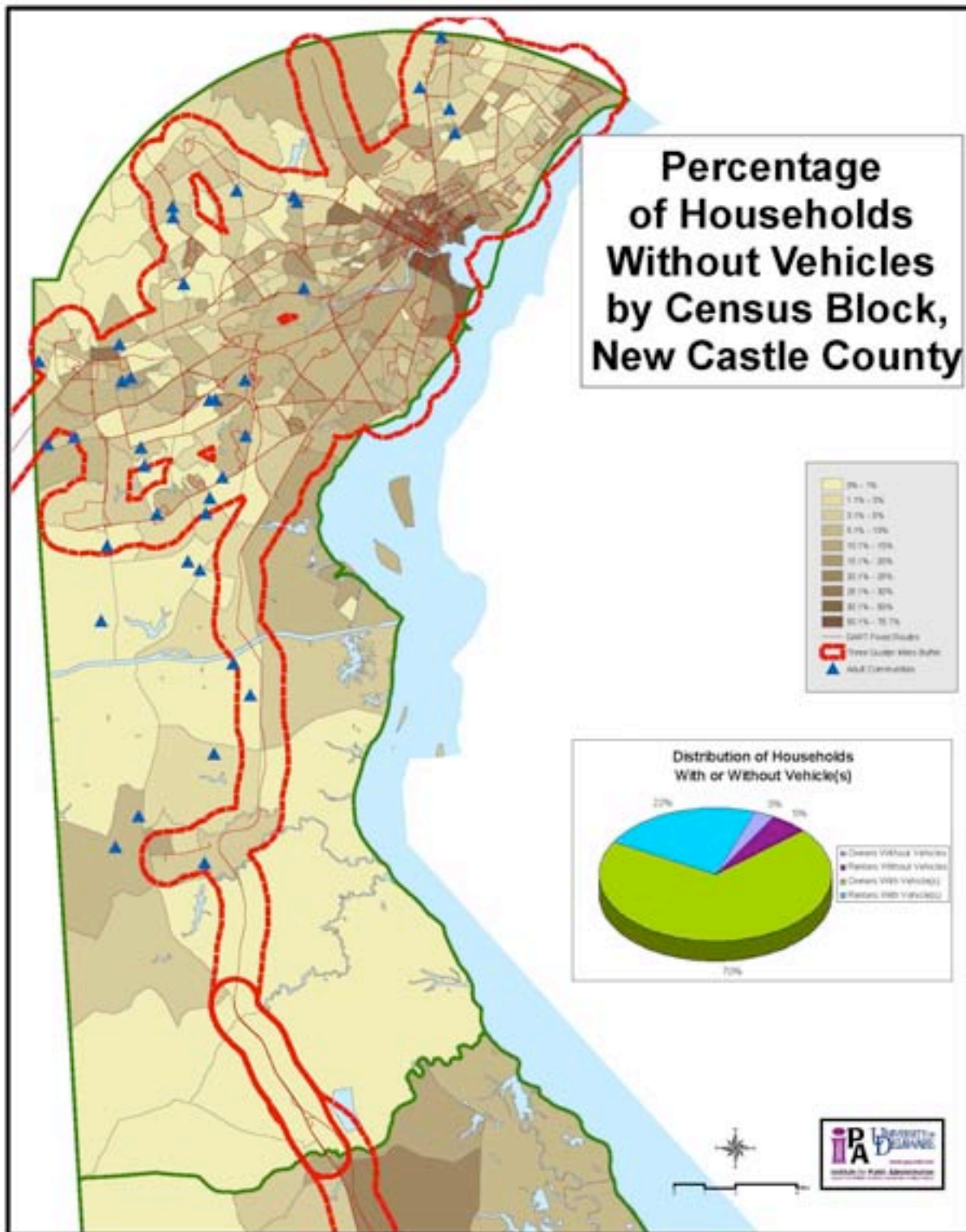
An example of a significant demand generator is the Elwyn Center at 321 E. 11th Street in Wilmington. It is the leading paratransit trip destination in Delaware, with nearly 4,000 trips in December of 2006—or 7% of all trips statewide. One in every eight paratransit trips in New Castle County [12.4%] began or ended at the Elwyn Center, and 95% of those were ADA trips—involving service to and from locations that are within three-quarters of a mile of a DART fixed-bus route.



This illustrates an application of GIS mapping to identify a current demand generator that might have a population of clientele who could be targeted for fixed-route service travel training.

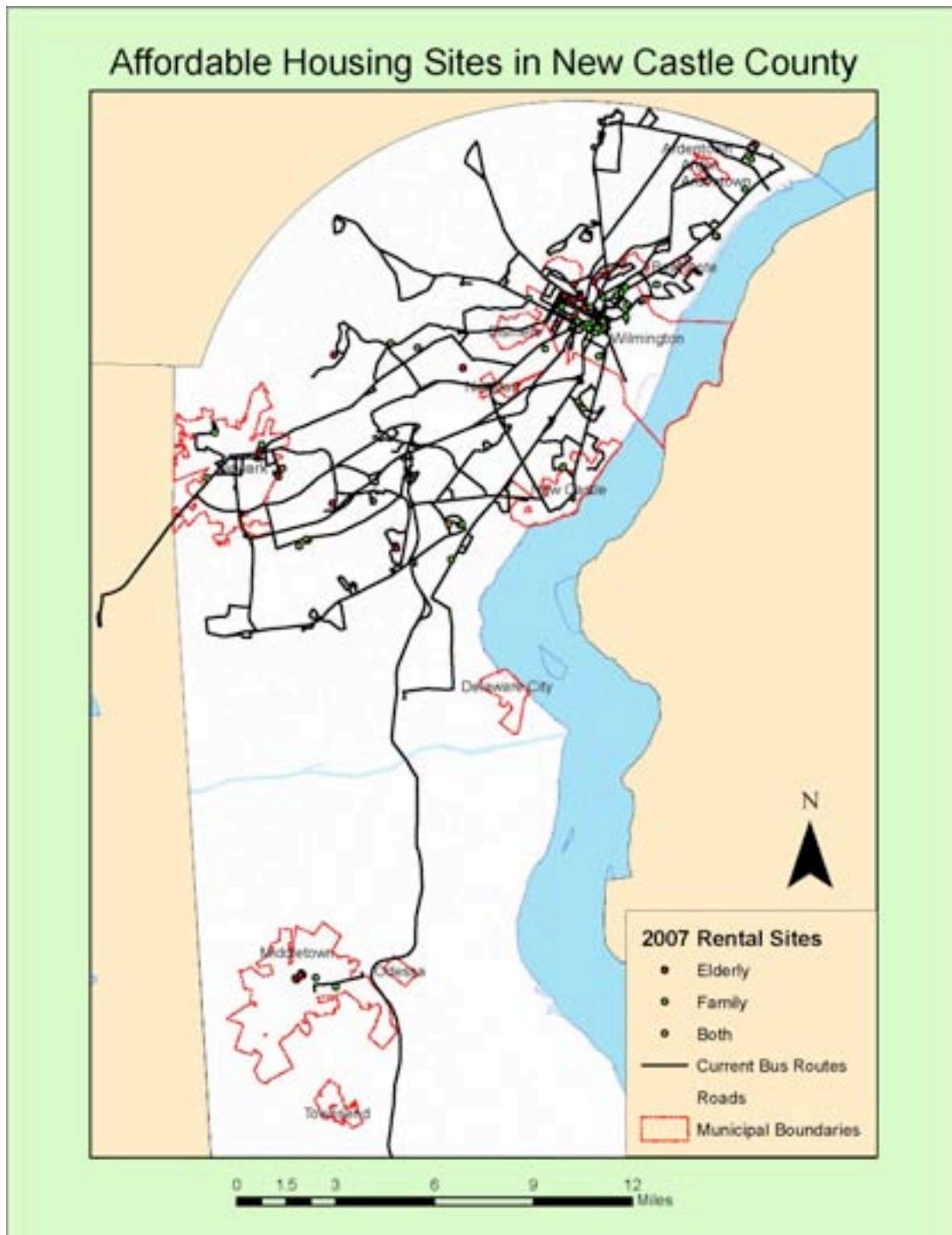
Framing the Issues of Paratransit Services in Delaware

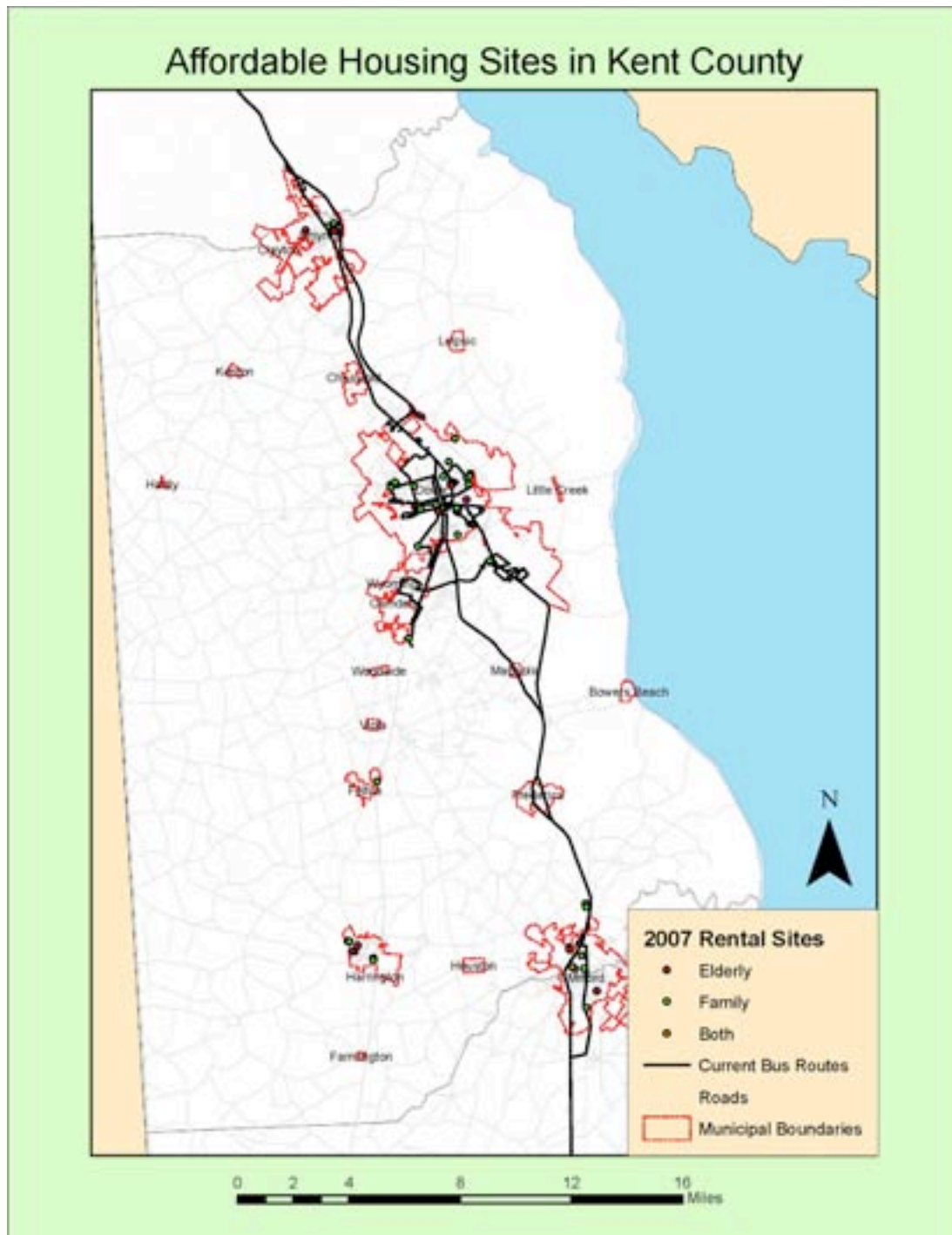
An example of a demographic variable that represents a “non-point” generator of demand for transit service, in general, is a lack of vehicle ownership. The following map relates the prevalence of non-vehicle households to the ADA buffer zone in New Castle County.

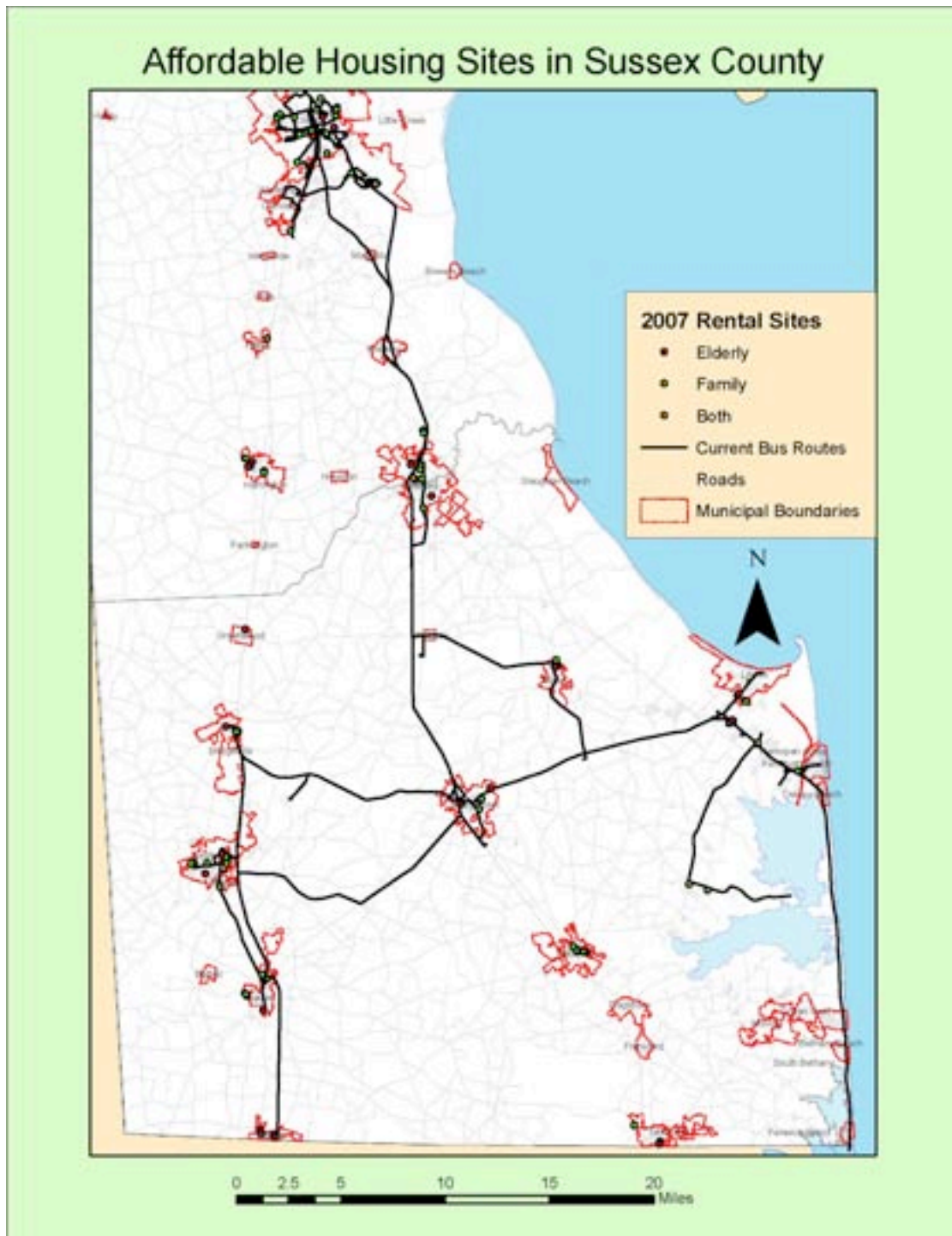


Framing the Issues of Paratransit Services in Delaware

Another probable predictor of demand for public transit is the location of affordable housing. The following three maps relate the locations of affordable rental housing communities to existing DART fixed-route bus service.

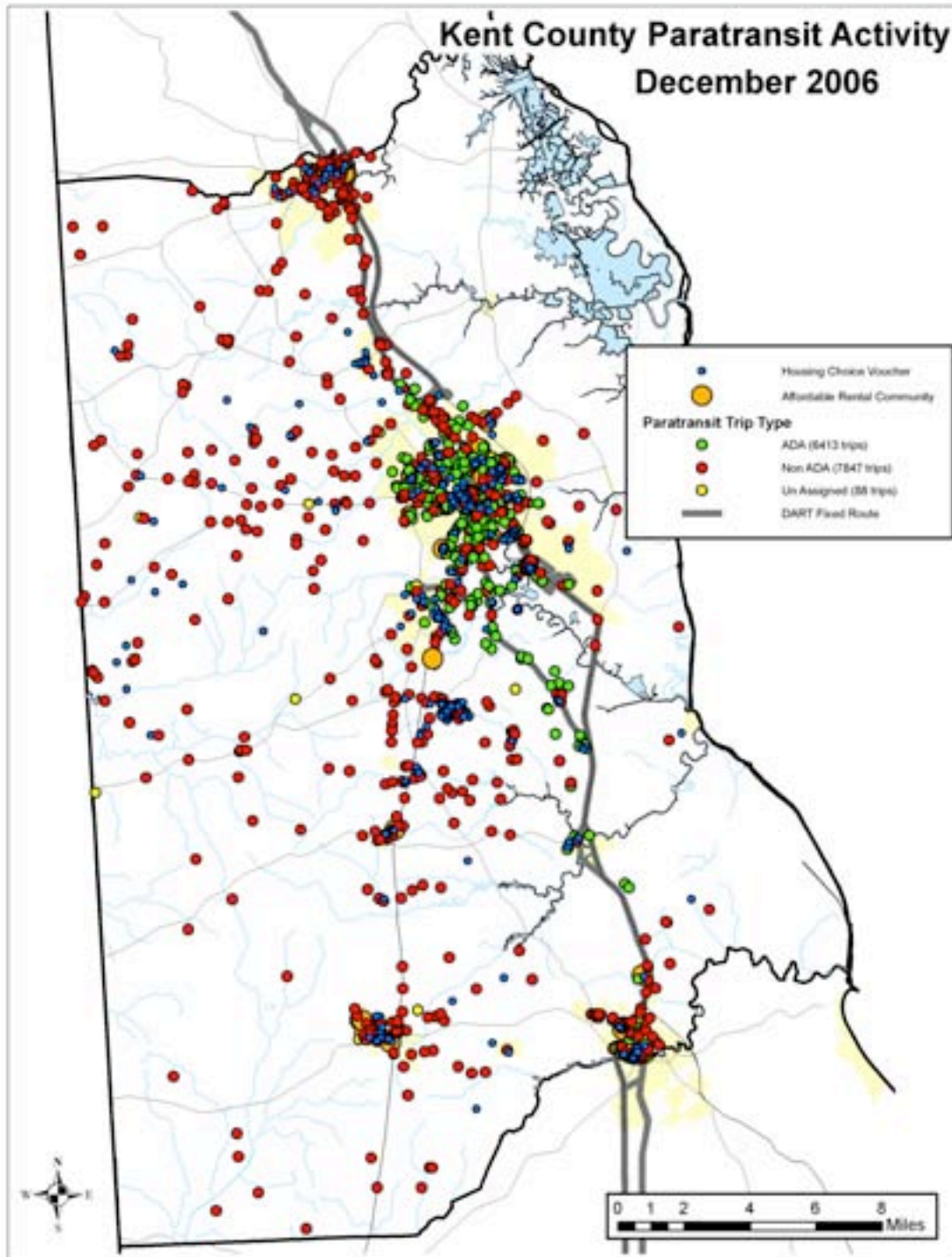






Framing the Issues of Paratransit Services in Delaware

In the following Kent County example, the December 2006 distribution of ADA and non-ADA trips [14,348 in total] are plotted, along with the locations of affordable rental communities (shown in orange) and the general locations of Housing Choice Voucher residences (shown in blue). Kent County non-ADA trips exceed ADA trips by 22%.



Future Demand Generators

These representative examples clearly illustrate the value of an integrated GIS database that brings together data from multiple public service agencies to enable the systematic analysis of current transit services as well as indicators of future demand. It must be acknowledged that there are currently some inconsistencies in the existing agency-based map files due to the use of different projections. So when “zooming in” to examine an area of the merged file in detail, it is possible that the various attributes of a unique address may be plotted in somewhat different locations. There is also a substantial amount of data related to municipal development plans that needs to be systematically collected and mapped. These factors are addressed at the conclusion of this report.

Transit-Oriented Development

While Transit-Oriented Development (TOD) has traditionally been viewed as a local activity due to local government jurisdiction over land use, more state departments of transportation (DOTs) are becoming proactive in planning and promoting TOD. DOTs increasingly are recognizing that direct transportation benefits can include decreasing demands on the state transportation system by reducing vehicle miles of travel, reducing long-term investment needs, increasing transit ridership, enhancing mobility options, and maximizing opportunities for revenue generation. Non-transportation benefits to DOTs and their customers include land preservation, improved air quality, energy conservation, and transit-supportive land use. In addition, DOTs actively involved in integrating land-use and transit planning have found that local community ties were strengthened as a result of their proactive efforts. Because of their vested interest in the relationship between land-use planning and transit services, more DOTs are proactively promoting and planning TOD communities.

State DOTs proactively involved in TOD include California, Florida, Maryland, Pennsylvania, New Jersey, and Washington, D.C. In California, efforts have focused on legislation regarding the use and sale of “excess” land for TOD use and funding for local TOD planning and implementation. As an outgrowth of Maryland Governor Glendenning’s Smart Growth/anti-sprawl movement in the mid-1990s, transit has become a cornerstone for community revitalization. TOD is at the heart of Maryland’s plans for a seamless system of transit ridership, mixed-use development around transit stations, and sustainable economic development opportunities.

Florida has identified TOD as part of its overall growth management strategy. FDOT has developed project development, design manuals, and guidelines to promote site design and land-use planning consistent with TOD principles. FDOT requires local governments delivering public transportation services to develop a Transit Development Plan (TDP), a multi-year plan that links public transportation planning to the MPO’s overall transportation planning process. The TDP provides direction and input to the MPO’s Unified Planning Work Program (transportation-related planning studies), Long-Range Transportation Plan, and the Transportation Improvement Program (TIP). TDPs are used by local governments (including St. John’s County) as justification for impact fees associated with the ten-year Transit Services Plans (www.co.st-johns.fl.us/BCC/growth_mgmt_services/media/Transportation/TDP/TOC).

New Jersey has developed a multi-agency Smart Growth partnership to help redevelop and revitalize communities around transit facilities. The goals are to reduce traffic congestion, improve air quality, and increase transit ridership. New Jersey has developed a Transit Village Initiative to provide municipalities meeting stringent criteria to be designated as Transit Villages. Designated Transit Villages may be awarded state grant funding and/or priority technical assistance/funding from state agencies (www.state.nj.us/transportation/community/village/index).

Transit agencies are also focusing on TOD. The *Central Florida Regional Transportation Authority (CFRTA)* has developed a manual to enhance partnerships between the transit agency and land development community in the design of mobility-friendly development projects. *King County* also has instituted TOD, involving innovative Public-Private-Partnership (PPP) agreements that focus on mixing bus transit and housing development. One goal of this effort is to provide more affordable housing options that are accessible to bus transit.

Recommended Action Plan

Recommended Short-Term Strategies (12 – 18 months)

1. Proactively Plan for Transit Growth

Demographic trends in Delaware reveal that the size of the paratransit system is being impacted by sprawl and patterns of low-density land use and low-density demand—areas not served cost-effectively by conventional transit. A clear relationship exists between patterns of development and infrastructure investment, particularly the link between land-use planning.

The Livable Delaware agenda is designed to proactively curb sprawl and direct growth in appropriate designated areas. The agenda also seeks to enhance *Strategies for State Policies and Spending*. The purpose of this policy is to coordinate the review of land-use plans, guide infrastructure planning, and direct state investment to designated growth areas.

The State has a substantial fiscal stake in the proactive coordination of land-use decisions with investments in transit. Within this public policy framework, opportunities exist to:

- **Apply the principles of State Strategies to transit planning** to better align expansion of transit services and capital investment in transit.
 - Utilize GIS mapping technology to target future transit investment and in relation to areas that have been designated for growth and state investment. For example, GIS mapping scenarios of the DART fixed-route system were developed, as part of this project, for each county as an overlay to the *Strategies for State Policies and Spending* map.
 - Identify and target transit infrastructure investment to transit corridors that connect employment centers, Transit-Oriented Development (TOD) areas, infill development areas, high-density areas, and affordable housing locations.
 - Limit transit expansion, and the corresponding extension of ADA-complementary paratransit service, into Strategy Level Areas that do not support growth or infrastructure investment.
- **Consider transit-density warrants** in conjunction with the *Strategies for State Policies and Spending* map. The size and growth of public transportation systems are governed by transit-supportive densities. Two factors that are used by transportation planners to determine the type and level of public transit services are residential density and employment center size, called “transit density warrants.”
 - Spatially map transit-density warrants and density settlement patterns, as an overlay to the *Strategies for State Policies and Spending* map, to guide decisions regarding where transit expansion and investment are financially viable and sustainable.
- **Strengthen the ability to review the impact of development on transit through the existing PLUS process.**
 - Enhance the PLUS process, which coordinates state agency review of development plans, to determine the impact of development and affordable housing on transit needs.

- Obtain DART First State representation on the PLUS process state review team to focus on the impact of new development (and type of development, i.e., affordable and/or age-restricted housing) on transit services.
- Utilize the PLUS process to identify future demand generators, that is, origins or destinations that generate a demand for frequent paratransit trips.
- In addition to integrating transit planning into the land-use planning process, consider a housing affordability component within local government comprehensive plans.
- **Build an integrated GIS database** that brings together data from multiple state and public service agencies to enable the systematic analysis of current transit services, improve its route planning process, and assess future demand generators of paratransit.
 - Assess the impact of paratransit demand generators using integrated GIS data from DTC, the Delaware State Housing Authority, WILMAPCO, and the Office of State Planning Coordination.
 - Commission a study, with a GIS component, to determine if active-adult (55+) communities become substantial demand generators for paratransit service as the residents of those communities increase in age and lose travel independence/mobility.

2. Promote Transit-Oriented Development Practices

Development patterns and demographic trends have contributed to the growth of paratransit demand, particularly in low-density rural areas. The overall question is how to configure the public transportation system to provide mobility and access, while responding to statewide paratransit demands. One way to reconfigure the public transportation system is to focus on the interrelationship between land-use and transit planning. There is a need to provide a balance between transit planning and public policies regarding land-use planning, development patterns, and density. Opportunities exist to:

- **Incorporate transit-supportive principles into land-use planning.**
 - Promote land-use planning concepts and design practices that facilitate transit service and access.
 - Assess feasibility of establishing transit corridors within *State Strategy* areas.
 - Use principles of *State Strategies* to target transit expansion and investment within designated transit corridors.
 - Conduct a study to examine various perspectives of TOD strategies and tools to promote density within designated transit corridors.
 - Develop tools, provide fiscal incentives, and establish public-private partnerships to promote density, investment, and transit-supportive institutional arrangements within *State Strategy* investment areas.
 - Explore feasibility of instituting developer incentives such as Transit Reinvestment Districts (TRID) and/or state incentives to local governments, such as New Jersey's Transit Village concept.
- **Consider policies/practices for "Transit-Ready Communities" to:**
 - Propose state-mandated policies to provide necessary transit infrastructure up front in the development process.
 - Establish and/or revise state and local transportation guidelines to incorporate transit- and pedestrian-oriented design standards.

- **Form an interagency group to discuss TOD issues and solutions in Delaware.**
 - Convene and facilitate a work session of the interagency group to discuss TOD examples, initiatives, and plans for implementation in Delaware.
 - Explore incentive-based funding programs for local governments and developers to:
 - Obtain technical assistance to amend comprehensive plans and/or zoning codes to pursue transit-supportive development patterns or transit overlay zones.
 - Develop transit-friendly regulatory practices.
 - Adopt TOD projects that implement transit-oriented design standards, integrate transit into new residential or commercial development, or enhance the effectiveness of mass transit.
 - Provide tools to make density more attractive and affordable.
 - Plan to educate the public on the benefits of TOD; produce a brochure regarding issues and solutions identified through the facilitated session and related research
 - Support or leverage Public-Private Partnerships (PPPs) that mix transit and affordable housing development.
 - Consider the use of impact fees to support transportation enhancements and transit service expansions.
- **Work with local governments to better integrate principles of Smart Growth with transit planning within comprehensive plans.**
 - Specifically, utilize the PLUS process to review land development impacts on transit planning.
 - Develop a local government training program/outreach to provide guidelines for integrating land-use and transit planning.

3. Continue Regional Public Transportation Coordination

There is a need for human services transportation providers to collaborate, coordinate, and possibly consolidate services to achieve economies of scale, reduce operating expenses, and improve service delivery to the persons with mobility impairments. Coordinated Transit/Transportation Plans were recently prepared and released for New Castle, Kent, and Sussex Counties. These plans reviewed existing efforts to promote human service transportation coordination, inventoried existing transportation services, acknowledged gaps of unmet needs, and proposed strategies to better coordinate human service transportation. While there are redundant/duplicative services human transportation services in Delaware, opportunities exist to:

- **Coordinate human service transportation efforts:**
 - Continue to develop strategies at the regional level to enhance the capacity of the region and state to deliver comprehensive and coordinated human service transportation.
 - Work with human service transportation providers to enhance mobility options for persons with disabilities and system-wide accessibility.
 - Coordinate resources of 5310 recipient agencies and recipient trips through a one-stop brokerage service.
 - Provide centralized coordination of community transportation services and client data management using integrated technologies.

- Coordinate human service transportation services within a mobility management framework.
 - Designate a mobility board as an advisory organization to DelDOT and DTC as well as a mobility manager for the state of Delaware.
 - Assemble a mobility guide and establish community mobility programs.
 - Pursue use of SAFETEA-LU programs to fund mobility management activities, including those consisting of short-range planning and projects for improving coordination among DART First State and other human-service transportation providers.
- **Assess whether funding allocations could be used as incentives for human service transportation providers to expand paratransit services.**
 - Specifically, restructure Delaware’s Grant-in-Aid Senior Center Funding Formula to provide funding incentives for enhanced human service transportation to senior citizens.
 - Determine the viability of an amended Delaware’s Grant-in-Aid Senior Center Funding Formula that would target additional financial support to enable senior centers to provide specialized trips or to run “feeder service” to paratransit hubs for the grouping of trips.
- **Expand, and actively seek, public-private partnerships.**
 - Establish public-private partnerships to finance purchase of additional paratransit vehicles.
 - Identify additional opportunities for employer-sponsored transportation programs (e.g. Bank of America Deerfield site, which offers transportation services for mobility-limited persons).
- **Expand specialized transportation service options.**
 - Activate an accessible taxi service.
 - Research affordable, accessible taxi service programs
 - Mandate, through legislation, that a certain percentage of taxis be accessible.
 - Provide on-demand, emergency senior transportation.
 - Develop a coordinated volunteer driver program.
 - Establish accessible car/van pools.
- **Collaborate with human services transportation providers to implement demand-management strategies.**
 - Enlist local community-based organizations to assist with an expanded travel training programs.
 - Enlist local community-based organizations to assist DART First State in conducting in-person interviews, functional assessments, and determinations of paratransit eligibility and/or trip-by-trip eligibility
 - Utilize human services agency volunteers to assist with targeted travel training, sponsor travel host services, and conduct training referrals.
- **Seek innovative paratransit solutions to provide feeder services, from a 5310 organization or human service agency to themed trips during off-peak hours.**
 - Identify and provide specialized trip needs and offer off-peak transportation services to grocery stores, shopping destinations, medical centers, and other commercial services.

- Build coordination among existing human public transportation providers and DART First State to cost-effectively coordinate and manage group trips.
- **Explore the feasibility of a pilot program to provide retired paratransit vans and operating cost grants to human service agencies that provide expanded paratransit services to clients.**

4. Optimize Use of Technology

DART First State is successfully implementing Advanced Public Transportation Systems (APTS) to address growing demands for service, improve safety and quality of service, and increase service efficiency. APTS technology implemented at DART First State includes Automated Vehicle Locator technology, operations software, mobile data terminals, an upgraded communications system, the integration of real-time passenger information with operations software, on-board surveillance cameras, and an electronic fare payment system. A planned Interactive Voice Response system is also in final design stages. Additional technology upgrades to consider include:

- **Utilize GIS and Trapeze mapping software to plan for impacts of demographic change and better connect land-use and transit planning.**
- **Continue to work with the University of Delaware to identify critical trends and demand generators to estimate near- and long-term paratransit demands both geographically and demographically through the use of GIS technology.**
- **Institute the usage of automated fare collection equipment, i.e., Smart Cards, which eliminates fare collection by drivers, enhances passenger security, and increases fare payment convenience.**
- **Utilize smart infrastructure to link information between the transportation network and transportation agencies, develop smart bus shelters and stops with automated customer information, and better manage the flow of automated information between the transit operations center and vehicles, and interface GIS with GPS.**
- **Optimize Use of Trapeze operations software.**
 - Adjust trip algorithms for Sussex and Kent Counties to provide more accurate trip time estimates.
 - Plan for continued software upgrades to provide for enhancements such as automating scheduling services, automatically updating schedules when trips are cancelled, and grouping of trips, provide real-time computerized reservations and cancellations, and interface existing technologies .
- **Implement the planned IVR technology to give clients the ability to call and make reservations via phone, similar to the system implemented by the Delaware Express Shuttle.**
- **Invest in technology to inventory and analyze transit stop improvement needs to identify environmental barriers that prevent use of fixed-route transit.**
 - GIS and GPS technology are available and should be deployed to analyze the need for bus stop amenities, track assets, and improve the route planning process.
 - Specifically, Automated Transit Stop Inventory Model (ATSIM) technology is available to assist in the collection, revision, and management of standard transit stop inventories. The technology enables an up-to-date inventory to be kept for transit stop data, information to assess the need for amenities, and data to implement additional advanced public transportation systems technology.

5. Enhance Public Information/Outreach

Stakeholder outreach is a key to helping the public better understand the challenges that DART First State faces in providing cost-effective, quality mobility services to persons with disabilities. The public in general does not understand that while paratransit fills an important transportation gap, its financial viability has been underwritten by substantial government funding; it is not sustained through its own revenues. The public needs to understand the limitations for the growth of paratransit services and there is a need to improve the distribution, coordination, and options for public transit and human services transportation. Unless coordination and collaboration of transportation resources are attained, the level and quality of paratransit service will deteriorate. Strategies for stakeholder outreach should include plans to:

- **Convene a statewide mobility management forum to on providing technical assistance and information sharing for human service organizations interested in developing mobility management activities.**
 - Facilitate discussion on customer needs, policy options, and short- and long-term service priorities.
 - Plan for the establishment of a mobility guide and specific community mobility programs.
 - Conduct short-range planning and projects for improving coordination among DART First State and other human-service transportation providers.
- **Conduct follow-up activities such as establishing an Internet “web portal,” Web-based tools, and/or one-stop transportation call center to coordinate transportation information, specify eligibility requirements, and integrate services in Delaware.**

6. Conduct a Survey to Identify Infrastructure Barriers to Fixed-Route Service

While DART First State has a fleet of fixed-route buses that is 100 percent accessible, removal of infrastructure barriers is needed to make fixed-route service an option. A June 2004 study by the University of Delaware Center for Disability studies, looked at environmental categories that prevented persons with disabilities from use of fixed-route service. Respondents to a survey of individuals deemed eligible to use fixed-route service, as determined by a ADA paratransit eligibility process control model, indicated that bus stops presented the greatest barrier to the use of fixed route service followed by weather limitations (Denson, 2004). The intent of the DTC Bus Stop Policy, a Livable Delaware Activity, is to ensure that all existing bus stops in the fixed-route system are made accessible, establish standards for locations of new stops, and install passenger amenities at each stop. (www.deldot.gov/information/pubs_forms/manuals/livable_delaware/pdf/bus_stop_location.pdf). To address the issue of infrastructure barriers as fixed-route bus stops:

- **Conduct an on-site, in-the-field environmental survey to assess the need for improvements to:**
 - Walkways including the need to correct deficiencies with storm drains, obstructions, curb cuts, width, and surface condition
 - Intersections including the need to install crossing/traffic signals and curb cuts
 - Bus stop shelter features including the pad or platform areas and benches

- Facility amenities including visual/aural information systems, telecommunication devices, accessible parking and vehicle boarding areas, fare vending machines, and adequate lighting

Recommended Long-Term Strategies (18 months+)

1. Continue to Build a GIS Database

A compelling aspect of this project has been the GIS mapping component. Data was gathered from multiple sources including DelDOT, DART First State, OSPC, DSHA, WILMAPCO, and the University of Delaware's Center for Applied Demography and Survey Research. The GIS map examples produced to date spatially illustrate how paratransit is impacted by current demand generators, changing demographics, planned residential development, and affordable housing in relation to the fixed-route bus system. It is recommended that DelDOT and DTC bring GIS mapping specialists together in order to:

- **Develop a model for a centralized GIS database.**
 - Come to a consensus on mapping protocols.
 - Create a prototype of a centralized data file.
 - Research options for the institutionalization of a centralized, commonly accessible GIS database.
 - Research best practices to enable public access to information to the degree possible.
 - Develop a plan for the integration of GIS mapping technology for transit with land-use planning.
- **Gather data from additional local sources.**
 - Identify Wilmington Housing Authority, Newark Housing Authority, and New Castle County "Housing Choice Voucher" locations for individual affordable housing units in New Castle County. (This information is available presently for Kent and Sussex Counties, but only affordable rental complexes information is available for New Castle County).
 - Further refine local government data, including:
 - Active-adult community locations.
 - Information on property tax-exemption policies.
 - PLUS site follow-up information (GIS-code type of housing development, name, number of units, accessibility characteristics)
- **Enter currently un-mapped data into GIS database.**
- **Work with GIS database contacts to establish uniform protocols for mapping GIS points.**
- **Develop a GIS Database Matrix of essential mapping components, responsible entity, data sources, and contact person(s).**
- **Analyze historical and current paratransit service data, in conjunction with GIS mapping, to determine the viability of expanding fixed routes to underserved populations and/or adding fixed-route operating hours or days to reduce paratransit demand.**

2. Implement Demand-Management Strategies

ADA complementary paratransit services are not intended to meet all of the transportation needs of eligible persons with disabilities. For this reason, ADA required public transportation providers to gradually acquire accessible fixed-route buses. Paratransit demand strategies are commonly used by transit providers to control paratransit demand and shift passengers from paratransit to fixed-route transit alternatives.

DART First State's paratransit transportation is meant to serve as a supplement to its fully accessible fleet of fixed-route buses. Many customers have become accustomed to a high level of personalized service, offered at a fraction of the true cost of the service. A realistic public policy framework is to provide accessible public transportation services, at a reasonable cost, for disabled persons who are unable to use the accessible fixed-route system. DART First State has successfully instituted several demand-management strategies to minimize demand on the paratransit system. These strategies include travel training, the "Go Link" hybrid program of overlapping paratransit and fixed-route services, and a stronger no-show policy.

The following recommended demand-management strategies focus on operating/service adjustments to improve operational efficiency and provide service enhancements to persons with disabilities and seniors. These strategies include:

- Trip Management** to group trips according to common destinations such as shopping during non-peak hours. One strategy to shape the distribution of paratransit travel demand is to manage levels of paratransit service based on the nature of the trip. Subscription trips (pre-scheduled, routine trips) are more productive than pre-scheduled, demand-responsive trips. Under ADA, however, there is a 50% cap on subscription trips and transit providers are not allowed to prioritize based on the purpose of a trip. While recognizing these constraints imposed under ADA, there is an opportunity to optimize scheduling performance by shifting certain demand-responsive trips to off-peak days and hours. Additional advances in mobility management efforts, and the cost-effective expansion of overall service levels, could be achieved through coordination among existing human service transportation providers. The table below illustrates a possible framework to establish levels of paratransit service:

Trip Purpose	Pre-Scheduling Format	Scheduling Parameter
Chronic care (i.e., renal)	Subscription	Peak days/times permitted
Work/School	Subscription	Peak days/times permitted
Urgent Medical	Demand-responsive	Peak days/times permitted
Medical Appointments	Demand-responsive	Off-peak only
Grocery Shopping	Group*	Scheduled off-peak time/day
General Shopping	Group*	Scheduled off-peak time/day
Social-recreational	Group*	Scheduled off-peak time/day

**Specialized van services, operating on set days/times within certain geographic areas, could become operational to serve groups trips to grocery, shopping, and social-recreational destinations.*

- Feeder Service** to transport paratransit riders, who are capable of using the fixed-route system, to board fixed-route buses at accessible transfer point or stop locations. Within a

mobility management framework, feeder services may be coordinated between human service transportation providers and DART First State, using state service and senior centers as service “hubs.”

- **Hybrid or flexible fixed-route service** to extend DART First State’s successful model “Go Link” project to other viable locations in Delaware to establish timed transfers for paratransit customers, provide flexible-route adjustments to better accommodate customers unable to access fixed-route service, serve affordable-housing communities, and provide “hybrid” services to allow the general public to ride paratransit vehicles on a space-available basis in areas of limited transit service.

An additional series of recommended demand-management strategies are aimed at shifting capable, disabled passengers to fixed-route buses. This series of actions must be implemented in a sequential order as follows:

- **Improve access to fixed-route bus service.** While DART First State’s bus fleet is 100% accessible, physical barriers such as poor sidewalk infrastructure, lack of curb cuts, and facility amenity deficiencies such as lighting and shelter, visual/aural information systems, telecommunication devices, and accessible vehicle boarding areas are deterrents to riding the fixed-route system.
 - Invest in technology, such as ATSIM technology, to inventory and analyze transit stop improvement needs.
 - Improve off-street passenger facilities such as transit centers, transfer stations, and park-and-ride facilities, parking, curb cuts, and sidewalks.
 - Assess and correct on-street passenger amenities such as lighting, shelter, visual/aural information systems, telecommunication devices, accessible parking and vehicle boarding areas, and fare vending machines (once automated fare technology is developed).
 - Develop incentives for walkable commercial and residential developments as well as transit-oriented development standards, in collaboration with other state departments/agencies.
- **Tighten the paratransit eligibility process** once barriers are minimized and transit stop improvements are addressed, as a means to manage demand for ADA complementary paratransit service. DART First State has already taken positive steps to strengthen its eligibility process through research on an ADA eligibility process control model conducted by UD’s Center of Disabilities Studies. The intent of this model is to provide a framework to objectively evaluate paratransit eligibility based on both the mobility attributes of a disabled person and the environmental attributes of the fixed-route system (Denson, 2004).
 - **Elements of a stricter eligibility determination process, may include:**
 - Development of an online eligibility worksheet.
 - Mandatory in-person interviews (in conjunction with an online eligibility worksheet, conducted by local community-based organizations).
 - Functional assessments (to complement in-person interviews).
 - Trip-by-trip screening of ride requests for conditionally eligible patrons..
 - **Develop a targeted travel training program** at major state service centers, centers of employment, senior centers, and/or demand generators (e.g., the Elwyn Institute example in this study).

3. Consider Policy Reforms

Because federal law requires that the characteristics of ADA complementary paratransit service to mirror the fixed-route system, the growth of paratransit services should correspond to the growth of fixed-route system. However, because the Delaware model does not make a distinction between ADA complementary and non-ADA paratransit services, the growth of the paratransit system has remained unchecked. As a result of this public policy decision in Delaware, the demand-driven nature of paratransit and will result in continued, unconstrained growth in areas of low-density land use and low-density demand—areas not served cost-effectively by conventional fixed-route transit. A balanced menu of policy options and service strategies is proposed to manage demand, control costs, and enhance the efficiency and effectiveness of paratransit services in Delaware.

Paramount to managing the size of Delaware's paratransit system is the modification of public policy to differentiate between ADA complementary and non-ADA paratransit services. The goal of the public policy modification is to conform to federal law by adhering to the minimum ADA complementary paratransit service requirements. The intent is not to deny or restrict trips by paratransit customers whose disabilities prevent them from using the fixed-route system. To remedy this problem, the following options are proposed to:

- **Modify the service delivery policy to establish two service classifications:**
 - **Classify ADA complementary paratransit service** – as the federally mandated paratransit service provided by DART First State, for persons with disabilities who are unable to use fixed-route service and meet specific eligibility requirements as defined by ADA.
 - **Classify non-ADA paratransit service** as a premium-level paratransit service, provided either by a public or private transit agency, which provides eligible disabled persons services that exceed the minimum ADA complementary paratransit (with respect to service area, response time, trip purpose, hours and days of service, and capacity).

4. Adopt Revenue Reforms

- **Conduct a comprehensive assessment of additional revenue enhancement opportunities, including the implications of SAFETEA-LU “New Freedom” program, which provides funding for new public transportation services and alternatives beyond those required by ADA.**
- **Implement a fiscal impact analysis model to project fiscal impacts associated with regional or statewide growth scenarios.**
- **Investigate PPPs or innovative financing options to finance Transit Oriented Development.**
- **Restructure DTC's Fare Policy.**
 - **Increase the base fare for fixed-route bus fares and corresponding ADA-complementary paratransit fares** to account for inflationary costs since fees were last raised in 1989, correspond to comparable regional public transit systems, and support investment in capital costs of transit and new technology.
 - **Establish and adopt a two-tiered fare structure** that is consistent with ADA law, provides fare equity through “premium charges” for premium-level services,

boosts farebox recovery for bus transit, and provides incentives for the use of the accessible, fixed-route bus fleet.

- **Adopt pricing strategies to reflect levels of paratransit service** to provide incentives for patrons to use of less costly, accessible fixed-route buses and manage demand for non-ADA paratransit services. Pricing strategies may include premium charges for premium-level services such as:
 - Non-ADA paratransit services such as origins or destinations beyond the $\frac{3}{4}$ mile paratransit buffer.
 - Peak-hour travel.
 - Door-to-door or hand-to-hand services, if not warranted through the eligibility determination process.
 - Other service differentials exceeding fixed-route operating days/hours.
- **Market the availability of fare incentives for use of the fixed-route system by persons with disabilities (who are qualified to use fixed-route) and senior citizens.**

Path Forward

Comprehensive, Integrated Strategic Planning

Both DTC and DelDOT have engaged in strategic planning processes. Strategic planning is used by private corporations and public entities to establish frameworks to assess issues and trends impacting operations, develop a vision, establish goals and objectives, determine performance measures, guide the development of financial and business plans, and set spending priorities. Several documents guide or represent the strategic direction of DTC including *Transitioning Transit: Delaware's Long-Range Transit Plan for the 21st Century*; *Delaware Transit Corporation Business Plan, Fiscal Year 2008 – 2013*; *Fiscal Year 2008 Operating Budget*; the current *Six-Year Capital Budget*; DelDOT's long-range transportation plan; "*Shaping Delaware's Future*," the *State's Long-Range Plan*; *Strategies for State Policies and Spending*; and the state's *Livable Delaware* agenda. Other long-range plans have also provided policy guidance and helped shape the strategic direction of DTC including long-range transportation plans of Delaware Metropolitan Planning Organizations (MPOs), long-range and comprehensive plans of local governments, and other transportation research and investment studies.

It is evident that a solid foundation for strategic planning is in place in Delaware. Yet this project illustrates a fundamental disconnect between transportation, housing, and land-use planning. DTC and DelDOT need to collaborate both internally, among state agencies, county governments, and stakeholders to identify interrelated issues and challenges. A comprehensive, integrated strategic planning process is needed to cooperatively address mutual issues and to ensure that strategic planning efforts are consistent and interconnected. Paramount to this process is a results-oriented management system with a strong customer focus—one that recognizes the need to link customer expectations with organizational plans, measures, and accountability.

Appendices

Appendix A—Matrix of Local Government Tax-Exemption Policies and Proliferation of Active-Adult Communities

Appendix B—Matrix of Innovative Practices

Appendix C—Citations

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Arden (New Castle)	Danny Schweers	P: (302) 475-3516, F: Email:	2/15/07	None	N/A	None	N/A	None	None	502
Ardencroft (New Castle)	Pat Toman	P: (302) 529-1261, - (302) 475-7508 F: (302) 529-7029 Email:	2/15/07	None	N/A	None	N/A	None	None	282
Ardentown (New Castle)	Steven Cohen	P: (302) 475-5814, F: Email:	2/15/07	1	1. Eden Rock- Assisted Living Community, Phone # (302) 475-9400 Address: 2210 Swiss Lane, Wilmington DE 19810			?	?	325
Bellefonte (New Castle)	Mark Barnwell, Building Inspector	P: (302) 377-8565, F: Email:	2/15/07	None	N/A	None	N/A	?	?	1,243
Bethany Beach (Sussex)		P: (302) 539-8011 F: (302) 539-8149 Email:	2/15/07	None	N/A	None	N/A	None	None	4,302
Bethel (Sussex)	Anna Lee Robinson	P: (302) 875-5314, F: (302) 875-0414 Email:	2/15/07	No Response						188
Blades (Sussex)	Chryl Ruff	P: 302-629-7366 F: Email: chrylruff@comcast.net	2/12/07	1	Little Meadows	N/A	N/A	Partial Based on income	Partial Based on income	1,166
Bowers Beach (Kent)	Unable to reach	P: 302-335-3857 F: Email:	2/12/07 (no answer) 2/15/07 (No answer) 2/21/07 (no answer) 5/10/07 (No answer) 5/14/07 (no answer)	Unknown	unknown	Unknown	Unknown	Unknown	Unknown	417
Bridgeville (Sussex)	Bonnie Walls (Town Manager) Kris Gostomski	P: 302-337-7135 Developer P: 410-819- 0053	2/12/07	N/A	N/A	1	heritageshores.com 19933	N/A	Partial (not to exceed \$3,000) Must be 65+ and have income no more that \$3,000 or total \$6,00 for couple, must be resident and owner	1,436

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Cheswold (Kent)	Diana Kuhn	P: 302-734-6991 F: Email:	2/12/07	N/A	N/A	N/A	N/A	N/A	N/A	600
Clayton (Kent)	Kris Letterman	P: 302-653-8419 F: Email:	2/12/07	N/A	N/A	N/A	N/A	Partial: Must fill out form and be exempt from county	Partial : Must fill out form and be exempt from county	1,400
Dagsboro (Sussex)		P: (302) 732-3777 F: (302) 732-3907 Email:	2/15/07	No Response						530
Delaware City (New Castle)		P: (302) 834-4573 F: (302) 832-5545 Email:	2/15/07	None	N/A	None	N/A	yes	Yes, income limitation, \$20,000 single exclude, \$25,000 total household, 65 years of age or disabled and a resident 1 year	1,682
Delmar (Sussex)	Jannie	P: (302) 846-2664 F: (410) 896-9055 Email:	2/15/07	Yes	1. Country Meadows 5-3220.10 Parcel 55, 2. Golden Meadows Apartments, Address: 40 Golden Lane Delmar DE 19940 Same Parcel #, 3. 5- 3220.0089.02 - Villa 1 or Villa 2	None	N/A	None	None: Property Tax, 2% Discount For Real Estate Taxes *(Seniors)	1,407
Dewey Beach (Sussex)		P: (302) 227-6363 F: (302) 227-6164 Email:	2/15/07	None	N/A	None	N/A	None: Tax Relief, Parking Exemptions for the Disabled	None	1,997
Dover (Kent)	Jannelle	P: (302) 736-7000 planning and inspections, / Tax Dept. (302) 736-7022 F: (302) 736-7177 Email:	2/15/07	Yes	No details	Yes	E-Mail	None	Yes, Up to the 1st \$50,000 is exempted. Kent County has an exemption.	34,072
Ellendale (Sussex)		P: (302) 422-6727- # Has a Dial -up Problem F: (302) 422-0863 Email:	2/15/07	No Response						332
Elsmere (New Castle)	Michelle Spadea	P: 302-998-2215 F: Email:	2/12/07 Voice Mail left 2/15/07 (Voicemail) 2/21/07	N/A	N/A	N/A	N/A	Partial Possible change to requirements (3/8/2007)	Partial exemption; Possible change to requirements (3/8/2007)	5,935

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Farmington (Kent)	Unable to reach	P: F: Email:		Unknown	unknown	Unknown	Unknown	Unknown	Unknown	122
Felton (Kent)	Sarah Fergusson	P: 302-284-9365 F: Email:	2/12/07	N/A	N/A	N/A	N/A	5% discount Approved by county	5% discount for 65+	933
Fenwick Island (Sussex)	Agnus Dipietrantonio	P: 302-539-3011 F: Email:	2/12/07	N/A	N/A	N/A	N/A	N/A	N/A	1,400
Frankford (Sussex)	Terry Truitt	P: 302-732-9424 F: Email:	2/12/07 Busy 2/15/07 (Messgae) 2/16/07	N/A	N/A	N/A	N/A	N/A	N/A	591
Frederica (Kent)	Swazzanna Donaway	P:302-335-5417 F: Email:	2/12/07 no answer 2/15/07 No answer 2/21/07	N/A	N/A	N/A	N/A	N/A But in process	N/A: But in process	761
Georgetown (Sussex)	Town Clerk - Angela	P: (302) 856-7391, Townsend. F: (302) 856-6348 Email:	2/15/07	Voice Mai For Angela TownsendI						4,643
Greenwood (Sussex)		P: (302) 349-4534 F: (302) 349-9332 Email:	2/15/07	None	N/A	None	N/A	None	None	837
Harrington (Kent)	Dale Morgan	P: (302) 398- 3530/4476, Mayor, 398- 4224- F: (302) 398-4477 Email:	2/15/07	Yes, not exclusive to seniors	1. Heritage Manner Address: 131 West Center Street Zip Code: 19952, 2. West Street Manner Address: 131 West Center Street	None	N/A	None	None at the City Level - Kent County Tax Exemption For Seniors	3,279
Hartly (Kent)	Marvin Johnson, Public Works	P: (302) 492-0640, F: Email:	2/15/07	No Response						107
Henlopen Acres (Sussex)		P: (302) 227-6411 F: Email:	2/15/07	No Response						380

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Houston (Kent)	Connie Morgan, Town Clerk	P: (302) 422-4940, F: Email:	2/15/07	No Response						487
Kenton (Kent)	Unable to reach	P: 302-659-0944 F: Email:	2/12/07 no answer 2/15/07 No answer 2/21/07 no answer 5/10/07 no answer 5/14/07 no answer	No Response						232
Laurel (Sussex)	Jamie Smith	P:302-875-2277 F: Email:	2/12/07	1	Laurel Commons 21 units Office at 100 Laurel Commons 201-207, 301-307, 401-407 (Unit numbers)	N/A	N/A	N/A	N/A	3,814
Leipsic (Kent)	Unable to reach	P: 302-734-0421 F: Email:	2/15/07 Disconnect ed	No Response						236
Lewes (Sussex)	Alice Erickson	P: 302-645-7777 F: Email:	2/15/07	N/A	N/A	N/A	N/A	N/A	N/A	2,932
Little Creek (Kent)	Unable to reach	P: F: Email:		No Response	unknown	Unknown	Unknown	Unknown	Unknown	172
Magnolia (Kent)		P: (302) 335-5891 F: (302) 335-5270 Email:	2/21/07	None	N/A	None	N/A	None	Yes, The municipality follows the Kent County's procedures on tax exemptions for Seniors	211
Middletown (New Castle)		P: (302) 378-2711 F: (302) 378-1167 Email:	2/21/07	Yes	1. Springmill, 55 + Community. Address: 182 Springmill Drive Middletown, DE *(Off of Summit Bridge Road) 2. Holly Square, Address: 400 North Broad Street, Middletown, DE	Yes	1. Spring Arbor, Under Construction. Address: 1022 Bunker Hill Road Middletown, DE	None	Yes, Full Tax Exemptions: 65 and older citizens who've lived in Middletown for at least 1 year. The exemption is for Property Taxes that would influence the whole amount of the city's taxes.	15,157
Milford (Kent/Sussex)		P: (302) 422-6616 F: (302) 422-1120 Email:	2/21/07	None	N/A	Yes	1. Brookstown Trace, in development. Address: Off of Old Shawnee Road Milford, DE	None	None	6,732

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Millsboro (Sussex)		P: (302) 934-8171 F: (302) 934-7682 Email:	2/21/07	No Response						2,360
Millville (Sussex)		P: (302) 539-0449 F: (302) 539-0879 Email:	2/21/07	None	N/A	None	N/A	None	None	259
Milton (Sussex)	Julie	P: 302-684-4110 F: Email:	2/15/07 2/21/07	2	Luther Gardens 201 Bay Ave. 19968 Luther Tower 500 Palmer st. 19968	N/A	N/A	N/A	N/A	2,301
New Castle (New Castle)	Kim Burgmuller	P: 302-322-9801 F: Email:	2/15/07	N/A	N/A	1	Riverbend	Full: Income of \$12,500 single Income of 25,000 Couple	Full: Income of \$12,500 single; \$25,000 Couple	5,164
Newark (New Castle)	Michael Fortner	P: 302-366-7000 F: Email:	2/21/07	13				Partial; same as NCC policy	Partial: same as NCC policy	30,613
Newport (New Castle)	Cindy Reynolds	P: 302-994-6403 F: Email:	2/15/07 (Left Message) 2/21/07	N/A	N/A	N/A	N/A	Partial 50% disability	Partial: for 65+	1,240
Ocean View (Sussex)	Marie Thomas	P: 302-539-9797 F: Email:	2/15/07	N/A	N/A	N/A	N/A	N/A	N/A	1,006
Odessa (New Castle)	Jessica Norton	P: 302-378-2510 F: Email:	2/15/07 (No answer) 2/21/07 Message 5/10/07 message 5/14/07	N/A	N/A	N/A	N/A	N/A	N/A	286
Rehoboth Beach (Sussex)		P: (302) 227-6181 F: (302) 227-4643 Email:	2/21/07	None	N/A	None	N/A	None	None	6,060
Seaford (Sussex)		P: (302) 629-9173 F: (302) 629-9307 Email:	2/21/07	None	N/A	None	N/A	None	Yes, Full Tax Exemptions: 65 and older citizens who've lived in Seaford for at least 5 years. The exemption is for Property Taxes, \$7,500 - Single Person & \$10,000 - Married Couple.	6,699

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Selbyville (Sussex)		P: (302) 436-8314 F: (302) 436-8018 Email:	2/21/07	None	N/A	None	N/A	None	None	2,021
Slaughter Beach (Sussex)		P: (302) 424-7659 F: Email:	2/21/07	Left a Message						524
Smyrna (Kent)		P: (302) 653-3483 F: (302) 653-3492 Email:	2/21/07	Yes	1. Peach Circle, Operated by the Delaware Housing Authority, Address: 900 Peach Circle Smyrna, DE *[Near W. Glenwood Ave] 2. Frazier Place II, Address: 200 Goldsborough Way Smyrna, DE 3. Bonnar, Address: Smyrna, DE	None	N/A	None	Yes, Tax Exemption: You must be 65 years and older and lived in Smyrna for approximately 1 consecutive year. The 1st \$30,000 of the owned property assessment is exempted. A senior citizen who is single can not earn more than \$18,000 while a couple's earnings must be \$24,000.	9,513
South Bethany (Sussex)	Renne McDorman	P: 302-539-3653 F: Email:	2/15/07	N/A	N/A	N/A	N/A	Can receive expemtions as indicated in town charter but no one has ever asked before	N/A	1,848
Townsend (New Castle)	Mike Jester	P: 302-378-8082 F: Email:	2/15/07	N/A	N/A	N/A	N/A	N/A	Full: As long as they qualify for state guidlines	322
Viola (Kent)	Unable to reach	P: F: Email:		Unknown	unknown	Unknown	Unknown	Unknown	Unknown	162
Wilmington (New Castle)	Eloise	P: 302-576-2100 P2: 302-571-4320 F: Email:	2/15/07 2/21/07-Busy 2/22/07	Unsure	Unsure	Unsure	Unsure	Full or partial depending	Full or partial depending	72,005
Woodside (Kent)	Unable to reach	P: 302-697-1467 F: Email:	Wrong Number	Unknown	unknown	Unknown	Unknown	Unknown	Unknown	228
Wyoming (Kent)	Cindy Veller Dale Rife	P: 302-679-2966 P2: 302-697-9711 F: Email:	2/16/07 2/21/07 (Message)	N/A	N/A	N/A	N/A	Partial	Partial	1,141

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Kent County	Mike Ward	P: 302-744-2305 P2: 302-744-2417 F: Email:	2/21/07 2/22/07	4	1. Long Acre Village-- 265 Units, East side of Rt 13 2,800 ft north of Walnut Shade rd, northeast of Woodside. 2. Spring Meadow-- 246 units, Easterly side of N. Dupont Hwy (U.S. rt 13), 2,100 ft south of Twin Willows rd (Co. Rd 84), south of Smyrna at Garrisons Lake 3. Village of Nobles Pond--1021 Units, Easterly side of Kenton Rd (Co. Rd 104) 1,400 ft south of Pearsons Corner Road (Co. Rd 101), and on the west side of McKee Road (Co. Rd. 156), 500 ft south of Rose Bowl rd (Co. Rd. 156), south of Cheswold. 4. Champions Club at Jonathans Landing-- 338 Units, Northerly side of Plaindealing Road (Co. Rd. 365), and east side of West Birdie Lane, 2,239 ft northeast of South State Street Extended (U.S. Rt. 113-A), north of Magnolia	Unknown	Unknown	Partial 100% disabled, DE resident for 5 years, hold title to property, lived at property for 1 year, income single 12,700, double 22,000 -- must reapply each year unless disability is permanent	Partial for 65+, DE resident for 5 years, hold title to property, lived at property for 1 year, income single 12,700, double 22,000	127,000
New Castle County		P: F: Email:		Yes 37 existing and planned age-restricted communities, including those within municipal corporate limits				Partial: Currently provide a property tax exemption for disabled persons for those with up to \$40,000 in income to an assessed property value of \$42,000. NCC Financial Task force has recommended replacing current program with need-based exemption for seniors & disabled	Partial: Currently provide a property tax exemption for property owners ages 65+ (exclusive of S.S.) with an income of \$50,000 to an assessed property value of \$50,000. NCC Financial Task force has recommended replacing current program with need-based exemption for seniors & disabled	471,417

Municipality (County)	Contact	Contact Info/E-Mail	Dates Called	Existing 55+ Communities	Tax Parcel # and/or Address & Zip	Proposed 55+ Communities	Tax Parcel # and/or Address & Zip	Full/Partial Tax Exemption/Disabled? (Describe)	Full/Partial Tax Exemption/Seniors? (Describe)	Pop.
Sussex County		P: F: Email:		Yes				Yes doctor's signature and identification and resident for 5 years	Yes over 65, half off their school tax portion, make up to beside their social security for 6,000 single, 7500 married take more off, if the assessment is 12500 or less no tax	156,638
Del. State Code Requirements re: Property Tax Exemption								State Code does not require Counties to exempt property of the disabled from taxation	State requires Counties to exempt citizens who are 65+ with an income of \$3,000 or less from property tax on the first \$5,000 of a home's assessed value	

Outreach Strategies

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
Regional Transportation Commission (RTC) of Southern Nevada	Responsible Rider Program	<ul style="list-style-type: none"> Rewards customers who have an exemplary record of riding the paratransit system 	<ul style="list-style-type: none"> Passengers who have taken a minimum of 6 one-way trips in a six-month period and have not had a No-Show in that period can be awarded up to 5 free round trips Provides incentives for responsible behavior 	<ul style="list-style-type: none"> Cost of free rides to responsible customers is less than the cost of No-Show episodes <p>www.rtcnv.com/ots/paratransit/Contents.htm</p>
RTC & Utah Transit Authority (UTA)	Newsletters and Rider's Guide	<ul style="list-style-type: none"> Provide tips for riding the system, info on new policies, info on understanding how the system works 	<ul style="list-style-type: none"> Ongoing customer orientation 	<ul style="list-style-type: none"> Minimal cost if produced online or distributed to service hubs <p>www.rideuta.com/paratransit/pdf/paratransit2007.pdf</p> <p>www.rtcnv.com/ots/paratransit/paraguide7-04.pdf</p>
UTA	"Rider's Guide"	<ul style="list-style-type: none"> Provides concise information on UTA's 100% fixed-route accessible and paratransit systems. Explains eligibility criteria, service policies, service operations and limits 	<ul style="list-style-type: none"> Reference manual for disabled customers 	<ul style="list-style-type: none"> Minimal cost if on-line accessible Provide hard-copy to all certified ADA customers <p>www.rtcnv.com/ots/paratransit/paraguide7-04.pdf</p>
WMATA	<p>Transportation Options for Seniors and People with Disabilities Booklet</p> <p>Accessibility PR Project</p>	<ul style="list-style-type: none"> Comprehensive guide to public, private, and nonprofit transportation in the Washington Metropolitan Region, State of Maryland, and Northern Virginia 	<ul style="list-style-type: none"> Provides detailed information on all transportation options available to seniors and disabled persons Includes information on intermodal transportation services, escorted transportation for medical/necessary appointments, taxi service, private door-to-door transportation, and nonprofit transportation. 	<ul style="list-style-type: none"> Document available on-line and in alternative formats such as large print or Braille Link to documents provided from participating transportation agency websites <p>www.wmata.com/accessibility/Accessible_Transportation_Options.pdf</p> <p>www.wmata.com/accessibility/accessible_project.cfm</p>
King County Metro	On-line Regional Accessible Transit Guide	<ul style="list-style-type: none"> The <u>Regional Accessible Transit Guide</u> is geared to persons with disabilities, senior citizens and service agencies. It is available in text, graphics, and framed mode at the Web site enabling persons with accessible computers to also use it. Provides a "one-stop" regional transportation guide. 	<ul style="list-style-type: none"> The on-line guide describes public transportation options The "Find A Ride" section of the website enables persons with disabilities in the Puget Sound region to provide the best transportation options using website prompts. The website was developed by LunaWorks, Inc. of Seattle 	<p>findaride.org/ratg/frameset.php</p>

Demand-Management Strategies

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
ACCESS Services, in Pittsburgh, Pa., and Capital Metro in Austin, Tex.	Fixed-Route Integration for Paratransit Passengers <i>*(Feeder Service)</i>	<ul style="list-style-type: none"> • Use of paratransit as a feeder to fixed-route service • Used in conjunction with trip-by-trip eligibility • Transit agency must implement program of conditional eligibility and trip-by-trip environmental barriers assessments • Paratransit feeders are scheduled 10 minutes prior to arrival of fixed-route bus at stop • ACCESS of Pittsburgh has developed a profile of acceptable transfer locations 	<ul style="list-style-type: none"> • Paratransit service becomes the feeder service that accomplishes those portions of the trip that the passenger is unable to accomplish • Extends the use of the accessible fixed-route system to eligible passengers with disabilities that have not been able to travel to an accessible fixed-route bus stop or bus stop to the final destination. 	<ul style="list-style-type: none"> • Strategy must be developed to purchase, install, and implement a software package capable of trip planning and scheduling linked fixed-route trips and paratransit trips. • Software needs to take into account passenger's individual abilities and environmental barriers <p>www.portauthority.org/PAAC/CustomerInfo/RidersWithSpecialNeeds/ACCESS/tabid/135/Default.aspx</p> <p>www.capmetro.org/riding/accessibleservices.asp</p>
Pierce County Transit (Wash.)	Route Deviation or Flexible Fixed-Route Service	<ul style="list-style-type: none"> • Designed to operate on a fixed-route schedule but provides opportunities to travel off the set route course to meet specialized transportation needs • Provides discretion to bus drivers who want to deviate from a fixed-route path in order to respond to a paratransit request for service 	<ul style="list-style-type: none"> • Helps lower transit costs and moderates paratransit growth • Reverses the trend of declining fixed-route ridership • The service has been successful in specific service areas and neighborhoods that do not have the population densities to support fixed-route systems 	<ul style="list-style-type: none"> • Documents <p>www.piercetransit.org/DraftTDP.pdf</p>
Regional Transportation Commission (RTC) of Southern Nevada	No-Show Policy	<ul style="list-style-type: none"> • “No-show” riders receive a computer-generated letter and are assessed points (1 – 5) for each trip missed. Accumulation of points may result in suspension of services • Free coupons are awarded twice annually to customers who have no points 	<ul style="list-style-type: none"> • Communication system to remind riders why no-shows are detrimental to the system • System of incentives to reward customers for not missing scheduled rides 	<ul style="list-style-type: none"> • No-Shows are costly in terms of man-hours, gas, and schedule delays. Goal is to create incentives to customers for minimizing no-shows

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
Utah Transit Authority (UTA)	No-Show Policy	<ul style="list-style-type: none"> Penalize “No-Show” customers by charging suspension points to record based on no-show type: 1 pt. – Same Day Notice for cancelling ride with less than 1 day before pickup 3 pts. – Late Notice for cancelling ride less than 4 hours before pickup 5 pts. – No Notice/Cancel at Door for cancelling ride less than 30 minutes, upon arrival, or after a 5-minute wait by driver Paratransit service could be suspended for a period of time based on the number of points accumulated Coupons that can be redeemed for removal of points, or free ride, are awarded for late service outside “window of service” policy 	<ul style="list-style-type: none"> Provides a firm policy to discourage no-shows Penalizes no-shows, based on the degree of infraction Provides customer incentives for on-time service by drivers Attendance of optional education meeting will also reduce service suspensions 	
King County Metro (Wash.)	Advanced-Reservation Policy	<ul style="list-style-type: none"> Beginning Jan. 1, 2005, paratransit ACCESS trips may be scheduled from 1 – 3 days in advance instead of 4 – 7 days in advance 	<ul style="list-style-type: none"> Minimizes extra work for call reservationists and schedulers Minimizes the number of and costs associated with trip cancellations (formerly 1 out of every 5 trips cancelled) 	<ul style="list-style-type: none"> Cost savings and better customer service efficiencies
	Enhanced ACCESS Transportation Service	<ul style="list-style-type: none"> Provides enhanced paratransit services to eligible, disabled individuals Reservations made up to three days before trip Provides subscription service for persons going to/from same location several times a week (limited to federal regs) Expanded service area (6 a.m. – 10 p.m., M – F) Provides “door-to-door” and/or “hand-to-hand” service 	<ul style="list-style-type: none"> Provides services beyond the accessible regular bus service and paratransit services required by ADA Provides more flexible and responsive services to meet unique transportation needs of persons with disabilities 	
New Jersey Transit	Senior Citizen & Disabled Transportation Assistance Program (SCDRTAP)	<ul style="list-style-type: none"> Administered through NJ Transit, revenue from the SCDRTAP provides funding to paratransit providers at the county level. The funding distribution formula is based on the percentage of the county population over the age of sixty. Drawbacks: 1) The formula favors urban counties, 2) Doesn't not fully account for the population of people with disabilities. 3) Doesn't consider accessibility to traditional public transit services 		www.njtransit.com/tm/tm_servlet.srv?hdnPageAction=ParaTransitTo

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
Montgomery Co. (Md.)	Connect-A-Ride Commuter Services Commuter Connections	<ul style="list-style-type: none"> Call service for transportation information and referral regarding all private and public transportation options for seniors and people with disabilities Helps commuters find carpool/vanpools, and public transportation routes; Commuter Express Store sells commuter passes, weekly reduced fare disabled and senior Metro and Ride-On bus and rail passes and SmarTrip Card. Customers who use public transit or paratransit services at least 2X per week to get to work may be eligible for Guaranteed Ride Home Program 	<ul style="list-style-type: none"> Assists customers with paratransit service eligibility determination and applications Enables customers to call or access a website to find convenient public transportation routes and less-expensive rides to work Provides emergency rides home from work; accessible vehicles with lifts are available 	<ul style="list-style-type: none"> Cooperative venture: Operated by Jewish Council for Aging. Connect-A-Ride under contract to Montgomery Co. Dept of PW and Transportation/Division of Transit Services Sponsored by Montgomery Co. Dept of PW and Transportation/Division of Transit Services Operated by Council of Governments <p>www.montgomerycountymd.gov/tsvtmpl.asp?url=/content/dpwt/transit/index.asp</p>
Montgomery Co. (Md.) and Washington Metropolitan Area Transportation Agency (WMATA)	Free-Fare Policy (effective 7/9/06)	<ul style="list-style-type: none"> Provides free fare to seniors age 65+ or disabled with valid Metro ID card, weekdays 9:30 a.m. – 3:00 p.m.; disabled customer's attendant also rides free Provides free fare to MetroAccess certified customers (ADA-certified) and companion Provides free transfer to local buses and Metrorail-to-Ride On (Montgomery Co., Md.) bus transfer 	<ul style="list-style-type: none"> Provides financial incentives for disabled persons and seniors to ride fixed route buses for those able to use regular, accessible transit systems 	
Capital Metro, Austin, Tex.	Free-Fare Policy	<ul style="list-style-type: none"> Provides free-fare to all passengers with disability on the fixed route system 	<ul style="list-style-type: none"> Implemented to eliminate the lengthy time taken in fare collection from persons with disabilities 	<ul style="list-style-type: none"> Loss of fare is off-set by cost savings of true net cost of individual paratransit trip. <p>www.capmetro.org/riding/fares_2.asp</p>
Santa Clara (Calif.) Valley Transportation Authority (VTA)	Premium Services	<ul style="list-style-type: none"> Distinguishes between and charges more for a service levels that exceed the ADA requirements: <ol style="list-style-type: none"> 1. Same-paratransit service = 4x cost of one-way paratransit trip (\$14) 2. Second vehicle for missed ride = 5X cost of one-way trip fare (\$17.50) 3. Service Area Surcharge = 2X the one-way trip fair (\$7.00) 4. Door-to-Door Surcharge = ½ X the one-way trip (\$1.75) 	<ul style="list-style-type: none"> Request customers to share cost of providing "premium" services which substantially exceed ADA requirements To assess appropriate higher-level of charges to customers who elect to have a higher level of service to help off-set costs of paratransit 	<p>FTA has ruled that any paratransit services that is provided above and beyond ADA regs," including service to individuals who do not fall under one of the 3 categories of eligibility... are not subject to the service critier for ADA complementary paratransit (i.e. service area, response time, trip purpose, hours and days, and capacity restraints). Transit operators may therefore elect to establish 'premium charges' for such services."</p> <p>www.vta.org/services/accessible_services.html#special</p>

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
King County Metro (Wash.)	Premium Services	<ul style="list-style-type: none"> King Co. Council passed an ordinance in 1999 structured to guarantee only minimum ADA requirements (i.e., passengers who request same-day reservations or door-to-door service must pay premium service fare. 	<ul style="list-style-type: none"> Limit ADA paratransit service to what is mandated by ADA Restrict the growth of non-ADA paratransit services 	<ul style="list-style-type: none"> Implementation of ordinance reaped King Co. large savings. In 2000, the paratransit budget was projected to be \$31 M, but after ordinance implementation, the actual cost of paratransit service was \$28 M.
	Community Partnership Program	<ol style="list-style-type: none"> Senior CPP Vans – Provides (5) retired <i>ACCESS</i> vans to Senior Services CPP AddVANTage Vans – Currently has 31 retired vanpool and <i>ACCESS</i> vans placed with 24 community service agencies. Metro provides emergency response, vehicle maintenance and repairs, driver training, and technical assistance to participating agencies. Agencies agree to provide minimum number of <i>ACCESS</i> rides per month. CPP Special Use Vanpools – Enter into a vanpool agreement with local agencies that have a number of clients who are ADA eligible. 	<ul style="list-style-type: none"> Effort to make use of an increasing number of high-quality retired <i>ACCESS</i> and vanpool vehicles Provides enhanced travel options in cooperation with human service agencies Addresses need to provide specialized services for mobility-limited populations 	<ul style="list-style-type: none"> CCP AddVANTage Vans – Metro provides small operating grant annually to offset costs of insurance, fuel, and administration to agencies committed to providing higher level of rides; agencies provide the drivers and comprehensive collision and liability insurance. CPP Special Use Vanpools – CPP pays the monthly cost of a standard vanpool agreement on behalf of participating local agencies <p><i>transit.metrokc.gov/tops/accessible/access-ctp.html</i></p>
	Taxi SCRIP Program	<ul style="list-style-type: none"> Serves low-income residents who have a disability or senior citizens 	<ul style="list-style-type: none"> Subsidizes costs of taxi service for low-income, disabled persons Registered individuals can purchase up to 6 books of taxi scrip monthly at a 50% discount 	
King County Metro (Wash.)	Hyde Shuttle Service	<ul style="list-style-type: none"> Free van service for registered disabled and senior citizens within service area during non-peak hours (9 a.m. – 4 p.m.) Van is lift-equipped and reserved on a first-come, first-served basis 	<ul style="list-style-type: none"> Encourages disabled and senior citizens to utilize specialized van services and make appointments for doctors, shopping, or leisure activities during non-peak hours 	<ul style="list-style-type: none"> Incentive for off-peak van service is free fare
	Ride Options Program	<ul style="list-style-type: none"> Free hotline service for seniors and disabled people who are registered for <i>ACCESS</i> paratransit services 	<ul style="list-style-type: none"> Maximizes customer service by matching customer needs to best ride option 	

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
King County Metro (Wash.)	Accessible Taxicab Demo Project	<ul style="list-style-type: none"> Low-floor, ramp-equipped vans offer ADA-compliant taxi-cabs for service area Seattle Metropolitan area. Operates like a taxi service Fare structure is same as other taxicabs Service provided by professional, licensed taxicab drivers Curb-to-curb service Assistance in using the ramp in loading and securing wheelchair Yellow cab service operates in cooperation with King Co. Metro 	<ul style="list-style-type: none"> Provide same-day, affordable, convenient taxi service individuals who use wheelchairs or other mobility aids that require ramps Same-day reservations No fixed routes 24-hour, 7-day per week service One-year cooperative demonstration project (King Co. Metro, King Co.'s Licensing Division, & City of Seattle's Consumer Affairs Division) 	<ul style="list-style-type: none"> Fares for accessible taxis the same as standard taxi rates; computed by an electronic meter Meter drop (after loading) \$2.50 Per mile rate \$2.00 Waiting time \$.50 (per minute in slow-moving traffic) Extras (each passenger over 2, excluding minors) \$.50 If eligible, Taxi Scrip can pay for individual fare
	Subscription Service	<ul style="list-style-type: none"> Access paratransit service for persons going to/from the same location the same times at least once per week. 	<ul style="list-style-type: none"> Automatic booking of paratransit services for eligible, or "conditionally eligible" individuals Reduces manhours on booking/scheduling of regular paratransit services 	<ul style="list-style-type: none"> Service automatically cancelled on select holidays and during adverse weather conditions
Montgomery Co. (Md.)	Ride On Bus	<ul style="list-style-type: none"> Montgomery County's 100% accessible, fixed-route bus system 	<ul style="list-style-type: none"> Provides extensive fixed bus routes (82 within County with connections to rail system) Extensive hours of operation (4:30 a.m. – 1 a.m. on weekdays and weekends; some 'til 2 a.m.) Goal is to promote quick, reliable, inexpensive transportation to relieve traffic congestion 	www.montgomerycountymd.gov/tsvtmpl.asp?url=/content/dpwt/transit/seniors.asp
Montgomery Co. (Md.) and Washington Metropolitan Area Transportation Agency (WMATA)	MetroAccess	<ul style="list-style-type: none"> Public transportation service for individuals with disabilities as required by ADA. It is noted that certified MetroAccess users ride the fixed route free. Participants must be certified that they are not able to use accessible fixed route public transportation Certified users are eligible to use paratransit with advance reservations Shared, curb-to-curb ride service only (advise trips may take up to 50% longer) Service provide 7 days/week from 5:30 a.m. – midnight Sun-Th and until 2:00 a.m. on F-Sat 	<ul style="list-style-type: none"> Shared ride trips that meet ADA requirements Provides hotline for customers stranded by MetroAccess 	www.wmata.com/metroaccess/free_ride_program.cfm

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
Montgomery Co. (Md.) and Washington Metropolitan Area Transportation Agency (WMATA)	Call 'N Ride Program	<ul style="list-style-type: none"> Provides transportation for low-income seniors age 67+ and for low-income people with disabilities Curb-to-curb service only (no taxicab driver assistance) Income eligibility, advance reservation, and eligibility are required to participate in the program. Transportation is provide by sedan and accessible taxicab vans 	<ul style="list-style-type: none"> Affordable, transportation service for seniors and persons with disabilities Cost is determined by income and charged on a sliding-fee scale. 	<ul style="list-style-type: none"> Depending on funding, clients may purchase one or two \$50 coupon books per month
	Same-Day-Access Program	<ul style="list-style-type: none"> Provides service for certified MetroAccess participants who do not qualify for Call 'N Ride Program because of income requirements Users may purchase one \$50 Call 'N Ride coupon book each month for emergency trips at a reduced price of \$26.25. Funding is dependent upon availability 	<ul style="list-style-type: none"> Provides same-day emergency curb-to-curb transportation Transportation is by sedan and accessible taxicab vans Non-peak hours of operation: M – F 9:00 a.m. – 3:30 p.m. 	
	Senior Bus Transportation	<ul style="list-style-type: none"> Provides bus transportation for adults aged 55+ to senior centers and selected senior program neighborhood program sites. Bus transportation for grocery shopping is also provided for seniors in selected low-income senior apartment buildings 	<ul style="list-style-type: none"> Specialized transportation service for senior citizens; affiliated with Senior Nutrition Program 	
Montgomery Co. (Md.) and Washington Metropolitan Area Transportation Agency (WMATA)	Medicaid Transportation	<ul style="list-style-type: none"> Used for medical appointments only to Medicaid providers Must have a Medicaid card Requests from 8:30 a.m. – 12 noon, Monday - Friday 	<ul style="list-style-type: none"> Provides transportation to Medicaid-eligible patients for doctors' appointments during specific service hours 	
	Escorted Transportation	<ul style="list-style-type: none"> Various provides offer coordinated transportation services to health clinics and service centers that provide ongoing medical appointments, kidney dialysis, or cancer treatment programs The Senior Connection provides escorted transportation services for seniors 62+ using volunteer drivers Transcend Transportation is a service that provides registered drivers to provide both sedan and wheelchair transportation to grocery stores, the pharmacy or mall shopping Assisted Services – Other social service 	<ul style="list-style-type: none"> Provides expanded transportation options based on specific needs of individual Some services require patients to be ambulatory or may not be wheelchair accessible 	<ul style="list-style-type: none"> Service fees are offset by donations, funding by nonprofit service organizations, volunteer drivers, or other social service agencies

Transit Agency	Transit Initiative	Description	Service Objective	Cost Considerations
		agencies provide door-to-door transportation on established routes for grocery shopping, trips to senior centers, or medical appointments		
	Private Door-to-Door Transportation Services	<ul style="list-style-type: none"> Private companies offer door-to-door service, beyond the scope of MetroAccess services Some private companies will also assist a person enter or exit a home/building 	<ul style="list-style-type: none"> Provides a level of service beyond what is mandated by ADA and offered by MetroAccess 	<ul style="list-style-type: none"> Costs are higher than public transportation Depending on the company, private pay, insurance, Medicaid, and or Medicare may be accepted

Public Policies

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
King County Metro (Wash.)	ADA Eligibility Determination Process	<ul style="list-style-type: none"> Provides basic paratransit services to eligible, disabled individuals Provides bus service during the same times/days as fixed-route busses Provides curb-to-curb, shared rides DART must tighten or restrict ADA-eligibility process In-person interview sessions have increased denial rates for paratransit rider by about 10% 	<ul style="list-style-type: none"> Provides paratransit service within ¼ of a mile on either side of non-commuter fixed route bus service Loose interpretations of ADA paratransit regulations can be costly to the transit agency DART First State should institute policies mandating in-person interviews, functional assessments, conditional eligibility determination, and travel training 	
NJ Transit	In-Person Interviews	<ul style="list-style-type: none"> Access Link is comparable to a local bus network in that it provides transportation at the same time and fares as the regular bus service. Potential applicants for Access Link must have a disability that prevents them from using the fixed bus system, which certifies them as ADA-eligible. Individuals must undergo an extensive interview process with local community-based organizations before their applications are submitted and finalized. 	<ul style="list-style-type: none"> Transit agencies that conduct in-depth interviews with candidates are more accurately able to determine whether applicants meet ADA-eligibility standards Transit officials could also evaluate and assess the severity of the disability in order to accommodate that individual's personal needs Evaluators can also gauge the rider's personality and mental capacities which gives the questioner insight into their emotional faculties 	<ul style="list-style-type: none"> Website: www.njtransit.com/tm/tm_servlet.srv?hdnPageAction=AccessLinkFAQSTo#b
Montgomery Co. (Md.) and Washington Metropolitan Area Transportation Agency (WMATA)	Functional Assessments	<ul style="list-style-type: none"> Clients have to complete online ADA-eligibility worksheet, composed of 5 questions, that assesses whether they are qualified for MetroAccess services, or curb-to-curb paratransit service for disabled persons Transit services complement the in-person interviews by utilizing this tactic 	<ul style="list-style-type: none"> Helps clients understand ADA-eligibility guidelines, facilitate the application process, and provide travel information regarding location tendencies and physical limitations. 	<ul style="list-style-type: none"> Website: www.wmata.com/metroaccess/worksheet.cfm

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
King County Metro (Wash.)	Trip-by-Trip Paratransit Eligibility	<ul style="list-style-type: none"> • A conditionally-eligible rider, a special circumstance client, can be subjected to a trip-by-trip evaluation based on an individual's functional awareness and ability to use the fixed-route bus system for a particular destination or location • In 2001, Access transportation implemented a trip-by trip screening process that examined conditions and environmental factors that contribute to a person's paratransit status • Transit organizations review and analyze paratransit records of riders before they make crucial decisions 	<ul style="list-style-type: none"> • A proactive approach toward monitoring and reviewing conditional paratransit riders • Moderate handicapped citizens who are on the border of meeting ADA requirements should be observed and evaluated based on the types of trips and conditions they encounter. • This policy also places an emphasis on filtering clients out of the paratransit sector and into the fixed-route system 	
	Subscription Services	<ul style="list-style-type: none"> • Provides regularly scheduled trips under a "subscription service" • Change in service allows registered person with disability or senior citizen to subscribe for regular trips; only need to call reservationists if there is a cancellation 	<ul style="list-style-type: none"> • Minimizes time required to continually reschedule regular trips; requires customer to call only if trip is to be cancelled 	<ul style="list-style-type: none"> • While not required by ADA, most agencies have adopted subscription policies to cut costs and a convenience to customers.
	Free Travel Training Program	<ul style="list-style-type: none"> ▪ Community Transit, Everett Transit, King County Metro and Pierce Transit provide free bus travel training programs for senior or a person with a disability, including students, and want to learn how to ride fixed-route buses. ▪ Metro subcontracts with local disability groups to provide free training to teach disabled persons and senior citizens how to ride fixed-route busses. ▪ Includes individual training, group orientation and lift-use instruction 	<ul style="list-style-type: none"> • Goal is to assist seniors and persons with disabilities to make the transition to riding fixed-route buses. • Marketed to groups as providing greater flexibility and independence to disabled and seniors that opt to use regular bus service instead of paratransit services • Training is designed to fit individual needs. Options include basic orientation, group training or one-on-one training. 	<ul style="list-style-type: none"> • Fare incentives, less than <i>ACCESS</i> fares, are provided to customers who participate • In 2000, King Co. Metro spent \$161,500 on travel training and saved \$417,000 in paratransit costs. <p>Easter Seals Project Action. "Innovative Practices in Paratransit Services."</p>

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
Southwest Ohio Regional Transit Authority (SORTA), Cincinnati, Ohio	Comprehensive Travel Training Program	<ul style="list-style-type: none"> ▪ Free, personalized, one-on-one instruction for SORTA Access riders. ▪ Travel Training is also available for non-Access riders for a fee. 	<ul style="list-style-type: none"> • Requesting bus information • Trip planning • Reading bus schedules • Boarding and exiting buses • Using the wheelchair lift and securement system (if applicable) • Street crossing • Emergency procedures • Stranger awareness • Appropriate behavior on the bus • Currently unable to provide service for visually impaired 	<ul style="list-style-type: none"> • Annual cost of SORTA travel training program is about \$84,000, while paratransit cost savings is about \$250,000 - \$300,000 per year <p>www.go-metro.com/training.html</p>
King County Metro (Wash.)	Accessible Service Advisory Committee Task Force	<ul style="list-style-type: none"> • Task force formed to work on an intensive process with community organizations & agencies to brainstorm on key transportation recommendations • Convened two summits where 150 people, 20 organizations/agencies met over six months • Conducted needs assessment and resource survey • Forged partnerships with community agencies • Integrated transportation, housing and human services in policy planning and implementation • Resulted in 10 key recommendations 	<ul style="list-style-type: none"> • Meet the growing demand for transportation needs of seniors and persons with disabilities, while providing service efficiencies and top customer service • Look for innovative approaches to meet the range of transportation needs facing people with disabilities • Plan for technology improvements for customer-friendly service • Improved communications with customers 	<ul style="list-style-type: none"> • Implementation of Mobile Data Terminal and Interactive Voice Response systems regionally, including sharing eligibility information among agencies & service providers • Implementation of Smart Card technology • Enhanced technology to improve ride grouping and coordination • Online 24/7 trip booking/cancellation

Partnerships

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
Regional Transportation Commission (RTC) of Southern Nevada	Pre-Paid Fares	<ul style="list-style-type: none"> 11 agencies throughout the Las Vegas Valley pre-pay their clients' paratransit rides Customers using paratransit may schedule a ride and board a vehicle without having to show a pass or pay a fare 	<ul style="list-style-type: none"> Cost-sharing with other human and social service agencies and NGO's 	<ul style="list-style-type: none"> Substantial cost savings to the public transit agency
New Jersey Transit	NJ Travel Independence	<ul style="list-style-type: none"> Collaborated with 2 community agencies to develop the program, which helps people with disabilities develop skills and confidence needed to travel independently on the fixed-route system 	<ul style="list-style-type: none"> Help integrate paratransit riders onto the fixed-route system. Help reduced the cost of travel training 	
United We Ride in Puget Sound; King County (Wash.) Metro	United We Ride in Puget Sound	<ul style="list-style-type: none"> On-line document and trip planner provides a "one-stop" transportation resource guide A partnership between Community Transit, Everett Transit, King County Metro, Pierce Transit, Sound Transit and Sound Transit's Citizen's Accessibility Advisory Committee developed the web-based document over a 16-month period. 	<ul style="list-style-type: none"> Public information about the coordination of transportation services 	
State of California	Social Service Transportation Improvement Act of 1980 created a system of Consolidated Transportation Service Agencies (CTSAs)	<ul style="list-style-type: none"> Expanded the availability of specialized transportation services by improved use of existing resources through coordination. 	<ul style="list-style-type: none"> In Sacramento County, the local CTSA – Paratransit, Inc. matches specialized transportation needs with available resources of organizations and agencies Partners include the Developmental Disabilities Service Organization, Voluncare, Easter Seals of Superior California, Esakton Carmichael, Eskaton, Health for All, Sutter Senior Care, Jewish Family Services, Sacramento Lao Family Community, Robertson Adult Day 	

			Health Care Center, Senior Nutrition Services, United Cerebral Palsy of Greater Sacramento and others	
Sacramento County (Calif.) Paratransit, Inc.	Shared Maintenance	<ul style="list-style-type: none"> Paratransit, Inc. provides maintenance to partnering CTSA agency fleets 	<ul style="list-style-type: none"> In addition to its paratransit fleet of 170 vehicles, Paratransit, Inc. maintains about 200 vehicles for over 40 partnering agencies and organizations. 	

Technology

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
King County, Wash.	Implemented Mobile Data Terminal and Interactive Voice Response System	Regional technology	Eligibility information is shared among agencies and service providers	
	Enhanced scheduling technology	Improved customer service and efficiency by grouping rides	New technology enables service providers to improve ride grouping and coordination	
	On-Board Systems Project	Electronic Scrolling Readerboards	<ul style="list-style-type: none"> 2007 King County Budget includes funding for this technology to make the experience of riding a Metro Transit bus easier and more accessible System also provides recorded stop announcements, schedule adherence information for the bus operator, and automatic passenger counters. 	<ul style="list-style-type: none"> \$2.5M for cost of system included in 6-year CIP www.metrokc.gov/mkcc/news/2006/1106/BUDGET_transit.htm
	Proposed Telephone Keypad Booking	Will enable customers to book and cancel trips over the Internet by providing online scheduling 24 hours per day, 7 days per week	Greater customer service and scheduling efficiencies	Technology for telephone keypad booking
	SMART Card Technology	The ORCA smart card was piloted to introduce is a new way to pay your bus, ferry and train fare. The size of a credit card, a smart card contains a microchip that communicates with card reader equipment. Card readers have been installed on select bus, rail and ferry routes. The card keeps track of the value of transfers, passes and tickets.	<ul style="list-style-type: none"> Allows intermodal transit riders to pay via e-purse, which is automatically loaded onto the ORCA smart card, similar to a pre-paid coffee or phone card. Pilot program enlisted volunteers to test and evaluate the new regional card fare system. Testing involved volunteers who were asked to tag the card on the equipment to pay the fare. 	Frees drivers from dealing with fares or fare cards and to concentrate on transporting customers transit.metrokc.gov/prog/smartcard/smartcard.html

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
Washington Metropolitan Transportation Authority (WMATA)	SmarTrip	WMATA was the first public transportation system in the U.S. to adopt smart cards, launching a pilot program in 1999. By the end of 2004, over 800,000 of the permanent, rechargeable plastic smart cards, which hold up to \$200.00 in fare value, had been sold. One third of WMATA Metrorail riders use SmarTrip cards regularly. SmarTrip has been expanded to Metro parking lots and to bus transit, and will eventually cover other regional rail service over a total of 17 transit systems.	<ul style="list-style-type: none"> Reduced cash handling, equipment maintenance, and security costs; increased convenience for riders; improved collection of ridership data; Enhances image of transit Provides new opportunities for innovative fare structures and marketing. 	<ul style="list-style-type: none"> Essentially, provides seamless regional fare payment system across 17 regional transit systems serving over ½ billion annual rides Increases ridership and revenues Reduces business costs: capital & operating
Chicago Transit Authority (CTA)	Chicago Card Plus	As of March, 2004 there are more than 67,000 Chicago Cards in use. The system is interoperable across the CTA's rail turnstiles and bus fare boxes as well as the PACE suburban bus system, making it the nation's first multi-agency, multi-modal smart card system for public transit. Special features of the Chicago Card include automatic reloading when the stored value drops below \$10.00, and passback privileges allow up to seven customers to board the same bus or pass through the same rail station turnstile using one card.		www3.yourcta.com/product.asp?catalog%5Fname=CTA&category%5Fname=&product%5Fid=tc
Sacramento County (Calif.) Paratransit, Inc. in partnership with Sacramento Regional Transit	Flexible Neighborhood Routes	<ul style="list-style-type: none"> Shuttles connect residents with neighborhood stores and services following a regular route Shuttles are flexible enough to off-route (for persons with disabilities need door-to-door service) utilizing intelligent transit system technologies These “smart transit” services also link riders to conventional light rail and bus service 		
Montgomery Co. (Md.) and Washington Metropolitan Area Transportation Agency (WMATA)	Automated InstantAccess	<ul style="list-style-type: none"> Automated trip confirmation or cancellation for MetroAccess trips Requires MetroAccess ID and touch-tone phone 	<ul style="list-style-type: none"> Greater service efficiencies within reservation department Ability for customers to cancel a trip with as little as 2 hours notice, without penalty 	

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
SORTA, Cincinnati, Ohio	Automatic Voice System	<ul style="list-style-type: none"> Newer fixed-route buses feature an automatic voice system to announce key stops, transfer points and other important information. More than 90% of buses are equipped with a wheelchair lift and two securement areas for wheelchairs. 	<ul style="list-style-type: none"> Goal is for standard bus fleet to be fully equipped with features to make riding easier for people with disabilities 	
Orange County Transportation Authority (Calif.)	Implemented Trapeze PASS program and PASS-MDC	<ul style="list-style-type: none"> Installed computers in each vehicle along with PASS-MDC (Mobile Data Computers) "enables drivers to view itineraries and inform dispatch of the status of a trip." Able to perform updates to itineraries in real time PASS qualifies each trip to determine eligibility 	Goal was to manage the increasing growth and costs	Computers for each vehicle Costs for upgrading software "Return on investment is predicted in less than two years."
Maryland Transit Administration (Baltimore City, Baltimore County, Anne Arundel County)	Implemented Trapeze PASS program, installed all vehicles with GPS and MDTs (Mobile Data Terminals), and use of "smartcards"	<ul style="list-style-type: none"> PASS program coordinates all dispatching GPS and MDTs (Mobile Data Terminals) allow dispatchers to track vehicle locations 'smartcards' are used to track clients—they swipe the card when they get on and off On-time performance went from 76% to 92% 37% drop in complaints Increase in productivity—dispatcher can handle 50-80 routes (before 25-30 routes) 	Goal was to increase on-time performance and reduce customer complaints	MDTs and GPS for all vehicles
Capital Area (Austin, Tex.) Rural Transportation System	Implemented mobile computing interface pilot program	<ul style="list-style-type: none"> Installed MDCs (Mobile Data Computers) in some vehicles with PASS software Supervisors can access real-time information from their vehicles Eliminated need for paper manifests so dispatchers can be more productive 	Wanted to increase reliability and manage demand	Cost for implementing MDTs

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
South Coast Area Transit (Western Ventura County, Calif.)	ACCESS curb-to-curb paratransit service updated software to Trapeze PASS	<ul style="list-style-type: none"> • Could schedule trips more efficiently • Complaints have dropped from 4 in 1,000 boardings to less than 1 • Managers can handle complaints easier because they can track down changes to schedules 	Wanted to improve customer service, improve tracking, create efficient schedules and enable managers to “see the big picture”	Increase cost of service per boarding “Overall costs of providing the service decreased by 23%.”
Delaware Express Shuttle (services Del., N.J., D.C., N.Y., Md., and Pa. airports)	Private transportation service -- Provides transportation services for a fee	<ul style="list-style-type: none"> • Uses Hudson Software to schedule reservations, which specializes in transportation software • 44% Reservations are completed online • In the process of implementing phone reservation system— Customer would key in designated customer number and indicate where would like to travel via the touch tone phone. • Drivers communicate with dispatch via Blackberry phones. • Dispatch can track each driver using GPS and assigns calls to closest driver • When callers are being held in a queue the system tells them what number in line they are 	Wants to become more customer oriented	

Transit-Oriented Development

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
State DOTs proactively involved in TOD: Calif., Fla., Md., Mass., N.J., Pa., and Washington, D.C.	Directly and proactively engaging in TOD promotion through funding and other supportive programs	<ul style="list-style-type: none"> Traditionally have focused on rail-oriented TODs, but efforts are expanding to include bus transit 	<ul style="list-style-type: none"> Improved coordination of regional land use and transportation planning Provide funding to local agencies to plan and implement TOD near major transit stations 	
New Jersey DOT and New Jersey Transit	Transit Village Initiative	<ul style="list-style-type: none"> Multi-agency Smart Growth partnership to help redevelop and revitalize communities around transit facilities. Encourages growth in NJ where infrastructure and public transit already exists Municipalities that meet stringent criteria may be designated as a Transit Village and are eligible to receive state grant funding and/or priority technical assistance/funding from some state agencies 	Goals to reduce traffic congestion, improve air quality, and increase transit ridership	<ul style="list-style-type: none"> In 2005, each municipality that received a designation as a Transit Village were awarded grant funds of \$100,000
Central Florida Regional Transportation Authority (CFRTA)	"Central Florida Mobility Design Manual"	<ul style="list-style-type: none"> Working document, which illustrates basic mobility design actions to be considered at the design and review level of projects. Includes actions needed to successfully integrate the physical design of independent projects into comprehensive, sustainable communities that are served by a balanced transportation system 	<ul style="list-style-type: none"> Developed to enhance partnerships between LYNX transit and the land development community in the design of new growth and redevelopment projects. Introduces basic design guidelines and how to specific guidelines for each design element can be integrated into a comprehensive development review process. 	
King County (Wash.) and King Co. Housing Authority	Transit-Oriented Design focusing on bus transit	<ul style="list-style-type: none"> Innovative PPP agreements that mix transit and housing development Involves lease by county of existing park-and-ride lots to work with private developer to construct affordable housing units as part of redesigned transit center To date, 2 projects approved, 6 underway, 3 planned 	<ul style="list-style-type: none"> Goal to increase transit use in employment centers and urban areas Goal also to provide more affordable housing options that are accessible to bus transit Initiative began in 1998, as first in nation to combine housing with metropolitan bus service 	<ul style="list-style-type: none"> Predict that county's investment in accessible housing units will pay for itself over time since it allows residents to use regular bus service rather than Access paratransit. Provides bus passes to each unit for 1st 2 years of occupancy, cost of which is shared by county DOT and developer.

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
		<ul style="list-style-type: none"> Distribution of guidelines to developers is required as part of planning process 		www.metrokc.gov/smartgrowth/livable.htm
California Department of Transportation (Caltrans)		<ul style="list-style-type: none"> Assessment report recommends state-level strategies to encourage TODs such as leasing or purchasing state-owned surplus and/or underutilized land located near transit stations for TODs 	<ul style="list-style-type: none"> Strategy designed to help manage growth and improve quality of life. Helps provide communities with transportation alternatives Helps to address need for affordable housing 	<ul style="list-style-type: none"> Note that FTA now gives priority for funding of proposed bus and rail transit projects to areas with transit-supportive land use policies and practices.
Delaware Valley Regional Planning Commission (DVRPC), Pa.	"Municipal Implementation Tool #1: Transit-Oriented Development"	<ul style="list-style-type: none"> Municipal training/outreach Brochure describes TOD as an "implementation tool" based on the region's long-range plan 	<ul style="list-style-type: none"> Provide technical assistance to local governments who wish to encourage transit-supportive development patterns by amending their comprehensive plans and/or zoning ordinances Outlines transit-friendly regulatory techniques available to local governments 	
Maryland Department of Transportation (MDOT)	Transit-Oriented Development	<ul style="list-style-type: none"> MDOT analyzes the "market readiness" of station areas to identify those with the greatest TOD potential. It evaluates existing land uses and physical characteristics, the perspective of surrounding communities, regulations, market strength and other issues. State is building relationships with local jurisdictions, developers and others with a stake in TOD 	<ul style="list-style-type: none"> To proactively commitment to develop transportation investments and facilities and support for transit-oriented, joint and transit-adjacent development that support economic growth and neighborhood revitalization in close proximity to transit facilities Where possible to residents to using rail with fixed-route bus service. 	<ul style="list-style-type: none"> MDOT also notes FTA criteria for priority funding of TOD projects than include a transit element, stimulate economic development or private investment, and enhances the effectiveness of a mass transit system.
City of Alexandria, Va.	Zoning Ordinance: Transportation Management Plans (TPMs)	<ul style="list-style-type: none"> A TPM special use permit must be submitted and approved for any building or structure, combination of space, project, complex or development which contains: <ul style="list-style-type: none"> 50,000 or more useable sq. ft. of commercial or office space 40,000 or more useable sq. ft. or retail space, or 250 or more residential unites 	<ul style="list-style-type: none"> The purpose of a TMP is to mitigate the traffic and related impacts of certain office, retail, industrial, and residential uses TMP requirements are detailed in the Zoning Ordinance City is a strong proponent of TODs and mixed-use development projects. 	

Innovative Financing, Revenue Streams, or Cost-Effective Practices

Transit Agency	Initiative	Description	Service Objective	Cost Considerations
Central Ohio Transit Authority	Bus wraps	<ul style="list-style-type: none"> Bus systems are increasing their use of bus advertising wraps as a way to raise revenue as they're squeezed by federal gov't subsidy cuts, rising operating costs, and less tax revenue 	<ul style="list-style-type: none"> Provide funding subsidies to the revenue stream 	<p>COTA charges \$1,000 per month for the 15 wrapped buses in its fleet of 250</p> <p>www.chroniclet.com/2005_Archive/01-18-05/Daily%20Pages/Local/Html/local3.html</p>
SORTA, Cincinnati, Ohio	Use of alternative fuel	<ul style="list-style-type: none"> Provides 22 million passenger trips per year and uses 3.6 million gallons of fuel each year including soy biodiesel 	<p>Soy biodiesel is a clean-burning alternative fuel produced from soybeans, a domestic renewable resource.</p> <ul style="list-style-type: none"> Soy biodiesel can be used as a pure fuel or blended with petroleum in any percentage. Soy biodiesel is the lowest cost alternative fuel option to meet the federal government's EPA compliance. 	<ul style="list-style-type: none"> This low-cost alternative fuel source provides support to Delaware's soy biodiesel industry and is touted by DNREC's State Energy Office <p>www.delaware-energy.com/Soy_Biodiesel.htm</p>
Washington Metropolitan Area Transportation Agency (WMATA)	SmartBenefits	<ul style="list-style-type: none"> Employers offer transit benefits of up to \$110 a month per employee Dollar value of an employee's monthly benefit is applied directly to employee's reusable, rechargeable plastic SmarTrip card from the employer's website Employees can opt to buy the \$110 monthly transit benefit with pre-tax income or employers can share the cost of the monthly benefit with employees. 	<ul style="list-style-type: none"> Encourages use of public transit Provides convenience of paying commuting expenses without using cash Regional applicability Convenient, web-based program 	

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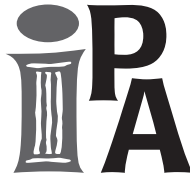
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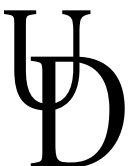


***Institute for Public Administration
College of Human Services, Education & Public Policy
University of Delaware
180 Graham Hall
Newark, DE 19716-7380***

phone: 302-831-8971 e-mail: ipa@udel.edu fax: 302-831-3488

www.ipa.udel.edu

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