

TRANSIT SERVICES AND NEEDS IN WESTERN FRANKLIN COUNTY



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VOLUME I

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**FRANKLIN REGIONAL
TRANSIT AUTHORITY**



**FRANKLIN REGIONAL
COUNCIL OF GOVERNMENT**

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VOLUME I

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VOLUME I

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VOLUME II of this report contains a full listing of comments submitted by West County residents on the West County Transit Survey.

Introduction

The expansion of transit services in western Franklin County (West County) has been identified as a priority in a number of regional studies, including the 2007 Franklin Region Transportation Plan. The focus of this study is to gather additional data on West County residents' interest in and need for expanded transit services. The information gathered for this study will be used to design and support future transit service expansions and enhancements, as well as to improve current services. The collected information includes demographic and socioeconomic figures from the U.S. Census Bureau and data on Franklin Regional Transit Authority (FRTA) services and ridership. Two other important sources of information are a transit survey that was sent to all households in the West County area and a public forum that was held in Shelburne Falls on the area's transit services. Both the survey and forum were conducted as part of this study.

The West County area¹ currently has a population of approximately 12,600 residents (U.S. Census Bureau, 2006 Population Estimates). In terms of bus routes, the West County area is served by the West Route operated through the Franklin Regional Transit Authority (FRTA) based in Greenfield. The West Route runs along Route 2 between Greenfield and Charlemont and goes to Shelburne Falls. The route was first established to serve Academy at Charlemont students and this is still its primary function. However, there has been interest expressed in making changes to the West Route so that it is more useful and accessible to West County residents in general. Because the timing of the current bus route focuses on providing transportation to Academy at Charlemont students, it does not presently work well for many other commuters. The route operates each weekday during the school year (early September to early June) when the Academy at Charlemont is in session (approximately 150 days per year). The West Route makes two round trips per day, one in the morning and one in the afternoon. The times of the afternoon bus varies by day of week and by time of year. For most commuters who are not Academy at Charlemont students, the afternoon schedule variation is a major challenge to taking the West Route bus. In addition, the absence of year-round service means that people who would like to use the bus year-round for commuting or other trips are unable to do so and must rely on other transportation, such as using their own car or getting a ride with others, for the periods without service.

In addition to the West Route, the FRTA provides paratransit (van) services for elderly residents and residents with disabilities for most of the West County area. These services range considerably by town, with some towns having transportation every weekday and other towns having van service just a few times a month. One important demographic trend in western Franklin County, and statewide and nationally as well, is the projected growth in the number of elderly residents in coming decades, and the need to address the transportation needs of this population segment. Between 2000 and 2030, the number of elderly residents age 65 and over in the West County area is projected to double (to 3,385 residents), and this cohort's share of the total population is expected to grow from 13 percent (2000) to 20 percent (2030).

The study's findings indicate that western Franklin County is underserved by current transit options and that the expansion of both fixed-route and paratransit services is warranted. The

¹For this study, the West County area is considered to include the towns of Ashfield, Buckland, Charlemont, Colrain, Conway, Hawley, Heath, Monroe, Rowe, and Shelburne.

study findings also suggest that the main beneficiaries of improved West County transit services would likely be low and moderate-income residents, who generally face the most transportation access and job access issues, and that expanded transit services would therefore help create a more equitable and just transportation system for West County residents, and for Franklin County overall.

This study contains the following:

- A review of the transit and paratransit services that are presently available in western Franklin County (West County);
- A review of demographic, economic, and vehicle ownership statistics for the West County area that relate to transportation needs;
- A discussion of the results of the household transit survey conducted in August 2007;
- Recommendations for future transit service improvements in the West County area; and
- An overview of potential funding sources for expanded transit services.

Current Transit Services

This section reviews the current fixed-route and paratransit van services currently available in West County area. The Franklin Regional Transit Authority (FRTA) is the primary transit agency for Franklin County, including the western part of the County. The FRTA, which is based in Greenfield, serves the most rural and geographically largest area of all the Regional Transit Authorities in Massachusetts. The FRTA's service territory covers 1,121 square miles and extends into Hampshire, Hampden, and Worcester Counties. The FRTA has 40 member towns with a combined population of 110,000 residents; a map of the FRTA service territory is included at the back of this report. Twenty-three of the twenty-six towns in Franklin County are members of the FRTA, including the West County towns of Ashfield, Buckland, Charlemont, Colrain, Conway, Hawley, Heath, Rowe, and Shelburne. The town of Monroe is not a member. The FRTA also serves 17 towns in Worcester, Hampshire, and Hampden Counties. The FRTA administers and coordinates fixed-route bus services and paratransit van services for its member towns.² Monroe has limited paratransit service for MassHealth clients through the Berkshire Regional Transit Authority (BRTA). All FRTA buses and vans are wheelchair accessible. The fixed route FRTA buses and transit vans all also have front bike racks which can hold up to two bicycles.

Fixed-Route Bus Services

The Franklin Regional Transit Authority (FRTA) has nine bus routes in the greater Franklin County area. The bus routes are operated by F.M. Kuzmeskus, Inc. of Gill on behalf of the FRTA. The bus routes all run from downtown Greenfield, with each route providing a round-trip from Court Square near the Greenfield Town Hall. The bus routes focus on providing transportation for school and work. The routes offer bus service to the Academy at Charlemont, the Northfield Mount Hermon School in Gill, Greenfield Community College, and the University of Massachusetts in Amherst. The routes also provide transportation to employment centers, such as within Greenfield and Montague, along Routes 5/10 to Northampton, and along Routes 2/2A to the Orange-Athol area.

The western part of Franklin County is served by the FRTA's West Route. The West Route runs along Route 2 between Greenfield and Charlemont and goes to Shelburne Falls. The route was first established to serve Academy at Charlemont students and this is still its primary function. The route operates each weekday during the school year (early September to early June) when the Academy at Charlemont is in session (approximately 150 days per year). The West Route makes two round trips per day, one in the morning and one in the afternoon. The bus schedule is shown in Table 1 on the next page.

² Under Massachusetts General Law, Chapter 161B, regional transit authorities are not allowed to run transit services on their own, and must contract with other transportation providers for the operation of fixed-route and paratransit services. The FRTA coordinates and administers these operations for its 40-town service area.

Table 1: Schedule for the FRTA West Route along Route 2, 2007-2008 School Year

The West Route operates only when the Academy at Charlemont is in session.

The West Route does not operate during the Academy's intersession periods during the school year or during the summer (early June to early September).

	Mon-Fri	Mon-Thurs	Mon-Thurs	Fri
	9/5/07-6/5/08	9/4/07-10/25/07 & 3/31/08-5/15/08	10/29/07-3/27/08 & 5/19/08-6/5/08	9/4/07-6/5/08
Greenfield to Charlemont				
	A.M.	P.M.	P.M.	P.M.
Court Square, Greenfield	7:05	4:35	2:15	2:15
Cherry Rum Plaza	7:15	--	--	--
Greenfield Comm. College	--	4:45	2:30	2:30
Big Y Plaza	7:20	R	R	R
Arms Library, Shel. Falls	7:35	5:00	2:45	2:45
Mohawk Trail High School	R	R	R	R
Charlemont Park & Ride	R	R	R	R
Academy at Charlemont	7:50	5:15	3:15	3:15
Avery's Store, Charlemont	7:55	R	R	R
Charlemont to Greenfield				
	A.M.	P.M.	P.M.	P.M.
Avery's Store, Charlemont	7:55	R	R	R
Charlemont Park & Ride	R	R	R	R
Mohawk Trail H.S.	R	R	R	R
Salmon Falls, Buckland	8:05	5:30	3:30	3:30
Arms Library, She. Falls	8:10	5:35	3:35	3:35
Big Y Plaza	R	5:55	3:55	3:55
Greenfield Comm. College	8:25	R	R	R
Court Square, Greenfield	8:35	6:05	4:05	4:05
Cherry Rum Plaza	--	6:15	4:10	4:10

-- = No stop.

R = Stops by request only. Call the FRTA (413-774-2262, 1-888-301-2262) in advance (preferably at least 24 hours) to ride the bus from these locations.

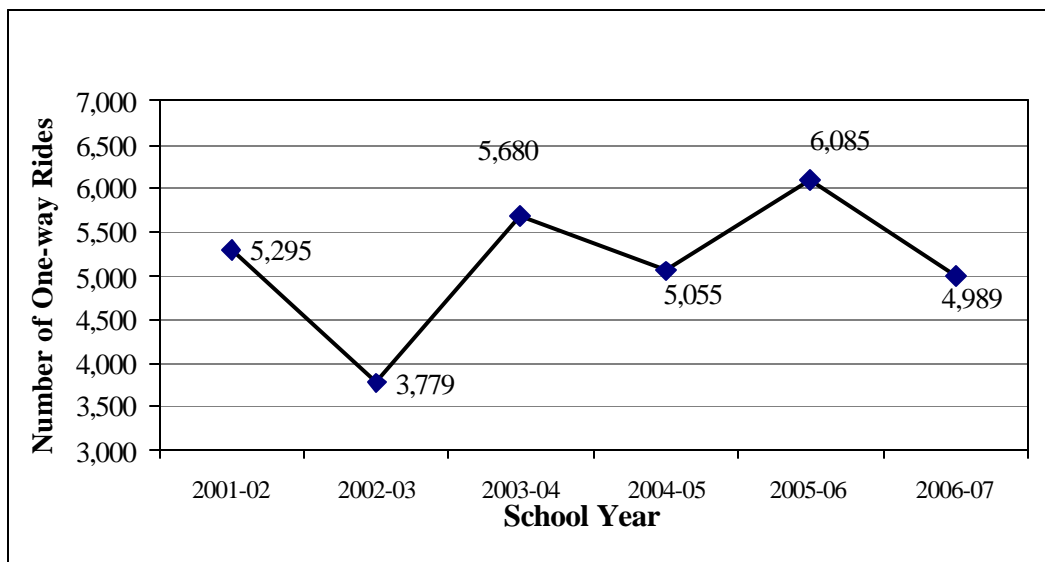
The West Route starts from Court Square in Greenfield, and travels west, with stops at the main campus of the Greenfield Community College (GCC) and in Shelburne Falls. The bus route usually ends at the Academy at Charlemont. The bus then reverses its path and returns to Greenfield, traveling back to Court Square and the Cherry Rum Plaza in Greenfield. A new stop on the return route is the Salmon Falls Marketplace in the Buckland portion of Shelburne Falls. The stop was added to the schedule in September 2007. In addition to its regular stops, the route has a number of places where it will stop upon request. These stops are indicated with an "R" in the schedule; these stops include Charlemont Center, the Charlemont Park and Ride lot on Route 2, and the Mohawk Trail High School in Buckland on Route 112, as well as the Big Y Plaza on most trips to Charlemont, and the GCC campus on most trips to Greenfield. The bus will also pick up and discharge passengers at safe locations along its route besides the established stops. The FRTA asks that riders who want to get on the bus at a by-request stop call the FRTA offices (413-774-2262 or 1-888-301-2262) at least 24 hours in advance to assure a pickup. The FRTA

also suggests that riders wanting to take the bus to or from any specific location along the bus route that is not a designated stop, call in advance to verify the bus will stop there.

There has been interest expressed in making changes to the West Route schedule so that it is more useful and accessible to West County residents in general. Because the timing of the current bus route focuses on providing transportation to Academy at Charlemont students, it does not presently work well for many other commuters. For example, as shown in Table 1, the times of the afternoon bus varies by day of week and by time of year. For workers or college students on fixed schedules, this schedule variation may be inconvenient or even impossible to coordinate with their work or class times. In addition, the absence of year-round service means that people who would like to use the bus year-round for commuting or other trips are unable to do so and must rely on other transportation, such as using their own car or getting a ride with others, for the periods without service.

Bus riders taking the West Route are primarily Academy of Charlemont students, and the route's ridership therefore can vary considerably from year-to-year depending on the number of students who reside in Shelburne and Greenfield. The total enrollment at the school is about 100 students (grades 7 to 12 and post-graduate study). During the 2006-2007 school year, the West Route provided a total of 4,939 one-way rides, with approximately 20 to 40 passengers each day. Over the past six years, the route's ridership has varied from a low of 3,779 during the 2002-2003 school year to a high of 6,085 during the 2005-2006 school year (Figure 1). It is believed that the increase in ridership for this latter year was a result of more non-Academy at Charlemont students taking the bus when the price of gasoline rose significantly, to over \$3.50 per gallon. Now that gas prices have fallen slightly again, ridership by non-students has dropped again as well.

Figure 1: FRTA West Route Annual Ridership, 2002-2007 School Years



In the West County household transit survey conducted for this study³, 2 percent of respondents indicated that, in the past year, they or someone else in their household rode the West Route at least weekly while it was in operation; another 2 percent of respondents rode the bus at least monthly; and 5 percent rode at least a few times during the year.⁴

The transit survey also found that 9 percent of survey respondents had used the Charlemont Park and Ride lot in the past year. Approximately 1 percent of respondents had parked in the lot at least weekly. An estimated 22 percent of these households reported taking the West Route bus at least weekly as well; this finding suggests that the Park and Ride lot is being used more for carpools than for taking the bus. The FRTA's service to the Park and Ride lot began in September 2006, and the West Route stops at the lot upon request.

At Court Square in Greenfield, West Route passengers can transfer to other FRTA routes. Some of these routes have schedules that are coordinated with the West Route. The FRTA provides frequent weekday service along Federal and Conway Streets in Greenfield, and to Turners Falls; the FRTA also has less frequent service each weekday to Millers Falls (6 times per day), Montague Center (5 times), and Amherst (2 times), and service three days a week to the Northfield Mount Hermon School in Gill. There is also the FRTA's regular weekday service to Northampton with the Valley Route, and the GLink Route between Greenfield and Athol. The Valley Route connects with Pioneer Valley Transit Authority (PVTA) bus routes in South Deerfield, Sunderland, and Northampton. The GLink connects with Montachusett Regional Transit Authority (MART) routes in Athol and Orange.

Some of the FRTA's other bus routes have limited connectivity to the West Route. For example, West Route riders who transfer to the Valley Route or the GLink in the morning and seek to return in the afternoon have few options and need to take a return bus a few hours after they arrive at their destination. Additionally, the times of the Amherst Route, which runs twice a day between Greenfield and the University of Massachusetts, and the times of the West Route are incompatible, making transfers between the two impossible. Offering additional runs of these bus routes and improving riders' ability to transfer between them would increase their utility for West County residents.

In the West County transit survey, 1 percent of respondents said that over the past year, they or someone else in their household had taken a FRTA bus beside the West Route bus at least weekly, and 3 percent said that they or someone in their household had taken other FRTA buses monthly or a few times during the year. Also, a few respondents reported connecting to PVTA bus routes in South Deerfield or Northampton.

The regular bus fare for the West Route is \$1.50 each way for rides between Greenfield and Charlemont, and \$1.00 each way for rides between Greenfield and Shelburne, or Shelburne and Charlemont. Fares for other FRTA routes range from \$1.00 to \$2.00. Riders who are age 60 or

³The West County transit survey and its methodology are described more fully later in this report, as part of the discussion under "Evaluating the Interest in Expanded Transit Services." A copy of the survey is included in the report appendix.

⁴The percentages shown for survey results throughout this report are based on the number of households answering the question being referenced, unless noted otherwise. For multi-part questions, such as survey question #4 ("How often has you or someone else in your household used the following services in the past year"), a question is considered to have been answered if any of its parts were answered. A total of 777 households returned the survey.

older, disabled riders and riders with Medicare cards, Statewide access passes or ADA cards qualify for half-price fares. Children under age 5 accompanied by a fare-paying adult, ride for free. Massachusetts Commission for the Blind card holders also ride for free.

The Academy at Charlemont pays most of the local portion of the costs of running the West Route service. The local share of bus service costs is typically 20 to 25 percent of the total expenses, and subsidies from the state and federal government contribute the rest. Towns also pay some of the expenses; for example, Buckland is paying the local share for the new West Route extension to the Buckland side of Shelburne Falls.

Academy at Charlemont students are eligible for reduced fare passes that cost \$55 per month for trips from Greenfield and \$35 per month from Shelburne Falls. The Academy also offers four bus routes of its own for students. These routes serve the following communities and areas in between:

- Leyden – Colrain;
- Northampton – Williamsburg – Ashfield – Buckland;
- Amherst – South Deerfield – Conway; and
- Cummington – Plainfield – Charlemont.

The fares for the Academy's routes vary from \$3.50 to \$5.50 per ride one-way. Reduced fare passes are also available and range from \$78 to \$145 per month.

Paratransit Van Services

The FRTA coordinates paratransit service van transportation to qualifying residents in all its member communities. Paratransit is a flexible form of bus transportation that does generally follow fixed routes; it is also referred to as demand-response service or dial-a-ride service. Paratransit van services are available to residents age 60 years old and older, and for younger residents with disabilities that restrict them from using regular bus transportation. Priority for paratransit service is given to people with disabilities who are unable to take a regular bus, and for trips for essential purposes, such as medical care. All the West County towns except for Monroe have access to paratransit service that is coordinated through the FRTA. In Monroe, MassHealth clients have access to van service through the Berkshire Regional Transit Authority (BRTA) for medical trips.

Under the Americans with Disabilities Act (ADA), transit providers are required to offer van transportation to people with disabilities who are available within three-quarters of a mile of a bus route, and who are unable to take a regular bus. The ADA requires that paratransit services be offered during the same hours as the fixed-route services. Because of the rural nature of West County and the limited service provided by the West Route, most of the West County towns have no ADA requirements to provide transportation for disabled residents; other towns, including Shelburne, Buckland, and Charlemont, have only minimal requirements. Most of the paratransit transportation that is provided to West County residents therefore is optional and offered at the FRTA's discretion.

The FRTA contracts with local public and private transportation providers for the mandated ADA service and optional demand-response service. The primary provider of these services in

the West County area is the Shelburne Council on Aging (COA). The Shelburne COA offers van transportation to qualifying residents living in Ashfield, Buckland, Charlemont, Colrain, Hawley, Heath, Rowe, and Shelburne, and in the portion of Conway near Shelburne. The secondary van provider is F.M. Kuzmeskus, Inc. Kuzmeskus is also the primary provider for Conway residents who live farther from Shelburne and closer to Deerfield. Kuzmeskus provides van transportation to Deerfield residents as well.

Residents who are 60 years old or above, or younger residents who have disability and who have registered with the FRTA can use the van services. The Shelburne COA van service operates Monday through Friday, between the hours of 8:00 a.m. and 4:00 p.m., and provides transportation for medical appointments and shopping trips. Medical trips are booked between the hours of 9:00 a.m. and 2:00 p.m. The Shelburne COA offers rides to the Shelburne senior meal site on Mondays, Tuesdays, and Thursdays. Most of the van service provided by the Shelburne COA is local and primarily to neighboring communities or to Greenfield. In addition to its regular demand-response services, the Shelburne COA has a few planned trips each month. For example, each Wednesday morning, the COA has an organized shopping trip to Shelburne Falls, and three Fridays each month, the COA has shopping trips to Greenfield. One Friday per month, the COA makes a shopping trip to Hadley to Wal-Mart and other nearby stores.

Kuzmeskus provides van rides when the Shelburne Council on Aging vans are in use, or otherwise not available. As indicated previously, Kuzmeskus is also the primary paratransit provider for most Conway residents, except for those living near Shelburne. Kuzmeskus operates Monday through Friday between the hours of 8:00 a.m. and 4:30 p.m. Kuzmeskus has designated days and times that are set aside for transportation to the Shelburne meal site and for shopping and medical appointments in Greenfield. For example, Rowe seniors have a bus to take them shopping in Greenfield every Wednesday, and Conway seniors have a shopping trip to Greenfield twice a month.

It is recommended that residents wishing to use the paratransit vans call the Shelburne Council on Aging (413-625-2502) or Kuzmeskus (413-863-2595) at least one to two weeks in advance to schedule their ride. Although rides can be scheduled as late as 24 hours before a trip, the vans have limited staff and high demand, and requests for rides made just before the trip date cannot always be accommodated.

The Shelburne Council on Aging and Kuzmeskus currently charge no fares to van riders, though donations are suggested based on distance, destination, and trip purpose. These donations help defray the cost of these services.

The Shelburne COA leases its vans through the FRTA and the FRTA maintains and insures them. The vans' gas costs are covered by a budget the COA receives from the FRTA. COA van drivers are generally Shelburne town employees. Kuzmeskus owns, maintains, and insures its vehicles. Towns contribute to the paratransit service costs through the regional transit assessments that are issued to municipalities by the Commonwealth. Typically, subsidies from the state and federal governments defray most of the van service expenses, and the local share of costs comprises approximately 20 to 25 percent of the total. The paratransit assessment for each town is based on the net cost of service for rides provided to town residents and incorporates factors including the number of paratransit rides and the distance of the trips provided.

The FRTA van ridership statistics for the past five years show that the annual van usage in the West County area has ranged from 4,517 and 3,775 (87 to 72 rides per week). These statistics include rides provided by the Shelburne Council on Aging and by Kuzmeskus.

The degree of usage of the FRTA's van services vary considerably by community. During Fiscal Year 2007 (July 2006 to June 2007), the town with the highest van usage was Shelburne, with 1,401 rides (27 rides per week); Colrain and Heath has the least van usage, each averaging less than 1 ride per week. For towns without much van ridership, it is possible that a few passengers could be accounting for most of the trips. For example, assuming that a person takes one round-trip per week (equal to 2 one-way rides), that person alone would take approximately 100 rides per year, which is just slightly more than the total number of van rides in FY 2007 for Colrain, Heath, and Hawley combined. In the recent West County transit survey, only 3 percent of respondents (22 people) indicated that they or someone in their household had used a FRTA paratransit van in the past year, and only half of these respondents said they or someone in their household had ridden the van at least monthly or more frequently. Of the few people who reported using the van service at least monthly or at least weekly, over half are from low-income households.

Figure 2: FRTA West County Paratransit Van Ridership, FY 2002 to 2007

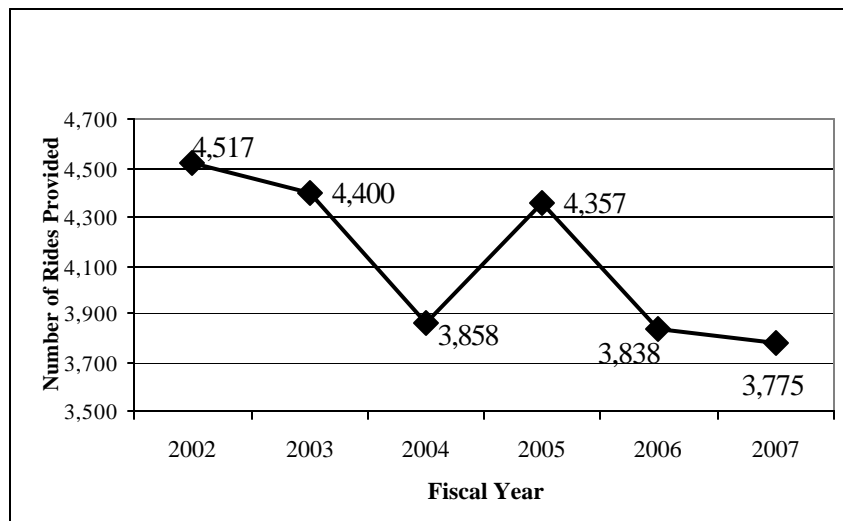
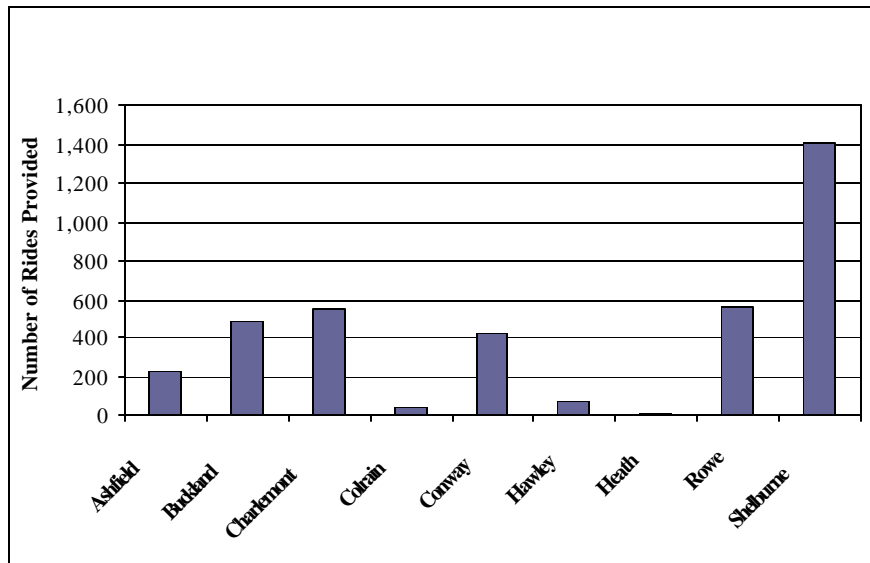


Figure 3: FRTA Paratransit Ridership by Town, Fiscal Year 2007



One possible reason for the low van usage in some communities could be that qualifying residents feel that they do not need the service. Most older residents in the West County area own a car and are able to drive themselves. According to the last U.S. Census (2000), only 10 percent of elderly households (headed by someone age 65 or older) in the West County area do not have their own car. Another possible factor could be the perceived inconvenience of using the van service compared to getting a ride from a family member or neighbor. Van rides need to be arranged at least 24 hours in advance at a minimum, and the van service has limited hours of operation and availability.

In the West County transit survey, 57 respondents (7% of the total) indicated that although they do not use the bus or van services presently, they can see themselves doing so in the future when they are no longer able to drive themselves. Survey respondents also expressed general support for transit services, especially for elderly residents.

Other Transportation Options

Taxi Service

There are two taxi services currently operating in Franklin County. They are Ace Cab and About Town Taxi, both based in Greenfield. Both companies serve all of Franklin County and charge fares based on the distance from Greenfield. There are also few cab companies operating in North Adams in Berkshire County that provide service for western Franklin County. At the public forum held in Shelburne Falls as part of this study, one meeting attendee mentioned that he is considering starting a taxi service based in the West County area.

Ridesharing

The major program to promote ridesharing in Franklin County, and Massachusetts overall, is MassRides, run through the Executive Office of Transportation (EOT). MassRides provides

travel assistance to commuters, employers, students, and other travelers. The program offers information about transportation alternatives, including transit, biking and walking, and helps employers to establish vanpool and carpool options for employee commutes. MassRides also runs a statewide rideshare web site (www.commute.com) which matches people who are interested in sharing rides to work. The Franklin Regional Council of Governments has helped organize community meetings with MassRides representatives to explore rideshare options and opportunities in the region. Most rideshare programs, including those through MassRides, will offer guaranteed rides home to participants in case of emergencies.

The Park and Ride lot in Charlemont was created in part to facilitate ridesharing among West County commuters. Use of the lot has been growing since it was established. A new Park and Ride lot is being planned in the town of Whately near Interstate 91 and the Deerfield town line. This project is listed in the current (Fiscal Year 2008-2011) Franklin Region Transportation Improvement Program of planned transportation projects and is expected to be funded with Congestion Mitigation Air Quality (CMAQ) monies. The establishment of a Park and Ride lot near the I-91 Exit 24 interchange was a recommendation of the Connecticut River Crossing Transportation Study (2004). The creation of the Whately Park and Ride lot will encourage carpooling along the I-91 corridor and to the West County area. The Park and Ride lot will be served by the FRTA's Valley Route which runs between Greenfield and Northampton along Route 5/10. Additional transit services to the lot and to the Route 5/10 corridor through Whately and Deerfield are under consideration. In the West County transit survey, some respondents indicated support for a Park and Ride lot in the South Deerfield/Whately area and said they would use such a lot and then commute by bus to Northampton or Amherst.

Other Van Services for Eligible Residents

In addition to the van services provided through the Shelburne Council on Aging and Kuzmeskus, a few other van transportation options exist for eligible West County residents. Van transportation is offered through the Massachusetts Division of Medical Assistance (DMA), the Massachusetts Department of Mental Retardation (DMR), the Department of Public Health (DPH), and various other State-level human service agencies. The travel that can be funded through these programs is usually limited to a few specific types of trips, such as medical trips or transportation to job training. In addition, riders must meet strict eligibility criteria. Regional transit authorities generally coordinate the transportation services for the State's human service agencies. Transportation services for the DMA, DMR, and DPH in Franklin County are currently coordinated by the FRTA and provided by transportation operators, such as Kuzmeskus, that contract with the FRTA. As mentioned earlier, the Berkshire Regional Transit Authority (BRTA) provides van service for DMA MassHealth clients residing in Monroe.

The FRTA also coordinates transportation for elderly and disabled veterans to medical appointments at Veteran Administration (VA) facilities. The service offers regular weekly (Tuesday/Thursday) van rides to VA facilities, including facilities in Greenfield, Northampton, Worcester, West Roxbury, Jamaica Plain, Boston, and Bedford. The fare for this service ranges from \$1 to \$3 per one-way trip, depending on the distance traveled.

Transportation for medical appointments is also available to Franklin County seniors through the Med-Ride program. The Med-Ride program is sponsored by Franklin County Home Care and the FRTA and provides transportation through volunteer drivers using private automobiles. The

program focuses on providing rides to medical services outside of Franklin County and drivers will sometimes travel all the way to Boston if necessary. The volunteer drivers are paid a mileage stipend by the FRTA and/or Franklin County Home Care. Because the program uses private automobiles, this program is not available to people in wheelchairs or with other serious mobility constraints.

Demographic and Socioeconomic Statistics Relating to Transportation Needs

This section summarizes demographic, economic, and vehicle ownership statistics for the West County region that relate to potential transportation needs. Most of the data presented here come from the 2000 U.S. Census. Results from the West County transit survey are also discussed.

Population and Age Distribution

An examination of the West County area's population trends is important for assessing current transportation services, and for predicting future transportation demand and potential issues. The West County area currently has a population of approximately 12,600 residents (U.S. Census Bureau, 2006 Population Estimates). The largest towns by population are Shelburne and Buckland, followed closely by Conway, Colrain, and Ashfield (Table 2). The smallest towns are Monroe, Rowe, and Hawley.

Table 2: Estimated Population of West County Towns, 2006

Town	Estimated Population
Ashfield	1,800
Buckland	1,991
Charlemont	1,358
Colrain	1,813
Conway	1,809
Hawley	336
Heath	805
Monroe	93
Rowe	351
Shelburne	2,058
West County Total	12,414

Source: U.S. Census Bureau, 2006 Population Estimates.

For transportation planning, it is important to know not only population size, but also the distribution of the population by age group, and how the age distribution is expected to change over time. The rise and fall in the number of people in different age groups can affect the demand for various transportation services. For example, changes in the number of elderly and school children can influence the need for public transportation services. Similarly, changes in the size of the workforce can affect peak commute time travel volumes and the demand for commuter transit routes.

Table 3 gives the population age distribution for the West County area overall and each of the ten towns. Overall 56 percent of the West County population is between 25 and 64 years old, the age group that comprises the bulk of the workforce. An estimated 25 percent of the West County residents are under age 18, six percent are college-age (between age 18 and 24), and 13 percent are elderly (age 65 and over) (2000 U.S. Census).

Table 3: Population Age Distribution, 2000

Town	2000 Population	Percentage of 2000 Population in each Age Group					
		Under Age 5	Age 5-17	Age 18-24	Age 25-64	Age 65-74	Age 75 & Above
Ashfield	1,800	6%	18%	5%	61%	6%	5%
Buckland	1,991	5%	18%	9%	54%	8%	7%
Charlemont	1,358	5%	19%	8%	56%	7%	5%
Colrain	1,813	7%	21%	6%	55%	7%	5%
Conway	1,809	5%	21%	5%	60%	5%	4%
Hawley	336	5%	19%	3%	59%	6%	7%
Heath	805	5%	25%	6%	55%	7%	4%
Monroe	93	11%	13%	0%	49%	16%	11%
Rowe	351	4%	19%	6%	54%	11%	7%
Shelburne	2,058	4%	20%	6%	51%	8%	11%
West County Area	12,414	5%	20%	6%	56%	7%	6%
Franklin County	71,535	5%	18%	8%	54%	7%	8%

Source: U.S. Census Bureau, 2000 Census of Population and Housing.

Table 3 shows that although there are similarities in the age distributions among the towns, there is some variation as well. For example, Heath has the highest percentage of children (30%), and Buckland has the highest level of college-age residents (9%). Ashfield has the largest proportion of residents 25 to 64 years old (61%), and Rowe and Monroe have the highest levels of residents age 65 and over (11% and 16% respectively).

Elderly Population

Following nationwide and statewide trends, the West County area is expected to see a significant increase in the number of elderly residents (age 65 and over) in coming decades as the “Baby boom” generation (born 1946 to 1964) gets older. Baby boomers will begin reaching 65 years of age in 2011, and 75 years of age in 2021. Overall currently, 13 percent of the West County population is age 65 or older, including the 6 percent of the population is age 75 or older. The age 75 and older population segment, which totals approximately 800 people in the West County area, is particularly important from a transportation needs perspective. According to transportation and aging research, 75 years old is the age where people often begin to face significantly more health problems and mobility challenges. The research shows that because of these problems, people in this age group are much less able to drive themselves than are other adults and more likely to be dependent on others for transportation and to need public transit or paratransit services. Nationally, an estimated 40 percent of people age 75 and above are non-drivers. Further, many of the people in this age category who still drive limit their driving and use their cars less than younger drivers. Two-thirds of drivers age 75 and over drive under 5,000 miles annually, more than 60 percent avoid driving at night, and over half avoid driving during peak commute times.⁵

⁵ Zafian, T.M., Master’s Thesis, Improving Transportation Access to Health Care: Addressing the Needs of the Elderly, Massachusetts Institute of Technology, 2000, p. 50. Based on the work of Straight, A., Community Transportation Survey, American Association of Retired People, 1997.

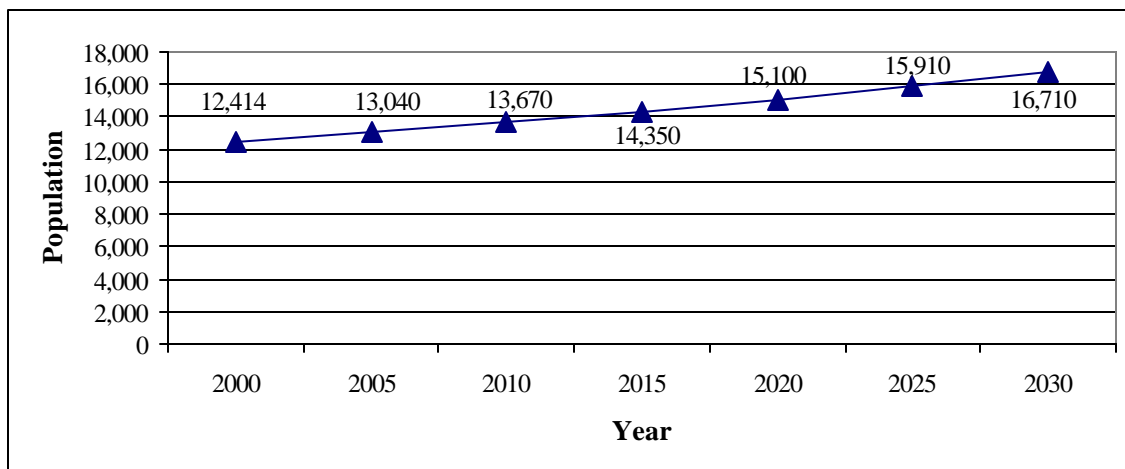
An elderly person’s transportation needs are influenced not only by their own ability to drive, but by whether family members or friends may be available to drive them places if they cannot drive themselves. The decennial U.S. Census collects information on the composition of households and the ages of heads of households that can be used to help explore this topic. The 2000 U.S. Census found that an estimated 70 percent of elderly West County residents (age 65 or over) live in households with other people, and that 24 percent (405 people) live by themselves. The other 6 percent live in group quarters, such as nursing homes.

The 76 percent of elderly residents who live with others may be able to find transportation assistance if they need it within their own residences. However, some of these seniors live in households in which all other residents are all also age 65 or older. An example of such a household could be an elderly couple. The 2000 Census found that there are approximately 630 multi-person households in West County headed by an elderly person. These elderly households and elderly residents who live on their own are the most likely to have unmet transportation needs.

Population Projections

This section discusses population projections for the West County region through 2030. Franklin County and town-level population forecasts to 2030 were created for the 2007 Franklin Region Transportation Plan. The forecasts were developed by the Franklin Regional Council of Governments working in coordination with the Executive Office of Transportation (EOT) Office of Transportation Planning.⁶ The forecasts project that between 2000 and 2030, the population of the West County area will grow to 16,710, an increase of 35 percent (4,300 people) over 2000. In comparison, Franklin County is expected to grow by 26 percent during the same time frame.

Figure 4: Projected West County Population Change, 2000-2030



Sources: U.S. Census Bureau, 2000; Franklin Regional Council of Governments, *Regional Population Projections for 2000-2030*, developed in coordination with the Massachusetts Executive Office of Transportation, 2006.

⁶The population forecasts also build upon the projections for 2000-2020 that were developed by the State Data Center at the University of Massachusetts [which was then part of the Massachusetts Institute of Social and Economic Research (MISER) and is now part of the Donahue Institute], 2003.

Table 4 shows the projected population changes by town for the 2000-2030 period. During this time frame, the greatest numerical population increase is projected for Conway, which is expected to grow by more than 1,440 residents. The largest percentage increases are projected for Conway (80%), and Charlemont (51%), and Hawley (49%). Monroe is the only town expected to lose population between 2000 and 2030.

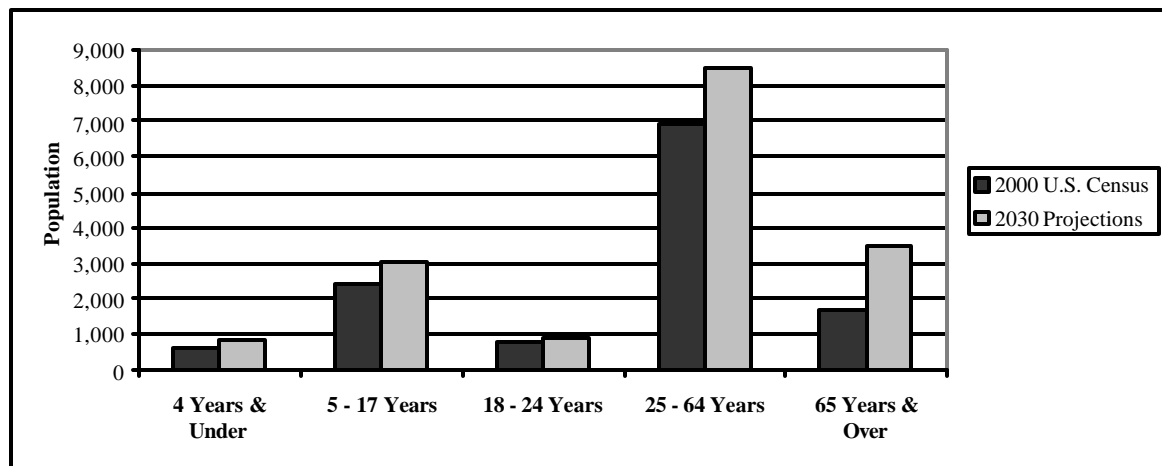
Table 4: Projected Population Change, 2000-2030

Town	Population			Change in Population 2000-2030	
	2000 U.S. Census	2015 Forecast	2030 Forecast	Number	Percentage
Ashfield	1,800	2,150	2,560	760	42%
Buckland	1,991	2,050	2,100	109	6%
Charlemont	1,358	1,670	2,050	692	51%
Colrain	1,813	2,040	2,300	487	27%
Conway	1,809	2,430	3,250	1,441	80%
Hawley	336	410	500	164	49%
Heath	805	960	1,140	335	42%
Monroe	93	60	50	-43	-46%
Rowe	351	400	450	99	28%
Shelburne	2,058	2,180	2,310	252	12%
West County Area	12,414	14,350	16,710	4,296	35%
Franklin County	71,535	80,000	90,100	18,565	26%

Sources: U.S. Census Bureau, 2000; Franklin Regional Council of Governments, *Regional Population Projections for 2000-2030*, developed in coordination with the Massachusetts Executive Office of Transportation, 2006.

During the 2000-2030 period, it is also expected that the population's age distribution will shift significantly (see Figure 5) and that a major trend will be a growing proportion of elderly residents (age 65 and over). Between 2000 and 2030, the number of elderly residents age 65 and over in the West County area is projected to increase 103 percent to 3,385, and this cohort's share of the total population is expected to grow from 13 percent (2000) to 20 percent (2030).

Figure 5: Population Age Distribution for the West County Area, 2000 and 2030



Sources: U.S. Census Bureau, 2000; FRCOG, *Regional Population Projections for 2000-2030*, developed in coordination with the Massachusetts Executive Office of Transportation, 2006.

The projections suggest that the six of the ten towns in the West County area will see their populations of elderly residents more than double between 2000 and 2030 period. In 2030, Shelburne and Conway are forecasted to have the largest elderly populations, each with over 500 residents age 65 and over. The greatest percentages of elderly residents as part of a town’s total population are expected for Buckland, Monroe, Rowe, and Shelburne. In each of these towns, elderly residents age 65 and over are projected to account for at least 24 percent of the total town population in 2030.

The expected growth in the number of elderly residents is an important consideration in planning future transportation services, since elderly populations are large users of transit and paratransit services.

Other age groups besides the elderly are all projected to grow between 22 percent and 32 percent during the 2000-2030 period. This may also increase the demand for transit services.

Prevalence of Disabilities

The U.S. Census collects basic information regarding residents with disabilities.⁷ Data on the prevalence of disabilities among West County residents are presented in Table 5. The table excludes people living in institutionalized settings, such as long-term medical or care facilities (In 2000, the West County area is estimated to have 100 such residents, most of them living in

⁷ The U.S. Census Bureau considers people 5 years old and over to have a disability if they have a physical, mental, or emotional condition lasting more than 6 months which is characterized by “one or more of the following: (1) blindness, deafness, or a severe vision or hearing impairment; (2) a substantial limitation in the ability to perform basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying; (3) difficulty learning, remembering, or concentrating, (4) difficulty dressing, bathing, or getting around inside the home. In addition to the above criteria, people 16 years old and over are considered to have a disability if they have difficulty going outside of the home alone to shop or visit a doctor’s office, and people 16-64 years old are considered to have a disability if they have difficulty working at a job or business” (U.S. Census Bureau, Technical Documentation 2000 Census, 2002).

nursing homes). Overall, an estimated 18 percent of West County residents age 16 and over report having a disability.⁸ The proportion of West County residents with disabilities is comparable to that for Franklin County as a whole; an estimated 18 percent of county residents age 16 and over report having a disability.

Table 5: Prevalence of Disabilities in the West County Region**

Age Group	Total Population	Number with Disabilities	Percent with Disabilities	Types of Disability (% of Population in Age Group)*			
				Sensory Disability	Physical Disability	Mental Disability	Go Outside the Home Disability
Age 5 to 15	1,983	138	7%	< 1%	2%	6%	---
Age 16 to 64	8,110	1,105	14%	3%	5%	4%	3%
Age 65 & Over	1,568	641	41%	16%	27%	11%	18%
Age 5 & Over**	11,661	1,884	16%	4%	8%	5%	5%
Age 16 & Over	9,678	1,746	18%	5%	11%	6%	7%

*A person can have multiple disabilities and can be counted in more than one disability category.

**The Census Bureau does not track disabilities in children under age 5, and or in people of any age who live in an institutionalized setting, such as group home or nursing home.

Sources: U.S. Census Bureau, Census of Population and Housing, 2000.

Disabilities are more prevalent among older residents. Among West County residents age 65 to 74, 25 percent report having a disability. Among older elderly age 75 and over, 60 percent have a disability. The primary disabilities among the elderly are physical disabilities that affect mobility; physical disabilities are experienced by 27 percent of West County residents age 65 and over. The U.S. Census provides little qualitative data regarding the severity of these disabilities. However, for older age groups, disabilities are likely to be more significant and the occurrence of a disability is more likely to affect their transportation options, including the ability to drive and the ability to take the bus.

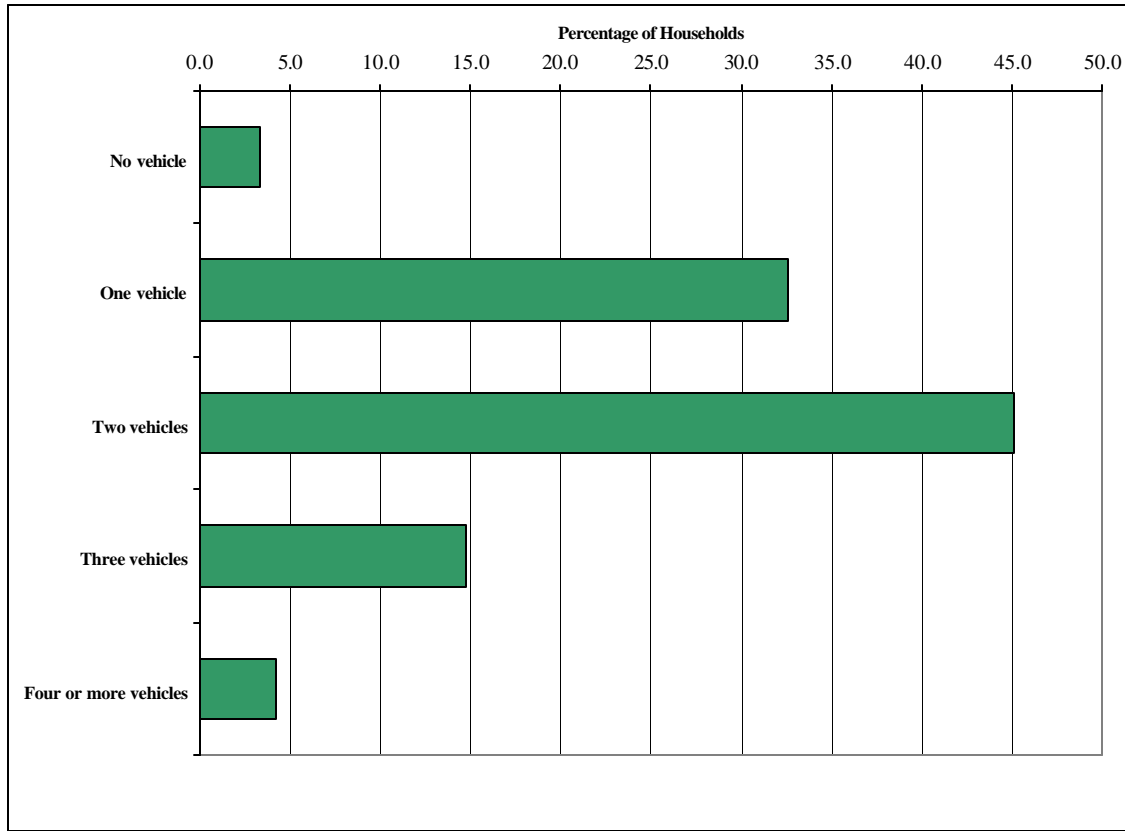
Vehicle Ownership

The U.S. Census gathers data on household vehicle ownership and access, including by householder age. The Census information for West County towns shows a very high level of household vehicle ownership (Figure 6). Automobiles, vans, and trucks with a 1 ton capacity or less are included in the Census statistics. An estimated 97 percent of West County households have one such vehicle or more, with 64 percent having two vehicles or more.

The Census estimates that 163 West County households (3%) do not have their own vehicle, compared to 8% of households in Franklin County overall. The level of higher car ownership in the West County area reflects the area's lower level of transit services. As shown in Table 6, the West County town with the highest number of car-less households is Shelburne. Over two-thirds (68%) of the car-less West County households are elderly households (headed by someone age 65 or over). Vehicle ownership becomes even less common especially among older elderly households headed by someone age 75 or older. These statistics reflect the increasing disabilities and declining driving abilities of older seniors.

⁸ Age 16 is the age at which Massachusetts residents are eligible for a driver's learner permit and can begin driving.

Figure 6: Motorized Vehicle Ownership among West County Households



Motorized vehicles include automobiles, vans, and trucks with 1 ton capacity or less.

Source: U.S. Census Bureau, 2000 Census of Population and Housing.

Table 6: Households without Motorized Vehicles

Town	All Households			Elderly Households headed by someone age 65 or older		
	Household without a Vehicle	Total Households	Percentage	Elderly Households without a Vehicle	Total Elderly Households	Percentage
Ashfield	16	742	2%	14	130	10%
Buckland	23	779	3%	15	194	8%
Charlemont	21	541	4%	12	107	11%
Colrain	18	684	3%	10	168	6%
Conway	7	692	1%	1	94	1%
Hawley	12	136	9%	10	33	30%
Heath	6	294	2%	6	55	11%
Monroe	2	28	7%	2	11	18%
Rowe	4	153	3%	2	41	5%
Shelburne	54	826	7%	39	232	17%
West County Total	163	4,875	3.3%	111	1,065	10%
Franklin County	2,285	29,466	7.8%	1,020	6,719	15%

Total Households figures are based on the sample of households with available data.

Source: U.S. Census Bureau, Census of Population and Housing, 2000.

In the recent West County transit survey, 2 percent of responding households indicated that they had no car. Another 17 percent of respondents indicated that they had at least one car, but fewer cars than the number of adults. This second group of households may experience transportation problems when the adults need to travel to different locations at the same time and there are no other transportation options available.

Income

Even though almost all West County households have a car (97%) and 64 percent have two cars (2000 U.S. Census), some households have transportation access issues related to the costs of car ownership. Owning a car is expensive. Current (2007) estimates from the American Automobile Association (AAA) place the cost of car ownership, including maintenance, insurance, car payments, and gasoline at 41-67 cents per mile, depending on car size, when driving 15,000 miles annually. The average cost for all cars is 52 cents per mile. Assuming vehicle costs of 52 cents per mile, someone who drives 15,000 miles per year will spend \$7,800 annually; and someone who drives 5,000 miles per year will spend \$2,600 annually. Driving 15,000 miles per year is equivalent to approximately 300 miles per week. Paying the expenses related to car ownership and usage can be challenging to households with limited or fixed incomes, including elderly households.

Table 7 shows the number and percentage of low-income households by town. Low-income households are defined as having incomes of less than \$25,000 per year. Overall, 22 percent of West County households (1,074 households) are considered to be low-income. The towns with the highest percentages of low-income households are Charlemont, Colrain, Hawley, Monroe, and Shelburne. In each of these towns, at least 25 percent of the households are low-income households.

Table 7: Low-Income Households and Level of Poverty

Town	Total Households	Low-income Households (1999)	Percentage	Households Living Below the Poverty Level (1999)	Percentage
Ashfield	735	131	17.8%	49	6.7%
Buckland	784	145	18.5%	63	8.0%
Charlemont	536	155	28.9%	51	9.5%
Colrain	696	173	24.9%	43	6.2%
Conway	696	89	12.8%	33	4.7%
Hawley	138	51	37.0%	22	15.9%
Heath	288	64	22.2%	36	12.5%
Monroe	28	13	46.4%	6	21.4%
Rowe	154	23	14.9%	4	2.6%
Shelburne	813	230	28.3%	85	10.5%
West County Total	4,868	1,074	22.1%	392	8.1%

Total households figure is based on the sample of households with available data.

Low-income household is defined as a household with an annual income under \$25,000.

Source: U.S. Census Bureau, Census of Population and Housing, 2000.

Table 7 also shows the number of very low-income households, defined as households living below the poverty level. Poverty status is established using federal income thresholds that vary according to family size and composition. In 2006, the poverty income threshold set by the U.S. Department of Health and Human Services stood at \$13,200 for a household of two people and \$20,000 for a household of four. Overall, 8 percent of West County households have incomes below the poverty level. These very low-income households have the most trouble affording their basic expenses, including for transportation. The Franklin Regional Council of Governments' Environmental Justice activities focus on outreach to low-income households, especially households living below the poverty level, and on identifying and addressing the transportation issues facing this population, including the need for access to transit services.

Table 8 summarizes household incomes in West County households by householder (head of household) age. Income levels are lowest among young households (headed by someone under age 25), and among elderly households (headed by someone age 65 or older), with 42 percent and 40 percent respectively of households in these categories being low-income. In contrast, 17 percent of households headed by someone age 25 to 64 are low-income. Low-income households are the most likely to have difficulties related to transportation costs, and to the expenses of car ownership and maintenance. The results of the West County transit survey showed that 46 percent of households who take the West Route bus at least weekly fall into the low-income category (among respondents who indicated their household income).

Table 8: Households by Income Level, by Householder Age, in the West County Area

Income Level (1999)	Total		Age of Householder (Head of Household)							
			Age 16 to 24		Age 25 to 44		Age 45 to 64		Age 65+	
	#	%	#	%	#	%	#	%	#	%
Low Income (Under \$25,000)	1074	22%	47	42%	272	16%	344	17%	411	40%
Moderate Income (\$25,000 - \$39,999)	969	20%	31	27%	325	19%	340	17%	273	26%
Middle Income (\$40,000 - \$74,999)	1844	38%	30	27%	788	47%	765	37%	261	25%
Upper Income (\$75,000 & Above)	981	20%	5	4%	295	18%	590	29%	91	9%
Total	4,868	100.0%	113	100.0%	1,680	100.0%	2,039	100.0%	1,036	100.0%

Source: U.S. Census Bureau, Census of Population and Housing, 2000.

Travel Patterns in Western Franklin County

This section discusses travel patterns in the West County area, and reviews journey to work and employment data. One of the major functions of transit services in Franklin County is to provide transportation access to jobs and to employment training and education.

Travel to Work

The decennial U.S. Census is the primary source of information on workers' commute travel. The U.S. Census collects data on the principal travel mode people use for their trips to work, the time of day they leave home for work, the length of their commutes, and the location of their employment.

Mode of Travel to Work

The automobile is the primary mode for travel to work for West County residents and Franklin County residents overall. In 2000, 87 percent of West County's employed residents commuted to work by car, with 77 percent driving to work alone and 10 percent carpooling. In comparison, statewide in 2000, 83 percent of workers commuted to their jobs by car. Less than 1 percent of employed West County residents took transit to work, another 4 percent walked or biked to their job, and 8 percent worked from home. Working from home was the most prevalent in the towns of Ashfield, Conway, Hawley, and Rowe; in each of these towns, at least 11 percent (or 1 out of 9) employed residents work from home.

Location of Employment

Many working West County residents are employed at jobs within Franklin County. In 2000, approximately 71 percent of employed West County residents worked within the county, including 21 percent who worked in their own towns. The majority of West County residents commuting to jobs outside of Franklin County work in Hampshire County (16% of employed residents), and towns such as Northampton and Amherst. Other working West County residents have jobs in Hampden County (5% of employed residents), Berkshire County (2%), or outside of Massachusetts (4%), such as in Vermont.

Table 9 shows the top four primary job locations for residents living in each West County town, and gives the percentage of working residents with jobs based in each. For example, 25 percent of working Ashfield residents have jobs based in Ashfield, and 15 percent have jobs in Northampton. As mentioned above, a large percentage of working residents in each town work in that community, including those residents who work from home.

Table 9: Primary Employment Locations for West County Residents, by Town

Town	Employed Residents	Top Four Primary Job Locations with Percentage of Working Residents for Each Town Employed in Each			
		#1	#2	#3	#4
Ashfield	1,027	Ashfield (25%)	Northampton (15%)	Greenfield (7%)	Amherst (7%)
Buckland	1,093	Greenfield (23%)	Buckland (23%)	Shelburne (12%)	Deerfield (8%)
Charlemont	727	Greenfield (20%)	Charlemont(18%)	Shelburne (8%)	Deerfield (6%)
Colrain	910	Greenfield (23%)	Colrain (21%)	Shelburne (7%)	Montague (6%)
Conway	1,057	Conway (17%)	Greenfield (13%)	Northampton (12%)	Deerfield (10%)
Hawley	162	Greenfield (22%)	Hawley (20%)	Deerfield (7%)	Shelburne (7%)
Heath	444	Greenfield (23%)	Heath (20%)	Shelburne (6%)	Buckland (5%)
Monroe	19	North Adams (21%)	Monroe (21%)	Williamstown (16%)	Charlemont (11%)
Rowe	177	Rowe (31%)	Greenfield (15%)	Deerfield (5%)	Heath (5%)
Shelburne	1,034	Greenfield (26%)	Shelburne (23%)	Buckland (7%)	Montague (6%)
West County Total	6,650	Greenfield (19%)	Shelburne (10%)	Buckland (7%)	Northampton(7%)

Source: U.S. Census Bureau, Census of Population and Housing, 2000.

For the West County area overall, the top work destination is Greenfield, with an estimated 19% (1,248) of working West County residents commuting there regularly (Table 10). Greenfield is the major center of employment and business activity in Franklin County, and has an employment base of just over 10,500 workers. Of the 57 employers with 100 or more employees in Franklin County, 23 are located in Greenfield.

Other primary commuting destinations from the West County area are Shelburne (10% of employed West County residents), and Buckland (7%). Outside of West County, other top destinations are Northampton (7%), Deerfield (6%), and Amherst (5%). Each of these communities also has a large employment base. Deerfield has an estimated 3,500 workers and 10 businesses with more than 100 workers. Franklin County’s largest single employer, Yankee Candle, employs more than 1,000 workers between its Deerfield and Whately facilities. Amherst, with an estimated employment base of 23,500 workers, has a large downtown, and is home to three colleges; the biggest of which is the University of Massachusetts (UMass); UMass has a staff of 5,300 employees and a total of 26,000 undergraduate and graduate students. Northampton has an employment base of 20,000 workers, and includes Smith College and large commercial and retail areas downtown and along Routes 5/10 and Routes 9 outside of the downtown.

At the public forum held in Shelburne Falls as part of this study, some attendees questioned whether the commuting data from the 2000 U.S. Census is accurate; for example, they believe that that more West County residents are commuting to jobs in Hampden and Hampshire Counties than indicated. The Franklin Regional Council of Governments (FRCOG) believes that although the figures might have changed slightly since 2000, the general commute patterns reported by the 2000 Census still hold true. Since 2000, one town that is predicted to have had an increase in commuters from Franklin County, including the western part of the county, is Hadley in Hampshire County. In the past seven years, a number of large employers and retail establishments have located in Hadley and new retail and business complexes are planned or

currently under development. Given current employment trends, long-term, there is also expected to be more commute travel from western Franklin County to Amherst and Northampton.

Table 10: West County Residents Working in Employment Centers

Centers of Employment	Total Employment Level (Number of Workers)	Number of Workers from the West County Area*	% of All Employed West County Residents
Franklin County			
Greenfield	10,509	1,248	18.8%
Shelburne	932	672	10.1%
Buckland	667	444	6.7%
Deerfield	3,456	377	5.7%
Montague	2,988	228	3.4%
Whately	1,846	161	2.4%
Hampshire County			
Amherst	23,501	323	4.9%
Hadley	4,092	62	1.5%
Northampton	20,037	433	6.5%
Berkshire County			
North Adams	6,644	33	0.5%
Pittsfield	20,846	32	0.5%
Hampden County			
Holyoke	21,941	52	0.2%
Springfield	76,745	143	2.2%
West Springfield	16,311	20	0.1%
Westfield	18,085	49	0.3%

*For West County towns, these counts include employed residents who work from home or elsewhere in their communities.
Source: U.S. Census Bureau, Census of Population and Housing, 2000.

There are a few employment centers in the West County area, such as Buckland and Shelburne. Most of the employers, however, are small, and there is only one employer in western Franklin County with more than 100 workers: the Mohawk Trail Regional School District. There is only a limited flow of workers from outside western Franklin County commuting to the West County area, and an estimated two-thirds (67%) of people with jobs in West County live in West County (2000 Census). The town outside of western Franklin County with the most residents traveling to work in western Franklin County is Greenfield; an estimated 270 Greenfield residents make this commute.

Transit Service to Employment Centers

The FRTA has bus service to Greenfield through the West Route, which has one morning and one afternoon roundtrip from Greenfield to Charlemont when the Academy at Charlemont is in session (approximately 150 days per year). As indicated in Table 1, the afternoon bus leaves Greenfield for Charlemont at either 2:15 p.m. or 4:35 p.m. depending on time of year and day of

the week. This varying afternoon run schedule makes it difficult for commuters to use the bus for their travel to work, to educational classes or training.

The FRTA has transit service to Deerfield and Northampton through its Valley Route, to Turners Falls, Athol, and Orange through the GLink, and to Amherst through the Amherst Route that serves the University of Massachusetts. However, none of these routes link well to the West Route for commute travel, even during the part of the year that the West Route is in operation.

Although it is possible to take the West Route to Greenfield and then transfer to the Valley Route or GLink, the times of the bus runs are not good for most workers. Someone transferring to the Valley Route in the morning would reach downtown Northampton at 9:50 a.m. and would have to leave at 3:00 p.m. to take the bus back to Greenfield to catch the later afternoon run (4:35 p.m.) for the West Route. On the days when the West Route leaves Greenfield at 2:15 p.m. there is no connection to the Valley Route in the afternoon. Similarly, someone taking the West Route in the morning and transferring to the GLink to reach Orange Center would arrive in Orange at 9:37 a.m. and would need to take the bus back to Greenfield at 11:37 a.m. to connect to the early time of the afternoon West Route bus, or at 1:22 p.m. to connect to the 4:35 p.m. West Route bus. There are also challenges with connecting from the West Route to bus service to Turners Falls and Millers Falls.

Transferring from the West Route to the Amherst Route, or vice versa, is not possible in either the morning or the afternoon. The Amherst Route has one morning and one afternoon run. The morning West Route bus arrives in Greenfield at 8:30 a.m., but the Amherst Route bus leaves Greenfield for the University of Massachusetts at 6:50 a.m. There is also no way to connect between the afternoon runs of the two routes.

Offering additional runs of these bus routes and improving riders' ability to transfer between the routes would increase their utility for West County commuters. It would also provide West County residents better access to jobs outside of western Franklin County. Expanded transit services would also offer West County residents better transportation access to the region's educational institutions, including Greenfield Community College and the University of Massachusetts, as well as job-related training.

Other Travel

Limited information is available regarding residents' travel patterns for trips besides commutes to and from work. It is generally estimated that nationwide, approximately half of all trips are for work commutes. Other important trip functions include travel to school and college, to essential services such as health care, and for shopping. The same communities which serve as major employment centers in the greater region, including Greenfield, Amherst, and Northampton are also the major centers for other activities such as education, health care, and shopping. Expansions to transit services to assist commuters and enhance access to jobs will help facilitate trips for these other purposes as well, particularly for residents who rely on the bus for their primary travel.

Evaluating the Interest in Expanded Transit Services

The expansion of transit access and services in western Franklin County has been identified as a priority in a number of regional studies, including the 2007 Franklin Region Transportation Plan. The focus of this study is to gather additional data on residents' interest in and need for expanded transit services. The information collected for this study will be used to design and advocate for future transit service expansions and enhancements, as well as to improve current services. Earlier, this report summarized data from the U.S. Census and other sources regarding demographic characteristics, economic factors, and commute patterns which influence the demand and need for transit services. Two other important sources of information are the results of the West County transit survey, and the comments received at the public forum on West County transit services held in Shelburne Falls. The survey and public forum are both an integral part of this study. Their key findings are summarized in this section. More comprehensive results are included in the report appendix, and in Volume II of the report. Volume II contains a full listing of the comments submitted through the transit survey. Approximately two-thirds of the surveys that were returned (515 surveys of the 777 surveys returned) included comments from the respondents regarding their thoughts on how transit services could be improved and what bus route changes would likely lead them to take the bus more frequently.

West County Transit Survey

The West County transit survey was mailed to households in western Franklin County during the last week of July 2007. The survey was developed by the FRCOG and reviewed by the FRTA before mailing. The cover letter accompanying the survey was signed by the chair of the Franklin Regional Planning Board, Thomas Miner, and by the chair of the Franklin Regional Transit Authority Board, Leo Parent, Jr. A copy of the survey is provided in the appendix. The mailing was designed to reach as many households as possible in the West County towns of Ashfield, Buckland, Charlemont, Colrain, Conway, Hawley, Heath, Monroe, Rowe, and Shelburne. Commercially available mailing address databases were used to create the mailing list, which included both street addresses and post office boxes. In total, the survey was sent to an estimated 5,625 households.

Each mailed survey included a return envelope with paid postage, to increase the response rate. Recipients were asked to send back the survey by August 20, 2007. Many surveys were returned by that date, and more were sent back later. As of September 25, 2007, a total of 777 surveys had been returned, for an overall response rate of 14 percent.

The West County transit survey contained eight questions and asked West County households about the following:

- Their town of residence,
- Number of adults in the household,
- Number of children under age 18 in the household,
- Number of cars owned by the household,
- Household income,
- Household’s current level of use of FRTA bus and van services, and the
- Expected likely impact of potential future transit service improvements (e.g. such as longer hours of service) on the household’s bus usage (2 questions).

This section focuses on the responses to the survey’s questions regarding potential future transit service improvements. Question #6 asked specifically about ten potential service changes and how often household members might ride the bus as a result of each of the changes. Provided answers were: “More than Weekly”, “Weekly”, “Monthly”, “A Few Times Per Year”, “Would Not Take the Bus/Van More than Now”, and “Not Sure.”

Table 11: Number of Survey Respondents Who Might Ride the Bus at Least Weekly or Monthly as a Result of Potential Service Changes

Potential Service Change	How Often Household Member(s) Would Likely Ride the Bus as a Result of the Potential Service Change					
	At Least Weekly	Percentage*	Monthly	Percentage*	Monthly or More Frequently	Percentage*
Expansion of bus service along Route 2 west (Greenfield-Charlemont) from school-year service to year-round	93	12.7%	27	3.7%	120	16.4%
Longer weekday hours for bus service along Route 2 west from Greenfield to Charlemont	94	12.9%	27	3.7%	121	16.6%
More frequent weekday bus service along Route 2 west from Greenfield to Charlemont	105	14.4%	30	4.1%	135	18.5%
Weekend bus service along Route 2 west from Greenfield	56	7.7%	32	4.4%	88	12.1%
Regular bus stop at the Park & Ride Lot in Charlemont	46	6.3%	17	2.3%	63	8.6%
Regular bus stop at Mohawk Trail Regional School	49	6.7%	19	2.6%	68	9.3%
Other additional bus stops	69	9.5%	20	2.7%	89	12.2%
Bus service to areas off of Route 2 and to other parts of Franklin County	92	12.6%	37	5.1%	129	17.7%
Better connection between the FRTA’s Route 2 West Route and other FRTA bus routes	74	10.1%	33	4.5%	107	14.7%
Increased van services for seniors and residents with disabilities	67	9.2%	14	1.9%	81	11.1%

*Percentages are based on the number of survey respondents who answered at least part of the survey question (Question 6).
Source: West County Transit Survey Results, 2007.

Table 11 gives the number of survey respondents who indicated that a household member might ride the bus at least weekly or monthly as a result of each potential service change. The highest weekly and monthly bus usage percentages in Table 11 occurred for the following changes:

- Weekday changes to the West Route, including longer hours of service, more frequent service, and a change from school year to year-round buses;
- Bus service to areas off of Route 2 and to other parts of Franklin County; and
- Better connections between the West Route and other bus routes.

Many of the respondents who indicated that they or another household member might take the bus as a result of these potential changes are of low or moderate-income and/or have limited access to a car. This suggests that the main beneficiaries of these service changes would be low and moderate-income households, and that these service changes would help create a more equitable and just transportation system for West County residents, and for Franklin County overall.

Table 12: Low and Moderate-Income Households Who Might Ride the Bus at Least Weekly as a Result of Selected Potential Service Changes

Potential Service Change	Might Take the Bus at Least Weekly (Count)	Number With Household Income Data	Household Income Category, Percentage in Each Category, for each Service Change (based on Households with Income Data)			
			Very Low Income (Under \$10,000)	Low Income (\$10,000-\$24,999)	Moderate Income (\$25,000 - \$39,999)	Low & Moderate Income (Under \$40,000)
Expansion of bus service along Route 2 west from school-year service to year-round	93	70	1.4%	22.9%	22.9%	47.2%
Longer weekday hours for bus service along Route 2 west	94	71	2.8%	28.2%	23.9%	54.9%
More frequent weekday bus service along Route 2 west	105	76	2.6%	23.7%	22.4%	48.7%
Bus service to areas off of Route 2 and to other parts of Franklin County	92	72	2.8%	22.2%	25.0%	50.0%
Better connection between the FRTA's Route 2 West Route and other FRTA bus routes	74	54	3.7%	29.6%	22.2%	45.5%

Source: West County Transit Survey Results, 2007.

Each of the top five bus service changes with the highest survey respondent support is listed in Table 12 along with household income data. The table shows that for each of the service changes, the percentage of low and moderate income households who might use the bus at least weekly ranged from 45 percent to 55 percent. These figures demonstrate the importance of the bus services and the potential bus changes for low and moderate residents.

Table 13 looks at the same five service changes and how they might impact households with limited car access. The table shows that for each of the service changes, the percentage of households with limited car access who might use the bus at least weekly ranged from 23 percent to 32 percent.

Table 13: Households with Limited Car Access Who Might Ride the Bus at Least Weekly as a Result of Selected Potential Service Changes

Potential Service Change	Might Take the Bus at Least Weekly (Count)	Number With Data on Number of Cars and Adults	Number of Cars for Household, Percentage in Each Category, for each Service Change (based on Households with Data Available)		
			No Car	Have Car(s), but Fewer than 1 Car per Adult*	Have Fewer than 1 Car per Adult Total
Expansion of bus service along Route 2 west (Greenfield-Charlemont) from school-year service to year-round	93	85	2.4%	29.4%	31.8%
Longer weekday hours for bus service along Route 2 west from Greenfield to Charlemont	94	82	4.9%	20.7%	25.6%
More frequent weekday bus service along Route 2 west from Greenfield to Charlemont	105	92	4.3%	20.7%	25.0%
Bus service to areas off of Route 2 and to other parts of Franklin County	92	82	3.7%	19.5%	23.2%
Better connection between the FRTA's Route 2 West Route and other FRTA bus routes	74	63	3.0%	29.2%	32.2%

*It is assumed that in households with 4 or more cars and 4 or more adults, that each adult has adequate access to a car.
Source: West County Transit Survey Results, 2007.

One question on the survey asked respondents to write a brief description of the specific changes in bus service that would lead their household to take the bus more often. These written responses supported the survey's quantitative results. The comments indicated an interest and support for the following transit service changes: expanded hours of operation and runs for the West Route, more bus stop locations along the West Route, bus service to West County communities not currently served by the West Route, and better transit service and connections to destinations in Hampshire County (such as Northampton and Amherst) and elsewhere in Franklin County.

Increasing the number of runs for the West Route and expanding the West Route's hours, particularly in the afternoon, when for much of the year the bus leaves Greenfield for Charlemont at 2:15 p.m. would make the West Route more useful for West County residents. These changes would also improve the connectivity between the West Route and some of the FRTA's other bus routes without any major changes to those other routes' schedules.

In terms of bus services off of Route 2, survey respondents generally focused on creating and enhancing bus services to their own communities. There was also significant interest expressed in having a new bus route run along Route 116 from Ashfield and Conway to South Deerfield or a Park and Ride Lot in South Deerfield that would make it easy to transfer to FRTA or PVTA buses going to Amherst and Northampton. As mentioned earlier, a Park and Ride Lot site in Whately near South Deerfield is currently under design and its construction is listed in the current Franklin Region Transportation Improvement Program of planned transportation projects for the 2008-2011 period.

Paratransit Services

An estimated 9 percent of survey respondents indicated that they might use the FRTA paratransit van services for seniors and residents with disabilities at least weekly, if these services were increased. Another 6 percent said that although they were still able to drive and did not need paratransit services at the current time, they expected to use them more as they get older. The survey results show good support for expanded transit services for seniors and disabled residents, even among those survey respondents did not support bus services in the West County area more generally.

Half of the survey respondents (51%) who indicated that they might use the van services at least weekly were from three communities, Charlemont, Ashfield, and Conway. Another 25 percent were from Buckland, Shelburne, or Shelburne Falls. Of all these communities, Conway residents currently have the least amount of van service access, particularly those residents who live closer to Deerfield than Shelburne and who therefore rely on F.M. Kuzmeskus as their primary transportation provider. Kuzmeskus has just two days scheduled each month for Conway residents to use van service. On those days, Conway residents can go to Greenfield for shopping and appointments. On the survey, some Conway elderly residents indicated that they wish they had more frequent service, a few also mentioned that they wish there were trips to Shelburne Falls and the Shelburne Senior Center.

Other Comments and Suggestions on the Transit Survey

The last question on the transit survey asked people to write in any other comments or suggestions they had regarding bus services in western Franklin County. Approximately 41 percent of survey respondents (317 people) provided other comments. The full listing of these comments is contained in Volume II of this report. The comments generally fell into a few categories. The most common type of comment showed support for expanded transit services in the western Franklin County. Some people said that they thought transit services were very important, even if they do not take the bus themselves. A number of people made specific comments regarding the current bus services, and other made suggestions for future service improvements.

There were a significant number of people (13% of those wrote comments) who had questions about the current West Route schedule, such as when and where the bus runs, and about the FRTA other buses, and/or who thought that the transit system needs more publicity. Some people said that until they received the transit survey, they weren't aware of the West Route service; others mentioned that they had thought the West Route was only for students. It is clear from these responses that more publicity and outreach about the current bus routes is needed.

Residents will be unlikely to ride the FRTA buses, including the West Route, if they do not know anything about them or when they run.

Input and Comments from the Public Forum

A public forum regarding transit services in western Franklin County was held in Shelburne Falls on the night of Wednesday, August 15, 2007. The Franklin Regional Council of Governments (FRCOG) coordinated the forum. Approximately 40 people attended, including West County residents, members of the FRTA Advisory Board, staff of the FRCOG and FRTA, and other interested parties.

Prior to the public forum, the FRCOG conducted extensive publicity for the forum in conformance with the Public Participation Plan adopted by the Franklin County Transportation Planning Organization (TPO) in 2007. The FRCOG serves as the staff for the TPO. The public forum flyer (contained in the appendix) was distributed to town offices, libraries, and Councils on Aging in West County towns. The flyer was also mailed to members of the TPO, relevant FRCOG Boards, and interested environmental organizations, agencies whose clients are primarily low-income residents or disabled residents, local media outlets, federal and state legislative representatives, the Executive Office of Transportation, the Federal Highway Administration, and the Massachusetts Highway Department. The public forum was also promoted through a notice on the West County transit survey. News articles about the public forum and transit survey appeared in local papers before and after the date of the forum. Some of the articles are shown in the appendix of this report.

The attendees at the forum expressed the same main issues and recommendations regarding West County transit services as the people who completed the transit survey. The focus of the forum discussion was the need for a West Route bus schedule that is not entirely based on the Academy at Charlemont calendar and schedule of after-school activities. Forum attendees supported having year-round bus service to the West County area, more bus runs each weekday, longer hours of service, and more stops along Route 2. It was mentioned that it is particularly important for the West Route to have a consistent afternoon time and not vary by season and day of the week; both riders and potential riders have been confused by the changing schedule.

Other ideas for transit changes mentioned at the forum included better bus connections to destinations elsewhere in Franklin County and outside of Franklin County (such as Northampton, Amherst, Springfield, Brattleboro, and Boston), more bus services within the West County area, and more van services for seniors and disabled residents, especially for medical appointments. Forum attendees also emphasized the need for more publicity and information about the bus system and the bus schedules, and suggested a number of ways to publicize the current transit services, including through West County newspapers, town and regional web sites, and through posting the schedules at various locations in Greenfield and the West County area.

Transit Service Recommendations

The following recommendations are proposed to help improve transit services and transit access in the West County area. These recommendations are based on this study's analysis of current bus services, demographic and economic data, and on results of the West County transit survey and the public forum. The recommendations are grouped into short-term and longer-term recommendations.

Short-Term Recommendations

West Route

- Pursue funding to increase the West Route's number of round trips from Greenfield from two trips to three trips per weekday, with the added trip occurring in the afternoon. This change would help eliminate the need to vary the time of the afternoon bus, and the schedule consistency would make the West Route more accessible to West County residents and would encourage bus ridership.
- Consider additional increases in the West Route's number of weekday runs and expanding its hours of operation.
- Consider potential locations for additional bus stops in Shelburne Falls and along Route 2, factoring in safety concerns, the usefulness of the locations for bus riders, and the stops' impacts on the route schedule; then, propose the most suitable locations for new stops.
- Install bike racks at key bus stop locations to facilitate multimodal travel.

Connectivity

- Examine the schedules of all the FRTA bus routes to see if minor time changes could promote the connectivity between routes including the West Route, and make minor adjustments as feasible.
- Assist the Executive Office of Transportation and MassHighway with the development of the Park and Ride lot that is planned for Whately near South Deerfield and Interstate 91.
- Coordinate between the FRTA and the Pioneer Valley Transit Authority (PVTA) and investigate options for providing the planned Whately Park and Ride lot with transit services, and for improving the connection between FRTA and PVTA bus routes to South Deerfield and Sunderland.

Paratransit Services

- Explore the interest and costs of increasing van services for seniors and residents with disabilities, focusing on parts of the West County area, such as the section of Conway near Deerfield, that have current have less than weekly van service and access. Through discussions with the Shelburne Senior Center and F.M. Kuzmeskus, evaluate the extent to which West County residents who wish to use the van services for trips are unable to do so.

Short-Term Recommendations (continued)

Transit System Publicity

- Expand current outreach and publicity efforts to provide information about the West Route and other FRTA transit services and to encourage bus usage. Current, accurate information on bus services and schedules ideally should be available from a variety of locations, both in the West County area and elsewhere. Current information on bus services and schedules should also be available in a variety of mediums, electronically through the web sites of the FRTA, regional organizations, and town governments, and in print through local newspapers and through the distributed schedules. Outreach efforts should target the populations who are most likely to use transit services and to need transit assistance, such as low-income residents, disabled residents, and the elderly. Also, increase publicity of the FRTA's toll-free number (888-301-2262) for questions about its bus schedules and services, through advertising and other outreach activities.
- Conduct meetings with town officials and local Council on Aging representatives to provide information about bus services and funding costs and to discuss any issues with current services and any interest in service expansions. These local meetings, and publicity about them, would be another way of increasing residents' knowledge of the transit system and gaining additional input on residents' transit needs.

Longer-Term Recommendations

West Route

- Consider increasing the West Route's weekday runs and hours of operations up to at least 4-5 round trips per day, and extending the service to be year-round.
- Consider extensions of the West Route to communities off of Route 2, and the possibility of bus service along Route 116 between the West County area and South Deerfield.

Transit System

- Conduct a comprehensive assessment of the FRTA bus system as a whole to evaluate and address issues and inadequacies with current routes and connections between routes, and propose route and schedule changes to improve the utility, efficiency, and cost-effectiveness of the system.
- Continue extensive outreach and publicity activities for the bus system.
- Continue to have regular meetings regarding bus services with local town officials and Council on Aging representatives.

Longer-Term Recommendations (continued)

Connectivity

- Continue to coordinate bus routes and services between the FRTA and the PVTA in communities where services overlap, including Sunderland, South Deerfield, Northampton, and Amherst.
- Pursue the development of additional Park and Ride lot facilities in the West County area and elsewhere in the region, and the establishment of bus services to these facilities.

Paratransit Services

- Pursue the expansion of paratransit services to meet the needs of the expanding elderly population, particularly the needs of elderly residents age 75 and older, as they are in the age group that is most likely to have stopped driving and to need transportation assistance. Work with local Councils on Aging to identify the towns and residents with the most needs for increased paratransit access. Seek non-local sources of funding to pay for service expansions.

Potential Funding Options for Expanded Transit Services

This section briefly explores potential federal and state funding options for expanding transit services in western Franklin County, and the costs associated with service increases.

Federal and State Funding Sources

The three primary identified potential sources of funding for expansions to transit services in the West County area are the Congestion Mitigation Air Quality (CMAQ) Program, the Job Access and Reverse Commute (JARC) Program, and the New Freedom Program. Each of these funding programs was created through federal transportation legislation, and each is administered in Massachusetts by the Executive Office of Transportation (EOT) working with federal transportation agencies.

Congestion Mitigation Air Quality (CMAQ) Program

The Congestion Mitigation Air Quality (CMAQ) Program provides funding for transportation projects that help improve air quality and reduce traffic congestion. The CMAQ is administered jointly by the Federal Highway Administration and the Federal Transit Administration. CMAQ funding is available for geographic areas that do not meet national ambient air quality standards according to the Clean Air Act; the entire Commonwealth of Massachusetts currently does not meet the air quality standards for ozone. The current federal transportation funding legislation, SAFETEA-LU (Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users) authorized over \$8.6 billion dollars nationwide in funds to state departments of transportation, metropolitan transportation planning organizations and transit agencies, for projects to reduce air pollution from transportation-related sources over its five year timeframe (2005-2009). The formula for distribution of funds considers an area's population by county and severity of its ozone and carbon monoxide air pollution problems. The Franklin County region currently receives an approximately \$762,000 per year in CMAQ funding. In Franklin County, roadway and intersection improvements, and bicycle projects designed to decrease traffic congestion have been financed with CMAQ funds. CMAQ funding is also slated to be used for the Whately Park and Ride lot. The CMAQ Program can also be used to fund transit services for a start-up period of three years; after that, other sources of funded are needed. The FRTA's GLink bus service between Greenfield and Athol was initially funded with CMAQ monies. SAFETEA-LU requires that projects receiving multi-year funding be evaluated annually to assess their effectiveness and impacts on air quality and traffic congestion levels.

Job Access and Reverse Commute (JARC) Program

The focus of the Job Access and Reverse Commute (JARC) Program is to improve the transportation mobility for low-income individuals to help them access and retain employment, as a means to assist people in moving off of public assistance. The JARC program recognizes that the transportation challenges faced by low-income workers, including the need for transportation services for second and third shift jobs, and the need to be able to use public transportation for multiple linked trips, for example to childcare, school, or shopping, as well as jobs. JARC Program provides competitive grants to local governments and non-profit

organizations to develop transportation services to connect low-income persons to employment and support services. The JARC Program and funding have emphasized public transportation access to and from suburban areas, but has provided funding for rural areas. In Franklin County, the expanded Valley Route bus service between Greenfield and Northampton was initially funded in part through the JARC Program. SAFETEA-LU authorized \$727 million for the JARC Program nationwide over the legislation's 2005-2009 time period; however, most of this funding will go for urban and suburban areas, and only a small portion of these funds is slated for rural areas. In Massachusetts, non-urbanized areas with populations under 50,000 (such as the West County region) are projected to receive a total statewide of approximately \$572,000 in JARC funding during the 2007-2010 period, and \$651,000 during the 2011-2015 timeframe. These funds are highly competitive.

New Freedom Program

The Freedoms Program was created under SAFETEA-LU to support the creation of new services and facility improvements that address the transportation needs of people with disabilities and that go beyond the requirements of the Americans with Disabilities Act.

The New Freedom program providing funding for a large variety of projects including transportation services which can be used by non-disabled riders as well as people with disabilities, such as transit services for work-related travel. Only new services are eligible for funding, however, with a "new service" defined as one that was not operational on or before August 10, 2005, and that did not have an identified funding source by August 10, 2005. Other types of eligible projects include: the provision of paratransit services beyond the minimum ADA requirements (3/4 of a mile within a fixed route), including for routes that run seasonally; accessibility improvements to transit stations; financial support for rideshare and vanpool programs; support for volunteer driver and aide programs, support for voucher programs for transportation services offered by human service agencies, and support for mobility management and coordination programs among public transit agencies and human services agencies that offer transportation services.

Nationwide, a total of \$339 million is available for the program for the 2005-2009 period. Funds through the New Freedom program are apportioned based on the populations of peoples with disabilities. As with the JARC program, the emphasis is on funding projects in urban and suburban areas. In Massachusetts, non-urbanized areas with populations under 50,000 are projected to receive a total statewide of approximately \$565,000 in New Freedom funding during the 2007-2010 period, and \$638,000 during the 2011-2015 timeframe. These funds are highly competitive.

Estimated Costs of Transit Service Expansions

The FRTA provided basic information regarding its costs for fixed-route and demand-response services. The main costs include transit vehicle purchases and maintenance, vehicle insurance, fuel costs, and employee salaries and benefits. Table 14 itemizes these costs.

Table 14: Costs for the FRTA’s Fixed-Route and Paratransit Services, Fiscal Year 2008

Fixed-Route Service Costs	
Transit Vehicle (34-passenger bus) Purchase	\$200,000
Vehicle insurance costs	\$2575/year
Operation costs, including vehicle maintenance and salaries, for Kuzmeskus	\$2.10/mile
Vehicle fuel costs for Kuzmeskus services	Market price minus taxes
Paratransit Service Costs	
Transit Vehicle (10-passenger van) Purchase	\$45,000
Vehicle insurance costs	\$1750/year
Operation costs (vehicle maintenance and salaries) for Kuzmeskus	\$36.25/loaded vehicle hour
Vehicle fuel costs for Kuzmeskus services	Market price minus taxes
Shelburne Council on Aging van service budget (Fiscal Year 2008), includes vehicle maintenance, salaries, and fuel costs	\$38,000

Source: FRTA, October 2007.

Table 15 and Table 16 on the following pages provide a general estimate of the costs associated with specific transit service changes proposed in this study’s recommendations. Table 15 looks at service changes for the West Route, and Table 16 considers two other service changes for the West County area. All of the cost estimates in the tables, except where noted otherwise, assume that no additional transit vehicles are needed for the service expansions and that insurance, maintenance, and employee costs remain the same. More extensive transit system expansions than those proposed here would likely add to these basic costs.

Based on the general calculations summarized in the tables, it is estimated that making the West Route afternoon schedule consistent throughout the Academy at Charlemont’s school year, and adding one afternoon bus run during each day of operation would cost approximately \$16,625 per year. Adding two runs during each day of operation for the school year, for a total of four runs each weekday, would cost approximately \$33,250 annually. It is also estimated that turning the West Route from a school-year only weekday bus to a year-round weekday bus would cost approximately \$22,175 per year more than current expenses for two runs per day, and \$49,875 more annually for three runs per day.

Table 16 considers two service changes beyond the West Route service. The first is the creation of a new bus route running between Ashfield and South Deerfield on Route 116 to serve West County commuters traveling to Deerfield, Amherst, or Northampton. From South Deerfield, this bus could connect with the FRTA’s Valley Route or with PVRTA buses to Amherst and Northampton. At a minimum, the bus would make one southbound run from Ashfield each weekday morning and one northbound run from South Deerfield each weekday in the late afternoon/early evening. It is estimated that having this bus route run twice a weekday would cost \$34,725 per year, not including any costs for additional transit vehicles. Since the FRTA’s buses are all based in Greenfield, the bus would travel from Greenfield at the beginning of each run and return to Greenfield after the run. During these trips to and from Greenfield, the bus

could overlap with the Valley Route and West Route and provide additional service times for riders on those routes.

The second service change listed in Table 16 is an increase in the van service to Greenfield for Conway senior citizens from its current operation of two days per month to four days per month. The current principal van service for Conway seniors is offered through Kuzmeskus (though Conway seniors living near Shelburne have access to van transportation through the Shelburne Council on Aging). It is estimated that doubling Kuzmeskus' current service for Conway seniors would cost an estimated \$5,500 per year.

It is possible that some of the proposed services could initially be funded through the federal and state funding programs mentioned earlier, such as CMAQ, JARC, and New Freedoms. However, these programs do not generally provide ongoing long-term funding. Therefore alternative sources of long-term financial support would also be needed.

Table 15: General Cost Estimates for Possible West Route Service Expansions

West Route Service	Estimated Added Cost
<p><u>(1) Addition of another afternoon run on the West Route</u> <u>(3 runs total per day)</u> This change would allow the West Route to have a consistent schedule, with one morning run and two afternoon runs, throughout the school year. The West Route would continue to run only when the Academy of Charlemont is in session, approximately 150 days per year. There is the assumption that this service could be provided with the current FRTA bus fleet and that no additional buses would be needed.</p> <p><u>Operating costs:</u> 45 miles/roundtrip from Court Square-Charlemont x 1 additional roundtrip/day x \$2.10/mile x 150 days/year</p> <p><u>Fuel costs:</u> \$2.60/gal x 0.14 gal/mile (7.1 mpg) x 45 miles/roundtrip x 1 roundtrip/day x 150 days/year <i>(The FRTA does not pay federal or state gas taxes on its fuel purchases).</i></p> <p><u>Total estimated costs</u></p>	<p></p> <p>\$14,175/year</p> <p>\$2,450/year</p> <p><u>\$16,625/year</u></p>

Sources: Estimates of the FRTA's cost per mile for fixed-route service and the costs for additional transit vehicles were provided by the Franklin Regional Transit Authority, October 2007. The calculations for the cost estimates for each service change were made by FRCOG staff.

Table 15: General Cost Estimates for Possible West Route Service Expansions (con't)

West Route Service	Estimated Added Cost
<p><u>(2) Addition of 2 runs per day on the West Route (4 runs total per day)</u> This change would include the run added under (1) above and as well as one additional run each weekday, either in the morning or midday. The West Route would continue to run only when the Academy of Charlemont is in session. There is the assumption that this service could be provided with the current FRTA bus fleet and that no additional buses would be needed.</p> <p><u>Operating costs:</u> 45 miles/roundtrip from Court Square-Charlemont x 2 additional roundtrips/day x \$2.10/mile x 150 days/year <u>Fuel costs:</u> \$2.60/gal x 0.14 gal/mile (7.1 mpg) x 45 miles/roundtrip x 2 roundtrips/day x 150 days/year (The FRTA does not pay federal or state gas taxes on its fuel purchases).</p> <p><u>Total estimated costs</u></p>	<p>\$28,350/year \$4,900/year <u>\$33,250/year</u></p>
<p><u>(3) Addition of 3 runs per day on the West Route (5 runs total per day)</u> This change would increase the amount of service for the West Route from two runs per weekday (currently) to five runs per weekday. The bus would run twice each morning, once midday, and two times in the afternoon/early evening. The West Route would continue to run only when the Academy of Charlemont is in session. It was not known at the time of these cost estimates if this service could be provided with the current FRTA bus fleet or if additional buses would be needed.</p> <p><u>Operating costs:</u> 45 miles/roundtrip from Court Square-Charlemont x 3 additional roundtrips/day x \$2.10/mile x 150 days/year <u>Fuel costs:</u> \$2.60/gal x 0.14 gal/mile (7.1 mpg) x 45 miles/roundtrip x 3 roundtrips/day x 150 days/year (The FRTA does not pay federal or state gas taxes on its fuel purchases).</p> <p><u>Total operating and fuel costs</u></p> <p><u>New bus or van costs:</u> purchase costs and insurance costs (if an additional transit vehicle is necessary)</p> <p>Additional 10-passenger van Vehicle purchase price \$45,000 Insurance cost <u>\$1,750/year</u></p> <p>Additional 34-passenger bus Vehicle purchase price \$200,000 Insurance cost <u>\$2,575/year</u></p>	<p>\$42,525/year \$7,350/year <u>\$49,875/year</u></p>

Sources: Estimates of the FRTA's cost per mile for fixed-route service and the costs for additional transit vehicles were provided by the Franklin Regional Transit Authority, October 2007. The calculations for the cost estimates for each service change were made by FRCOG staff.

Table 15: General Annual Cost Estimates for Possible West Route Service Expansions (con't)

West Route Service	Estimated Added Cost
<p><u>(4) Extension of West Route from school year (150 days) to year-round Monday-Friday (250 days), with 2 runs per day</u> This change would allow the West Route to run year-round Monday through Friday twice a day, once in the morning and once in the afternoon, increasing the service by approximately 100 days per year. There might still be challenges in getting non-students to ride the bus during the school year if the time of the afternoon bus varies according to the Academy of Charlemont schedule when the school is in session. Outside of the school year, the bus would maintain consistent afternoon run times. There is the assumption that this service could be provided with the current FRTA bus fleet and that no additional buses would be needed.</p> <p><u>Operating costs:</u> 45 miles/roundtrip from Court Square-Charlemont x 2 roundtrips/day x \$2.10/mile x 100 added days/year</p> <p><u>Fuel costs:</u> \$2.60/gal x 0.14 gal/mile (7.1 mpg) x 45 miles/roundtrip x 2 roundtrip/day x 100 days/year <i>(The FRTA does not pay federal or state gas taxes on its fuel purchases).</i></p> <p><u>Total estimated costs</u></p>	<p></p> <p>\$18,900/year</p> <p>\$3,275/year</p> <p><u>\$22,175/year</u></p>
<p><u>(5) Extension of West Route from school year (150 days) to year-round Monday-Friday(250 days) and to three runs per day</u> This change would allow the West Route to run year-round Monday through Friday three times a day, increasing the service over the current schedule by one run daily and approximately 100 days per year. With a three times per day schedule, the schedule could be consistent year-round and include at least one morning run and one afternoon run and one other run (afternoon, morning, midday). If the schedule was still going to follow the Academy of Charlemont schedule, there would be one morning run and two afternoon runs. Also, outside of the school year, the bus would maintain consistent afternoon run times. There is the assumption that this service could be provided with the current FRTA bus fleet and that no additional buses would be needed.</p> <p>Cost of adding one run during the school year, as calculated under (1)</p> <p><u>For additional 100 days of service</u></p> <p><u>Operating costs:</u> 45 miles/roundtrip from Court Square-Charlemont x 3 roundtrips/day x \$2.10/mile x 100 added days/year</p> <p><u>Fuel costs:</u> \$2.60/gal x 0.14 gal/mile (7.1 mpg) x 45 miles/roundtrip x 3 roundtrips/day x 100 added days/year <i>(The FRTA does not pay federal or state gas taxes on its fuel purchases).</i></p> <p><u>Total estimated costs</u></p>	<p></p> <p>\$16,625/year</p> <p>\$28,350/year</p> <p>\$4,900/year</p> <p><u>\$49,875/year</u></p>

Sources: Estimates of the FRTA's cost per mile for fixed-route service and the costs for additional transit vehicles were provided by the Franklin Regional Transit Authority, October 2007. The calculations for the cost estimates for each service change were made by FRCOG staff.

Table 16: General Annual Cost Estimates for Other Possible Transit Service Expansions

Other Services	Estimated Added Cost
<p><u>(a) Bus service twice each weekday between Ashfield and South Deerfield on Route 116 (southbound a.m. and northbound p.m.)</u> This service would run along Route 116 between Ashfield to South Deerfield twice each weekday (250 days per year). The bus would have a southbound run from Ashfield in the morning, and a northbound run to Ashfield in the late afternoon/early evening. The bus' schedule would be designed to serve West County commuters to Deerfield, Amherst, and Northampton, and the schedule would make it feasible for riders to transfer between this bus, the Valley Route, and PVTA buses to Amherst and Northampton. Since the FRTA's buses are currently all based in Greenfield, the bus would travel from Greenfield at the beginning of run and return to Greenfield at the end of each run. During these trips to and from Greenfield, the bus could overlap with the Valley Route and West Route, and provide additional service times for riders on those routes. It was not known at the time of these cost estimates if this service could be provided with the current FRTA bus fleet or if additional buses would be needed.</p> <p><u>Operating costs:</u> 47 miles/roundtrip from Greenfield (Greenfield-Ashfield-S. Deerfield-Greenfield during mornings; reverse trip in afternoon) x 2 roundtrips/day x \$2.10/mile x 150 days/year</p> <p><u>Fuel costs:</u> \$2.60/gal x 0.14 gal/mile (7.1 mpg) x 47 miles/roundtrip x 2 roundtrips/day x 150 days/year <i>(The FRTA does not pay federal or state gas taxes on its fuel purchases).</i></p> <p><u>Total operating and fuel costs</u></p> <p><u>New bus or van costs:</u> purchase costs and insurance costs <i>(if an additional transit vehicle is necessary)</i></p> <p>Additional 10-passenger van Vehicle purchase price Insurance cost</p> <p>Additional 34-passenger bus Vehicle purchase price Insurance cost</p>	<p style="text-align: right;">\$29,600</p> <p style="text-align: right;">\$5,125</p> <p style="text-align: right;">\$34,725/year</p> <p style="text-align: right;">\$45,000 <u>\$1,750/year</u></p> <p style="text-align: right;">\$200,000 <u>\$2,575/year</u></p>

Sources: Estimates of the FRTA's cost per mile for fixed-route service and the costs for additional transit vehicles were provided by the Franklin Regional Transit Authority, October 2007. The calculations for the cost estimates for each service change were made by FRCOG staff.

Table 16: General Annual Cost Estimates for Other Possible Transit Service Expansions (con't)

Other Services	Estimated Added Cost
<p><u>(b) Increase in Conway senior van service to Greenfield from twice a month to four times per month</u> Conway senior citizens not living near Shelburne currently have van service to Greenfield only two days per month. This service is offered through Kuzmeskus. (Conway seniors living near Shelburne has access to weekday van service through the Shelburne Council on Aging). Under this increase in services, Kuzmeskus would offer Conway seniors van transportation two additional days each month, for six hours each day. It was assumed that Kuzmeskus' current vans could accommodate this increase in service.</p> <p><u>Operating costs:</u> \$36.27/loaded vehicle hour x 6 hours/day x 24 additional days per year</p> <p><u>Fuel costs:</u> \$2.60/gal x 0.11 gal/mile (9 mpg) x 40 miles/trip to and around Greenfield x 24 additional days per year (When serving as a provider for the FRTA, Kuzmeskus does not pay federal or state gas taxes on its fuel purchases).</p> <p><u>Total estimated costs</u></p>	<p>\$5,225</p> <p>\$275</p> <p><u>\$5,500</u></p>

Sources: Estimates of the van service costs per loaded vehicle hour were provided by the Franklin Regional Transit Authority, October 2007. The calculations for the cost estimates for each service change were made by FRCOG staff.