

Splitting the Tri-Town Route

The Feasibility of Expanding the ACTR Tri-Town Shuttle Bus

Based on Work in the Towns of
Bristol, Lincoln, Monkton, New Haven, Starksboro, and Vergennes
Addison County, Vermont



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Led by Molly S. Costanza-Robinson and Diane Munroe
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Joy Erdman
Julie Erickson
Katie Flagg
Ashley Gamell
Ben Hanna
Emily Peterson

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I. Summary of Project Objectives

Addison County Transit Resources (ACTR), a non-profit public transportation agency based in Middlebury, Vermont, operates a bus service between the Addison County towns of Middlebury, Vergennes and Bristol known as the Tri-Town Shuttle Bus (TTSB). With the current route, Vergennes riders travel through the town of Bristol on each leg of the trip, adding considerable time to the Vergennes-Middlebury commute. As a student group focused on engaging community members on public transportation options and the associated financial commitments, our project revolved around the possibility of splitting this route to allow direct service between Middlebury and both Vergennes and Bristol and to increase the frequency of buses. The split would provide a great opportunity to expand and increase the quality of ACTR service in the area while working within an existing framework of ridership and town support.

The goal of this project was to collect and analyze information about funding from the six towns that will most directly benefit from a split in the Tri-Town Shuttle route (Bristol, Lincoln, Monkton, New Haven, Starksboro, and Vergennes). In analyzing current trends and future potential, we considered how these towns allocate funding to various non-governmental agencies, what services other agencies provide (and to whom), and how funding correlates with population and income figures. Our analysis was both quantitative and qualitative. Our group also worked with town officials and residents to discern how best to build support for increased funding in the upcoming budget cycle, especially in Vergennes, where the 2008-2009 budget will be voted on in May.

II. Introduction

Public transportation systems provide vital services to the residents of rural communities. For many, public transportation is the only means of accessing medical care, employment, education facilities, consumer needs, and a community of family and friends. This is especially pertinent in an area like Addison County, with a large elderly population and high poverty rates: many residents are no longer able to drive or cannot afford a car. The availability of public transportation in rural areas, where residents often live far from town centers and social services, is thus not only a question of convenience, but also an issue of social equity (Wang 2007).

Public transportation also creates an opportunity for environmental stewardship in rural towns. If a transportation system is well used by its community as a substitute for single-occupancy vehicle (SOV) travel, it can reduce carbon emissions that contribute to global warming and lessen other environmental damage to soil, water, and air (Pucher 2004). If used to its greatest potential as an SOV-substitute, public transportation has been shown to reduce carbon monoxide by up to 95%, volatile organic compounds by up to 90%, and carbon dioxide and nitrogen oxide by as much as 50% per passenger mile (American Public Transportation Association 2007). However, the environmental benefits of public transportation are highly contingent on the level of ridership; a scarcely used transportation system can actually have adverse affects on the environment, and the low population density in Addison County creates the distinct risk of an underused system.

In addition to the aforementioned social and environmental benefits, public transportation systems can stimulate economic growth in rural communities. According

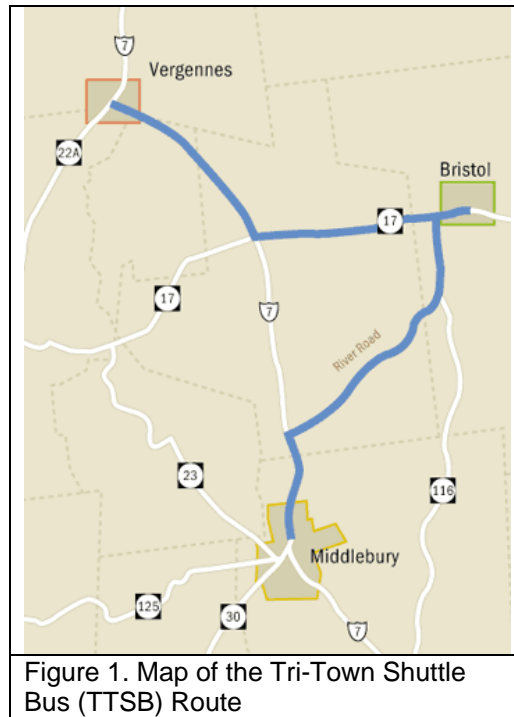
to a national study conducted by the Transportation Cooperative National Research Board, the costs of implementing public transportation systems in rural communities was recovered in resulting economic growth at three times the amount of investment (Burkhardt 1998).

Vermont communities are strong candidates to invest in public transportation, which could alleviate many environmental issues stemming from the state's current car-based transportation patterns. Currently, 75% of Vermont residents commute to work alone (Watts 2008). This high rate of SOV travel contributes heavily to global warming; transportation is responsible for 44% of the state's carbon footprint, while in comparison, transportation is only responsible for 26% of such emissions nationally (Wang 2007). Car use is also draining the Vermont economy; in 2006, state residents spent over one billion dollars on gasoline and diesel, with almost all of these dollars leaving Vermont, and many leaving the US economy entirely. The state's elderly population is yet another factor contributing to the essential need for available transit options. By 2025, the population of Vermonters aged 65 or older is projected to roughly double (Watts 2008). Meanwhile, current investments in public transportation systems are meager, comprising only 4% of the Vermont transportation budget (Wang 2007).

Addison County Transit Resources (ACTR), a nonprofit organization based in Middlebury, Vermont, has been providing transportation service in Addison County since its founding in 1992. The organization's mission is "to enhance the economic, social and environmental health of the region by providing public transportation services that are safe, reliable, accessible, and affordable for everyone." The service is composed of two parts: a demand-response service and shuttle bus services. Through the demand-response

program, volunteers use their personal cars to provide transportation to those who are unable to otherwise access medical services, from routine check-ups to kidney dialysis. ACTR coordinates these trips and reimburses volunteer drivers based on the federal mileage rate (accounting for fuel cost, vehicle wear, and maintenance needs). ACTR shuttles provide free service around Middlebury, along the Tri-Town Shuttle route and, according to seasonal demand, from Middlebury to the Middlebury Snow Bowl and other recreational areas. In addition, ACTR partners with neighboring transit organizations to provide affordable regional service between Middlebury and both Rutland and Burlington. All of these shuttle services, with the exception of the Burlington Link Express, are operated with a “deviated route” system, wherein passengers may request pick-up or drop-off up to ½ mile off the route (¼ mile on the Rutland Connector). The organization currently provides over 100,000 rides each year between its demand-response service and shuttle routes serving Middlebury, Vergennes, New Haven, Bristol, Rutland, and Burlington, among other towns.

ACTR procures 80% of its funding from state and federal sources; however, the organization relies upon local sources, including town governments and individual donors, for the remaining 20% of its operating budget. As ACTR looks to increase its service to Addison County residents, it is necessary to increase local awareness and support for the services they provide. At this time, the organization is particularly interested in revising the route of the TTSB, a bus service originating in Middlebury and serving residents of nearby Bristol, New Haven, and Vergennes (Figure 1).



Currently, direct service from Middlebury to Vergennes is not available; riders must travel through Bristol, which decreases the frequency of buses and increases riding time. According to ACTR, residents of both Bristol and Vergennes have voiced interest in a split route that would serve each town separately and a consultant study conducted for ACTR suggested that splitting the route could increase ridership by up to 320% (Edwards-Kelcey). ACTR estimates that this split route would require an additional \$100,000 in order to maintain reasonable frequencies. Of this amount, \$20,000 would have to come from local sources. With this cost split among the towns served, town residents would pay roughly twice their current annual contribution to ACTR, which is added to the property tax.

The primary goal of our work was to explore the feasibility of splitting the TTSB route with a focus on Bristol and Vergennes as the main population centers utilizing the

route. Though Lincoln, Monkton, and Starksboro do not lie directly on the current route, some residents from these towns already drive to Bristol and Vergennes and park their cars to utilize the TTSB. For this reason, and because there is potential for increased use of park-and-ride services, we explored the possibility of increasing funding in these towns as well. However, Vergennes merited the most urgent attention in this matter, since its budgeting process is slated to occur in late May 2008.

Overview of TTSB Ridership

ACTR provided a total of 16,458 rides on the TTSB from designated stops in Middlebury, New Haven, Bristol, and Vergennes during the fiscal year (FY) 2007, or the equivalent of about 65 rides per day (ACTR on-board ridership data 2007). During the FY 2007, 41.4% of the Tri-Town Shuttle rides were from Middlebury, while 5.4%, 29%, and 24.2% were served from New Haven, Bristol, and Vergennes, respectively. For the FY 2008 (as of March 2008) the Tri-Town Shuttle has provided 11,984 rides. A similar percentage of rides as seen for FY 2007 have been provided to the four towns, with 38.5% in Middlebury, 5.1% in New Haven, 32.8% in Bristol, and 23.5% in Vergennes. January 2008 data for the total number of pick-ups and drop-offs by stop for the Tri-Town Route shows the Merchant's Row stop in Middlebury is used most frequently with 509 total pick-ups and drop-offs out of a total 2,689 for the whole route. The Bristol Shaw's is the second busiest stop with 215 pick-ups and drop-offs.

III. Methods

In order to assess the feasibility of expanding the TTSB, we carried out work in four primary areas: interacting with key stakeholders, analyzing town financial support and budgeting, gauging community perceptions and support, and producing media and promotional materials.

As part of our interactions with key stakeholders, we sought to establish contact with community members who either have political familiarity with town funding processes, or who have access to a sizeable employee base that would potentially use the ACTR shuttle for daily commuting purposes (and therefore provide additional validation for the route expansion). By meeting with Renny Perry, the Town Manager of Vergennes, we hoped to develop a detailed understanding of the budget process through which ACTR must request increased funding for a split route. We also conducted surveys and personal interviews with the three largest employers in the Tri-Town area: Autumn Harp, Porter Hospital, and Middlebury College. Our primary intention was to gather data about commuter patterns and to assess the employees' level of interest in using the TTSB daily were the split to be achieved. Additionally, we hoped to explore the willingness of businesses to offer financial incentives to employees who use public transportation instead of single-occupancy vehicles to travel to work.

In order for a service agency to receive town funding, it must write a letter to the town government outlining its financial request for the upcoming fiscal year. Our group obtained copies of such service agency letters directly from town clerks in Bristol, Vergennes, Lincoln, and Monkton. These letters (for FY 2009) allowed us to compare ACTR's funding request in relation to that of other service agencies, which provided us

with a more comprehensive understanding of the funding environment in each town. The compiled data provided an important quantitative basis for determining whether there is a compelling case for an increase in ACTR funding.

Although it was necessary to understand the intricacies of the town funding process, we also realized that it was equally important to work with town residents themselves in order to evaluate the community's level of support for the TTSB route split. We surveyed residents from all focus towns, with a specific emphasis on gathering information in Vergennes since the town would vote on its budget in May 2008. Through our written and verbal survey methods, we collected data about residents' general transportation patterns and their willingness to pay higher taxes in order to provide the necessary capital for the route expansion.

Given that Vergennes' budget approval process coincided with the end of our course, our group developed media and promotional materials about ACTR that were intended for distribution in the town of Vergennes throughout the month of May. These materials highlighted the environmental, social, and economic benefits of using ACTR—such as reducing one's carbon footprint, supporting a valuable community service, and saving financial resources by avoiding gas purchases for personal cars.

IV. Interaction with Key Stakeholders

In order to assess support for the TTSB route split among key players in our focus towns, we met with town leaders and representatives of the largest employers that lie along the TTSB route.

Vergennes Town Manager

On March 20, 2008, we met with Vergennes Town Manager and ACTR board member Renny Perry. The purpose of the meeting was to discuss our role in helping ACTR get the support it needs to split the Tri-Town Shuttle route to individually serve Bristol and Vergennes. As a city, Vergennes' budget gets approved not by the voters, but rather by the City Council. According to Mr. Perry, they operate a tight budget and are very skeptical of providing increased funding for ACTR. In order for the City Council to approve increased funding for a split route, ACTR would need to make a strong case that ridership will increase and that the service will greatly benefit the city.

Autumn Harp

Autumn Harp, a cosmetics manufacturer, is one of the largest employers in the region, and thus provides a valuable opportunity for examining commuter patterns and gauging interest in potential public transportation ridership. Currently, Autumn Harp has 177 employees at its Bristol facility, though this number changes seasonally. Most of these employees commute to work from their homes outside the Bristol area. They come from towns all over Addison County, and a large group comes from Burlington.

According to Pamela Russell, a human resources representative, all employees drive to work except for one person, who rides ACTR to work. There have been efforts to decrease SOV commuting to the facility: a few employees have set up a carpool from Burlington. The company currently provides no incentives to ride public transit, though it has explored the option of chartering a bus for Burlington employees. As of now, however, plans for this bus are stalled.

Porter Hospital

Porter Hospital, like Autumn Harp, provides a useful lens for examining potential ridership among commuters. Currently, the hospital employs 545 individuals on-site in Middlebury. Ten percent live in New York State, concentrated in the Ticonderoga, Crown Point, and Essex County region, but the rest are primarily residents of Addison County, according to Nancy Lindberg in the hospital's department of Human Resources. Approximately 40 employees live in Vergennes, and approximately 55 currently reside in Bristol.

At this time, the hospital does not provide any incentives to employees to use carpools or public transportation. While the hospital does provide information in their human resources department about public transportation, Lindberg recounted that in her time at the hospital, she has only had one employee come to her for information about ACTR. Parking is free and available on-site.

Considering the number of employees living in Bristol and Vergennes—not to mention the additional riders who could use a “park and ride” service from these hubs—there does appear to be a potential ridership base for a split version of the Tri-Town

route. That said, the availability and convenience of Porter Hospital's current employee parking lots discourage the use of public transportation, and significant outreach and education would be required to encourage the use of the ACTR shuttle among employees.

Middlebury College

With over 1600 employees, Middlebury College is the largest employer in Addison County. Fourteen percent of these employees reside in one of the six towns with access to the Tri-Town Shuttle Bus. More precisely, data from the College's human resources department show that 88 employees live in Bristol, while 57 reside in Vergennes (Middlebury College Department of Human Resources). At this time, the College offers no incentives for these employees to use ACTR to get to work, though a report conducted by Middlebury College students in 2007 found that 65% of College employees would consider leaving their cars at home if a financial incentive was provided (MiddShift 2007). With this potential ridership, the expansion of the Tri-Town Shuttle Bus could provide an easy transportation option to Middlebury employees while further helping the College reach its goal of carbon neutrality by 2016.

V. Town Support Analysis

Based on town reports and letters submitted from service agencies, we completed the following analyses of town funding allocations in communities served by the TTSB.

General Budget Analysis

On average, the towns considered in this analysis apportioned 2.74% of the total town expenditure to service agencies for the 2008-9 fiscal year (Table 1). Bristol residents approved the highest percentage of expenditures to service agencies at 3.37%. Annual per capita spending on service agencies varied from a low of \$8.65 in Monkton to a high of \$16.62 in Bristol. Despite Monkton's lower-than-average contributions to service agencies, total town expenditures per capita were quite high in Monkton, at \$574 per person. Median household income is also highest in Monkton, which could be related to less demand for social services and hence the lower level of spending in this budget category. New Haven had the highest overall per capita spending, with \$1309 per resident going toward town expenses each year. In contrast, Starksboro residents paid the least per capita for town expenditures at \$405 per capita.

	DR ^a and TTSB Funding			DR Funding Only		
	Bristol	Vergennes	New Haven	Lincoln	Monkton	Starksboro
Population	3,811	2,746	1,829	1,280	1,988	1,953
Median Household Income	\$43,250	\$37,763	\$47,014	\$45,750	\$53,807	\$44,559
Total Annual Town Spending per capita	\$493	\$577	\$1,309	\$508	\$574	\$405
% of Town Budget to SA ^b	3.4%	2.1%	0.82%	2.7%	1.5%	2.7%
SA Spending per capita	\$16.62	\$12.30	\$10.69	\$13.71	\$8.65	\$11.03
Town Funding for ACTR	\$5,500	\$3,000	\$2,500	\$500	\$450	\$500
% of SA Spending for ACTR	8.7%	8.9%	5.1%	2.9%	2.6%	2.3%
Annual per capita Spending for ACTR	\$1.44	\$1.09	\$1.37	\$0.39	\$0.23	\$0.26

^aDR=demand-response, ^bSA=Service Agencies
Town Populations based on 2006 US Census estimate; Median Household Income based on 2000 US Census; Town budgets are approved or proposed figures for FY09

In all towns, annual funding for ACTR constitutes less than 10% of service agency spending, despite ACTR being one of the agencies receiving the highest absolute amount of town funding in towns served by the TTSB. This reflects the large number of worthy service agencies all competing for town funding. Funding for ACTR in all towns considered in this study is less than \$1.50 per capita or below \$4 per household, assuming an average household size of 2.7 individuals for all towns (Figure 2). These figures are surprisingly low considering the potential of large economic savings for town residents who choose to use the free transportation services ACTR provides. Lincoln, Monkton and Starksboro, which only pay for demand-response services, currently devote only \$0.39, \$0.23, and \$0.26 per capita to ACTR, respectively, despite the fact that many residents of these towns drive to Bristol to park-and-ride areas in order to utilize the TTSB.

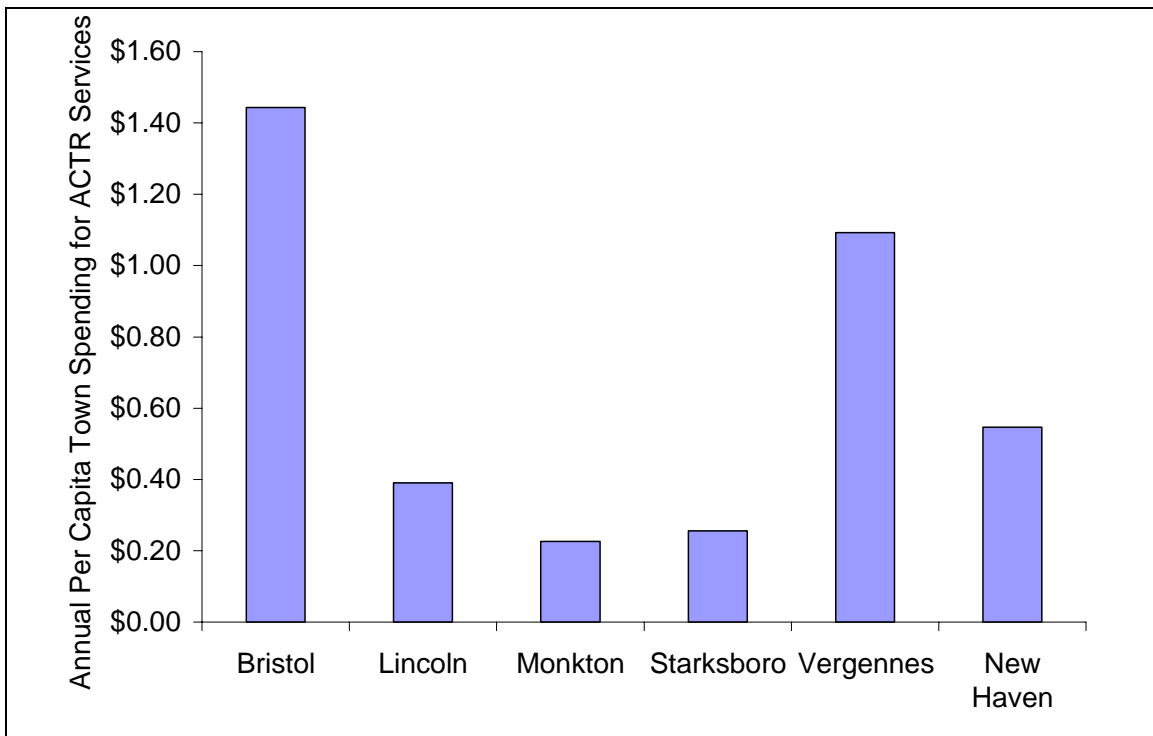


Figure 2. Annual Town Spending Per Capita for ACTR Services. This includes Demand-Response funding. Only Bristol, Vergennes, and New Haven contribute funding for the TTSB.

Our data analysis shows that our focus on Vergennes is not only appropriate because of the upcoming annual budgeting process, but also because of the financial situation and socioeconomic conditions in the town. Vergennes, which would benefit the most from the TTSB route split by gaining direct service to Middlebury, also has the lowest median household income of \$37,763. In addition, 17% of the population lives below the poverty line (2000 US Census). This means that Vergennes residents are probably feeling the impacts of increasing energy prices the most and, therefore, may have the greatest need for a free public transportation system. Unfortunately, Vergennes also faces the most significant barriers in allocating additional funding to ACTR due to these same factors, which place the town in a situation with little financial flexibility.

Town Funding and Services Provided: Comparing ACTR to Other Service Agencies

One way of quantifying a service agency's contribution to the community is by comparing the funds they receive with the services they render. In order to compare ACTR services to those of other organizations, we used the estimate (suggested by ACTR) that 5% of residents in Bristol and Vergennes use the TTSB.

1. Funding in Bristol and Vergennes

In Bristol, where funding amounts per resident served for different agencies range from \$7.44 for Addison County Community Action Group (ACCAG/HOPE) to \$138.89 for WomenSafe, ACTR funding per resident served is estimated to be approximately \$32.83 (Table 2). In actuality, ACTR services to Bristol residents can most accurately be quantified based on ridership data, which indicate that ACTR provided 4,770 TTSB rides

to and from Bristol in 2007, or an average of 20 rides per day. ACTR also provided 4,232 demand-response rides to Bristol Residents in 2007.

Table 2. Bristol Service Agency Spending Analysis Based on Services Provided				
Agency Name	Current Funding (FY 2009) ^a	2007 Impact ^b	Cost per Resident Served	Cost per Capita ^c
Addison County Community Action Group (ACCAG/HOPE)	\$3,250	437	\$7.44	\$0.85
Addison County Parent/Child Center	\$4,800	468	\$10.26	\$1.26
Champlain Valley Agency on Aging	\$2,700	186	\$14.52	\$0.71
Bristol After School Kids (BASK) Program	\$1,500	65	\$23.08	\$0.39
Addison County Transit Resources (ACTR)	\$6,237	~190	\$32.83	\$1.64
Open Door Clinic	\$1,000	23	\$43.48	\$0.26
Elderly Services, Inc. (Project Independence)	\$2,200	23	\$95.65	\$0.58
WomenSafe	\$2,500	18	\$138.89	\$0.66
Counseling Service of Addison County	\$3,875	79,755 hours of service	n/a	\$1.02
Addison County Home, Health and Hospice	\$4,700	9,017 visits	n/a	\$1.23
^a Based on FY 2009 approved budget				
^b Refers to number of residents served in 2007 unless otherwise noted, according to letter submitted to Town Clerk by agency				
^c Refers to funding amount divided by total town population, not just by number of residents directly served				

In Vergennes, the service agency spending and services provided by various agencies is similar to that of Bristol. Funding per resident served range from \$4.08 for Addison County Community Action Group (ACCAG/HOPE) to \$87.00 for the John W. Graham Shelter (Table 3). The estimated funding for ACTR per resident served again falls in the middle of the range for various service agencies, with an estimate of \$21.90 per resident served. This figure makes a strong case specifically for increasing town funding for ACTR in Vergennes, since several other service agencies funded by the town receive substantially more funding per resident served. While the number of residents served by ACTR is an estimate, the TTSB provided 3,982 rides to and from Vergennes in

2007, or about 16 rides per day. ACTR also provided 5,881 demand-response rides to Vergennes residents in 2007.

Table 3. Vergennes Service Agency Spending Analysis Based on Services Provided				
Agency Name	Current Funding (FY 2009) ^a	2007 Impact ^b	Funding per Resident Served	Cost per Capita ^c
Addison County Community Action Group (ACCAG/HOPE)	\$1,740	426	\$4.08	\$0.63
Addison County Parent/Child Center	\$3,074	172	\$17.87	\$1.12
Addison County Transit Resources (ACTR)	\$3,000	~137	\$21.90	\$1.09
WomenSafe	\$2,500	58	\$43.10	\$0.91
RSVP	\$750	14	\$53.57	\$0.27
Champlain Valley Agency on Aging	\$2,500	40	\$62.50	\$0.91
John W. Graham Shelter	\$1,740	20	\$87.00	\$0.63
Addison County Counseling Service	\$2,370	70,750 hours of service	n/a	\$0.86
Vergennes Rescue Squad	\$6,500	365 emergencies	n/a	\$2.37
Home Health and Hospice	\$3,223	11,375 visits	n/a	\$1.17
^a Based on FY 2009 approved budget ^b Refers to number of residents served in 2007 unless otherwise noted, according to letter submitted to Town Clerk by agency ^c Refers to funding amount divided by total town population, not just by number of residents directly served				

Overall, in both Bristol and Vergennes, the amount of funding for ACTR per resident served falls in the mid to low range of values for all service agencies. Therefore, an increase in funding for ACTR seems reasonable in this context, especially since increasing the service would likely increase the number of residents served.

2. Funding in Lincoln as a Representative Outlying Town

ACTR submitted a request for a total of \$500 from Lincoln, where the agency provided 2,200 demand-response rides to 35 residents in 2007. This breaks down to \$14.29 per person served. As a basis for comparison, the organization WomenSafe requested \$850 for offering its services to 12 residents, equivalent to \$70.83 for every

resident served, while the Open Door Clinic placed the highest request by seeking \$150 for every resident served. On the opposite end of the spectrum, Vermont Adult Learning placed the lowest request by seeking only \$1.19 per resident served while providing services to 420 town residents (Table 4).

Table 4. Lincoln Service Agency Spending Analysis Based on Services Provided				
Agency Name	Current Funding (FY 2009) ^a	2007 Impact ^b	Funding per Resident Served	Cost per Capita ^c
Vermont Adult Learning	\$500	420	\$1.19	\$0.39
John W. Graham Shelter	\$1,000	150	\$6.67	\$0.78
Addison County Transit Resources (ACTR)	\$500	~35	\$14.29	\$0.39
Addison County Parent/Child Center	\$1,300	83	\$15.66	\$1.02
Champlain Valley Agency on Aging	\$1,100	40	\$27.50	\$0.86
ACCAG	\$2,000	46	\$43.48	\$1.56
WomenSafe	\$850	12	\$70.83	\$0.66
Open Door Clinic	\$750	5	\$150.00	\$0.59
RSVP	\$375	n/a	n/a	\$0.29
Hospice Volunteer Services	\$425	n/a	n/a	\$0.33
Addison County Home Health & Hospice	\$1,250	1,600 visits	n/a	\$0.98
Counseling Service of Addison County	\$1,600	1,152 hours of service	n/a	\$1.25
^a Based on FY 2009 approved budget ^b Refers to number of residents served in 2007 unless otherwise noted, according to letter submitted to Town Clerk by agency ^c Refers to funding amount divided by total town population, not just by number of residents directly served				

In evaluating Lincoln’s funding of the various agencies, it is clear that the allocation of \$500 for ACTR falls in the low-to-mid range of agency funding amounts. Only two organizations—RSVP and Hospice Volunteer Services—requested a smaller amount than ACTR (\$375 and \$425, respectively). In contrast, multiple organizations requested significantly greater financial support than ACTR, both in terms of absolute amounts and cost per resident served. For example, the Champlain Valley Agency on

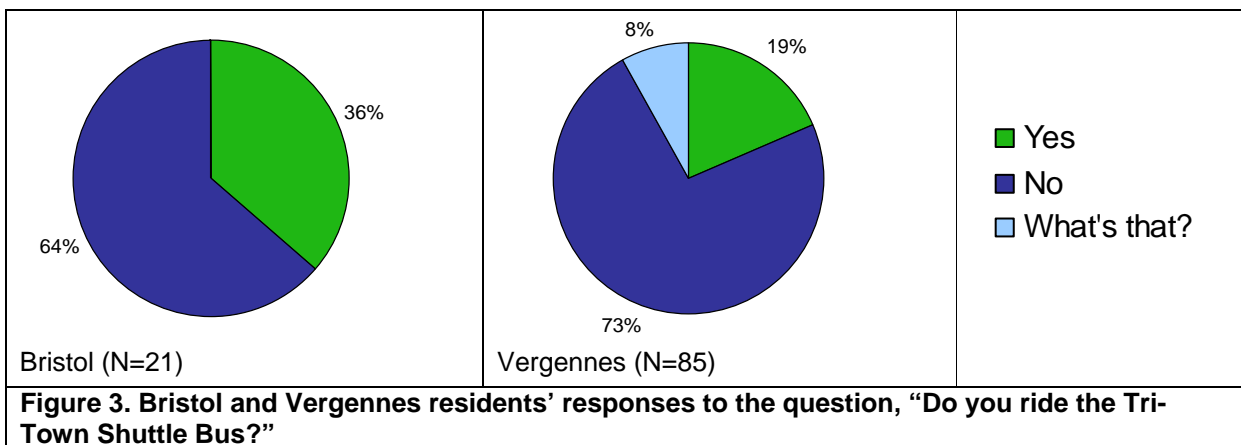
Aging provides services to 40 individuals, (only five more residents than ACTR served), yet its request was more than double that of ACTR's.

These data, therefore, suggest that ACTR is in a reasonable position to consider proposing a slight increase in funding from Lincoln given its proportion of residents served to financial support received, especially if more Lincoln residents are to begin riding the TTSB given expanded services. It is not uncommon for agencies to request large increases in funding in order to meet community needs. The Bristol Rescue Squad, for instance, requested a \$1,000 increase for 2008 alone. Nevertheless, it is critical to remember that since town residents generally oppose tax increases, ACTR should carefully proceed in its potential request for higher funding. Finally, it should be noted that this analysis only includes the town of Lincoln, which is not identical to, but a good representation of the other outlying towns.

VI. Community Perceptions and Support

Residents of all focus towns were surveyed at strategic community locations about their use of—and support for—public transportation. The surveys specifically addressed potential support for the Tri-Town Route expansion and amount of residents’ tax dollars they might be willing to invest to achieve the split (see Appendix A). While the survey was designed as a written questionnaire, most surveys were administered verbally, allowing us to interact with town residents, better explain the TTSB route, and make the surveying process easier for them. In Bristol, 21 people responded to the survey, while 85 responded in Vergennes. A total of 20 residents from Lincoln, Monkton, New Haven and Starksboro combined were also surveyed.

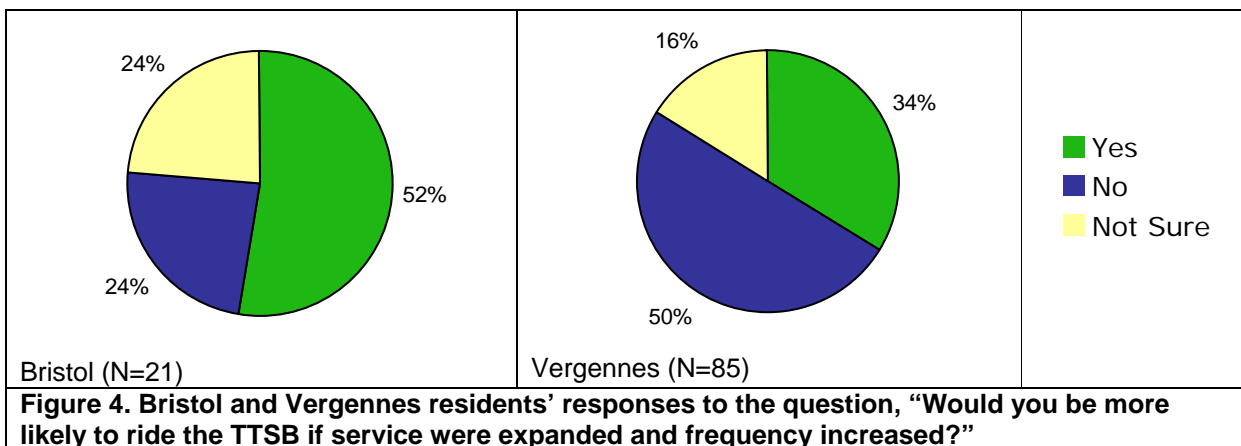
In both Bristol and Vergennes, the majority of respondents did not use the TTSB. In Bristol, only 36% of respondents used the TTSB, while only 19% of Vergennes respondents said they ever rode the TTSB. A few respondents in Vergennes also indicated they were not even aware of the service (Figure 3).



In Vergennes, 48% of the 63 non-rider respondents said they do not use ACTR because they have their own car, and 25% said the schedule and route times are

inconvenient. Some also said they were not aware of ACTR services or that buses were free to non-seniors citizens. Finally, a few of those surveyed simply responded, “I’m American,” when asked why they did not use ACTR service, while another replied that “it’s embarrassing,” demonstrating that ACTR must improve awareness and perceptions of public transportation if it is to gain more widespread support and increase ridership.

In Bristol, 52% of respondents said they would be more likely to ride the TTSB if the frequency of buses was increased from one bus every two hours to one bus every hour (Figure 4). In contrast, only 34% of Vergennes residents said they would be more likely to use the TTSB if service were expanded (Figure 4). Although the number of respondents that would be more likely to ride the TTSB is lower in Vergennes than in Bristol, it does represent nearly a doubling of the Vergennes respondents that currently ride.



Bristol and Vergennes responses suggest that with the expansion of the TTSB route, there should be some increase in ridership. In contrast, not one resident surveyed from the towns of Lincoln, Monkton, and Starksboro indicated that the increased service would make them any more likely to ride. Therefore, expanding service is less likely to

increase TTSB ridership in these towns. Overall, there seemed to be more awareness, use, and support for the Tri-Town Shuttle in Bristol than Vergennes, further highlighting the importance of raising awareness in Vergennes in order for town officials to be convinced of the demand for increased service.

Despite the fact that few town residents surveyed were ACTR users and that most did not say they would benefit from increased service, most were aware of and in favor of current or increased town funding for ACTR services in Bristol and Vergennes. Bristol residents demonstrated greater awareness of ACTR services than Vergennes residents. In Bristol, 68% of residents surveyed were aware of town funding for ACTR compared to 56% in Vergennes, and 41% of residents in the other outlying towns. However, 94% of Vergennes residents surveyed said they approved of current town funding of ACTR, while only 78% responded this way in Bristol. Similarly, in the outlying towns, 75% of respondents said they thought current funding was reasonable. Additionally, the majority of respondents in all towns said they would support increased town funding if the TTSB route were split or expanded (Table 5).

Table 5. Response percentages by town for the question, “Would you favor increased town (tax dollar) funding of ACTR if there was increased service?”			
Town	Yes	No	Not Sure
Bristol	56%	25%	19%
Vergennes	77%	11%	12%
Other Towns	58%	16%	26%

This finding is particularly interesting, because it shows that most residents of the towns served by the Tri-Town Route see value in public transportation, even if they do not use it themselves, and still might not use it even if the route were expanded. However, it is

important to take into account the fact that survey respondents may have been overly positive in their responses due to the nature of the conversational surveying process.

General comments by respondents also revealed that many see public transportation as a good service that is worth supporting for the sake of those who really need it. For example, several respondents wrote comments like, “I think it’s good for people who don’t have a car,” and, “I know a lot of community members benefit from it.” One respondent at first said they would not support increased funding for ACTR since it did not benefit him or his family, but then reconsidered when he realized that ACTR could be viewed as a charity that would benefit others. While not all respondents went through such a clear thought process out loud, this seemed to be the general mentality among most.

VII. Media and Promotion

Providing promotional materials to ACTR for use in Vergennes was another key component of our strategy to support increased community funding. The survey data and general attitudes in the six towns highlighted the need for educational and promotional materials about ACTR and the TTSB. Outreach will be critical in creating a receptive and positive response from town residents, and also crucial for increasing ridership if the route is expanded. In designing these materials, we emphasized both the benefits ACTR can provide to riders and the importance of town support for the organization.

The money riders can save by using public transportation

Assuming a daily commute between Vergennes and Middlebury, and using gasoline prices of \$3.40 per gallon, a rider could save \$40 per year by riding ACTR once a month, and \$180 per year by riding ACTR once a week (Appendix B, Figure 1).

The environmental benefits of riding the ACTR shuttle

Twenty drivers in individual cars would generate 776 pounds of carbon dioxide emissions in one day, if driving a 40 mile round trip daily commute. These same riders, on one ACTR shuttle bus, would only generate 70 pounds of CO₂ per day, saving over 700 pounds of carbon emissions (Appendix B, Figure 2).

Quality of life benefits gained by using public transportation

Riding public transportation gives riders a chance to relax, work, read, or socialize—further contributing to the beneficial community-building facets of public transportation. These benefits are not quantifiable in the same sense that financial or environmental

benefit are, but speak to the lifestyle change that utilizing public transportation asks of riders (Appendix B, Figure 3).

Benefits to Vergennes town residents

Finally, we designed a flyer emphasizing ACTR's impact in Vergennes, distilling ridership data to focus on the benefits to the city's residents specifically. This poster quantified the rides on both the TTSB and the Vergennes demand-response system, comparing these free services with the low price paid per taxpayer to sustain the service. This flyer was designed with Vergennes' May budgeting process in mind, with the hopes of encouraging residents to voice support for increased funding (Appendix B, Figure 4).

VIII. Suggestions for Future ACTR Funding Increase Tactics

Our survey analysis shows that a majority of residents believe that current funding levels for ACTR are not only acceptable, but also could be increased. These survey results become valuable when presented to town managers and select boards, as well as to citizens voting at an upcoming town meeting. During our discussion with Renny Perry (outlined in section IV above), he stressed that increased funding for ACTR would come only if we could prove ridership would increase and that residents view the service as a great benefit to the city. That 94% of Vergennes residents support current town funding for ACTR implies that the latter is true. As for the former, 50% of Vergennes residents surveyed indicated that they would use ACTR more if the frequency of the service were increased.

Convincing town officials, with survey data, that residents strongly support the service ACTR provides is probably the best tactic for procuring increased funding, although because of the small sample size of our survey, increased polling is advisable. Contextualizing current funding with data about funding per resident served will also build a stronger case for increased funding. Since giving increased funding to a potentially stagnant ridership presents a “chicken or the egg” dilemma, the general view non-riders have of ACTR as a beneficial service should also be stressed.

In the long term, ACTR should also pursue creative solutions in building ridership on the TT&SB. Continued communication with major employers in the county — especially Porter Hospital and Middlebury College — could allow ACTR to tap into the large number of employees commuting on a regular basis into Middlebury from not only Bristol and Vergennes but also from surrounding towns. Simple measures such as

coordinating the bus schedule directly with work schedules would encourage ridership. More capital-intensive measures, like financial employee incentives for leaving personal automobiles at home, would also prompt increased participation. By drafting concrete plans for building ridership (particularly, we believe, in the commuter sector), ACTR could strengthen its case for increasing current funding in the more immediate future.

IX. Conclusions

In sum, our consideration of these quantitative and qualitative data leads us to conclude that the expansion of the TTSB is a feasible and appropriate goal for ACTR, if use of the service can, in fact, be increased. An examination of the potential fiscal demands of route expansion in the context of town budget appropriations shows that ACTR is in a promising position to increase its fiscal demands to a moderate degree. Given that ACTR's funding request currently lies within the low to mid range of service agency demands, that ACTR serves a large number of community residents (with potential for increase), and that ACTR provides a social good to all, a funding increase seems within reason. ACTR's request must, however, take into account the demographics of the region, and remain appropriate for low-income members of Addison County towns.

A positive town response to ACTR's request for increased funding is anticipated according to our survey data. Residents of the six towns most influenced by the TTSB route are overwhelmingly supportive of increased funding for ACTR. Much of this generosity stems from an understanding of free public transportation as a public service. Many residents are focused on the social equity implications of public transportation in their communities, however, and many do not acknowledge the environmental or economic benefits as main assets of public transportation, since they assume that only those in dire need would use the service. Therefore, the expansion of the route may result in more buses, while ridership remains the same. This would, in effect, double the carbon footprint of the operation. In the case of such an underused public transportation

system, the environmental impacts would be reversed, and the economic potential would remain untapped.

If ACTR succeeds in acquiring increased funds, it should immediately take steps to increase its ridership. Efforts to increase public awareness should be a priority following the expansion of the route, with the aim that ACTR's services are more largely accepted in the community as an economical and environmentally-sound personal choice for the use of all town residents, not only for those with no other options. While the expansion of the TTSB is an appropriate development in the social equity of the region, it should also fulfill its potential to be beneficial to the whole of the Tri-Town community. A rural public transportation route with social, economic and environmental integrity will become the model for the state and national future. As we conclude that the TTSB expansion will become a reality in Addison County, we also hope that the TTSB will become such a paragon of equitable and sustainable community living.

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APPENDIX A – SURVEYS

Autumn Harp Employee Survey: The Tri-Town Route

As part of our senior seminar at Middlebury College, we are working with Addison County Transit Resources (ACTR) to explore public transportation needs in Addison County.

Thank you for your time and participation!

Where do you live? Bristol___ Vergennes___ New Haven___ Burlington area___
Middlebury___ Other_____

What hours do you work?_____

How do you get to work? Personal Car___ Walk___ Carpool___ ACTR Bus___
Bicycle___ Other_____

Do you use the ACTR Tri-Town Route? Yes___ No___ What’s that?___

If yes...

To and from where? Bristol___ Vergennes___ Middlebury___ New Haven___

How Often? Daily___ Once/week___ Once/month___ Very rarely___

If no...Why not? _____

Would you be more likely to use ACTR services if there were increased frequency between Middlebury and Bristol? (Current frequency is 1 bus every 2 hours from 7:30 am to 6:30 pm)
Yes___ No___ Not sure___

Would you be more likely to use public transportation if there were bus service between Bristol and the Burlington area? Yes___ No___ Not sure___

Did you know that ACTR receives town support from Bristol, Vergennes, New Haven and Middlebury to fund the Tri-Town Route? Yes___ No___

An average of \$1.42 of tax dollars per person per year goes toward funding ACTR. This amount includes not only access to the bus but also supports demand-response services for vulnerable populations. Last year, ACTR provided nearly 5,000 rides to and from Bristol alone.

Do you think \$1.42 per person per year is a reasonable amount to contribute?

Yes___ No___ Not sure___

If you took the free ACTR bus round trip once a month between Bristol and Middlebury, instead of driving your car, you would save \$42 per year in gasoline expenses alone. If you took the bus once a week you would save \$182 per year!

Would you favor increased town funding if there were increased bus frequency?

Yes___ No___ Not sure___

If yes, how much would you be willing to invest, individually?

Over \$25___ \$25___ \$10-\$25___ less than \$10___

(If each individual gave \$25, the cost of increased service would nearly be met.)

Please rank in order of importance (with 1 being most important) the reasons why you do not use ACTR. Rank only those that apply to *your* situation.

- _____ Unaware of the service
- _____ Inconvenient times
- _____ Inconvenient stops
- _____ Schedule difficult to read
- _____ Inconvenient routes
- _____ Prefer other transportation forms
- _____ Transfer between buses is required
- _____ No service where I live
- _____ Other: _____

Please rank in order of importance (with 1 being most important) what would make you more likely to use ACTR? Rank only those that apply to *your* situation.

- _____ More information about routes/stops
- _____ Increase in gas prices
- _____ Information about environmental benefits
- _____ Schedule matched my work schedule
- _____ Shorter travel time
- _____ More frequent service
- _____ Expanded routes/stops
- _____ If there were service where I live
- _____ Other: _____

How long are you willing to wait for public transportation?

_____ 0-5 min. _____ 5-10 min. _____ 10-20 min. _____ more than 20 min.

At what price per gallon of gas will you choose (or have you already chosen) to seek alternative transportation at least some of the time? (Please check one)

_____ lower than \$3.00/gallon _____ \$3.00/gallon _____ \$3.25/gallon
_____ \$3.50/gallon _____ \$4.00/gallon _____ higher than \$4.00/gallon

Other comments about ACTR service?

Vergennes Tri-Town Route Survey

As part of our senior seminar at Middlebury College, we are working with Addison County Transit Resources (ACTR) to explore public transportation needs in Addison County.

Thank you for your time and participation!

Do you use the ACTR Tri-Town Route? Yes___ No___ What's that?___

If yes...To and from where? Bristol___ Vergennes___ Middlebury___ New Haven___
How Often? Daily___ Once/week___ Once/month___ Very rarely___

If no...Why not? _____

Would you be more likely to use ACTR services if there were increased frequency and direct service between Middlebury and Vergennes? (Current frequency is 1 bus every 2 hours between 6:45am and 5:45pm; buses pass through Bristol.) Yes___ No___ Not sure___

Did you know that ACTR receives support from Vergennes, Bristol, New Haven and Middlebury to fund the Tri-Town Route? Yes___ No___

Currently, \$1.09 of Vergennes residents' tax dollars per person per year goes toward funding ACTR. This amount includes access to the Tri-Town Shuttle and supports ACTR's demand-response services to vulnerable populations. ACTR provided 5,881 demand-response rides to Vergennes residents in FY2007 488 rides in and out of Vergennes on the Tri-Town shuttle in January of this year alone .

Do you think \$1.09 per capita (about \$2.70 per average household) is a reasonable amount to contribute? Yes___ No___ Not sure___

If you took the free ACTR bus round trip once a month between Bristol and Middlebury, instead of driving your car, you would save \$42 per year in gasoline expenses alone. If you took the bus once a week you would save \$182 per year!

Would you favor increased town funding of ACTR in exchange for increased frequency and direct service between Middlebury and Vergennes? Yes___ No___ Not sure___

If yes, how much would you be willing to invest, individually?

Over \$25___ \$25___ \$10-\$25___ less than \$10___

(If each individual gave \$25, the cost of increased service would nearly be met.)

If no...Why not? _____

Please tell us about yourself. All information is confidential.

Do you consider yourself or your household to be:

Low income___ Moderate income___ High income___

How many people are in your household? ___

Other comments about ACTR service and the Tri-Town Route? (feel free to write on back)

Monkton Tri-Town Route Survey

As part of our senior seminar at Middlebury College, we are working with Addison County Transit Resources (ACTR) to explore public transportation needs in Addison County. **Thank you for your time and participation!**

Do you use the ACTR Tri-Town Route? Yes___ No___ What's that?___

If yes...

To and from where? Bristol___ Vergennes___ Middlebury___ New Haven___

How Often? Daily___ Once/week___ Once/month___ Very rarely___

If no...Why not? _____

Would you be more likely to use ACTR services if there were increased frequency between Middlebury and Bristol? (Current frequency is 1 bus every 2 hours from 7:30 am to 6:30 pm)

Yes___ No___

Did you know that ACTR receives support from Bristol, Vergennes, New Haven and Middlebury to fund the Tri-Town Route? Yes___ No___

Currently, \$0.23 of Monkton residents' tax dollars per year supports ACTR's demand-response services to vulnerable populations. During the 2007 fiscal year ACTR provided 668 demand-response rides to Monkton residents. While Tri-Town Shuttle does not pass directly through Monkton, Monkton residents use park and rides in Bristol to access the free ACTR buses.

Do you think that \$0.23 (about \$0.62 per average household) is a reasonable amount to contribute?

Yes___ No___ Not sure___

If you took a free ACTR bus round trip once a month between Bristol and Middlebury, instead of driving your car, you would save \$42 per year in gasoline expenses alone. If you took the bus once a week you would save \$182 per year!

Would you favor increased town funding if there were increased bus frequency?

Yes___ No___ Not sure___

If yes...How much would you be willing to pay, per capita?

less than \$1___ \$1-\$5___ \$5-\$10___ \$10-\$20___ over \$20___

If no...Why not? _____

Please tell us about yourself. All information is confidential.

Do you consider yourself or your household to be:

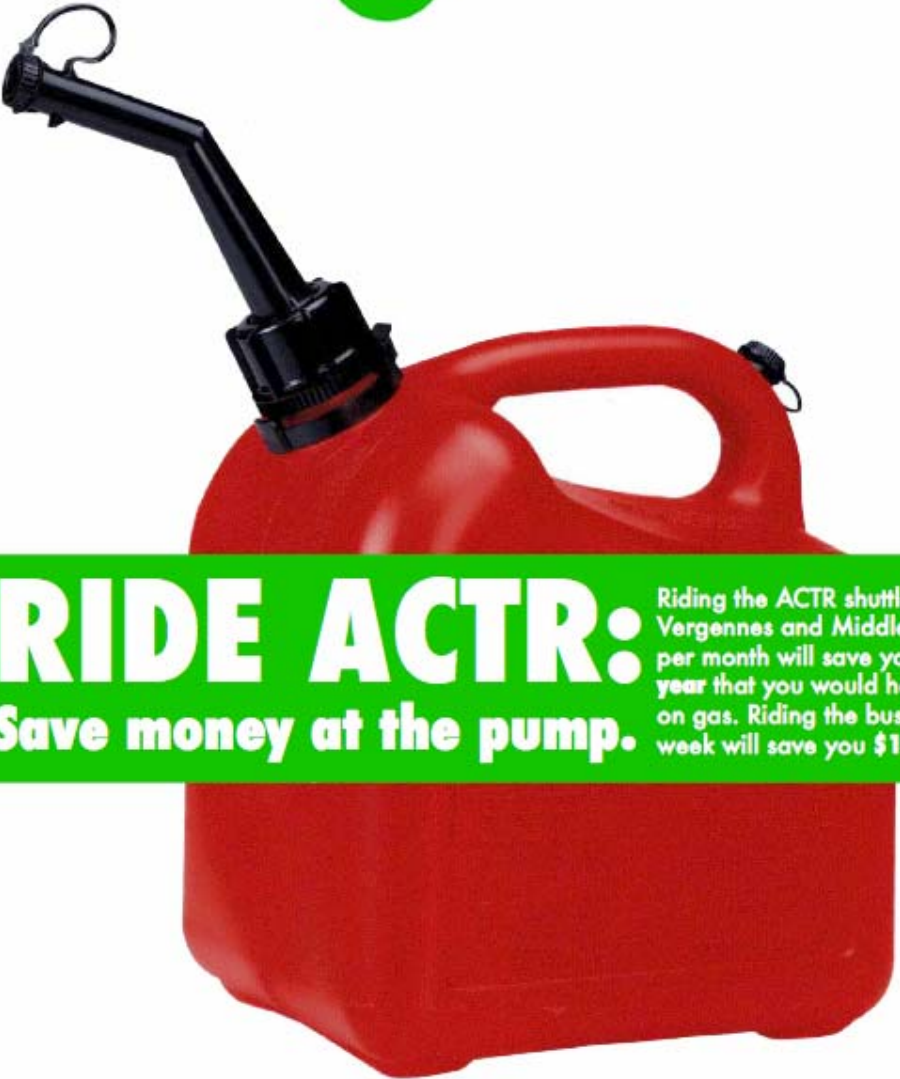

Low income___ Moderate income___ High income___

How many people are in your household? ___

Other comments about ACTR service and the Tri-Town Route?

APPENDIX B – PROMOTIONAL POSTERS

Figure 1





RIDE ACTR: Save money at the pump. Riding the ACTR shuttle between Vergennes and Middlebury once per month will save you \$40 a year that you would have spent on gas. Riding the bus once a week will save you \$180 a year!

These calculations are based on gas prices of \$3.40 per gallon and do not include the additional costs of maintenance for individual car owners.


VISIT ACTR-VT.ORG TODAY FOR MORE INFORMATION AND SCHEDULES.

Figure 2

 **ACTR** transportation for everyone





RIDE ACTR: **Reduce your footprint.** Twenty passengers riding one bus can save over 700 pounds of CO₂ emissions in one day. For the sake of tomorrow, make ACTR part of your commute today.



CO₂ emissions for 20 cars with one passenger a piece: 776 pounds per day.
CO₂ emissions for one bus carrying 20 passengers: 70 pounds per day.
(Calculations assume a 40 mile round trip daily commute.)

VISIT ACTR-VT.ORG TODAY FOR MORE INFORMATION AND SCHEDULES.

Figure 3




RIDE ACTR:
Simplify your life.

Riding public transportation doesn't have to be a hassle. Riding the ACTR shuttle is a great way to make the best use of your valuable time: read, catch up on work, or socialize!

Supporting Addison County Transit Resources (ACTR) saves time, money, and the environment – plus it supports a valuable community service.

VISIT ACTR-VT.ORG TODAY FOR MORE INFORMATION AND SCHEDULES.

Figure 4



SUPPORT ACTR:

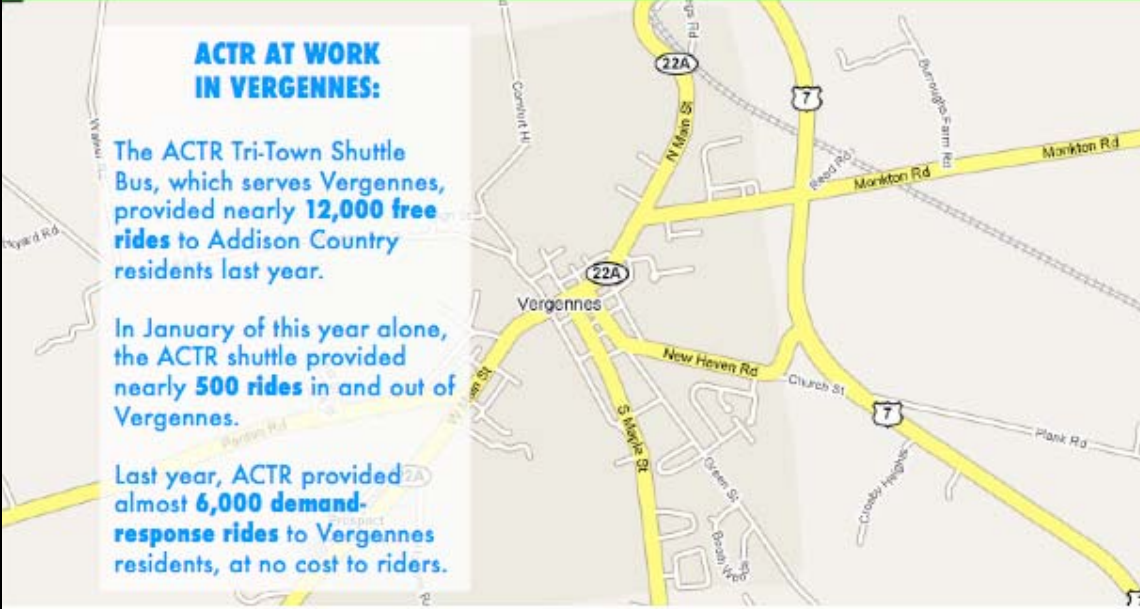
See your tax dollars on the road. Fund public transportation in Vergennes.

**ACTR AT WORK
IN VERGENNES:**

The ACTR Tri-Town Shuttle Bus, which serves Vergennes, provided nearly **12,000 free rides** to Addison County residents last year.

In January of this year alone, the ACTR shuttle provided nearly **500 rides** in and out of Vergennes.

Last year, ACTR provided almost **6,000 demand-response rides** to Vergennes residents, at no cost to riders.



Currently, Vergennes residents pay **only \$1.09 per capita** in tax dollars to support ACTR. Support increased funding for this valuable community service today.

VISIT ACTR-VT.ORG TODAY FOR MORE INFORMATION AND SCHEDULES.