VDOT Multimodal Planning Grant:
EMPLOYMENT MOBILITY

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prepared for
Virginia Department of Transportation

prepared by
New River Valley Planning District Commission
in cooperation with the U.S. Department of Transportation,
Federal Highway Administration and the Multimodal Office

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EXECUTIVE SUMMARY

This Employment Mobility study is prepared through funding under the Multimodal Planning Grant administered by the Virginia Department of Transportation (VDOT). The purpose of this study was to develop a vision for rural transportation within the New River Valley. The eighteen-month project analyzed commuter patterns, barriers to transportation, and explored transportation solutions through two surveys and the guidance of a knowledgeable stakeholder group. Located in Southwest Virginia, the New River Valley includes the Counties of Giles, Floyd, Montgomery, and Pulaski, and the Towns therein, and the City of Radford.

VDOT defines a Multimodal and Land Use Plan as one that educates and trains in multimodal and land use planning and develops an implementable plan. This project's scope can be summarized in the following four main components:

- Creation of local stakeholders group to guide progress of project
- Design and implementation of two surveys addressing regional commuting patterns, transportation barriers, and assessment of interest in alternative transportation
- Coordination of region's public and private transportation providers to explore multimodal solutions to employee mobility in the New River Valley
- Drafting of first-phase recommendations for a regional transit system by current transportation providers

Project progress was overseen by a stakeholders group that was tasked with providing input concerning survey creation, identifying both formal and informal existing Park & Ride lots as part of the survey process, and promoting the survey after its completion. The stakeholders played an active and continuous role during the Employment Mobility study, meeting regularly throughout the project to provide input and feedback.

The first survey, administered in person at Park & Ride lots across the region, was created in order to address how formal and informal Park & Ride lots are being utilized, and assess the ability for these lots to serve as rural bus stops along a fixed or semi-fixed transit route. The surveys were conducted over a four-month period, with each lot surveyed more than once. To broaden the

project's demographics beyond Park & Ride lot users, a more comprehensive survey was created in order to target employees across the entire region. This survey focused on four main categories: Transportation Information, Transportation Barriers, Transportation Solutions, and Demographics. Demand was illustrated through a series of maps.

The scope of work for the study was broken into two segments: the tasks completed by the New River Valley Planning District Commission (PDC) and the tasks completed by the selected Consultants. The PDC performed all activities concerning stakeholders meetings, survey distribution, and data entry, while the Consultants were tasked with technical and transit specific activities. Using Blacksburg Transit (BT), Pulaski Area Transit (PAT), and Community Transit (CT) (the region's existing transportation providers) to analyze the survey data, the project was able to draw on the knowledge and expertise of those already involved in transit.

As an enhancement to the project, the PDC applied for and was awarded grant funds through the Transportation and Housing Alliance Toolkit (THA) program to develop maps of the region identifying and analyzing disabled, aging, and low-income populations within the project area and to located other points of interest such as employment center and health care providers.

Results of both surveys point to an overall interest in both carpooling and public transportation. Other than for those employees who live and work in the region's urban areas, walking and biking to work was an infeasible form of commuting. Over half (55%) of the Employee Survey respondents reported that they would be willing to pay $2 for a one-way trip and $3.50 for a round trip. Nearly 80% of those who said they would *not* be willing to pay those prices for public transportation, claimed that they would be willing to pay *some* amount. Most responses were females (67%) who fell into the 45-54 age bracket (29%). Over half of those who participated resided in Montgomery County, namely the Towns of Christiansburg and Blacksburg.

The recommendations within this report were based on a review of local comprehensive plans and other studies as well as a review of data provided by the NRVPDC from the employment mobility survey and related data collection efforts. These data were used in conjunction with the expertise from the group to make the following recommendations:

- Service providers including BT, CT, and PAT, in conjunction with other service providers can serve the needs of commuters in this region.
- Seven routes would best service commuters in the New River Valley including:
    1. Glen Lyn to Blacksburg
    2. Pearisburg to Dublin
    3. Draper to Fairlawn
    4. Radford to Christiansburg/Falling Branch
    5. Floyd to Downtown Christiansburg
    6. Blacksburg to Radford to Christiansburg
    7. Christiansburg to Shawsville
- Additional transportation services should be included to transport riders from transit stops to their employment centers. It is proposed that this will be accomplished through a network of vanpools running on semi-fixed routes. Maps of the proposed vanpool system can be found in Section 4.3 of the report.
- Refinements of this vision should focus on connections among routes and with other service providers via a hub concept.
- At current 2009 prices, the anticipated cost of vehicles range from $50,000 to $360,000 per vehicle, depending on whether vans or buses are chosen for a particular route or area. Operational costs are estimated to be between $60,000 to $100,000 per route, based on hours of operation, deadhead miles, number of stops, price of fuel, etc. Additional funding would also need to be set aside for replacement vehicles.
- Cost sharing and matching funds programs such as those provided by Federal and State government should be thoroughly explored and sought after.
- Scheduling should initially focus on servicing commuters that work Monday through Friday, 8 AM to 5 PM. For example, the Glen Lyn to Blacksburg route would start at 6:20 AM and end at approximately 7:44 PM. These route hours would be expanded as funding and ridership demand allows.
- Vehicles could range from standard 12 person vans, to 15 or 21-passenger body on chassis (BOC) vans, which allows for wheelchairs and includes a high ceiling so that passengers can easily stand upright while entering or exiting the vehicle. Other options include using 30, 35, or 40-foot buses such as those used by Blacksburg Transit.

- A phased approach is recommended to implement the seven routes, including:
    1. Identify roles and services for each agency
    2. Establish a formalized NRVPDC and BCM-MPO collaboration focused on expanding the vision of NRV transportation services
    3. Identify potential sponsors, partners, or other funding mechanisms
    4. Refine, solidify, and market the vision
    5. Launch Commuter Transportation Service based on the seven routes

Regional public transportation is supported in many of the localities' Comprehensive Plans as well as the Metropolitan Planning Organization's (MPO) 2030 Transportation Plan, which states that "transportation via transit, bicycle, walking, air, and intercity bus is an integral part of the region's transportation system and the [MPO 2030 Transportation] Plan recommends expanding the role that these modes of travel provide in the region…"

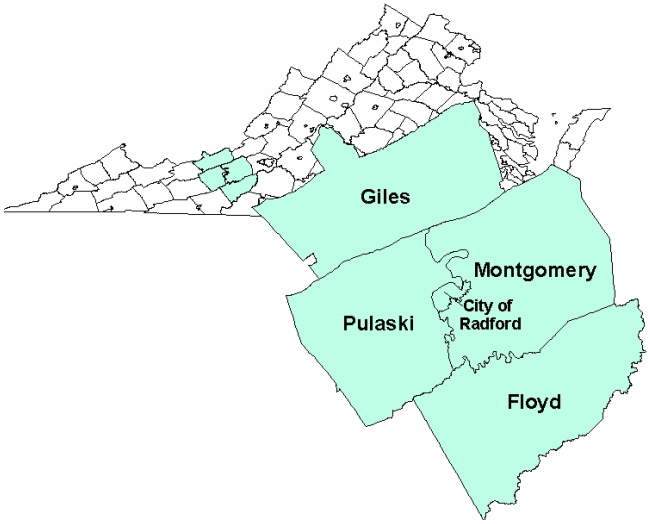
Implementation of the routes can take place gradually, and it is most likely that each route would be launched separately. Ideally however, all of the routes would be launched within a relatively short time frame (e.g. 2-3 years), as the need for employee commuter transportation is apparent, and the need will likely grow as the population increases in the region. These recommendations serve as the first of many planning phases, and the PDC will be working to procure ongoing funding in order to continue this study.

I. INTRODUCTION

1.1 Project Overview

The Employment Mobility project is the second phase to a public mobility project funded by VDOT in FY 2005-2006. The Multimodal Planning program aimed to educate and train localities in multimodal and land use planning as well as develop implementable plans. Conducted by the New River Valley Planning District Commission (PDC), this study focused on the four county and one city region that makes up the New River Valley, in order to address gaps in rural transportation and to evaluate the region for employee-based transit. Located in Southwest Virginia, this area includes the Counties of Giles, Floyd, Montgomery, and Pulaski, and the Towns therein, and the City of Radford (Figure 1).

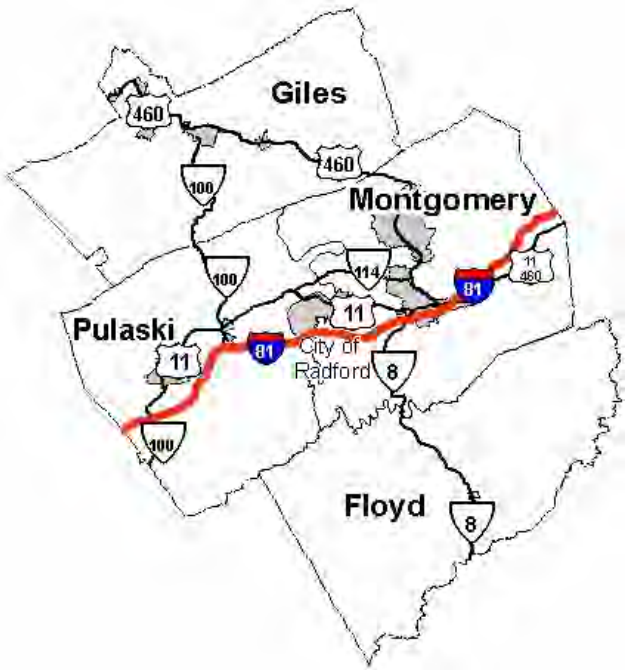
Figure 1 - New River Valley



The New River Valley is bisected by Interstate 81, with U.S. Routes 460, 11, and State Routes 100, 114, and 8 serving as the major corridors providing connectivity between the towns (Figure 2). All localities in the region retain more than 50% of their residents for local employment except for Floyd County, which retains 43%. For localities whose residents seek employment beyond their jurisdiction, often they remain in the region. For instance, only 7% of Pulaski County, 8% of Giles County, 12% of Montgomery County, and 30% of Floyd County residents commute beyond the region.[1]

[1] *Virginia's New River Valley Regional Data Book 2006.* "Labor Force Commuting Patterns" (2006). Pg. 48. Online at: http://www.nrvpdc.org/08Databook/workforce08.pdf .

Figure 2 – New River Valley Major Corridors



The New River Valley has acknowledged the importance of transit since June of 1947, when the Blacksburg Transit Company (of no relation to present day Blacksburg Transit) started providing bus service.[2] Then in 1976, Senior Services began running routes catered to the elderly and disabled.[3] Blacksburg Transit and Community Transit soon followed, in 1983 and 1986 respectively, and Pulaski Area Transit was founded in 2006 under the umbrella of Senior Services[4]. RIDE Solutions, a regional ridesharing program was formed in 2003 to generate carpool matches for individuals with similar routes.[5] And in a partnership with the Roanoke Valley, the Smart Way is a commuter bus service that links the Roanoke Valley to the New River Valley.[6] More information on the areas existing transit can be found in Appendix E, page A-42.

To understand commuting patterns in the region, a Park & Ride lot user survey was created. This survey addressed how formal and informal Park & Ride lots are being utilized, and assessed the ability for these lots to serve as rural bus stops along a fixed or semi-fixed transit route. Questions designed to understand lot use frequency, origin/destination, mode of transportation, and whether public transit was of interest were included. Demand was illustrated through a series of

[2] *Richmond Times-Dispatch.* (1947). "Town Buses Begin Runs at Blacksburg." June 7, 1947. Richmond, Virginia.
[3] Senior Services. Online at http://nrvseniorservices.org/
[4] Blacksburg Transit: Online at: http://www.btransit.org/ and Pulaski Area Transit: online at: http://www2.nr.edu/transit/pat.asp
[5] RIDE Solutions. Online at: http://www.ridesolutions.org/
[6] Smart Way Bus. Online at: http://www.smartwaybus.com

maps. To further evaluate transportation needs, the PDC also created a survey targeting employees across the region to identify commuting routines and work hours, points of origin versus destination points, barriers to transportation, and to explore alternative modes of commuting. A copy of each survey can be found in the Appendix section.

As an enhancement to the project, the PDC applied for and was awarded grant funds through the Transportation and Housing Alliance Toolkit (THA) program to develop maps of the region identifying and analyzing disabled, aging, and low-income populations within the project area who could benefit from the Employment Mobility Study. The Transportation and Housing Alliance Toolkit provided the PDC the opportunity to map demographic data at the block group level, including disabled populations, low income, multi-unit housing facilities and several other demographic categories. These maps serve as indicators for transportation need. An additional set of geo-coded maps illustrate points of demand for disadvantaged populations, such as, health care providers, departments of social security, and financial institutions.

The final component of the program pulled together the region's current public transportation providers, Blacksburg Transit, Community Transit, and Pulaski Area Transit, for an analysis of the data and recommendations for meeting commuter needs with region-wide public transportation.

The project also involved continuous input from a stakeholders group formed during the first phase of this study. This group met throughout the project in order to hear progress and give input.

1.2 Project Area Background

Although the New River Valley is rural in comparison to many other localities in Virginia, the region contains two urban centers, the Towns of Blacksburg and Christiansburg, which are more densely populated. These two Towns and parts of Montgomery County make up the Blacksburg-Christiansburg Metropolitan Planning Organization (MPO), a Federal requirement for any urbanized area with a population greater than 50,000.[7] In further compliance of Federal

[7] Blacksburg/Christiansburg/Montgomery Metropolitan Planning Organization. (2008). Online at: http://www.montva.com/departments/mpo/

requirements, the MPO developed a transportation plan listing projected transportation improvements as well as projected travel demands to the year 2030.

Even though the MPO's 2030 Transportation Plan was written for the Towns of Blacksburg and Christiansburg and the surrounding urbanized portions of Montgomery County, it occasionally speaks of region-wide improvements as well. In the plan's Executive Summary it states that "transportation via transit, bicycle, walking, air, and intercity bus is an integral part of the region's transportation system and the [MPO 2030 Transportation] Plan recommends expanding the role that these modes of travel provide in the region…the Plan recommends expansion to transit in the region, park-and-ride lots, bikeways and walkways, and intercity transportation by rail, air, and bus."[8]

The *Radford Area including Fairlawn 2020 Transportation Plan* was developed as a joint effort between the Virginia Department of Transportation (VDOT), the City of Radford, Pulaski County (Fairlawn) and Montgomery County.[9] The purpose of this study was to evaluate the existing transportation system and future demand in the area and to recommend a set of transportation improvements that could best meet existing and future transportation infrastructure needs.[9] Currently, the Radford and Fairlawn areas are only partially served by mass transit. Tartan Transit runs two routes on weekdays: a "Campus Loop" serving predominantly Radford University students and a "City Loop," which begins at 2:30pm and makes a stop at two shopping centers and the Technology Park once an hour until 8:30pm. The City Loop does not run on the weekend.[10]

This report explores the viability of rural public transportation in the New River Valley. The recommendations put forth in this study were not only developed with data from two survey efforts and the input of a stakeholder group, but in conjunction with other correlating studies on transportation and localities' comprehensive plans in hopes of creating one transportation plan that aims to fulfill the needs of commuters in the entire New River Valley.

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[8] Blacksburg/Christiansburg/Montgomery Area *2030 Transportation Plan Technical Report.* (November 2005). Pg. 5 Online at: http://www.montva.com/departments/mpo/downloads/bcmfinal2030techreport.pdf

[9] *Radford Area Including Fairlawn 2020 Transportation Plan.* (2001). Pg. 1 Online at: http://www.virginiadot.org/projects/resources/Radford_plansummary_FINAL.pdf

[10] Radford University Tartan Transit. (2009) Online at: http://parking.asp.radford.edu/Information/TransitSchedule.htm

II. METHODS

2.1 Multimodal Plan Elements

VDOT defines a Multimodal and Land Use Plan as one that educates and trains in multimodal and land use planning and develops an implementable plan. This project's scope can be summarized in the following four main components:

- Creation of local stakeholders group to guide progress of project
- Design and implementation of two surveys addressing regional commuting patterns, transportation barriers, and assessment of interest in alternative transportation
- Coordination of region's public and private transportation providers to explore multimodal solutions to employee mobility in the New River Valley
- Drafting of first-phase recommendations for a regional transit system by current transportation providers

2.2 Project Timeline

The work program for the Employment Mobility project was broken into two segments: PDC tasks and Consultant's tasks. Under the tasks to be completed by the PDC, monthly Stakeholders Meetings and Demand Assessment began first. The Demand Assessment portion of the project spanned the largest amount of hands-on time in order to develop and distribute surveys. Following the completion of Demand Assessment and the tabulation of all survey data, Inventory Illustration began in order to map important data findings. The remaining tasks of System Design were delegated to the Consultants.

2.3 Employee Mobility Stakeholders Group

During the 2004-2006 Coordinated Human Service Mobility project, a stakeholders group was created in order to oversee project development, offer input, and review project findings. This group included representation from Blacksburg Transit, Community Transit, and Pulaski Area Transit (the region's existing transportation providers), government officials, and other transportation experts from the New River Valley.[11] At the project's end, the stakeholders group

[11] Cambridge Systematics, Inc. and KFH Group. *New River Valley (PDC 4) Coordinated Human Service Mobility Plan.* (2008). Pg. 3

continued meeting on a bi-monthly schedule, allowing for smooth transition after the Employment Mobility Project was funded in the spring of 2007. With the focus of this project on employee transit, the addition of local employers and Human Resource managers to the group was vital to the study's development.

The stakeholders were tasked with providing input concerning survey creation, identifying both formal and informal existing Park & Ride lots as part of the survey process, and promoting the survey after its completion. The stakeholders played an active and continuous role during the Employment Mobility study, meeting regularly throughout the project to provide input and feedback. For example, the group was able to provide valuable input toward taking the demand assessment one step further to surveying employees. Since several companies expressed an interest in surveying their employees in an effort to gain a higher level of understanding in terms of their employee needs, the PDC created an employee survey.

2.4 Park & Ride Survey

Creation

The New River Valley has 16 Park & Ride Lots used by residents for commuting and other travel purposes. Only five of these lots are considered formal lots as designated by the Virginia Department of Transportation. The remaining informal lots take the form of commercial parking lots or large roadside pull-offs. Since the New River Valley's Park & Ride Lots already act as "hubs" for those seeking to either carpool or take other forms of transportation, the concept of a fixed-route transit system with potential pick-up locations at Park & Ride lots would create a natural multimodal relationship. The survey asked questions to understand lot use frequency, origin and destination points, the mode of transportation being used and whether public transit was of interest.

Administration

A short, 13 question survey was created in order to address how formal and informal Park & Ride lots are being utilized, and assess the ability for these lots to serve as rural bus stops along a fixed or semi-fixed transit route. The surveys were conducted in person over a four month period, with each lot surveyed more than once. For vehicles not captured, a weather resistant information packet was left on the windshield giving details about the survey including contact information

and a web address where the commuter could fill out the survey. The Park & Ride survey gave valuable insight into frequency of lot use, the demographics of those who frequent the lots, as well as the origin and destination of Park & Ride lot users. A copy of the Park & Ride Survey can be found in Appendix A .

2.5 Employee Survey

Creation

Originally, the project scope indicated an employer survey and a Park & Ride lot survey. The stakeholders group helped to determine that future discussions would benefit significantly by understanding the employee transportation demand in more detail. To broaden the project's demographics beyond Park & Ride lot users, a more comprehensive survey was created in order to target employees across the entire region. The stakeholders group spent several weeks deliberating the survey question content and style; the survey needed to be comprehensive enough to provide quality data, but concise enough to generate a representative sample. The final draft of the Employee survey focused on four main categories: Transportation Information, Transportation Barriers, Transportation Solutions, and Demographics.

The Transportation Information section gathered data on employees' commuting schedule, mode of transportation, start and finish times, and length and distance of commute. It also questioned respondents on their familiarity with the RIDESHARE program, a database service that matches workers with potential carpool partners. The Transportation Barriers section focused on reasons why an individual may or may not use alternative forms of transportation such as carpooling, biking, walking, and using public transportation. In the section on Transportation Solutions, survey participants were asked to consider using alternative modes of transportation more frequently if common barriers could be removed. Finally, the Demographics section allowed for a count of the age, origin and destination points, and gender of all those surveyed.

Administration

Initially, the employee survey was made available online via a link on the PDC's homepage, with hardcopies available by request. Throughout the course of the survey process, the PDC sought to make the survey accessible to all employees. At the suggestion of the stakeholders, the survey was made available over the phone to accommodate those who may be intimidated by a lengthy

written survey. And at the request of a particular employer, with the help of staff at Virginia Tech, the survey was also made available in Spanish.

The survey garnered steady response throughout the entire assessment period, with spikes in interest resulting from media attention or specialized publicity within a place of employment. To help ensure a more representative sample, stacks of hardcopies were left with HR Managers or in break rooms of participating places of employment such as Wal-Mart, Xaloy, and Wolverine. These surveys tapped into a demographic whose place of employment was not in an office setting and may not have had access to a computer. This demographic proved the most challenging to access, yet these survey responses generally provided invaluable data. A copy of the Employee Transportation Survey can be found in Appendix B.

2.6 Consultants

As previously mentioned, the scope of work for the Employment Mobility study was broken into two segments: the tasks completed by the PDC and the tasks completed by the selected Consultants. The PDC performed all activities concerning stakeholders meetings, survey distribution, and data entry, while the Consultants were tasked with technical and transit specific activities.

Using Blacksburg Transit, Pulaski Area Transit, and Community Transit, the region's existing transportation providers, to analyze the survey data, the project was able to draw on the knowledge and expertise of those already involved in transit. Their understanding of the area, the technical and logistic side of providing transportation, and knowing the strengths and weaknesses of their personal organizations made their participation vital to the study.

Following the conclusion of the Demand Assessment portion of the project, the Consultants were given the compiled data and began meeting to discuss their recommendations. Their discussions incorporated survey data, 2000 Census data, each locality's Comprehensive Plan, and other correlating transportation studies conducted in the region.

III. RESULTS

The results of both the Park & Ride survey and the Employee survey, together with the expertise of the region's transportation providers helped to shape the final recommendations in this report. This section highlights and discusses some of the more pertinent findings in the surveys. The full results from both surveys can be found in Appendix C and D.

The region's dichotomy of urban and rural not only creates challenging extremes when considering transportation for a region, but also when surveying the region. It should be noted that responses from citizens in rural localities were much different from responses received by those who live in the region's urban centers. Similarly, responses from the region's more densely populated regions were much easier to obtain.

3.1 PARK & RIDE SURVEY

At the onset of the study, Park & Ride lots were identified as potential "rural bus stops." To that effect, each identified Park & Ride lot was surveyed in person with a 13-question survey. Questions ranged from origin and destination points to the desirability of region-wide rural public transportation.

Park & Ride lots are located in all five localities in the New River Valley, however, the largest capacity and highest usage lot is located in the Town of Christiansburg, off exit 118A from I-81. With a capacity of 55 vehicles, this lot outsizes the other lots roughly six to one.[12] Data from the Park & Ride survey will reflect this.

On weekdays, each of the Park & Ride lots is used equally from day to day, with no one day having a significantly higher use rate. These numbers drop significantly on Saturday and Sunday, supporting the 68% response rate of those who reported using Park & Ride lots to commute to work.

[12] VDOT. "Online Transportation Information Map." (2009). Online at: http://www.virginiadot.org/travel/prOTIM.asp

Most Park & Ride lot users originate from the Towns of Blacksburg and Christiansburg and commute to Salem and Roanoke, which are located 35-45 minutes north on Interstate 81. These residents commute from the Park & Ride lot to their place of employment via the SmartWay bus. Seventy-three percent of respondents live 20 minutes away or less from the lot they use.

The Park & Ride survey also asked respondents about their familiarity with the RIDESHARE program, a program where commuters are paired up with other commuters in order to create a vanpool or carpool. Although none of the lot users surveyed were members of RIDESHARE, 53% of the respondents were familiar with the program. Further, 80% of those surveyed reported that they would be interested in public transportation if made available to them.

3.2 EMPLOYEE SURVEY

The four-part Employee survey was created to target employees across the region and identify information such as commuting patterns, barriers to transportation, prime working hours, and basic demographics. The survey was made available both in hard copy and online in attempt to capture a wide range of respondents.

The project gained media coverage in the Roanoke Times, the Southwest Times, and over a local radio station, WUVT 90.7 FM (Appendix F). The local National Public Radio (NPR) station out of Roanoke also conducted an interview which ran in April of 2008. Following the media attention and in conjunction with the publicity efforts of the stakeholders group, the response rate and business participation increased steadily over the course of the project. In the end, the survey generated 750 online responses and 150 hardcopy responses, for a total of 900 surveys completed.

Part I: Transportation Information

The first section of the survey asked respondents about their current commuting schedules. From Monday through Friday, respondents reported that they drove themselves to work 82%-86% of the time, Carpooled with others 8%-9% of the time, took Public Transportation 1%-2% of the time, rode their Bikes 2%-3% of the time, Walked 1%-2% of the time, and Worked from Home 1%-3% of the time. On weekday mornings, the window of greatest activity occurred between 7:00am and 10:00am, with weekday evenings receiving the most activity between 3:00pm and 7:00pm. Peak

times occurred during the 8:00am hour and 5:00pm hour. On average, employees were driving anywhere from 1-20 miles to work, with the bulk of commutes lasting 10-30 minutes.

Part I also surveyed employees on their familiarity with the RIDESHARE program. Although only 16 (2%) of the respondents were members of RIDESHARE, a strong majority (63%) had heard of the program through either an advertisement or word of mouth. Fifty-seven percent of respondents claimed they would be willing to participate in a carpooling arrangement. Additionally, the survey itself, if taken online, was designed to forward all respondents to the RIDESHARE website upon the completion of the survey. The RIDESHARE program saw a spike in registration corresponding with the release of the survey.

Part II: Transportation Barriers

The second section of the survey asked commuters to identify any barriers they may have to carpooling, biking, walking, and public transportation. For each of the modes, respondents were asked to choose from a list of barriers that applied to them, or write in one of their own. If the respondent did *not* experience a barrier using one of the alternative modes, he or she was asked to indicate that as well. In response to carpooling barriers, needing a personal vehicle to run errands before or after work was the most frequent response (466 answers, 20%). The greatest barrier for both biking and walking to work were the distance being too far (21% and 43% respectively.

Twenty percent (164) of respondents had been late to work due to unreliable transportation and 13% (108) had missed an entire day of work due to a less than standard vehicle. The last question of section two asked the open-ended question: "How could this/these barrier(s) be removed?" This question provoked hundreds of varying responses ranging from comments on road maintenance, to the weather, to gas prices, to suggestions for alternative transportation.

Part III: Transportation Solutions

The third section of the survey explores solutions to the barriers of transportation as well as gauges employee interest in more energy and fuel-efficient modes of transportation. Respondents were posed with the question, "How much do the following affect your decision to use other modes of transportation to work?" Choices ranged from 1 (Does NOT affect) to 5

(Strongly Affects) and Table 1 illustrates the percentage of respondents who answered with a 4 or a 5.

Table 1 - Factors That Affect the Use of Alternative Transportation

I would consider taking public transportation, car/vanpooling, walking, or biking to work more often	4	5 – Strongly Affects
If a Guaranteed Ride Home program, which would guarantee me a ride home in case of emergency were available	18%	24%
If my work start and finish times were flexible	16%	21%
If there was a company vehicle I could use for business use during the day	14%	21%
If the cost of public transportation were subsidized by my employer	14%	25%
If there was help (e.g. my employer or an agency) to find people with whom to carpool/vanpool	18%	16%
If public transportation passes were sold at work	10%	11%
If childcare services were located at or near my place of work	4%	9%
If secure and convenient bicycle parking racks and/or lockers were available at work	5%	6.5%
If parking was reserved close to my building for carpools/vanpools	8%	8%
If parking rates were lower for those who carpool/vanpool than for those who drive alone	8%	9%
If transportation information (e.g. biking routes, public transportation routes and scheduling) were available at work	13%	11%
If showers, clothing lockers, and change facilities were available at work	9%	9%
If a shuttle bus service from my workplace to a major public transportation station was provided	12%	22%

When given the choice of alternative modes of transportation, the majority (43%) stated that they would choose public transportation. A Needs Assessment on transportation conducted in Eastern Montgomery County also supports the desire for more accessible public transportation. "Fifty three persons (70%) responded that they would utilize public transportation if it was available to get to work. Forty-four of those responding listed the number of days per week which they would desire service. Of those 44 [respondents], 32 (73%) indicated that they would use public transportation 4-5 days per week."[13] In addition, over half (55%) of the Employee Survey respondents reported that they would be willing to pay $2 for a one-way trip and $3.50 for a

[13] Montgomery County. *Eastern Montgomery Needs Assessment* (2006). pg. 8

round trip. Nearly 80% of those who said they would *not* be willing to pay those prices for public transportation, claimed that they would be willing to pay some amount. The suggestions varied from $.25 to $1.75 for one-way trips and $.25 to $3.00 for round trips.

Part IV: Demographics

The final section of the survey identified distinguishing attributes in the group of respondents as a whole. Questions such as age, gender, and community of residence helped to pinpoint the type of people filling out the surveys.

Most responses were females (67%) who fell into the 45-54 age bracket (29%). Over half of those who participated resided in Montgomery County, namely the Towns of Christiansburg and Blacksburg. This is supported by the most frequent residential zip codes belonging to those in Christiansburg (26%) and Blacksburg (23%) as well. The City of Radford, Town of Dublin (Pulaski County) and the Town of Pulaski (Pulaski County) also had notable levels of response.

Other reported areas of residence included Newport, Narrows and Pearisburg, in Giles; Snowville and Fairlawn, in Pulaski; Riner and Shawsville, in Montgomery; and Floyd County.

Figure 3 – New River Valley Employment Centers by Number of Employees

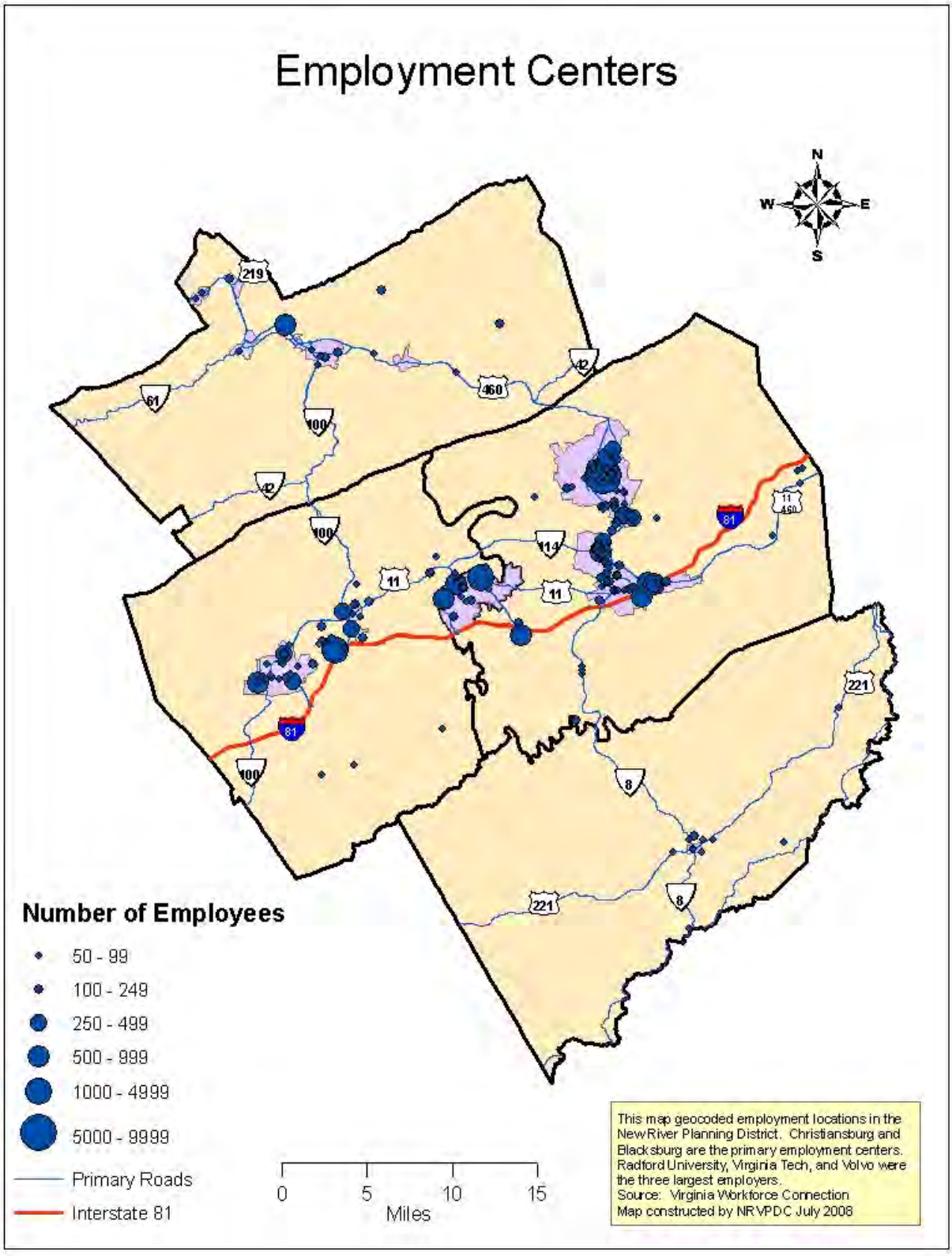


Figure 4 - Employment Centers in Towns of Blacksburg and Christiansburg and the City of Radford by Number of Employees

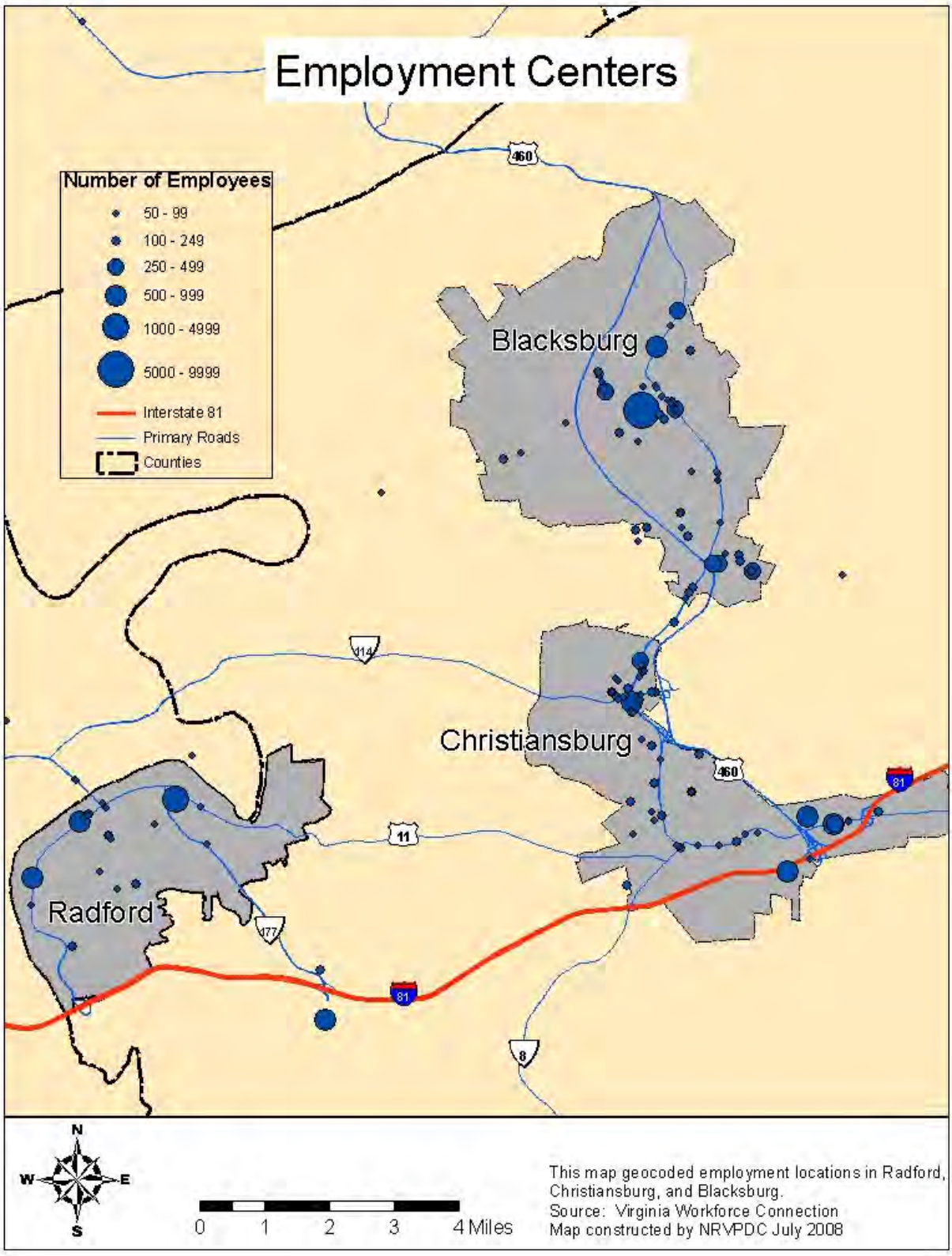


Figure 5 - Origin of Commuters in New River Valley

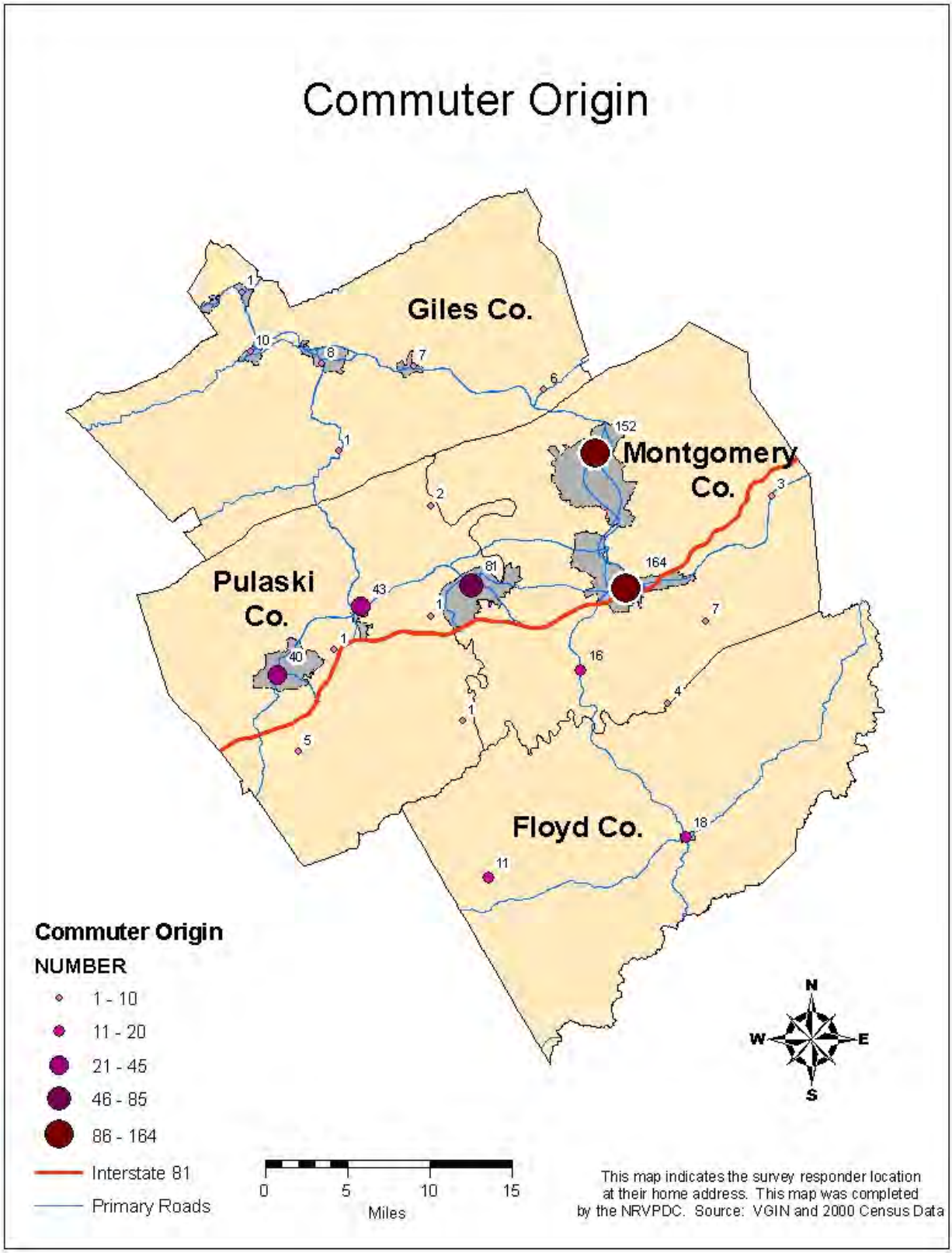


Figure 6 – Destination of Commuters in New River Valley

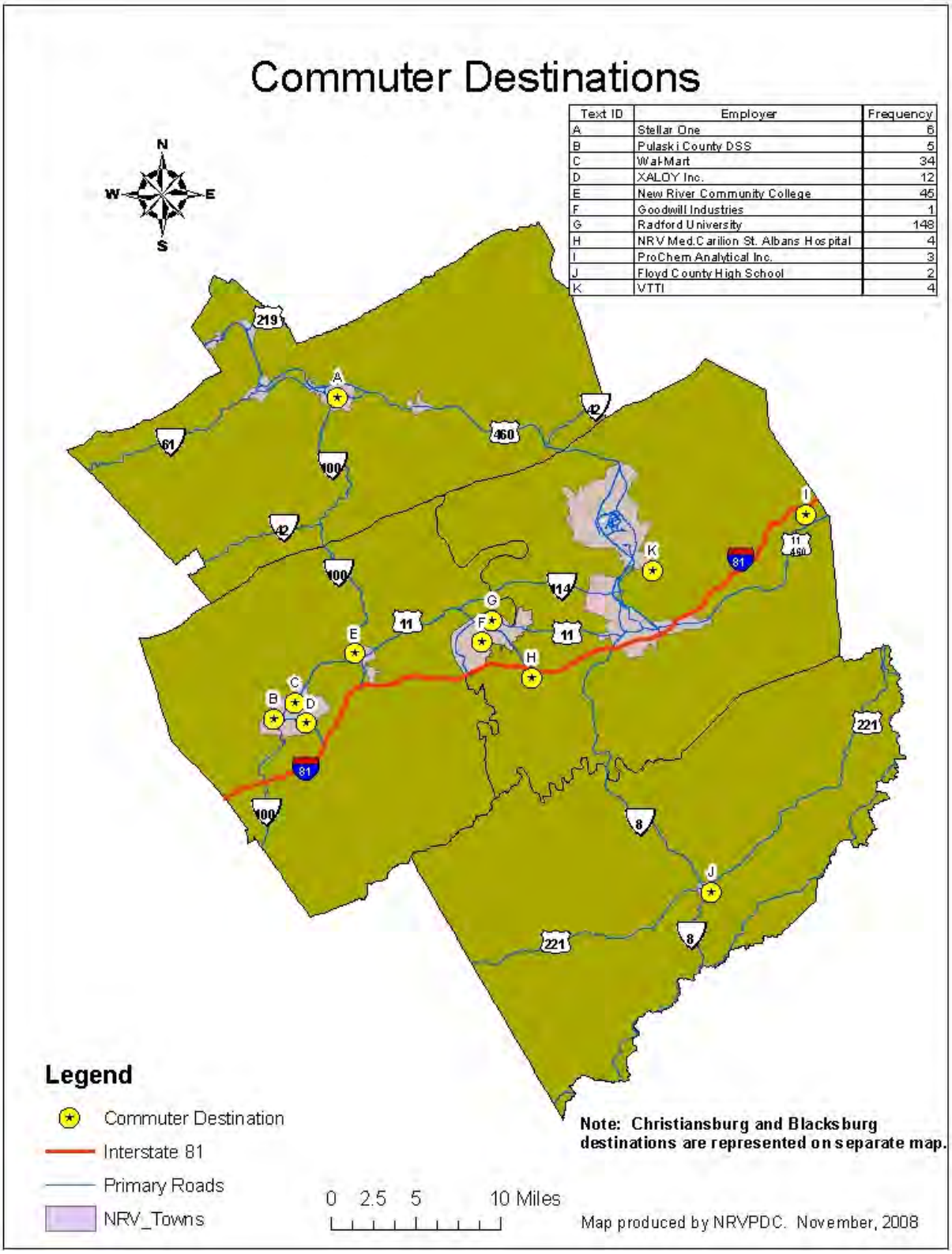
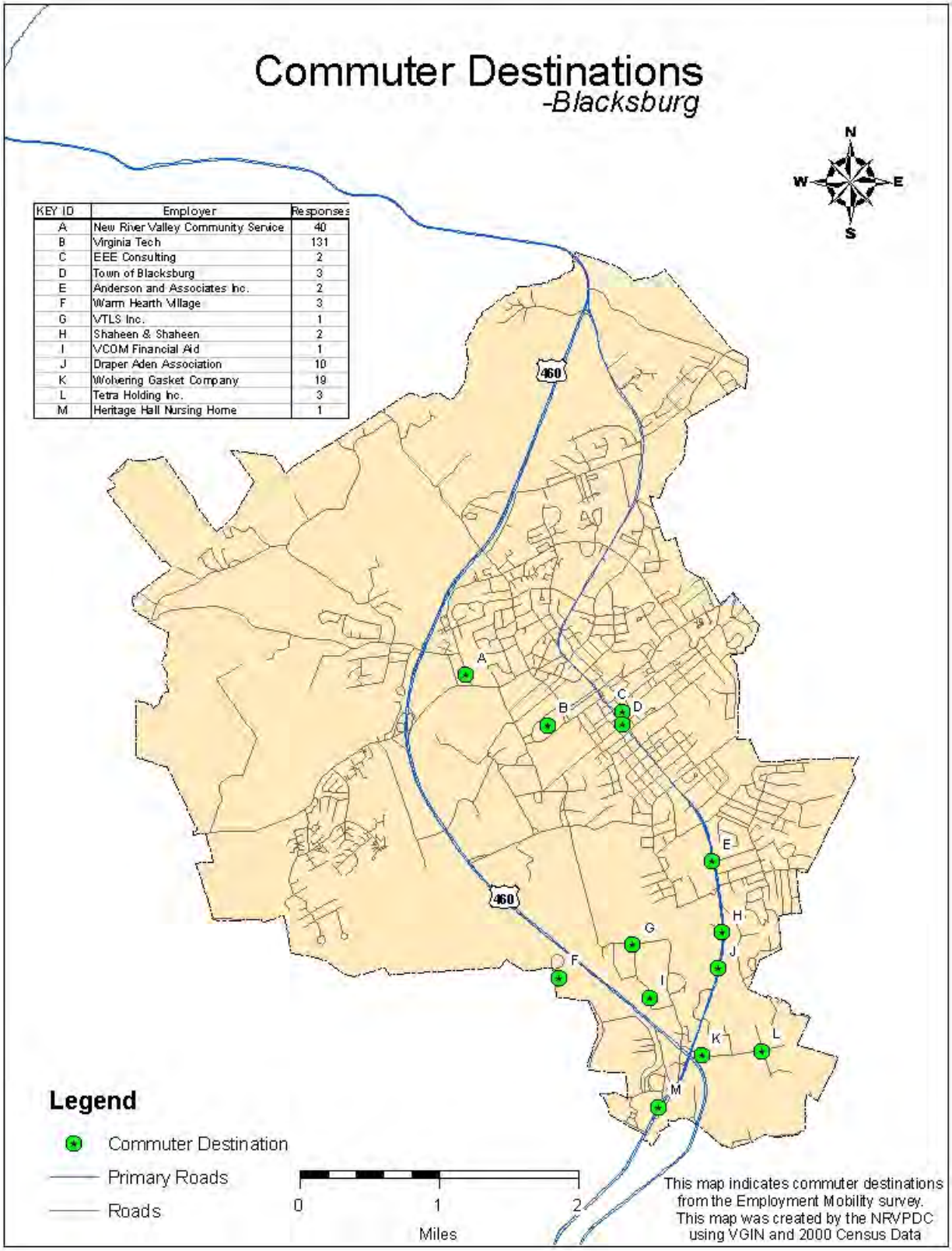


Figure 7 - Commuter Destinations in the Town of Blacksburg



KEY ID	Employer	Responses
A	New River Valley Community Service	40
B	Virginia Tech	131
C	EEE Consulting	2
D	Town of Blacksburg	3
E	Anderson and Associates Inc.	2
F	Warm Hearth Village	3
G	VTLS Inc.	1
H	Shaheen & Shaheen	2
I	VCOM Financial Aid	1
J	Draper Aden Association	10
K	Wolvering Gasket Company	19
L	Tetra Holding Inc.	3
M	Heritage Hall Nursing Home	1

Figure 8 - Commuter Destinations in the Town of Christiansburg

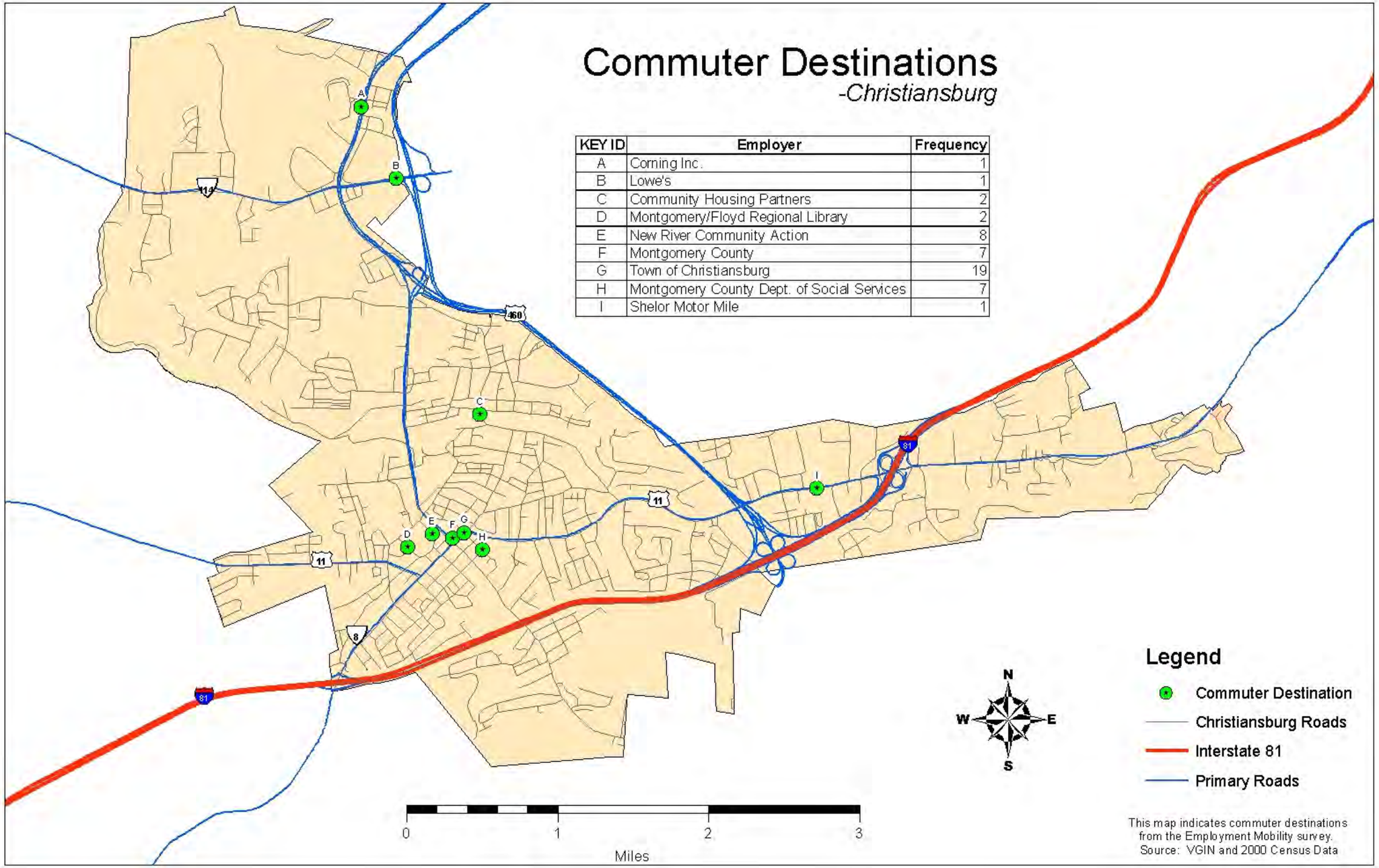


Figure 9 - Family Income Less Than $35,000 in the New River Valley

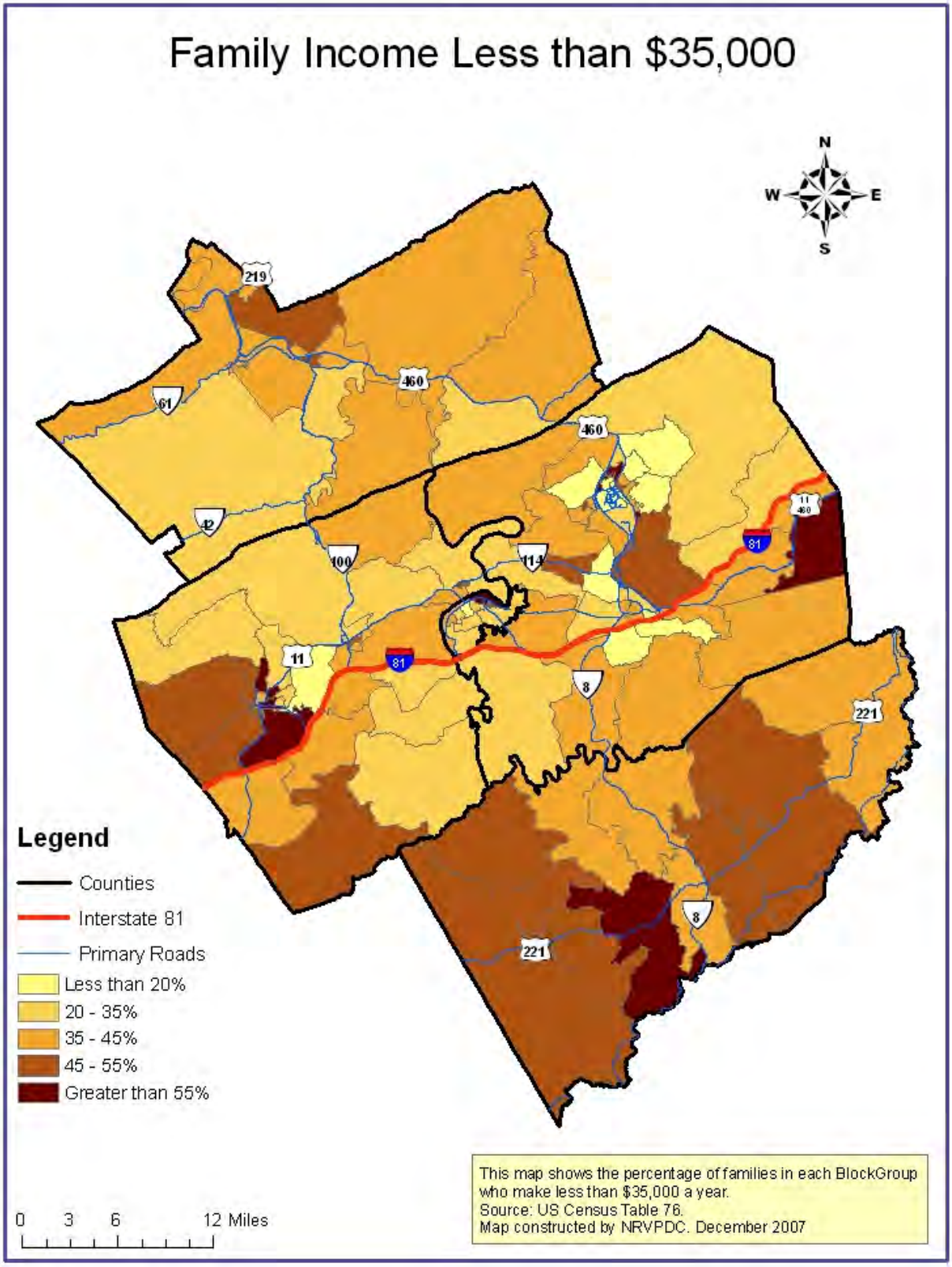
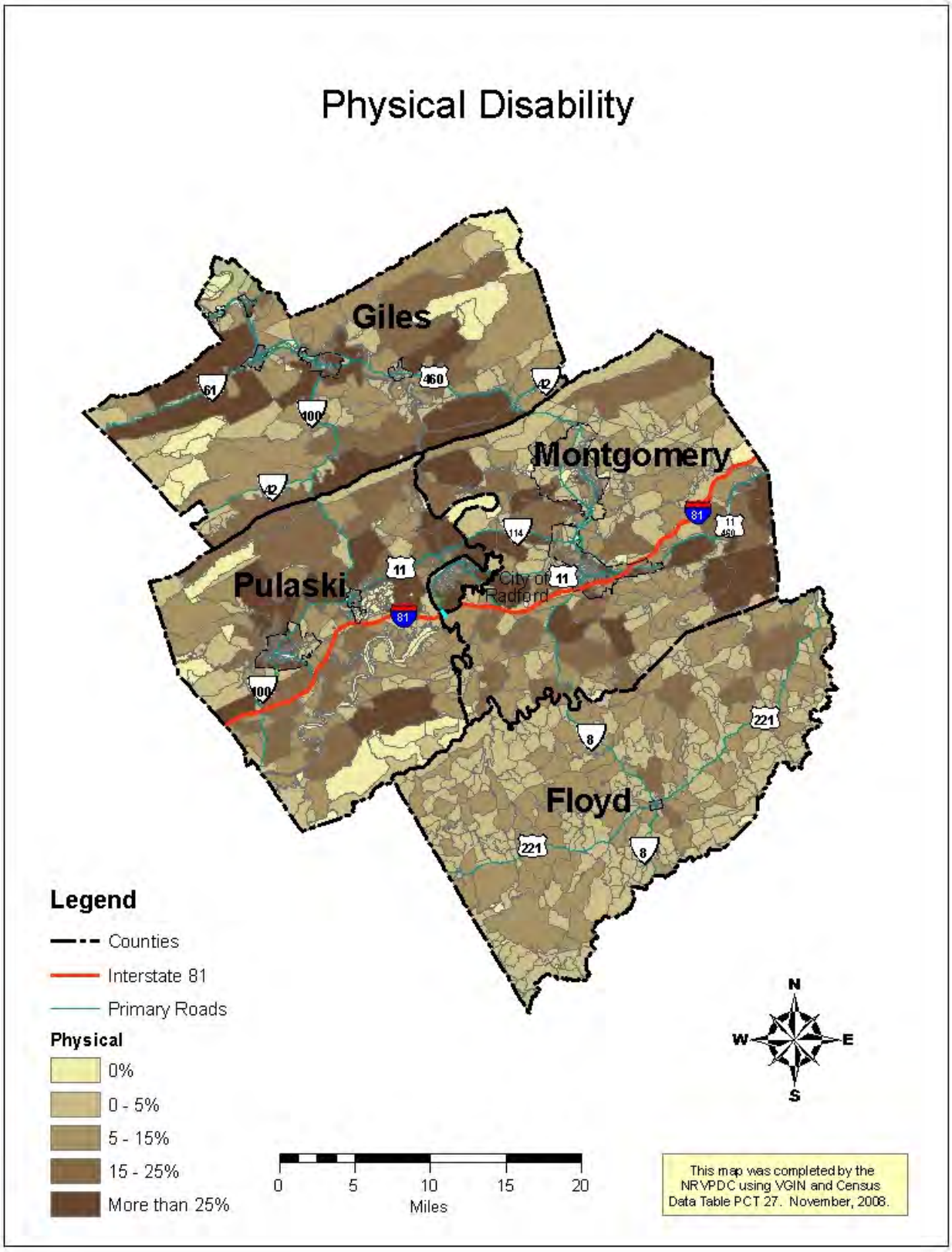


Figure 10 - Physical Disabilities in New River Valley



IV. RECOMMENDATIONS

The majority of the New River Valley's workforce commutes within the region, and there are limited options of main thoroughfares for travel. With a contained local workforce and a limited supply of roadway options, exploring rural transit becomes a worthwhile endeavor to increase transportation efficiency and to provide an option for people who do not have personal transportation.

Recent efforts have shown long-standing and continued support for a regional transportation system. The MPO's Transportation Plan sites another reason for bringing transit into the New River Valley, stating, "Reduced congestion, along with upgrades to transit service, will reduce fuel consumption and improve air quality."[14] Additionally, the City of Radford's Comprehensive Plan sites the following as a Neighborhood and Sector Project and Program Goals: "Seek opportunities for innovative and effective transportation systems within the City and connecting the City to the region, and the state. Seek partners for the development of a complete and fully functioning transportation system for the City."[15] The Montgomery County 2025 Comprehensive Plan calls for the County to provide increased access to opportunities for citizens, including job-related transportation for the disabled and for lower income individuals and families. [16]

Currently underway is the Christiansburg Bus Survey, administered by the Virginia Tech Center for Survey Research for Blacksburg Transit. Preliminary analysis indicates that there is overwhelming support for expansion of the bus system in Christiansburg. Hours will be expanded from the existing Christiansburg to Blacksburg bus service (the Two Town Trolley), as well as the possibility of a "circulator route" to service the areas between the New River Valley Mall and the surrounding areas. Expansion of service into neighborhoods and into areas currently not serviced will also be strongly considered.

[14] MPO. Blacksburg/Christiansburg/Montgomery Area *2030 Transportation Plan Technical Report*. (2005). Appendix, pg. A-2.
[15] City of Radford. *City of Radford Comprehensive Plan.* (2001) pg. 29. Online at: http://www.radford.va.us/gov/planpages/Radcomp2001.pdf
[16] Montgomery County. *Montgomery County Comprehensive Plan*. (2004)

In October of 2008, the PDC was awarded a Mobility Manager grant through funding provided by the FTA Job Access and Reverse Commute (JARC) Progam. The Mobility Manager will serve as a one-stop call center for people seeking mobility services across the New River Valley region as well as for the collection of public transit demand information. The long-term vision for this position is to create and serve as a transportation broker for the region. The Consultants support plans for this position and have been encouraged to incorporate the Mobility Manager into future phases of this study.

4.1 Benefits of Public Transportation

A document about public transportation would not be complete without a brief overview of the benefits both regionally and at a national level. According the American Public Transportation Association on a national level public transportation is key to:

- Providing jobs: $1 billion invested into the nation's transportation infrastructure supports/creates 47,500 jobs
- Transporting people to work while generating savings: Households that use public transportation save an average of between $6,251 and $8,754 annually
- Reducing greenhouse gases: Public transit reduces CO_2 emissions by 37 million metric tons annually and saves the U.S. 4.2 billion gallons of gasoline annually
- Encouraging citizens to be healthier, green, and safer: Transit-friendly communities promote higher levels of physical activity (and a lower dependence on automobile travel), lead to less air pollution, and fewer vehicle crashes
- Promoting energy security and decreasing our dependency on foreign oil[17]

On a regional level, the Coordinated Human Services Mobility Study compiled feedback on improving mobility for older adults, people with disabilities, and low-income persons. These points were developed through a series of workshops throughout the course of the study, and can be applied on a universal basis for all commuters in the region:

- **Goals of Coordination:**

o More cost-effective service delivery

o Increased capacity to serve unmet needs

[17] American Public Transportation Association (APTA). (2003; 2007; 2008a; 2008b); Center for Disease Control "Urban Sprawl and Public Health." (2002)

o Improved quality of service

o Services which are more easily understood and accessed by riders

- **Benefits of Coordination:**

o Gain economies of scale

o Reduce duplication and increase efficiency

o Expand service hours and area

o Improve the quality of service

- **Key Factors for Successful Coordination:**

o Leadership – Advocacy and support; instituting mechanisms for coordination

o Participation – Bringing the right State, regional, and local stakeholders to the table

o Continuity – Structure to assure an ongoing forum, leadership to keep the effort focused and respond to ever-changing needs[18]

Limited transportation services to access employment opportunities could be addressed through the implementation of shuttle services designed around concentrated job centers. These concentrated job opportunities provide central employment destinations that could potentially be served via targeted shuttle services. Locating a critical mass of workers is the key for this strategy to be effective. This strategy may also provide a mechanism for employer partnerships.[19]

4.2 Routes

The group has determined that based on the geography of the region and the existing transportation options it would be best to develop transportation for the region consisting of seven routes to service the majority of commuters in the New River Valley. The following subsections provide an overview of the routes, cost, schedule, and phases involved in a seven-route system.

[18] Cambridge Systematics Inc. and KFH Group. *New River Valley (PDC 4) Coordinated Human Service Mobility Plan*. (2008). pg.9

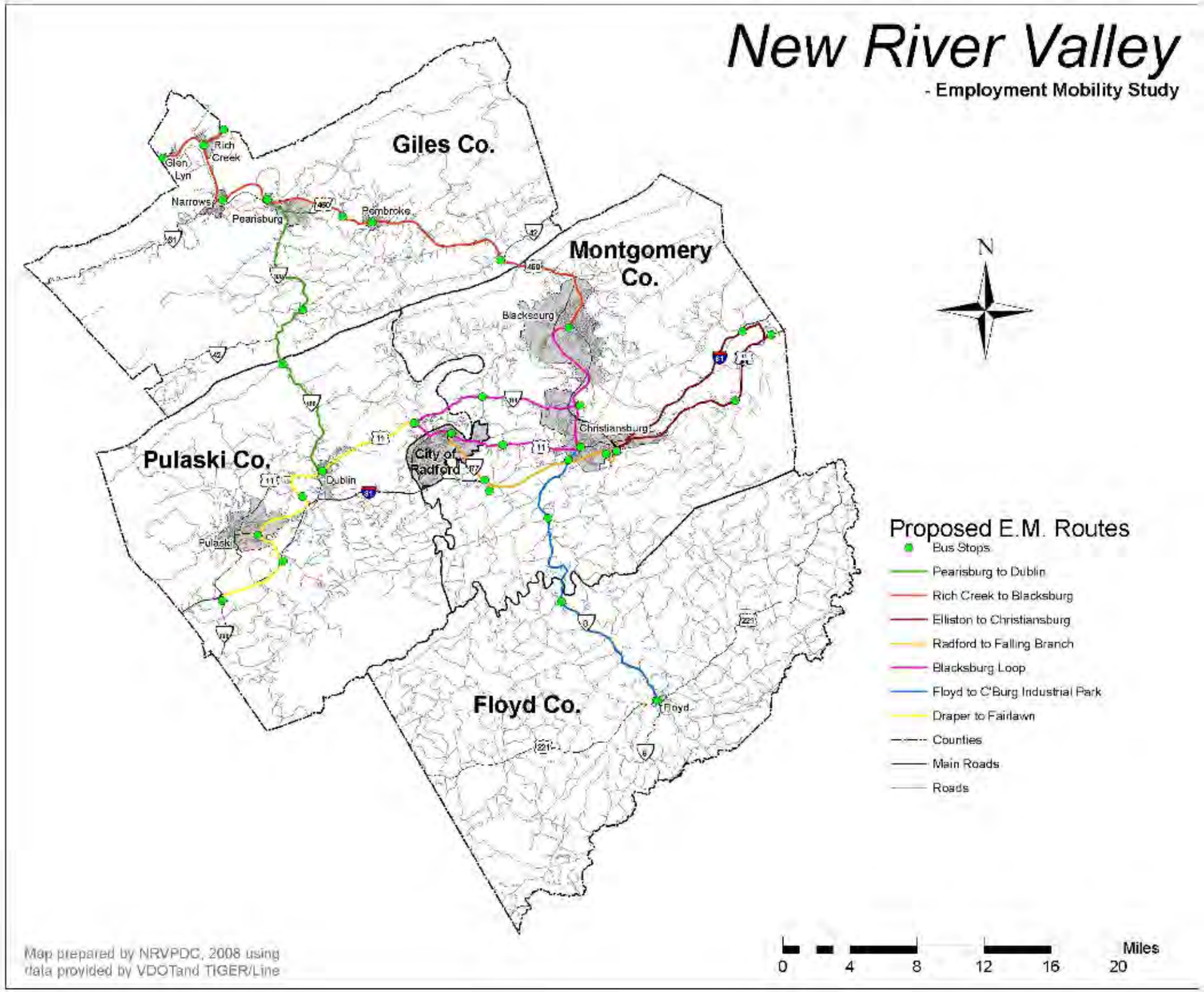
[19] Cambridge Systematics, Inc. and KFH Group. *New River Valley (PDC 4) Coordinated Human Service Mobility Plan*. (2008) pg. 46

This section outlines the vision for recommended regional transportation routes for the New River Valley. There are seven proposed regional routes as listed in Table 2 and illustrated by Figure 11 showing routes and bus stops across four Counties (Pulaski, Floyd, Giles, and Montgomery) and one City (Radford). The routes include: 1) Glen Lyn to Blacksburg (red); 2) Pearisburg to Dublin (green); 3) Draper to Fairlawn (yellow); 4) Radford to Christiansburg (orange); 5) Floyd to Downtown Christiansburg (blue); 6) Blacksburg-Radford-Christiansburg (pink), and 7) Christiansburg to Shawsville (gray). Each route is explained in more detail in the following sub-sections.

Table 2 - Route Length (miles) and Estimated Time (minutes) for the seven proposed routes

Route	Length (Miles)	Estimated Time (min.)
1) Glen Lyn to Blacksburg (red)	38.20	50
2) Pearisburg to Dublin (green)	30.59	37
3) Draper to Fairlawn (yellow)	22.62	36
4) Radford to Christiansburg/Fairlawn (orange)	16.50	26
5) Floyd to Downtown Christiansburg (blue)	24.53	41
6) Blacksburg-Radford-Christiansburg (pink)	31.95	51
7) Christiansburg to Shawsville (maroon)	28.21	46

Figure 11 - New River Valley Proposed Regional Transit System



Route I: Glen Lyn to Blacksburg

A route from Rich Creek to Blacksburg (Table 3, Figure 12) would take approximately 90 to 100 minutes, including three minute stops and traffic delays, across 38 miles.

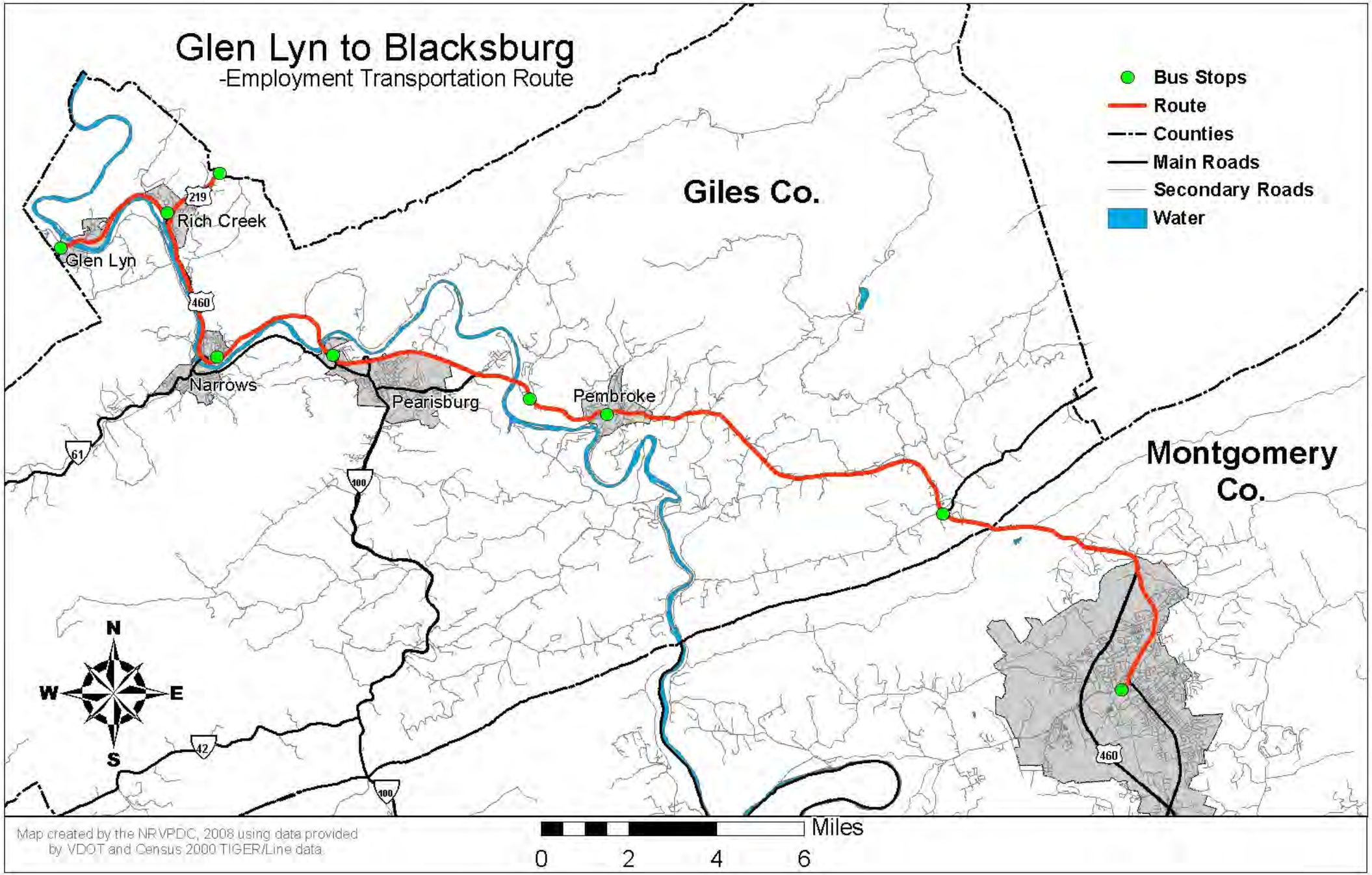
Glen Lyn to Blacksburg Stops:

1. Glen Lyn (Davis Ave)
2. WV Border
3. Rich Creek (Intersection of Old VA Avenue and Rt. 460)
4. Narrows (2nd Street)
5. Pearisburg (Magic Mart, Food Lion shopping center)
6. W. Pembroke (N. Intersection of Big Stoney Creek and Rt. 460)
7. Pembrook (Fire Station on Cascade Dr, south of 460)
8. Newport (Intersection of Rt. 42, RR 605 and Rt. 460)
9. Blacksburg (VT future Multimodal Facility on Perry Street)

Table 3

Glen Lyn to Blacksburg		
Route	**Length (Miles)**	**Estimated Time (min.)**
Glen Lyn to WV border	4.73	~7
WV border to Rich Creek Stop	1.54	~3
Rich Creek to Narrows	4.61	~8
Narrows to Pearisburg	2.95	~5
Pearisburg to West Pembroke	5.00	~7
W. Pembroke to E. Pembroke	2.06	~6
Pembroke to Rt. 42	9.15	~9
Rt. 42 to Blacksburg	8.16	~15
Total:	38.20	50

Figure 12 - Glen Lyn to Blacksburg Employment Transportation Route Map



Route II: Pearisburg to Dublin

A route from Pearisburg to Dublin (Table 4, Figure 13) would take approximately 50 to 60 minutes, including stops (assuming 3 minute stops) and traffic delays, across 31 miles.

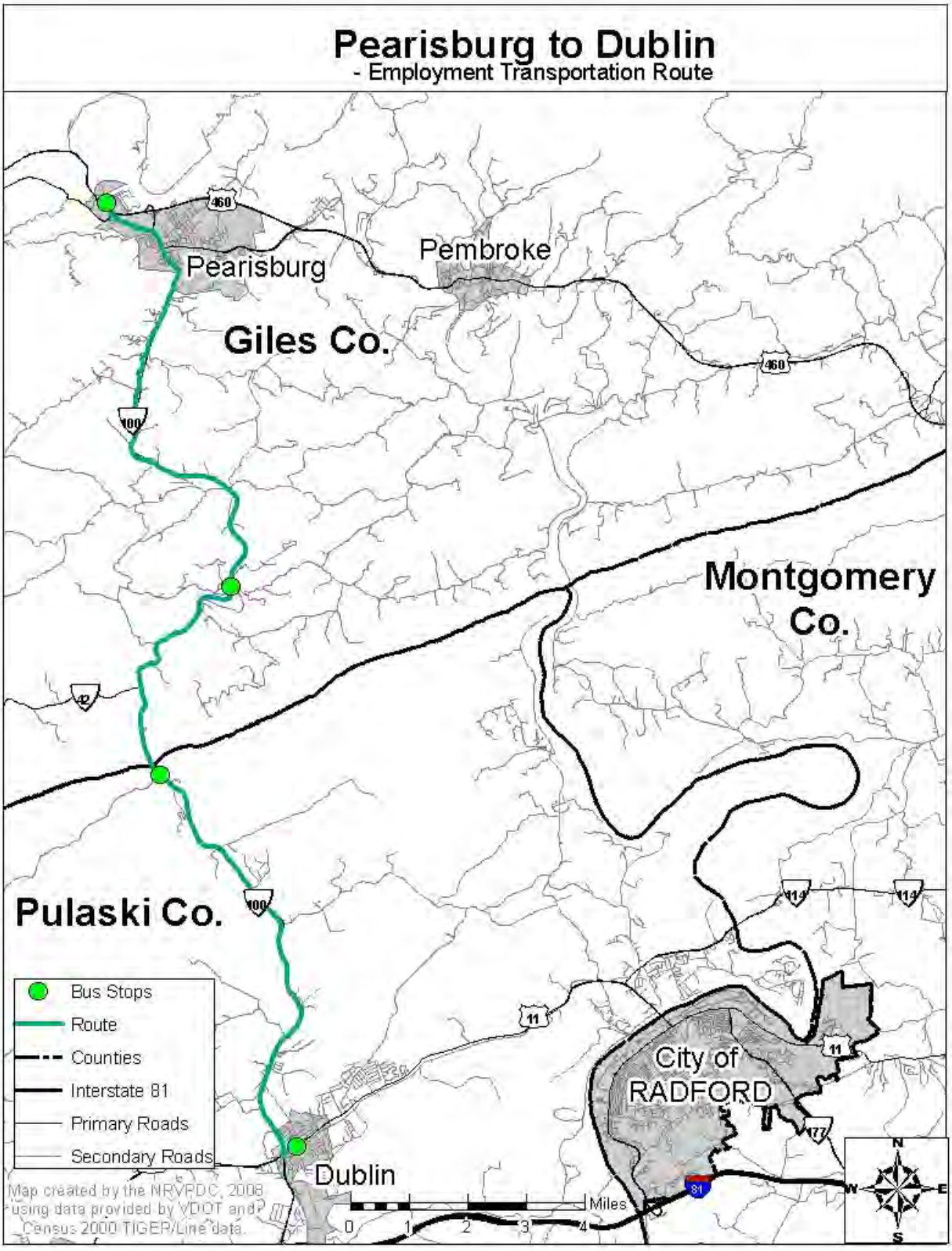
Pearisburg to Dublin Stops:

1. Pearisburg Park & Ride (Thomas Drive and Cord Drive)
2. Staffordsville Park & Ride (Staffordsville Rd & Rt. 100, carpool parking area)
3. Little Creek Park & Ride (just beyond Little Creek Rd, Rt. 100, "Jim's Drive In")
4. Dublin (Wade's Food Market parking lot, Route 11)

Table 4

Pearisburg to Dublin		
Route	**Length (Miles)**	**Estimated Time (min.)**
Pearisburg Park & Ride to Staffordsville Park & Ride	8.97	~15
Staffordsville Park & Ride to Little Creek Park & Ride	8.14	~15
Little Creek Park & Ride to Dublin (Wade's)	4.51	~7
Total:	30.59	~37

Figure 13 - Pearisburg to Dublin Route Employment Transportation Route Map



Route III: Draper to Fairlawn

A route from Draper to Fairlawn (Table 5, Figure 14) would take approximately 55 to 65 minutes, including three minute stops and traffic delays, across 22 miles.

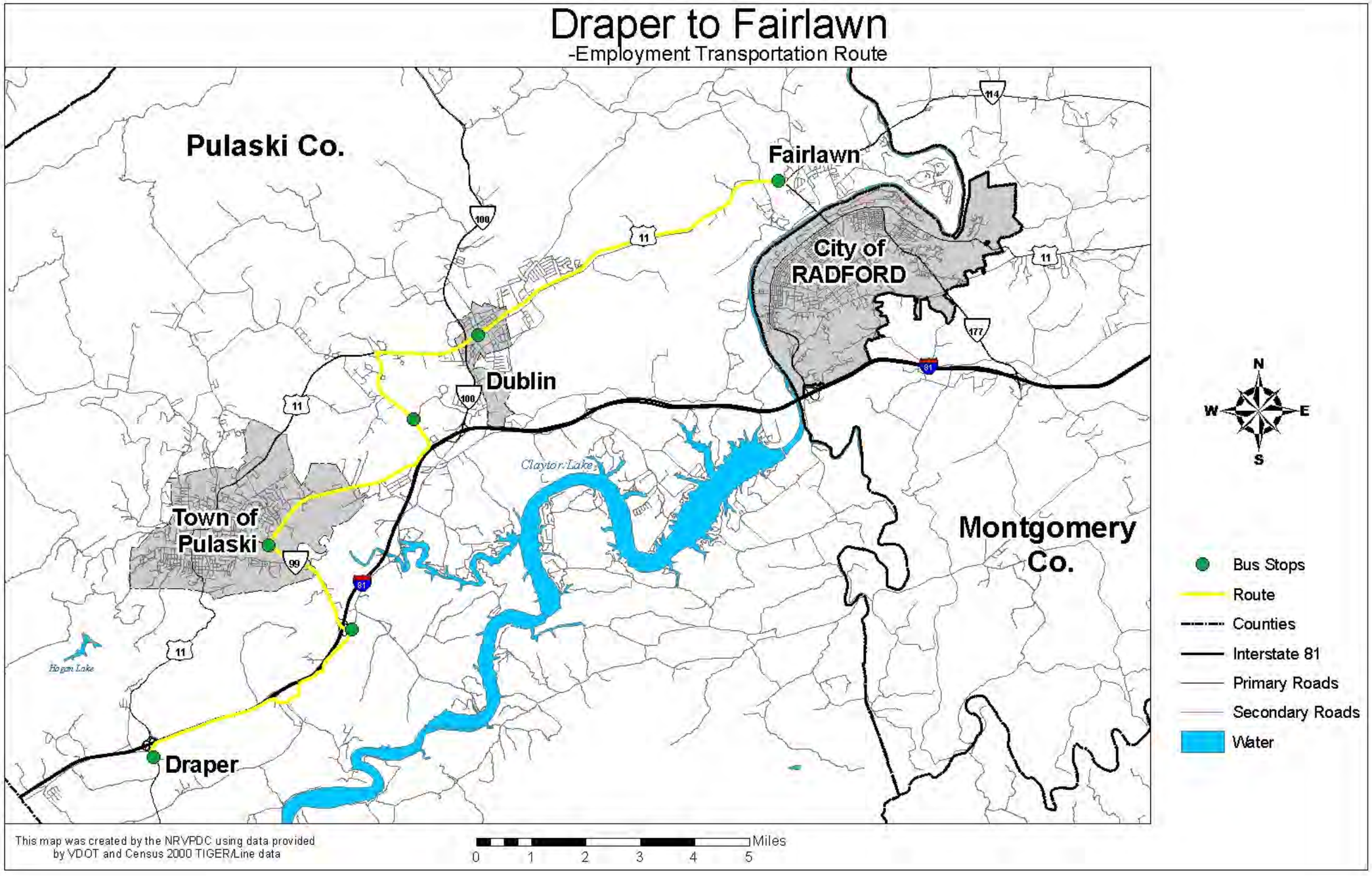
Draper to Fairlawn Stops:

1. Draper Park & Ride lot (Kirby Rd and Wysor Rd)
2. Exit 94 Park & Ride lot (Old Rt. 100 and Rt. 99)
3. Town of Pulaski (Rt. 99 & Bobwhite Blvd)
4. Volvo (Cougar Trail & Alexander Rd)
5. Dublin (Wade's Food Market parking lot, Route 11)
6. Fairlawn (Pepper's Ferry & Rt. 11)

Table 5

Draper to Fairlawn		
Route	**Length (Miles)**	**Estimated Time (min.)**
Draper Park & Ride to Exit 94 Park & Ride	4.84	~6
Exit 94 Park & Ride to Town of Pulaski	2.37	~6
Town of Pulaski to Volvo	4.23	~8
Volvo to Dublin	3.54	~7
Dublin to Fairlawn	6.71	~10
Total:	21.69	37

Figure 14 - Draper to Fairlawn Employment Transportation Route Map



Route IV: Radford to Christiansburg/Falling Branch

A route from Radford to Christiansburg Industrial Park (Table 6, Figure 15) would take approximately 45 to 50 minutes, including three minute stops and traffic delays, across 17 miles.

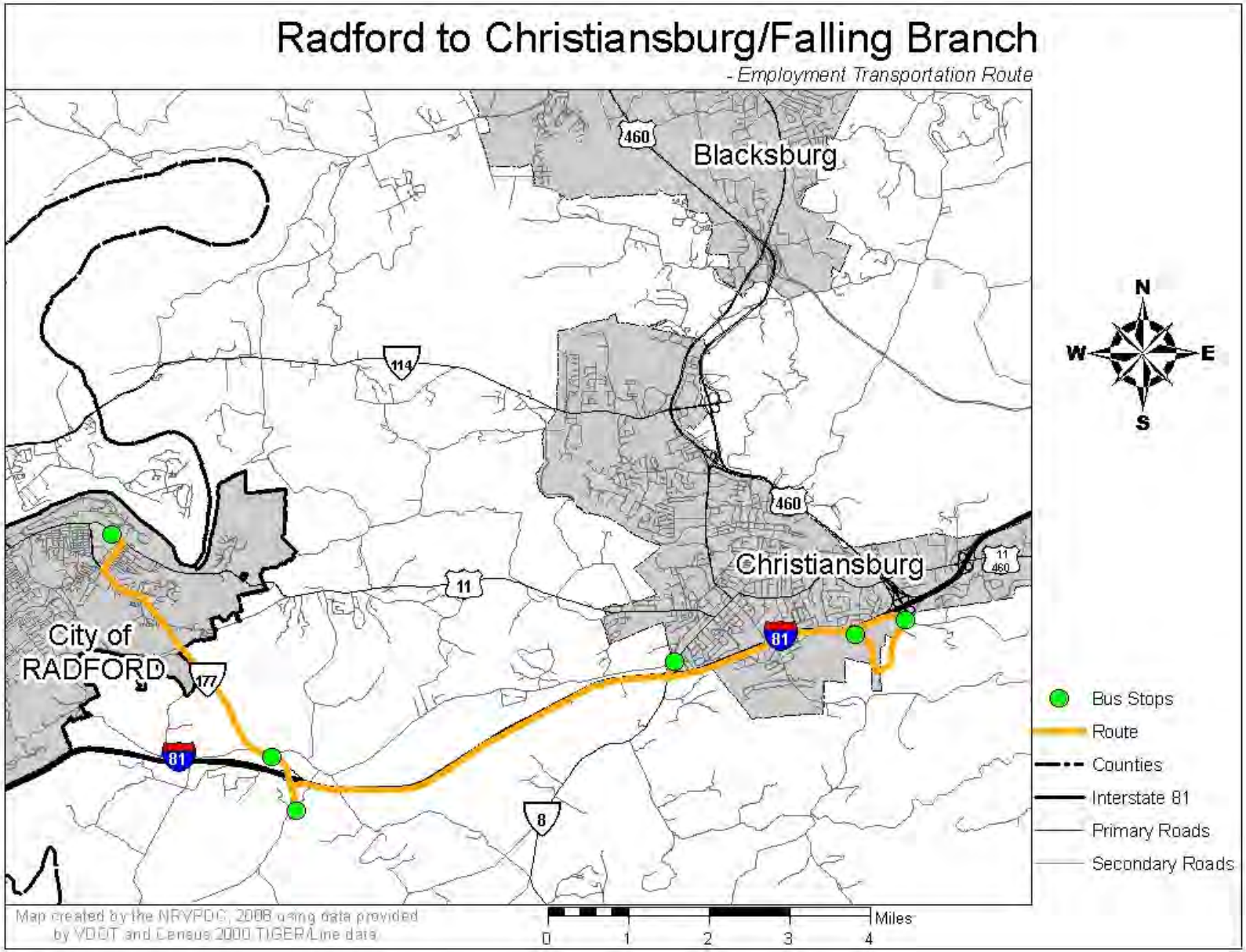
Radford to Christiansburg/Falling Branch Stops:

1. Radford University (Lot A, in front of Young Hall)
2. BP Gas Station Park & Ride Lot – (Rt. 177 and Tyler Rd., adjacent to Mud Pike Road)
3. Carilion New River Valley Medical Center (Exit 109 to 177)
4. I-81/Rt 8 Park & Ride Lot (Auburn St and W. Main St.)
5. Falling Branch Park & Ride Lot (Exit 118A at Parkway Drive)
6. 400 Technology Drive (Falling Branch Industrial Park)

Table 6

Radford To Christiansburg/Falling Branch		
Route	**Length (Miles)**	**Estimated Time (Min.)**
RU Campus to BP Gas Park & Ride Lot	3.84	~7
BP Gas Park & Ride Lot to New River Medical Center	0.84	~2
New River Medical Center to 1-81/Rt. 8 Park & Ride Lot	5.65	~7
1-81/Rt. 8 Park & Ride Lot to Falling Branch Park & Ride Lot	4.76	~7
Falling Branch Park & Ride Lot to 400 Technology Drive, Christiansburg	1.41	~3
Total:	16.50	26

Figure 15 - Radford to Christiansburg/Falling Branch Employment Transportation Route Map



Route V: Floyd to Downtown Christiansburg

A route from Floyd to Downtown Christiansburg (Table 7, Figure 16) would take approximately 50 to 60 minutes, including three minute stops and traffic delays, across 21 miles. Note that this route shares the I-81/Rt 8 stop with the Radford to Christiansburg/Falling Branch route.

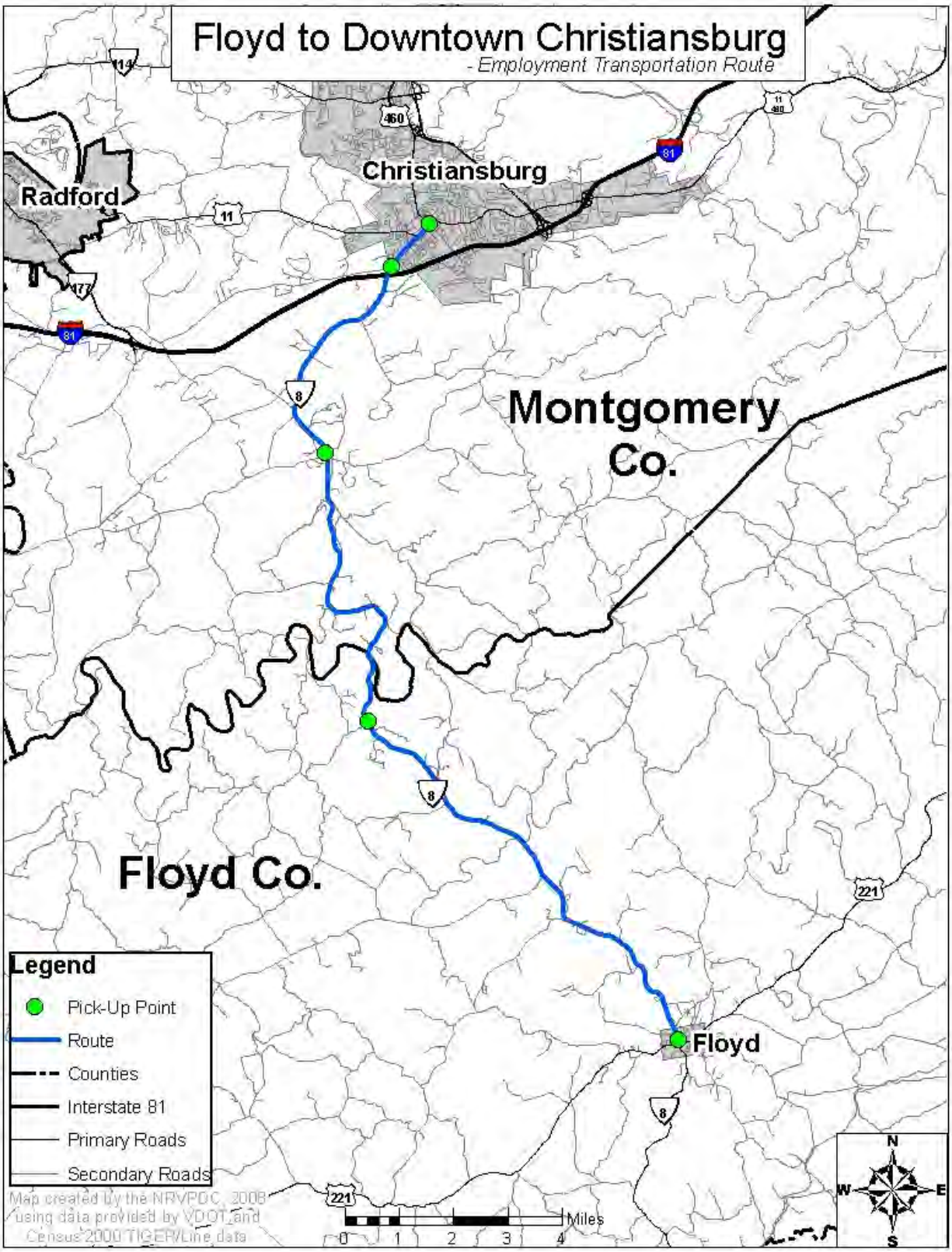
Floyd to Downtown Christiansburg Stops:

1. Floyd Courthouse (Oxford St and Locust St)
2. Floyd Park & Ride Lot (Alum Ridge and Rt. 8)
3. Riner Food Center (off Rt. 8, between Cloverleaf & Fairview Church Rd)
4. I-81/Rt 8 Park & Ride Lot (Auburn St and W. Main St., Christiansburg)
5. Main St and Franklin St.

Table 7

Floyd to Downtown Christiansburg		
Route	**Length (Miles)**	**Estimated Time (Min.)**
Floyd Courthouse to Route 8/Alum Ridge Park & Ride Lot	8.91	~15
Route 8/Alum Ridge Park & Ride Lot to Riner Food Center	6.34	~10
Riner Food Center to i-81/Rt. 8 Park & Ride Lot	4.52	~8
I-81/Rt. 8 Park & Ride Lot to Intersection of Franklin and Main Street	1.09	~4
Total:	20.86	~37

Figure 16 - Floyd to Downtown Christiansburg Employment Transportation Route Map



Route VI: Blacksburg-Radford-Christiansburg Loop

A looped route from Blacksburg to Radford to Christiansburg (Table 8, Figure 17) would take approximately 70 to 80 minutes, including three minute stops and traffic delays, across 32 miles.

Blacksburg-Radford-Christiansburg Loop Stops:

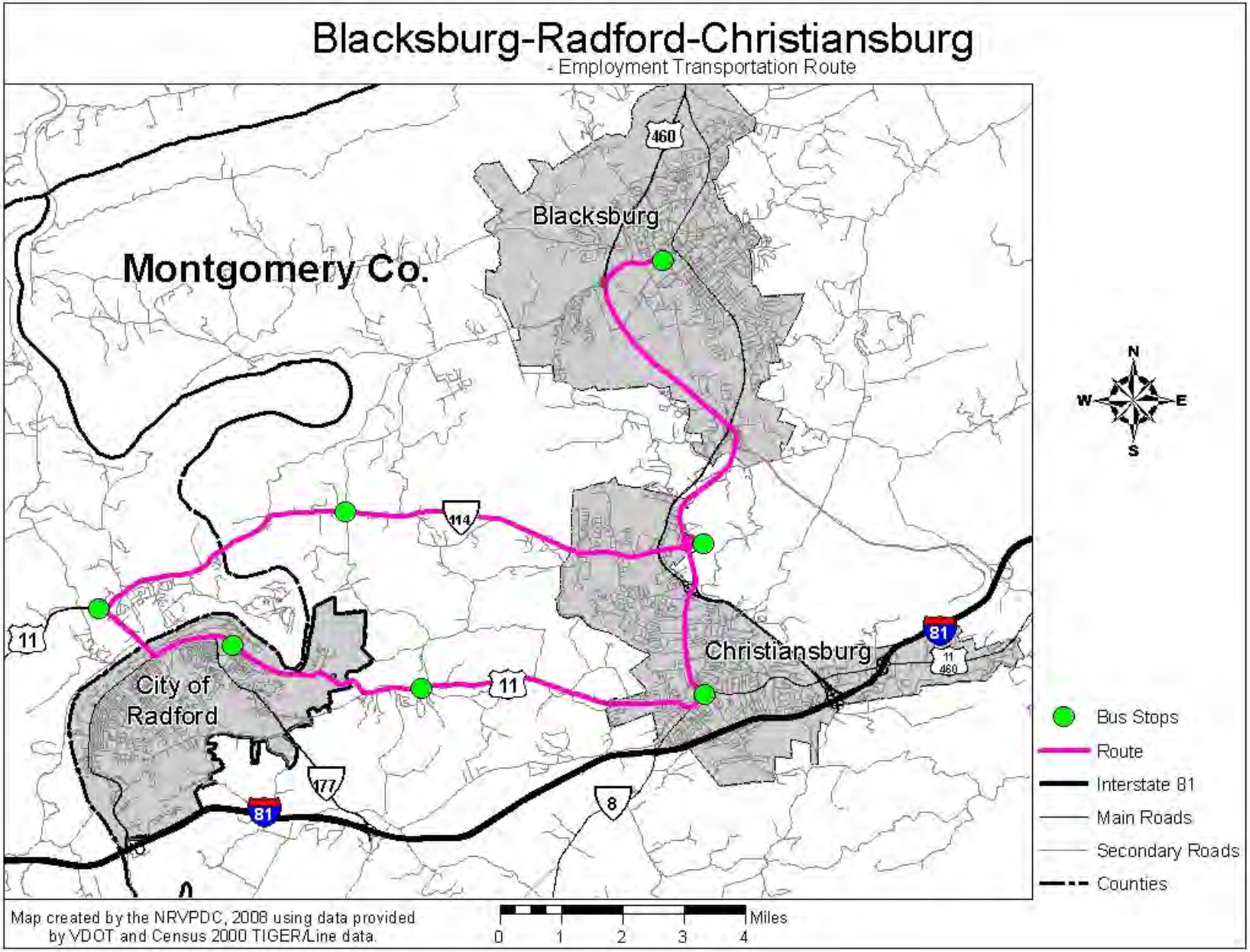
1. Blacksburg Hub (VT future Multimodal Facility on Perry Street)[20]
2. Marketplace (Cinnabar & Pepper's Ferry Road)
3. Belview (Price's Fork & Pepper's Ferry)
4. Fairlawn (114 and Rt. 11)
5. Radford University (Lot A, in front of Young Hall)
6. Plum Creek (Plum Creek Rd & Rt. 11)
7. Downtown Christiansburg (Main St. and Franklin St.)
8. Marketplace (Office Max/former Books a Million) (via Route 11 and 460)

Table 8

Blacksburg-Radford-Christiansburg Loop		
Route	**Length (Miles)**	**Estimated Time (min.)**
Blacksburg to Marketplace	7.26	~7
Marketplace to Belview	6.00	~10
Belview to Fairlawn	4.54	~8
Fairlawn to Radford University	2.89	~5
Radford University to Plum Creek	3.38	~6
Plum Creek to Downtown Christiansburg	4.80	~7
Downtown Christiansburg to Marketplace	3.08	~8
Total:	31.95	~51

[20] A new multi-modal facility has been proposed for the Virginia Tech campus. The proposed new facility is envisioned to accommodate long-distance intercity bus operators such as Greyhound as well as the Smart Way service from Roanoke operated by Valley Metro (Urbitran, 2008).

Figure 17 - Blacksburg-Radford-Christiansburg Employment Transportation Route Map



Route VII: Christiansburg to Shawsville

A looped route from Christiansburg to Shawsville (Table 9, Figure 18) would take approximately 60 to 70 minutes, including three minute stops and traffic delays, across 28 miles.

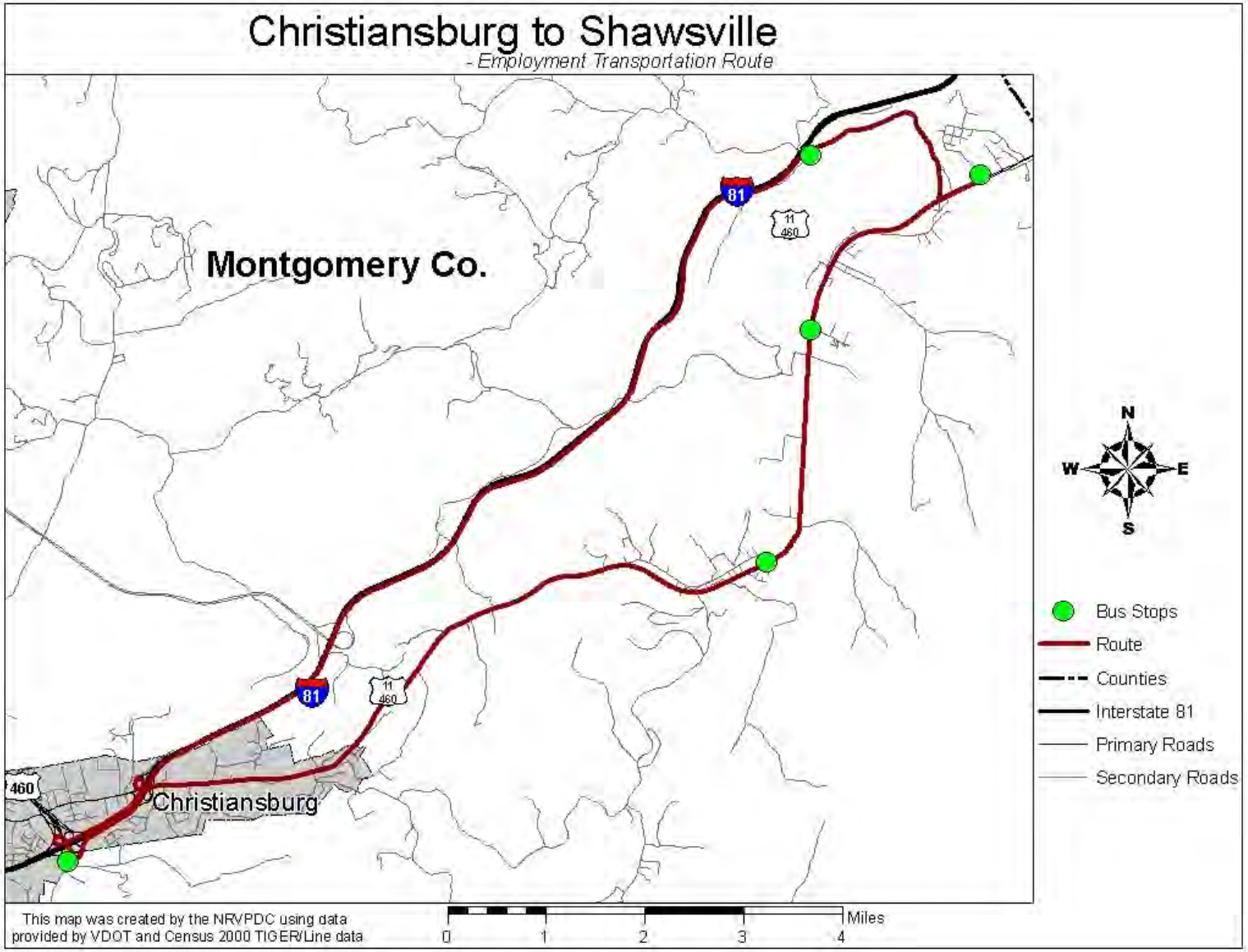
Christiansburg to Shawsville Stops:

1. Falling Branch Park & Ride Lot (Exit 118 A at Parkway Drive, Christiansburg)
2. Ironto (Pedlar Rd. and Fork Rd. just off the 128 I-81 exit)
3. Lafayette (Roanoke Rd. and Gardner St)
4. Elliston (Eastern Montgomery High School)
5. Shawsville (Roanoke Rd. and Oldtown Rd)
6. Falling Branch Park & Ride Lot (Exit 118A at Parkway Drive, Christiansburg)

Table 9

Christiansburg to Shawsville		
Route	**Length (Miles)**	**Estimated Time (Min.)**
Falling Branch Park & Ride Lot to Ironto	11.23	~17
Ironto to Lafayette	2.64	~5
Lafayette to Elliston	2.57	~5
Elliston to Shawsville	2.51	~5
Shawsville to Falling Branch Park & Ride Lot	9.25	~13
Total:	28.21	~45

Figure 18 - Christiansburg to Shawsville Employment Transportation Route Map



4.3 Semi-fixed Routes

In addition, a comprehensive system would also include transporting riders from stops to their respective work locations. It is proposed that this will be accomplished through a network of vanpools running on semi-fixed routes. The vanpools serve to set this regional transit system apart from its urban counterpart because it focuses on curb-to-curb service in conjunction with a fixed-route system. Geographical constraints of working in a rural setting require a different approach to transit, and this system addresses this.

To be effective, this project would need to include an effort to:

1) identify or develop local or private transportation service to transport commuters from main bus stops to their place of employment, and
2) in conjunction with this effort, there would be a need to identify potential sponsors, partners, or other funding mechanisms or agencies to fund such services, so that employers can support their employees in using the system, in a convenient, timely manner, on a daily basis.

Figures 19, 20, and 21 illustrate conceptual service areas that would need service by vanpools in coordination with employers or public transit connection services. This shows conceptually how a commuter would be transported to his or her workplace by using one of the seven main commuter routes in conjunction with a service such as the one illustrated. These show vanpool service areas (shaded circles), employment centers (blue dots), and the main route bus stops (larger green dots).

As this study progresses, the vanpool system would also need to finalize details such as the appropriate vehicles to use, pick-up/drop off points, funding mechanism, and operations (e.g. scheduling, routing, staffing, training) before implementing such a system. Note that Floyd County is not included in these figures, and service within that area would also be needed.

Figure 19 – Vanpool Service Area within Radford, Blacksburg, and Christiansburg

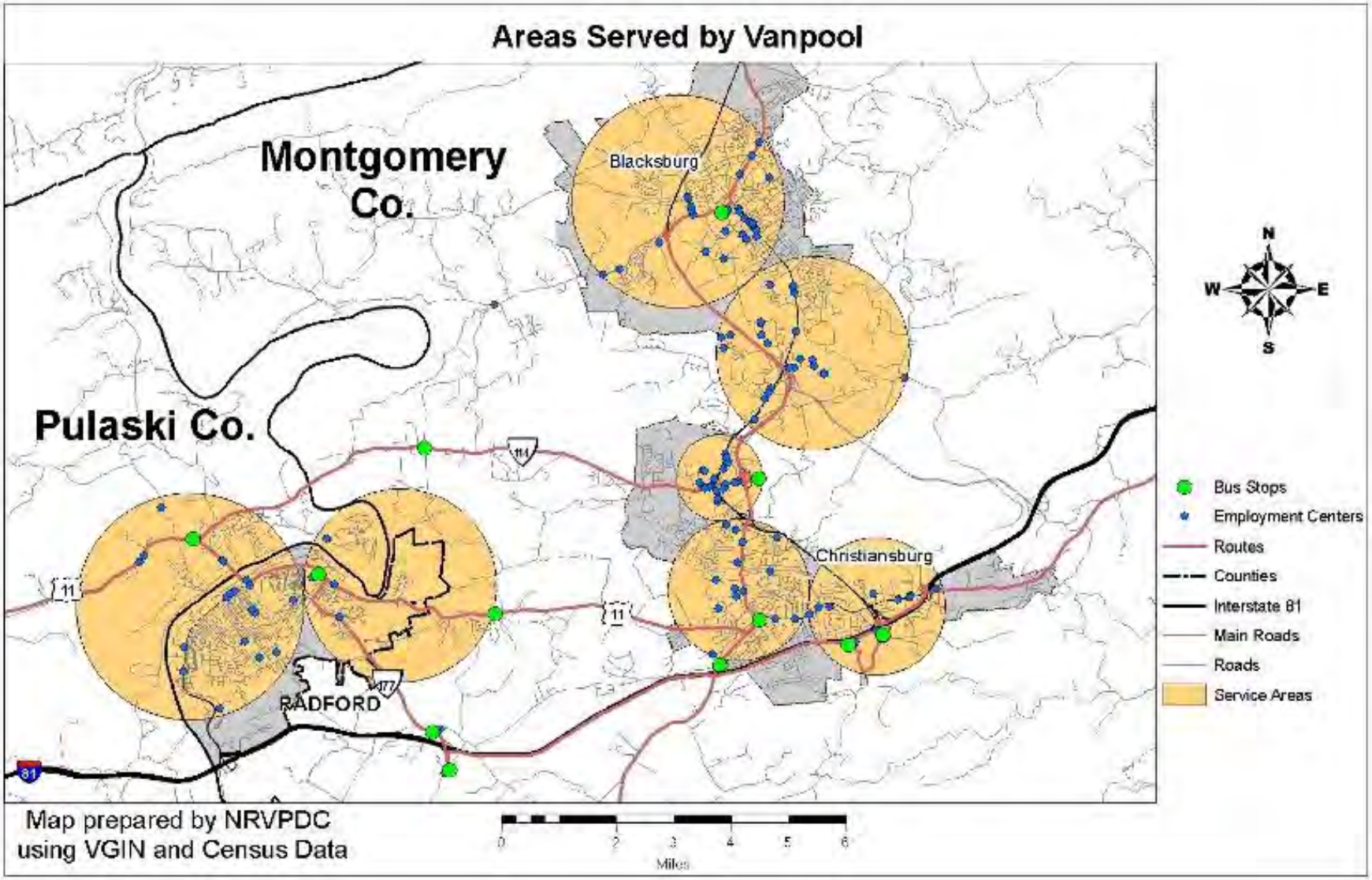


Figure 20 - Vanpool Service Areas with the Towns of Pulaski and Dublin

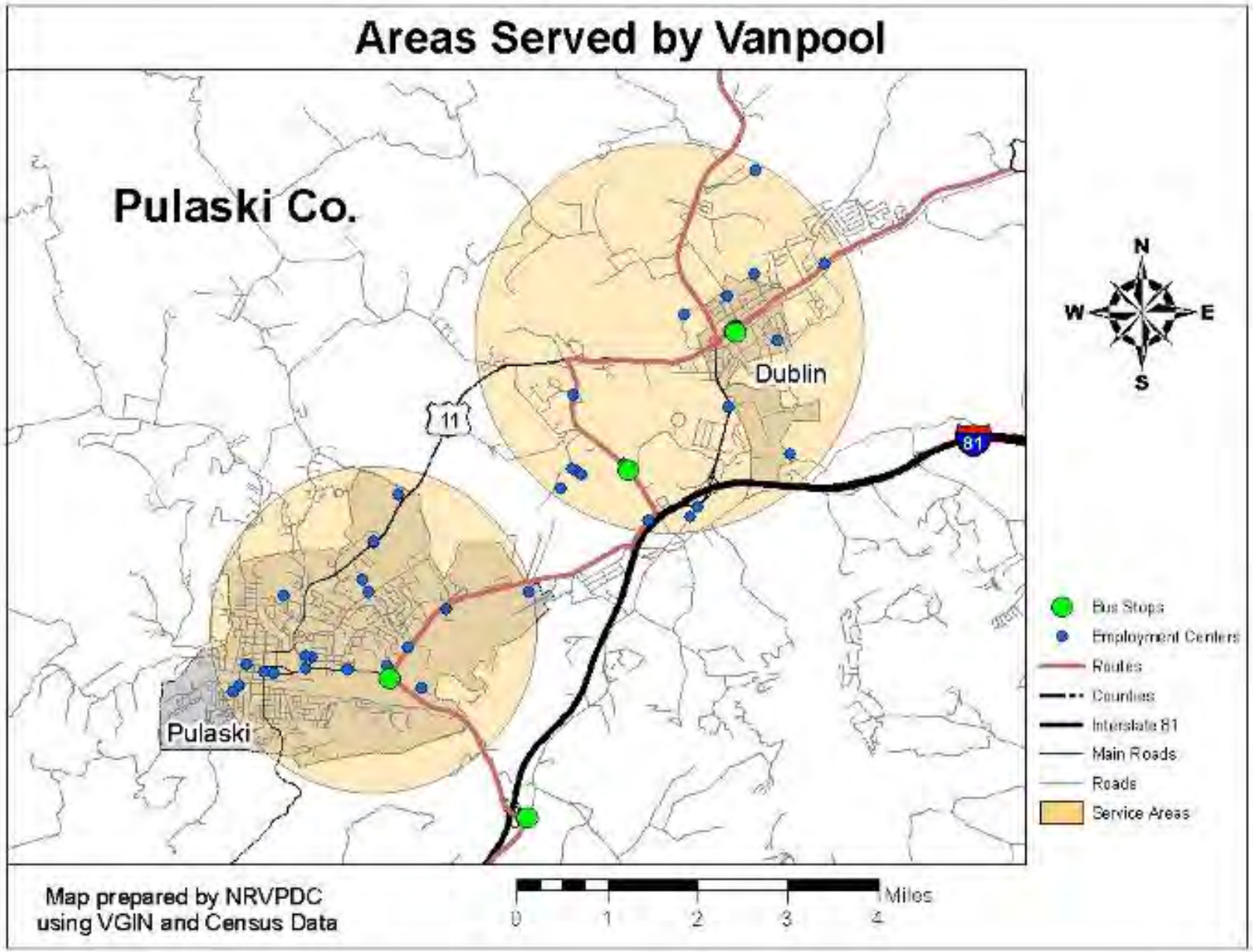
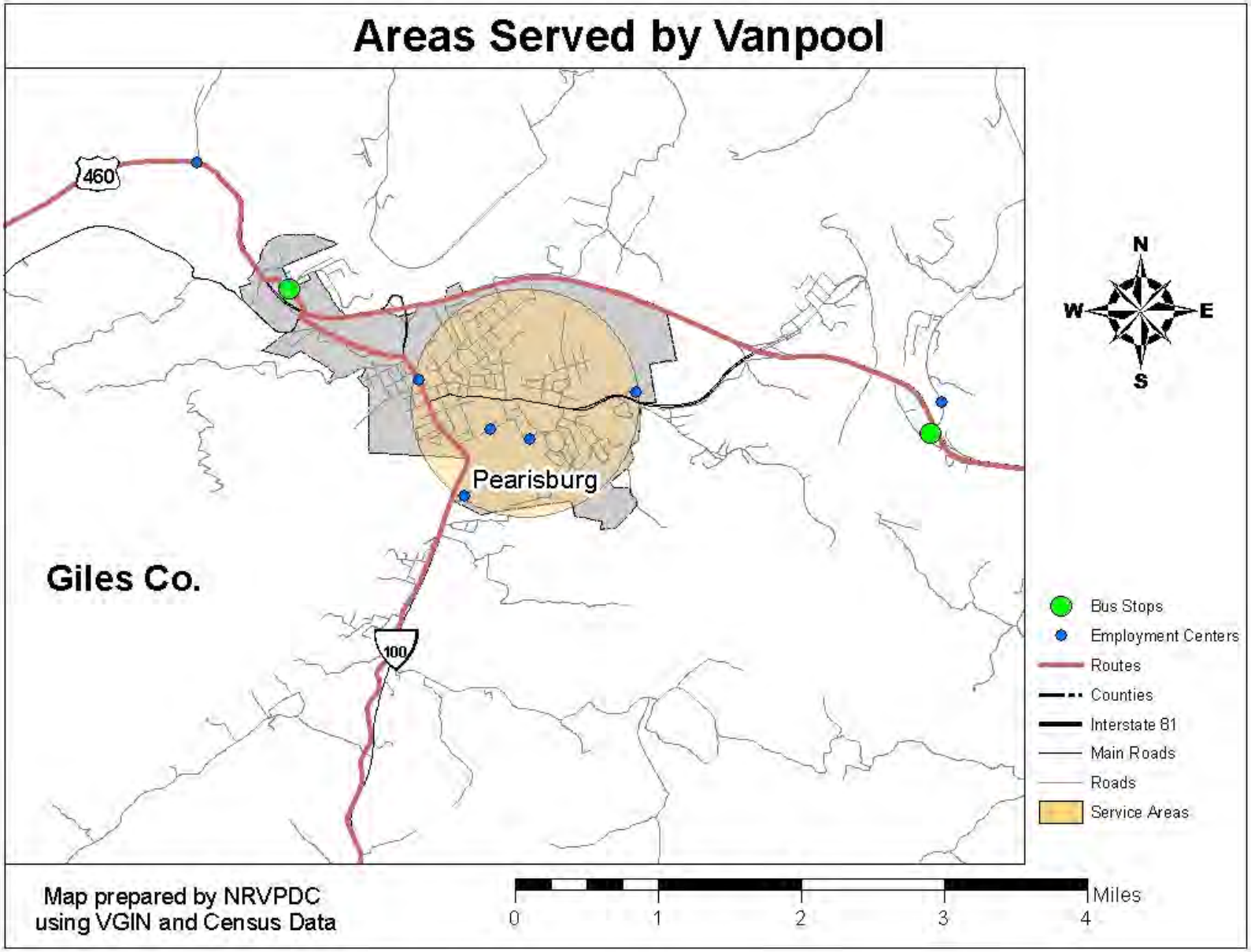


Figure 21 – Vanpool Service Area within the Town of Pearisburg



4.4 Transit Hubs

Connectivity among routes is another priority of this transit system. Much like urban transit systems, these transit "hubs" will provide commuters with access to destinations beyond the destination of their route of origin. As this plan shows, there are already potential hubs built into this system, as more than one route makes stops in the same location. These hubs include the I-81/Rt 8 stop that serves both the Radford to Christiansburg/Falling Branch and Floyd to Downtown Christiansburg routes. Also the Falling Branch Park & Ride stop is located on the Radford to Christiansburg/Falling Branch and the Christiansburg to Shawsville routes, as well as the Smart Way Commuter Bus route, operated by Valley Metro (see Figure 11).

4.5 Costs

This section includes a discussion of the potential costs, based on 2009 cost-estimates and various assumptions. There are several budgetary considerations related *only to the operation of the seven employment mobility routes* proposed. These estimates do not consider the costs for the concept of vanpool service as illustrated by Figures 19, 20, and 21. Floyd County would also need a separate service area.

There are two major budgetary categories to consider:

1) Capital (vehicles, equipment) and
2) Operations (salaries, operational costs). Assumptions are that the cost of vehicles is based on 2009 pricing, that operating costs would be approximately $45 per hour, and that this funding would apply to the seven, main commuter routes described. Additional funds and resources would be required for any additional routes and to provide for vanpool service directly to major employers or destinations not currently served by existing transportation providers. Additional costs may also exist.

Estimated Capital Costs

At current 2009 prices, the anticipated cost of vehicles range from $50,000 to $360,000 per vehicle, depending on the vehicle chosen for a particular route or area. This assumes that the vehicles selected are diesel (or biodiesel) fueled vehicles. The cost of a hybrid vehicle is estimated

to be 1.5 to 2 times the cost of a diesel vehicle. One to three spare vehicles would also be recommended for seven routes. Based on a $230,000 per-vehicle price, for a total of 10 vehicles, the total estimated capital cost could be $2.3 million, or approximately $3.45 million for hybrid vehicles. Additional funding would also need to be set aside for replacement vehicles, within 7-12 years, depending on the vehicles selected.

Estimated Operational Costs

Operations are estimated to cost between $60,000 and $100,000 annually per route. This depends upon various factors including hours of operation, pre-trip inspection protocols, number of unbillable or "deadhead" miles or hours, travel time/distance to route-start/end, number of stops, price of fuel, etc. For a total of seven routes, the total estimated capital cost could be $700,000 annually. Affected municipalities and partners would need to make matching contributions as required for most grants. It is possible that the percentage required for such grants may fluctuate based on changes in both the federal and state government policies, associated programs, and budgetary cuts.

4.6 Cost Sharing and Matching Funds

One of the main advantages of operating transportation as a public system is that the government municipality can apply for and receive assistance from the federal and state government. Such assistance is usually in the form of grants such as the Federal Transit Administration's Job Access and Reverse Commute (JARC) program, established to help low-income individuals access to employment and related activities and to fund "reverse commute transit services" available to the general public.[21] Reverse commuting includes transportation services for the general public from urban, suburban, and rural areas to suburban employment opportunities.

Federal and state funds are used to "match" those contributed by local government (and/or partnerships) to help pay for public transportation. These matching grants are strongly

[21] Federal Transportation Administration. (2009). Job Access and Reverse Commute Program (5316). Online at: http://www.fta.dot.gov/funding/grants/grants_financing_3550.html.

recommended to extend local funding to the maximum. Such grants could bring the vision of the NRV seven route commuter system to reality.

4.7 Scheduling

Based on the survey data and on typical commuter driving habits observed in the New River Valley, it is recommended that a morning and evening schedule be developed. Initially this schedule would serve the 8:00 AM to 5:00 PM workforce, assuming that the final destination of that route was where the rider worked. Tables 10 and 11 illustrate an example time schedule for the Glen Lyn to Blacksburg route. The times are estimates based on the mileage between stops and assume a three minute wait time at each stop. Exact schedules would need to be developed, tested, and refined for each of the seven employment mobility routes.

Table 10 - Example Morning Schedule for Glen Lyn to Blacksburg

Glen Lyn to Blacksburg		
Morning Schedule		
Location	**Arrival**	**Departure**
Glen Lyn	6:20	6:23
WV border	6:30	6:33
Rich Creek	6:36	6:39
Narrows	6:47	6:50
Pearisburg	6:55	6:58
W. Pembroke	7:05	7:08
Pembroke	7:14	7:17
Rt. 42	7:26	7:29
Blacksburg	7:44	End of Route

Table 11 - Example Evening Schedule for Blacksburg to Glen Lyn

Blacksburg to Glen Lyn		
Evening Schedule		
Location	**Arrival**	**Departure**
Blacksburg	5:15	5:18
Rt. 42	5:33	5:36
Pembroke	5:45	5:48
W. Pembroke	5:54	6:00
Pearisburg	6:06	6:07
Narrows	6:12	6:15
Rich Creek	6:23	6:26
WV border	6:29	6:32
Glen Lyn	6:39	End of Route

4.8 Vehicles

The vehicles for each of the seven routes need to be researched further. As discussed in the section on cost, a variety of vehicles could be used, based on funding available, plans for expansion, road types, and location of bus stops. The Consultants assume that the vehicles would be diesel or biodiesel fueled vehicles, or hybrid vehicles.

Vehicles could range from standard 12 person vans, to 15 or 21-passenger body on chassis (BOC) vans, which allows for wheelchairs and includes a high ceiling so that passengers can easily stand upright while entering or exiting the vehicle. Larger, more comfortable vehicles would likely be desirable for routes of long duration (e.g., Glen Lyn to Blacksburg) such as a Freightliner bus (similar to the blue Smart Way Commuter buses). Other options include using 30, 35, or 40-foot buses such as those used by Blacksburg Transit or even a 60-foot articulated bus.

4.9 Implementation

It is recommended that a phased approach be taken for implementation.

Phase 1: Identify roles and services for each agency including BT, CT, PAT, RADAR, and Greater Roanoke Transit Company (GRTC)

Phase 2: Form a PDC-MPO collaboration focused on expanding this vision, including key players from all agencies and relevant partners such as VT, RU, City of Radford, etc., as well as the DRPT and VDOT; create refined long-term plan with timeline/milestones.

Phase 3: Identify potential sponsors, partners, or other funding mechanisms or agencies to fund such services, so that employers can support their employees in using the system; identify appropriate funding sources and potential documents to serve as written agreements amongst involved organizations; determine the percent of local match funds required, based on the funding source sought.

Phase 4: Refine, solidify, and market the vision with a focus on: 1) improving and developing connections to other agencies and services (e.g., Greyhound, Smart Way, Rail) via hubs, 2) evaluating and improving facilities (e.g., bus stops, shelters, park and ride locations); 3) facilitating connections into neighborhoods by working with local organizations to perform a needs assessment for each locality; 4) developing service to less populated, but important, more rural locations such as Willis, Check, Eggleston, Pilot, and McCoy; 5) identifying or developing local or private transportation service (e.g., vans sponsored by local government, private businesses, or partnerships) to get people from the main bus stops to their place of employment, 6) marketing the service, and 7) develop a mechanism for continuous improvement.

Phase 5: Launch Commuter Transportation Service based on the seven routes identified as: 1) Glen Lyn to Blacksburg; 2) Pearisburg to Dublin; 3) Draper to Fairlawn; 4) Radford to Christiansburg/Falling Branch; 5) Floyd to Downtown Christiansburg; 6) Blacksburg to Radford to Christiansburg; and 7) Christiansburg to Shawsville.

Ideally, a collaboration between the MPO and the PDC would assist in further development and expansion of this vision for employment transportation options in the New River Valley. This collaboration would consider views from representatives of relevant and interested parties in each of the localities, as well as the BT, CT, PAT, and others such as RADAR, DRPT, VDOT, and GRTC, as well as other Federal and State organizations.

The five phases suggested may be further refined based on subsequent meetings of the Consultants. The phased approach works well in that various grants for funding could be pursued in association with each phase. The approach also lends itself to the building of a solid foundation upon which Phase 5 can stand and survive. To keep the momentum going toward the launch of Phase 5, the Consultants intend to continue meeting on a regular basis, and will continue to revisit and refine this vision.

Implementation of the routes can take place gradually, and it is most likely that each route would be launched separately. Ideally however, all of the routes would be launched within a relatively short time frame (e.g. 2-3 years), as the need for employee commuter transportation is apparent, and the need will likely grow as the population increases and economic conditions continue to change in the region.

V. CONCLUSION

The Consultants selected the seven routes based on data provided, a review of history in the region, and upon the experience of those involved in this effort. To that end, the Planning District Commission recognizes the importance of keeping the region's service providers and other interested organizations involved in future discussions on regional employee transit. These recommendations serve as the first of many planning phases, and the PDC will be working to procure ongoing funding in order to continue this study. Both from this study's findings as well as the many other plans and studies sited, there is a documented demand for public transportation in the New River Valley.

In the immediate future, the PDC intends to disseminate the concepts of this vision to its Commissioners for adoption, along with other organizations throughout the New River Valley and state and federal organizations.

Appendix A: PARK & RIDE SURVEY

The New River Valley Planning District Commission is conducting a study on employment mobility in the district. Please be as honest and thorough as possible, as this will help us to better meet the mobility needs of our local citizens. Thank you for your time.

1. Which days of the week do you use this parking lot? *(check all that apply)*

- ☐ Monday
- ☐ Tuesday
- ☐ Wednesday
- ☐ Thursday
- ☐ Friday
- ☐ Saturday/Sunday

2. What hours of the day do you most commonly use this parking lot? **Check your arrival & departure times*

- ☐ 5-8 AM
- ☐ 8-10 AM
- ☐ 10 AM – 12PM
- ☐ 12-2 PM
- ☐ 2- 4 PM
- ☐ 4-6 PM
- ☐ 8-10 PM
- ☐ 10 PM – 4 AM

3 a) When you use this parking lot, where are you coming from? (name of city, town, or community)

_____

3 b) Where are you going? (name of city, town, or community)

_____

4. How long is your travel time TO this parking lot?

- ☐ Less than 10 minutes
- ☐ 11 - 20 minutes
- ☐ 21 - 30 minutes
- ☐ 31 - 45 minutes
- ☐ More than 45 minutes

5. When you use this parking lot, what is your purpose? *(check any that apply)*

- ☐ Going to work
- ☐ Medical trips
- ☐ Shopping
- ☐ Going to school
- ☐ Going out of town on a trip
- ☐ Other *(please specify)*

6. What type of transportation do you take to this parking lot?

- ☐ My own car
- ☐ A ride from someone with a car — How many riders do you join or join you? _____
- ☐ Bus
- ☐ Bicycle
- ☐ Other (specify) _____

7. Do you own your own vehicle? ☐ Y ☐ N

8. Have you ever heard of the RIDESHARE program? ☐ Y ☐ N

9. Are you a member of the RIDESHARE program? ☐ Y ☐ N

10. If convenient public transportation were available from this parking lot to your destination, would you use it? ☐ Y ☐ N

11. Would you be willing to pay $2 one way or $3 round trip for public transportation service?

- ☐ Y
- ☐ No, I would not be willing to pay for this service.

OR

- ☐ No, but I would be willing to pay $ _____

12. What type of information would be helpful for you to feel more informed about alternative transportation options and voice your comments or concerns? *(number in order of preference – 1= most preferred, 4= least preferred)*

- ☐ A brochure & comment card mailed to me
- ☐ An email address or phone number I can access
- ☐ A public hearing
- ☐ A website

13. What is your residential zip code? _____

Appendix B: Employee Transportation Survey

Part I – Transportation Information

1. Do you currently own or have access to a vehicle for commuting purposes?

___ Yes ___ No

2. Thinking of your most recent typical week of work, please indicate how you traveled to and from work each day.

** If you used more than one mode of transportation to get to work, check more than one circle per row.*

**On the days you did not work, check the circle in the "Did Not Work" column.*

Last Full Week	Drove Alone	Drove With Others/ Carpool/ Vanpool*	Took Public Transportation	Biked	Walked	Worked From Home	Did Not Work	Other (specify)
Monday								
To Work:	○	○	○	○	○	○	○	
Back Home:	○	○	○	○	○	○	○	
Tuesday								
To Work:	○	○	○	○	○	○	○	
Back Home:	○	○	○	○	○	○	○	
Wednesday								
To Work:	○	○	○	○	○	○	○	
Back Home:	○	○	○	○	○	○	○	
Thursday								
To Work:	○	○	○	○	○	○	○	
Back Home:	○	○	○	○	○	○	○	
Friday								
To Work:	○	○	○	○	○	○	○	
Back Home:	○	○	○	○	○	○	○	
Saturday								
To Work:	○	○	○	○	○	○	○	
Back Home:	○	○	○	○	○	○	○	
Sunday								
To Work:	○	○	○	○	○	○	○	
Back Home:	○	○	○	○	○	○	○	

* A vanpool is a group of 6-8 people who commute together in a van provided for that purpose and pay a flat fare per month based on their commuting distance.

3. Based on trips from home to work, what modes of transportation are <u>available</u> to you? *Check all that apply.*

____ Single occupant vehicle
____ Carpooling
____ Walking
____ Biking
____ Public transportation
____ Other *(please specify)* _____

4. What time do you normally start <u>and</u> end work? *Fill in the time and circle **AM** or **PM** as applicable.*

Day of Week	Start Work	End Work
Monday	: am/pm	: am/pm
Tuesday	: am/pm	: am/pm
Wednesday	: am/pm	: am/pm
Thursday	: am/pm	: am/pm
Friday	: am/pm	: am/pm
Saturday	: am/pm	: am/pm
Sunday	: am/pm	: am/pm

5. Considering the mode of travel you use <u>most often</u>, please record in the table below the <u>average time</u> it takes you to travel to work and the <u>average time</u> it takes for you to travel home after work.

	Average Travel Time
Travel to work	___ hours ____ minutes
Travel home (from work)	___ hours ____ minutes

6. What is the travel distance between your home and your workplace?

Travel distance (miles) between home and work	Check One Below
Less than 5 miles	
5 – 10 miles	
11 – 20 miles	
21 – 30 miles	
31 – 40 miles	
41 – 50 miles	
51 or more miles	
Don't Know/Not Sure	

7a. When you drive to work, where do you typically park?

___ On the street

___ Parking provided by my employer

___ In a public parking lot

___ In a paid parking lot

___ OTHER (please specify):_____

7b. If you pay for parking, On average, how much does it cost <u>you personally</u> per month or per day to park at that location?

$_____ (Dollars per day) OR $_____ (Dollars per month)

8. In order to reduce the cost of your daily commute, would you be willing to participate in a carpool with one or more co-workers?

___ Yes ___ No

9a. Are you a member of RIDESHARE?

___ Yes *(go to Question 9c)* ____ No *(go to Question 9b)*

9b. If **<u>No</u>**, have you ever heard of RIDESHARE, a program where commuters are paired up with other commuters in order to create a vanpool or carpool?

___ Yes *(go to Question 9c)* ____ No (*continue to Part II – Transportation Barriers)*

9c. If **<u>Yes</u>**, where did you first hear about the RIDESHARE program?

___ My employer ___ A friend/coworker ___ In a printed advertisement ___ Online

___ Other (please specify): _____

Part II – Transportation Barriers

1. A transportation barrier can be an unreliable personal vehicle or something that keeps you from carpooling, biking, walking, or using public transportation. Please respond by checking any items that <u>are barriers</u>. Then circle the situation that is the <u>greatest</u> barrier in each of the following tables:

Barriers to:	**Check all that apply**
Carpooling:	
No, I do not have any barriers to carpooling	
Co-workers do not live near me	
I don't know anyone to carpool with	
Carpooling/Vanpooling takes too much time	
I need my own car to do personal errands before or after work	
I like the privacy of driving alone	
I do not like having to rely on other people	
My schedule does not allow me to leave at the same time each day	
I need my car for business reasons	
Other: *please specify*	

Biking:	
No, I do not have any barriers to biking	
Distance is too far	
Hilly terrain	
Heavy auto traffic	
Lack of bike paths or other riding space	
Lack of road maintenance in the winter	
Lack of showers at work	
Inadequate or nonexistent place to park a bike	
Lack of proper equipment	
Lack of experience or knowledge	
Other: *please specify:*	

Walking:	
No, I do not have any barriers to walking	
Distance too far	
Hilly terrain	
Lack of sidewalks	
Lack of pedestrian crossing signals	
Lack of road maintenance in the winter	
Other: *please specify*	

Public Transportation:	
No, I do not have any barriers to using public transportation	
No access to public transportation	
Lack of convenient access to public transportation	
Lack of experience or knowledge	
Bus schedule does not match my needs	
Other: *please specify*	

2a. Have you ever <u>missed work</u> due to unreliable transportation?

___ Yes ___ No

2b. If yes, how many times in the last 6 months has this occurred? _____

3a. Have you ever been <u>late to work</u> due to unreliable transportation?

___ Yes ___ No

3b. If yes, how many times in the last 6 months has this occurred? _____

4. If you've had trouble getting to work, what barriers kept you from getting there? *Check all that apply.*

____ Vehicle reliability

____ Cost of gas

____ Cost of vehicle maintenance

____ Lack of insurance

____ Relying on another driver

____ Lack of driver's license

_____ Weather conditions

____ Other (please specify) _____

5. How could this/these barriers be removed? _____

_____

_____

Part III – Transportation Solutions

1a. How much do the following affect your decision to use other modes of transportation to work, including public transportation, car/vanpooling, walking, or biking? Circle the most appropriate response, with 1 meaning the situation does NOT affect your decision, and 5 meaning the situation STRONGLY affects your decision.

I would consider taking public transportation, car/vanpooling, walking or biking to work more often …	Does Not Affect				Strongly Affects	Do Not Know
If a Guaranteed Ride Home program, which would guarantee me a ride home in case of emergency, were available	1	2	3	4	5	?
If my work start and finish times were flexible	1	2	3	4	5	?
If there was a company vehicle I could use for business use during the day	1	2	3	4	5	?
If the cost of public transportation were subsidized by my employer.	1	2	3	4	5	?
If there was help (e.g., my employer or an agency) to find people with whom to carpool or vanpool	1	2	3	4	5	?
If public transportation passes were sold at work	1	2	3	4	5	?
If childcare services were located at or near my place of work	1	2	3	4	5	?
If secure and convenient bicycle parking racks and/or lockers were at work	1	2	3	4	5	?
If parking was reserved close to my building for carpools/ vanpools	1	2	3	4	5	?
If parking rates were lower for those who carpool/vanpool than for those who drive alone	1	2	3	4	5	?
If transportation information (e.g., biking routes, public transportation routes and scheduling) were available at work	1	2	3	4	5	?
If showers, clothing lockers and change facilities were available at work	1	2	3	4	5	?
If a shuttle bus service from my workplace to a major public transportation station was provided	1	2	3	4	5	?

1b. If you circled 4 or 5 (strongly/somewhat affects) for <u>any items</u> in the previous question, which mode or modes would you most likely use more often to travel to work? *Check all that apply.*

___ Car/Vanpool ___ Bicycle ___ Walk ___ Public transportation ___ Not sure

2. If alternative transportation was available from your home to work, which modes of transportation would you choose? *Check all that apply.*

____ Single occupant vehicle ____ Biking

____ Carpooling/Vanpooling ____ Public transportation

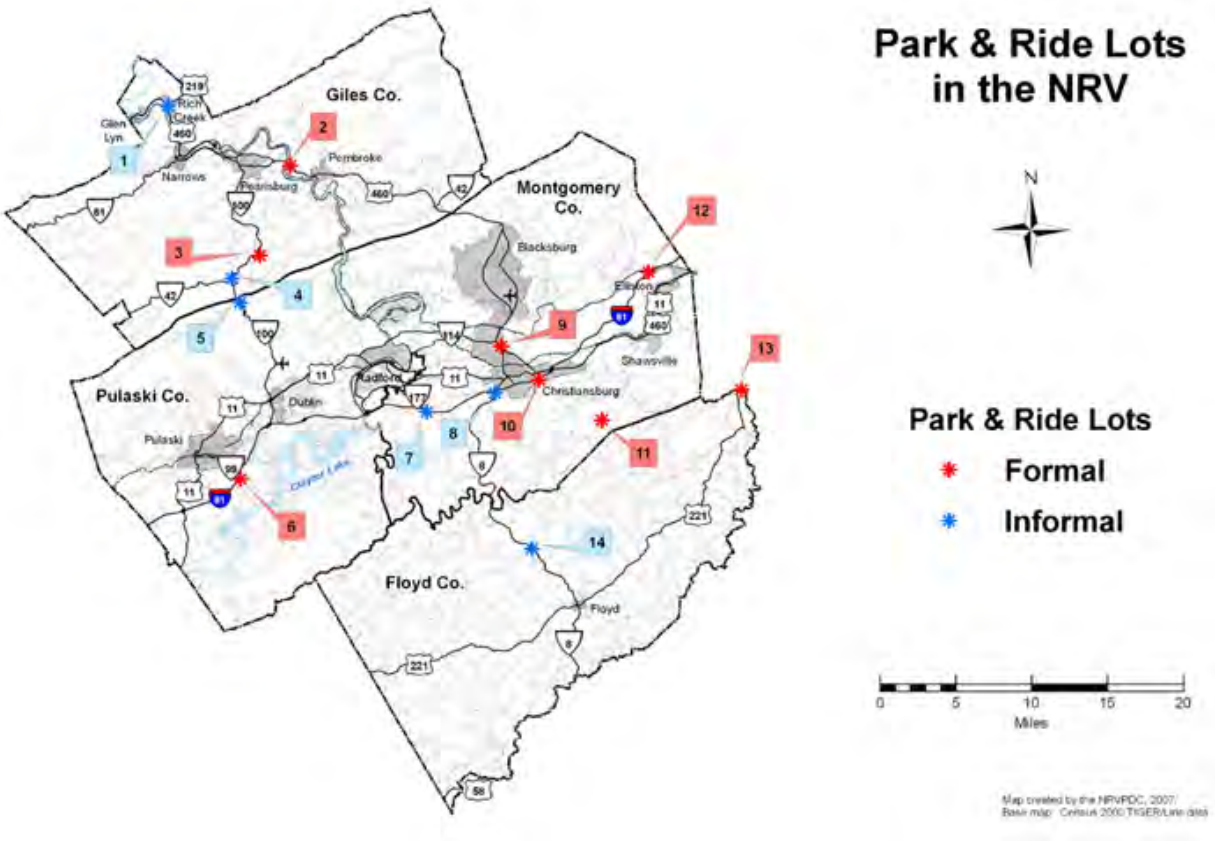
____ Walking ____ Other _____

3a. If public transportation were available, would you be willing to pay $2 for a one way trip and $3.50 for a round trip fare? ____ Yes ____ No

3b.If no, what would you be willing to pay? $_____ one way $_____ round trip

4. Park and Ride Lots are parking lots that allow commuters and other travellers to leave their personal vehicles in a designated lot and transfer to a bus or carpool for the rest of their trip. Referring to the map below, what is the closest Park and Ride lot to where you live? Identify it by writing the number in the blank. _____

5. How much time does it take for you to get to this Park and Ride lot from where you live? Please specify in minutes. _____



Part IV – Demographics

The following questions are for classification purposes only. All data will be shown as a whole.

1. Into what age category do you fall?

___ 18-24 ___ 35-44 ___ 55-64

___ 25-34 ___ 45-54 ___ 65 and over

2. Are you: ___ Male ___ Female

3. In which of the following communities do you live? *Check only one.*

____ **Giles County**

___ Pembroke ___ Glen Lyn ___ Narrows ___ Rich Creek ___ Pearisburg

___ Newport ___ Other _____

____ **Floyd County**

___ Town of Floyd ___ Willis ___ Check ___ Indian Valley

___ Alum Ridge ___ Other _____

____ **Montgomery County**

___ Christiansburg ___ Blacksburg ___ Shawsville ___ Elliston ___ Riner

___ McCoy ___ Price's Fork ___ Belview ___ Pilot ___ Other _____

____ **Pulaski County**

___ Town of Pulaski ___ Dublin ___ Snowville ___ Other _____

____ **City of Radford**

____ **West Virginia** (name of Town or County) _____

____ **North Carolina** (name of Town or County) _____

____ **Other** - (specify):_____

4. What is your residential zip code? _____

5a. If you are willing, please list the name of your employer _____

5b. If not, please list the community/town/county/state where you work (example: Narrows, Giles County, Virginia) _____

THIS COMPLETES THE SURVEY. THANK YOU FOR YOUR HELP.

Appendix C: Park & Ride Survey Results

1. Which days of the week do you use this parking lot?

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
frequency	66	63	63	65	63	17	12

2. What hours of the day do you most commonly use this parking lot?

Time	Frequency
5 - 8 AM	79
8 - 10 AM	0
10 AM - 12 PM	3
12 - 2 PM	5
2 - 4 PM	2
4 - 6 PM	94
8 - 10 PM	8
10 - 4 AM	4

3a. When you use this lot, where are you coming from?

Locality	Frequency
Christiansburg	29
Blacksburg	11
Floyd	9
Pearisburg	7
Riner	6
Radford	5
Peterstown, WV	3
Willis	3
Dublin	2
Ironto	2
Pembroke	2
Pulaski	2
Roanoke	2

Locality	Frequency
Salem	2
Belspring	1
Belview	1
Big Stoney	1
Copper Hill	1
Draper	1
Elliston	1
Fairlawn	1
Falling Branch	1
Giles	1
Glen Lyn	1
Hillsville	1
Shawsville	1

3b. Where are you going?

Locality	Frequency
Roanoke	31
Salem	15
Christiansburg	8
Blacksburg	9
Floyd	5
Radford	4
Pulaski	4
Dublin	3
Bland	2
Narrows	1

Locality	Frequency
Riner	1
Big Stoney	1
Peaks of Otter	1
Selu	1
Pearisburg	1
Peterstown	1
Ripplemead	1
Wytheville	1
Glenvar	1
Halifax	1

4. How long is your travel tim TO this parking lot?

	< 10 min.	11-20	21-30	31-45	>45 min.
frequency	41	32	14	11	1

5. When using this parking lot, what is your purpose?

Purpose	Frequency
Going to work	69
Medical trips	0
Shopping	3
Going to school	1
Going out of town on a trip	10
Other *(listed at right)*	18

Other:	music
	selu
	bike ride
	swimming
	dance
	softball game
	games
	hanging out
	church
	meet with wife
	music

6. What type of transportation do you take to this parking lot?

My own car	94	
Bus	0	
A ride from someone with a car	1	
How many riders do you join or join you?		1
Bicycle	0	
Other	1	

7. Do you own your own vehicle?

YES	95
NO	5

8. Have you ever heard of the RIDESHARE program?

YES	46
NO	52

9. Are you a member of the RIDESHARE program?

YES	0
NO	97

10. If convenient public transportation were available from this parking lot to your destination, would you use it?

YES	80
NO	18

11. Would you be willing to pay $2 one way of $3 round trip for public transportation service?

YES	81
NO	14
NO, but I'd pay __	$1 round trip
	$2 round trip
	$1 round trip

12. What is your residential zip code?

24012	1
24058	1
24060	8
24073	32
24079	1
24084	3
24087	3
24091	8
24134	3
24136	2
24138	1
24141	6
24144	1

24149	3
24149	2
24150	1
24162	1
24167	1
24301	3
24312	1
24316	1
24324	1
24343	1
24347	1
24380	3
24963	2

13. Park and Ride Lot numbers from map

Lot Number	Frequency
1	1
2	4
3	0
4	2
5	0
6	2
7	4
8	23
9	-
10	51
11	0
12	0
13	0
14	6

Save-a-lot-Pearisburg	4

Appendix D: Employee Survey Results

Part I: Transportation Information

1. Do you currently own or have access to a vehicle for commuting purposes?

YES	816	96%
NO	32	4%

2. Thinking of your most typical week of work, please indicate how you traveled to and from work each day.

Last Full Week	Drove Alone	Carpooled	Took Public Transpor-tation	Biked	Walked	Worked from Home	Did Not Work	Other	
Monday									
To work	704	69	13	21	14	12	36	3	Dropped off picked up
From work	704	69	11	21	15				
Tuesday									
To work	703	73	15	28	12	14	24	4	Got ride with family Dropped off picked up
From work	703	72	13	28	13				
Wednesday									
To work	701	69	14	24	13	10	32	3	got ride with family
From work	701	69	13	24	14				
Thursday									
To work	717	70	12	24	10	12	22	3	Got ride with family Dropped off picked up
From work	717	70	11	24	11				
Friday									
To work	699	68	11	21	12	24	25	4	Got ride with family Dropped off picked up
From work	699	68	10	21	13				
Saturday									
To work	111	11	2	6	2	20	460	9	Got ride with family Dropped off picked up
From work	112	10	1	6	3				
Sunday									
To work	83	11	2	4	3	13	487	9	Got ride with family Dropped off picked up
From work	83	11	1	4	4				

3. Based on trips from home to work, what modes of transportation are available to you?

	Number	Percentage
Single Occupant Vehicle	812	59%
Carpooling	237	17%
Walking	87	6%
Biking	118	8.5%
Public Transportation	102	7%
Other *(listed at right)*	18	1%

Other:	Family or Friend	6
	Motorcycle/Moped	5
	Town/Company Vehicle	3
	Cab	2
	Vanpool	1
	Carpooling only available on portion of commute	1

4. What time do you normally start and end work?

START TIMES

Time	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
2:00 AM						1	
2:15 AM							
2:30 AM							
2:45 AM							1
3:00 AM		2			1		1
3:15 AM							
3:30 AM		3					
3:45 AM							
4:00 AM		1	1	1	1	1	2
4:15 AM							
4:30 AM	2	4	3	3	3		
4:45 AM							
5:00 AM	1	14	13	14	14	2	1
5:15 AM							
5:30 AM	1		2	1	1		
5:45 AM							
6:00 AM	6	12	12	11	10	5	5
6:15 AM							
6:30 AM	6	3	4	5	4		
6:45 AM	1	1	1	1	1		
7:00 AM	53	83	69	69	66	14	15
7:15 AM	7	9	6	7	5		
7:30 AM	78	85	79	78	65	1	1
7:45 AM	13	15	13	14	9		
8:00 AM	322	377	336	337	314	16	14
8:15 AM	8	7	6	7	6		
8:30 AM	81	87	87	83	78		
8:45 AM	2	1	2	1	1		
9:00 AM	76	79	67	77	72	19	6
9:15 AM						1	
9:30 AM	5	5	5	6	3	2	2
9:45 AM							
10:00 AM	14	21	15	19	13	9	8
10:15 AM			1	1	1		
10:30 AM	2	2	2	1	2		
10:45 AM							
11:00 AM	3	11	5	10	9	1	4
11:15 AM							1

11:30 AM	1		1	3			
11:45 AM							
12:00 PM	8	10	6	1	2	2	3
12:15 PM							
12:30 PM						2	2
12:45 PM							
1:00 PM	6	9	4	5	2	2	5
1:15 PM							
1:30 PM	2	1	1	1	1		
1:45 PM							
2:00 PM	1	6	3	4	5	7	5
2:15 PM							
2:30 PM							
2:45 PM		1	1	1	1	1	
3:00 PM	1	11	12	13	15	5	5
3:15 PM							
3:30 PM					1	1	
3:45 PM							
4:00 PM	2	6	5	4	4	4	2
4:15 PM							
4:30 PM							
4:45 PM							
5:00 PM		3	1	1		1	3
5:15 PM							
5:30 PM				1	1	1	
5:45 PM							
6:00 PM		3	2	2	4	2	3
6:15 PM							
6:30 PM						1	
6:45 PM							
7:00 PM			1			2	
7:15 PM							
7:30 PM						1	1
7:45 PM							
8:00 PM		1	1	2	3	1	1
8:15 PM							
8:30 PM							1
8:45 PM							
9:00 PM							
9:15 PM							
9:30 PM							
9:45 PM							
10:00 PM		6	7	10	9	7	7
10:15 PM							
10:30 PM							
10:45 PM							
11:00 PM	2	6	4	5	3	2	4
11:15 PM							
11:30 PM							1
11:45 PM							

END TIMES

Time	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
12:00 AM	1	1	2	2	7	1	2
12:15 AM							
12:30 AM							
12:45 AM							
1:00 AM		1	1	1	1	1	1
1:15 AM							
1:30 AM							
1:45 AM							
2:00 AM		1	1	1	1	1	1
2:15 AM							
2:30 AM							
2:45 AM							
3:00 AM							
3:15 AM							
3:30 AM							
3:45 AM							
4:00 AM							
4:15 AM							
4:30 AM							
4:45 AM							
5:00 AM				1		1	1
5:15 AM							
5:30 AM							
5:45 AM							
6:00 AM		2	2	2	2		
6:15 AM		1				1	1
6:30 AM							
6:45 AM		2	2	1	1	1	1
7:00 AM	1	7	7	10	8	9	11
7:15 AM							
7:30 AM		2	2	2	1		2
7:45 AM		1	1			1	
8:00 AM	2	1	1	1	3	1	1
8:15 AM							
8:30 AM							
8:45 AM		1					
9:00 AM					1		
9:15 AM		1					
9:30 AM							
9:45 AM							
10:00 AM					1		
10:15 AM							
10:30 AM							
10:45 AM						1	
11:00 AM		1			1	1	
11:15 AM							
11:30 AM				1	1		
11:45 AM							

12:00 PM	3	5	4	4	9	7	4
12:15 PM							
12:30 PM					1		2
12:45 PM							
1:00 PM	2	2	3	3	4	3	4
1:15 PM							
1:30 PM	1	12	12	13	12	1	1
1:45 PM							
2:00 PM	3	6	4	6	9	5	3
2:15 PM	1	1	1	1	1		
2:30 PM	5	6	6	8	6	1	
2:45 PM	1	1	1	2	2	1	
3:00 PM	15	32	32	29	38	14	9
3:15 PM					1	1	
3:30 PM	8	8	9	7	8		
3:45 PM	1	7	5	6	6	3	2
4:00 PM	59	67	63	61	68	9	12
4:15 PM	3	5	4	5	5		
4:30 PM	51	42	43	46	43	1	1
4:45 PM	4	8	8	9	9		
5:00 PM	337	378	347	357	324	11	8
5:15 PM	13	20	18	19	19		
5:30 PM	64	60	59	59	44	1	1
5:45 PM	1	4	5	4	4		
6:00 PM	46	49	52	47	45	7	8
6:15 PM	3	6	5	3	1	1	1
6:30 PM	6	10	11	9	3	1	
6:45 PM			1				
7:00 PM	16	17	21	14	12	5	2
7:15 PM		1	1	1	2	1	2
7:30 PM	6	8	5	6	4	2	1
7:45 PM		1					
8:00 PM	8	14	9	11	10	4	4
8:15 PM							1
8:30 PM	2	2	1	1	1		1
8:45 PM							
9:00 PM	6	5	5	3	2	3	3
9:15 PM		2	1	1	2	1	1
9:30 PM	3	1	2	2			
9:45 PM							
10:00 PM	6	8	4	3	2	4	4
10:15 PM		1		1	1	1	1
10:30 PM							
10:45 PM		2	1	2	2	1	1
11:00 PM	1	14	12	16	16	7	5
11:15 PM							
11:30 PM		1	1	1	1	1	1
11:45 PM							

5. Considering the mode of travel you use most often, please record in the table below the average time it takes you to travel to work and the average time it takes for you to travel home after work.

Travel to work	<10 min.	10-20	21-30	31-45	> 45 min.
number	80	390	161	123	80
percentage	9.5%	47%	19%	15%	9.5%

Travel home from work	<10 min.	10-20	21-30	31-45	> 45 min.
number	73	384	168	130	82
percentage	9%	46%	20%	15%	10%

6. What is the travel distance between your home and your workplace?

Distance	**Number**	**Percentage**
< 5 miles	184	21%
5-10	187	22%
11-20	219	25%
21-30	109	13%
31-40	101	12%
41-50	33	4%
> 51 miles	18	2%
Don't Know	5	.5%

7a. When you drive to work, where do you typically park?

	Number	**Percentage**
On the street	8	.9%
Parking provided by my employer	635	75%
In a public parking lot	57	6%
In a paid parking lot	98	12%
Other *(listed at right)*	53	6%

Other:		
	In a lot with parking pass	30
	Did not drive/was dropped off	12
	At job site	2
	Parking deck	2
	Any lot available	2
	Maintenance parking	1
	At client's home	1
	Have various worksites	1
	Bike rack	1
	Parking for employees and customers	1

7b. If you pay for parking, on average, how much does it cost your personally per month or per day to park at that location?

Per day cost	**Frequency**
$.20	2
$.28	1
$.50	1
$.60	1
$1.00	1
$1.25	1
$2.00	6
$3.25	1

Per month cost	**Frequency**
$3.00	7
$4.00	1
$4.15	1
$4.17	2
$4.33	1
$5.00	3
$5.83	25
$6.00	47
$6.25	17

Cost for an Unspecified Time	**Frequency**
$2.50	2
$4.00	2
$0 (retiree)	1
$30.00	2

Continued…

Per month cost	frequency
$6.50	1
$7.00	4
$7.50	2
$8.00	5
$8.33	2
$8.82	1
$9.00	1
$10.00	12
$10.42	2
$10.50	10
$11.00	3
$12.00	10
$12.50	35
$13.00	6
$14.60	1
$15.00	3
$18.00	1
$20.00	1
$35.00	1

8. In order to reduce the cost of your daily commute, would you be willing to participate in a carpool with one or more coworkers?

	Number	Percentage
YES	475	57%
NO	360	43%
Other *(listed at right)*	2	<1%

Other	Has two small children
	Has a child who requires a car seat

9a. Are you a member of RIDESHARE?

	Number	Percentage
YES	16	2%
NO	832	98%

9b. If NO, have you ever heard of RIDESHARE, a program where commuters are paired up with other commuters in order to create a vanpool or carpool?

	Number	Percentage
YES	303	37%
NO	511	63%

9c. If YES, where did you first hear about the RIDESHARE program?

My employer	55
A friend/coworker	40
In a printed advertisement	113
Online	38
Other *(listed at right)*	50

Other	old job	1
	Fredericksburg	1
	word of mouth	2
	TV	1

Part II: Transportation Barriers

1. A transportation barrier can be an unreliable personal vehicle or something that keeps you from carpooling, biking, walking, or using public transportation. Please respond by checking any items that are barriers. Then circle the situation that is the greatest barrier in each of the following tables:

BARRIER TO CARPOOLING	NUMBER	PERCENTAGE	CHOSEN AS GREATEST BARRIER
No, I do not have a barrier to carpooling	115	5%	-
Coworkers do not live near me	321	14%	74
I don't know anyone to carpool with	223	10%	42
Carpooling/Vanpooling takes too much time	66	3%	7
I need my own car to do personal errands before or after work	466	20%	141
I like the privacy of driving alone	202	9%	27
I do not like having to rely on other people	313	14%	54
My schedule does not allow me to leave at the same time each day	326	14%	131
I need my car for business reasons	122	5%	53
Other *(listed below)*	130	6%	2

Other:	
Dropping or picking up child/children	36
Work schedule varies too much/doesn't match others	27
Currently carpool	8
Possible child illness/emergency	8
Live too close to work to carpool	7
Work two jobs	7
Use car during the day	5
Drive a company car	3
Attend class after work	2
Bike to work instead	2
Is a smoker	2
Live in too rural of an area	2
Need car seats for children	2
Always late	1
Barriers apply SOME of the time	1
Brings dog to work	1
I paid to park the car, why would I want to stop driving it?	1

I live in a rural area so I often have to do errands after work so as not to make other trips to town. I'm not particularly fond of the commitment involved with carpooling but would appreciate the ability to be loosely involved in a program like that.	1
Like to work out before work	1
Long commute - hard to find match	1
Loss of flexibility	1
Needs handicap accessible car	1
No place to park the "other" car	1
Occasional bad weather	1
Something new and untried	1
Unreliable personal vehicle	1
Won't ride with smokers	1
Car can only carry two passengers	1
Car carries electric scooter	1
Cost of gas	1
Family complications	1

BARRIERS TO BIKING	NUMBER	PERCENTAGE	CHOSEN AS GREATEST BARRIER
No, I do not have any barriers to biking	50	2%	-
Distance is too far	556	21%	319
Hilly Terrain	304	12%	31
Heavy Auto Traffic	394	15%	65
Lack of bike paths or other riding space	367	14%	54
Lack of road maintenance in the winter	192	7%	5
Lack of showers at work	230	9%	17
Inadequate or nonexistent place to park a bike	76	3%	2
Lack of proper equipment	178	7%	30
Lack of experience or knowledge	137	5%	13
Other *(listed below)*	76	3%	2

Age/Out of shape/Health reasons	35	Smartway bus has no 'real' accommodations	1
Dropping or picking up child	13	TOO LAZY	1
Need car during/after work	12	have showers at work but time/hassle of showers is barrier	1
Carrying capacity too small	11	I don't want to work up a big sweat riding a bike to work!	1
Not interested	7	in executive position	1
Weather	6	Work out at gym in morning; biking doesn't fit with that routine.	1
Too time consuming	5	getting up early enough for commute	1
Safety	4	I already work out before coming to work	1
It is dark when I leave work.	1	I bring clients to work some days	1
I need car seats for children	1	scared to ride home at night	1
My schedule does not allow me to leave at the same time each day; I unpredictably may be going home after dark	1	New fencing in certain areas made commute longer in order to by pass the fences (take alt. route added 3 miles each way to bike commute)	1
my agency transportation fleet is insufficient to provide for all employee needs	1	need to dress professionally at work, so would have to plan ahead to bring change of clothes	1
My wife is driving anyway	1		
I bike a lot recreationally (~2000 mi/year), but ironically I live too CLOSE to bike. It takes more time just to change clothes than to drive the 1.5 miles.			1

BARRIERS TO WALKING	NUMBER	PERCENTAGE	CHOSEN AS GREATEST BARRIER
No, I do not have any barriers to walking	56	3%	-
Distance too far	712	43%	483
Hilly Terrain	190	11%	8
Lack of sidewalks	310	18%	33
Lack of pedestrian crossing signals	171	11%	4
Lack of road maintenance in winter	159	9%	4
Other *(listed below)*	78	5%	1

Age/Out of shape/Health reasons	22
Dropping or picking up child/children	11
Need car during/after work	10
Time consuming	9
Heavy traffic	4
Safety	4
Need to transport items for work	4
Weather	3
Would sweat through dress clothes	2
Need car seats for children	1

Have been harassed by police when walking	1
Walk enough at work	1
Already work out before coming to work	1
Scared to walk home at night	1
Lack of flexibility	1
Too archaic	1
Illegal to walk on interstate I think	1
Not interested	1

BARRIERS TO PUBLIC TRANSPORTATION	NUMBER	PERCENTAGE	CHOSEN AS GREATEST BARRIER
No, I do not have any barriers to public transportation	102	9%	-
No access to public transportation	509	43%	315
Lack of convenient access to public transportation	271	23%	96
Lack of experience or knowledge	62	5%	13
Bus schedule does not match my needs	186	15%	77
Other *(listed below)*	62	5%	0

Dropping or picking up child/children	12
Need car during/after work	11
Time consuming	9
Don't like public transportation	4
Bus doesn't run earlier enough	4
Need car to transport things	3
there IS no public transportation in Radford	3
Too short of a distance for public transportation.	2
I like the privacy of my own car.	1
have my own vehicle	1
Smartway bus has no 'real' accommodations for bikes. In the alternative, Valley Metro connections are inconvenient, requiring riding all the way to Campbell Court. Need connections at Salem and airport for west side of Roanoke.	1

no need	1
use town vehicle	1
value of my time	1
have to drive to bus stop	1
unable to wait at stop due to health	1
Buses are often crowded	1
I have call BT and asked for route to Woodbine and Wyatt Farm	1
not very practical for the average person in the new river valley	1
NO public transportation options to connect Smart Bus drop-off to Radford	1
I travel to work too early to catch public transportation	1
I live in a rural area	1

2a. Have you ever missed work due to unreliable transportation?

	Number	Percentage
YES	108	13%
NO	723	87%

2b. If YES, how many times in the last six months has this occurred?

Frequency	Number
0	46
1	16
2	10
3	1
4	0
5	1

3a. Have you ever been late to work due to unreliable transportation?

	Number	Percentage
YES	164	20%
NO	664	80%

3b. If YES, how many times in the last six months has this occurred?

Frequency	Number
0	67
1	49
2	21
3	5
4	2
5	1
6	2
15	1

4. If you've had trouble getting to work, what barriers kept you from getting there?

	Number	Percentage
Vehicle Reliability	90	17%
Cost of gas	68	11%
Cost of vehicle maintenance	26	4%
Lack of insurance	3	.5%
Relying on another driver	27	5%
Lack of driver's license	11	2%
Weather conditions	325	55%
Other *(listed below)*	32	5%

sick/sick child	6
flat tire	5
traffic/road work	5
bus reliability	3
car in for maintenance	2
family coordination (getting kids to school)	1
unexpected schedule change	1

getting up early enough	1
take son to school in the morning	1
not planning	1
lack of parking	1
drug interaction	1
two car accidents	1
laziness	1
no money for vehicle	1
cycling accident	1

5. How could this/these barrier(s) be removed? *(responses grouped in categories for readability)*

Maintenance

Better county maintenance
Plow roads
Better road maintenance in winter
Quicker snow scraping
Better snow removal in residential areas
Better winter road maintenance on country roads
Plow the roads in a reasonable time period
Ice removal
Clearing rural roads of snow and ice sooner
Better Snow Removal in Subdivisions
More efficient highway clearing during inclement weather
Better road conditions
Better road maintenance
Better road cleaning in winter
Better road maintenance
Preventive maintenance
Better maintenance of roads during snowstorms
Better state/county road maintenance during winter
Better snow removal on secondary roads
Better snow removal from neighborhood
Better road conditions
Have my road plowed sooner.
Better road maintenance
Remove snow/ice in rural areas more efficiently
Clear my neighborhood roads sooner when there is heavy snow

Weather

Not much can be done about my fear of driving on ice
On bad weather days it would be nice if safety was more important that the bottom line.
Cancel work on snow days/drive my own car
No snow
Only wintry weather is a factor.....
Nothing can change weather
Icy secondary roads can't be helped
Mainly weather conditions is the main barrier around the river and hilly terrain
A winter with no snow or sleet
Close university on bad weather days
Plowing my driveway
A change in the weather.
No control of weather or unexpected breakdown of vehicle
I live in Merrimac, just have to wait for the roads to be cleared
Moving far south...no ice/snow!!!
Close for the day
University could close when there is snow or ice on the roads, or any type of hazardous driving conditions.
Can't control the weather
Could not be removed; it snows heavily once in a while
I can't control weather conditions
Change the weather
If employer observed or had a weather policy and closed for safety reasons due to the weather. There have been times that the state police have blocked roads due to weather or made statements to stay off the roads, yet we are required to come to work or take personal leave if we choose not to.
None - No control over weather
No heavy snowfall
Weather incidents can be expected, and prepared for. I normally stay home when the college is closed due to weather conditions.
No control over winter weather
Stop weather
If it didn't snow or sleet
The only condition that would prevent me from coming to work would be ICE! Could not prevent this.
Close the University
Remove bad weather
No winter and Ice
It's going to snow and ice - I don't see how that could be changed

Gas Prices

Lower gas prices
Gas companies could quit making billions and only make millions
Lower Gas Prices
New president who will lower gas taxes.
This hasn't impacted me yet but I foresee that it will.
Obvious solution is to lower gas prices.
For those of us in very rural areas the cost of gas is going to cause us to choose gas, work, food, or welfare.
Reduce gas prices
Lower gas prices
Lower gas prices
Decrease rising fuel cost
Lower the price of gas by $1.00 per gallon at minimum, find a more reliable carpool driver, etc...
Lower gas prices
Lower gas price
Lower gas prices
Transportation in the past has not been a problem except for bad weather conditions, but with the price of

gasoline headed higher and higher, I now worry that it could be a problem in the future.
Cut the cost of gas
Gas Prices
Gas Prices dropped and better road maintenance
Lower gas prices
Gas vouchers
Lower gas prices
If gas goes down then it may help
Get government officials to do something about gas prices. Employer give raise in pay to help pay for gas.
Employer pay fuel costs

Transportation Solutions

Safely carpooling
Public transportation that picks up and drops off at more locations
Public transportation between Blacksburg and Radford
Public Transportation stop closer to my house
Greater emphasis on bike transportation and traffic calming techniques
Advance information about maintenance and congestion
Public Transportation
Continue to build and expand trail networks for biking between communities
Extend bus system out N. Main St. in Blacksburg and provide a commuter parking lot there.
Teleworking could remove every barrier I have.
Commuter networking; increased awareness of Rideshare in outlying communities such as Mt. Airy, Fancy Gap, Wytheville, and Floyd
Increase in pay (underpaid check the salary survey), reliable public transportation, decrease in cost of gas would help as well
PUBLIC TRANSPORTATION
Public transportation
Work from home
Reliable public transportation
Public transport within 1 mile of home/work, employer could and should allow telecommute but does not
I'm mostly going to be riding public transportation or have my mother take me
Public transportation would be nice
Reliable Regular Public Transportation System, however, in inclement weather it is virtually impossible to get off of Little Creek Road to get to Rt. 100 in order to reach such mode of transportation.
If public transportation came further into the county
Carpooling
Taking the Smart Bus all the way to Radford
Public Transportation
No bus service from Roanoke to Radford
Public Transportation being available from the route 100 side of Giles County to various areas.
Public transportation
If there was a vanpool or bus than ran frequently (every 15 minutes) during regular commuting hours that would work for me. Some days my hours would not work for this. I doubt I would ever be in good enough shape to bike 19 miles to work on hilly terrain with heavy traffic - but if there was a bike path it might be a possibility for those in shape. I've tried carpooling before, but with added time needing to get others houses and with my need to stay late to get work done - this is hard to make work.
An express bus from Pulaski to Blacksburg and back would be nice
Bus schedule should be accessible to people standing waiting for the bus
Take public transportation instead, or additional parking
A regional rail system would be great
More bike paths in the county
More telecommuting
Public transit would be wonderful in our area
Bus service
Blacksburg-Radford Bus
Better/more public transportation
Telecommuting (i.e. working from home)
Someone else pick me up
Public transportation services
Reliable bus service from where I live
Bus or rail transportation from Pulaski to Radford.
PUBLIC TRANSPORTATION
More bike paths.
Have reliable, convenient public transportation
Public transportation
More public transport
Access to "adult worker " public transportation at a reasonable cost.
Public transportation on a 30 min. schedule would be GREAT.
Public Transportation
Start operating bus at earlier times and ending later to accommodate working hours
Would be glad to carpool but unlikely to find a person with similar work hours
Public Transportation
Carpool from my home in Craig County Rt. 42 to Blacksburg
public transportation
SmartWay bus to connect to RU.
Connect me to someone who lives close who is willing to carpool

public transportation in Giles County

Vehicle Quality

Getting a better vehicle
I bought a more reliable vehicle, don't rely on others to give me a ride, and if the weather is bad (i.e. ice, snow, etc) I wait until the road to my office and parking lot have been plowed before attempting to go to work.
probably buy a newer vehicle
bought new battery for second vehicle
New battery installed
New car
had vehicle repaired
carry cell phone for road-side assistance and have a reliable spare tire
make tires that don't go flat
trade cars more frequently
better car
done, got a new vehicle
no control of weather or unexpected breakdown of vehicle
If I could afford a better car, or afford to move closer.
get a newer car
affordable reliable vehicle
I don't have trouble at all getting to work anymore, since we have three vehicles

God/Nature

God
An act of God and a flat terrain...only barrier is that I live on a steep street and in a house with a ski jump ramp for a driveway.
God
Only by God.
they can't - Mother Nature
GOOD QUESTION - ISN'T GOD IN CONTROL OF THE WEATHER?
Talk to God. I can't change the weather

Unable to be Removed

Cannot
They can't be
Can't be removed
Something's we must live with
They can't - unplanned problems do occur sometimes
I don't think they can
IT CAN'T
not possible
They cannot
Couldn't
they can't
Can't
It can not be helped
I doubt they can. I live in a remote residential area.
they can't
They can't
Can't
Not sure this could have been avoided
They can't

Monetary

Wal-Mart could pay me more so I could stop living paycheck to paycheck
monetary/and schedule pickups from more than 1 person
Federal government assistance for new vehicle purchase
PAY ME MORE MONEY TO BUY A NEW CAR!
If I could afford a better car, or afford to move closer.
receive a raise so I can buy a new car!
For me to make enough money to buy a newer car, which I actually don't care to do anyway because it costs more than maintaining my current car
make eco-friendly vehicles accessible to the average person

Better Planning

leave earlier
Better planning for departure time
Leave earlier
plan ahead
Leave home earlier

Proximity to Work

Decent paying job close to home
Move closer to Wal-Mart
Move Radford to Blacksburg
Moving to Pulaski
Moving
I am moving closer to work

Undecided

?
don't know
Unknown
Don't know
???
Not sure
not really sure
?
No idea
don't know
??
?

unknown
?
??

Miscellaneous

Not a problem
Flat tires happen, ice storms happen. No big deal.
It was a fluke. bus is usually on-time
Stricter penalties and enforceable leash laws.
I experience minimum barriers because I drive my own vehicle.
Do not get sick.
Still made it to work. was a little late. could not be avoided
Obtain driver's license
Get license back
Working 10 hour shifts
Working 4 10 hour shifts instead of 5 8-hour shifts
Get a reliable driver and/or driver's license
Do not get sick
No barriers; if I can't get to work, my place of employment is almost always closed for inclement weather. Or I work from home.
Make pedestal bridges over or under campus roads
Showers at work or earlier BT times.
Better fleet at my agency
Getting my license so I can get to work on time
Solve global warming

Part III. Transportation Solutions

1a. How much do the following affect your decision to use other modes of transportation to work, including public transportation, car/vanpooling, walking, or biking? Circle the most appropriate response, with 1 meaning the situation does NOT affect your decision, and 5 meaning the situation STRONGLY affects your decision.

I would consider taking public transportation, car/vanpooling, walking, or biking to work more often	1 – Does Not Affect	2	3	4	5 – Strongly Affects	Do Not Know
If a Guaranteed Ride Home program, which would guarantee me a ride home in case of emergency were available	200	50	130	139	180	58
If my work start and finish times were flexible	294	42	107	118	155	36
If there was a company vehicle I could use for business use during the day	340	44	81	102	154	21
If the cost of public transportation were subsidized by my employer	286	41	90	101	186	34
If there was help (e.g. my employer or an agency) to find people with whom to carpool/vanpool	268	73	139	110	117	38
If public transportation passes were sold at work	385	52	99	75	85	50
If childcare services were located at or near my place of work	596	15	25	29	65	22
If secure and convenient bicycle parking racks and/or lockers were available at work	573	33	45	37	49	14
If parking was reserved close to my building for carpools/vanpools	498	55	61	60	60	16
If parking rates were lower for those who carpool/vanpool than for those who drive alone	506	36	53	59	68	20
If transportation information (e.g. biking routes, public transportation routes and scheduling) were available at work	369	58	112	98	84	28
If showers, clothing lockers, and change facilities were available at work	481	40	65	69	70	19
If a shuttle bus service from my workplace to a major public transportation station was provided	317	43	97	89	161	33

1b. If you circled 4 or 5 for any items in the previous question, which mode or modes would you most likely use more often to travel to work?

	Number	Percentage
Car/Vanpool	335	39%
Bicycle	104	12%
Walk	36	4%
Public Transportation	342	39%
Not sure	51	6%

2. If alternative transportation was available from your home to work, which modes of transportation would you choose?

	Number	Percentage
Carpooling/vanpooling	405	37%
Biking	135	12%
Public Transportation	475	43%
Walking	62	6%
Other *(listed below)*	17	2%

jet pack!
There is no way someone with 3 kids playing sports can do anything but drive (esp. 20 miles out).
None
Carpooling with my husband
not feasible
Rail Service between Christiansburg/Radford and Roanoke
telework
Not interested
Motorcycle if VT did not charge extra for motorcycle parking.
Pulaski area transit supposed to be free

if the dog issue of enforcement is better in Blacksburg
Train
I would just be satisfied if some sort of commuter bus option from Radford/Fairlawn to Blacksburg was available. My car is reasonably fuel efficient so I use less than a gallon a day, but I always liked riding the bus
N/A
drive myself
It is really not an option
Teleporting

3a. If public transportation were available, would you be willing to pay $2 for a one way trip and $3.50 for a round trip fare?

	Number	Percentage
Yes	410	55%
No	328	44%
Maybe	1	1%

Other:	Employer should pay for this

3b. If NO, what would you be willing to pay?

One Way		
	Number	**Percentage**
$0.00	12	11%
$0.25	5	5%
$0.50	23	21%
$0.75	4	4%
$1.00	54	50%
$1.25	1	1%
$1.50	7	6%
$1.75	2	2%

Round Trip		
	Number	**Percentage**
$0.00	13	11%
$0.25	1	.9%
$0.50	3	3%
$0.75	0	-
$1.00	20	18%
$1.25	0	-
$1.50	10	9%
$1.75	0	-
$2.00	49	43%
$2.50	9	8%
$3.00	9	8%

Other:	
No/Not interested/Not feasible	10
Unsure/ Don't know	9
live too close	9
Less than the price of gas	8

Dependant on the distance. Since my distance is short, an in town bus service should be nominal or free	Employees shouldn't have to pay for this. Already spend too much money as it is
No way to get to my job in Giles County	Pass from employer
$2.00 round trip and subsidized by employer	I would want monthly or annual passes available
Walking is cheaper, and not too far	I do not need public transportation
You do not specify if that is a daily rate	As it is I ride free
Free Passes from RU or max $4.00 weekly	Frequent Buyer Discounts
NO I don't like public transportation, it is not always safe nor is it clean!	$2-$3 each day, or a weekly/monthly pass - discounted the longer you buy...
I already pay $100 for Smartway bus monthly pass - are you asking me to pay more?	It would have to be cheaper than a 10 mile round trip in the car
Already get BT free	Only if it were a weekly fee.
No more than $10 a week	Public transport doesn't' provide for my electric scooter!
NEED MY CAR AFTER WORK	would have to save me money
I would be willing to pay a flat rate for a month/year. $2 for a one way trip will add up to a higher cost than my current gas usage and parking fee/month	Public Transportation should be free, that would be the only way I would use it. Having lived in major cities it was free there and I used it daily
I'd pay more if I had to.	my employment gives me free use
Need vehicle for errands and changing work schedule	I travel 20 miles/day. Cost should be dependent upon distance
I would be willing to pay $15 per week for 5 round trip passes on a bus. If bought in "bulk" (e.g. a five day work week purchased monthly), it would be great to see the price lowered...like $55 per month	If carpooling and others also drive, just trade off days; would pay nominal fee for public transportation but would like a reduced rate for parking decal since I would only park on campus a few days a month
Don't know - I might be willing to pay $3.50 - I'd have to figure out how much I'd be saving in gas, etc. $75 a month seems expensive - but maybe it would be worth it	would like a pass that you pay yearly or monthly - don't want to have to pay cash each time
I only travel less than 12 miles round trip. To pay $3.50 round trip costs me more than what I would pay for gas on my own.	Need vehicle for errands and changing work schedule

4. Park and Ride Lots are parking lots that allow commuters and other travelers to leave their personal vehicles in a designated lot and transfer to a bus or carpool for the rest of their trip. Referring to the map below, what is the closest Park and Ride lot to where you live?

Lot Numbers	Frequency	Percentage
1	8	1%
2	37	7%
3	10	2%
4	0	0%
5	5	0.8%
6	78	14%
7	64	11%
8	25	4%
9	179	32%
10	107	19%
11	4	0.7%
12	21	4%
13	1	0.2%
14	28	5%

5. How much time does it take for you to get to this Park and Ride lot from where you live?

	< 10 min.	10-20	21-30	31-45	>45 min.
Number	293	569	115	34	16
Percentage	27%	56%	12%	3%	2%

Other:
not sure
not sure
longer than it takes to get to work
don't know

Part IV: Demographics

1. Into what age category do you fall?

Age	Frequency	Percentage
18 - 24	39	6%
25 - 34	140	21%
35 - 44	172	25%
45 - 54	195	29%
55 - 64	123	18%
65 & over	10	1%

2. What is your gender?

	Frequency	Percentage
Male	223	33%
Female	452	67%

3. In which of the following communities do you live?

Locality	Town	Other	Frequency	Percentage
Giles Co.			8	
	Pembroke		4	
	Narrows		6	
	Rich Creek		1	
	Pearisburg		6	5%
	Newport		7	
	Other:	Bane	1	
		Wolfcreek	1	
		Staffordsville	1	
Pulaski Co.			30	
	Town of Pulaski		25	
	Dublin		37	
	Snowville		9	
	Fairlawn		15	18%
	Other:	Draper	4	
		Parrott	1	
		New River	1	
		New Bern	1	
		Belspring	1	
Floyd Co.			14	
	Town of Floyd		6	4%
	Willis		4	
	Indian Valley		4	
Montgomery Co.			82	
	Christiansburg		134	
	Blacksburg		134	
	McCoy		3	
	Price's Fork		3	56%
	Shawsville		5	
	Elliston		1	
	Riner		14	
	Belview		2	
	Pilot		3	
City of Radford			48	7%
West VA				
	Bozoo, Monroe County		1	
	Princeton, Mercer County		2	

Other Localities		
Locality	**Towns**	**Frequency**
Roanoke		19
	Vinton	1
Salem		5
Franklin County		
	Moneta	1
	Rocky Mount	1
Wythe County		6
	Max Meadows	2
	Barren Springs	1
	Wytheville	5
	Fort Chiswell	1
	Rural Retreat	1
Carroll County		1
	Hillsville	2
	Woodlawn	1
Grayson County		1
	Elk Creek	1
Patrick County		
	Patrick Springs	1
Bland County		
	Bland	1
Botetourt		
	Troutville	1
Craig County		1
	New Castle	1
Hardy County		
	Franklin	1
Ripplemead		1
Orange, VA		1
Ballard		1

4. What is your residential zip code?

Zip Code	Frequency		Zip Code	Frequency
22960	1		24138	5
24014	2		24141	84
24015	5		24147	1
24017	1		24149	17
24018	2		24150	2
24019	3		24151	1
24058	1		24153	5
24060	158		24162	8
24061	1		24167	1
24062	2		24175	1
24073	181		24179	1
24084	48		24301	40
24087	4		24313	3
24091	19		24315	1

Highest Frequency Zip Codes

24073: Christiansburg, Montgomery County
24060: Blacksburg, Montgomery County
24141: Radford, City of Radford
24084: Dublin, Pulaski County
24301: Pulaski, Pulaski County

24101	1		24324	6
24105	2		24325	1
24111	1		24326	1
24121	1		24343	5
24124	15		24347	1
24126	1		24360	7
24127	2		24368	1
24128	8		24380	12
24129	1		24381	1
24132	1		24382	10
24133	1		24740	1
24134	10		24963	1
24136	10		27084	1

5a. If you are willing, please list the name of your employer.

Employer	**Frequency**	**Employer**	**Frequency**
ACI	1	Norfolk Southern	2
Advance Auto Parts	1	Not currently employed	1
Anderson and Associates	2	NRCA (radford)	8
Automation Creations, Inc.	1	NRCC (dublin)	45
Bollo's	1	NRV Community Transit	1
Carilion (mont co.)	4	NRVCS	40
Celco	1	Paul Mitchell, CPA	1
Community Housing Partners	2	Pocahontas Press	1
Corning, Inc.	1	ProChem	3
Draper Aden Associates	10	Pulaski County	3
Dept. of Rehab. Services	1	Pulaski County DSS	5
Duncan Acura Audi	1	Pulaski Co. Public Schools	2
EEE Consulting	2	Radford University	148
Floyd Co schools	2	Roanoke College	1
FNB/Stellar One (dtown cburg)	6	Shaheen & Shaheen	2
Giles County Public Schools	1	Shelor Motor Mile	1
Goodwill Industries of the Valley	1	State of Virginia	1
Government	1	Tammy Havens	1
Hardee's	1	Tetra/United Pet Group	3
HCA	1	The Roanoke Times	1
Heritage Hall	1	Town of Blacksburg	3
Long & Foster REALTORS	1	Town of Christiansburg	19
Lowe's	1	Tyco Electronics	1
Manpower	2	VBI at the CRC	1
MCPS Christiansburg HS	1	VCOM	1
Mel Wheeler, Inc.	1	VA DEQ	1
Montgomery Co	7	Virginia Tech	131
Montgomery Co DSS	7	VTLS, Inc.	1
Montgomery Co Public Schools	2	VTTI	4
Montgomery-Floyd Library	2	Wal-Mart (cburg)	37
MRH	1	Warm Hearth	37
New River Land Trust	1	Wolverine	19

New River/Mt Rogers WIB	1	Xaloy	12
		don't work for a local company	

5b. If not, please list the community/town/county/state where you work.

Locality	Town	Frequency	Locality	Town	Frequency
Giles Co.		2	Montgomery Co.		10
	Pembroke	1		Christiansburg	29
	Narrows	3		Blacksburg	67
	Pearisburg	1		Shawsville	1
	Newport	1		Elliston	4
Floyd Co.		1	Pulaski Co.		9
				Town of Pulaski	1
City of Radford		40		Dublin	12
				Fairlawn	6

Other Localities:		
Locality	**Town**	**Frequency**
Wythe Co.	Wytheville	1
	Max Meadows	1
City of Roanoke		9
Salem		1
Albemarle Co.		1

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Appendix E: A Vision for New River Valley Commuter Employment Transportation

coordinated for the New River Valley Planning District Commission (NRVPDC)
by select employees from

Blacksburg Transit
New River Valley Community Services/Community Transit
Pulaski Area Transit

with maps generated by the NRVPDC

January 30, 2009
Vision for New River Valley Commuter Employment Transportation

Table of Contents

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Executive Summary

The purpose of this project was to develop a vision for transportation of commuters within the four counties and one city of the New River Valley. Representatives from Blacksburg Transit (BT), New River Valley Community Services/Community Transit (CT), and Pulaski Area Transit (PAT) worked together on this vision, under task orders issued by the New River Valley (NRV) Planning District Commission (NRVPDC). A coordinated process was used including meetings with the group and additional email, telephone, and in-person interactions to develop the vision. Input was also included from the Blacksburg-Christiansburg Montgomery Metropolitan Planning Organization (BCM-MPO).

The group worked collectively to summarize current services, review relevant literature, review survey data from an employment mobility survey and other NRVPDC sources, discuss alternatives for regional transportation, develop recommendations for commuter routes in the NRV, and create this document.

Current transportation service for the NRV is provided by a mixture of services to serve a variety of public and private clients. BT, CT, and PAT serve the majority of people in the region. Vanpool and carpool matching services also exist, as does the Smart Way Commuter bus connecting the NRV to Salem and Roanoke.

Long-standing and broad support has existed for an inter-connective transportation system within the NRV with emergence of bus service over 60 years ago. A system existed in the City of Radford in the early 1970s (until 1981) and Senior Services (part of PAT) started service in 1976. An early 1979 study outlined bus systems to serve students, faculty, and staff of Virginia Tech and Radford University, and nearby citizens. In 1983 BT service began; CT started in 1986, the same year that the federal government began providing funding for coordination efforts of transportation services. In 1987 representatives from Senior Services (PAT), the Community Services Board (associated with CT), and BT collaborated and outlined recommendations such as the coordination of vehicle maintenance, client referrals, unmet transportation needs, as well the potential for a joint University-City transportation network in Radford.

In 2001 the City of Radford updated its comprehensive plan and another plan involving Radford and Fairlawn was developed. These efforts showed strong support for improved transportation systems within Radford and to tie it to Fairlawn, Pulaksi, Blacksburg, and Christiansburg. In 2004 and 2005, respectively, Montgomery County and the BCM-MPO developed comprehensive plans outlining the need for transportation planning, and improvements in service. Recent survey efforts by the NRVPDC have indicated strong support and a desire for transportation services in Eastern Montgomery as well as at Radford University. Additionally efforts involving the Town of Blacksburg, Virginia Tech, the Town of Christiansburg, as well as an evaluation of both the New River Valley and Roanoke Valley have shown a strong desire by citizens for expanded and improved transportation services.

The benefits of public transportation are many, including spurring economic development, providing jobs, transporting people to work while generating savings, reducing greenhouse gases, encouraging citizens to be healthier and safer, and decreasing our dependency on foreign oil.

The recommendations within this report were based on a review of the literature as well as a review of data provided by the NRVPDC from the employment mobility

survey and related data collection efforts. These data were used in conjunction with the expertise from the group to make the following recommendations:

- Service providers including BT, CT, and PAT, in conjunction with other service providers can serve the needs of commuters in this region.
- Seven routes would best service commuters in the New River Valley including:
    1. Glen Lyn to Blacksburg
    2. Pearisburg to Dublin
    3. Draper to Fairlawn
    4. Radford to Christiansburg/Falling Branch
    5. Floyd to Downtown Christiansburg
    6. Blacksburg to Radford to Christiansburg
    7. Christiansburg to Shawsville
- Additional transportation services should be included to get riders from stops to their employment centers. The concept of a vanpool system should be considered.
- Refinements of this vision (e.g., Phase 4) should focus on connections among routes and with other service providers via a hub concept.
- Capital costs for the seven commuter routes are estimated to be between $50,000 to $360,000 or more per vehicle. The total capital cost for vehicles would range depending on the vehicles selected. Ten vehicles at $230,000 each would cost $2.3 million. Operational costs are estimated to be between $60,000 to $100,000 per route, based on hours of operation, deadhead miles, number of stops, price of fuel, etc.
- Cost sharing and matching funds programs such as those provided by Federal and State government should be thoroughly explored and sought after.
- Scheduling should initially focus on servicing commuters that work Monday through Friday, 8 AM to 5 PM. For example, the Glen Lyn to Blacksburg route would start at 6:20 AM and end at approximately 7:44 AM.
- The vehicles selected for each route need to be researched further. Potential candidates range from 12 passenger vans to 15 or 21-passenger vans (with high ceilings) to larger vehicles designed for longer trips, such as a 40 foot bus.
- A phased approach is recommended to implement the seven routes including:
    1. Identify roles and services for each agency
    2. Establish a formalized NRVPDC and BCM-MPO collaboration focused on expanding the vision of NRV transportation services
    3. Identify potential sponsors, partners, or other funding mechanisms
    4. Refine, solidify, and market the vision
    5. Launch Commuter Transportation Service based on the seven routes

It is recommended that the NRVPDC and the BCM-MPO establish a formalized collaboration focused on further development and expansion of this vision for employment transportation options in the NRV. Representatives need to be included from regional municipalities, service providers, and Federal and State organizations. To maximize the likelihood of this vision becoming reality, the NRVPDC and BCM-MPO should carefully consider recommendations from previous efforts, understanding that those recommendations align with the vision described.

The group (BT, CT, and PAT) supports plans to hire a Mobility Manager to serve as a liaison amongst parties involved with transportation services within the NRV. We hope this person pursues this vision as well. The five phases suggested (identify roles and services, establish a formalized collaboration, identify sponsors, partners, and funding mechanisms to fund services, refine the vision, and launch the seven commuter routes) may be further refined by the group. The phased approach allows for funding in association with each phase. The approach also lends itself to the building of a solid foundation upon which phase 5 (launching the seven routes) can stand, survive, and flourish. The group intends to meet on a quarterly basis to keep the momentum going and to revisit and refine this vision.

The group selected the seven routes based on data provided, a review of history in this region, and based upon the experience of those involved in this effort. Implementation of the routes can take place gradually, and it is most likely that each route would be launched separately. Ideally however, all of the routes would be launched within a relatively short time frame (e.g., 2-3 years), as the interest in and need for employment commuter transportation increases.

Funding is perhaps one of the largest challenges for such a vision. The group is hopeful that resources will soon be made available toward the next steps of implementation, following the phases. The NRV needs comprehensive employment commuter transportation and the group is confident this vision will be realized.

The next step is for the NRVPDC to take action involving the group and other interested organizations. Progress toward realizing this vision can be attained by following with a regulated, formalized approach. We urge the NRVPDC and BCM-MPO to collaborate with interested parties to move forward with the development and refinement of this vision, and of the recommended phases.

Toward these ends, it is recommended that the NRVPDC disseminate the concepts of this vision to organizations throughout the NRV, other districts, throughout the Commonwealth of Virginia, and the country. The NRVPDC is urged to invite representatives from the group to make joint presentations to the NRVPDC and BCM-MPO policy board and technical advisory committee meetings, as well as to other organizations such as Virginia Tech, Radford University, the City of Radford, Town Council meetings, each of the four counties in the New River Valley.

The group will host a dinner and presentation during 2009 to review and discuss the vision. The group encourages the NRVPDC to invite representatives from other interested parties to attend as well.

Purpose

The purpose of this project was to develop a vision for transportation of commuters within the four counties and one city of the New River Valley. Toward that end, the New River Valley Planning District Commission (NRVPDC) initially brought together representatives from Blacksburg Transit (BT), New River Valley Community Services/Community Transit (CT), and Pulaski Area Transit (PAT). According to individual Task Orders issued to each organization, the group task was to work collectively to:

> "Analyze survey data and furnish recommendations to include identifying a service provider, determining routes and cost, and recommending scheduling options and vehicle type best suited for route."

Overview & Method

This section provides an overview of the process completed to develop the vision of transportation for the New River Valley. The focus is on providing commuters transportation via public transit (i.e., via large van or bus) to their place of employment. A review follows of the planning process, meetings, and personnel involved.

A.1 Planning Process

A coordinated planning process included a series of meetings to review the results from the Employment Mobility Survey, discuss alternatives for a regional transportation system, develop recommendations, and create this document.

A.2 Meetings

A series of meetings was held with representatives from each of the three transportation groups on December 8 (8:30 AM-5:30 PM), December 17 (10:30 AM-1:30 PM), 2008 and January 14 (3:00 PM-5:00 PM), 2009. Additional email, telephone, and in-person interactions also took place and the group consulted with the Executive Director of the BCM-MPO, Dan Brugh, throughout the process.

A.3 Personnel

Persons involved in this process included those within four organizations as follows:

<u>New River Valley Planning District Commission (NRVPDC)</u>

- David Rundgren, Executive Director
- Jennifer Wilsie, Regional Planner
- Andrew Gilmer, Cartographer (intern)

<u>Blacksburg Transit (a department of the Town of Blacksburg) (BT)</u>

- Rebecca Martin, Director
- Debbie Swetnam, Regulatory Manager
- Erik Olsen, Transportation Planner

- Tim Witten, Access Manager

New River Valley Community Services/Community Transit (CT)

- Josh Baker, Transportation Manager
- Rose Hill, Dispatcher

Pulaski Area Transit/Senior Services (PAT)

- Gary Heinline, Director of Programs/Transit Manager

Results

Results obtained from this process were used as the basis for writing this report. The report includes a summary of current services, performing a representative literature review, and reviewing the data from the Employment Mobility Survey and related sources supplied by the NRVPDC.

B.1 Current Services

This section reviews current services provided by the organizations in the region including Blacksburg Transit (BT), New River Valley Community Services/Community Transit (CT), Pulaski Area Transit (PAT), and other regional organizations. The group worked jointly to obtain this information from one another or from appropriate contacts from the other organizations mentioned.

Blacksburg Transit (BT)

Blacksburg Transit (BT) was started in 1983 with 3 routes servicing Blacksburg, Virginia with eight 30-foot buses, one van, and seven full time staff. Currently BT services Blacksburg as well as Christiansburg has 11 routes, 36 fixed-route 30, 35 and 40 ft. buses, 11 body on chassis (BOC) vans, and 15 service vehicles. For the fiscal year 2008, BT had 2.61 million trips per year. For FY 2008, riders included 90% VT students, 4% Virginia Tech (VT) faculty/staff, and 6% other citizens. Currently Virginia Tech contributes a large majority (89%) of operating funds for the local match for service.

Blacksburg Transit is planning to implement a real-time transit information system. In November 2008 BT, in conjunction with the Department of Rail and Public Transportation, had Google Transit activated. This is an on-line trip-planning service that makes it easier for people to use public transportation (see www.google.com/transit/).

BT has a total of 181 employees including 36 full-time employees and 145 part-time employees, the majority of which are bus operators (133). The operating budget for BT is approximately $4.7 million annually with capital expenses ranging depending upon the year. As an example of this range, for FY 2009 BT ordered 14 replacement buses at a cost of over $5 million; for some years only a few vehicles are ordered and the capital expenses are lower. BT offers advertising opportunities on its buses resulting in $90K in revenue annually. Additionally, BT offers a paratransit service ("BT Access") to eligible Blacksburg town residents, serving areas within the Town of Blacksburg. Their website is http://www.btransit.org.

New River Valley Community Services/Community Transit (CT)

Community Transit, a program of New River Valley Community Services, was established in 1986 to service clients of the New River Valley Community Service Board. The system started with 4 drivers and 1 transportation manager the primary focus was individuals seeking Mental Health, Mental Retardation and Substance Abuse Services.

Currently the department has 22 employees including 17 operators and 5 administrative personnel. The service area of Community Transit includes all eligible trips originating within the four counties of the New River Valley and the City of Radford. Trips are primarily demand and response in nature (vehicles are dispatched on a pre-scheduled/as needed basis). Primary focus of services is clients of New River Valley Community Services and Medicaid contracts. Additional contracts for transportation services include Radford City Public Schools, Radford City Social Services, New River Community Action, New River Fitness, Radford Nursing and Rehab, Beans & Rice, Inc and others.

The current total fleet consists of 74 vehicles with approximately 22 designated for paratransit purposes with the remaining 52 used by other programs of New River Valley Community Services. There are six daily semi-fixed routes that adjust dependent upon passenger demand. Contracted Medicaid Transportation primarily consists of trips within the New River Valley; however it is common to service destinations outside the New River Valley including Roanoke, Charlottesville, Richmond, and neighboring states including North Carolina, West Virginia and Maryland.

The approximate annual budget of NRVCS Community Transit is $786,000 (capital and operating) with annual revenues around $267,500. Community Transit provides approximately 2,100 trips per month with annual ridership approaching 26,000. Vehicle Maintenance services include contracts with New River Valley Senior Services, the Commonwealth of Virginia, and New River Community Action. All fleet maintenance services are provided in-house with on site certified Virginia car inspectors. Community Transit provides fleet management for locations of the agency throughout the New River Valley including sites in Floyd and Giles Counties.

Pulaski Area Transit (PAT)

Pulaski Area Transit is a public transportation system that serves the Town of Pulaski, parts of the County of Pulaski, and outlying areas. In operation since 2006 “PAT” is a demand response, deviated fixed route system. PAT has four (4) full-time employees with eight (8) vans and eleven (11) drivers. PAT has been recognized as an outstanding transit system in growth by APTA (The American Public Transportation Association) and continues to see increases in ridership with an outstanding 11 minutes “call to curb” response time.

Recently PAT added Saturday service targeted towards individuals with mobility needs and seniors. PAT is a member of the Pulaski Chamber of Commerce and operates with an approximate annual budget of $480,000 (operating and capital included). Their website is http://www.nrvseniorservices.org.

New River Valley Senior Services (NRVSS - in conjunction with PAT)

New River Valley Senior Services has been in existence since 1976. It is a private non-profit organization governed by a Board of Directors. Senior Services qualifies under the

IRS code as a 501(c)(3) organization. It is also recognized and exempt under the Consumer Affairs Department and is the largest services provider for the elderly in the New River Valley.

The goals of NRVSS are to provide safe and efficient services with the major emphasis being placed on serving the elderly, disabled, low income, and minority community. NRVSS is a Human Service transportation provider provides service covering 1,400 square miles for the 4th planning district (the four counties within the New River Valley and the City of Radford). Services include contracts with the NRV Agency on Aging, goodwill industries of the valleys the disability services board, DRS, department of social services, the association for the mentally retarded and several others. NRVSS also runs MED-RIDE a medical transportation system which uses volunteer drivers and partner agencies such as BT and CT. As an example of services provided, NRVSS provides transportation services to clients of the NRV Agency on Aging to and from seven nutrition sites throughout the NRV. It also provides shopping assistance to the Agency clients and the general public, 60 years of age or older who have no transportation available. Disabled people under 60 may be included if space is available on the vans.

Senior Services also provides services for Medride, Meals-on-wheels, Congregate Meal Sites, Homebound Meals and Transportation for Medicaid. Employing thirty (30) paid drivers operating twenty-seven (27) vans and thirty (30) volunteer drivers the service provides approximately 55,000 trips per year. The system operates on an approximate annual budget of $348,000 (operating expenses) and $147,000 (capital expense).

Additional Regional Services

Additional services in the region include Radford University's Tartan Transit, the VT Vanpool Program, RIDE Solutions, and the Smart Way Commuter Bus. This section includes a brief overview of these programs/services.

Radford University (Tartan Transit). This service includes a City Loop with services once per hour between 2:30 to 8:30 PM. This loop includes stops to the nearby Wal-Mart, the Radford University (RU) Business Technology Park, and Food Lion shopping plaza. A Campus Loop runs every 15 minutes from 7:45 AM to 2:15 PM and every 30 minutes from 2:30 to 9:45 PM Monday through Friday. Limited service is provided on Sunday as well. No service is provided during breaks when RU is not in session (e.g., Summer, Christmas, Spring Break).

Radford University Parking and Transit Services operates Tartan Transit with 6 drivers, 4 busses, and 2 routes (potentially) serving 9,000 students, 1,200 full-time staff/faculty. All riders, including City of Radford citizens (population is approximately 16,000), ride fare-free. Further information is available on-line at http://parking.asp.radford.edu/Information/TransitSchedule.htm.

RIDE Solutions. RIDE Solutions, a regional ridesharing program, offers a free carpool matching service, the Guaranteed Ride Home program, and information on alternative transportation options to the region's commuters. The program is operated by the Roanoke Valley-Alleghany Regional Commission in cooperation with the NRVPDC. Through funding from the Virginia Department of Rail and Public Transportation

(DRPT) and local governments, the program that provides free carpool matching services for commuters traveling into and out from the Roanoke and New River Valley regions. The program works with individuals to facilitate one-on-one carpool matches, and with employers to create company-wide alternative transportation programs.

Total membership is 758 people with NRV membership at 351. The website had 732 unique visitors as of November 2008. The match rate to date in the NRV is 66% of membership, 65% for carpools originating in NRV, 72% for carpools with destination in the NRV, 66% for carpools that stay within the NRV (C. Straight Personal Communication, December 17, 2008; NRVPDC, 2009). These numbers are based on totals that include non-carpooling members. The areas covered include the four counties of the New River Valley (Floyd, Giles, Montgomery, Pulaski and the City of Radford), and from Roanoke to Alleghany including Botetourt, Craig, Franklin, Roanoke counties and the cities of Salem and Roanoke. It is interesting to note that the fourth quarterly report appears to show a direct relationship between gas prices and new registrations. For example, as prices started to drop (since about October 2008), the number of new registrations has also dropped. The program was introduced in the NRV in 2007, and has been established in Roanoke since 2002. Their website is http://www.ridesolutions.org/.

Smart Way Commuter Bus. The Smart Way is a commuter bus service that links the Roanoke Valley to the New River Valley. It is operated by The Greater Roanoke Transit Company (GRTC), known locally as Valley Metro, a private, non-profit, public service organization wholly owned by the City of Roanoke. The service begins in downtown Roanoke at Valley Metro's Campbell Court Transportation Center and ends at the Virginia Tech Squires Student Center. The route from the New River Valley to the Roanoke Valley is the exact reverse. Fares are $3.00 and services runs Monday-Friday, 5:15 AM to 7:15 PM and Monday-Saturday 6:20 AM to 9:40 PM. Visit http://www.smartwaybus.com/.

Virginia Tech (VT) Vanpool Program. The VT Vanpool Program is available for full-time, permanent employees for commuting purposes. To be eligible for vanpooling participants must be currently employed by Virginia Tech and agree to have the monthly vanpool fare payroll deducted from their paycheck. The current program has 3 vanpools, each with 7 people in them. The average cost per person has been approximately $80 per month. This fluctuates based on gas prices and the number of miles each particular van travels in a month. More information can be found at: http://www.facilities.vt.edu/ot/alternative/van.asp.

B.2 Literature Review

This subsection includes a review of representative literature that supports expansion of transit (bus) or alternative transportation (e.g., car or van pools) in the New River Valley region and connecting regions. While a variety of documents are available, this review includes a sampling of reports, surveys, and municipality plans relevant to developing a New River Valley Commuter Employment Transit System. This review is not an exhaustive review. An overview of the benefits of transit is also included. A full listing of references is included at the end of this document.

Sixty Years of Bus Service

Long-standing and broad support has existed for an inter-connective, employment transportation system within the four counties of Pulaski, Giles, Montgomery, and Giles and the City of Radford. Bus service has been present in this area for over 60 years. For example, the Blacksburg Transit Company (which has no relation to the current Blacksburg Transit) started providing bus service in June of 1947 (Richmond Times-Dispatch, 1947). A 3-bus system in the City of Radford existed in the early 1970s but struggled to persist to present-day (Harris, 1974; VDOT, 2001). Service in the City of Radford continued until 1981 (Thornton, 2009). The Harris (1974) article discussed early efforts by the NRVPDC approved to investigate the possibility of establishing a public transportation system connecting Radford, Blacksburg, Christiansburg, and Pulaski, and solutions regarding how to offer public transportation to rural areas.

Early Roots

In 1979 the New River Valley Transit Study was completed (Howard and Stuart, 1979). The final report discussed the need for a system that allows transportation for medical services, food, education, religion, social well-being and other essential aspects of life, to those that do not have access to an automobile. The report outlined a six-leg, seven-bus system of fixed routes in Blacksburg that would service all major apartment projects, shopping centers, the Virginia Tech Campus, and a large part of the single family areas. In Radford, a two-bus, two route system was proposed with new coverage to the Radford Plaza area. Options for the elderly and disabled included a demand responsive van to provide door-to-door service or a point-deviation service to provide door-to-door service (at extra fare). Other topics included the affect transportation systems would have on major employment centers (e.g., strengthen accessibility) using subscription vanpooling. Finally, a concept for rural and inter-county transportation for Montgomery and Pulaski Counties was presented. Soon thereafter steps were taken to bring mass transit to Blacksburg. In the 1980s federal funding was sought (Geran, 1981), a transit manager was hired (Haddad, 1982), and in 1983 Blacksburg Transit started with 1983 with 8 buses and three routes (Virginia Tech, 1983).

Coordination Efforts

In an attempt to coordinate transportation in the New River Valley efforts have been conducted to bring representatives together from various organizations, starting as early as 1986 (Asper and Hart, 1993). This effort, funded by the DRPT and BT, focused on coordination of Human Service transportation providers. In 1986 the federal government promoted "coordination of transportation services…at the Federal level wherever possible and to promote maximum feasible coordination at the State and local level" (Asper and Hart, 1993, p. 2). This report also mentions early collaborations between the Community Services Board (CSB), Senior Services (PAT), and Blacksburg Transit in about 1987. Recommendations included coordination of vehicle maintenance, creation of an independent public not-for-profit organization (such as a New River Valley Area Transportation Alliance), interagency transportation coordination, coordinated client information and referral, and addressing unmet transportation needs. Additionally, the recommendations included the potential for developing a transportation network in Radford, in conjunction with the University and local government (Asper and Hart,

1993).

Recent Efforts Showing Support

More recent efforts have shown long-standing and continued support for a regional transportation system. City of Radford Comprehensive Plan Update has a focus on assisting the City in communicating better with its citizens, businesses, and organizations within Radford and the region (Radford City Planning Commission, 2001). In addition, the plan documents that 1) citizens have stated the city should pursue a transportation systems connecting to the City to the region and the state, 2) the City should pursue study of intra-city transportation program in partnership with regional transportation providers, and 3) the city should participate/initiate a collaborative strategy for inter-jurisdictional transportation system for the New River Valley.

During the same period, the Radford Area including Fairlawn 2020 Transportation Plan was developed as a joint effort between the Virginia Department of Transportation (VDOT), the City of Radford, Pulaski County (Fairlawn) and Montgomery County (VDOT, 2001). The purpose of this study was to evaluate the existing transportation system and future demand in the area and to recommend a set of transportation improvements that could best meet existing and future transportation infrastructure needs. Relevant statements were 1) Improved transportation systems are vital to the local area's economic growth and development; 2) currently this area is not served by an intercity bus; 3) it is recommended to extend the Two Town Trolley between Blacksburg and Christiansburg to the City of Radford, and to tie Radford University with Virginia Tech; 4) Pulaski County should [will] consider implementation of public transportation in Fairlawn and in the County, 5) it is recommended that coordination take place with the NRVPDC to study funding, and 6) the City of Radford Comprehensive Plan (Radford City Planning Commission, 2001, p. 29) indicates an (earlier) interest in developing a trolley system (p. 5)

The Montgomery County 2025 Comprehensive Plan has numerous sections discussing the need for transportation planning in the region (Montgomery County, 2004). The plan calls for the County to provide increased access to opportunities for citizens, including job-related transportation for the disabled and for lower income individuals and families.

The Blacksburg-Christiansburg-Montgomery 2030 Transportation Plan (BCM-MPO, 2005) includes a comprehensive set of transportation improvements that will meet current travel demands, as well as projected travel demands to the year 2030. The plan recommends expanding the role transit, park-and-ride lots, and intercity transportation in the region, and includes expanded transit service to particular areas such as Warm Hearth, roadway improvements that support transit, and connections to the Smart Way bus service. In addition, the plan calls for transit friendly communities and encourages current providers (e.g., Blacksburg Transit) to provide more efficient and well-planned service routes.

In 2005 the NRVPDC Commission conducted a survey about transportation needs of citizens living in Eastern Montgomery County (NRVPDC, 2007). The majority of respondents resided in Shawsville (40%) or Elliston (60%) and results indicate a desire to have public transportation services available to meet work, services, shopping, and recreation needs. In response to the question, "If you ride to work with someone else, do you believe you could get a better job if you had access to other transportation options?" 60% of

respondents indicated “yes.” This supports the idea that public transportation in this area could help citizens have better access to work. Respondents indicated a desire to have e a bus or van service to get to work or to help with services/shopping to travel to several areas including Christiansburg, Blacksburg, Radford, Dublin/Pulaski, Salem, and Roanoke. The report includes a series of alternatives for providing public transportation services for residents in Eastern Montgomery County. For example, alternative 2 is to develop a community public transportation service (i.e., including existing providers such as Blacksburg Transit and Senior Services Transportation, Inc.) that provides transportation services to meet the needs of residents seeking public transportation to access their work places. This alternative is in alignment with the goals of the current effort for a regional transit system within the four counties of the New River Valley, including the City of Radford.

In early 2006, the Town of Blacksburg conducted a series of public meetings soliciting comments about various topics including transportation (Town of Blacksburg, 2006). Several comments were about expanding transit including locations such as Christiansburg, Giles, the Montgomery Regional Hospital, Walmart, and the Warm Hearth retirement community. Some comments were also made about having transit routes near affordable housing areas and having relationships with the Town of Christiansburg and the City of Radford.

Also in 2006, the NRVPDC published a description of a Regional Long Range Transportation Plan “to create regional long-range plans in rural areas that compliment those in the metropolitan areas of the state” in a phased program, including plans for transit (NRVPDC, 2006a). One of the results from this on-going effort has been the development of a map demonstrating a New River Valley Rural Transportation System Transit Expansion illustrating a proposed rural shuttle system and transit expansion areas (provided 12/11/08 by P. Gilbertson; Figure 1). The importance of this map is that it echoes the recommendations provided within the current report. It is interesting to note that, although this map was made available at an earlier time to some members of this group, our recommendations were made without consulting it.

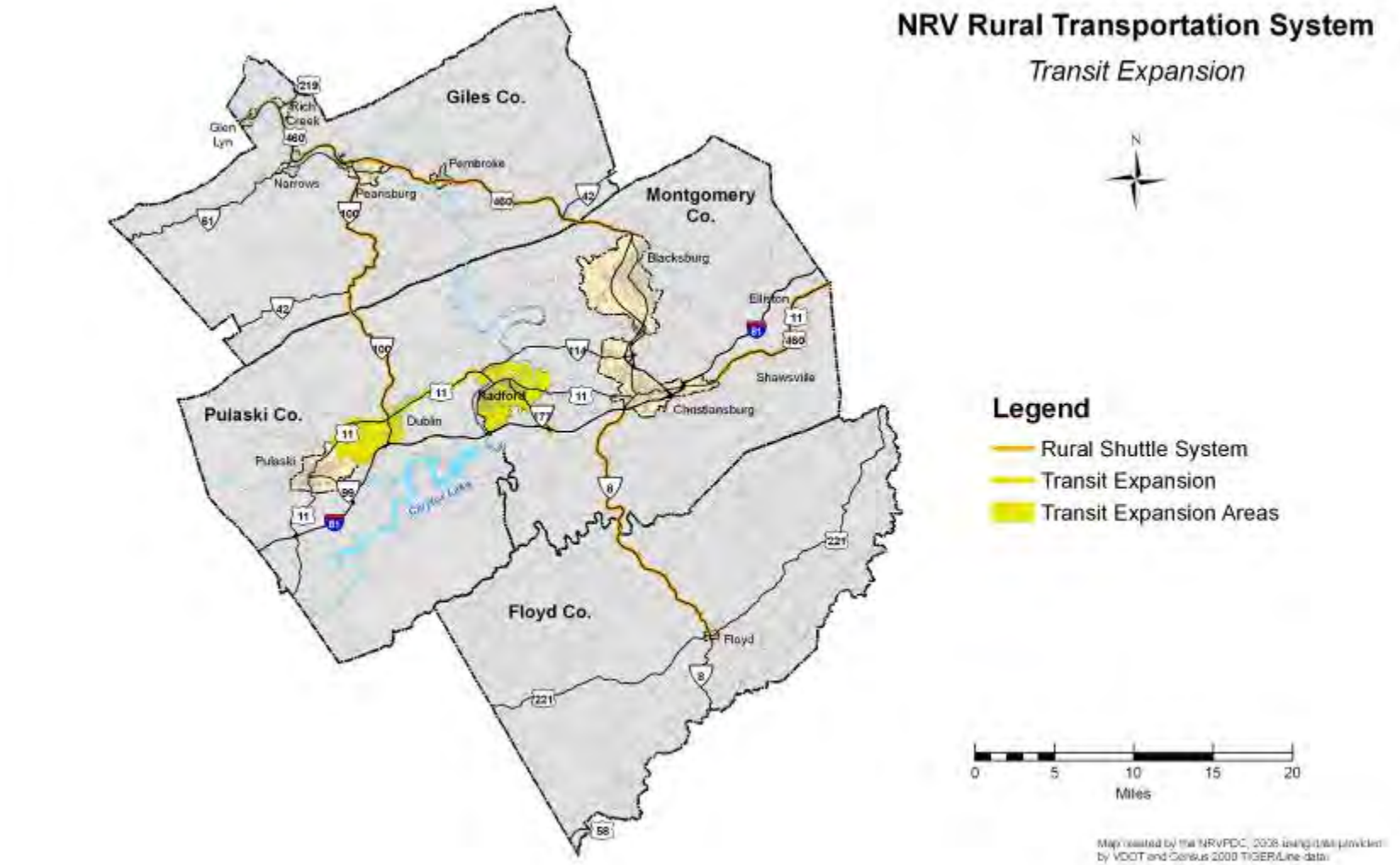

Figure 1. New River Valley Rural Transportation System: Transit Expansion Map
Showing a proposed rural shuttle system and transit expansion areas (provided 12/11/08 by P. Gilbertson of the NRVPDC)

In 2006 a survey was conducted of Radford University Nursing Students (NRVPDC, 2006b). It identified a need for transit between Radford University and Roanoke, and within and among Radford and the towns of Blacksburg and Christiansburg. Another Radford University study included 2,858 participants (11% faculty, 12% staff, 68% undergraduate students, and 9% graduate students) (Unknown, 2008). While the results are extensive, a relevant comment was made by a student indicated that the existing Radford University bus system (Tartan Transit) should be integrated with a regional system including service that serves both students and the local community to Fairlawn, Virginia Tech, and the New River Valley Mall. This approach would require the Blacksburg Transit, Virginia Tech, the Smart Way Bus, and the Town of Christiansburg to coordinate routes.

In October 2007 a survey of Smart Way bus riders was conducted. The results support the idea that public transportation is needed and valued in this region. Riders were from various areas including those in the New River Valley (i.e., Blacksburg, Montgomery County, Floyd County, Giles County). Respondents took the Smart Way bus to various locations including stops at Virginia Tech, the park and ride lot at exit 140 (Interstate 81), as well as stops at Blacksburg's Kent Square, the Christiansburg K-Mart, and the Corporate Research Center (Virginia Tech, 2007).

Very Recent Efforts Strengthen

An on-line survey conducted in June 2008 by a Christiansburg resident resulted in some comments supporting transit development in the region (Lindstrom, 2008). Relevant comments indicated that the Town of Christiansburg needs busses to serve Blacksburg in the mornings for commuters, that the Town needs smart, well-planned development, that Christiansburg needs a better system of public transportation and alternative transportation with more bus and bike routes, and that the Town needs to improve traffic problems.

An extensive survey of 1,713 respondents (649 students and 1,064 faculty and staff) was conducted in May 2008 (Virginia Tech, 2008). Comments indicated that while 77% of respondents use a personal vehicle, 9% use the Blacksburg Transit (bus) to get to campus. Suggestions included running busses more frequently and having additional stops or destinations. Regarding where respondents desired additional bus stops or destinations, of 372 open-ended responses, 28% were to destinations outside of Blacksburg including: Christiansburg (17%), Montgomery County (3%), Radford/Fairlawn (2%), Giles County (2%), Riner (1%), Pulaski (1%), Floyd County (1%) as well as Dublin, Vinton, Prices Fork, and McCoy. Many comments were made regarding providing expanded bus service between Blacksburg and Christiansburg. Of those comments made about service to Christiansburg, 21% specifically requested the need for commuting (morning) hours.

Most recently the New River Valley (PDC 4) Coordinated Human Service Mobility Plan was completed, which is largely in alignment with the concept of coordinated, regional transportation (Cambridge Systematics and KFH Group, 2008). This report is particularly useful, as it includes details and maps (e.g., Figures 2-9) for the region including population density, transit need by ranked density, and potential destinations with specific street addresses (Table 2). Appendix A is the executive summary of an associated report, the New River Valley and Roanoke Valley Public

Mobility Project Final Report (VTTI, 2006). One of the findings (Finding 4, p. 57 in Cambridge & KFH, 2008, or p. 8-9 in VTTI, 2006) was relevant to the current effort of a regional, interconnected transportation system. Specifically, the finding points out that a region-wide coordination effort is possible but that to succeed such an effort:

> "Requires sustained leadership and commitment, including associated funding and a clear champion of coordination efforts who will lead the efforts and coordinate services . . ."

The report recommends the region should:

> "Identify a leadership committee of transportation providers and human service; designate one person as the "champion" who will facilitate meetings, ensure momentum is continuous, serve as spokesperson, and who will be looked to as a "neutral" participant without an organizational agenda; and begin monthly meetings specifically designed to move toward coordination…a (not-for-profit) 501 (C) 3 organization (should be created) to provide a centralized point of administration of a region-wide brokerage system."

Finally, an effort is currently underway. Between October 2008 and March 2009 the Christiansburg Bus Survey was administered by the Virginia Tech Center for Survey Research for Blacksburg Transit (Town of Blacksburg, in press). As of December 2008, a total of 11,171 surveys were sent to Christiansburg households. The response rate has been 34% and the survey is on track for a 40% response rate. Preliminary analysis indicates that there is overwhelming support for expansion of the bus system in Christiansburg. For example, numerous suggestions were made for service to Spradlin Farms Shopping Center and areas near NRV Mall. There were also many suggestions for earlier and later hours for the existing service within and to Christiansburg (e.g., 6 AM – 7 PM). In addition, numerous surveys indicated that survey respondents from Christiansburg travel to many areas outside of the Town including Blacksburg, Radford, and other areas within Montgomery County, Pulaski County, Giles County, and Floyd County.

It is the intention of the Town of Christiansburg to offer expanded bus service to its citizens starting on or before January 2010. The exact routing, hours, and service type is currently under development, but will likely include early morning hours of the existing Christiansburg to Blacksburg bus service (the Two Town Trolley), as well as the possibility of a "circulator route" to service the areas between the New River Valley Mall and the surrounding areas (e.g., to K-Mart, Walmart, Spradlin Farms Shopping Center, and the areas near Arbor Drive. Expansion of service into neighborhoods and into areas currently not serviced will also be strongly considered, based upon the results from the survey.

Benefits of Public Transportation

A document about public transportation would not be complete without a brief overview of the benefits of public transportation. According the American Public

Transportation Association (APTA, 2007; 2008), on a national level public transportation is key to:

- Spurring the Economy: Public transportation enhances economic development by increasing customers for shopping malls, medical facilities and services (APTA, 2008).
- Providing jobs: $1 billion invested into the nation's transportation infrastructure supports/creates 47,500 jobs (APTA, 2007)
- Transporting people to work while generating savings: Households that use public transportation save an average of between $6,251 and $8,754 annually (APTA, 2007; 2008b)
- Reducing greenhouse gases: Public transit reduces CO_2 emissions by 37 million metric tons annually and saves the U.S. 4.2 billion gallons of gasoline annually (APTA, 2008a)
- Encouraging citizens to be healthier, green, and safer: Transit-friendly communities promote higher levels of physical activity (and a lower dependence on automobile travel), lead to less air pollution, and fewer vehicle crashes (APTA, 2003; CDC 2002).
- Promoting energy security and decreasing our dependency on foreign oil (APTA, 2007; 2008a)

B.3 Data Review

As is described in the main report produced for VDOT (of which this report is a portion), data from the NRVPDC was provided to the group in various forms including print outs of descriptive statistics (bar graphs, charts, spreadsheets), a series of regional maps illustrating various findings (e.g., population densities, employment centers), as well as data in raw form (i.e., tabulations of responses to specific survey questions). In addition, the NRVPDC provided an overview of the findings initially and throughout the process. The NRVPDC also provided staff support to render the seven route and overall maps, illustrating the routes, stop locations, and approximations of the mileage and duration between stops. Supplemental information was also made available from surveys of park and ride locations and from previous efforts that the NRVPDC was either involved with or had access to.

After an initial review of these data, three meetings were held with leaders from each of the groups. The NRVPDC was involved in portions of the first and second meetings. The process of reviewing these data sources served as the basis of the group recommendations. Additionally, the review of literature helps to show that these recommendations fit in with previous efforts. Finally, the group also relied upon experience and expertise from members of the group in making these recommendations.

Recommendations

The group has determined that based on the geography of the region and the existing transportation options it would be best to develop transportation for the region consisting of seven routes to service the majority of commuters in the New River Valley. The following subsections provide an overview of the service providers, routes, cost, schedule, and phases involved in a seven-route system.

C.1 Service Providers

As discussed in the results section, BT, CT, PAT, as well as several other service providers exist in the New River Valley. Transportation for commuters could be serviced by coordination amongst these organizations with additional financial support. For an overview, see the description of current services presented earlier in the results section. Later phases in the development of this vision would involve identifying particular service providers for each route.

C.2 Routes

This section outlines the vision for recommended regional route transportation routes for the New River Valley. The group recommendation is for seven (7) regional routes as listed in Table 1 and illustrated by Figure 2 showing routes and bus stops across 4 counties (Pulaski, Floyd, Giles, and Montgomery). The routes include: 1) Glen Lyn to Blacksburg (red); 2) Pearisburg to Dublin (green); 3) Draper to Fairlawn (yellow); 4) Radford to Christiansburg/Falling Branch (orange); 5) Floyd to Downtown Christiansburg (blue); 6) Blacksburg to Radford to Christiansburg (pink), and 7) Christiansburg to Shawsville (maroon).

Each route is explained in more detail in the following sub-sections. Note however, that these are concepts as of now, and a more detailed survey of the exact locations for bus stops (e.g., formal, informal, and potential park and ride locations) would need to be completed before service could be implemented.

Table 1. Listing of Route Length (miles) and Estimated Time (minutes) for the 7 proposed routes

Route	**Length (Miles)**	**Estimated Time**
1) Glen Lyn to Blacksburg (red)	38.20	50
2) Pearisburg to Dublin (green)	30.59	37
3) Draper to Fairlawn (yellow)	22.62	36
4) Radford to Christiansburg/Falling Branch (orange)	16.50	26
5) Floyd to Downtown Christiansburg (blue)	20.86	37
6) Blacksburg to Radford to Christiansburg (pink)	31.95	51
7) Christiansburg to Shawsville (maroon)	28.21	46

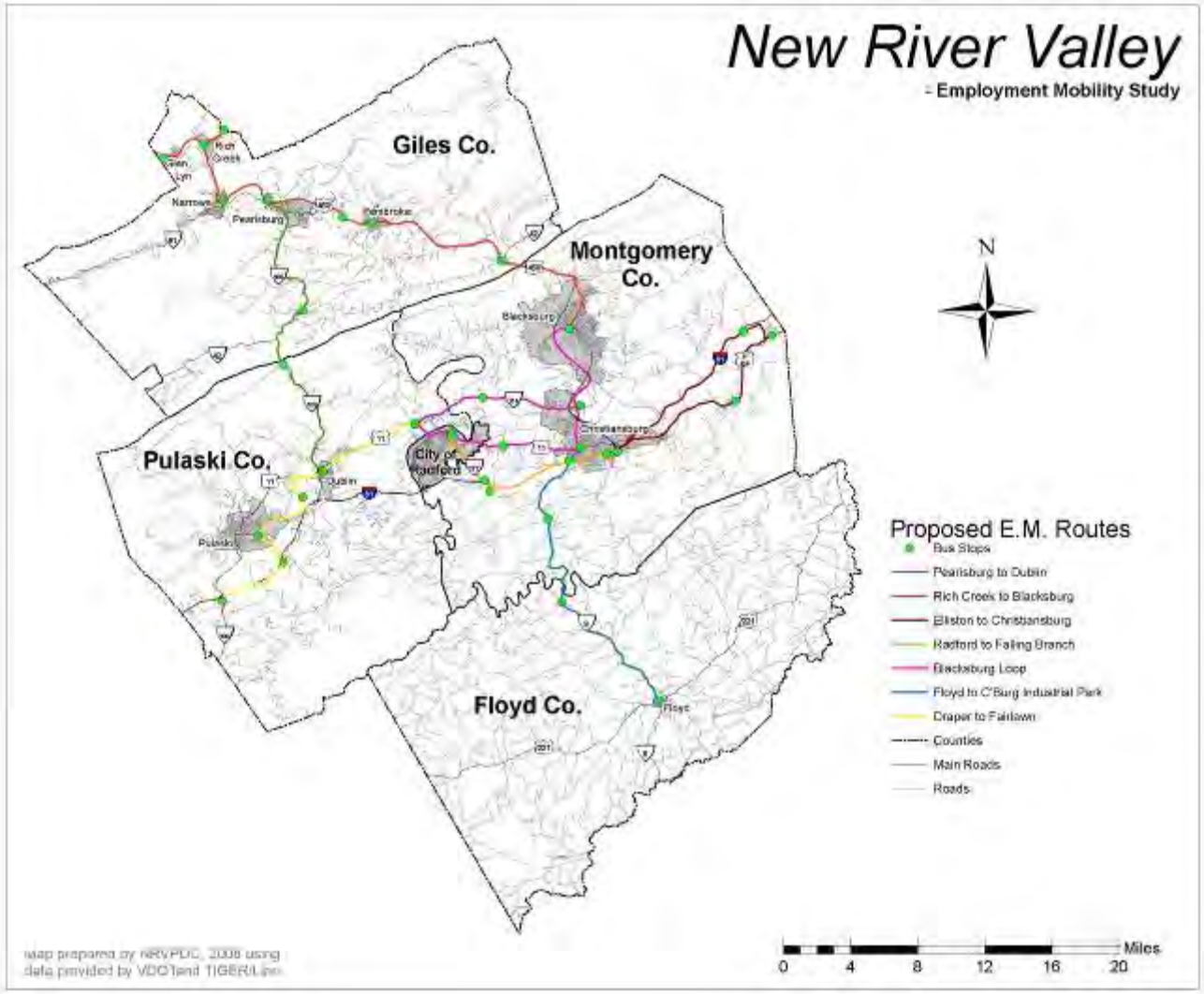

Figure 2. Regional Route System Map for New River Valley: Seven Employment Mobility Commuter Routes and Bus Stops

Glen Lyn to Blacksburg Route

A route from Glen Lyn to Blacksburg (Table 2, Figure 3) would take approximately 90 to 100 minutes, including stops (assuming 3 minute stops) and traffic delays, across 38 miles. See the examples under "Scheduling" (Tables 9 and 10) illustrating a route operating from 6:20 AM to 7:44 AM and 5:15 PM to 6:39 PM.

1) Glen Lyn to Blacksburg (Red) Stops

- Glen Lyn (Davis Ave)
- WV Border
- Rich Creek (Intersection of Old VA Avenue and Rt. 460)
- Narrows (2nd Street)
- Pearisburg (Thomas Drive and Cord Drive) center)
- W. Pembroke (N. Intersection of Big Stoney Creek and Rt. 460)
- Pembrook (Fire Station on Cascade Dr, south of 460)
- Newport (Intersection of Rt. 42, RR 605 and Rt. 460)
- Blacksburg Hub (VT future Multimodal Facility on Perry Street)[1]

Table 2. Listing of Route Length (miles) and Estimated Time (minutes) for the Glen Lyn to Blacksburg route

Glen Lyn to Blacksburg		
Route	**Length (Miles)**	**Estimated Time**
Glen Lyn to WV border	4.73	~7
WV border to Rich Creek Stop	1.54	~3
Rich Creek to Narrows	4.61	~8
Narrows to Pearisburg	2.95	~5
Pearisburg to West Pembroke	5.00	~7
W. Pembroke to E. Pembroke	2.06	~6
Pembroke to Rt. 42	9.15	~9
Rt. 42 to Blacksburg Hub	8.16	~15
Total	**38.20**	**~60**

[1] A new multi-modal facility has been proposed for the Virginia Tech campus. The proposed new facility is envisioned to accommodate long-distance intercity bus operators such as Greyhound as well as the Smart Way service from Roanoke operated by Valley Metro (Urbitran, 2008).

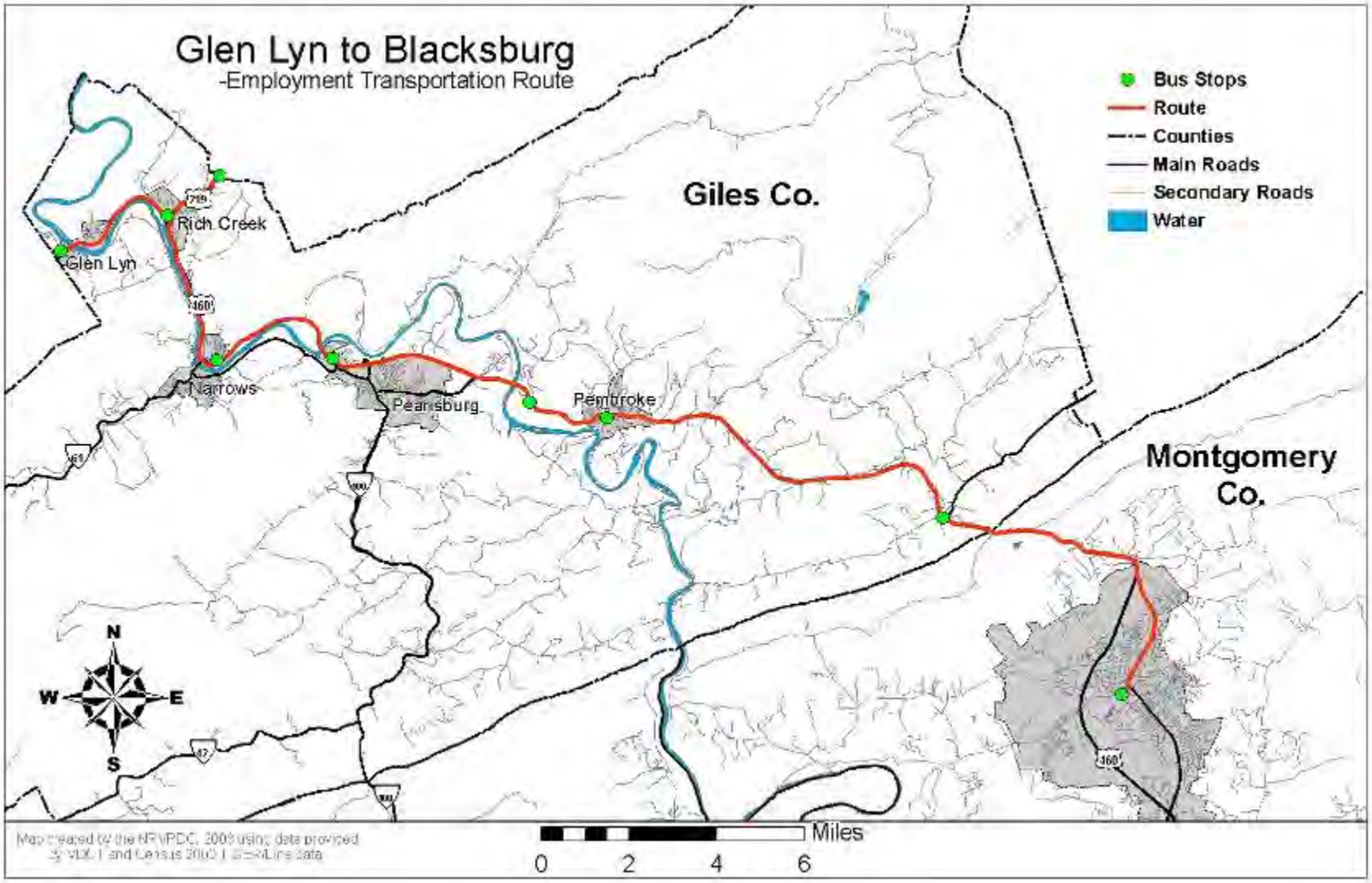

Figure 3. Glen Lyn to Blacksburg Employment Transportation Route Map

Pearisburg to Dublin Route

A route from Pearisburg to Dublin (Table 3, Figure 4) would take approximately 50 to 60 minutes, including stops (assuming 3 minute stops) and traffic delays, across 31 miles.

2) Pearisburg to Dublin (Green) Stops

- Pearisburg Park & Ride (Thomas Drive and Cord Drive)
- Staffordsville Park & Ride (Staffordsville Rd & Rt. 100, carpool parking area)
- Little Creek Park & Ride (just beyond Little Creek Rd, Rt. 100, "Jim's Drive In")
- Dublin (Wade's Food Market parking lot, Route 11)

Table 3. Listing of Route Length (miles) and Estimated Time (minutes) for the Pearisburg to Dublin route

Pearisburg to Dublin		
Route	**Length (Miles)**	**Estimated Time**
Pearisburg Park & Ride to Staffordsville Park & Ride	8.97	~15
Staffordsville Park & Ride to Little Creek Park & Ride	8.14	~15
Little Creek Park & Ride to Dublin (Wade's)	4.51	~7
Total	**30.59**	**~37**

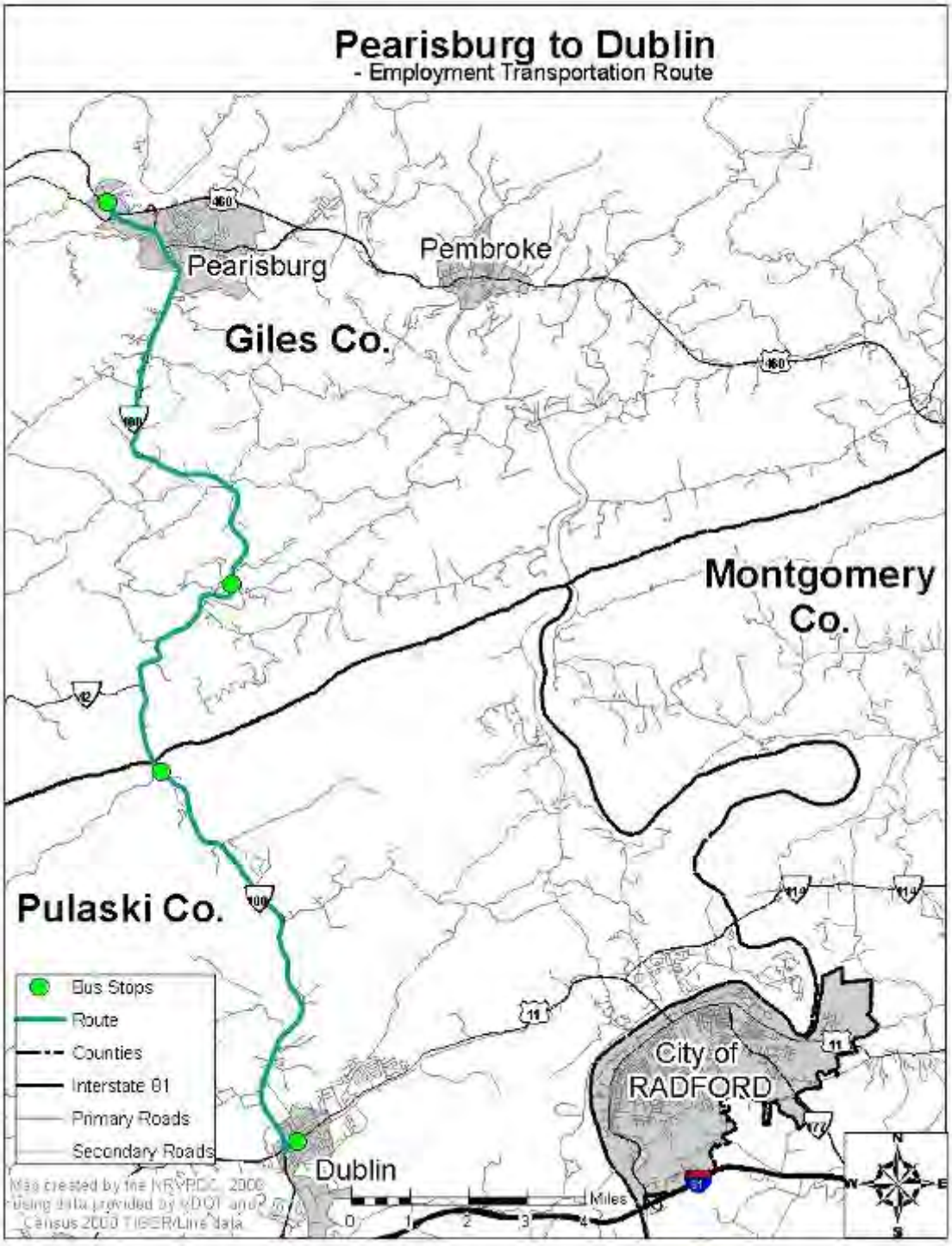

Figure 4. Pearisburg to Dublin Route Employment Transportation Route Map

Draper to Fairlawn Route

A route from Draper to Fairlawn (Table 4, Figure 5) would take approximately 55 to 65 minutes, including stops (assuming 3 minute stops) and traffic delays, across 22 miles.

3) Draper to Fairlawn (Yellow) Stops

- Draper Park & Ride (Kirby Rd and Wysor Rd, informal lot)
- Exit 94 Park & Ride (Old Rt. 100 and Rt. 99)
- Town of Pulaski (Rt 99 & Bobwhite Blvd)
- Volvo (Cougar Trail & Alexander Rd)
- Dublin (Wade's Food Market parking lot, Route 11)
- Fairlawn (Pepper's Ferry [114] & Rt 11)

Table 4. Listing of Route Length (miles) and Estimated Time (minutes) for the Draper to Fairlawn route

Draper to Fairlawn		
Route	**Length (Miles)**	**Estimated Time**
Draper to Exit 94	4.84	~6
Exit 94 to Downtown Pulaski	2.37	~6
Town of Pulaski to Volvo	4.23	~8
Volvo to Dublin	3.54	~7
Dublin to Fairlawn	6.71	~10
Total	**21.69**	**37**

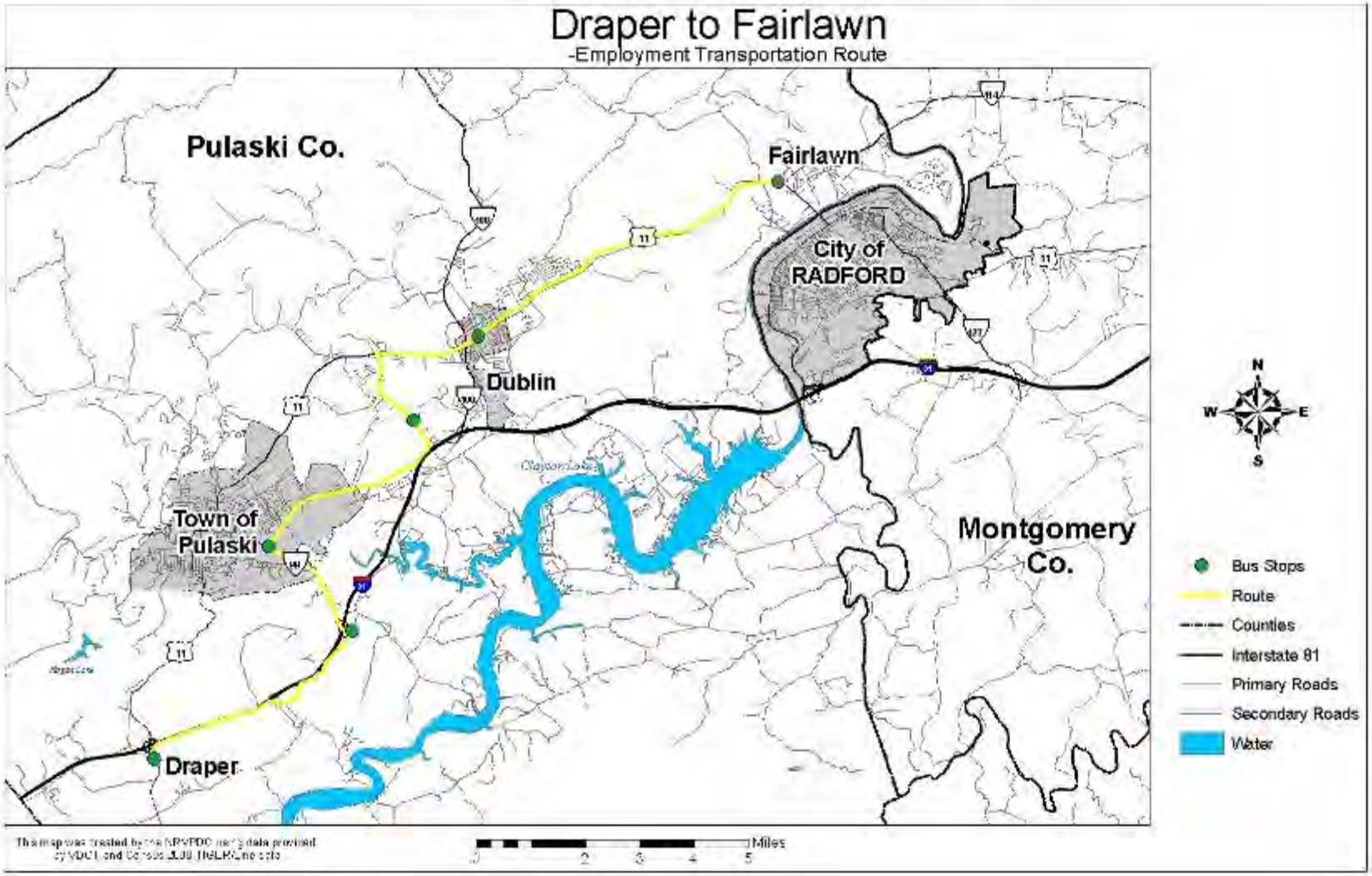

Figure 5. Draper to Fairlawn Employment Transportation Route Map

Radford to Christiansburg/Falling Branch Route

A route from Radford to Christiansburg/Falling Branch (Table 5, Figure 6) would take approximately 45 to 50 minutes, including stops (assuming 3 minute stops) and traffic delays, across 17 miles. Note that the Falling Branch Park & Ride is also a stop along the Smart Way Commuter route connecting to Roanoke.

4) Radford to Christiansburg/Falling Branch (Orange) Stops

- Radford University (Lot A, in front of Young Hall)
- Park & Ride Lot (BP Convenience store & Rt. 177 on Tyler, adjacent to Mud Pike Road)
- Carilion New River Valley Medical Center (Exit 109 to 177, 2900 Tyler Road at Lamb Circle, Radford)
- I-81/Rt 8 Junction Park & Ride (Auburn St. and W. Main St.)[2]
- Falling Branch Park & Ride (Exit 118A at Parkway Drive)[3]
- 400 Technology Drive ("Falling Branch Industrial Park" serving Echostar and nearby businesses)

Table 5. Listing of Route Length (miles) and Estimated Time (minutes) for the Radford to Christiansburg/Falling Branch route

Radford To Christiansburg/Falling Branch		
Route	**Length (Miles)**	**Estimated Time**
RU Campus to Park & Ride Lot (BP Gas)	3.84	~7
BP Gas to Carilion Hospital	0.84	~2
Carilion NRV Med. Ctr. to Rt. 8 / I-81 Park & Ride Lot	5.65	~7
Rt. 8 / I-81 to 1Falling Branch Park & Ride	4.76	~7
Falling Branch Park & Ride to 400 Technology Drive, Christiansburg	1.41	~3
Total	**16.50**	**26**

[2] also a stop along the Floyd to Downtown Christiansburg route
[3] also a stop of the Smart Way Commuter Bus

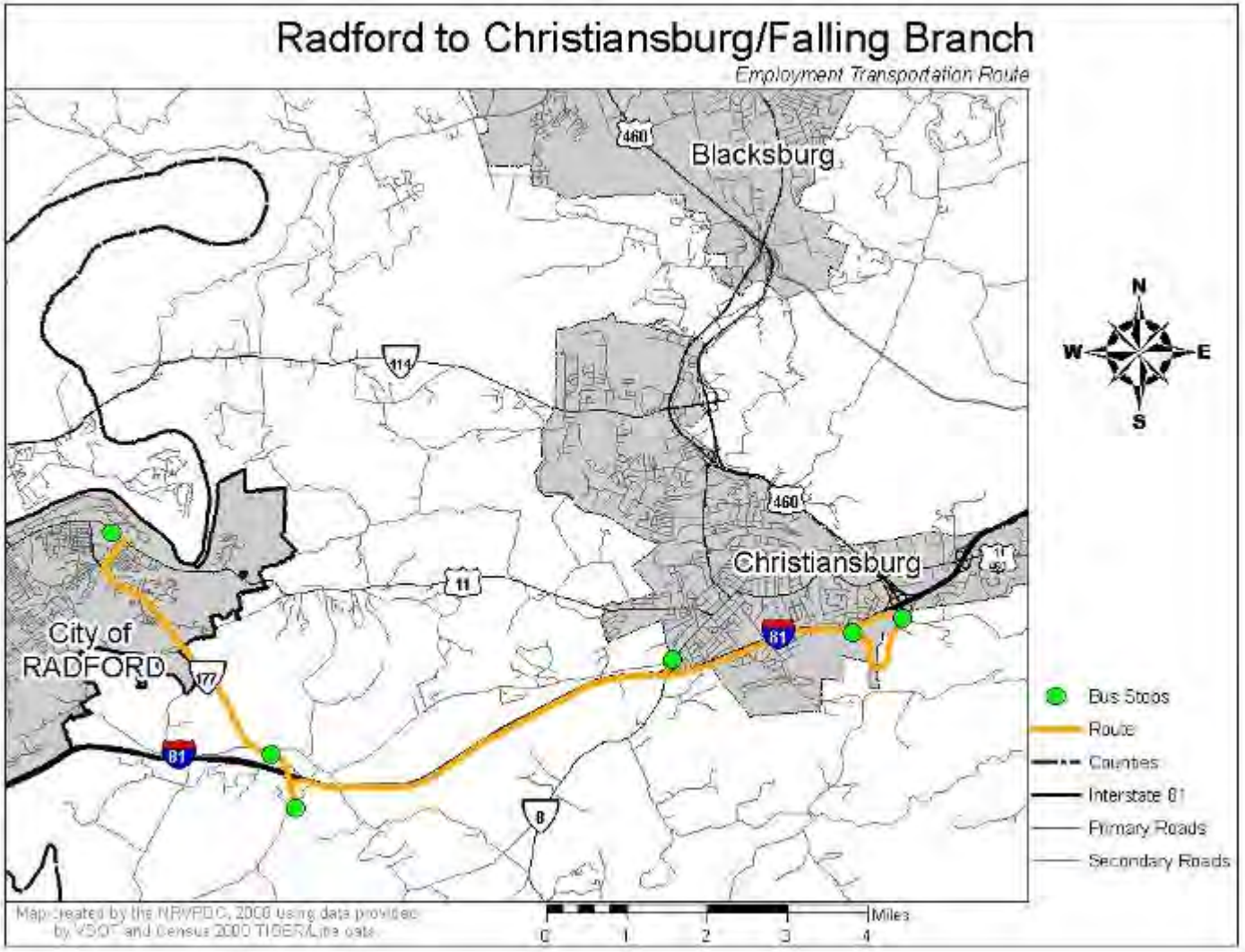

Figure 6. Radford to Christiansburg/Falling Branch Employment Transportation Route Map

Floyd to Downtown Christiansburg Route

A route from Floyd to Downtown Christiansburg (Table 6, Figure 7) would take approximately 50 to 60 minutes, including stops (assuming 3 minute stops) and traffic delays, across 21 miles. Note that this route shares the I-81/Rt 8 stop with the Radford to Christiansburg/Falling Branch route.

5) Floyd to Downtown Christiansburg (Blue) Stops

- Floyd Courthouse (Oxford St and Locust St)
- Floyd Park & Ride Lot (Alum Ridge and Rt 8 at Refuse site)
- Riner Food Center (off of Rt 8, between Cloverleaf & Fairview Church Rd)
- I-81/Rt 8 Junction (Auburn St and W. Main St., Christiansburg)[4]
- Main St and Franklin St.

Table 6. Listing of Route Length (miles) and Estimated Time (minutes) for the Floyd to Downtown Christiansburg route

Floyd to Downtown Christiansburg		
Route	**Length (Miles)**	**Estimated Time**
Floyd Courthouse to Rt 8 Alum Ridge Park & Ride	8.91	~15
Rt 8 Alum Ridge to Riner Food Center	6.34	~10
Riner Food Center to I-81.Rt 8 Park & Ride	4.52	~8
I-81 to Main & Franklin	1.09	~8
Total	**20.86**	**37**

[4] also a stop on the Radford to Christiansburg/Falling Branch Route

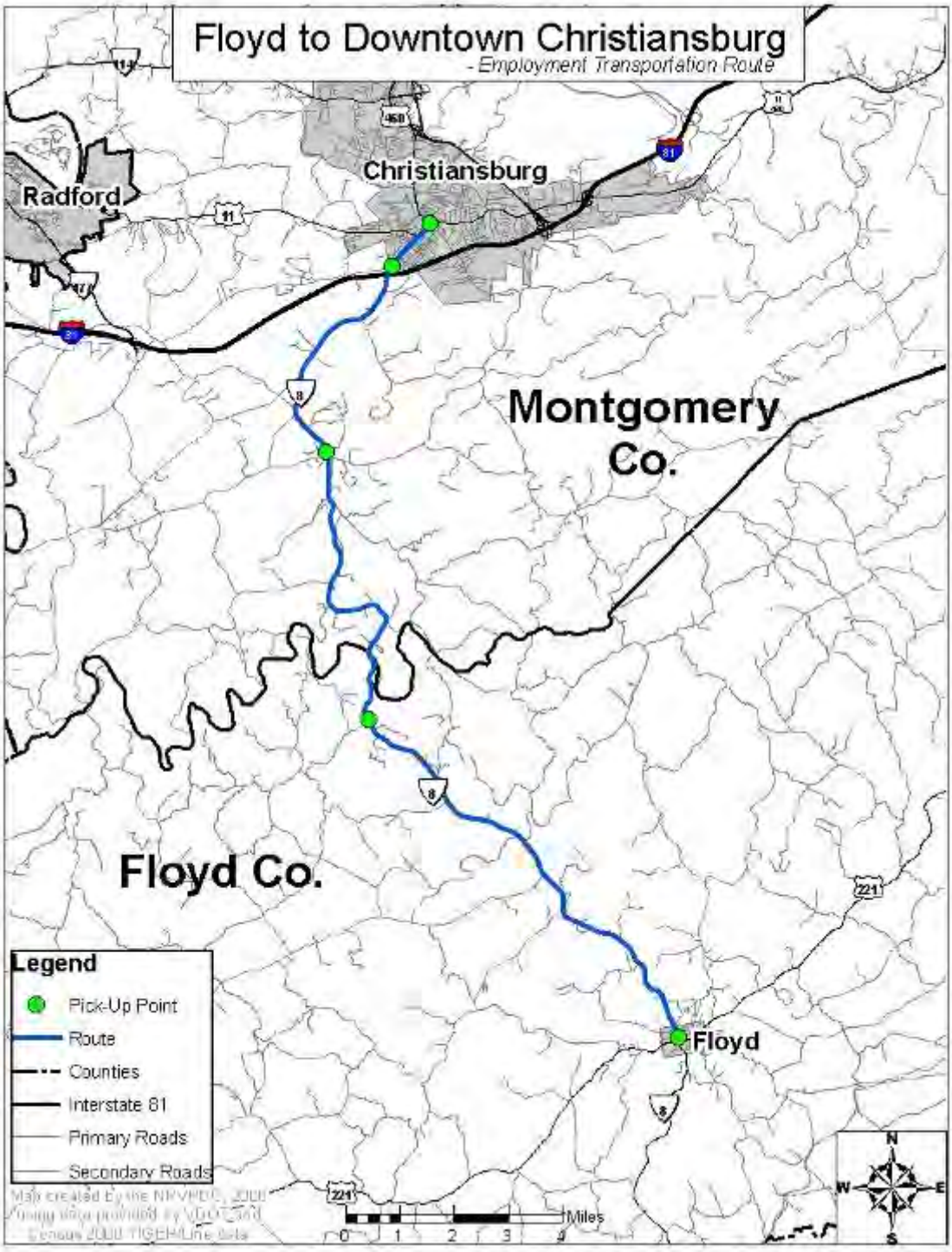

Figure 7. Floyd to Downtown Christiansburg Employment Transportation Route Map

Blacksburg to Radford to Christiansburg Route

A route from Blacksburg to Radford to Christiansburg (Table 7, Figure 8) would take approximately 70 to 80 minutes, including stops (assuming 3 minute stops) and traffic delays, across 32 miles.

6) Blacksburg to Radford to Christiansburg (Pink) Stops

- Blacksburg Hub (VT future Multimodal Facility on Perry Street)[5]
- Marketplace (Cinnabar & Pepper's Ferry Road, Rt 114)
- Belview (Price's Fork & Pepper's Ferry [Route 114])
- Fairlawn (114 and Rt 11)
- Radford University (Lot A, in front of Young Hall)
- Plum Creek (Plum Creek Rd & Rt 11)
- Downtown Christiansburg (Main St and Franklin St)
- Marketplace (Office Max/former Books a Million) (via Route 11 and 460)

Table 7. Listing of Route Length (miles) and Estimated Time (minutes) for the Blacksburg to Radford to Christiansburg route

Blacksburg to Radford to Christiansburg Route		
Route	**Length (Miles)**	**Estimated Time**
Blacksburg Hub to Marketplace	7.25	~7
Marketplace to Belview	6.00	~10
Belview to Fairlawn	4.54	~8
Fairlawn to Radford University	2.89	~5
Radford University to Plum Creek	3.38	~6
Plum Creek to Downtown Christiansburg	4.80	~7
Downtown Christiansburg to Marketplace	3.08	~8
Total	**31.95**	**~51**

[5] A new multi-modal facility has been proposed for the Virginia Tech campus. The proposed new facility is envisioned to accommodate long-distance intercity bus operators such as Greyhound as well as the Smart Way service from Roanoke operated by Valley Metro (Urbitran, 2008).

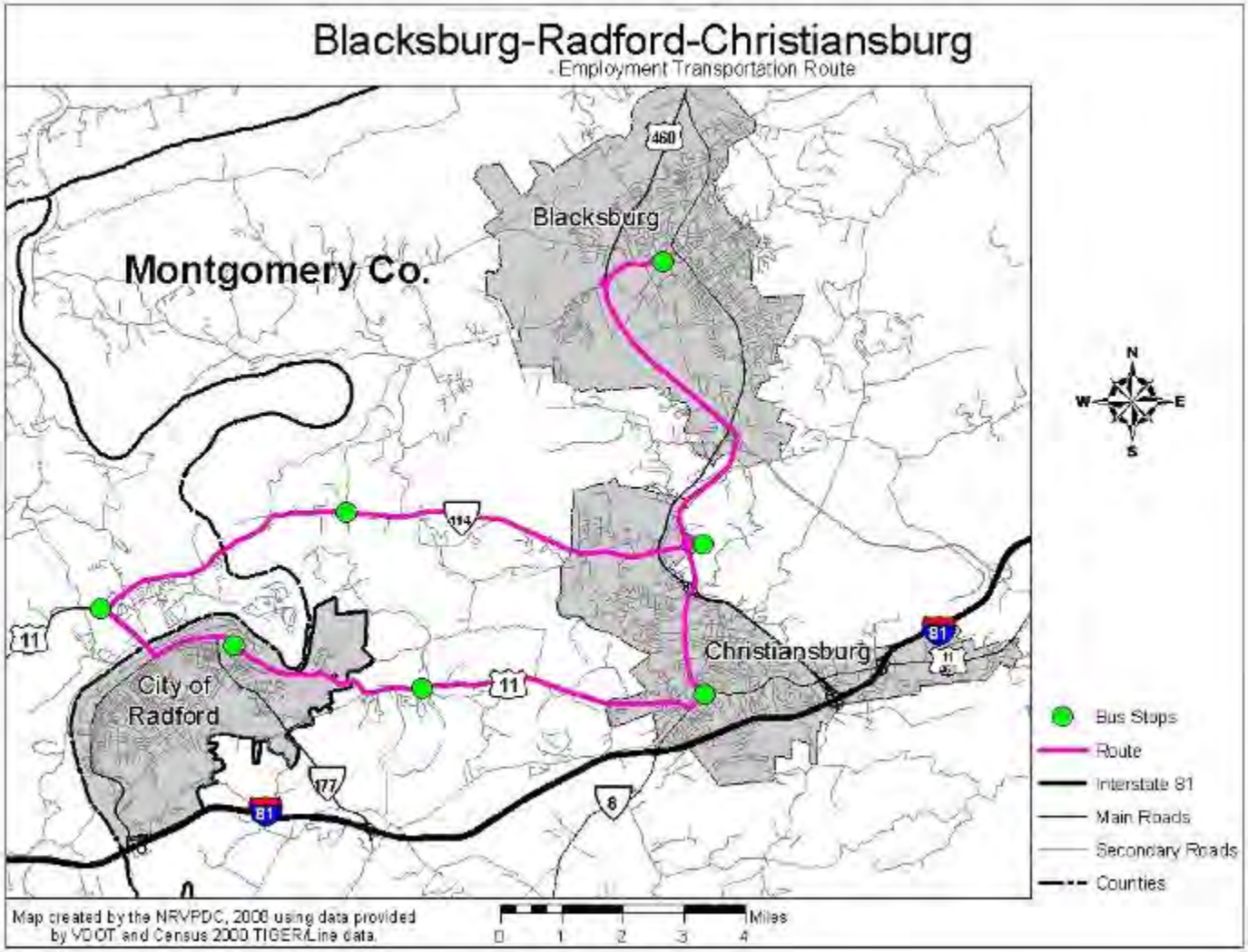

Figure 8. Blacksburg-Radford-Christiansburg Employment Transportation Route Map

Christiansburg to Shawsville Route

A route from Christiansburg to Shawsville (Table 8, Figure 9) would take approximately 60 to 70 minutes, including stops (assuming 3 minute stops) and traffic delays, across 28 miles.

7) Christiansburg to Shawsville (maroon) Stops

- Falling Branch Park & Ride Lot (Exit 118A at Parkway Drive, Christiansburg)
- Ironto (Pedlar Rd. and Fork Rd. off 128 I-81 exit)
- Lafayette (Roanoke Rd. and Gardner St)
- Elliston (Eastern Montgomery High School)
- Shawsville (Roanoke Rd. and Oldtown Rd)
- Falling Branch Park & Ride Lot (Exit 118A at Parkway Drive)

Table 8. Listing of Route Length (miles) and Estimated Time (minutes) for the Christiansburg to Shawsville Route

Christiansburg to Shawsville Route		
Route	**Length (Miles)**	**Estimated Time**
Falling Branch Park & Ride Lot to Ironto	11.23	~17
Ironto to Lafayette	2.65	~5
Lafayette to Elliston	2.57	~5
Elliston to Shawsville	2.51	~5
Shawsville to Falling Branch Park & Ride Lot	9.25	~13
Total	**28.21**	**~45**

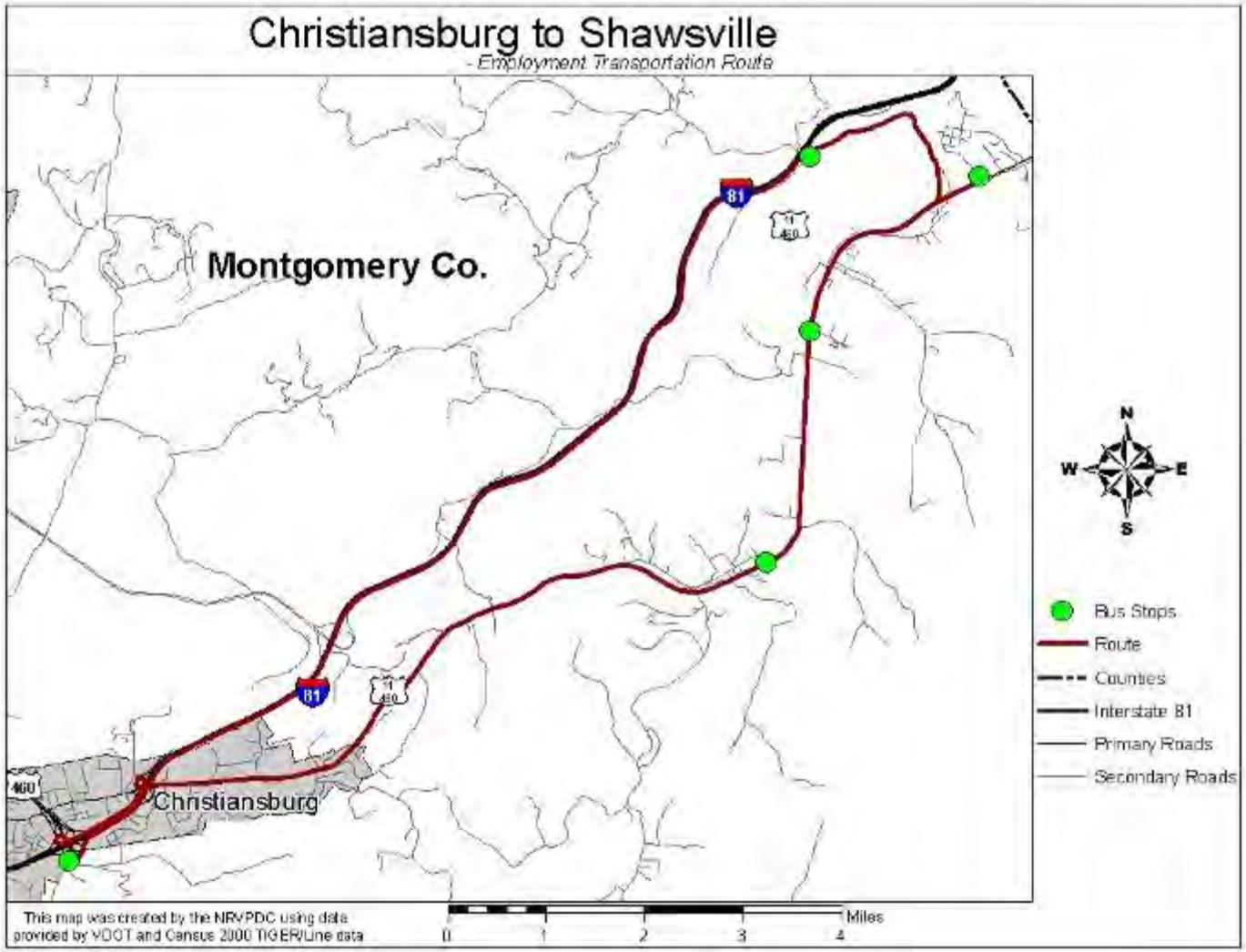

Figure 9. Christiansburg to Shawsville Employment Transportation Route Map

Additional Transportation Services

In addition, a comprehensive system would also include getting riders from stops to their respective work locations. Later phases of this vision would need to include an effort to refine such as system. This effort should: 1) identify or develop local or private transportation service (e.g., vanpools supported by various partners) to get people from the main bus stops to their place of employment, and 2) identify potential sponsors, partners, or other funding mechanisms to fund additional transportation services. This service would support commuters in using the system that is convenient for travel to and from work.

The following figures (Figures 10, 11, and 12) illustrate conceptual service areas that would need service by, for example, vanpools in coordination with employers or public transit connection services. The concept here is to show how a commuter could get to his or her workplace by using the main commuter route (one of the 7 proposed routes) in conjunction with a service such as that illustrated. These show vanpool service areas (the shaded circles), employment centers (blue dots), and the main route bus stops (larger green dots).

The vanpool system would need further refinement including details such as the appropriate vehicles to use, pick-up/drop off points, funding mechanism, and operations (e.g., scheduling, routing, staffing, training) before implementing such a system. Note that Floyd county is not included in these figures, and service within this area would also be needed. Later phases of this vision could serve to evaluate the need for vanpools in Floyd.

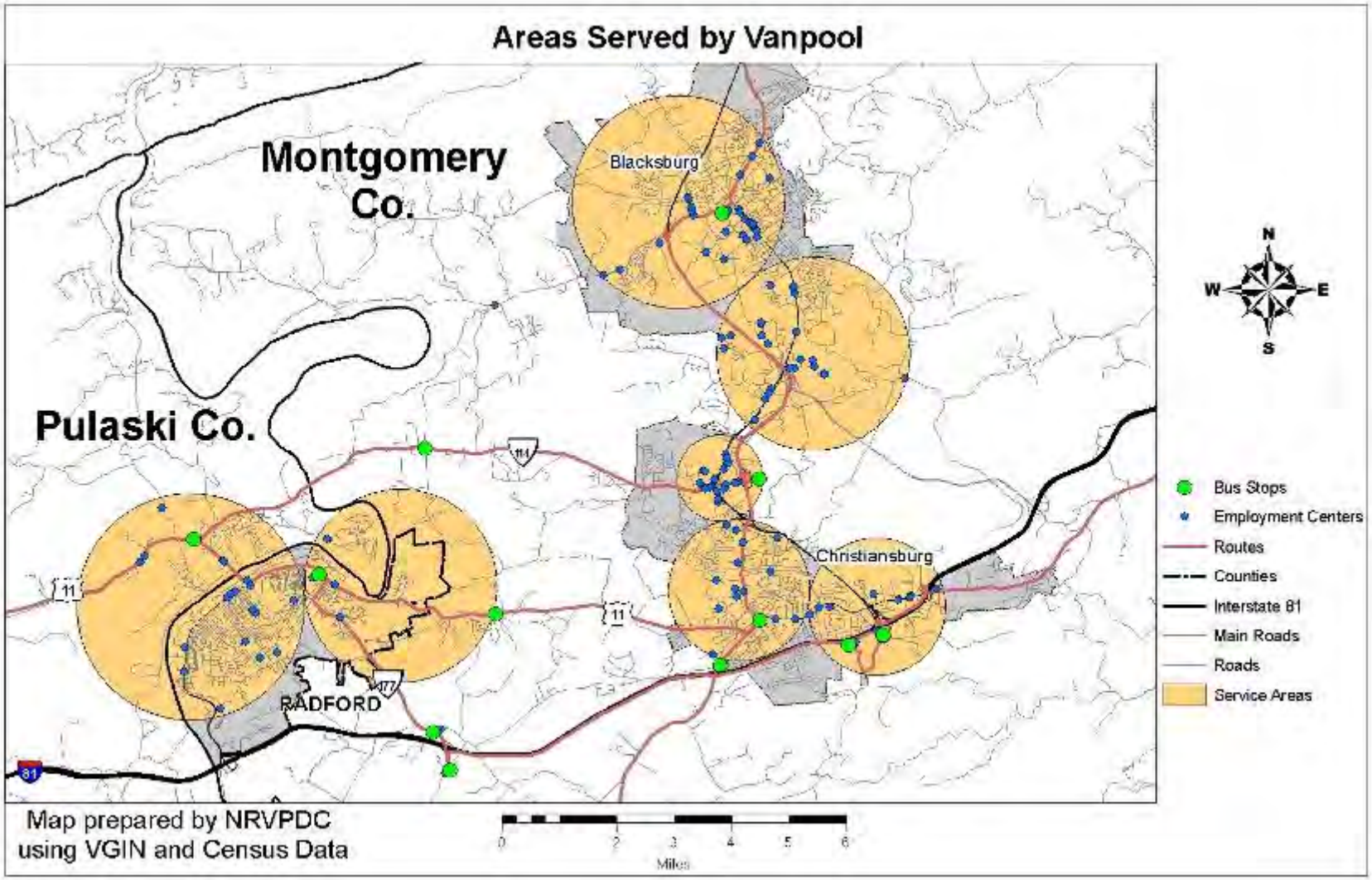

Figure 10. Map illustrating the concept of vanpool service areas within Radford, Blacksburg, and Christiansburg

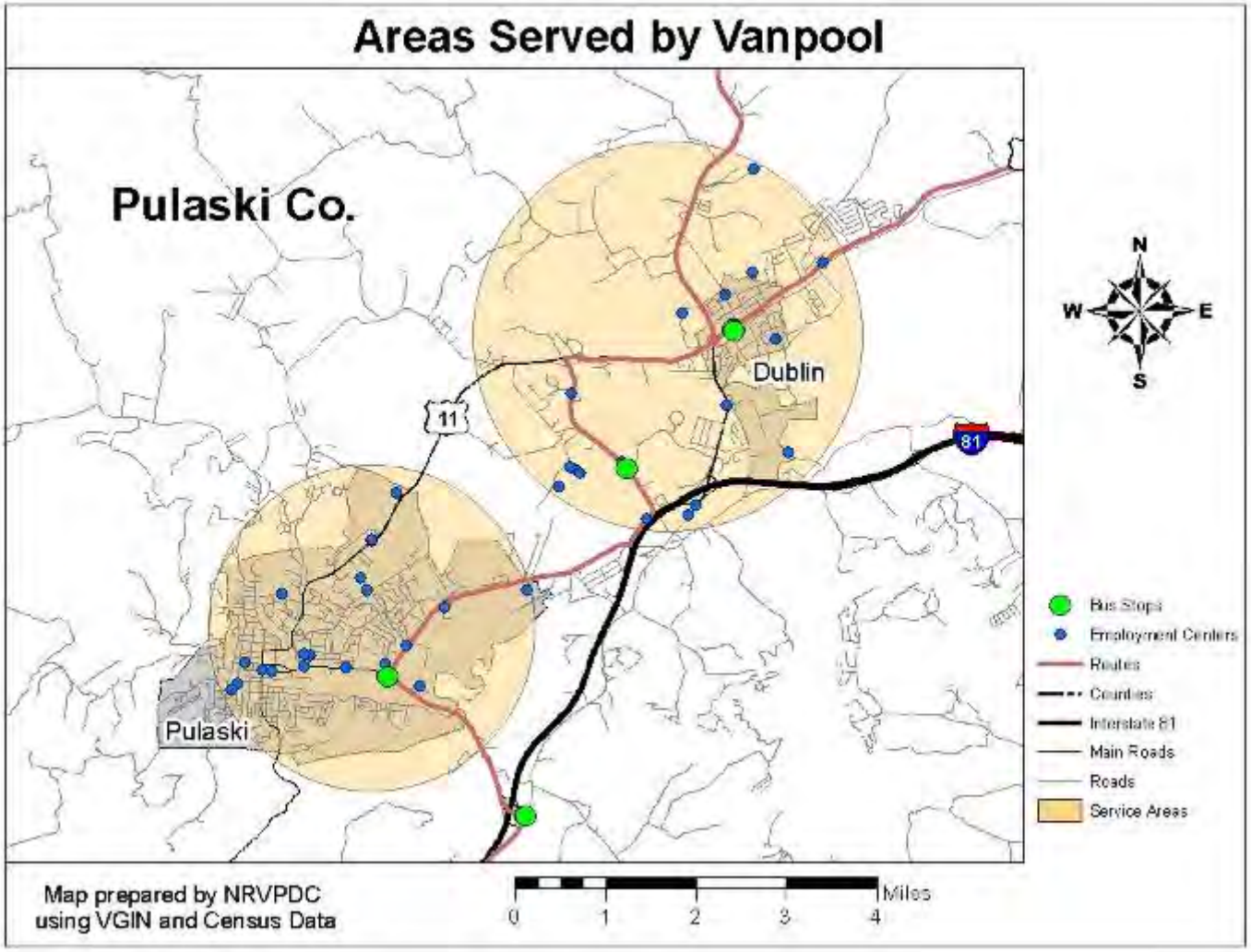

Figure 11. Map illustrating the concept of vanpool services areas within Pulaski and Dublin

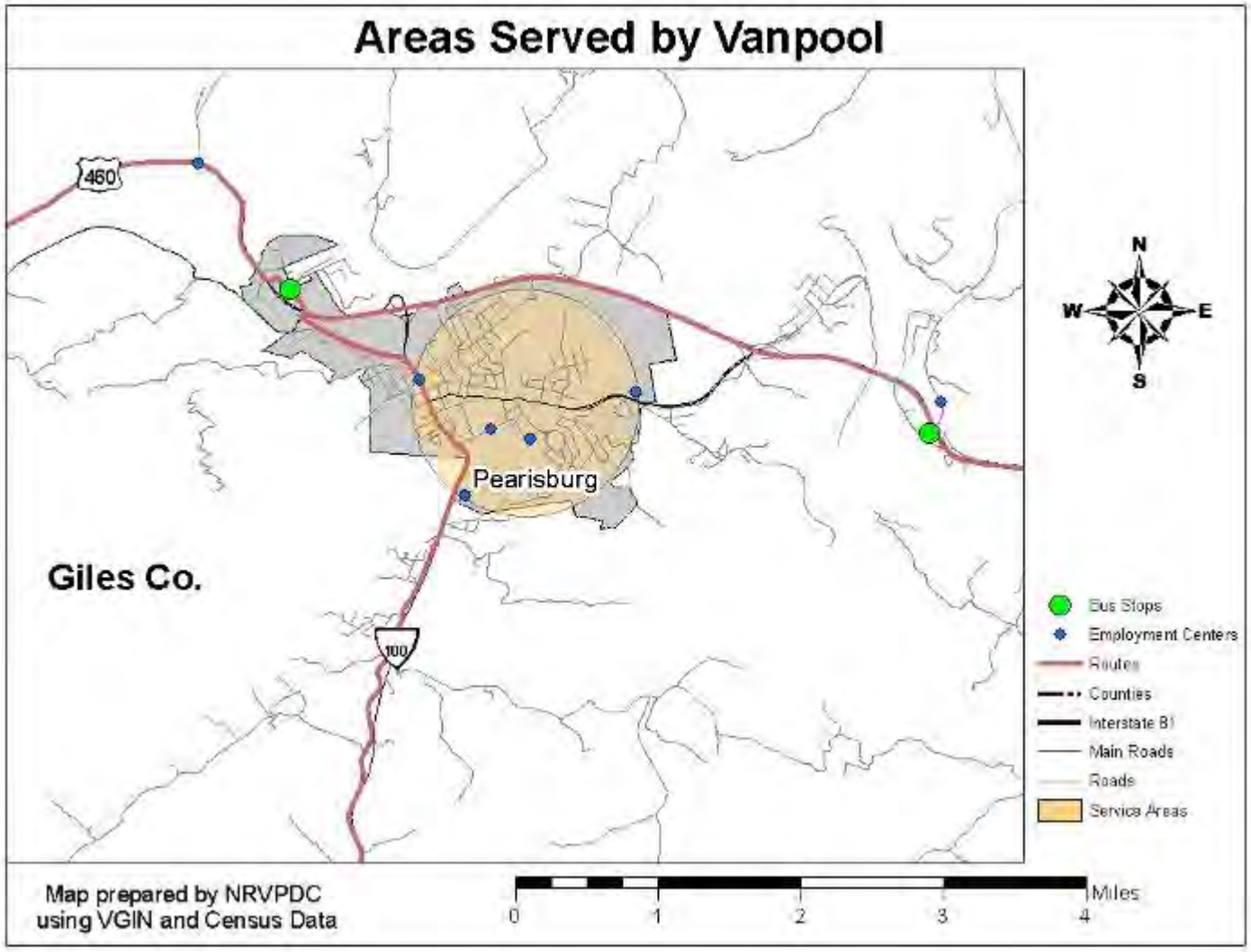

Figure 12. Map illustrating the concept of vanpool services areas within Giles County

Connections and Caveats

The goal in the future would be connect to other routes as well. The concept of "hubs" or transfer stops where routes intersect needs to be explored further in later phases of this vision. Potential hubs might include the I-81/Rt 8 stop that serves both the Radford to Christiansburg/Falling Branch and Floyd to Downtown Christiansburg routes. Also the Falling Branch Park & Ride stop is located on the Radford to Christiansburg/Falling Branch and the Christiansburg to Shawsville routes, as well as the Smart Way Commuter Bus route, operated by Valley Metro. It follows that Falling Branch Park & Ride stop could be featured as a hub, and possibly improved or expanded with additional services (e.g., restrooms, seating, vending machines).

As an example, a passenger from Floyd might connect to the Radford to Christiansburg/Falling Branch Route and then connect to the Smart Way to commute to Roanoke. In this case, the passenger would depart from the Floyd to Downtown Christiansburg route at the I-81/Rt 8 stop to catch the Radford to Christiansburg/Falling Branch route to the Falling Branch Park & Ride stop which the Smart Way Commuter bus also services.

Finally it is noteworthy that both the Glen Lyn to Blacksburg route and the Blacksburg to Radford to Christiansburg route includes the "Blacksburg Hub" labeled as the VT future multimodal Facility on Perry Street. This hub does not yet exist but may well serve the needs of commuters in the future who want to transfer to existing routes provided by Blacksburg Transit (or other providers). However, it may be necessary to include a substitute or additional stop location for routes connecting to Blacksburg, particularly for customers who live on the south end of Blacksburg. For example, a commuter who wants to travel from the south end of Blacksburg to Radford may be better off riding the BT to another stop in Christiansburg, where the customer could then transfer onto the Blacksburg to Christiansburg to Radford commuter route. This may be preferable to attempting to get to the VT multimodal hub, especially during peak hours (e.g., 7 am), when traffic and parking is most congested. Additionally, the concept of a shuttle service for commuters to get to transfer hubs may also need to be explored.

C.3 *Costs*

This section includes a discussion of the potential costs, based on 2009 cost-estimates and various assumptions. There are several budgetary considerations related to *only the operation of seven employment mobility routes* proposed. These estimates do not consider the costs for the concept of vanpool service as illustrated by Figures 11, 12, and 13. Service to employment centers would need a separate effort to estimate cost; there are over 100 employment centers identified, covering at least nine (9) service areas. The counties of Floyd and Giles would likely also need separate service areas.

There are two major budgetary categories to consider: 1) Capital (vehicles, equipment) and 2) Operations (salaries, operational costs). Assumptions are that the cost of vehicles are based on 2009 pricing, that operating costs would be approximately $45 per hour, and that this funding would apply to the seven, main commuter routes described. Additional funds and resources would be required for additional routes (e.g., rural routes to areas such as Check, Pilot, McCoy) and to provide for service directly to major employers or destinations not currently served by existing transportation providers. Additional costs may also exist.

Estimated Capital Costs

At current 2009 prices, the anticipated cost of capital (vehicles) ranges from $50,000 to $360,000 per vehicle, depending on the vehicle chosen for a particular route or area. For example, a 22 foot, 15-passenger BOC (Body on Chassis) E- 450 cutaway (this is the BOC model that BT uses for its paratransit service) cost: $73,000 at current prices. Larger BOCs such as a 25 foot 21-passenger vehicle is $118,000. A Freightliner bus (similar to what is used for the Smart Way Commuter Service) is approximately $230,000. A full size 30, 35, or 40 foot transit bus (such as those used by BT) cost approximately $360,000 for a diesel-fueled vehicle.

This assumes that the vehicles selected are diesel (or biodiesel) fueled vehicles. The cost of a hybrid vehicle (for example) is estimated to be 1.5 to 2 times the cost of a diesel vehicle. However, their gas mileage can be 1.5 to 1.8 times better (e.g., 7 mph vs. 4 mph for a large, full-size bus). One to three spare vehicles would also be recommended for seven routes. Based on a price of $230,000 per-vehicle, for a total of 10 vehicles, the total estimated capital cost could be $2.3 million (approximately $3.45 million for hybrid vehicles). Additional funding would also need to be set aside for replacement vehicles, within 7-12 years, depending on the vehicles selected.

Estimated Operational Costs

Operations are estimated to cost between $60,000 and $100,000 annually per route. This depends upon various factors including hours of operation, pre-trip inspection protocols, number of “unbillable” miles or hours (e.g., deadhead miles), travel time/distance to route-start/end, number of stops, price of fuel, etc. For a total of seven routes the total estimated operational cost could be $700,000 annually. Affected municipalities and partners (e.g., major employers, business) would need to make matching contributions as required for most grants. It is possible that the percent required for such grants may increase (or decrease), based on changes in both the federal and state government policies, associated programs, and budgetary cuts. Again, operational costs have not been included for some of the more rural areas, or the operational costs of operating vanpool services.

Cost Sharing and Matching Funds

One of the main advantage of operating transportation as a public system is that the government municipality can apply for and receive assistance from the federal and state government. Such assistance is usually in the form of grants such as the Federal Transit Administration's Job Access and Reverse Commute (JARC) program, established to help low-income individuals access to employment and related activities and to fund "reverse commute transit services" available to the general public (FTA, 2009). Reverse commuting includes transportation services for the general public from urban, suburban, and rural areas to suburban employment opportunities.

Federal and state funds are used to "match" those contributed by local government (and/or partnerships) to help pay for public transportation. Federal and state matching grants are strongly recommended to extend local funding to the maximum. As an example, for a capital budget of $2.3 million, a typical matching grant would be a "80-20" grant where 80% of the funds would be federal funds, and the remaining 20% would be the non-federal share from local funds. Of that 20% ($460,000 in this case), typical

state matching programs are "50-50." Here 50% ($230,000) would be provided by the state, assuming the local match (from local government and partners) would provide the final $230,000. In all, this works out to be essentially a "90-10" situation, since only 10% ($230,000 of $2.3 million) is required from local funding sources. A similar approach applies for operational costs, which are typically at a 50-50 match level with some variations and exceptions.

Federal and state matching grants are strongly recommended to extend local funding to the maximum. Such grants could bring the vision of the NRV seven route commuter system to reality. An in-depth investigation is needed of how funds from federal programs such as JARC and state agencies (e.g., DRPT) can assist during this process as this vision is further refined. A clear understanding of federal state funding mechanisms would increase the likelihood for a successful collaboration among the service providers in the NRV. The fact that BT, CT, and PAT have developed this vision is evidence that these service providers can coordinate efforts. Such coordination is a key component when considering funding options. For example, JARC funds can be obtained for providers that work together in a coordinated manner, including providers that are funded by other programs such as the Department of Health and Human Services.

C.4 *Scheduling*

Based on the survey data and on typical commuter driving habits observed in the New River Valley, it is recommended that a morning and evening schedule be developed. Initially this schedule would serve the 8:00 AM to 5:00 PM work-week Monday through Friday, assuming that the final destination of that route was located near where the rider worked. Tables 9 and 10 illustrate an example time schedule for the Glen Lyn to Blacksburg route. The times are estimates based on the mileage between stops and assumes a 3-minute wait time at each stop. Exact schedules would need to be developed, tested, and refined for each of the seven employment mobility routes.

Table 9. Example Morning Schedule for Glen Lyn to Blacksburg

Glen Lyn to Blacksburg		
Morning Schedule		
Location	**Arrival**	**Departure**
Glen Lyn	6:20	6:23
WV border	6:30	6:33
Rich Creek	6:36	6:39
Narrows	6:47	6:50
Pearisburg	6:55	6:58
W. Pembroke	7:05	7:08
Pembroke	7:14	7:17
Rt. 42	7:26	7:29
Blacksburg	7:44	End of Route

Table 10. Example Evening Schedule for Blacksburg to Glen Lyn

Blacksburg to Glen Lyn		
Evening Schedule		
Location	**Arrival**	**Departure**
Blacksburg	5:15	5:18
Rt. 42	5:33	5:36
Pembroke	5:45	5:48
W. Pembroke	5:54	6:00
Pearisburg	6:06	6:07
Narrows	6:12	6:15
Rich Creek	6:23	6:26
WV border	6:29	6:32
Glen Lyn	6:39	End of Route

C.5 *Vehicles*

The vehicles for each of the 7 routes needs to be researched further. As discussed in the section on cost, a variety of vehicles could be used, based on funding available, plans for expansion, road types, and location of bus stops. The group assumes that the vehicles would be diesel (or biodiesel) fueled vehicles, or hybrid vehicles (electric and diesel or biodiesel).

Vehicles could range from standard 12 person vans (for vanpools), to 15 or 21-passenger BOC vans, which allows for wheel chairs and includes a high ceiling so that passengers can easily stand upright while entering or exiting the vehicle. Larger, more comfortable vehicles would likely be desirable for routes of long duration (e.g., Glen Lyn to Blacksburg) such as a Freightliner bus (similar to the blue Smart Way Commuter buses). Other options include using 30, 35, or 40-foot buses such as those used by Blacksburg Transit or even a 60-foot articulated bus.

C.6 Phased Approach

It is recommended that a phased approach be taken for implementation. For example the following phases might be followed:

Phase 1: Identify roles and services for each agency including BT, CT, PAT, Roanoke Area Dial-a-Ride (RADAR), and Greater Roanoke Transit Company (GRTC)

Phase 2: Establish formalized NRVPDC and BCM-MPO collaboration focused on expanding this vision, including key players from all agencies and relevant partners such as VT, RU, City of Radford, etc., as well as the DRPT and VDOT; create refined long-term plan with timeline/mile-stones

Phase 3: Identify potential sponsors, partners, or other funding mechanisms or agencies to fund such services, so that employers can support their employees in using the system; identify appropriate funding sources and potential documents to serve as written agreements

amongst involved organizations; determine the percent of local match funds required, based on the funding source sought.

Phase 4: Refine, solidify, and market the vision with a focus on: 1) improving and developing connections to other agencies and services (e.g., Greyhound, Smart Way, Rail) via hubs, 2) evaluating and improving facilities (e.g., bus stops, shelters, park and ride locations); 3) facilitating connections into neighborhoods by working with local organizations to perform a needs assessment for each locality; 4) developing service to less populated, but important, more rural locations such as Willis, Check, Eggleston, Pilot, and McCoy; 5) identifying or developing local or private transportation service (e.g., vans sponsored by local government, private businesses, or partnerships) to get people from the main bus stops to their place of employment, 6) marketing the service, and 7) develop a mechanism for continuous improvement.

Phase 5: Launch Commuter Transportation Service based on the seven routes identified: 1) Glen Lyn to Blacksburg; 2) Pearisburg to Dublin; 3) Draper to Fairlawn; 4) Radford to Christiansburg/Falling Branch; 5) Floyd to Downtown Christiansburg; 6) Blacksburg to Radford to Christiansburg; and 7) Christiansburg to Shawsville.

Discussion

It is recommended that the NRVPDC and the BCM-MPO collaborate in some fashion toward further development and expansion of this vision for employment transportation options in the New River Valley. This collaboration should consider views from of representatives from relevant and interested parties such as Montgomery County, Floyd County, Giles County, Pulaski County and the City of Radford, as well as the BT, CT, PAT, and others such as RADAR, DRPT, VDOT, and GRTC, as well as other Federal and State organizations.

The collaborative effort should also develop a formalized mechanism to ensure the continuation of the planning process and to bring this vision to light. These recommendations align closely with recent recommendations by Cambridge Systematics and KFH Group (2008) for coordination efforts of transportation in the New River Valley. The group (BT, CT, and PAT) also supports the PDC plans to hire a Mobility Manager, whom might help to serve as a liaison amongst various parties involved in this vision.

The five phases suggested (identify roles and services, establish a formalized NRVPDC and BCM-MPO collaboration focused on expanding this vision, identify potential sponsors, partners, or other funding mechanisms to fund such services, refine, solidify, and market the vision, and launch commuter transportation service based on the seven routes) may be further refined based on subsequent meetings of the group. The phased approach works well in that various grants for funding could be pursued in association with each phase. The approach also lends itself to the building of a solid foundation upon which phase 5 (launching the seven routes) can stand and survive. To

keep the momentum going toward the reaching a launch of phase 5, the group intends to continue meeting on a regular basis, and will continue to revisit and refine this vision.

The group selected the seven routes based on data provided, a review of history in this region, and upon the experience of those involved in this effort. Implementation of the routes can take place gradually, and it is most likely that each route would be launched separately. Ideally however, all of the routes would be launched within a relatively short time frame (e.g., 2-3 years), as the need for employment commuter transportation is apparent, and the need will likely grow as the population increases in the region.

Funding is perhaps one of the largest challenges for such a vision. With a recent change in the country's administration, the group is hopeful that a resource will be made available to take the next steps toward implementing each of the phases outlined for employment commuter transportation in the four counties of the New River Valley.

Next Steps

Based on these recommendations, the next step is for the NRVPDC to take action. We encourage the NRVPDC to keep CT, BT, PAT and other relevant and interested organizations involved on a regular, formalized manner. Regardless, it is the intention of the group to continue to meet on a quarterly basis.

We urge the NRVPDC and BCM-MPO to collaborate in an appropriate manner and recommend that this collaboration include members of the group and other relevant and interested organizations. The NRVPDC and BCM-MPO collaborative effort will serve to move forward with the development and refinement of this vision, and of the recommended phases.

Toward these ends, it is recommended that the NRVPDC disseminate the concepts of this vision to organizations throughout the NRV, other districts, throughout the Commonwealth of Virginia, and possibly to other state and federal organizations. To assist in this process it is recommended that the NRVPDC invite representatives from the group to make joint presentations as needed. For example, presentations would be useful to the NRVPDC and BCM-MPO policy board and technical advisory committee meetings, as well as to other organizations such as Virginia Tech, Radford University, the City of Radford, Town Council meetings, each of the four counties in the New River Valley.

Finally, the group would like to organize and host a semi-formal dinner and presentation during 2009. The purpose of this event would be to review and discuss the vision. The group encourages the NRVPDC to invite representatives from other interested parties to attend as well.

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FOR IMMEDIATE RELEASE

PLANNING DISTRICT COMMISSION CONDUCTING SURVEY ON EMPLOYEE TRANSPORTATION

Fairlawn, VA – April 17, 2008 – The New River Valley Planning District Commission is administering an employment mobility program throughout the New River Valley. Funded by VDOTs Multimodal Planning Grant Program and the Planning District Commission (PDC), the program's primary goal is to address gaps in rural transportation and to evaluate the region for employee-based transit.

The PDC has recently posted a survey targeted at employees across the region to identify commuting routines and work hours, points of origin vs. destination points, barriers to transportation, and to explore alternative modes of commuting. Everyone is encouraged to participate in the survey, which can be accessed at the PDC's website: www.nrvpdc.org under the title "Employee Transportation Survey," or in hardcopies by request. The survey will run through May 16, 2008.

The PDC is a regional government that serves the local governments in the area and their citizenry to promote regional cooperation, coordinate the activities and policies of member local governments, and provide planning assistance to local governments. For further information on the Employment Mobility Project, please contact Kevin Byrd, AICP, at 540-639-9313 or kbyrd@nrvdc.org.

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The Roanoke Times

Roanoke.com

Saturday, April 26, 2008

Survey to probe valley commuting habits

Planners will use the results to guide transportation recommendations across the region.

By Lindsay Key
381-1671

As gas prices continue to rise, the New River Valley Planning District Commission is conducting a study to find out where people live in comparison to where they work, and how they make the commute each day.

Regional planners are also hoping to find out how many unemployed people would be working if transportation were not a barrier, said Kevin Byrd, regional planner for the New River Valley Planning District Commission.

The Employment Mobility Study is expected to be completed in November and is funded by the commission and the Virginia Department of Transportation's Multimodal Planning Grant Program.

A survey posted on the commission's Web site until May 16 asks employees working in Montgomery, Pulaski, Giles and Floyd counties and Radford to identify when and how they commute to work. A second survey asks carpoolers to identify which of the more than 14 park-and-ride lots they use in the New River Valley, and why. Some lots are maintained by VDOT, but the number of informal lots created by the public is increasing, Byrd said.

Once the surveys are tabulated, the commission will share the information with its stakeholders, which include local governments, transportation providers and private businesses, Byrd said. The stakeholders will then make a recommendation about what sort of transportation services would benefit the region, which might include a bus transit service, additional park and rides or an improved carpooling system.

The study was initiated because the commission was hearing from the public, namely commuters and their employers, that additional transportation options were needed, Byrd said.

Although the commission conducted two other transportation studies in 2005 and 2006, "I wouldn't say that the region has looked at efficient transportation as a whole before," Byrd said. "We have in certain areas, like eastern Montgomery County and certainly our towns have ... but it hasn't been as broad of a regional issue until recently."

The commission has identified 20 employment centers, or businesses employing the largest numbers of people, in the region, and they include EchoStar, Virginia Tech, Warm Hearth Village, Volvo and Rowe Furniture.

But the New River Valley is unique because "we have a lot of people in our region that work within our region but don't work in the counties they reside in," Byrd said.

So why not move closer to the workplace? Byrd called the situation a rural phenomenon.

"You have families that have been established in a community for a long time, and people in rural communities are more likely to travel further to work than relocate their families to where they work," he said.

New River Valley Planning District Commissioner Mike Harvey lived in Washington, D.C., before moving to Montgomery County, where he's now retired.

Harvey said that in Washington, mass transit via Amtrak train, bus and ride sharing made sense. Carpooling with fellow Verizon employees for 10 years cut his commute to Arlington in half and saved him gas money.

But Harvey said he can't see any of those systems working in a more rural area such as the New River Valley.

If anything, he could see a small shuttle bus system working with the established Smart Way bus system.

"A smaller bus could get you from Shawsville to Christiansburg or Shawsville to Roanoke, and then you could take the Smart Way bus somewhere else," Harvey said.

The employee transportation survey can be completed online at www.nrvpdc.org.

THE ROANOKE TIMES
roanoke.com

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COMMENTAR

In Our Opinion

How mobile are you?

Gas prices are continuing their skyward climb, and if you drive to work every day, then you're probably beginning to dread having to stop to fill up your vehicle's gas tank.

But you have to get back and forth to work or you can't pay for the gas to get you back and forth to work. With today's gas prices, transportation related costs are second only to mortgages in the average household budget — higher, even, than health care — according to the New River Valley Planning District Commission.

Many people live in rural areas in Pulaski County, and they do not have access to public transportation, so what are they to do?

Well, the Planning District Commission is currently administering a grant to study the viability of regional transit. The Employment Mobility program is an 18-month study that brings together transportation providers and local employers as stakeholders in order to explore the barriers to and solutions for effective transportation in rural southwest Virginia.

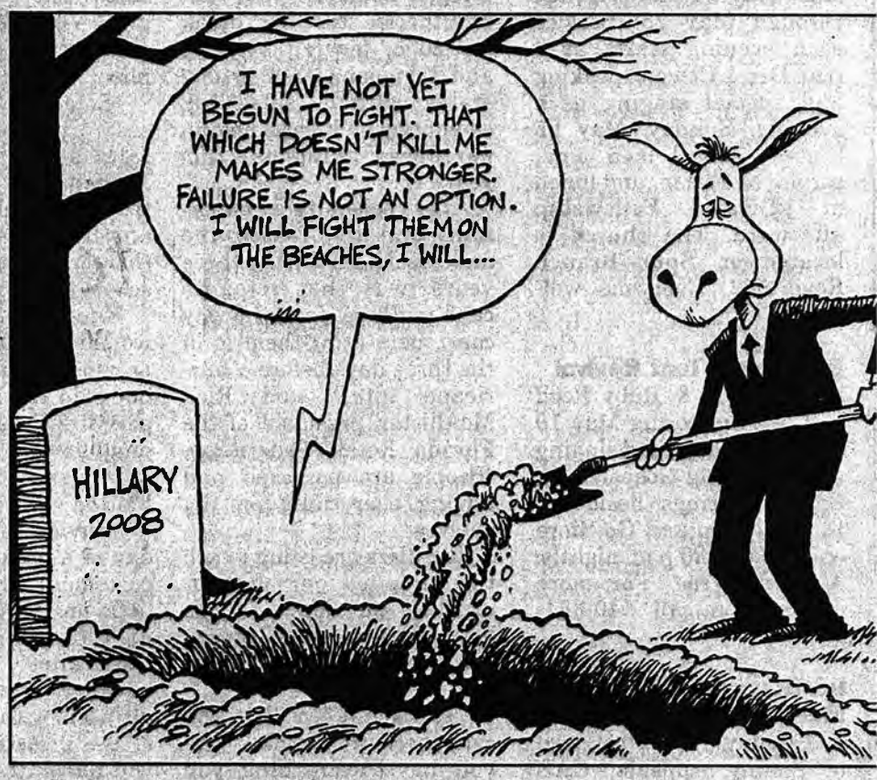
To understand commuting patterns in the region, an online transportation survey has been created.

The survey aims to identify commuting routines and work hours, points of origin vs. destination points, barriers to transportation, and to explore alternative modes of commuting.

The survey can be accessed on the Planning District Commission's website: www.nrvpdc.org, under the link "Employee Transportation Survey," or in hard copy by request.

A PDC spokesperson says researching more efficient commuting methods is necessary for the good of the economy and for our environment, and this survey is a good first step in that research.

The Southwest Times



Winning tactic, losing strat

It's long been my opinion that if Hillary Clinton could be appointed president, nobody could do the job better. In a parliamentary system, she'd stand an excellent chance of becoming prime minister, since political parties tend to select leaders more on the basis of competence than the dubious skills of a game show host.

Like Al Gore, Clinton's seen by friends as warm, funny and empathetic. She does better in small groups and town hall-type events than in large arenas. Also like Gore, she's motivated more by duty than most politicians. Unfriendly eyes see her determination as "entitlement." Misogyny runs deeper in American culture than many admit; brainy women are seen as unnatural. The camera doesn't love her the way it loves Sen. Barack Obama.

Gene Lyons

Too, Clinton's candidacy has labored under the manifest disadvantage of the Beltway media's unreasoning hatred of her husband, the virulence of which continues to amaze. In Arkansas, some think it's rooted in resentment that some smooth-talking, white-trash hayseed from the American outback could become president. In Washington, it's whispered that Hillary's unresponsiveness to certain socially prominent hostesses made them loathe her. Who knows? There's no denying her candidacy has encountered what a friend calls a "perfect storm" of progressive idealists merging with Clinton-hating celebrity courtiers in the "mainstream" media.

And yet Hillary keeps chugging along like The Little Engine That Could, defying increasingly shrill demands that she quit. Weeks before the Indiana primary, Obama described it as the potential "tiebreaker." Then he went out and lost it. Nevertheless, all but openly gloating, NBC's Tim Russert

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Campus Notice

Survey on employee transportation

From: Office for Transportation and Campus Services

The Planning District Commission is conducting a survey on employee transportation.

The New River Valley Planning District Commission is administering an employment mobility program study throughout the New River Valley. Funded by VDOT's Multimodal Planning Grant Program and the Planning District Commission (PDC), the program's primary goal is to address gaps in rural transportation and to evaluate the region for employee-based transit.

The PDC has recently posted a survey targeted at employees across the region to identify commuting routines and work hours, points of origin vs. destination points, barriers to transportation, and to explore alternative modes of commuting. Everyone is encouraged to participate in the survey, which can be accessed at the PDC's website: www.nrvpdc.org under the title "Employee Transportation Survey" or in hardcopies by request.

As the surveying process nears completion, the PDC staff will begin to illustrate the demand through a series of maps. The map series will also include geo-coded data for points of interest such as major employers, medical offices, service providers and retail centers.

The final component of the program involves pulling together the region's current public transportation providers, Blacksburg Transit, Community Transit, and Pulaski Area Transit, for an analysis of the data and recommendations for meeting those needs with region-wide public transportation. These agencies will give input on a service provider, feasible routes, scheduling options, and most suitable vehicle type.

The PDC is a regional government that serves the local governments in the area and their citizenry to promote regional cooperation, coordinate the activities and policies of member local governments, and provide planning assistance to local governments. For further information on the Employment Mobility Project, please contact Kevin Byrd, AICP, at 540-639-9313 or kbyrd@nrvdc.org.