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This study was prepared under contract with the Fort Drum Regional Liaison Organization or its assignee, with financial support from the Office of Economic Adjustment, Department of Defense. The content reflects the views of the Fort Drum Regional Liaison Organization, or its assignee, and does not necessarily reflect the views of the Office of Economic Adjustment.

EXECUTIVE SUMMARY

Since its reactivation in 1985, Fort Drum and the 10th Mountain Division have become an increasingly important influence in the region including Jefferson County and portions of Lewis and St. Lawrence counties, affecting economic development, the housing market, travel patterns, and many other aspects of daily life. The installation is by far the largest employer in the region and draws employees and visiting personnel from across the nation.

Living on-post are 8,500 single soldiers -- men and women who report from far away, are unfamiliar with the Watertown region, and do not have spouses or dependents. At the North Gate, there are an additional 2,000 housing units occupied by Fort Drum personnel. Fort Drum employs thousands of contractors and employees. Downtown Watertown, just 10 miles from the installation, contains the bulk of services, entertainment, and shopping needed by the Fort Drum community. Transit feasibility is based in large part upon density of need and destinations. Fort Drum and Watertown have a high density of residents, services, and jobs, yet there is no viable option for getting around other than via private vehicle. With a goal of integrating the military community into the Watertown region, no schools or hospitals were built on-post. Military families rely on area schools for education, and on hospitals in Watertown and Carthage for medical services. Thus the needs of the community and the needs of Fort Drum are linked, and resources devoted to transportation for either group can be shared by both.

This transportation and mobility needs assessment began in April 2011 and concluded in October 2011. Research methods included assessments of demographics and employment trends, an origin-destination and user preference survey, focus groups with transportation providers and potential customers, and analysis of funding options. From this process has emerged a picture of future transit ridership in the region and corridors identified for service. Important to keep in mind is that “transit” has many meanings and service delivery options beyond a bus. A primary goal of this study is providing increased mobility options – to both link people to necessary services as well as improve quality of life – through innovative and flexible service options. These include carpools, vanpools, volunteers, and combining clients on one vehicle, among others.

DEMOGRAPHIC PROFILE & EXISTING SERVICES

Given the rural nature of the study area, an analysis of travel patterns and locations of people likely to use transit was needed to inform where transit service could succeed. Demographic data, economic data, employment trends, and major destinations were culled from the Census, stakeholders, previous plans, and focus groups. The highest densities of populations likely to take transit reside in village centers, and the area with the most growth is LeRay, which issued more than 700 new certificates of occupancy from 2005-2010. An inventory of existing services revealed that the 12 main transportation providers transport 790,735 passengers per year and invest a total of \$8,814,097. An analysis of major destinations overlaid with transit routes

showed that there are numerous providers in the study area, and most destinations are reachable by transit. Ridership is low due to a few factors:

- Service is infrequent with just two round trips per day
- Service is circuitous, especially in Lewis County where Arc routes were opened to the public
- Service does not connect major origins and destinations such as Lowville and Watertown
- Lack of marketing and information means customers do not know transit systems are in operation
- Available service information such as maps and schedules are hard to understand
- Fort Drum's on-post shuttle does not connect to the five round-trips being run by Adirondack Trailways and St. Lawrence County along Route 11

Successful transit service hinges upon appropriate concentrations of people, jobs, and services that can be linked. Since the region is quite rural, it is important to hone in on corridors that have the densities to support transit. From this analysis it becomes clear that there is a market for transportation in Lowville, Watertown, Carthage, Gouverneur, and Canton. The employment and destination data shows a clear concentration of destinations along the Route 11 corridor connecting Watertown to LeRay.

A wealth of transportation services exist in the Fort Drum region, from general public fixed route to general public curb-to-curb service and client-based transportation. Conversations with providers revealed in many cases a desire to reach new markets, coordinate service, and try new delivery options. For example, Adirondack Trailways would like to sell tickets on-post, county agencies seek to lower costs by consolidating functions, and the private market stated interest in packaging service geared toward Fort Drum families. These opportunities provide fertile ground for sharing resources to provide greater transportation options.

PEER INSTALLATIONS

Three peer installations' transportation programs were analyzed. These included Fort Hood, which runs an on-post shuttle, Fort Bragg, whose on-post shuttle connects to area transit, and Fort Riley, which contracts with an area provider for vanpool service. Key findings:

- On-post shuttle services are limited unless contracted out
- Vanpools are critical elements to the service network
- Nighttime service can be provided through public-private partnerships
- Outside pressure such as traffic congestion or poor taxi service can be an important impetus for service
- Marketing is a critical investment to ensure the success of any service, including special vehicles and branding

NEEDS ASSESSMENT

Surveys and focus groups provided an in-depth understanding of transportation needs, challenges, and opportunities. Key findings that emerged from the needs assessment:

- Soldiers report needing a nighttime shuttle into Watertown. Many have had negative experiences with cab companies
- Watertown is the biggest destination for Fort Drum associates and the general public. The LeRay Wal-Mart is the second biggest destination

- Overlapping service on Route 11 can be coordinated with better timing to serve more people
- There is little coordination between Non-Emergency Medical Transportation (NEMT) brokers and public transit
- An estimated 75-80% of Watertown Airport business is Fort Drum-related, including soldiers on leave, dependents, and contractors
- 42.5% of general public survey respondents said they were "very likely" or "somewhat likely" to try transit. 43.5% of soldiers answered the same way
- 76.8% of survey respondents top destinations are in Watertown, LeRay, Evans Mills, or Lowville

The needs assessment clearly reveals that inter-county travel is taking place, and that the heaviest concentration of travel lies between Fort Drum, the Wal-Mart retail area, Watertown, and Lowville. The Wal-Mart in LeRay was the single most often identified destination of all survey respondents. Although survey respondents were primarily members of the general public, two of the top three singly identified common destinations were Fort Drum and the Commissary on Fort Drum, showing the installation's importance in the overall community. The analysis of geography and density of destinations, combined with in-depth discussions with providers and potential riders reveals numerous gaps in the transportation network. These include both spatial gaps and also gaps in information.

GAP ANALYSIS & OPPORTUNITIES

The previous analysis revealed the following unmet needs, and possible solutions were developed, drawing on stakeholder input and the national expertise of the study team.

Unmet Need/Gap	Strategy
Geographic/Spatial	
Watertown to LeRay/Route 11 vending area	Expand Citibus to Route 11 vending area Use JRC as operator to Route 11 vending area Develop vanpools / Use Mass Transit Benefit for soldiers Maximize use of Trailways
Fort Drum to North Gate/Route 11 vending area	Operate on-post shuttle route to transfer point at Wal-Mart Operate on-post shuttle route to transfer point at North Gate Transfer can be timed with Trailways
Lowville to Watertown	Develop vanpools from Lewis County to Fort Drum and Watertown Extend LOOP Purple Route three days per week
Outlying towns in Jefferson County to Watertown	Develop vanpools Open JRC routes to members of the public
To/From Watertown Airport	Work with hotels and existing transportation providers to create a shuttle

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Unmet Need/Gap	Strategy
Information	
Soldiers are unaware of Trailways & St. Lawrence County services that run up and down Route 11	Centralize information Develop a centralized call center Revamp information and marketing materials Include transit service information in new soldiers' welcome packets
Lewis County LOOP residents are not aware of bus service	
Information materials such as schedules and maps are difficult to understand	
Watertown residents do not know about St. Lawrence County buses connecting to the Route 11 vending area and Gouverneur	
Coordination	
No single entity works across agencies and jurisdictions on regional transportation issues	Bring together Regional Transit Committee Hire a mobility manager to continue work on addressing transportation issues in the region
Watertown Citibus and Jefferson County NEMT broker does not coordinate to provide NEMT trips	Foster Medicaid transportation partnerships Regionalize NEMT long-term
Service Quality	
Taxi service can be poor, though cost is high	Create service quality standards for taxis to meet in order to get on base to pick up/drop off soldiers
Hours of Service/Temporal Gaps	
No nighttime transportation options exist for soldiers	Form partnerships between transportation providers to create transit service along Route 11 Partner with private transportation providers or businesses to provide nighttime service
No midday service in Lewis County	Test midday service on a popular route
Limited weekend public transportation	Weekend volunteer network

FUNDING & IMPLEMENTATION

Funding is typically the crucial element in implementing strategies. In the Fort Drum region, there are monies available, but only through a coordinated planning effort that shows collaboration and cooperation between agencies, providers, and governments.

This study has resulted in numerous recommendations, many of which can be quickly implemented and have a high return on investment. Information and marketing, for example, can begin at the local level, even without a mobility manager, with a few hours of staff time dedicated to creating a map and service schedule for Lewis County LOOP, for example. Taxi service standards greatly improve quality of life for soldiers at Fort Drum, but do not require any regulatory changes or funding. Whether through a Regional Transit Committee or a mobility manager, the longer-term recommendations requiring greater funding and collaboration can be tackled as monies and partnerships are formed and solidified.

STUDY PURPOSE

Since its reactivation in 1985, Fort Drum and the 10th Mountain Division have become an increasingly important influence in the region including Jefferson County and portions of Lewis and St. Lawrence counties, affecting economic development, the housing market, travel patterns, and many other aspects of daily life. The installation is by far the largest employer in the region and draws employees and visiting personnel from across the nation.

Living on-post are 8,500 single soldiers -- men and women who report from far away, are unfamiliar with the Watertown region, and do not have spouses or dependents. At the North Gate, there are an additional 2,000 housing units occupied by Fort Drum personnel. Fort Drum employs thousands of contractors and employees. Transit feasibility is based in large part upon density of need and destinations. Fort Drum has a high density of residents and jobs yet there is no viable option for getting around other than via private vehicle. Downtown Watertown, just 10 miles from the installation, contains the bulk of services, entertainment, and shopping needed by the Fort Drum community. With a goal of integrating the military community into the Watertown region, no schools or hospitals were built on-post. Military families rely on area schools for education, and on hospitals in Watertown and Carthage for medical services. Thus the needs of the community and the needs of Fort Drum are linked, and resources devoted to transportation for either group can be shared by both.

An impetus for this study has been the increased growth at Fort Drum. The installation has become the primary site of deployment for the Army, and as a result, its population and affiliated personnel have grown rapidly. In 2004, a third brigade was added to Fort Drum, drastically increasing the population. From 2004 to 2006, Fort Drum soldiers and family members increased from 21,000 to 34,000. Most recently approximately 7,000 soldiers have been deployed overseas. Given the new directive ending the war in Afghanistan, Fort Drum will have its full strength on base in 2013. In addition, changes to deployment schedules of one year overseas and two years at home have resulted in more families relocating to the Fort Drum region. This gradual increase in population will affect housing and transportation infrastructure.

At the same time, a need has been felt for transportation serving the general public communities in the Fort Drum impact region, defined as a radius of 30 miles from the North Gate. The Fort Drum Regional Liaison Organization and the Fort Drum Regional Health Planning Organization have coordinated considerable resources to improve housing and access to medical services in the region, and felt a broader look at the overall community's transportation needs was appropriate at this time of changing demographics at Fort Drum.

The following report details the demographics of the community, analyzes existing transportation services, and outlines a series of strategies to meet identified needs. The report is organized as follows:

Chapter 2: Demographic Profile includes housing and demographic information based on Census data and other area housing data. This chapter provides a backdrop for the needs assessment by looking at the spatial distribution of places of residence as well as of major destinations and employers, providing a broad-brush view of trip origins and destinations.

Chapter 3: Transportation Services inventories the area's existing transportation providers, including public transit, nonprofit providers, for-profit companies and specialized transportation programs. Where available, operating statistics and funding streams are catalogued to illustrate where and how transportation resources are utilized in the region.

Chapter 4: Military Installation Peer Review describes the transportation engagements of three peer military installations from across the country - Fort Bragg near Fayetteville, NC; Fort Hood near Killeen, TX; and Fort Riley near Manhattan, KS.

Chapter 5: Needs Assessment documents the three-pronged public outreach process undertaken during the study and analyzes overarching needs from the variety of communities and sub-groups in the region. Stakeholder interviews, focus groups, and a survey are all documented.

Chapter 6: Gap Analysis & Opportunities identifies spatial, temporal, programmatic, and informational gaps between existing service providers, government agencies, and customers.

Chapter 7: Funding Sources lists state and federal funds available.

Chapter 8: Implementation Models describes ways of governing the implementation of the service strategies, as well as a short and long-term implementation timeline.

Glossary: Definitions of technical terms and transportation planning phrases can be found here.

DEMOGRAPHIC PROFILE

Transit riders typically fit into certain demographic niches that are more prone to riding buses.

- "Choice Riders" - These are people who have a transportation option such as driving, but choose to take a different form of transport that offers them comparable quality of service or cost of service to driving. For example, a group may choose to carpool, which adds some time to their overall trip, because they save money on gas and vehicle wear and tear. A college student might take a bus rather than drive to avoid paying for parking. Many of Fort Drum's soldiers fit into this category, as most arrive with a car but the expense of owning a vehicle makes carpooling and sharing rides common.
- "Transit-Dependent Riders" - These are people who have no alternative except for public transportation to get around. These "transit-dependent populations" include older adults, people with disabilities, households with low income, and households without a vehicle. These riders either can no longer safely drive or cannot afford a vehicle.

These groups make up the basis of public transit ridership in most communities, thus representing the "market" for transit. This chapter first summarizes overall regional population and growth. This study began in April 2011, when 2010 Census data at all geographic levels had not yet been released, thus analysis uses the most recent and reliable data available. To understand the transit-dependent market, density maps showing populations that typically rely upon transit were created. To understand the choice rider market, data on major employers and destinations in the region were mapped.

POPULATION CHANGE

Many upstate New York communities have been experiencing population declines in recent years; however, the Fort Drum impact region experienced population growth. Jefferson County experienced an overall growth in population of 4%, the fifteenth highest growth of all of New York State's 62 counties. Lewis and St. Lawrence counties both grew very slightly as well.

As of 2011, approximately 19,000 soldiers are assigned to Fort Drum. Of these, approximately 7,000 are deployed overseas. Deployed soldiers are not counted by the US Census and thus do not appear in the counts below. Soldiers assigned to the installation and living on-base in barracks are counted in these figures, as are soldiers residing off-base.

Figure 2-1 Population Change by County, 2000-2010

Jurisdiction	2000 Population	2010 Population	Total % Change
Fort Drum ¹	11,000 (2004)	19,247 (prj. 2013)	74.97%
Jefferson County	111,738	116,229	4.02%
Lewis County	26,944	27,087	0.05%
St. Lawrence County	111,931	111,944	0.01%

Source: Census 2010

¹ Fort Drum total military personnel taken from the *Fort Drum Growth Management Strategy*, 2009, p. 17.

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On a finer grain, villages and towns did not always follow the overall patterns of their respective counties. Figure 2-2 displays the populations from 2000 and 2010 by village in the study area, as well as the percentage of population change.

**Figure 2-2 Population Change 2000-2010 in Fort Drum Study Area
in Order of Most to Least Change**

City, Town or Village	2000 Population	2010 Population	% Change
Jefferson County			
LeRay (Town)	19,836	21,782	9.8%
Brownville	1,022	1,119	9.5%
Adams	1,624	1,775	9.3%
Clayton	1,821	1,978	8.6%
Theresa	812	863	6.3%
Chaumont	592	624	5.4%
Black River	1,285	1,348	4.9%
Sackets Harbor	1,386	1,450	4.6%
Glen Park	487	502	3.1%
Evans Mills	605	621	2.6%
Watertown (City)	26,705	27,023	1.2%
Carthage	3,721	3,747	0.7%
Watertown (Town)	4,482	4,470	-0.3%
Alexandria Bay	1,088	1,078	-0.9%
Antwerp	716	686	-4.2%
West Carthage	2,102	2,012	-4.3%
Cape Vincent	760	726	-4.5%
Deferiet	309	294	-4.9%
Dexter	1,120	1,052	-6.1%
Ellisburg	269	244	-9.3%
Mannsville	400	354	-11.5%
Philadelphia	1,519	1,252	-17.6%
Herrings	129	90	-30.2%
Lewis County			
Castorland	306	351	14.7%
Port Leyden	665	672	1.1%
Lowville	3,476	3,470	-0.2%
Harrisville	653	628	-3.8%

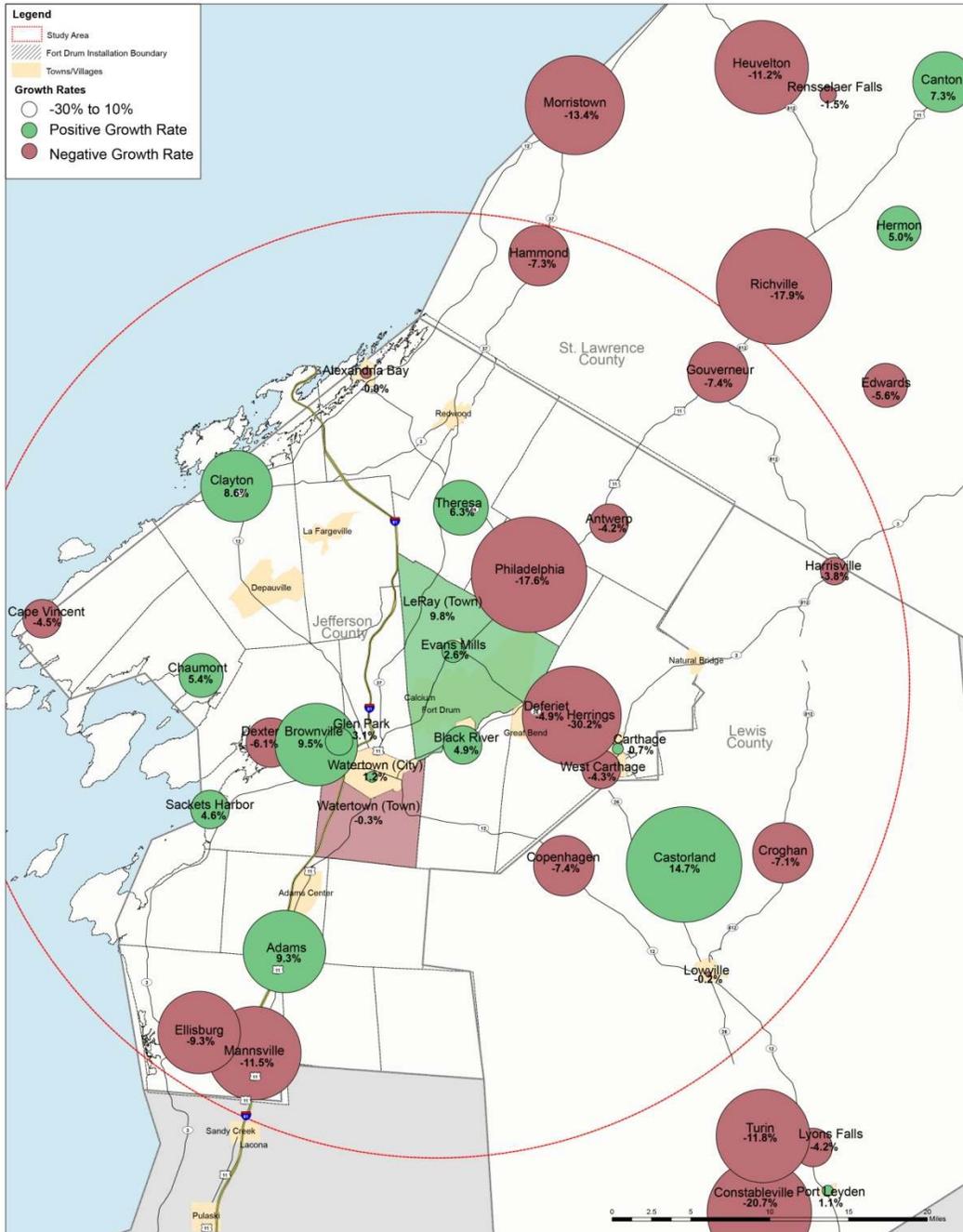
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City, Town or Village	2000 Population	2010 Population	% Change
Lyons Falls	591	566	-4.2%
Croghan	665	618	-7.1%
Copenhagen	865	801	-7.4%
Turin	263	232	-11.8%
Constableville	305	242	-20.7%
St. Lawrence County			
Richville	274	323	17.9%
Canton	5,882	6,314	7.3%
Hermon	402	422	5.0%
Rensselaer Falls	337	322	-1.5%
Edwards	465	439	-5.6%
Hammond	302	280	-7.3%
Gouverneur	4,263	3,949	-7.4%
Heuvelton	804	714	-11.2%
Morristown	456	395	-13.4%

Source: Census 2000 and 2010

Figure 2-3 displays the population changes geographically for 2000 to 2010. The communities nearest to Fort Drum grew the fastest, with the Town of LeRay achieving the fastest growth rate in Jefferson County at 9.8%, while most communities in St. Lawrence and Lewis counties lost population at relatively high rates. Note that several communities have extreme growth rates due to their very small populations, such as the village of Herrings with -30.2%. Herrings' absolute population in fact only dropped by 39 individuals.

Figure 2-3 Population Change 2000-2010 in Fort Drum Study Area



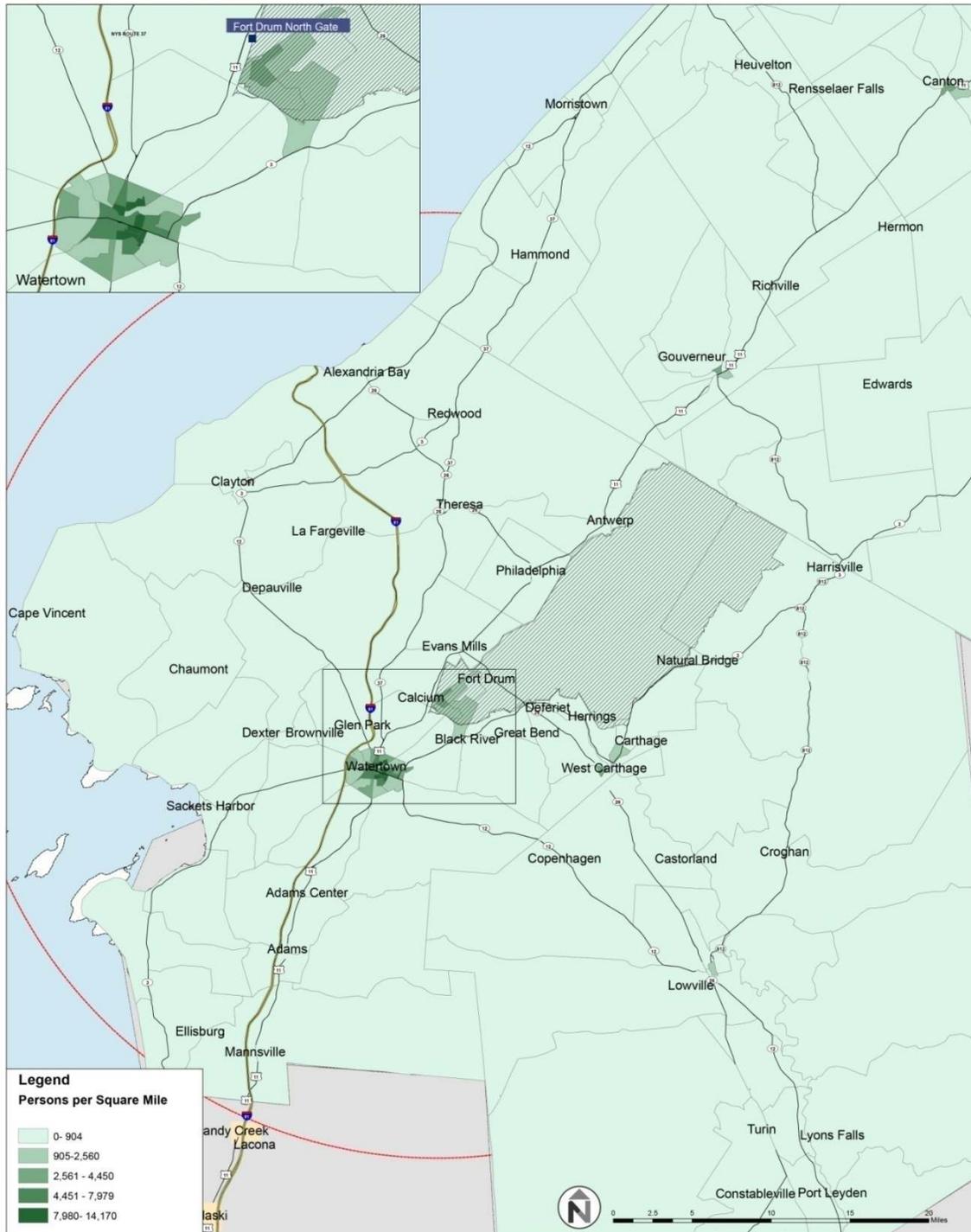
Population Density

Population density is mostly very sparse in the study area. Several pockets of high density are present in Watertown, Lowville, Gouverneur, Canton and Carthage, as well as at Fort Drum. Census block groups in eastern Watertown show the highest densities.

A general guideline for population density that will support local fixed-route bus service is approximately 3,000-4,000 persons per square mile, or 5-10 dwelling units per acre²; however, myriad factors beyond density affect transit ridership, including service design, transit incentives, and marketing. These minimum transit-supportive densities do occur in a few of the population centers in the Fort Drum region, including Watertown, Fort Drum, and Gouverneur. Other types of transit service can be designed to accommodate lower density areas, such as flex services and other hybrids of demand-response and fixed routes.

² *Toolbox for Alleviating Traffic Congestion*. Institute for Traffic Engineers.

Figure 2-4 Persons per Square Mile by Block Group (Census 2010)



Population density can represent where the most people live per square mile, but the varying sizes of Census Block Groups can mask important residential nodes in the region.³ The following list and map of major apartment complexes in the study area paint a more detailed picture of where some military families or transit-dependent populations live. Most of these complexes are in Jefferson County, with a number of the larger ones in Watertown. The largest is a 512-unit complex in Evans Mills called Eagle Ridge Village.

In the map, the size of the orange dot indicates the number of total units in the complex.

Figure 2-5 Major Apartment Complexes

Name	Total Units	Address	City	County
Eagle Ridge Village	512	26095 Kestrel Drive	Evans Mills	Jefferson
The Heights	300	26889 Anabel Avenue	Evans Mills	Jefferson
Woodcliff Community	300	26185 Jewett Place	Calcium	Jefferson
Truscott Terrace	256	207 A Wealtha Avenue	Watertown	Jefferson
Mountaineer Estates	224	256 Michigan Avenue	Watertown	Jefferson
Ontario Village Apartments	208	1296-2 Coffeen Street	Watertown	Jefferson
Summit Woods	200	2240 Kristina Park	Watertown	Jefferson
Pleasant Creek Meadows	156	28484 Robin Lane	Evans Mills	Jefferson
Friends Settlement	150	300 Quaker Avenue	Philadelphia	Jefferson
Kelsey Creek Apartments	132	1206 Superior Street	Watertown	Jefferson
Madison Barracks	130	85 Worth Road	Sackets Harbor	Jefferson
Forest Hills	126	940 Emjay Way	Carthage	Jefferson
Sedgewick Pines	122	836 Tamarack Drive	W. Carthage	Jefferson
Fort Pike Commons	120	133 General Grant Circle	Sackets Harbor	Jefferson
Gabriel Courts	120	1815 Olmestead Drive	Watertown	Jefferson
Wood Creek Apartments	104	25382 Virginia Smith Drive	Calcium	Jefferson
Lonsway Hill	100	Purcell Drive	Clayton	Jefferson
The Ledges	100	26686 Boyer Circle	Evans Mills	Jefferson
Wood Creek Village	96	Larch Circle	Gouverneur	St. Lawrence
Heather Acres	94	21825 Heather Acres Drive	Watertown	Jefferson
Starwood Apartments	91	845 Starbuck Avenue	Watertown	Jefferson
Constitution Court	75	Sleepy Hollow Road	Gouverneur	St. Lawrence
Deer River Estates	75	Phalen Drive	Copenhagen	Lewis

³ Larger block groups indicate a more diffuse population base, but can still be home to important pockets of population or transit need.

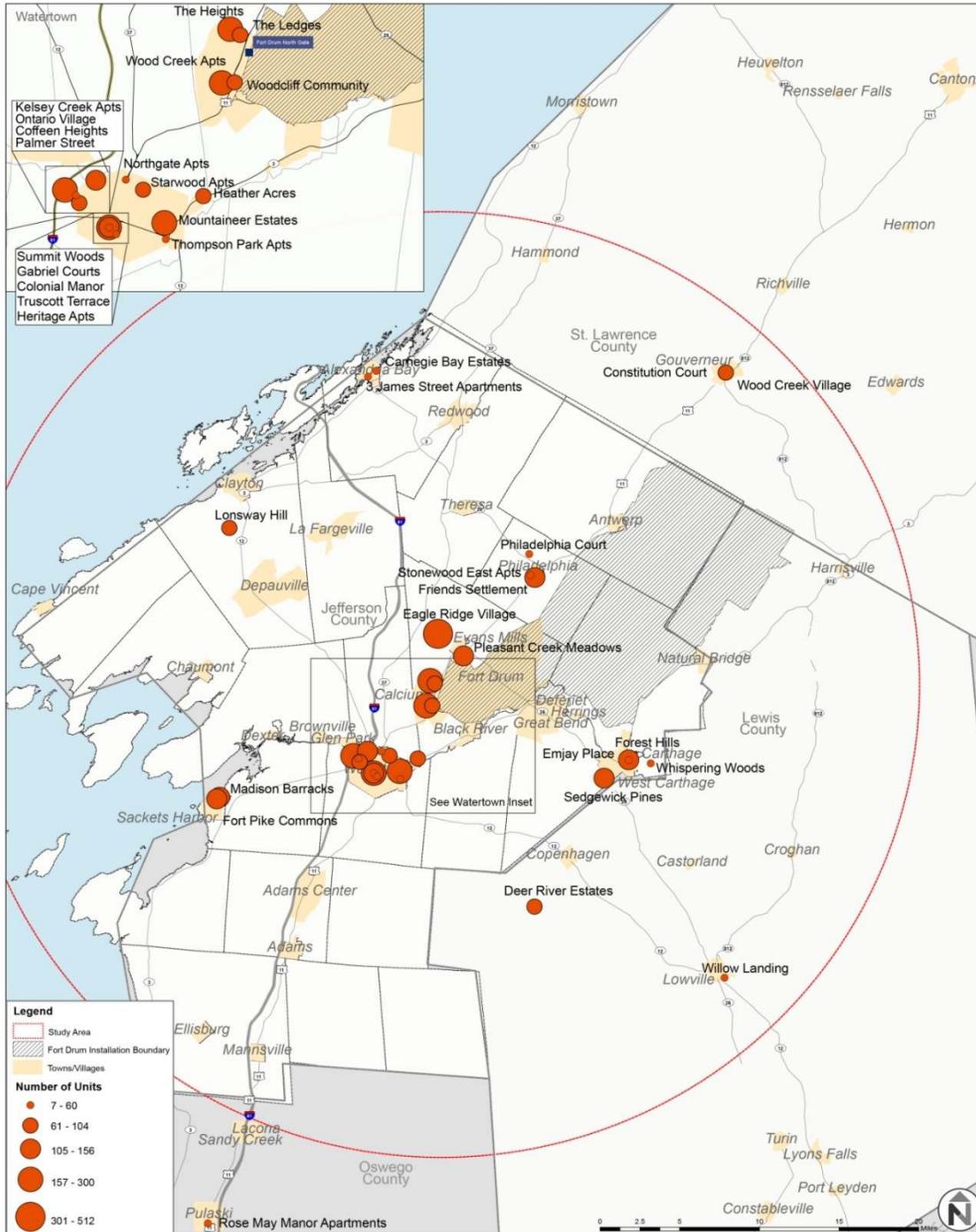
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Name	Total Units	Address	City	County
Palmer Street Apartments	70	224 Palmer Street	Watertown	Jefferson
Philadelphia Court	60	661 E. Main Street	Philadelphia	Jefferson
Stonewood East Apartments	60	746 Stonewood Drive	Philadelphia	Jefferson
Willow Landing	56	Hemlock Drive	Lowville	Lewis
Colonial Manor	44	NYS Route 3	Watertown	Jefferson
Whispering Woods	44	21246 Oxford Street	Carthage	Jefferson
Emjay Place	40	940 Emjay Place	Carthage	Jefferson
Rose May Manor Apartments	38	19 Scotch Grove Road	Pulaskia	Oswego
Thompson Park Apartments	38	127 Spring Avenue	Watertown	Jefferson
Heritage Apartments	33	522 Washington Street	Watertown	Jefferson
Carnegie Bay Estates	30	66-68 Anthony Street	Alexandria Bay	Jefferson
Northgate Apartments	26	983 LeRay Street	Watertown	Jefferson
Coffeen Heights Apartments	25	1106 Coffeen Street	Watertown	Jefferson
3 James Street Apartments	7	3 James Street	Alexandria Bay	Jefferson

Source: Fort Drum Regional Liaison Organization

Given the high deployment rate and large number of soldiers trained at Fort Drum, the housing market near and on the post is tight due both to the increased number of personnel assigned to Fort Drum in recent years and overall general public population growth. These conditions coincide with the recent phase-out of Section 801 extended lease subsidies for off-post housing and shuttle service between subsidized housing and the post. In Watertown, 30% of residential units are occupied by military families. As the population turns over every three to four years, there is a need for ground-up transportation education.

Figure 2-6 Major Apartment Complexes in the Study Area

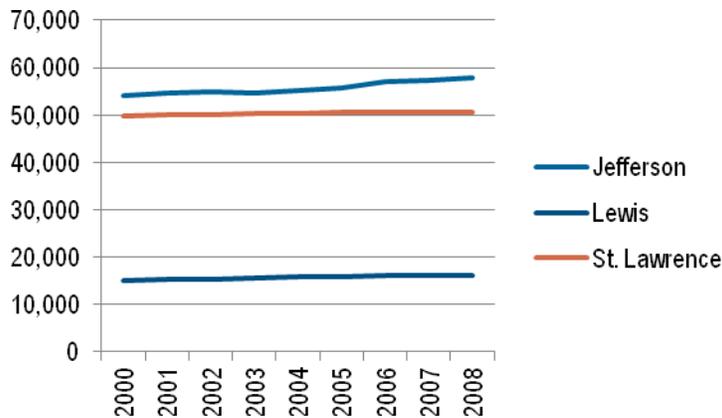


New Housing Construction

Other indications of the growth in population in the region include new housing units and certificates of occupancy.

Figure 2-7 shows the total number of housing units in each county based on Census data and the American Community Survey. Total housing units have increased steadily in Jefferson County since 2004 when an additional brigade was stationed at Fort Drum.

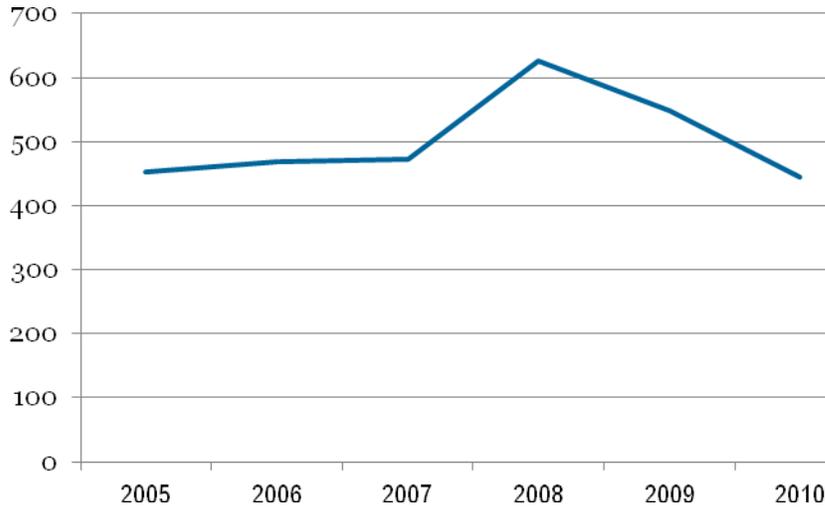
Figure 2-7 Total Housing Units 2000-2008



Source: Census 2000 and American Community Survey

Jefferson County tracks new issuances of certificates of occupancy for residential units in each of the county's towns and villages. In Figure 2-8, a visible increase in issuances occurred in 2008 and remained high in 2009, but returned to 2005 levels by 2010.

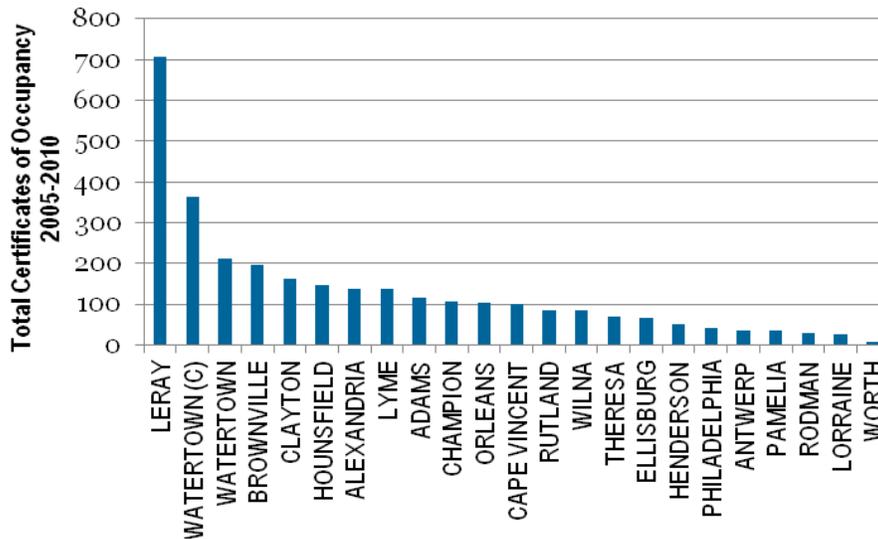
Figure 2-8 Total New Certificates of Occupancy 2005-2010 (Residential)



Source: Jefferson County Planning Department

Figure 2-9 shows these certificate issuances by town. LeRay, the town where Fort Drum is primarily located, had by far the highest numbers of new certificates of occupancy for residential units, approximately double the number in the second-highest jurisdiction, the City of Watertown.

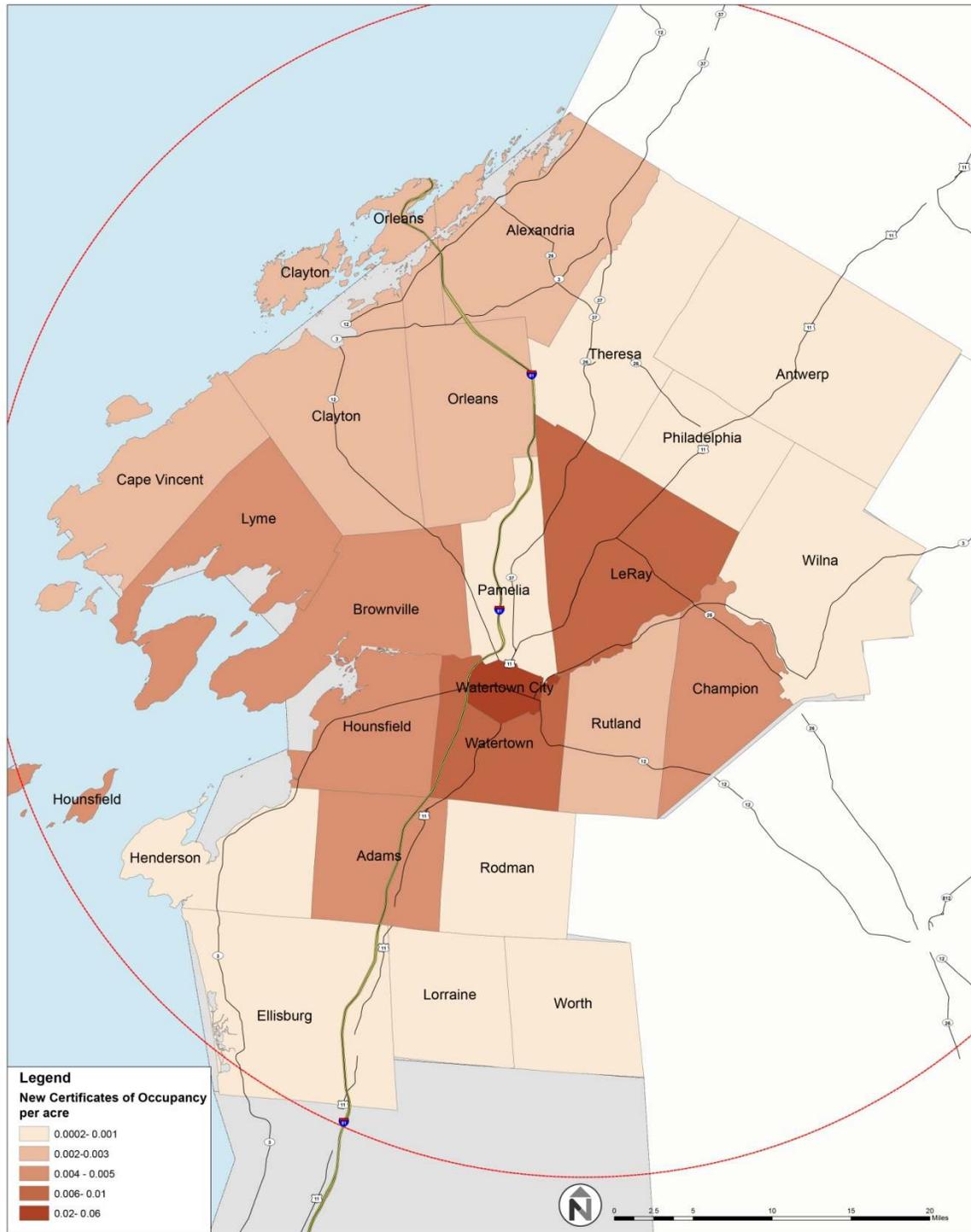
Figure 2-9 Total New Certificates of Occupancy by Town 2005-2010 (Residential)



Source: Jefferson County Resource Maps, <http://www.co.jefferson.ny.us/index.aspx?page=365>

Figure 2-10 maps the number of certificates of occupancy per acre between 2005 and 2010. Again, LeRay, the City of Watertown, and the Town of Watertown show the highest density of new certificates of occupancy for the time period.

Figure 2-10 Total Certificates of Occupancy per Acre 2005-2010



TRANSIT DEPENDENT POPULATIONS

Several population subgroups are typically analyzed to indicate transit dependency in an area: adults over age 65, persons with disabilities, persons with low income, and households without a vehicle.

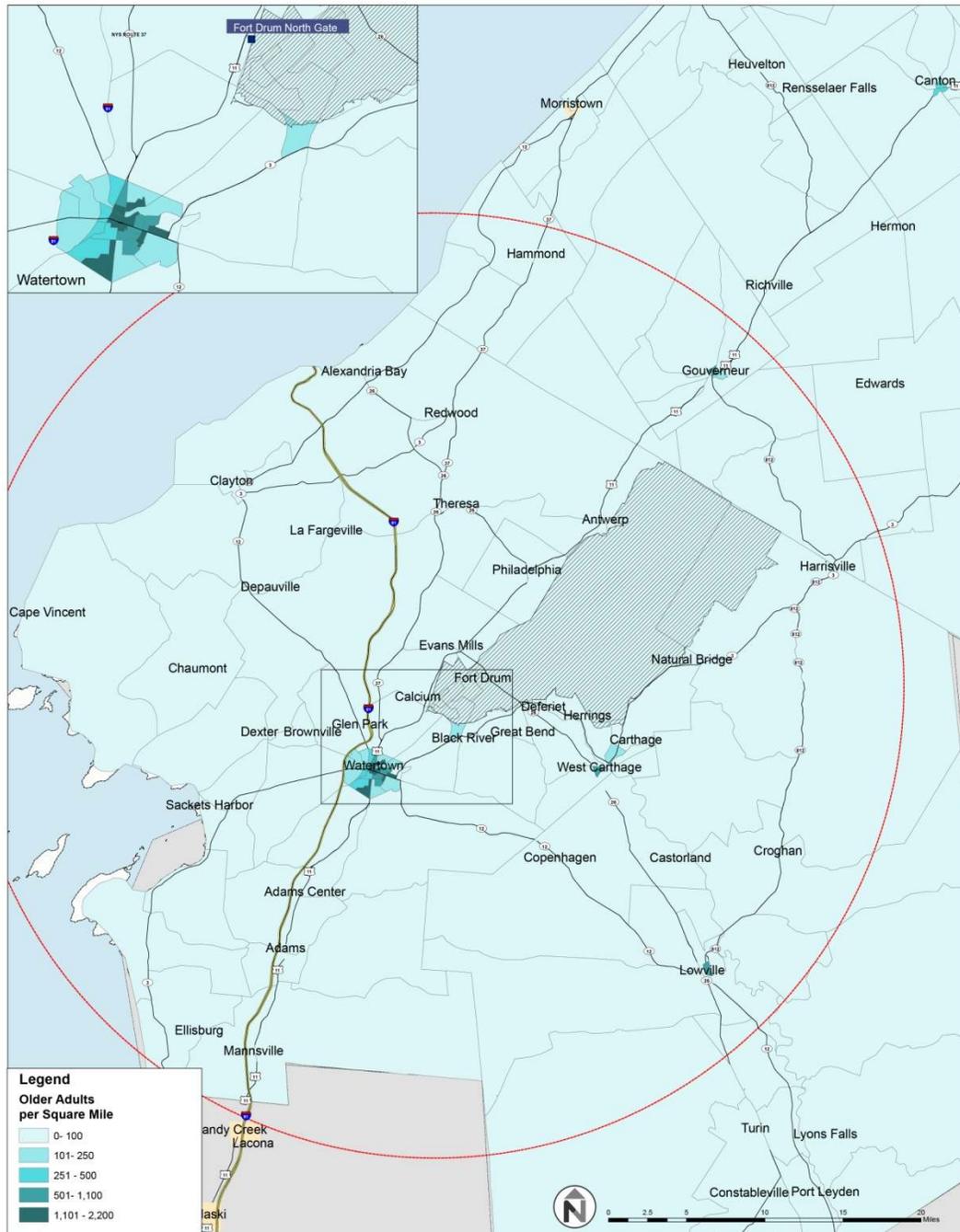
Census data from the most recent Decennial Census in 2010 is no longer available for several categories of transit dependent populations discussed here. Questions about disability, income, and vehicle availability are no longer part of the Decennial Census. Age data is still collected by the Decennial Census, but data at the block group level had not been released as of the writing of this report.

Data on disability, income, and vehicle availability are available through the American Community Survey 5-year estimates by village or town. However, in areas with small overall populations like most communities in the Fort Drum region, the sample sizes of these transit dependent populations are often smaller than the indicated margin of error, making the data extremely unreliable. This data cannot be used to indicate population numbers or densities. Thus, the following maps utilize Census 2000 data.

Older Adults

The highest densities of older adults in the study area are in southern and central Watertown, where several senior homes are located, as well as in West Carthage and Lowville.

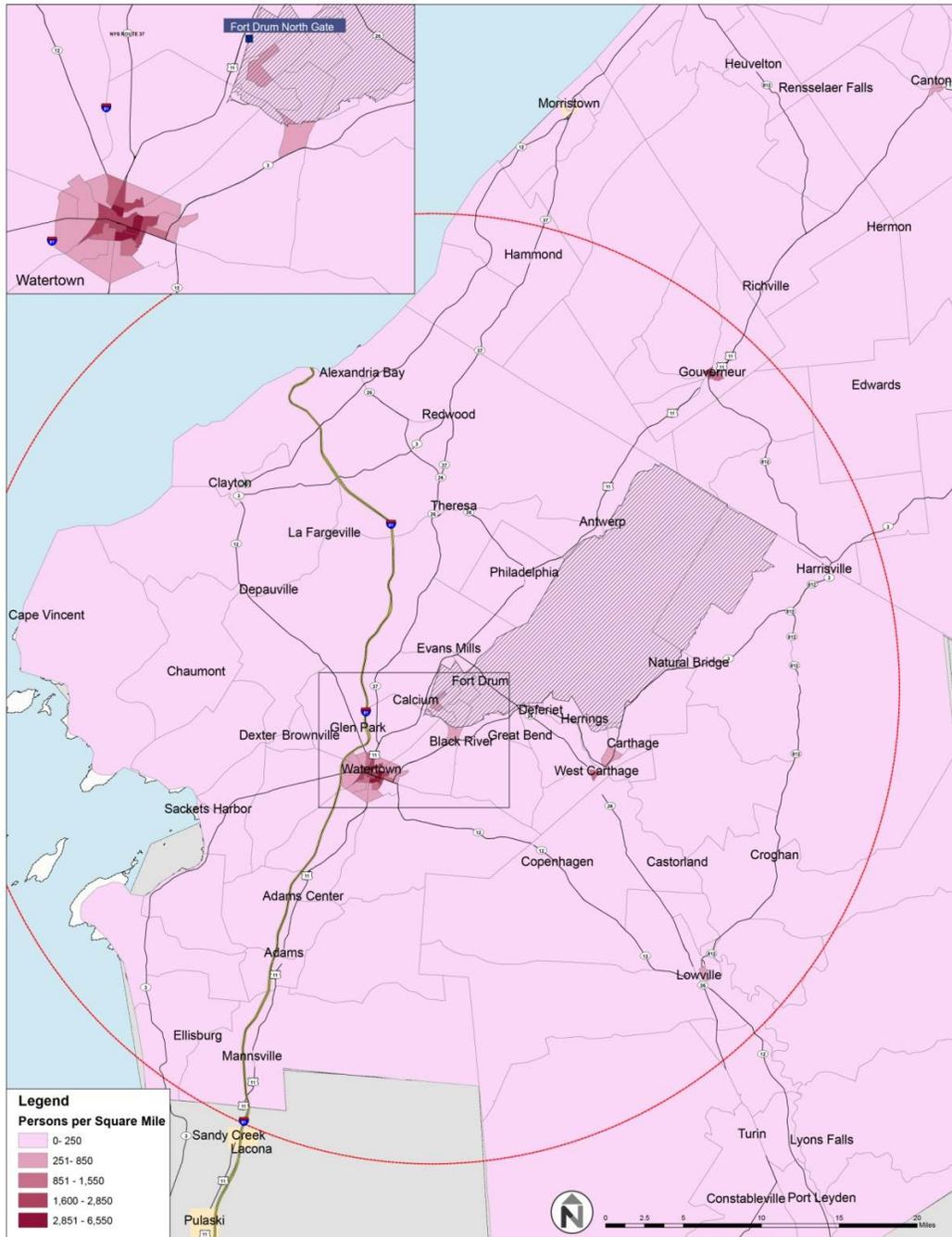
Figure 2-11 Older Adults per Square Mile by Block Group



Persons with Disabilities

Eastern Watertown, Gouverneur, and West Carthage indicate the highest density of persons with disabilities per square mile.

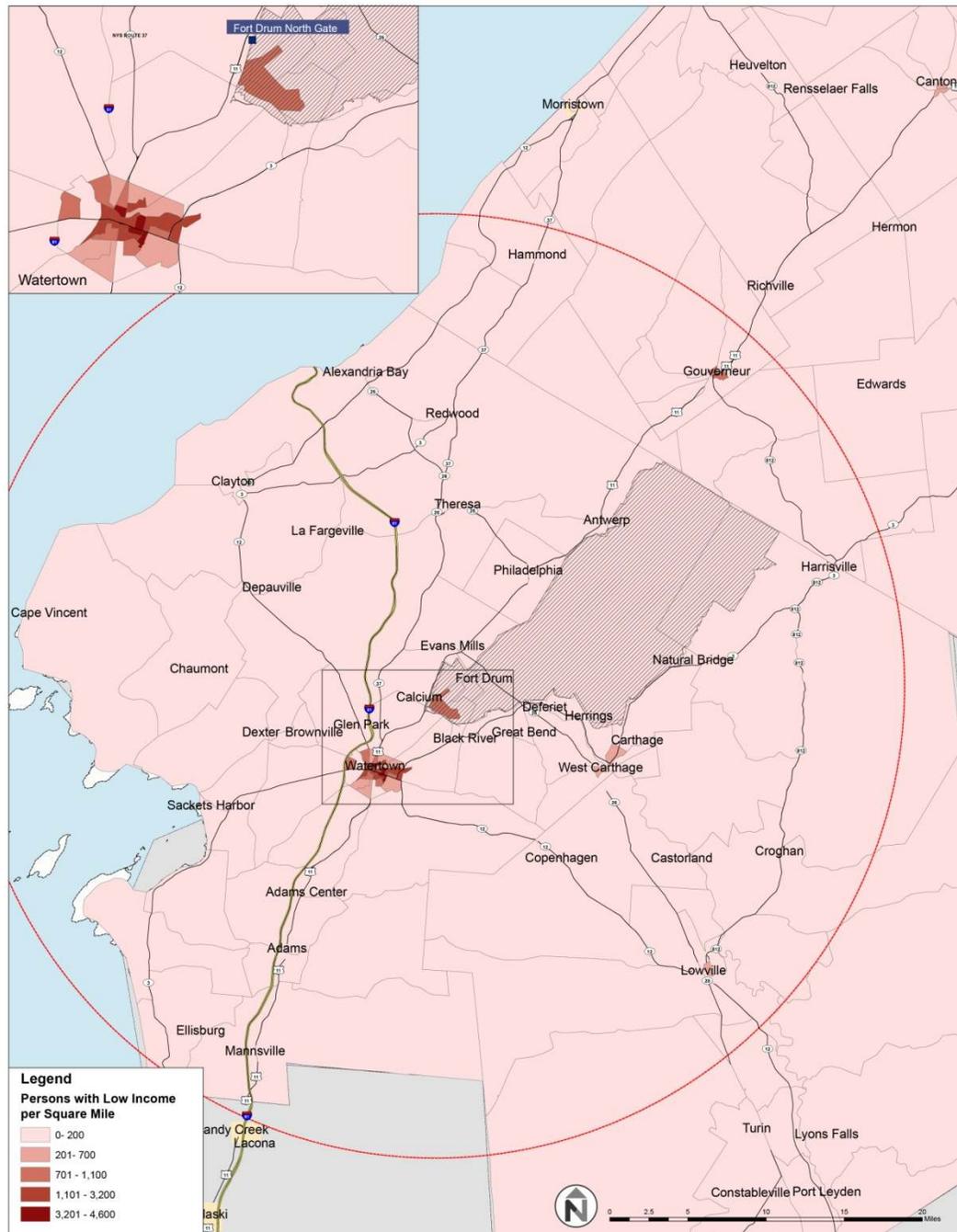
Figure 2-12 Persons with Disabilities per Square Mile by Block Group



Persons with Low Income

High concentrations of persons with low income are indicated in eastern Watertown and at Fort Drum. Small pockets also exist in Gouverneur, Carthage and Lowville.

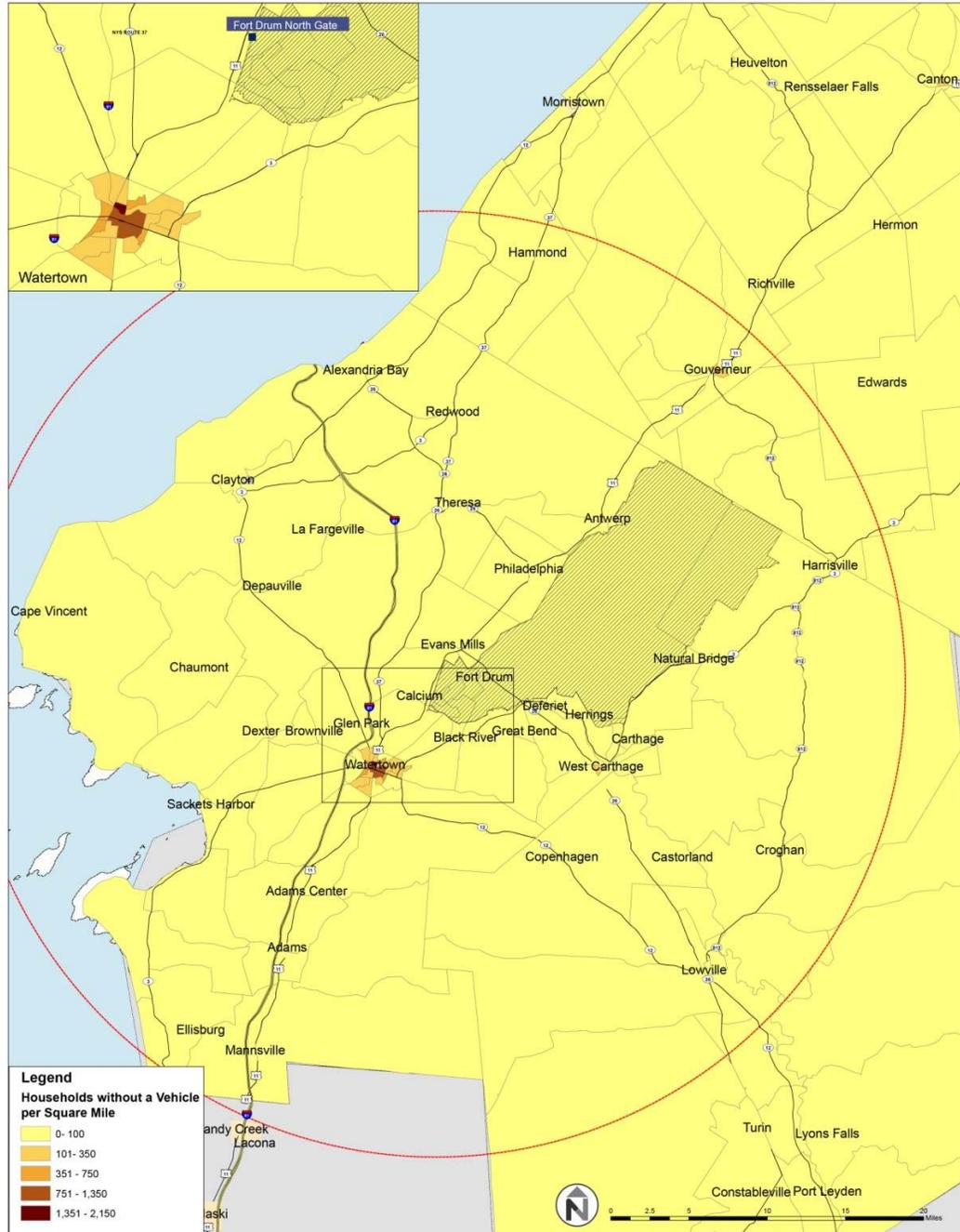
Figure 2-13 Persons with Low Income per Square Mile by Block Group



Households without a Vehicle

The highest densities of households without a vehicle are in central Watertown with small pockets in West Carthage and Gouverneur.

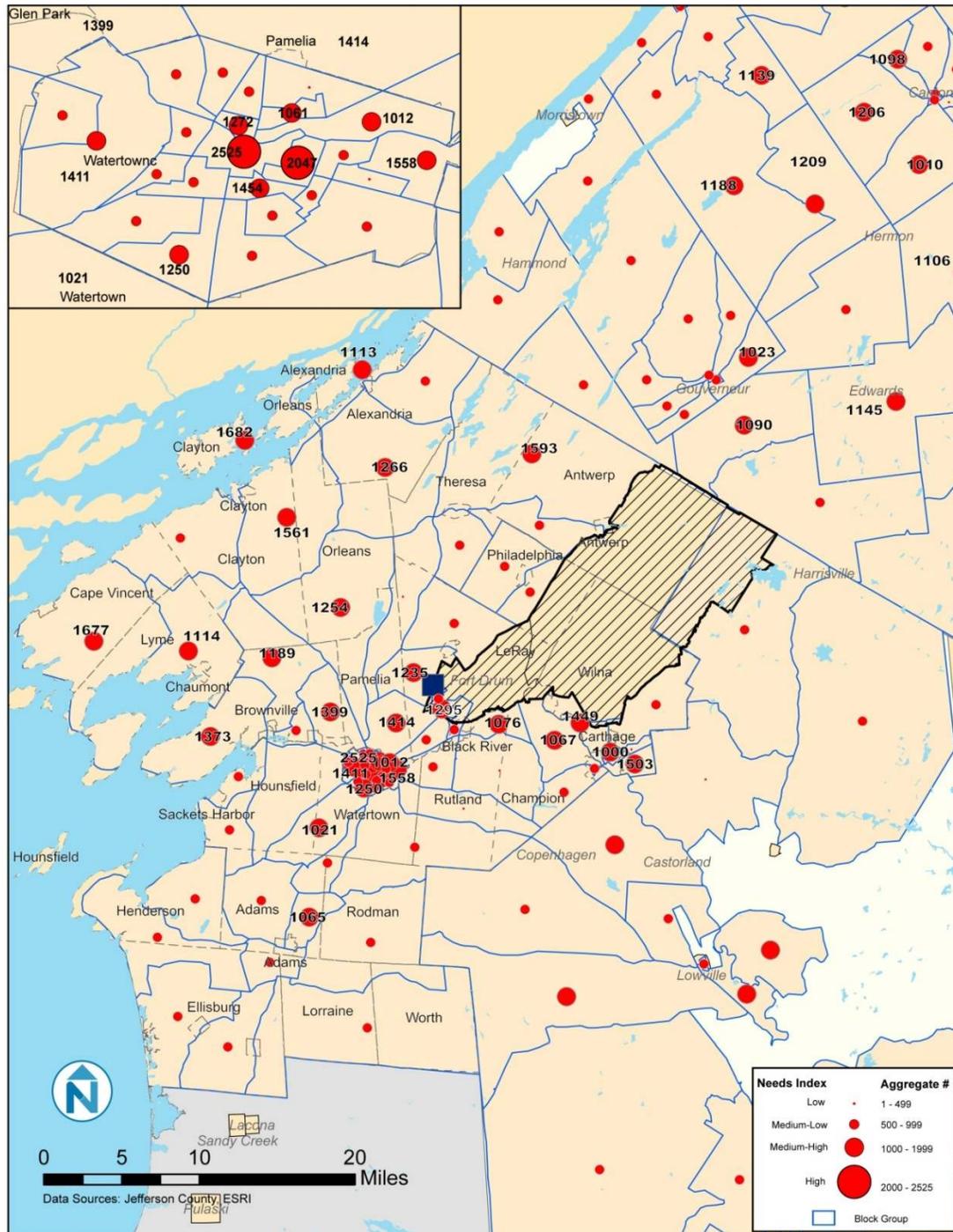
Figure 2-14 Households without a Vehicle per Square Mile by Block Group



Aggregate Need

By adding together all the transit-dependent populations per block group, a picture of the aggregate need for transportation can be seen. The following map shows the total tallied transit-dependent responses per block group. Some Census respondents may fall into more than one category; however, this still gives a sense of the scope of transit need.

Figure 2-15 Aggregate Need



Clearly the market analysis shows that Watertown, Lowville, Gouverneur, and to some extent Carthage and Calcium have the highest concentrations of overall population, transit-dependent population, destinations, and jobs.

MAJOR DESTINATIONS

Locating the most commonly traveled-to sites around the study area can help indicate primary travel corridors and travel patterns. This analysis includes destinations for both choice riders and transit-dependent riders who tend to frequent social services and senior programs. Major destinations include a range of sites such as shopping centers, educational facilities, medical centers, dialysis clinics, senior centers, congregate meal sites,⁴ and other community resources such as libraries or town/county/village offices.

In the Tri-County Area, many major destinations are also major employers, indicating that residents are traveling during both commuting and non-commuting hours to the same areas.

Figure 2-16 lists the major destinations in the Fort Drum region.

Figure 2-16 Major Destinations

Destination	Address	City/Town/Village	County	Type
Jefferson Community College	1220 Coffeen Street	Watertown	Jefferson	Education/Employment
Salmon Run Mall	21182 Salmon Run Mall Loop West	Watertown	Jefferson	Shopping
Hannaford Foods	6304 Arsenal Street	Watertown	Jefferson	Shopping
Price Chopper	1283 Arsenal Street	Watertown	Jefferson	Shopping
Big Lots	1125 Arsenal Street	Watertown	Jefferson	Shopping
Samaritan Hospital	830 Washington Street	Watertown	Jefferson	Medical/Employment
Samaritan Medical Plaza	1575 Washington Street	Watertown	Jefferson	Medical/Employment
Flower Memorial Library	229 Washington Street	Watertown	Jefferson	Community
Watertown City Hall	245 Washington Street	Watertown	Jefferson	Community
Renal Care - Northern New York	19328 US Route 11	Watertown	Jefferson	Dialysis
Jefferson Rehabilitation Center	380 Gaffney Drive	Watertown	Jefferson	Medical
Adams Senior Meal Site	87 E. Church Street	Adams	Jefferson	Senior Center/Meal Site
Alexandria Bay Senior Meal Site	46372 Co. Rte 1	Alexandria Bay	Jefferson	Senior Center/Meal Site
Antwerp Senior Meal Site	500 Lexington Avenue	Antwerp	Jefferson	Senior Center/Meal Site
Black River Senior Meal Site	224 LeRay Street		Jefferson	Senior Center/Meal Site
Carthage Senior Meal Site	222 State Street	Carthage	Jefferson	Senior Center/Meal Site
Chaumont Senior Meal Site	11385 New York 12E	Chaumont	Jefferson	Senior Center/Meal Site

⁴ Jefferson County Office for the Aging provides meals at 12 sites throughout the county.

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Destination	Address	City/Town/Village	County	Type
Clayton Senior Meal Site	914 Strawberry Lane	Clayton	Jefferson	Senior Center/Meal Site
Philadelphia Senior Meal Site	33019 US Route 11	Philadelphia	Jefferson	Senior Center/Meal Site
Sackets Harbor Senior Meal Site	112 N. Broad Street	Sackets Harbor	Jefferson	Senior Center/Meal Site
Watertown-Hilltop Senior Meal Site	113 West Main Street	Watertown	Jefferson	Senior Center/Meal Site
Watertown-Midtown Senior Meal Site	142 Mechanic Street	Watertown	Jefferson	Senior Center/Meal Site
Watertown-Skyline Senior Meal Site	454 Mill Street	Watertown	Jefferson	Senior Center/Meal Site
Lowville Free Library	5387 Dayan Street	Lowville	Lewis	Community
Beaver River Senior Center	9748 Main Street	Croghan	Lewis	Senior Center/Meal Site
Constableville Senior Meal Site	3059 Main Street	Constableville	Lewis	Senior Center/Meal Site
Copenhagen Senior Meal Site	6 Maple Avenue	Copenhagen	Lewis	Senior Center/Meal Site
Harrisville Senior Meal Site	14170 Church Street	Harrisville	Lewis	Senior Center/Meal Site
Lowville Senior Meal Site	Valley View Circle	Lowville	Lewis	Senior Center/Meal Site
Port Leyden Senior Meal Site	7108 North Street	Port Leyden	Lewis	Senior Center/Meal Site
Canton Meal Site	37 Riverside Drive	Canton	St. Lawrence	Senior Center/Meal Site
DeKalb Junction Meal Site	Josephine Street	DeKalb Junction	St. Lawrence	Senior Center/Meal Site
Edwards Meal Site	16 Trout Lake Street	Edwards	St. Lawrence	Senior Center/Meal Site
Morristown Meal Site	200 Morris Street	Morristown	St. Lawrence	Senior Center/Meal Site
Ogdensburg Meal Site	202 Washington Street	Ogdensburg	St. Lawrence	Senior Center/Meal Site
Star Lake Meal Site	4208 State Highway 3	Star Lake	St. Lawrence	Senior Center/Meal Site
St. Lawrence University	23 Romoda Drive	Canton	St. Lawrence	Education/Employment
SUNY Canton	34 Cornell Drive	Canton	St. Lawrence	Education/Employment
University Mall	5933 Us Highway 11	Canton	St. Lawrence	Shopping

MAJOR EMPLOYERS

The largest employer in the region is the 10th Mountain Division and Fort Drum, employing over 22,000 people. This figure includes 18,708 soldiers and 3,591 civilian employees. Other major employers include area hospitals, New York State offices, the counties of Jefferson, Lewis and St. Lawrence, local school districts, and several large industrial and manufacturing businesses, among others. Major employers in the three counties are listed in Figures 2-17, 2-18 and 2-19 below. In some instances, the total number of employees was not available.

Figure 2-17 Major Employers in Jefferson County

	Name	Street	Location	Employees
1	HQ 10th Mountain Division (LI) & Fort Drum	1000 10th Mountain Division Drive	Fort Drum	22,299
2	New York State	Various	Various	1800
3	Samaritan Medical Center	830 Washington Street	Watertown	1228
4	Jefferson County	175 Arsenal Street	Watertown	819
5	Jefferson Rehabilitation Center	Gaffney Drive	Watertown	713
6	Stream	146 Arsenal Street	Watertown	675
7	Watertown City School District	1351 Washington Street	Watertown	555
8	Jefferson-Lewis BOCES	20104 NYS Route 3	Watertown	500
9	Indian River Central Schools	32735B County Route 29	Philadelphia	500
10	New York Air Brake	748 Starbuck Avenue	Watertown	366
11	City of Watertown	245 Washington Street	Watertown	353
12	Wal-Mart 5497	25737 US Route 11	Evans Mills	335
13	Samaritan Keep Home	133 Pratt Street	Watertown	330
14	Carthage Area Hospital	1001 West Street	Carthage	300
15	Jefferson Community College	1220 Coffeen Street	Watertown	268
16	National Grid	21265 State Route 232	Watertown	261
17	Car-Freshener Corporation	21205 Little Tree Drive	Watertown	244

Source: Greater Watertown North Country Chamber of Commerce

Figure 2-18 Major Employers in St. Lawrence County⁵

	Name	Address	City
1	ALCOA	Park Avenue	Massena
2	Clarkson University	8 Clarkson Avenue	Potsdam
3	St. Lawrence-Lewis BOCES	139 State Street	Canton
4	Claxton-Hepburn Medical Center	214 King Street	Ogdensburg
5	Canton-Potsdam Hospital	50 Leroy Street	Potsdam
6	St. Lawrence County	80 State Highway 310	Canton
7	United Helpers Organization	8101 New York 68	Ogdensburg
8	St. Lawrence University	23 Romoda Drive	Canton
9	St. Lawrence NYSARC	6 Commerce Lane	Canton
10	SUNY Potsdam	44 Pierrepont Avenue	Potsdam

Source: St. Lawrence County website

Figure 2-19 Major Employers in Lewis County

ID	Name	Street	Town	Emp.
1	Lewis County General Hospital	7785 N State St	Lowville	375-400
2	County of Lewis	7660 N State Street	Lowville	350-375
3	Kraft Foods	7388 Utica Blvd	Lowville	300-325
4	Climax Manufacturing Co	7840 State Route 26	Lowville	275-300
5	Lowville Academy and Central School District	7668 State Street	Lowville	250-275
6	South Lewis Central School District	4264 East Road	Turin	225-250
7	ARC	7660 North State Street	Lowville	200-225
8	Fiber Mark, Inc	5492 Bostwick Street	Lowville	175-200
9	Wal-Mart Supercenter	7155 State Route 12	Lowville	175-200
10	Beaver River Central School District	9508 Artz Rd	Beaver Falls	150-175
11	Otis Techonology Inc.	6987 Laura Street	Lyons Falls	150-175
12	Copenhagen Central School District	3020 Mechanic Street	Copenhagen	100-125
13	QUBICA AMF Inc.	7412 Utica Boulevard	Lowville	100-125

Source: Lewis County Economic Development website and Lewis County Industrial Development Agency website

Major destinations in the region are scattered throughout Jefferson and Lewis counties, with particular densities in Watertown and Lowville. Canton in St. Lawrence County also has many

⁵ Number of employees was not available for St. Lawrence County

major destinations north of the region, outside of the 30-mile radius study area. Figure 2-20 maps the major destinations and employers in the region.

Figure 2-20 Major Study Area Destinations

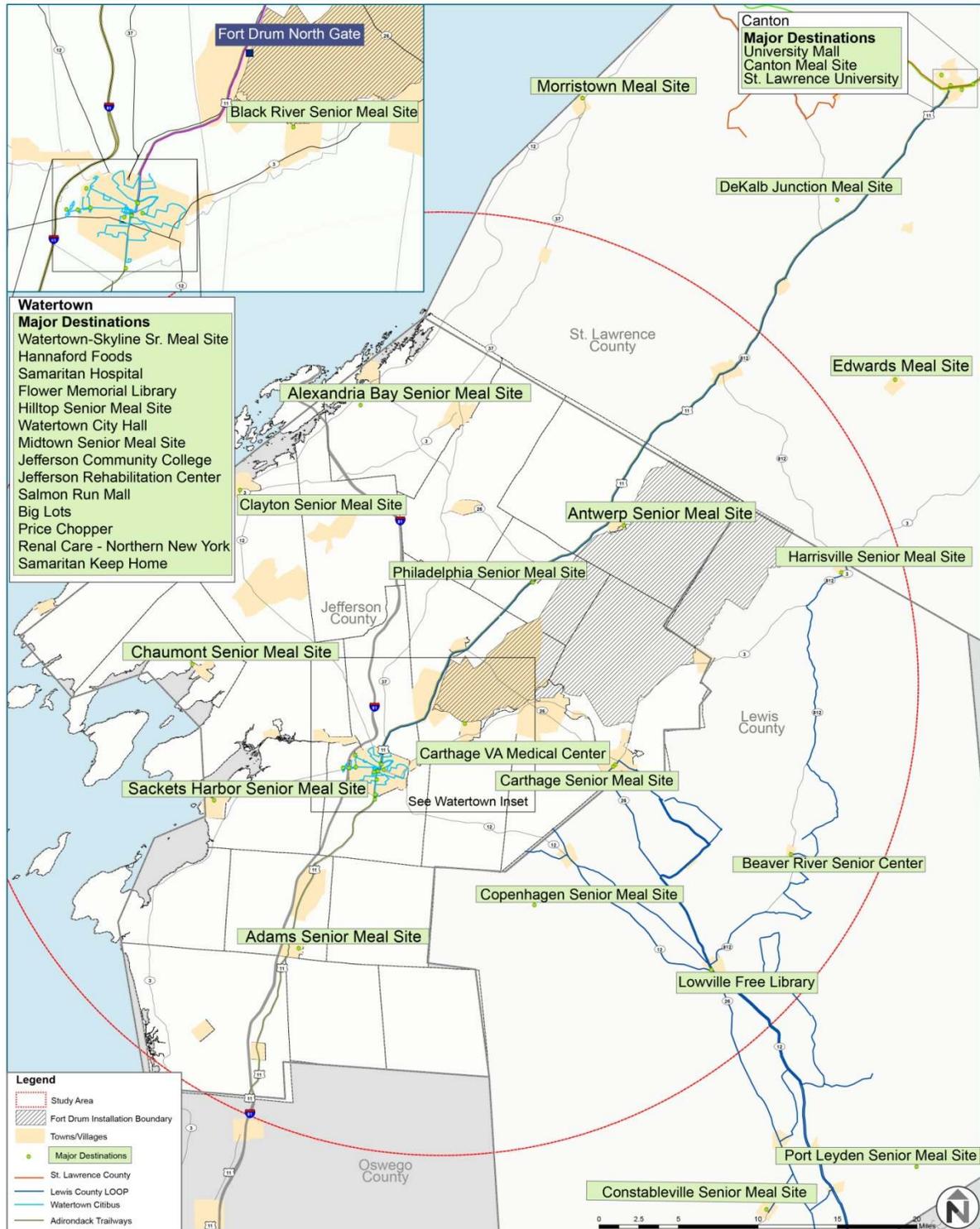
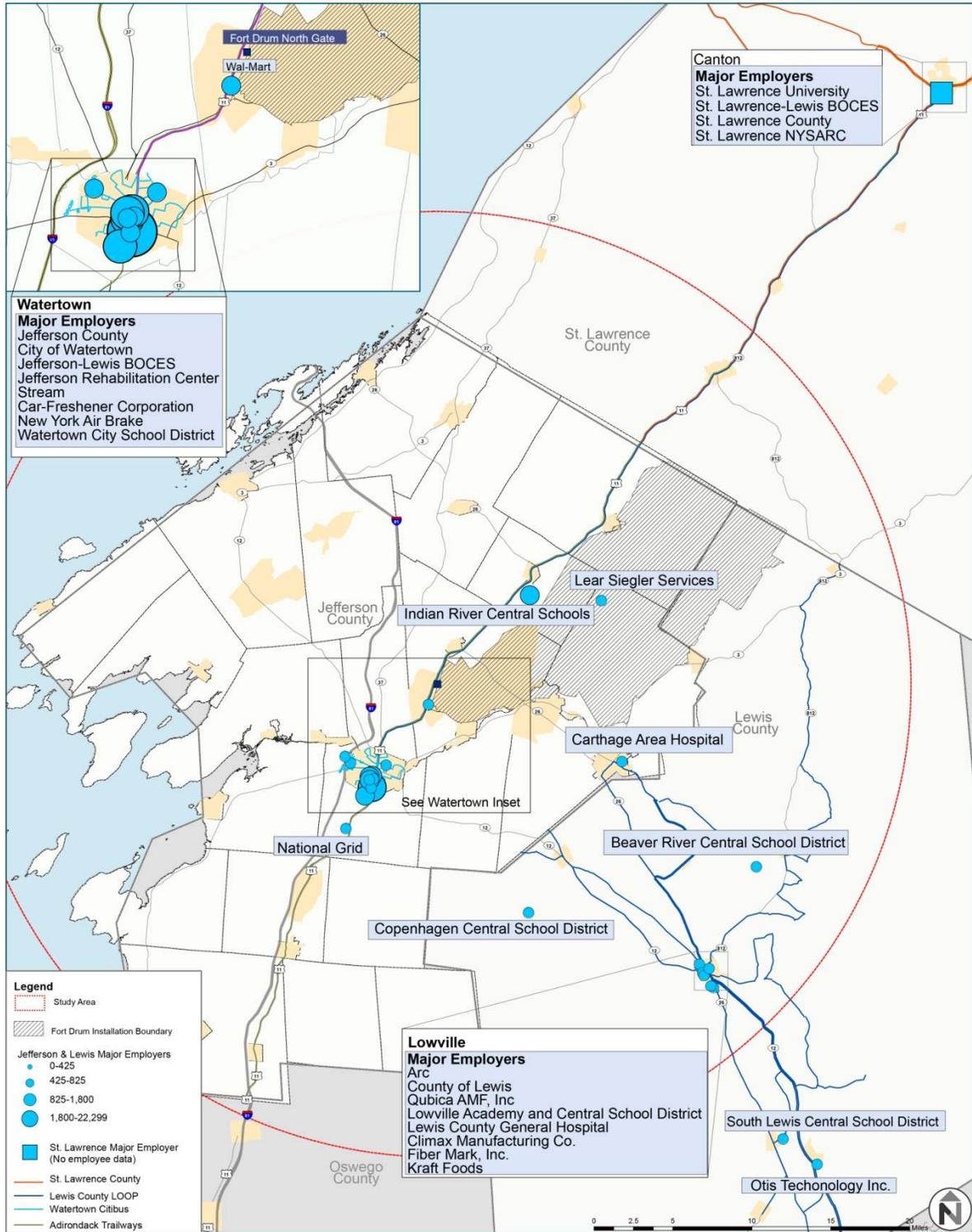


Figure 2-21 Major Study Area Employers



CONCLUSION

Successful transit service hinges upon appropriate concentrations of people, jobs, and services that can be linked. Since the region is quite rural, it is important to hone in on corridors that have the densities to support transit. From this analysis it becomes clear that there is a market for transportation in Lowville, Watertown, Carthage, Gouverneur, and Canton. The employment and destination data shows a clear concentration of destinations along the Route 11 corridor connecting Watertown to LeRay.

TRANSPORTATION SERVICES

The Fort Dum Installation Transportation Office operates a successful on-post shuttle whose ridership has more than doubled in the past two years. The region has three public transit operators in the three counties, two of which operate county-wide and the third confined to the City of Watertown. Complementing these transit providers is a strong network of nonprofits and human service transportation providers who transport individuals unable to use fixed-route service. This chapter discusses the major transportation providers and their operations in detail and lists other providers of more specialized transportation.

Figure 3-1 displays data on the major transportation providers in the region.

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Figure 3-1 Transportation Services in the Fort Drum Region

Agency	Eligibility	No. of Vehicles	Ridership			Operating Expenditures (2010)	Annual Operating Hours	Operating Cost per Hour	Operating Cost per Passenger	Passengers per Revenue Hour	Mobility Management Expenditures
			Annual	OR	Daily Average						
Watertown Citibus - Fixed Route	General Public	8	141,698	468 (March 2011)	\$672,918	8,842	\$76.10	\$4.75	15		
Watertown Citibus - Demand-Response	ADA-certified	3 (Contract w/ Guilfoyle)	8,668	28	\$74,072	6,162	\$12.02	\$8.55	1.4		
Lewis County LOOP	General Public	6	42,535 (2010)	163	\$609,785	6,647	\$91.74	\$14.34	6.4		
St. Lawrence Co. Public Transp.	General Public		30,000 (2010)	100-133	\$469,000	9,644	\$48.63	\$15.63	3.1		
Fort Drum	Fort Drum soldier	20	109,588 (2011)	300	\$238,374	6,570	\$36.28	\$2.18	16.7		
Volunteer Transportation Center	General Public; Medicaid recipient	102 volunteers	66,200 (2011)	285 (2011)	\$1,407,000 (2011)	N/A	N/A	\$21.25	N/A		
Jefferson Rehabilitation Center	JRC client	17	65,000	180 (May 2011) 250 (July 2011)	\$839,000	19,500	\$43.03	\$12.91	3.3		
St. Lawrence Co. NYSARC	NYSARC client	143	132,588 ARC 9,880 contract	508 ARC clients 38 contract riders (2010)	Not available	Not available	Not available	Not available	Not available		
Jefferson Co. DSS	Medicaid recipient	N/A	101,043 (2010)		\$2,226,606	N/A	N/A	\$22.03	N/A		
Lewis County DSS	Medicaid recipient	N/A	7,800 (2010)		\$399,342	N/A	N/A	\$51.19	N/A	\$52,200 (County-wide)	
St. Lawrence Co. DSS	Medicaid recipient	N/A	39,907 (2010)		\$1,878,000	N/A	N/A	\$47.06	N/A	\$25,000 (County-wide)	
Adirondack Trailways	General Public	124	35,828 (Syr. - Mess. Route)		Not available	Not available	Not available	Not available	Not available		
Totals		321	790,735		\$8,814,097						

Note: Figures in italics were calculated by study team and not directly reported by the agencies.

FIXED-ROUTE SERVICES

Fort Drum

In 2008 the installation began operation of four on-post shuttle routes. The following table shows the cost and ridership of these shuttles, which ran weekdays from 9:00 AM – 4:30 PM (0900-1630), on half-hour headways. The bus was not allowed in residential areas, highly limiting its utility. Operating costs were very high, ridership was low, and the installation discontinued service in 2009. Since each shuttle was one-hour in length, the shuttles operated 28 revenue hours of service per day or 7,308 hours per year, yielding an operating cost per hour or \$34.39.

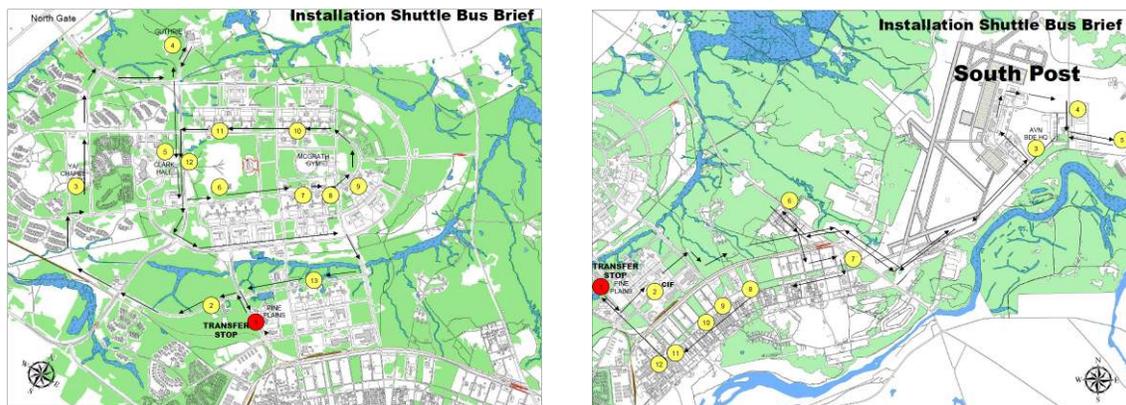
Figure 3-2 On-Post Shuttle Statistics (2008)

Shuttle	Bus Lease	Mileage	Wages	Total
North	\$17,400.00	\$32,907.84	\$76,373.28	\$126,681.12
South	\$17,400.00	\$30,851.10	\$76,373.28	\$124,624.38
Total	\$34,800.00	\$63,758.94	\$152,746.56	\$251,305.50

Passengers			
Shuttle	Passengers/Yr.	Expense Cost/Yr.	Cost/Passenger
North	14692	\$126,681.12	\$8.62
South	3550	\$124,624.38	\$35.11
Total	18242	\$251,305.50	\$13.78

Source: Fort Drum

Figure 3-3 Shuttle Routes (2008)



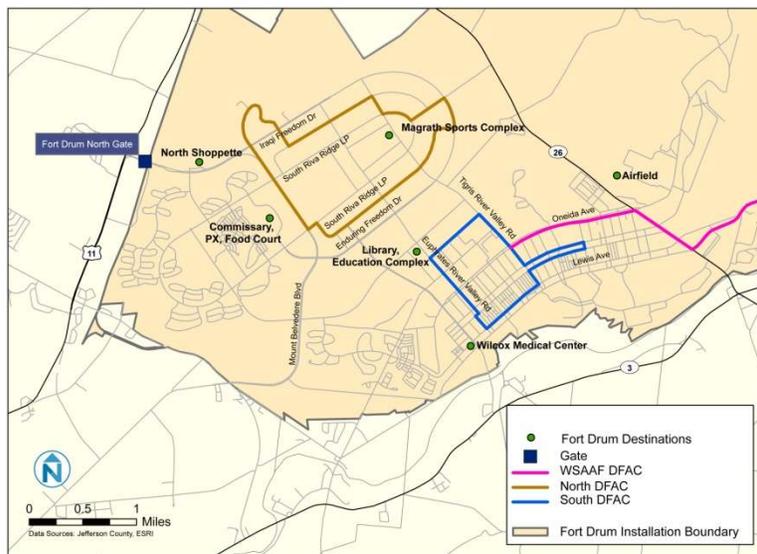
The installation has continued with on-post services only during meal times, on a continuous loop, which carried 40,063 passengers in 2010 and cost \$238,374 to operate for a cost of \$5.95 per passenger. The new routes are shown below. The four routes are operated for 18 hours per day seven days per week (4.5 hours per route), for a total annual operating hours of 6,570 and

operating cost per hour of \$36.28. Ridership skyrocketed to 109,588 from August 2010-September 2011. This increase can be attributed partially to installation of bus shelters, as well as support from officers in putting word out about the service.⁶ This increase brings cost per passenger down to \$2.18.

The Fort Drum's Installation Transportation Office leases 20 vehicles from the General Services Administration, of which 10 are typically in use at any given time. Fort Drum employees drive the shuttles.

For daily travel, soldiers typically arrive on Post between 6:30 and 7 AM for physical training. Those who live nearby typically go home to shower before returning to base around 9 AM. Many soldiers also leave base for lunch.

Figure 3-4 On-Post Transit Routes (2011)



Watertown Citibus

The Citibus fixed-route system consists of five local routes that run Monday through Friday 7 AM-6:15 PM and Saturdays 9:40 AM-5 PM. Citibus currently operates exclusively within the Watertown city limits with two exceptions: Salmon Run Mall west of I-81 and Kelsey Creek on Superior Street off US 11 in the Town of Watertown. Citibus also provides ADA paratransit service during the fixed-route service hours for eligible passengers living 3/4 mile from a route. ADA paratransit service is contracted out to Guilfoyle Ambulette.

Average daily ridership on Citibus fixed routes was approximately 468 one-way passengers. Routes A-1 and A-2 are interlined through the downtown area, as are C-1 and C-2. Complementary paratransit serves an additional 30 passengers per day. Figure 3-5 provides summary ridership and productivity statistics for the month of March 2011. Citibus is productive for a small urban system. Service is provided on eight 30' Orion brand buses.

⁶ Eric King, E-mail message, 9/6/2011

Figure 3-5 Citibus Fixed-Route Ridership by Route, March 2011

Route	Riders/ Month	Riders/ Day*	Weekday Revenue Hours	Passengers/ Revenue Hour
A-1 State-E. Main	2,583	96	5.25	18
A-2 Washington	1,219	45	4.67	10
B Arsenal	5,416	201	11.25	18
C-1 Northside Loop	2,179	81	5.25	15
C-2 Coffeen St-JCC	1,228	45	4.67	10
System Total	12,625	468	31.09	15

* 23 weekdays plus 4 Saturdays in March 2011.

Source: Citibus

Ridership has generally remained steady during the past three years. Citibus receives funding from several sources as shown in Figure 3-7.

Figure 3-6 Citibus Historical Annual Riders per Year

	FY 08	FY 09	FY 10	Annual Miles (FY10)
Fixed Route	146,711	150,221	141,698	111,157
Demand-Response	8,302	9,716	8,668	27,741

Source: Citibus

Figure 3-7 Citibus Funding Sources

Source	%	FY10 (Approx.)
Fares	20%	\$149,323
STOA & 5311	46%	\$343,615
City General Fund	32%	\$239,037
DSS	1%	10,000
Office for Aging	1%	\$5,000
Total		\$746,990

Source: Citibus phone interviews

Lewis County LOOP

In 2009, Lewis County opened its Arc routes to the general public. The county-sponsored service is called the Lewis County LOOP and is operated by Birnie Bus Service (BBS). In 2010, the LOOP carried 42,535 riders for a total of 199,396 revenue miles. Costs to operate the service were \$609,786. Revenue sources are included in Figure 3-8.

Figure 3-8 Lewis County LOOP Revenue Sources

Source	Amount
Contracts (Arc, UCP, DSS)	\$499,322
STOA	\$196,770
Local 5311 Match	\$19,787
5311	\$36,634
Fares	\$511
Total	\$752,513

Source: 5311 application

The LOOP carried forward approximately \$143,000 of net revenues into the following fiscal year 2011, based on FY 2010 actual operating cost of \$609,786 as shown in the following table. These data indicate that service productivity (passengers per revenue hour) is quite low and operating cost is high relative to many New York State rural transit systems

Figure 3-9 Lewis County LOOP Operating Statistics

Description	Amount
Total Operating Cost	\$609,786
Total Revenue Miles	199,396
Cost per Revenue Mile	\$3.06
Passengers per Revenue Mile	0.21
Total Revenue Hours	6,647
Cost per Revenue Hour	\$91.74
Passengers per Revenue Hour	6.4

Source: 5311 application and LOOP schedules

St. Lawrence County

St. Lawrence County began offering public transit service in 2005 and contracts with Roethel Coach Lines to operate six routes. Routes 1, 2, and 3 generally run between Ogdensburg, Canton, and Potsdam on schedules consisting of two or three round trips per day. Two routes bring people into Ogdensburg and Potsdam, with service from different areas on different days of the week. Route 6 serves Gouverneur to Watertown, with stops in Philadelphia and the LeRay WalMart for three round trips per day. This route carries approximately 30-35 one-way passengers per day, or 800 passengers per month with service provided weekdays and Saturdays. Effective July 1, 2011, the county doubled one-way trip fares on all routes from \$2 to \$4.

The system overall currently operates 30,000 one-way trips each year, serving between 100 and 133 people per day. In 2011, discussions were held regarding the future of public transit in St. Lawrence County. The County Legislature decided to keep public transit for the time being and issue an RFP for operation of the service in 2011.⁷

Currently, the service receives the following funds:

Figure 3-10 St. Lawrence County Funding & Expenditures

Revenue	Dollars (approx)	Expenses	Dollars (approx)
STOA	\$200,000	Contract to Roethel (net of fares)	\$308,000
5311	\$100,000	Fuel (county access to state rates)	\$90,000
County	\$110,000	Salary & Fringe	\$50,000
JARC	\$59,000	Marketing	\$2,000
Total	\$469,000	Total	\$450,000

* Note: These are approximate dollar amounts so revenue does not equal expenses. Source: St. Lawrence County phone interviews.

⁷ <http://www.watertowndailytimes.com/article/20110524/NEWS05/305249927>

The JARC fund is a two-year \$150,000 grant that will run out in the first quarter of 2012 and has not been renewed. The JARC grant was used to operate the Gouverneur-Watertown route.

Adirondack Trailways

Trailways operates intercity bus service between Massena and Syracuse en route to New York City via US 11 and I-81, a distance of approximately 160 miles. Major stops within the study area include Massena, Potsdam, Canton, Gouverneur and Watertown. The daily schedule consists of two southbound trips arriving in Watertown at 8:15 AM and 2:35 PM, and two northbound trips departing at 8:35 AM and 6:50 PM. The one-way fare for service between Gouverneur and Watertown is \$9.50. Military personnel receive a 10% discount.

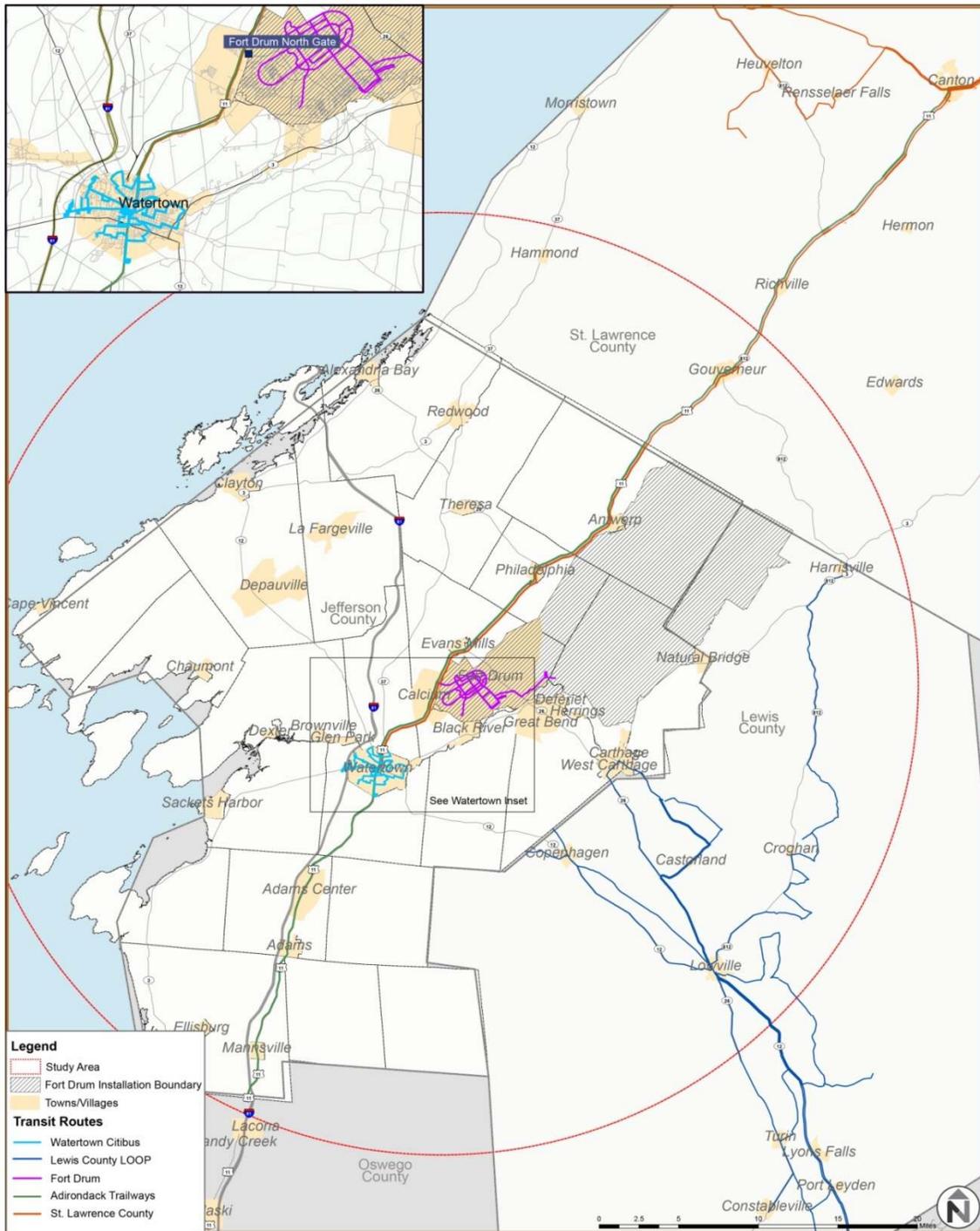
St. Lawrence County's route 6 overlaps with Trailways service from Gouverneur to Watertown. While it is not on the published schedule, operators will pick up soldiers waiting at the North Gate on Route 11. Trailways cannot distinguish actual ridership between Gouverneur and Watertown; however, its ticket offices reported that in the month of August, Trailways sold 65 tickets at the Gouverneur terminal and 921 in Watertown.⁸ Anyone boarding along Route 11 must pay their fare for their final destination at the next terminal; therefore a soldier boarding at the North Gate and heading to Syracuse pays their fare at Watertown. The very high number of tickets bought at Watertown shows a heavy southbound travel pattern.

Oneida Transit

There is some service connecting to Oneida County via Oneida County Rural Transit, which operates a route from Lowville to Utica that costs \$11 round trip. The schedule is limited, however, with no midday service for return trips.

⁸ Anne Noonan, phone interview 10/3/11

Figure 3-11 Fixed-Route Transit Services in the Fort Drum Region



NON-PROFIT PROVIDERS

Volunteer Transportation Center

The Volunteer Transportation Center has a pool of 80-100 volunteer drivers who make 200-260 one-way trips per day, totaling 66,200 one-way trips in 2010. Service is not provided where public transit exists. VTC uses a software scheduling system to maintain client and dispatch records; however, a human operator still makes the decision to dispatch the nearest driver to the client. Volunteers are reimbursed at the rate of \$0.51 per mile and pay back a small percentage to VTC for annual administrative costs.

In 2006, the VTC took over the Jefferson County Department of Social Services' volunteer driver program; DSS still screens clients, but VTC organizes those clients' transportation. VTC also runs Lewis County's volunteer program as of July 2011. VTC's presence in St. Lawrence County is mainly comprised of clients seeking dialysis treatment in Watertown. VTC uses a dispatch service to group rides and minimize trip cost, since reimbursements are calculated per mile, not per passenger.

Drivers are typically retired or on a fixed income, and working as a volunteer driver helps cover their automobile costs. Acquiring new volunteer drivers is relatively easy, but currently VTC is at capacity for administrative and operating costs. Given the rural nature of the study area, each trip is quite long; in 2010 VTC provided 2,115,000 miles, with an average mileage per trip of 32 miles. Operating costs are \$1.4 million, nearly all of which goes to mileage reimbursements.

VTC receives the following funding streams:

- Jefferson County DSS
- United Way of Northern NY
- Association for the Blind and Visually Impaired
- Jefferson County Office for the Aging
- Renal Dialysis of Northern New York
- Fundraising

Jefferson Rehabilitation Center

The JRC provides door-to-door transportation to its 900 clients, all persons with disabilities to agency facilities and programming. JRC operates several facilities in Jefferson County, including its main center in Watertown and 32 residential facilities around the county. JRC owns 17 vehicles and transports 250 passengers per day as of July 2011.

Figure 3-12 JRC Daily Ridership by Route May 2011

Route #	Riders	Route #	Riders	Route #	Riders
Route #1 - Carthage	20	Route #6 - City South Side	46	Route #11 - Cape Vincent	24
Route #2 - Henderson Harbor	15	Route #7 - Oxbow	23	Route #12 - Carthage	16
Route #3 - Mannsville	19	Route #8 - Clayton	14	Route #13 - City North Side	41
Route #4 - Theresa/Alex Bay	17	Route #9 - Dexter	17		
Route #5 - Dexter	22	Route #10 - Sackets Harbor	21		

Each route is run twice per day - morning and evening - to transport people to agency work sites. Thus some routes, like #6, are full (23 persons each way) while others have excess capacity. For example, a route operator might leave Watertown at 6 AM, pick up clients on the Mannsville route, and drop them off at work by 7:30 or 8 AM. All vehicles are stored in Watertown.

The transportation program is very expensive to run and has historically operated at a deficit. The JRC's budget has been cut recently, forcing them to consider cost-cutting strategies. One potential strategy involves having family members or volunteers drive clients to one central pick-up point in each town; however, implementation of any such changes is still in the distant future.⁹ The program currently costs \$839,000 per year. JRC receives \$369,000 from two JRC programs whose clients benefit from the transportation service, thus overall JRC loses \$470,000 per year on the transportation program.

From JRC's perspective, there is a great need to serve Fort Drum. The JRC has \$8 million worth of contracts with the installation for JRC employment programs, and 75% of employees provided by JRC must be persons with disabilities. Contracts include operation of dining halls, recycling facilities, and janitorial duties, among others. The JRC used to operate service to Fort Drum, but its high cost of \$67,000 annually forced it to be cut. Employees needing to get to Fort Drum currently ride with family or friends, but this arrangement is becoming more and more difficult. Taxi vouchers, which cover half the cost, are used for workforce trips. Potentially JARC funds could be used to support JRC service to the installation.

The JRC is also discussing operating some service for the general public to supplement funds. Since vehicles were procured via 5310 and the JRC is not licensed as a NYSDOT public operator, they cannot collect fares but are allowed to accept donations. The vehicle fleet is typically not in service from 9 AM-2:30 PM. Work routes are typically concluded by 5 PM, and thus vehicles are again available for evening service.

NYSARC

NYSARC of St. Lawrence County provides door-to-door transportation to persons with disabilities. NYSARC owns 143 buses, vans, and cars, of which 30 are ADA-accessible. In 2008 NYSARC provided 15,000 trips. The organization operates 32 routes for its clients to and from agency programming and work sites.

NYSARC operates 32 fixed routes throughout the county (See Figure 3-13). These include Medicaid routes and shuttles, as well as contracted routes. As a result, the service has many deadhead miles and empty buses throughout the day. Currently, NYSARC owns 143 vehicles, most of which are based in Canton in a new garage facility. These include 65 12-passenger vans, 35 7-passenger vans, and administrative vehicles. Though many vehicles are for the exclusive use of group homes, a total of 70 vehicles are used for general client transportation. NYSARC operates Monday through Friday from 6 to 9:30 AM and 2 to 5 PM, with some routes running until 7 PM. Maintenance takes place during the day, with additional work late at night. NYSARC has coordinated vehicle sharing with St. Lawrence County for special events.

⁹ Howie Ganter, phone conversation, October 2011

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Figure 3-13 NYSARC Ridership by Fixed Route

Route	Destinations	Ridership
1	Potsdam, Colton Pierrepont, Canton	9
2	Canton Lisbon Ogdensburg	16
3	Heuvelton , Morristown, Hammond Ogdensburg, Canton	17
4	Waddington, Canton, Madrid, Norwood, Potsdam	17
5	Chase Mills, Waddington, Madrid, Canton	6
6		0
7	Canton, Heuvelton, Lisbon	20
8	Lisbon, Canton, Heuvelton, Ogdensburg, Madrid	32
9	Potsdam, Colton, Norwood	13
10	Massena, Norwood, Potsdam, Norfolk	16
11	Potsdam, Norwood, Norfolk, Massena	20
12	Madrid, Potsdam, Norwood, Canton	17
13	St. Lawrence Central, St. Regis Central, Potsdam	5
14	Norwood, Madrid, Waddington, Massena, Lisbon	19
15	Canton, Hermon, Gouverneur	27
16	Potsdam	7
17	Massena, Norwood, Norfolk	28
18	Potsdam, Massena, Norwood, Norfolk	29
19	Massena, Norwood, Potsdam, Norfolk	25
20	Madrid, Norwood	10
21	Dekalb, Hermon, Gouverneur	16

Route	Destinations	Ridership
22	Potsdam, Colton, Canton, Hermon, Clifton Fine	14
23	Dekalb, Hermon, Edwards, Clifton Fine	2
24	Ogdensburg, Canton	19
25	Lisbon, Canton	13
26	Canton, Colton, Clifton Fine, Edwards, Hermon	11
27	Canton, Hermon, DeKalb, Gouverneur	18
28	Canton, Lisbon, Morristown, Heuvelton. Ogdensburg	7
29	Canton, Hermon	32
30	Massena, St. Lawrence Central, Brasher, Nicholville	29
31	Massena, Norwood, Potsdam, Canton, Norfolk	10
32	Star Lake	4
Total Daily Passengers		508

In addition to 508 daily NYSARC clients, the organization also provides 190 trips per week through Community Arts, Nexus, senior transportation, and other projects. Seventy-five percent of NYSARC drivers are full-time employees. Though historically, many drivers were part-time, the switchover to full-time has been beneficial to the workers and the organization.

SOCIAL SERVICES

Jefferson County Department of Social Services

Jefferson County Department of Social Services is the designated Medicaid agency for the county and provides a range of human service programs in addition, including Temporary Assistance for Needy Families (TANF) and child welfare programs. DSS is responsible for coordinated nonemergency medical transportation (NEMT), a benefit for Medicaid recipients. Jefferson County DSS contracts NEMT coordination to Community Transportation Systems (CTS), a nonprofit based in Connecticut who screens for eligibility and brokers NEMT to approved providers in the area.

Jefferson County also contracts with the Volunteer Transportation Center for volunteer driving services for additional clients.

In 2010, Jefferson County DSS spent \$1,818,606 on NEMT services, sponsoring nearly 95,000 trips; approximately 80,566 of these were ambulatory trips, and 13,719 were non-ambulatory. A portion of this – \$159,000 – went to CTS as an administrative fee for managing the NEMT brokerage. An additional \$945,767 was processed through CTS as payments to providers for service.

DSS also pays the VTC an administrative fee for managing the volunteer driver services for the NEMT program, totaling \$213,000. Mileage reimbursements processed through the VTC totaled \$872,839, paid by DSS.

Apart from the \$1.8 million spent on other NEMT services, DSS also reimburses clients who are self-drivers - those who have access to a vehicle but need resources to drive themselves to medical appointments. In the past, DSS processed these requests in-house; however, in July 2011, this responsibility was shifted to CTS. In 2010, DSS spent approximately \$36,000 on self-drive reimbursements at the IRS Self-Drive rate of \$0.235/mile, sponsoring approximately 6,800 trips.

NYS Department of Health Changes

The State of New York is studying the potential to revamp Medicaid transportation into regional service delivery, which has been structured as a county-by-county operation in the past. Local Departments of Social Services do not know how such a restructuring will affect their service delivery models if the state decides to regionalize Medicaid delivery systems in the area in the coming years.

In late 2010, the New York State Department of Health (DOH) issued a Request for Proposals (RFP) for a regional Medicaid broker in the Hudson Valley area in an effort to contain or reduce state Medicaid expenditures. This pilot region includes the counties of Albany, Columbia, Fulton, Greene, Orange, Montgomery, Putnam, Rockland, Sullivan, Ulster, Warren, Washington, and Westchester.

It is believed that this structure would eliminate county barriers and create cost efficiencies, especially for those trips. The new State policy would group the Tri-County region into a larger 12-county region under the consolidated call center plan. However, if the Tri-County region were to come together and coordinate one call center for Lewis, Jefferson, and St. Lawrence Counties, it might be possible to avoid being grouped into a larger region.

At the time of this writing (Fall 2011), the State movement to regionalize NEMT only affected the Hudson Valley pilot area.

Jefferson County DSS and CTS do not currently coordinate service with local transit services through Citibus or Citibus paratransit.

Lewis County Department of Social Services

Like Jefferson County, Lewis County DSS is the Medicaid agency responsible for NEMT and a number of smaller human service programs for the county. Until July of 2011, Lewis County used volunteer drivers and private companies to transport its NEMT clients. Beginning this fiscal year (July 2011), Lewis County will pay Birnie Bus approximately \$30,000 per year to coordinate NEMT services. The County also recently began a contract with the Volunteer Transportation Center to provide volunteer rides. Lewis County DSS will pay the VTC mileage costs incurred plus an additional \$4.38 per trip.

In 2010, Lewis County DSS spent approximately \$399,342 on NEMT. Of this cost, 800 ambulette trips were provided for non-ambulatory clients, totaling \$130,561. The remaining \$268,781 was used for mileage reimbursements, both to volunteer drivers and clients who drove themselves or asked a family member/friend for a ride. Approximately 7,000 such trip reimbursement requests were processed in 2010.

Historically, DSS did not coordinate NEMT trips with the local transit provider. However, with the Birnie Bus contract, they expect to begin utilizing transit.

St. Lawrence County Department of Social Services

St. Lawrence County DSS is also the NEMT coordinator for its county. Unlike Jefferson and Lewis counties, St. Lawrence coordinates NEMT in-house, using DSS employees to locate volunteer rides or hire other transport services. St. Lawrence County also uses the public transportation provider in the county for trips whenever possible.

In 2010, St. Lawrence County spent \$1,878,000 to provide NEMT and child welfare services, sponsoring nearly 40,000 trips. The cost of administering NEMT out of the \$1.87 million was \$370,000. St. Lawrence County has expressed interest in reaching out to contracts to broker its Medicaid trips.¹⁰

Figure 3-14 St. Lawrence County DSS Trips, 2010

Child Welfare Services Trips			Medical Services Trips	
Expense Type	# Trips	Cost	# Trips	Cost
Client Reimbursement	834	\$30,379	8,559	\$384,595
Volunteer Driver Payments	4,956	\$286,470	16,274	\$804,916
Other Transportation (Taxi/Bus)	70	\$906	9,174	\$101,100
Total	5,860	\$317,755	34,047	\$1,190,611

Source: St. Lawrence County

¹⁰ DSS Commissioner Chris Rediehs, phone conversation

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The following table summarizes administrative and operating costs per county.

Figure 3-15 Summary of DSS Transportation Costs by County

County	NEMT Manager	Admin. Costs	Trip Costs	Total by County	Total Trips	Cost per Trip
Jefferson	CTS	\$159,000	\$981,767	\$2,226,606	101,043	\$22.03
	VTC	\$213,000	\$872,839			
Lewis	Birnie Bus	\$30,000	\$130,561	\$399,342	7,800	\$51.19
	VTC	\$30,660	\$208,121			
St. Lawrence	In-house	\$370,000	\$1,508,000	\$1,878,000	39,907	\$47.06
Total		\$802,660	\$3,383,899	\$4,186,559	142,090	\$40.09 (Average)

Source: Phone & E-Mail interviews with counties and VTC

MOBILITY MANAGEMENT

Two counties have staff time allocated to mobility management (see sidebar for definition of mobility management).

Lewis County hired a staffer dedicating 40%, or 14 hours per week, of time to mobility management, with the remaining time dedicated to Office for the Aging. In addition, Lewis County Planning staff will be assisting with state and federal reporting and other administrative work. The county has set aside a budget of \$25,000 for mobility programs including marketing, publicity, travel training, and others. A key role of the mobility manager will be to coordinate NEMT trips with Lewis County LOOP.

St. Lawrence County hired a mobility manager per its human services coordination plan. This position, however, also became director of the Office for the Aging. Technically time was to be split 50/50 between mobility management and OFA; in reality, however, both roles were too time-consuming for one person. The plan for 2012 is for this ratio to be reallocated to 25/75, with less time devoted to mobility management. Given this shift in resources, there is willingness on the county's part to consolidate mobility management functions into more of a regional position, so long as appropriate procedures are in place.¹¹

Jefferson County does not have any mobility staff or programs at the present.

Figure 3-16 Mobility Management Investments

County	MM Salary	MM Programs	Total
Jefferson	\$0	\$0	\$0

¹¹ Mobility Manager Nancy Robert, phone conversation

Mobility Management

Mobility management is a term used by the Federal Transit Administration to describe an individual or organization whose primary function relates to coordinating existing transportation services, maximizing existing transportation resources, and facilitating individual access to these services. Mobility managers can be individuals or organizations and can provide a range of functions tailored to a specific service area.

Investment in a mobility manager can ultimately save money through better coordination of existing services and facilitation of better communication between existing transportation providers. For instance, a mobility manager would keep an inventory of transportation statistics for providers and would know when spare vehicles or other resources are available for use by a different service. Mobility managers can also coordinate joint maintenance and fuel contracts or driver training with existing providers to realize cost savings. The most savings are realized when the mobility manager manages a one-call center, saving significant administrative time and investment on the part of existing providers. Many mobility managers also write grants for existing projects or for new initiatives they lead, such as creating marketing materials or setting up a one-call center.

Lewis	\$27,200	\$25,000	\$52,200
St. Lawrence	\$25,000 (Future \$12,500)	\$0	\$25,000 (Future \$12,500]
Total	\$52,200	\$25,000	\$77,200

Source: County phone and e-mail interviews

SPECIALIZED PROVIDERS

Other small providers exist in the region as well, providing critical transportation services to a specific set of clients or individuals. These are typically very high needs populations or residents of private housing facilities. The study team identified approximately 20 of these agencies in the Tri-County Area. Services primarily focus on seniors and persons with disabilities. These providers are listed in Figure 3-17 below.

Figure 3-17 Specialized Transportation Providers

Agency	Service Description
Brookside Senior Living Community (Lewis)	Part-time drivers transport residents of Brookside to medical and dental appointments, grocery shopping, the pharmacy, and Watertown for \$0.505/mile (to Watertown only). In FY08, Brookside transported 1,800 riders for a total of 5,000 miles.
Central New York Developmental Disabilities Services Office (Lewis)	A government agency providing services to people with disabilities, including transportation for medical appointments and to agency activities. Two part-time drivers operate two DSO-owned 8-passenger, wheelchair accessible vehicles. Staff can receive reimbursements for transporting clients in their personal vehicles at the federal rate of \$0.585/mile.
Jefferson County Veterans	Transportation for veterans to Watertown.
Karcher Country Estates (Lewis)	Volunteer drivers to take residents to/from medical appointments and grocery shopping and do not receive mileage reimbursements.
Lewis County Community Mental Health Center	A full-time driver transports clients in one agency-owned vehicle to various appointments and personal trips, depending on the client's treatment plan. Appointments are given priority. Transportation is available M-F 8:30 AM – 4:30 PM. The Community Mental Health Center receives funding from the NYS Office of Mental Health. The Center spent approximately \$50,000 in 2008 on transportation.
Lewis County Employment and Training	Clients and staff are reimbursed for using their personal cars at \$0.15/mile. The office can also provide gas cards. Twenty-five (25) volunteer drivers also transport clients for the federal mileage reimbursement rate of \$0.585/mile.
Lewis County General Hospital	Adult Day Health Care program offers door-to-door transportation to the hospital's Adult Day facility, transporting approximately 20 riders daily. One full-time and one part-time driver operate the transportation service using hospital-owned vans. There are two vans with three wheelchair tie-downs and 10 seats each. Vans are also used by the nursing home on the hospital premises for various activities. The hospital also uses these vans once or twice per week to transport patients without other means of transportation, and only when the vans are not otherwise being used. The hospital spent approximately \$39,000 on transportation in 2008.

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Agency	Service Description
Lewis County Office for the Aging	Volunteer drivers to transport seniors to medical appointments, dental appointments, shopping, and other essential trips. Approximately 20 volunteer drivers use their own vehicles and are reimbursed at \$0.585 per mile; approximately 25 seniors use the program regularly. The Office for the Aging operates a 12-passenger van to and from the senior meal site in Lowville. Drivers are both staff and volunteer. About 16-20 people used the service to the meal site. Funding is provided by Title IIIB and the NYS Office for the Aging Transportation Program
Lewis County Opportunities	Lewis County Opportunities is a multi-service nonprofit using its vehicle to transport participants of its Domestic Violence-Rape Crisis programs to government offices, the Courthouse, law enforcement, or shelters. Staff can also be reimbursed for transporting clients. LCO owns one 17-passenger minivan. Lewis County Opportunities receives funding from Community Services Block Grants, VAWA, CVB and HELP grants.
Lewis County Public Health Agency	Freeman Bus Corporation operates transportation service for children with disabilities. Pre-school children with disabilities are transported to either United Cerebral Palsy in Barneveld, Benchmark Family Services in Watertown or Jefferson Rehabilitation in Watertown. Early Intervention children are taken to the United Methodist Church in Lowville. Freeman Bus is reimbursed \$64.31 per trip, per child. The Public Health Agency receives funding from the NYS Department of Health as well as NYS Department of Education.
Massena Independent Living Center (St. Lawrence)	The Center provides client transportation services for non-repetitive, nonmedical trips within a 25-30 mile radius with one Center-owned van. The Center typically provides transportation service to passengers every 3-weeks to 1-month. Service is available M-F 8:00 AM - 5:00 PM. Annual ridership in 2008 was 1,040. The Center receives funding from the NYS Department of Education and grants to operate service.
Oneida-Lewis Arc Chapter (Oneida)	Arc clients receive rides to employment sites in Lewis and surrounding counties. The Arc transports clients in its own vehicles using independent, contracted drivers. Staff also use their personal vehicles at times, and the Arc provides reimbursement in this case.
Paynter Senior Center (Jefferson)	<p>The Center has a contract with Office for the Aging that allows the Center to bring seniors to the center for lunch. Only seniors that have no other means of transport are transported (i.e., Medicaid clients cannot use it for medical trips). Trips allowed are to doctors and dentists, as well as on shopping trips and to the food pantry. Once per week, the Center takes seniors to Watertown. The Center relies primarily on volunteer drivers for transporting clients, but recently received a grant for a 5310 vehicle, which will be purchased in the fall of 2011. It also has a van with a wheelchair lift. Service area includes Orleans, Clayton village and town, Alexandria Bay, Cape Vincent.</p> <p>Donations are accepted, though no fare is charged. The Center receives funding from the Jefferson County Office for the Aging, the Town of Clayton, and the Town of Cape Vincent.</p>
River Hospital (Jefferson)	A fleet of three wheelchair-accessible vehicles were used to transport clients participating in its Adult Day Care program or residents of its Skilled Nursing Facility, but that program has been discontinued. Through foundation fund-raising, a vehicle has been gifted to the hospital, and they are seeking good ways to use it.

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Agency	Service Description
Samaritan Keep Home (Jefferson)	Samaritan Keep Home has been providing transportation since 1985 as a DOT-licensed, for-hire company. The Home schedules rides with a dispatcher. Trips are provided to residents and clients of the home to adult day care, medical services, dialysis, and occasional trips to Syracuse. Most trips are in Watertown. Samaritan is a service provider for Jefferson County Department of Social Services. Average daily ridership is approximately 30. The Home owns nine buses and conversion vans.
St. Lawrence County Office for the Aging	In 2008, 51 volunteer drivers transported 486 seniors utilized the volunteer transportation service, resulting in 5,000 trips total. Drivers are available Monday-Saturday. Seniors are limited to four medical trips per year. The office owns 12 vans that are used for meal delivery only.
TRIAD (St. Lawrence)	TRIAD, a nonprofit, received a 5310 grant in 2010 for \$50,000. Unfortunately the service could not get off the ground due to the high cost of insurance. TRIAD owns one 21' bus.
United Helpers (St. Lawrence)	A healthcare service organization that owns or manages 27 separate facilities for older adults, developmentally disabled, and/or mentally ill and owns 25 wheelchair-accessible vans, plus 6 additional cars and minivans. Transportation services are provided for residential participants to access non-emergency medical appointments, as well as other desired trips. United Helpers applied for a 5310 vehicle in the spring of 2011.
Wilna-Champion Transportation Association (Jefferson)	A nonprofit that provides door-to-door rides to seniors and persons with disabilities in the area surrounding the towns of Wilna and Champion. Service is generally available 9 AM – 3 PM on Monday, Wednesday, Friday, with special trips scheduled throughout the month. Accepts donations only - \$4 suggested for round trip. The association owns one 14-passenger bus with 2 wheelchair tie-downs and receives funding from Jefferson County Office for the Aging.

Source: Coordination Plans, Stakeholder interviews, Focus Groups

PRIVATE PROVIDERS

Several private providers are important links in the local network. Many provide services to county Departments of Social Services for NEMT or other types of contracts.

Figure 3-18 Private Transportation Providers

Agency	Service Description
Century Transportation (Oswego)	Century Transportation is the only taxi and limo provider serving Hancock International Airport in Syracuse, operating with an exclusive contract. Century offers service to both Watertown and Fort Drum. The Watertown trip is \$45 per person, with a two person minimum. Service to Fort Drum is available for \$120 for 1-3 people; \$40 per person for 4-5 people; and \$30 per person for 6-10 people. Century also offers taxi service to Watertown. The fare is \$164.60.
Freeman Bus/Clarence Henry Coach (Jefferson)	Freeman Bus has contracts to provide transportation for Watertown City School District and the Indian River School District, among others. It also offers for-hire motor coach and limo services. Freeman Bus provides for-hire services to Fort Drum and often to Utica and Rochester. Clarence Henry Coach runs special event tours to sporting events and area wineries.

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Agency	Service Description
Guilfoyle Ambulette (Jefferson)	Guilfoyle provides door-to-door transportation for Jefferson County DSS as an NEMT provider, among other programs. Rates are \$38.50 one-way and \$63.50 round trip; additional mileage charge applies to trips outside Watertown. Service available Monday-Saturday. Also operates paratransit bus service under contract for Watertown Citibus.
Lewis County Taxi Service	Lewis County Taxi Service provides local service as well as service to Albany, Pittsburgh, Boston or any other long distance destination a passenger is willing to fund. The company is staffed by one driver who mostly transports repeat customers. Ridership varies dramatically depending on the day and time of year. Fares are \$1.30-1.35 per mile, with flat-rates for long distance trips.
Lyme Lite Limo (Jefferson and Oneida)	Lyme Lite Limo operates for-hire service in Jefferson and Oneida counties. Lyme Lite used to run a service to pick up hotel guests and take them to the mall in Syracuse. The fare was initially \$50, but was lowered to \$35 to increase ridership. The route was not profitable and Lyme Lite discontinued service.
North Country Express (St. Lawrence)	North Country Express provides service in Clinton, Franklin and Essex counties as well as St. Lawrence County. One route currently terminates in Potsdam. Though no routes serve the Fort Drum Study Area, North Country Express has considered extending this service from Potsdam to Canton in St. Lawrence County.
Yellow Cab (Jefferson)	Private taxi service. Contracts with Jefferson County DSS to provide NEMT, adhering to driver screening regulations and drug testing.
Fatmans Cab (Jefferson)	Private taxi service.
East Coast Taxi (Jefferson)	Private taxi service.
Big Man's Cab (Jefferson)	Private taxi service.
Happy Cab (Jefferson)	Private taxi service.

Source: Coordination Plans, Stakeholder interviews, Focus Groups

REGIONAL AIRPORTS

Watertown Airport is seven miles from the center of Watertown and 13 miles from Fort Drum. Cape Air currently flies three trips a day from Watertown Airport to Albany using a Cessna 402 aircraft. Service using this nine-passenger aircraft began in September 2008. Any commercial airline service to Watertown is federally subsidized under the Essential Air Service Program, which means Watertown International has little choice about its services and destinations. Starting in November 2011, American Eagle will begin non-stop service to Chicago with two round trips per day (12 per week) using a 44-passenger jet.¹² Ticket prices are estimated at \$142 each way. Airport staff has been exploring the Ottawa and Kingston markets, hoping to attract Canadian passengers to fly through Watertown. Currently, no shuttle service exists to and from the airport.

Syracuse Airport is an international airport with multiple major airlines and frequent service. Syracuse is 65 miles from Watertown and 70 miles from Fort Drum. Several private services as well as a Fort Drum Morale Welfare Recreation shuttle serve Syracuse Airport.

¹² <http://www.co.jefferson.ny.us/Modules/ShowDocument.aspx?documentid=3984>

CONCLUSION

A wealth of transportation services exist in the Fort Drum region, from general public fixed route to general public curbside service and client-based transportation. Conversations with providers revealed in many cases a desire to reach new markets, coordinate service, and try new delivery options. For example, Adirondack Trailways would like to sell tickets on-post, county agencies seek to lower costs by consolidating functions, and the private market stated interest in packaging service geared toward Fort Drum families. These opportunities provide fertile ground for sharing resources to provide greater transportation options.

PEER MILITARY INSTALLATIONS

In order to create service models for Fort Drum, three peer Army bases were evaluated. These three peers were selected through advice from the Fort Drum transportation office, which has conducted research on comparable bases in the past, as well as with input from FDRLO.

Figure 4-1 Comparison of Peer Installations

Installation	Nearest Town/City	Town/(City) Population (2010 Census)	Distance (Installation to Town/City)	Service Structure
Fort Drum, NY	Watertown, NY (Syracuse, NY)	27,023 (145,170)	11 miles (81 miles)	
Fort Hood, TX	Killeen, TX (Austin, TX)	127,921 (790,390)	4 miles (70 miles)	On-Post Shuttle
Fort Bragg, NC	Fayetteville, NC	200,564	10 miles	On-Post Shuttle + Connections to Area Transit
Fort Riley, KS	Manhattan, KS	52,281	16 miles	Vanpools + Contracts with Area Provider

FORT RILEY

Fort Riley is located near Junction City, KS, 16 miles from Manhattan, KS (pop. 52,281). The Fort does not operate transportation on post but does have a new partnership with the Flint Hills Area Transportation Agency (ATA Bus) in Manhattan.

History of On-post Transportation

Fort Riley operated three shuttle buses in the past providing services to the installation. However, due to lack of ridership, the service was discontinued. The installation is extremely spread out; one route across it took nearly one hour. In addition, the shuttles were limited in areas they could serve and were not allowed in residential areas, severely limiting ridership.

Vanpools

Fort Riley has 25 vanpools with 168 riders currently utilizing the Mass Transit Benefit Program. This program subsidizes mass transportation, but can also be used for vanpools. Up to \$230 per rider per month is available through this program.

Flint Hills Area Transportation Agency (ATA) Bus

Fort Riley has recently made agreements with ATA Bus to provide demand-response transportation from Junction City and Manhattan to Fort Riley. The cost to riders is \$2 each way

within a three-mile radius of Manhattan and \$4 for trips beyond the radius. Service is offered between 6 AM and 7 PM to accommodate commuters between Junction City and Manhattan.

ATA Bus operates two 20-passenger vehicles for this service, running in opposite directions between Junction City and Manhattan. Service began at the end of April and is popular. In May, a total of 48 rides were taken; in June, over 200 were taken.

To address security concerns, ATA Bus trains drivers on this route to check IDs of passengers when they board. Since the services are demand-response, passenger information has already been logged when they request a ride, so drivers simply ensure that the person is identified when boarding. Because of the ID check at time of boarding, the installation does not require ID scans when the buses enter the gate in order to keep traffic moving smoothly.

Funding for this program is \$388,000 currently provided by Kansas DOT and is available through April 2012 using 5311 funds and the state highway fund. The future of the program following this date is uncertain, since the installation would have to begin paying for some of the cost, and DoD funding streams have many restrictions.

Riley Ride

Riley Ride was started in June 2008 to provide soldiers with an alternative to driving home from local nights out. The service operates from the post to Aggieville. The bus leaves the Leisure Travel Center on post at 9:30 PM on weekend nights and picks up soldiers at barracks and other buildings, taking them to Aggieville. The shuttle makes two trips back to post, starting at 11:00 PM, with the last trip leaving Aggieville at 2:30 AM.

From Aggieville, a ride is \$2.50. Soldiers can purchase punch cards good for several trips; unit leaders can also buy and distribute. The program is very popular.

The service is operated using an MWR-owned van and driven by a Flex Hire NAF employee. A 20-passenger bus was purchased in 2003 using Non-Appropriated CPMC funds. The MWR funds the service through fares as well as through local private sponsorship, including a local car dealership and Firestone Tires.

Issues, Hurdles, and Lessons Learned

Setting up the partnership with ATA Bus required several years of planning. ATA Bus can serve more unofficial parts of the installation that the post shuttles were not able to serve, including residential areas. Fort Riley talked with other installations during the planning process, including Monterey, where the installation does not allow soldiers to bring private vehicles and guarantees the local transit system 600 passengers per month. Fort Riley is not able to commit that level of ridership, but the demand-response service is a good alternate solution.

A major hurdle for the current partnership will be accessing funding after the pilot funds expire in April 2012. The installation is attempting to gain approval to use appropriated funds for Fort Riley's match, but is uncertain this will be deemed a legal use of funds. As of August 2011, Fort Riley was awaiting a response to their application for use of appropriated funds to supply the local match for 5311 operating funds.

FORT BRAGG

Fort Bragg is located approximately 10 miles from Downtown Fayetteville, NC (pop. 200,564). The total population of the installation is 144,822, including active duty military (48,702), contract employees (7,213), family members (74,027), and others. Soldiers living on post in barracks total 14,605. The civilian workforce on post is 11,345.

Fort Bragg operates a robust transportation program on post that connects to local public transit service at an on-post multimodal hub.

History and Service Origins

Until 2009, Fort Bragg was operating two routes just for deployments. In the last two years, they put together seven routes total, the last of which began service in October 2010. They are looking at adding three additional routes to serve Pope Air Force Base and the growing population along the southern boundary of the installation.

Road congestion and parking issues were the primary reasons the installation decided to ramp up its on-post transportation system. Most people drive to work at the installation, creating massive bottlenecks along access roads and straining parking facilities.

An Alternative Transportation Study was conducted in 2009, and the ITO was able to prove that investment in transit vehicles and a transit program would save hundreds of millions of dollars in highway investment designated to alleviate traffic congestion.

Connecting Local Service and Coordination

Several local services connect with on post shuttles at the installation's multimodal hub. The Fayetteville Area System of Transit (FAST) has one route along Highway 87 that enters base briefly. A two-year vetting process was necessary to allow this to happen, but now the installation can expand to other partners and shorten the vetting process. Nearby Spring Lake's Route 40 also enters base briefly at the multimodal hub.

A business association in Downtown Fayetteville operates an historic trolley that is allowed to enter base briefly with both civilian and military riders at the multimodal hub through an access control point. This partnership also had a protracted vetting timeline.

Neighboring Moore County is starting a vanpool to the multimodal hub (other vanpools travel to points all over post). Moore County has experienced a fast-growing commuter population to Fort Bragg.

An airport shuttle also connects at the multimodal hub.

Fort Bragg transportation personnel serve on the local Transportation Coordinating Council and the Transportation Advisory Committee. They work with the local MPO as well as the nearby Capital Area MPO in Raleigh, as well as the various towns, the City of Fayetteville, Cumberland County and other surrounding counties, the Rural Planning Organization and the Council of Governments. All of these organizations came together to discuss the development of on post transportation services before it came online. In 2008, the group decided that the installation should develop its service and the other area services would tie into it after it was up and running.

Planning on the installation is also highly coordinated. For instance, new developments automatically include bus bays to accommodate transit vehicles.

Service Statistics

Last month, the on post shuttle transported 5,500 riders. During lunchtime hours of 11:00 AM to 2:00 PM, an extra bus is placed on every route to achieve 10 minute headways. Service is contracted out to Hallmark Group as part of a large bundled contract.

The Wounded Warrior Battalion has been running its own transportation, but the transportation office is working to absorb this program into their transportation system. The Battalion paid for its own service and carries 5,000 passengers per month. This partnership would require two routes to start service at 6:00 AM, which would benefit other soldiers needing transportation at that hour, as the on-post shuttle does not begin until 10 AM.

Route Design and Service Features

The goal of the transportation system is to make riding the bus more convenient than driving. To that end, the bus stops in the middle of each quad of barracks in order to be a closer walk than the parking lot. Shuttles operate frequently around one section of the installation, connecting to other circulators at transfer points, which are also points of interest (e.g., minimart, coffee shop) so riders have something to do if they have to wait for a transfer.

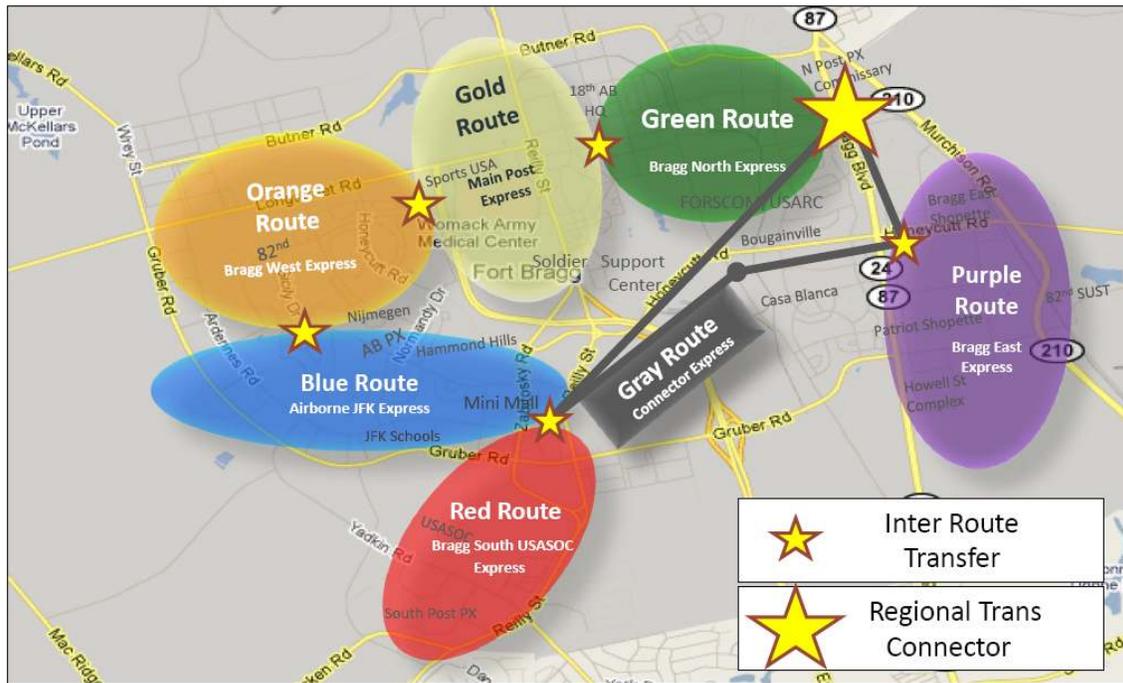
The shuttle is free to all and available to anyone on base - civilian or military.

A key feature of transportation service on base is the vehicles, which are state of the art hybrid electric, 30- and 15- passenger vehicles; the 30-passenger vehicles can fit up to 10 wheelchairs on board, in order to comply with the President's Hazard Plan, and are equipped with 1,000-lb capacity ramps. A GPS system is pre-loaded with the routes and automatically announces stops; eventually, they would like to have maps showing the moving vehicles so soldiers know how long they will have to wait.

The vehicles also have televisions. The transportation office wants to eventually create "Bragg TV" to promote events.

The transportation office has emphasized the experience of the transportation service. The office considered the model of service branding on Disney World's trams and monorails.

Figure 4-2 Fort Bragg Transit Routes



Evening Shuttle

Fort Bragg used to operate a “drunk bus” until 2:00 AM on weekend nights. However, ridership was too low to continue service, so it was discontinued. The installation does operate limited routes on Saturdays and Sundays - the Sinful Saturday bus and the Salvation Sunday bus (on which they air AM radio preachers), the names of which are an extension of their branding and marketing initiatives.

Vanpools and Carpools

Vanpools are managed by the budget office that manages the Mass Transit Benefit Program, not out of the transportation office. Anyone can start a vanpool and qualify for the mass transit credit.

Carpooling does occur but is informal and rare - only four of 100 vehicles carry more than one passenger when entering the base.

The transportation office is looking at establishing parking spaces just for vanpools and carpools, but there are union issues with that type of arrangement.

Taxis

Taxis come in and out of the base frequently. Service quality is a mix of good and bad, but there have not been any major problems with taxi service. There are no regulations at this time governing taxi operations and use on base.

Issues, Hurdles and Lessons Learned

Security has been a major hurdle in establishing partnerships. However, once the leadership becomes more comfortable and trusts FAST and Spring Lake's transit systems, more transit may be allowed on base.

Fayetteville has a very strong car culture, and establishing transit as a useful alternative for traveling on post is difficult. The transportation office does not want to keep soldiers from having cars; they want to encourage transit use on post to relieve congestion.

The process for establishing transportation and investing in vehicles and service was very difficult and required a leap of faith on the leadership's part. The ITO was under great pressure for several years to make the program a success. The ITO suggested that Fort Drum should look at having the city or a private agency operate transportation onto base instead of going through the difficult process that Fort Bragg went through getting service started.

FORT HOOD

Fort Hood gates are located on the city limit of Killeen, TX (pop. 127,921), and is 70 miles from Austin, TX. The total population served by the installation is 218,000, including over 100,000 military personnel, family members on and off post (17,954 and 89,933, respectively) and 8,909 civilian employees.

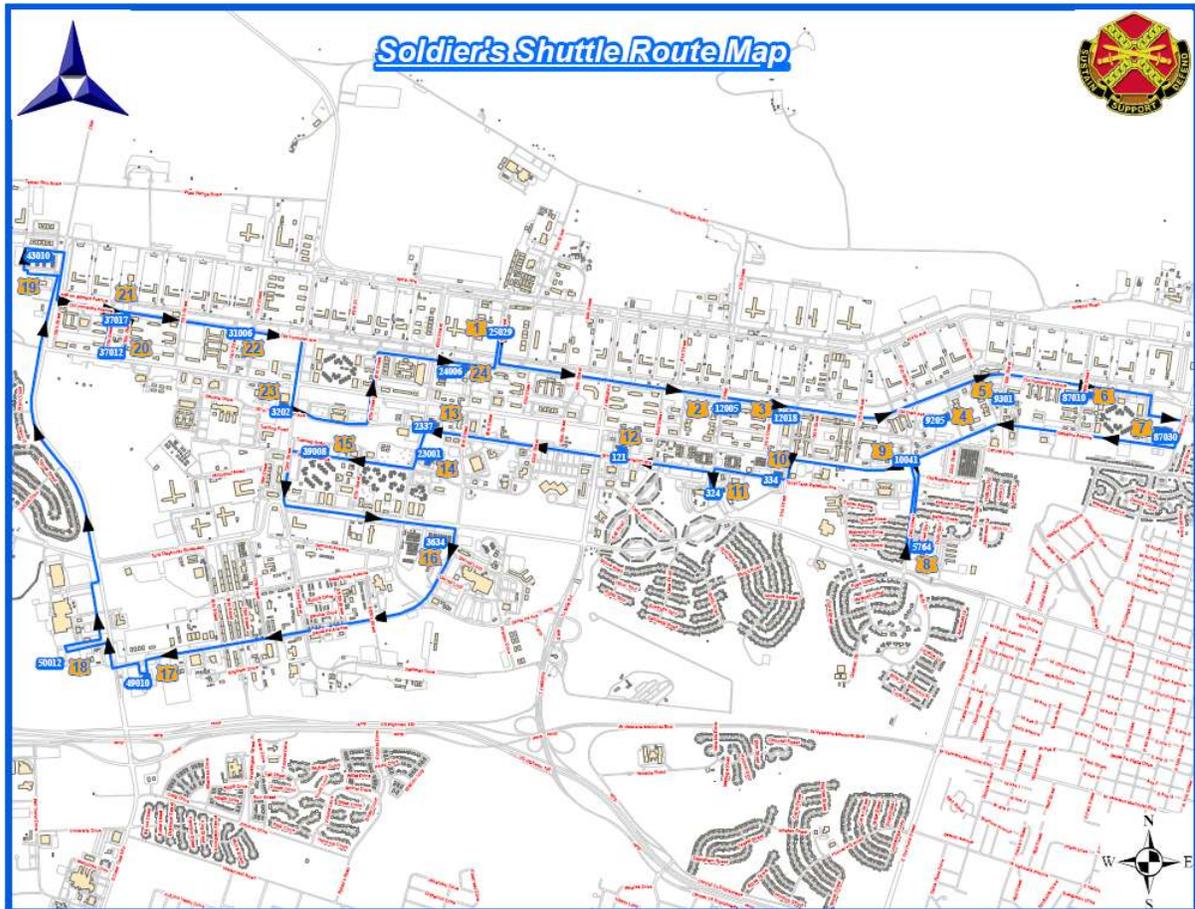
On Post Shuttle

A shuttle operates on post primarily to serve recreational activities such as the dining halls and gymnasium. Twenty-four (24) stops on base are covered by two 15-passenger vans, operating with 30-minute headways. Stops are marked with a sign and route maps are posted at various locations around post, as well as at the shuttle stops. The vehicles are leased from the GSA. The vans provide enough space to suit their needs while keeping costs low.

The shuttle operates Monday through Friday from 5:30 PM to 10:00 PM. On weekends and training holidays, hours of operation are 10:30 AM to 10:00 PM.

The service is operated by the Directorate of Logistics, Transportation Motor Pool under an established contract. The drivers are hourly wage employees (contracted).

Figure 4-3 Fort Hood Shuttle Routes



Impetus for Service

The II Corps Commander at the time noted that soldiers were using taxi service that was charging them more than \$6 to go across the post. As the commander, he thought the soldiers were being taken advantage of and wanted the Garrison to support their needs.

Routes were determined after studying the best plan to link destinations. The key was to ensure the ride was not more than 30 minutes to any one destination.

Service Statistics

Fare is free for all riders. The average operating cost per rider remains below \$5.00. In the last year, ridership was 22,000.

The shuttle is open to all on the base- soldiers, family members, Department of Defense employees, retirees and visitors to the installation.

Taxis and Vanpools

Taxis are not regulated, but do serve the installation. Vanpools are available through the Mass Transit Benefit Program but are not publicized.

Issues, Hurdles, and Lessons Learned

Justifying the service within the regulations was a major political hurdle. The transportation office learned early on that changing the routes causes the riders to be discouraged and to feel they cannot rely on the system. A primary objective for the service is to not change the routes or times in order to keep the reputation of being reliable.

CONCLUSION

The peer review reveals the following key findings:

- On-post shuttle services are limited in scope unless contracted out
- Vanpools are critical elements to the service network and funding is available to support them through the Mass Transit Benefit Program
- Nighttime service can be provided through public-private partnerships
- Outside pressure such as traffic congestion or poor taxi service can be an important impetus for service
- Marketing is a critical investment to ensure the success of any service, including special vehicles and branding

NEEDS ASSESSMENT

The needs assessment uses qualitative research methods to understand transportation needs from the provider and user side. This is a three-pronged approach using focus groups, surveys, and origin-destination analysis to understand, of the destinations and market collected at the onset of the study, exactly where and when people need service.

GEOGRAPHIC ASSESSMENT OF UNMET TRANSIT NEEDS

To begin identifying areas of unmet needs in this chapter, the housing and major destinations maps were overlaid with the existing transit routes. Figure 5-1 shows data from demographic and thematic maps presented in Chapter 2 overlaid with available transit services in the region from Chapter 3. Data points include Census 2010 population density, major housing complexes, major destinations, and major employers. They are intended to show simply where transit is not available to large centers of population or to major destinations.

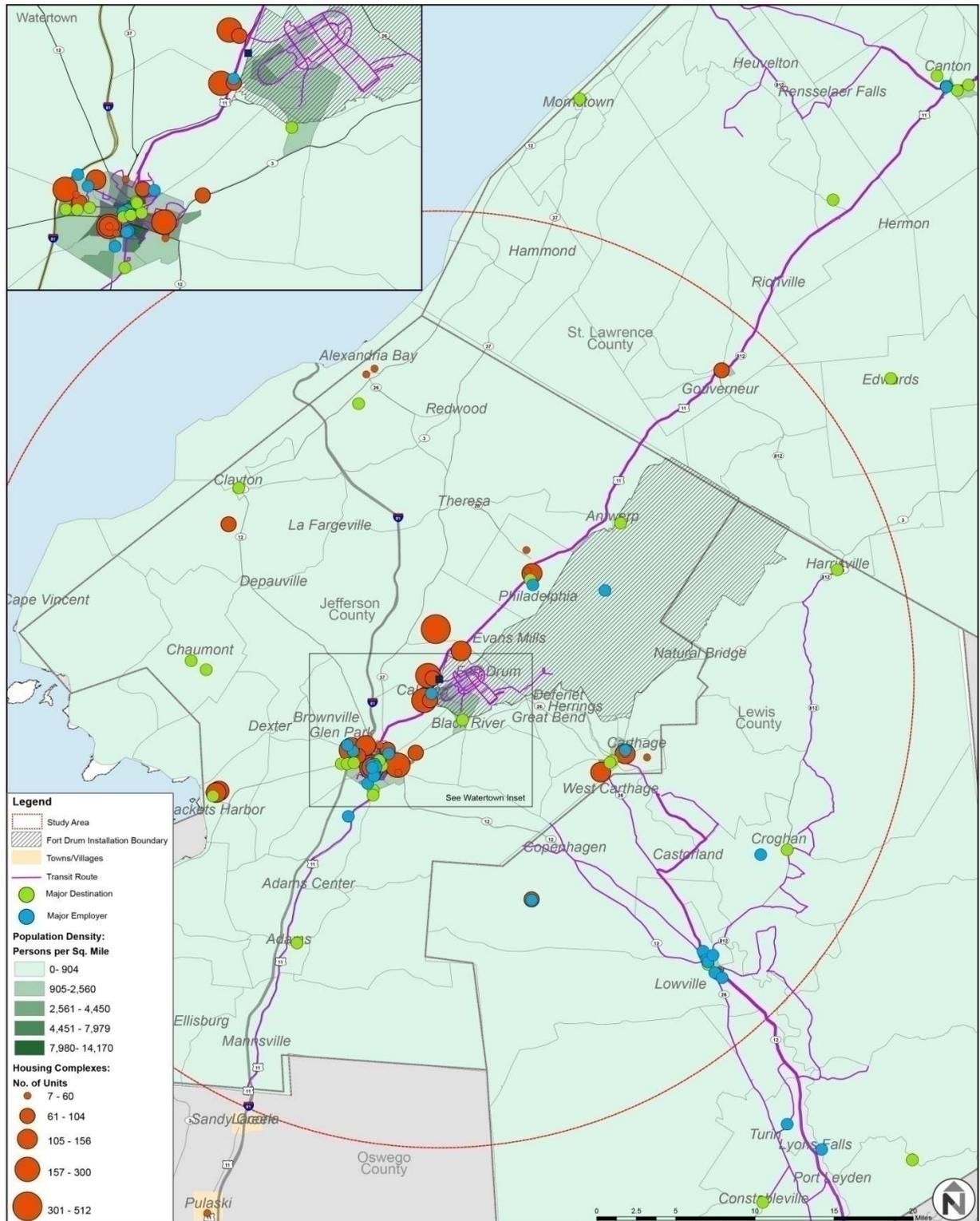
As a qualifier to this map, many transportation services are available to specific groups beyond these fixed routes. Individuals who are clients of Arcs, Departments of Social Services, senior housing facilities, and many others do have transportation available to them, often through multiple providers. However, these services are not available to the population at large and require some type of eligibility screening, whereas these fixed-route services do not.

Conversely, Figure 5-1 also displays slightly more coverage than may be available during certain times of day or certain days of the week. Of the services shown, only Watertown Citibus and St. Lawrence service are available on weekends, and the Lowville Circulator only operates on Tuesdays and Thursdays. There is virtually no service available Sundays.

No transit is available in western Jefferson County, where several communities have high and rising populations of Fort Drum affiliates. Lewis County appears to have high coverage, but as stated, the LOOP routes are operational during only limited hours each day and some only on certain days of the week. The map shows service running past Fort Drum, but these routes do not connect to Fort Drum directly, and these routes are not advertised as serving Fort Drum.

FORT DRUM REGION TRANSIT NEEDS ASSESSMENT | FINAL REPORT
Fort Drum Regional Liaison Organization

Figure 5-1 Centers of Population, Major Destinations, and Transit Coverage



Nelson\Nygaard held a series of focus group meetings with transportation providers, soldiers, and soldiers' families during June 1-2, 2011. The following section summarizes issues and comments raised during the focus group sessions. These five meetings provided valuable insights into the transportation issues facing the Tri-County region. Full minutes can be found in Appendix B. Primary insights include:

- **Information & Marketing** - There has been little marketing of the public transit services, especially in St. Lawrence and Lewis counties. People do not know about the bus routes available.
- **On-Post Shuttle** - Soldiers were very positive about restoring a full on-post shuttle to help them move around base in the course of their work day. Routes and schedules, however, must be clear. Many services in the military have gone the way of privatization, and they believed this option should be explored for transportation as well. Privatization would mean less regulation on where the bus could run.
- **Watertown-Fort Drum Link** - By far the most popular destination for soldiers and families is Watertown. Soldiers were very interested in a bus and were willing to pay up to \$5 per trip. Service could be provided either by running an on-post shuttle to a transfer point off-post or by having a local transit operator circulate on-post. Some expressed interest in pre-paid multi-ride passes as an indication of willingness to use the service.
- **Nighttime Shuttle** – Soldiers commonly head to Watertown at night, especially on Friday and Saturday nights. Currently they travel mostly in personal vehicles or cabs back and forth since there is no public transportation. This was a significant concern among focus group participants who made mostly negative comments about their own and cohort experiences with actual use of taxi service in terms of response times, dependability, cost, vehicle condition and driver courtesy. Those without a personal vehicle during their assignment at Fort Drum were particularly supportive of a public transit option for service to Watertown. Most soldiers did not want to drive to Watertown bars and restaurants for obvious safety reasons.
- **Cab Service** - Taxicabs were viewed as unreliable and unsafe by some soldiers and family members. The prevailing perception is that cabs take advantage of a captive market and overcharge when they can. Soldiers were favorable to the idea of requiring minimum performance level requirements for cabs to be allowed onto Fort Drum. There is also a private market of limos and town cars very willing to serve Fort Drum.
- **Overlapping Services** - The Gouverneur-Watertown link is currently served by two operators running along US 11. However, only a few focus group participants were aware of these services. An effort to coordinate these services would provide better transit for all, as currently, schedules are highly irregular and fares are uneven.
- **Service Coordination** - There was a distinct interest in implementing a one call center and a single booking system for Tri-County trips. Currently each county has a different structure for NEMT service delivery as well as other transportation services, but focus groups pointed to the desirability of one central number for information and referral.
- **Resource Availability** - Overall, the region enjoys a diverse public and private transportation industry with a sizeable vehicle fleet with significant capacity, and generally positive views toward collaborating and coordinating as a region.

The following text summarizes each focus group individually.

Fort Drum Single Soldiers

Two concurrent focus group sessions were held with single soldiers at the Better Opportunities for Single Soldiers office on June 2, 2011. Approximately 40 soldiers participated in the two meetings.

FORT DRUM REGION TRANSIT NEEDS ASSESSMENT | FINAL REPORT

Fort Drum Regional Liaison Organization

- All but one soldier in the group live on base. All soldiers in the group own a car. One person arrived in Watertown without a vehicle, and had difficulty getting around until he purchased one. Sharing rides is common practice amongst the group.
- In a typical day, soldiers report to physical training on base between 6:30 and 7 AM. Afterwards, they return to their barracks on base or their apartments off base before reporting to their jobs from 9 AM to 5 PM. Some soldiers report to their job at one location and move to other locations throughout the day. Some soldiers said they leave the base for lunch, especially if they have a car.
- Soldiers sometimes use the bus to get to the cafeteria for meals, but complain that the service is poor. Buses sometimes don't stop to pick-up passengers in the snow, make infrequent trips or do not follow a clear schedule. Buses passing soldiers on base are required to reduce their speed to 10 or 20 mph, resulting in slower service.
- On weekend nights, soldiers often travel to Watertown and Sackets Harbor. Although many soldiers own cars, they report frequently sharing cab services to and from these destinations for safety reasons.
- Traveling around the base is difficult without a car. All the soldiers reported sharing rides on and off post. One soldier uses a bicycle to get around post. During the winter, it is difficult to shovel cars out from under several feet of snow. Soldiers said that if public transit were in place, they may not have brought a car, or at least tried without for a little while. Some soldiers buy cars, then cannot keep up with car payments.
- On a daily basis, the soldiers reported traveling to the PX shopping area, Army Community Service Center, the Commons, the Robert C. McEwen Library and Education Complex, the gym, and their jobs on base. On a weekly basis, the soldiers reported traveling to the Wal-Mart on Route 11, the Shopette, PX shopping area, and the BOSS Center.
- The primary market for public transit is nighttime trips; however, the soldiers felt that a couple midday runs could help transport people to appointments in Watertown or Carthage. BOSS provides occasional special events outings to Buffalo and Syracuse for sports games, as well as wine tasting tours in the Finger Lakes and ski trips.
- The soldiers were not familiar with public transit services in Watertown, Lewis County or St. Lawrence County. They were not aware that private bus operators such as Adirondack Trailways will pick up soldiers near the North Gate. The soldiers typically use cab services, such as Yellow Cab, East Coast, Fat Man Cab and Phoenix. At orientation, the soldiers are given cards that warn against drinking and driving and have a list of cab companies with phone numbers. The soldiers report that service can be very poor: cabs can arrive hours late for scheduled pick-ups or not at all, and fares may vary between \$10 and \$20 over the same trip.
- Most soldiers use Syracuse when flying into and out of the region. The typical means of travel to the airport and back is driving, though parking costs are significant at \$10-\$13 per day. Fort Drum provides a free shuttle service that is primarily oriented around transporting newcomers from Syracuse to Fort Drum, although if there is space the shuttle will take other soldiers. No one had experience with other public or private transportation services to the airport.
- Fixed-route bus service on and off post is appealing to the soldiers. Getting around post is most important for work and other duties. The soldiers identified important routes along Riva Ridge, Mt. Belvedere, Iraqi Freedom, Euphrates, Enduring Freedom and Tigris River. In addition to previously identified destinations, on-base service would ideally stop at the community centers.
- Off-base service is also appealing. The soldiers are especially interested in a reliable, fixed-route bus service from Fort Drum to Watertown. They would be willing to pay up to \$5 per trip, which is equal to cost of gas. Service on the weekends should run until at

least 2 or 3 AM. A monthly card or a ten-trip pass would be useful. Soldiers also showed support for a flat-rate, shared ride service.

Fort Drum Families

In addition, a focus group session was held with soldiers' families on June 2, 2011. Three people, all wives of soldiers, attended.

- Two of the women who participated live on-post, while one lives off-post in Watertown. Daily travel for the on-post women is mostly contained to post, with intermittent trips to Syracuse and Carthage. One participant who lives in Watertown travels between Watertown and Fort Drum, where she works, several times a day.
- For shopping, destinations include Salmon Run mall, grocery shopping at the commissary on post and the Syracuse mall.
- Medical trips are frequent for this group and involve longer distances. Rideshare boards are posted in community facilities, mainly to coordinate rides to Syracuse for medical appointments.
- The group is not familiar with public transportation services in the area. All have at least one motor vehicle in their families.
- The women expressed some apprehension about taxi cab services. One person said the taxis look unsafe, unreliable and old. Many one-car families on post deal with transportation issues when one spouse doesn't have the car by sharing rides. Two women, who represent the Family Readiness Group (FRG), often personally drive people to appointments. A flat-rate, shared private car service would be more appealing than the current taxi service.
- Younger spouses are often scared and nervous about being out on their own, especially when their spouse is deployed. Taking public transit may not be easy for these younger spouses, and they might just stay home. Marketing and education is important to show how it works and that it is safe.
- Winter time driving is an issue. Many people drive less because they come from warmer climates and lack snow driving experience.
- Most trips to and from the region take place through the Syracuse Airport. Taxis can charge as much as \$140 between the airport and Fort Drum, so driving is preferred. The women are interested in traveling through the Watertown airport as it requires less driving, lower fuel costs and provides free parking.
- For bus service, it is important that there be a fixed route, published and reliable schedules, and clean shelters. While the women would prefer that teens use buses to Syracuse instead of driving, they are not completely comfortable with idea of teenage daughters using city bus or regional bus to Syracuse.
- The women would be willing to pay an average of \$20 for adults and \$15 for kids to travel one-way to Syracuse. However, it is suggested that this would still seem expensive to younger soldiers and be cost prohibitive to parents with multiple children versus driving.
- Regardless of the service model, it is important that it be marketed to users. Newcomer orientation takes bus tour of Watertown, a technique which could be used to legitimize public or private transportation service as a safe and efficient option for the military, families, spouses, etc.

Lewis County Transportation Providers

On Thursday, June 1, 2011, Nelson\Nygaard met with Lewis County transportation service providers at the Lewis County Court House in Lowville. Several issues were discussed:

- Participants suggested that the LOOP system has been a great initiative but needs to be revamped to serve more people. For example, current schedules do not have midday trips, leaving people to wait all day at a destination. Also, the routes do not cross county boundaries, which may need to change to serve critical needs.
- The closest dialysis services are in Watertown, Utica, and Ogdensburg. Approximately 15 Lewis County residents need transportation service to dialysis appointments. There are plans to open a dialysis unit at the hospital in Lowville, but may not be established for another 12-18 months.
- Better marketing of available transportation services is needed, including educating health care providers at Lewis County General Hospital, other human service workers, and the general public. There is a Lowville village route that operates Tuesdays and Thursdays, and doctors are encouraged to schedule visits for those days. However, knowledge of this service is still limited.
- There is a belief that too much money is being spent on Non-Emergency Medical Transportation (NEMT), and there is a need to overcome barriers to coordinate this service. Several suggestions for creating efficiencies were discussed, such as creating a common reservations and scheduling system that could be accessed by multiple service providers and commingling clients of different agencies on the same vehicle.
- The grant process for Section 5310-funded vehicles was discussed, including encouraging coordination at the county level among multiple applicants for new vehicles. It was noted that Lewis County General Hospital has Section 5310-funded vehicles and also is owned by Lewis County.
- Fares and other revenues are not a significant issue at the moment in Lewis County. New York State Transit Operating Assistance (STOA) funds are accruing based on Lewis County LOOP operations, and currently there is a surplus available to operate new or additional services.

Jefferson County Transportation Providers

On Thursday, June 1, 2011, Nelson\Nygaard met with FDRLO, Jefferson County staff and transportation service providers at the BOCES on Route 3 in Watertown. Providers in this group communicated several issues:

- An estimated 75-80% of Watertown Airport business is Fort Drum-related, including soldiers on leave, military dependents, and contractors. While the airport has worked to promote its service to Fort Drum, existing aircraft size and destinations are a limiting factor. The Watertown Airport is much easier for soldiers on mid-tour leave to use as families do not have to make the drive to Syracuse or Albany, though there is no bus service to either airport.
- Citibus and others noted a need for service expansion to Fort Drum and in Watertown. Trailways would like to provide service and sell tickets on Fort Drum, but needs help navigating bureaucracy to get on post. The old visitor center outside the North Gate was suggested as a transfer station for passengers to switch between on- and off-post transportation services.
- There is a need for coordinated schedules between operators at the transit hub in Downtown Watertown to accommodate transfers between Citibus, Trailways, and St. Lawrence County.
- River Hospital has a new vehicle and is looking for opportunities to use it to improve healthcare access.
- A participant suggested that there is an important niche market for private transportation service. because people like the privacy of the service, as well as the flat fare. A service like Lyme Lite is perceived as safer and more reliable than cabs.

- Mannsville, Adams Center, Cape Vincent, Alexandria Bay, and Carthage. Sackets Harbor, Clayton, and Alexandria Bay were identified as off-post areas with a denser military family presence and as areas for potential transportation service.

St. Lawrence County Transportation Providers

On Thursday, June 2, 2011, Nelson\Nygaard convened a meeting with St. Lawrence County service providers at the St. Lawrence County human services building in Canton.

- Many residents would benefit from an expanded span and frequency of county service for medical trips, Medicaid trips, work-related trips for low-income populations, and shopping trips to different retail destinations.
- Service to Gouverneur is provided with a JARC grant, but that funding is running out.
- There is a need for high-visibility marketing and branding of transportation, as well as training for riders to schedule appointments around the convenience of transit schedules. The system needs to be user-friendly. There is an auto-dependent mindset in which people would rather drive or get a ride with a friend or family member than wait for transit service.
- The rural nature of the counties means that many people live far from main roads. Many participants agreed that volunteers or paratransit service could take clients from home to a transit route to complete the trip instead of full door-to-door service.
- The County transit system has difficulty providing service to Stream Global Service on the Gouverneur route because the 700 employees change shifts every 5-6 weeks. There is a need for coordination with the employer.

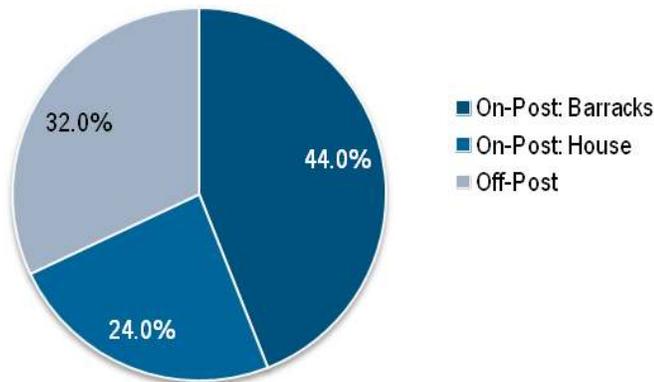
SURVEY

A key component in planning transportation services is understanding where people go, where they want to go, how they get around, and what type of service they would be interested in using. The project team created a survey asking for this information – one for the general public and one specific to soldiers. The survey was distributed in online and hard copy versions with the assistance of stakeholders. Fliers announcing the survey URL were posted throughout the three counties, along with newspaper advertisements, a Facebook posting, and e-mail chains. A total of 423 surveys were received.¹³

Fort Drum Soldiers

Twenty-five (25) soldiers responded to the online survey.¹⁴ Of these, 44% live in barracks on post, 24% live in a house on post, and 32% live off post.

Figure 5-2 Residence of Soldiers



Fifteen of the responding soldiers do not have a spouse or dependents living with them. Three have a spouse only, two have dependent only, and five have both a spouse and at least one dependent. The soldiers indicated that most family members drive alone for their travel needs, though many also carpool. Three carpool exclusively.

This is supported by information from the focus group dedicated to family members of soldiers, at which all participants reported that they drive alone for most of their travel needs.

¹³ A statistically valid random sample size of 384 responses would be needed within a population of 250,000 persons to generate survey results with a 95% confidence level and 5% confidence interval (margin for error).

¹⁴ Attempts were made to issue an email alert about the survey from the Garrison Commander's office, but for security reasons, this email was not allowed to circulate, limiting the advertising of the survey distribution.

Traveling To and Around Post

A majority of soldiers responding to the survey drive alone to post (64%). Twenty percent (20%) are dropped off, less than 1% takes a taxi, and less than 1% carpool. Traveling around post, a majority drive alone (64%), 2% walk and less than 1% use taxis, carpool, or are dropped off.

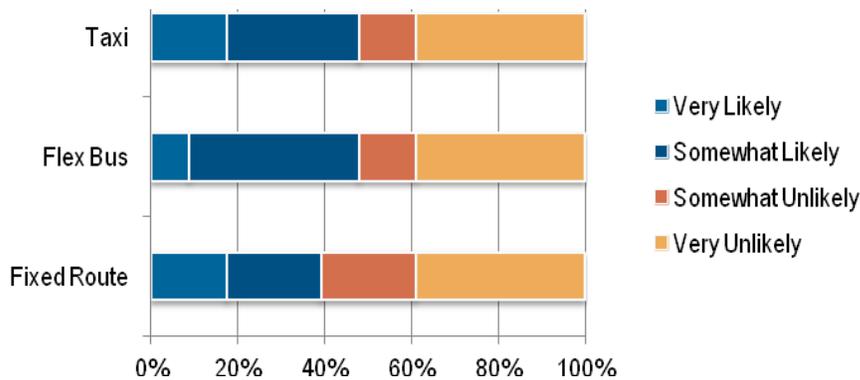
In the focus group, this trend was supported. Most of the 40 soldiers in attendance own a personal vehicle and believe that traveling around base without a car is difficult, though they all reported sharing rides frequently. Most were not familiar with public transit services in Watertown, Lewis County or St. Lawrence County.

Taxis are popular for work trips as well as for regional trips to Sackets Harbor and Watertown on weekend nights. However, perceptions of taxicab companies ranged from fair to poor; service can be highly unreliable and expensive.

Willingness to Ride

Survey respondents indicated that approximately 50% would be "Very Likely" or "Somewhat Likely" to use taxi services or a flex bus service. Slightly less than 40% indicated that they would use a fixed-route service.

Figure 5-3 Willingness to Use by Type of Transit

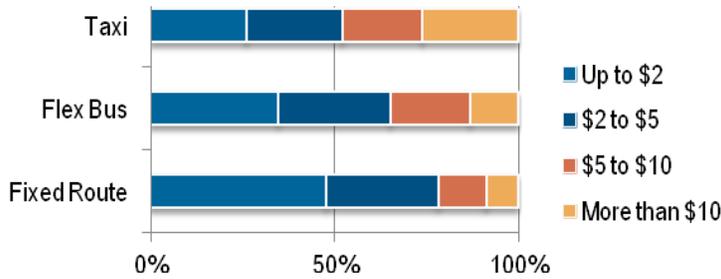


In the focus group, soldiers expressed support for fixed routes, especially for nighttime trips and connections between Fort Drum and Watertown and Fort Drum and Carthage.

Willingness to Pay

Similar to the general public, soldiers indicated a willingness to pay more for a higher level of service offered by a taxi or a flex bus.

Figure 5-4 Willingness to Pay by Type of Service



In the focus group, soldiers indicated they would be willing to pay up to \$5 for a reliable fixed route into Watertown. Reliability and uniqueness of vehicles are two important service qualities cited by soldiers.

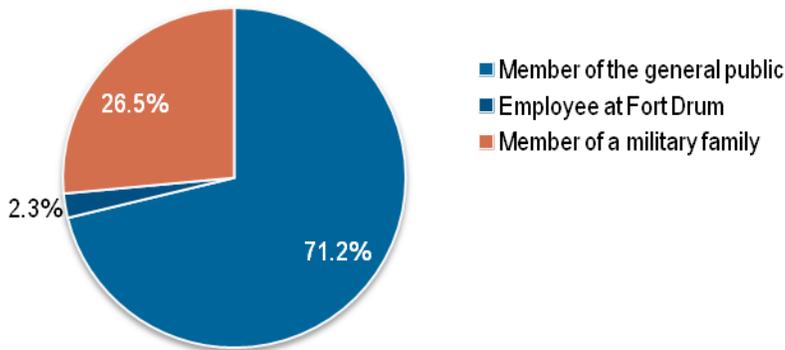
Unmet Needs

Soldiers responding to the survey, focus group respondents, and family members focus group respondents indicated a need for travel to Syracuse, whether for recreation (shopping, sports facilities) or to the airport. Soldiers also indicated a desire for nighttime service. Most were not aware of any public transit services available in the region.

General Public Survey

A total of 398 responses to the survey targeting the general public were received. Of these, 223 identified themselves as members of the general public, 81 as members of a military family, and three as employees of Fort Drum. The survey consisted of nine questions.

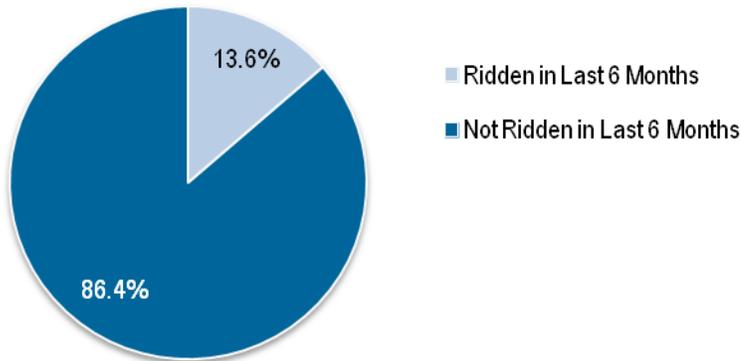
Figure 5-5 General Public Survey



Transit Use

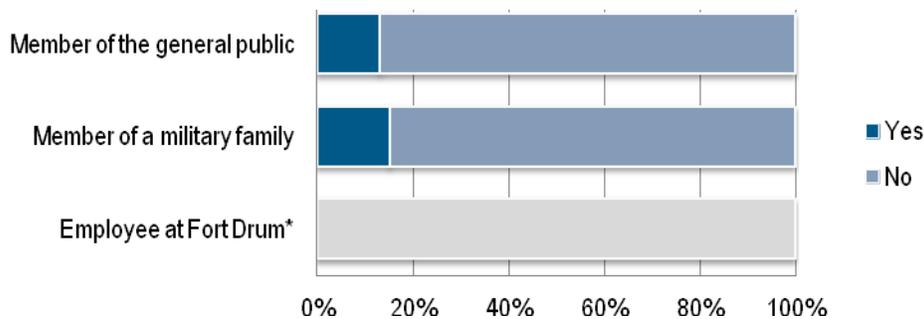
A number of questions on the survey sought to learn about residents' use and willingness to use transit. In the past six months, nearly 14% of survey respondents had used some type of transit.

Figure 5-6 Transit Use in Last 6 Months



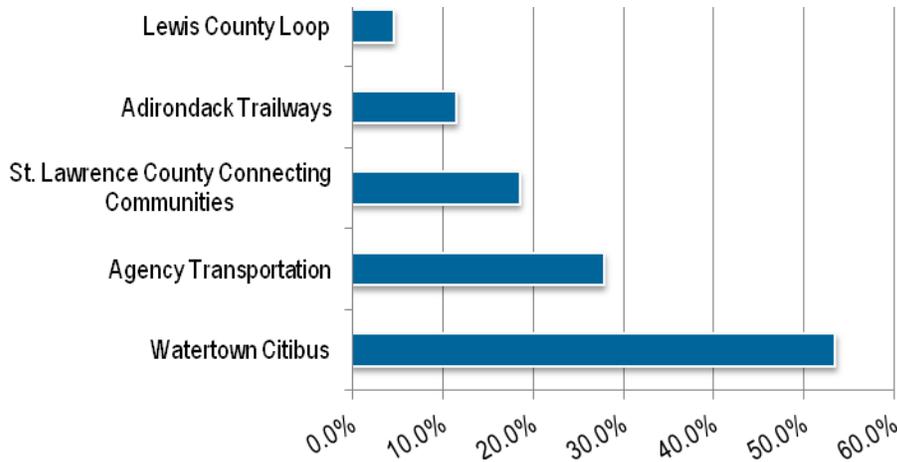
Members of military families were slightly more likely to have ridden transit in the last six months. (Note that the small number of employees at Fort Drum responding to the survey is not a sufficient sample size to include in this data point.)

Figure 5-7 Type of Rider



Of the types of riders who had used transit in the last six months, over 53% had ridden Watertown Citibus, nearly 19% had ridden St. Lawrence County services, and nearly 5% had used the Lewis County LOOP. About 30% had used a specialized agency transportation service (such as Medicaid or volunteer drivers). Over 11% had used Adirondack Trailways. Approximately 20% of respondents had used more than one transit service in the region.

Figure 5-8 Service Utilized in Past 6 Months



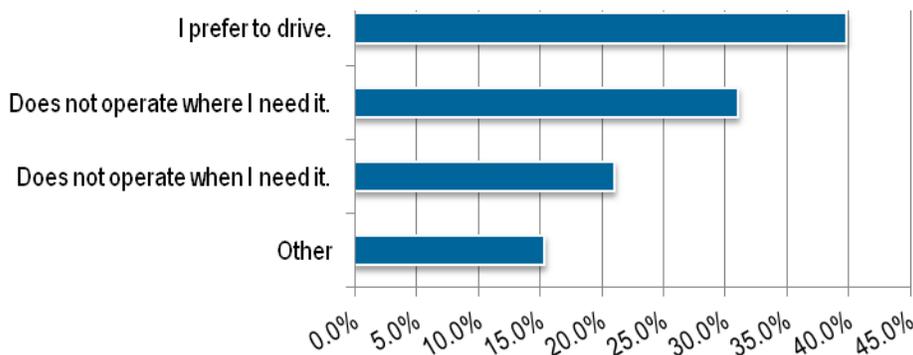
Reasons for Not Using Transit

A majority (40%) of respondents prefer to drive than use transit. A high percentage of respondents answered that at least one reason they do not use transit is the lack of availability in their geographic area (31%). Similarly, 21% indicate that the hours do not accommodate their transportation needs.

In the "Other" category, most respondents indicated that there is no transit available in their area or that they do not know about it.

(Note, percentages sum to more than 100% because respondents were allowed to indicate more than one reason.)

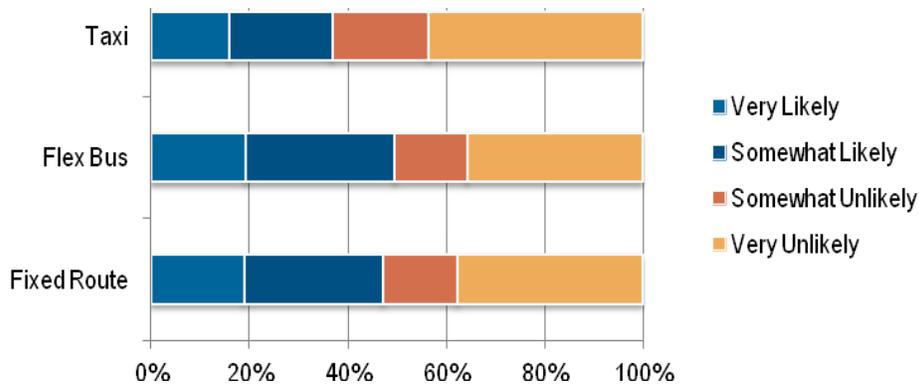
Figure 5-9 Reasons for Not Using Transit



Willingness to Ride

The below bar chart represents respondents' willingness to utilize different modes of transit if offered in their community. More respondents - 47% - are "Very Likely" or "Somewhat Likely" to use a flexible bus service than either fixed-route service (44%) or taxi services (37%).

Figure 5-10 Willingness to Use by Type of Service

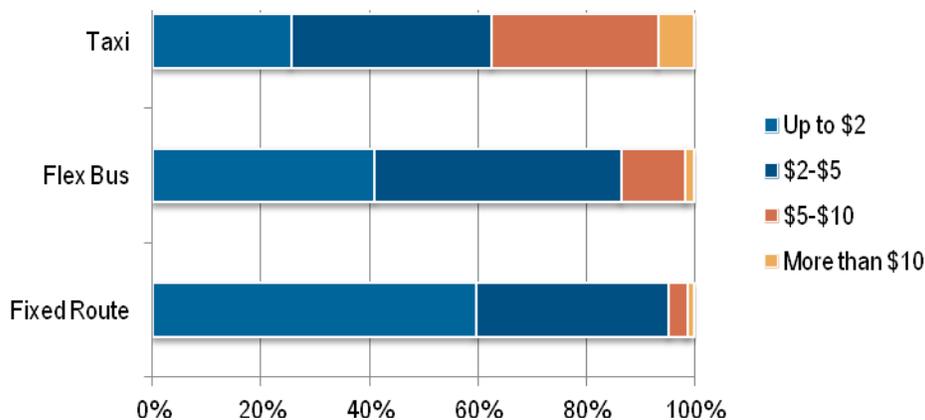


Across types of respondents - members of military families, employees of Fort Drum and members of the general public - answers about willingness to use the different types of service were nearly uniform, though members of military families were slightly less likely to indicate likely use of fixed-route services. This stated preference does contrast to reported behavior of riding transit in the last six months, in which members of military families were slightly more likely to have ridden. This discrepancy could be an indication of the difference between stated preferences and actual behavior or could indicate an insufficient sample size for military families (n=81).

Willingness to Pay

The chart below displays survey responses from the general public about willingness to pay for different types of service. Survey respondents show an understanding of the higher costs of curb-to-curb service and are in turn willing to pay more for a flexible bus system and even more for a taxi.

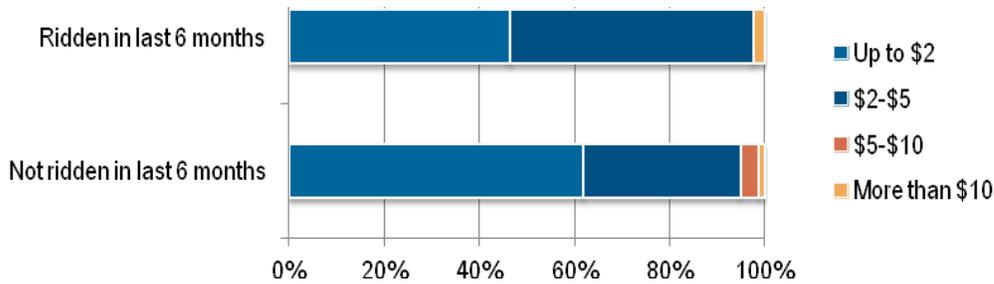
Figure 5-11 Willingness to Pay by Type of Service



The below chart displays willingness to pay for fixed-route service by category of rider. Survey respondents who have ridden transit in the last six months are more willing to pay between \$2

and \$5 for a trip, while non-riders are more willing to pay only up to \$2. However, respondents who have not ridden in the last six months are more willing to pay more than \$5 for a trip than those who have ridden recently. (Note: sample size for riders in the last six months was 43 respondents compared to 254 respondents who have not ridden).

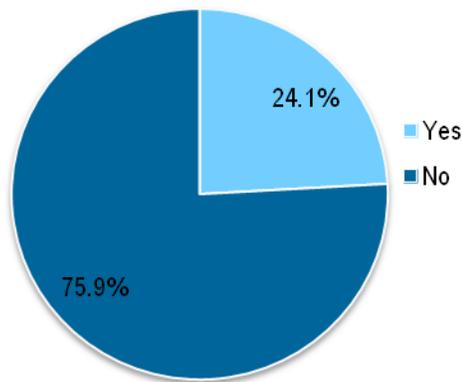
Figure 5-12 Willingness to Pay for Fixed Route by Transit Use



Unmet Transportation Needs

Despite the majority of respondents utilizing a personal vehicle for their transportation needs, nearly one quarter (24.1%) indicated difficulty traveling to some type of destination they wished to go to.

Figure 5-13 Cannot Travel to Some Destinations



A majority of those who indicate difficulty making certain trips listed destinations primarily in Watertown and Fort Drum as difficult to get to. Syracuse and the Syracuse Airport were also popular answers to the open-ended question. Shopping was the most prevalent type of trip that was difficult to travel to.

Figure 5-14 Destinations People Want to Go

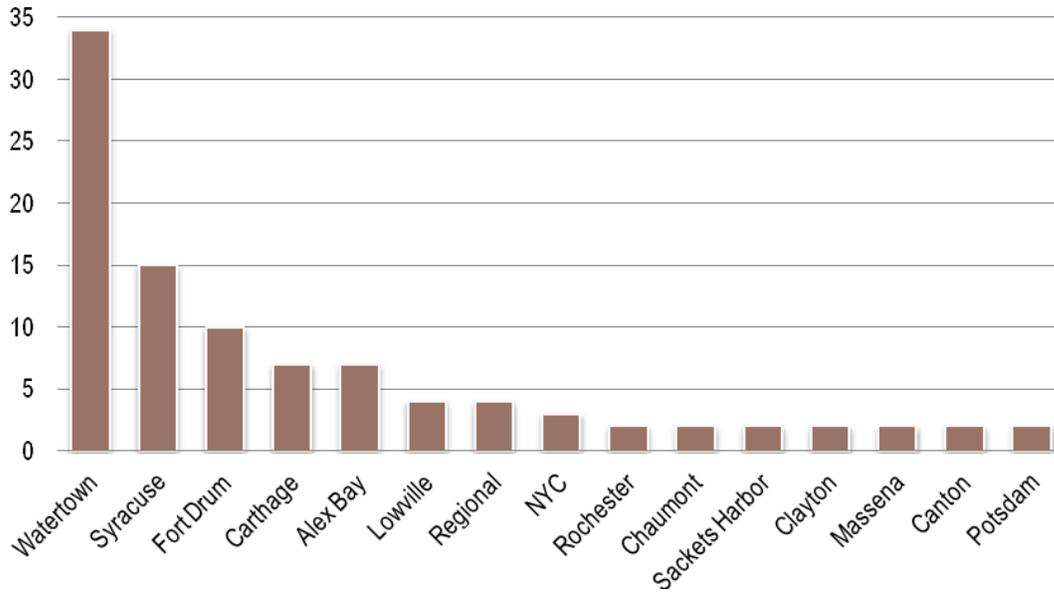
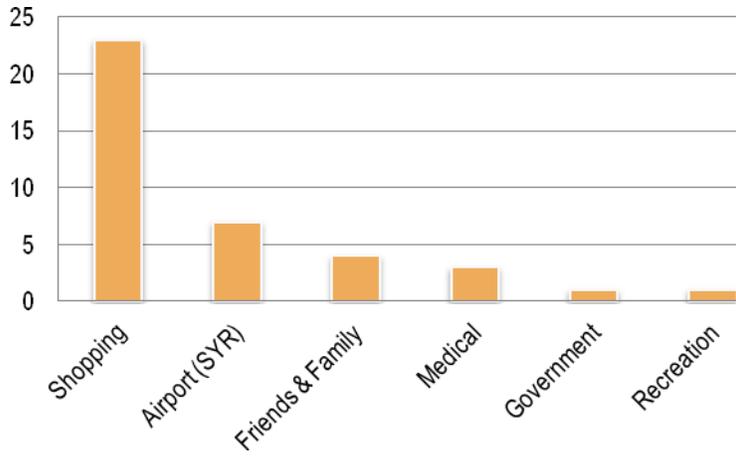


Figure 5-15 Trip Type



ORIGINS AND DESTINATIONS

The survey asked respondents to list the two closest cross streets to their home, plus their ZIP code, to determine their point of origin. In general, only a few origin responses were too vague to be mapped. The respondent was also asked to list the name and address of two destinations they travel to frequently. A total of 414 responses were from the general public, military families, or employees of Fort Drum. Out of a total possible 828 destinations that could have been listed, 610 responses were specific enough that they could be mapped - a yield rate of 73.7%.

Respondents were mostly concentrated in Jefferson County; however, there were a significant number of responses from Lewis County, and a good geographic spread of respondents from St. Lawrence County.

Figure 5-16 Respondents by ZIP Code of Origin

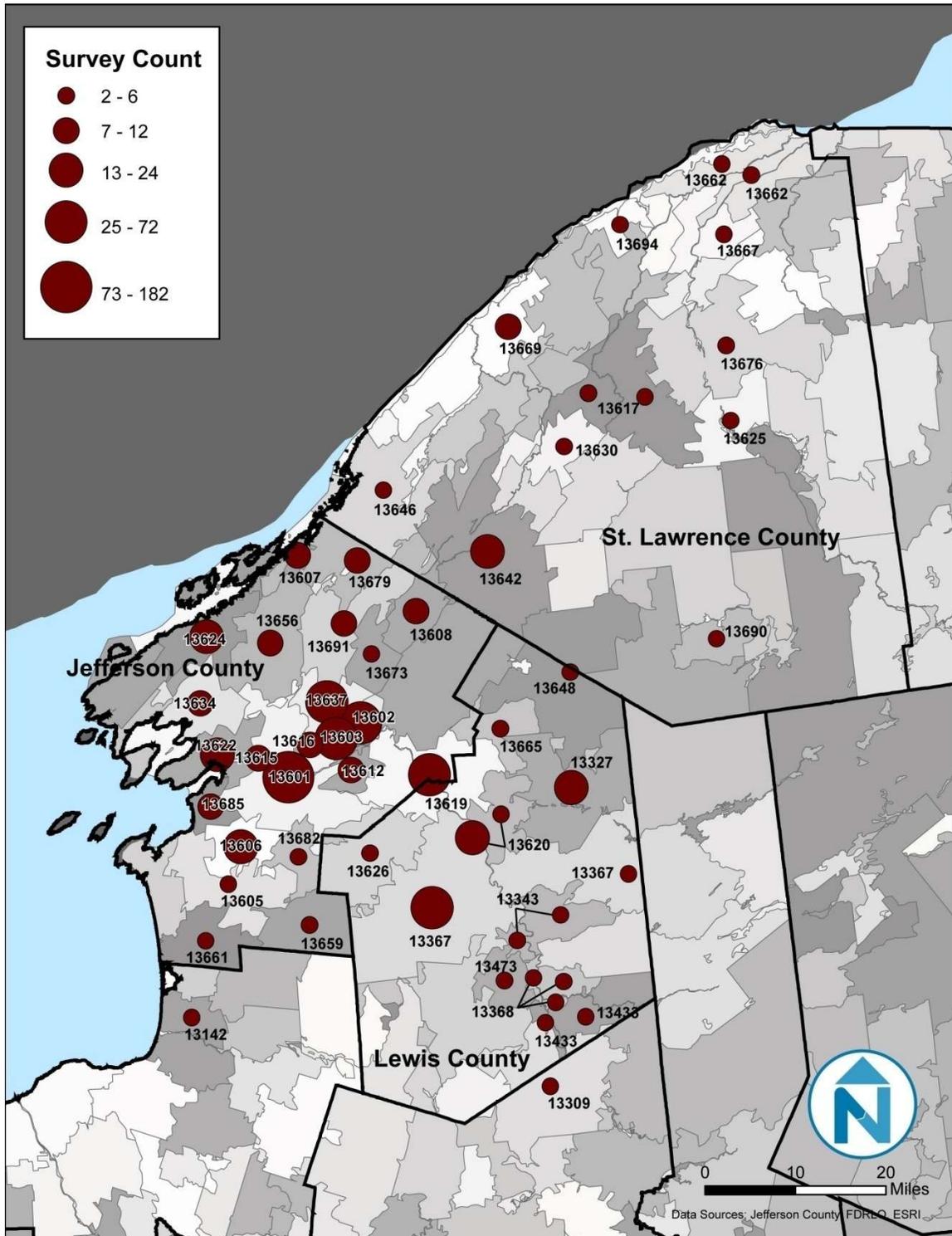


Figure 5-17 is a dot-density map showing where people said they "usually travel." As would be expected, most people cite locations in Watertown and LeRay, plus a small cluster in Carthage. In St. Lawrence County there are clusters of destinations along Route 11 from Gouverneur to Massena as well as on Route 37. In Lewis County, the Route 12 and 812 corridors emerge as places with destinations. The Lewis County LOOP serves both corridors, although routing can be circuitous. This might be because the route originated as an Arc route, and certain clients lived off Route 812. Interestingly, the vast majority of destinations are served by fixed-route transit, except for Fort Drum.

Figure 5-17 All Destinations

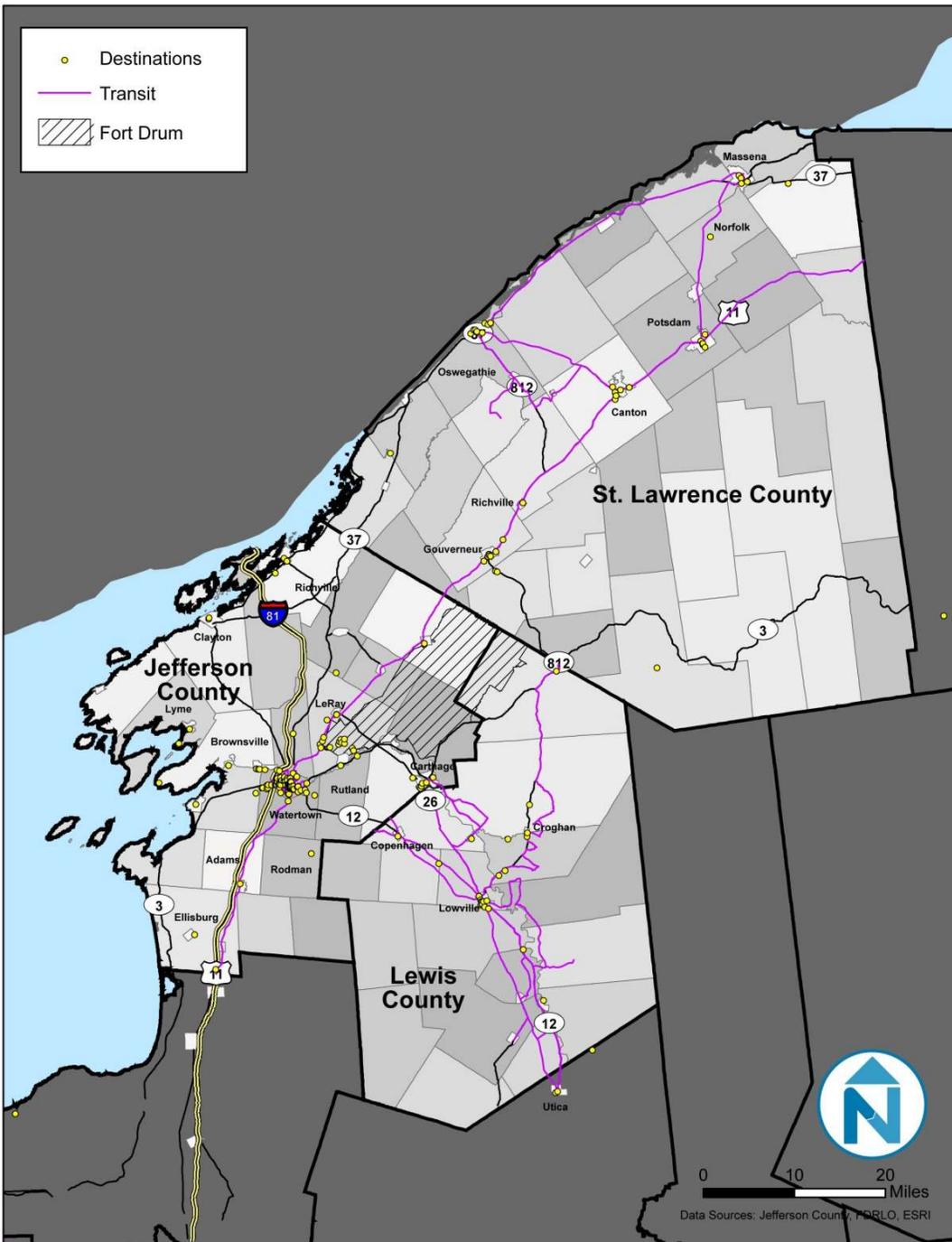
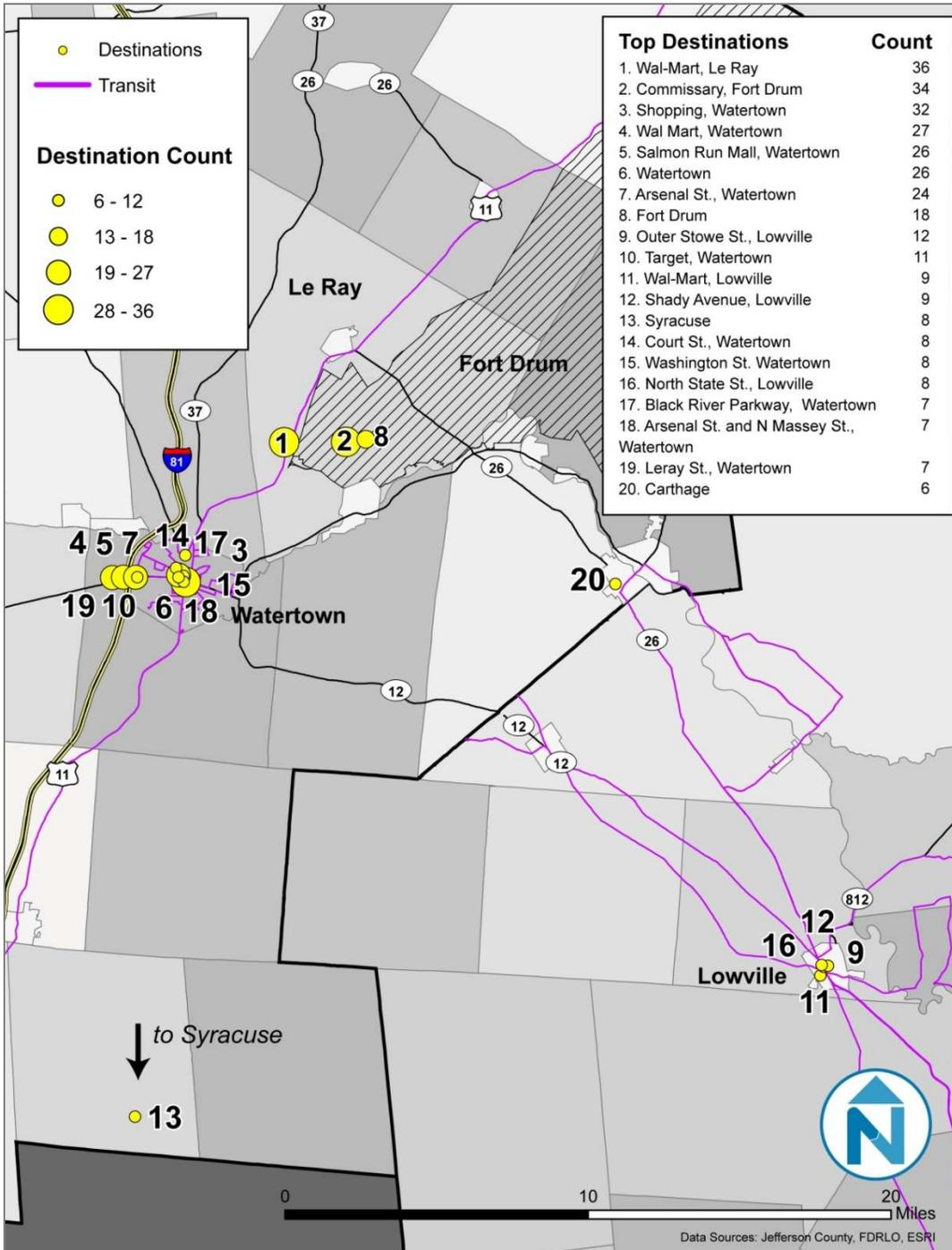


Figure 5-18 shows the top 20 destinations cited by respondents. The Wal-Mart in LeRay was the top destination. Despite the fact that the vast majority of survey respondents were members of the general public, the 2nd most common destination was the Commissary on Fort Drum, showing that the installation is a major destination for the general public as well. The only destination outside the study area in the top 20 was Syracuse, at #13.

Figure 5-18 Top 20 Destinations



A key component of transit planning is linking where people are coming from to where they are going. Accordingly, the origins and destinations of survey respondents were mapped to highlight prevailing travel patterns. Figure 5-19 shows the overall county-to-county travel flows. Travel within Jefferson County is by far the biggest travel trend, with 415 destinations linked to origins within the county.

Figure 5-19 Origin-Destination by County

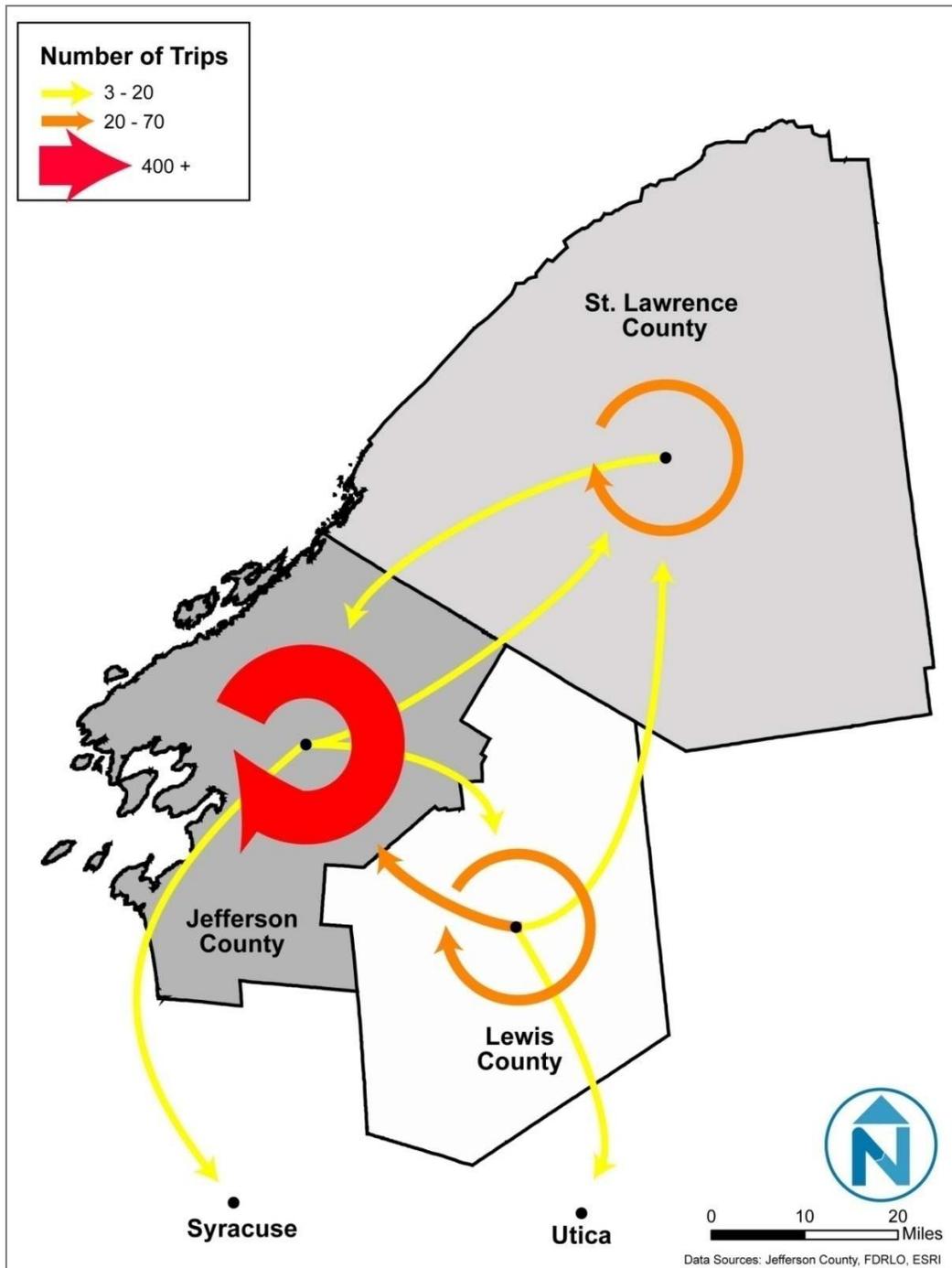


Figure 5-20 shows that the highest number of trips occurs within Watertown, LeRay and Lowville. Watertown is a major draw for residents of Jefferson and Lewis counties. The biggest destination from Watertown is the Town of LeRay. There is a significant number of people coming from Brownville to Watertown. There are trips between St. Lawrence County towns and Jefferson County, but they number five or less.

Figure 5-20 Origin-Destination by Town

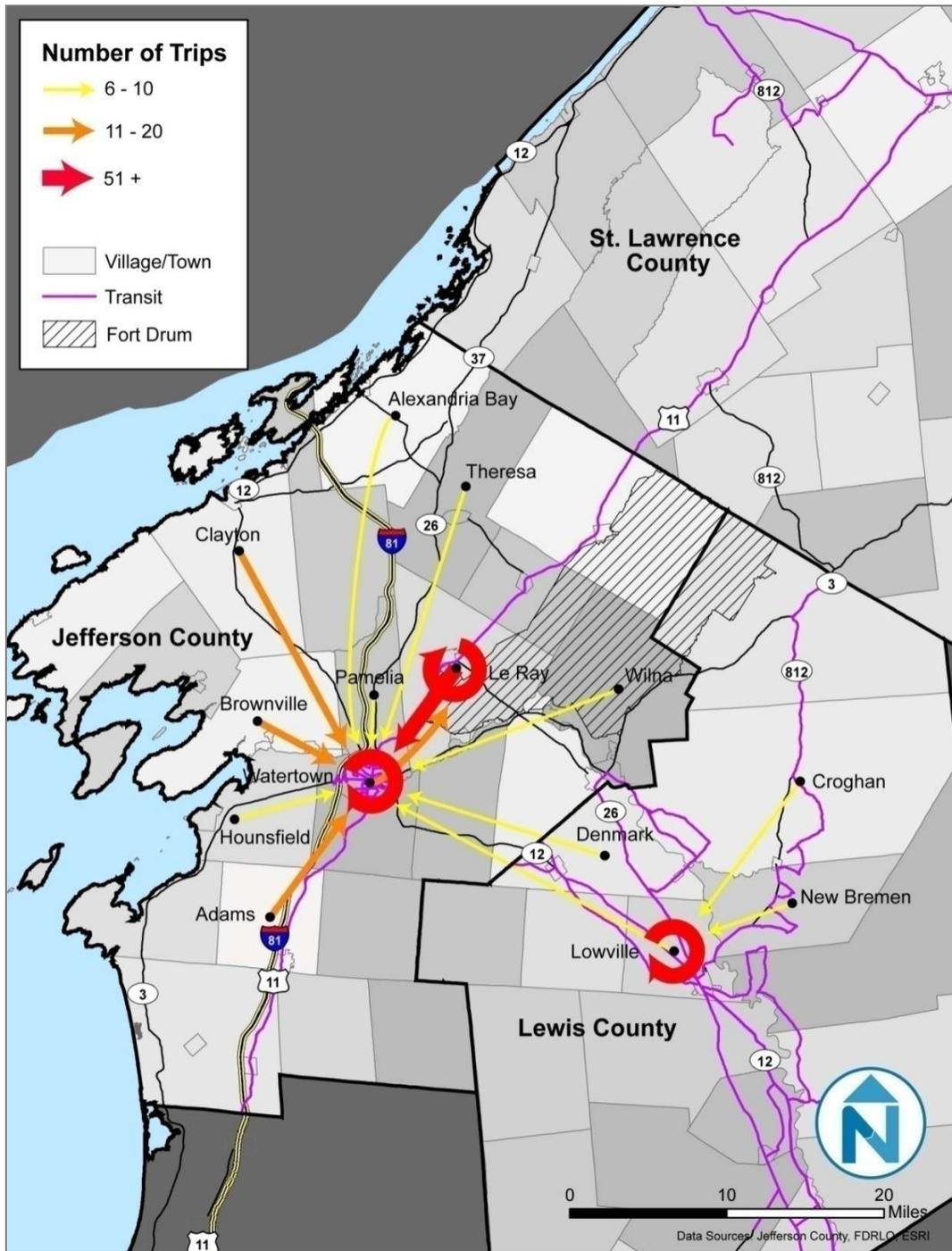
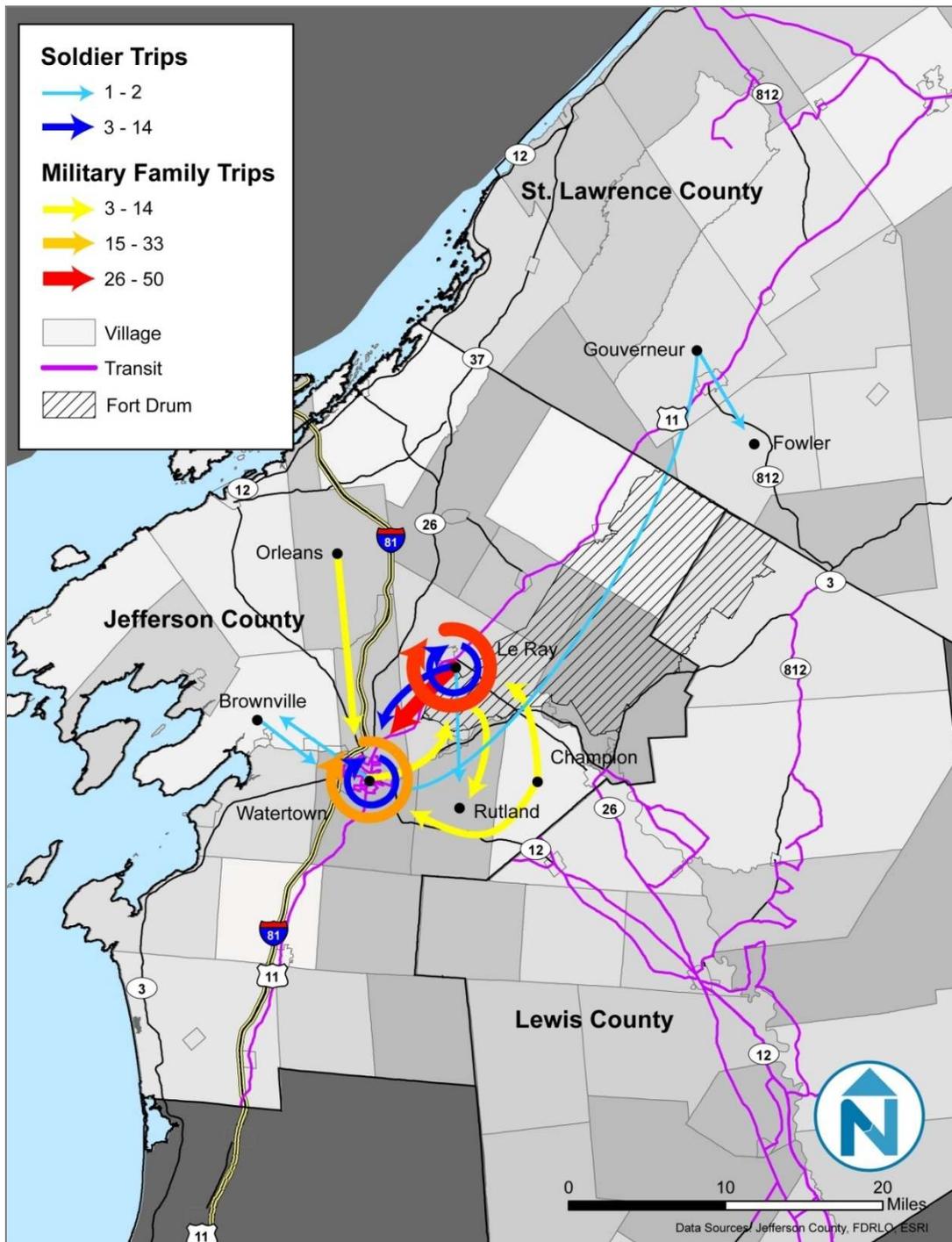


Figure 5-21 shows the origins and destinations of Fort Drum soldiers and military families. Most trips occur within LeRay or within Watertown. Military personnel are less likely to travel to Watertown than the general public. There are trips between towns outside Watertown, such as from LeRay to Rutland and Champion to LeRay. Travel is more dispersed.

Figure 5-21 Origin-Destination of Fort Drum Personnel

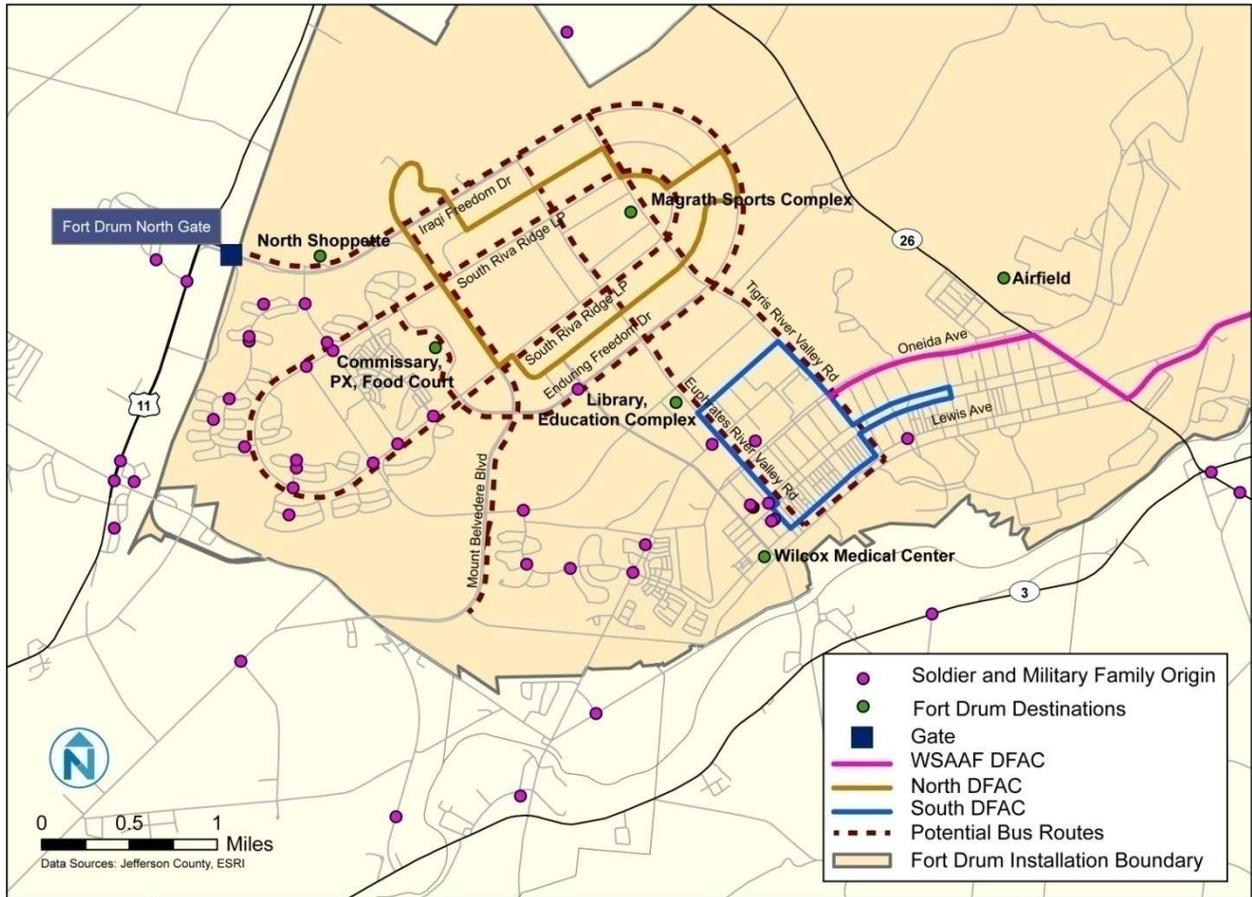


Soldiers were very enthusiastic about improved on-post transportation during focus groups. Figure 5-22 below shows the origin of military families and soldiers who live on or near the post, as well as destinations noted in the survey that are on-post. The map shows three existing Dining Facilities Administration Center (DFAC) bus routes (a.k.a., "chow bus"), along with some potential route segments that soldiers identified during the focus groups. Clearly a loop on Riva

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Ridge would reach more soldiers and families living in single-family style housing. The current chow bus routes may be low in ridership because they do not connect North and South Posts. Soldiers said that, especially for single soldiers, they tend to live on South Post and need to get to jobs on North Post.

Figure 5-22 On-Post Transportation



CONCLUSION

The needs assessment clearly reveals that inter-county travel is taking place, and that the heaviest concentration of travel lies between Fort Drum, the Wal-Mart retail area, Watertown, and Lowville. The Wal-Mart in LeRay was the single most often identified destination of all survey respondents. Although survey respondents were primarily members of the general public, two of the top three singly identified common destinations were Fort Drum and the Commissary on Fort Drum, showing the installation's importance in the overall community. The analysis of geography and density of destinations, combined with in-depth discussions with providers and potential riders reveals numerous gaps in the transportation network. These include both spatial gaps and also gaps in information.

Figure 5-23: Unmet Needs and Service Gaps

Unmet Need/Gap
Geographic/Spatial
Watertown to LeRay/Route 11 vending area
Fort Drum to North Gate/Route 11 vending area
Lowville to Watertown
Outlying towns in Jefferson County to Watertown
To/From Watertown Airport
Information
Soldiers are unaware of Trailways & St. Lawrence County services that run up and down Route 11
Lewis County LOOP residents are not aware of bus service
Information materials such as schedules and maps are difficult to understand
Watertown residents do not know about St. Lawrence County buses connecting to the Route 11 vending area and Gouverneur
Coordination
No single entity works across agencies and jurisdictions on regional transportation issues
Watertown Citibus and Jefferson County NEMT broker does not coordinate to provide NEMT trips
Service Quality
Taxi service can be poor, though cost is high
Hours of Service/Temporal Gaps
No nighttime transportation options exist for soldiers
No midday service in Lewis County
Limited weekend public transportation

GAP ANALYSIS & OPPORTUNITIES

As shown in earlier sections of this report, there are numerous transportation providers in the Tri-County region, including commercial operators that typically respond to market demands with services that do not require public subsidy and hopefully generate a profit, as well as public entities and private not-for-profit agencies that may address transportation needs that are satisfied under normal market conditions. As is the case locally, commercial providers may also become engaged in unprofitable services when adequate subsidy is available.

From the outset it is important to understand that rural passenger transportation seldom is a profitable enterprise, and few if any rural transit systems would exist without public subsidy. Virtually every U.S. rural transit system created during the past 30 years was created through local actions that responded to initial perceptions of unmet need followed by an ongoing process to determine what to do about them. Generally, only a portion of the unmet needs may be quantified while other needs must be described in qualitative terms. Transit ridership estimation is an inexact science at best and influenced by a variety of external conditions ranging from land development density to traffic congestion; from transit service frequencies to household income and auto ownership; from geography to the weather. Such conditions make it more difficult to predict transit ridership solely on the basis of results achieved by peer systems in other rural communities.

Therefore, this section focused in identifying pockets of transit riders and significant spatial (i.e., routing), temporal (i.e., scheduling), and other gaps in the existing public transportation system based on findings and conclusions documented in the Demographic Profile & Needs Assessment. These are gaps that constrain mobility within the Tri-County region, but also isolate the region from neighboring regions. A base estimation of transit riders has been created by applying research to the Market Analysis & Needs Assessment; however, less emphasis is placed on ridership estimation in consideration of the research methods used in the study process, which included stakeholder interviews, meetings involving community leaders, technical staff and the public, as well as multiple focus group sessions and two surveys of self-selected respondents. While highly informative and useful for identifying unmet needs, they provide relatively little basis for accurate numerical forecasts of future ridership. Ridership estimates provided in this chapter are based on historical ridership data aboard existing services as well as peer experience and professional judgment.

MARKET SIZE

In the Fort Drum region, there are two primary markets for transit:

- Transit-dependent populations who cannot drive or do not own a vehicle. These populations include adults over age 65, persons with disabilities, person with low income, and households without a vehicle. All this data is available through the Census and is outlined in chapter 2.
- Soldiers traveling between Fort Drum and Watertown. While vehicle ownership rates are high, feedback received in focus groups showed a strong desire for options other than driving to get to Watertown during the day to access services and at night for dining and entertainment. Transit service can provide an important quality of life improvement to soldiers, especially single soldiers.

Transit-Dependent Populations

Of the 143,424 people living in Jefferson County plus the towns of Denmark, Lowville, Canton, and Gouverneur, the Census tallied 76,870 responses that fall under the four transit-dependent populations. This number communicates a scope of demand, but does not equate to actual numbers of individuals since some people could fall into more than one demographic category. In order to more accurately show the number of people in this market, the following steps were taken:

1. Two categories that might overlap are persons with disabilities and older adults
2. Calculate older adults by town
3. Calculate persons with disabilities by town
4. Census has information on older adults who have a disability - calculate number of adults over age 65 with a disability and divide by 2 so the person is counted once
5. Calculate % overlap against the number of older adults and persons with disabilities
6. Persons with low income and households without a vehicle also typically overlap somewhat. Double the % overlap between older adults and persons with disabilities and subtract out of transit-dependent populations
7. The following table shows an example of this calculation for Cape Vincent. Based upon the regional average, a total overlap factor of 16% was used to reduce the reported Census transit-dependent population size.

Figure 6-1 Factoring of Population Overlaps

Town	Total Population	Older Adults (OA)	Persons with Disabilities (PWD)	OA + PWD	OA who also have a disability	Total Persons falling in 2 categories	OA and PWD Overlap %
Cape Vincent	3,327	398	358	756	134	67	8.9%
Average Overlap for Jefferson, Lewis, and St. Lawrence Counties							7.9%

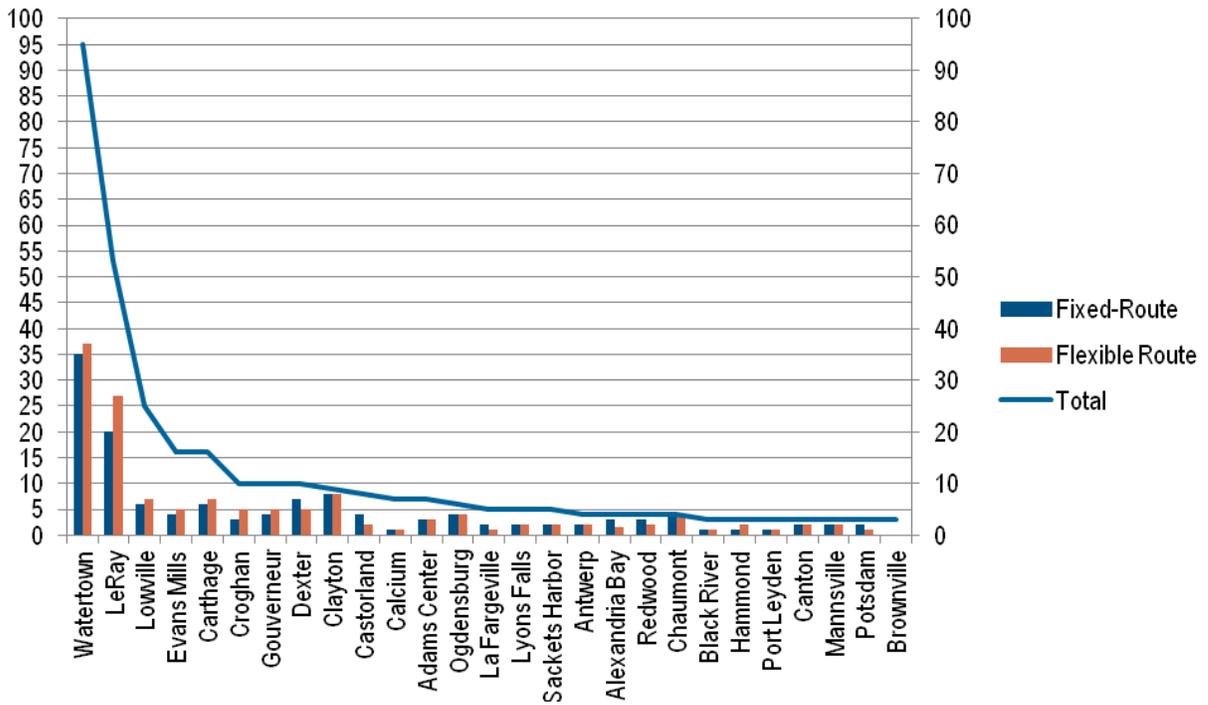
Source: Census 2000, Summary File 3

Of course, not every person will take transit who falls into certain demographic categories. To obtain a closer approximation of future demand, the following steps were taken, through a combination analysis of survey results, research, and current ridership.

- Clearly Watertown is the top destination. Although travel exists between towns, it is of a scale likely more appropriate to a volunteer or demand-response service. Of all the destinations reported on the survey, 76.8 percent (476 listed destinations) are in Watertown, Lowville, Evans Mills, Fort Drum, or LeRay, the area that currently has transit service and potential to expand. Thus 76.8 percent of the transit-dependent market is heading to Watertown.
- One question on the survey asked peoples' willingness to take a bus tied to a fixed schedule or a more flexible service. Of all valid responses, 42.5 percent said they were "very likely" or "somewhat likely" to take either service (42.5 percent is the average of the percentage of very likely or somewhat likely responses).
- Research has shown that stated preferences or behaviors do not always result in actual ridership. Researchers who have compared people's expressed intent to use transit with their actual behavior have found that the percentage of people expressing positive interest

in using a new transit service must be divided by a number between three and five to accurately project the number of riders.¹⁵ Thus the number of riders was divided by 4.

Figure 6-2 Respondents Reporting they Would be "Very Likely" or "Somewhat Likely" to Take Transit Against Total Number of Responses (for Towns with 3 or More Respondents)



The following table shows the total market for transit after the overall transit-dependent population Census numbers have been vetted through survey results and professional judgment.

¹⁵ Shenkin, Ira M. (1991). The Relationship Between Surveyed Behavioral Intent and Actual Behavior in Transit Usage. Transportation Research Record No. 1297, pp 106-115.

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Figure 6-3 Total Net Transit Riders

Town [Village]	Total Market	Overlap (less 16%)	Destination is Watertown (76.8%)	Willing to try Transit (42.5%)	Survey Bias (divide by 4)
Watertown City	16,378	13,758	10,566	4,491	1,123
Le Ray	5,125	4,305	3,306	1,405	351
Canton	3,976	3,340	2,565	1,090	273
Gouverneur	3,898	3,274	2,514	1,069	267
Wilna [Carthage]	3,451	2,899	2,226	946	237
Lowville	2,580	2,167	1,664	707	177
Brownville [Dexter]	2,565	2,155	1,655	703	176
Clayton	2,116	1,777	1,365	580	145
Alexandria	2,037	1,711	1,314	558	140
Adams	1,987	1,669	1,282	545	136
Champion	1,899	1,595	1,225	521	130
Ellisburg [Mannsville]	1,614	1,355	1,041	442	111
Watertown Town	1,358	1,141	876	372	93
Hounsfield	1,341	1,126	865	368	92
Croghan	1,321	1,110	852	362	91
Rutland	1,317	1,106	850	361	90
Orleans	1,239	1,041	799	340	85
Denmark	1,127	947	727	309	77
Pamelia	1,089	915	703	299	75
Cape Vincent	1,012	850	653	278	69
Theresa [Alex Bay]	1,010	848	651	277	69
Philadelphia	1,002	842	646	275	69
Lyme	991	833	639	272	68
Antwerp	965	811	623	265	66
Diana	796	669	514	218	55
Henderson	684	574	441	187	47
Greig	597	502	385	164	41
Lorraine	396	332	255	108	27
Rodman	394	331	254	108	27
Harrisburg	208	175	134	57	14
Worth	97	82	63	27	7
TOTALS	64,570	54,240	41,653	17,704	4,428

Fort Drum

Many different needs were identified by stakeholders and focus groups pertaining to Fort Drum:

- Spouses of soldiers need a way to get around during the day when soldiers take the car to work
- Vice versa, if soldiers leave the car for their spouse, they need a way to get on-base
- Soldiers do not always find it convenient to drive around base and off-base
- Concerns over winter driving
- Need to get to Syracuse for medical and shopping services
- Link to Watertown for services and errands
- Nighttime service to Watertown

All of these needs are important; however, single soldiers are less likely to have reliable transportation and thus are the prime market from Fort Drum in the short term. In order to be conservative, this study’s analysis uses the single soldier group as the target market base for transit, even though married soldiers and soldiers’ families are also potential riders. The following steps calculate the single soldier transit market to Watertown.

1. There are 8,300 unaccompanied soldiers living on-post.¹⁶
2. Of all current soldiers, 37% are deployed. Apply this percentage to 8,300 = 5,229 single soldiers currently stationed on-post.
3. In the survey, 14 of 34 destinations cited as frequently traveled to are in Watertown (41.2%).
4. In the survey, 9 out of 23 responses said they were "very likely" or "somewhat likely" to take a fixed route bus (39.1%). A total of 11 out of 23 responses said they were "very likely" or "somewhat likely" to take a flexible route (47.8%). Overall, this totals 20 out of 46 positive transit responses (43.5%).

The following table shows calculations leading to a total transit market of 239 soldiers.

Figure 6-4 Total Net Fort Drum Riders

Soldiers	Destined to Watertown (41.2%)	Willing to try Transit (43.5%)	Survey Bias (divide by 4)
5,229	2,196	955	239

Additional anecdotal evidence from Study Technical Committee members suggests that on any given night hundreds, and up to 1,900 soldiers on weekends, travel to Watertown and the Salmon Run Mall area for restaurants and entertainment.¹⁷

¹⁶ Fort Drum Regional Growth Strategy, p. 24

¹⁷ Fort Drum Community Affairs, E-mail message, Oct 6 2011; Fort Drum ITO E-mail message, Oct 2011

GAP ANALYSIS

Using input gathered from the focus groups, the public survey, a variety of stakeholder interviews and discussions, and the transportation inventory, the study team found a number of unmet needs in the Fort Drum region. The following analysis discusses these unmet needs and strategies that can be adopted to address them. Figure 6-5 on the following page displays the overarching unmet needs across the region and lists potential strategies.

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Figure 6-5 Unmet Needs and Service Strategies

Unmet Need/Gap	Strategy
Geographic/Spatial	
Watertown to LeRay/Route 11 vending area	Expand Citibus to Route 11 vending Area Use JRC as operator to Route 11 vending Area Develop vanpools / Use Mass Transit Benefit for soldiers Maximize use of Trailways
Fort Drum to North Gate/Route 11 vending area	Operate on-post shuttle route to transfer point at Wal-Mart Operate on-post shuttle route to transfer point at North Gate Transfer can be timed with Trailways
Lowville to Watertown	Develop vanpools from Lewis County to Fort Drum and Watertown Extend LOOP Purple Route three days per week
Outlying towns in Jefferson County to Watertown	Develop vanpools Open JRC routes to members of the public
To/From Watertown Airport	Work with hotels and existing transportation providers to create a shuttle
Information	
Soldiers are unaware of Trailways & St. Lawrence County services that run up and down Route 11.	Centralize information
Lewis County LOOP residents are not aware of bus service.	Develop a centralized call center
Information materials such as schedules and maps are difficult to understand	Revamp information and marketing materials
Watertown residents do not know about St. Lawrence County buses connecting to the Route 11 vending area and Gouverneur	Include transit service information in new soldiers' welcome packets

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Unmet Need/Gap	Strategy
Coordination	
No single entity works across agencies and jurisdictions on regional transportation issues	Bring together Regional Transit Committee Hire a mobility manager to continue work on addressing transportation issues in the region
Watertown Citibus and Jefferson County NEMT broker does not coordinate to provide NEMT trips	Foster Medicaid transportation partnerships Regionalize NEMT long-term
Service Quality	
Taxi service can be poor, though cost is high	Create service quality standards for taxis to meet in order to get on base to pick up/drop off soldiers
Hours of Service/Temporal Gaps	
No nighttime transportation options exist for soldiers	Form partnerships between transportation providers to create transit service along Route 11 Partner with private transportation providers or businesses to provide nighttime service
No midday service in Lewis County	Test midday service on a popular route
Limited weekend public transportation	Weekend volunteer network

Geographic/Spatial Gaps

- Watertown to LeRay/Route 11 vending area
- Fort Drum to North Gate/Route 11 vending area
- Lowville to Watertown
- To/From Watertown Airport
- Outlying towns in Jefferson County to Watertown

Watertown – LeRay Corridor (US 11 Vending Area)

More robust public transportation service in the US 11 corridor between Watertown and the Town of LeRay including the Fort Drum North Gate arguably is the first priority in terms of mitigating gaps in the regional transit network. This corridor is the most intensely developed area in the region with most of the destinations and a plurality of residents. Surveys show that the two Wal-Mart stores in Watertown and LeRay are by far the most common destinations in the area, and that the City of Watertown contains the largest agglomeration of destinations.

Currently the Watertown – LeRay segment is covered nominally by both Adirondack Trailways and St. Lawrence County Transit, both of which operate longer routes originating north of Gouverneur. As shown in Figure 6-5, the present service consists of five northbound and five southbound trips operated by the two providers. Although peak period, peak direction Watertown arrivals and departures are reasonably well-timed, reverse direction service that might serve soldiers and civilian employees working in Fort Drum or in LeRay stores and businesses is not available. For example, 30% of Watertown housing units are occupied by military personnel, which represents a sizable market for travel to and from Fort Drum. Soldiers need to get to post between 6:30 AM and -7:00 AM; however the first trip out of Watertown north to Fort Drum departs at 8:05 AM.

Moreover, there is a nearly seven-hour midday gap between the last southbound morning arrival at 8:15 AM and the first afternoon return trip departing at 3:00 PM. This effectively limits transit ridership to full-time workers, jurors and possibly others with all-day trip purposes in Watertown. The present schedule generally would not be attractive to medical, shopping and many personal business trip purposes.

Similarly, there is no service in either direction after the last northbound trip departs Watertown at 6:50 PM. Demand for later service could be significant among the approximately 5,230 unaccompanied soldiers who are not deployed and reside on post.¹⁸ As noted earlier, Fort Drum soldiers are strongly advised regarding the dangers of drinking and driving, while at the same time, many soldiers have had negative experiences when using taxicabs.

¹⁸ Source; 2009 Regional Growth Study. Assumes 8,300 total soldiers and a 37% deployment rate.

Figure 6-6 Current Transit Service in the US 11 Corridor (Gouverneur-Watertown)

Provider	Fare	SOUTHBOUND		NORTHBOUND	
		Gouverneur	Watertown	Watertown	Gouverneur
St. Lawrence County	\$4.00	6:20 AM	7:35 AM	8:05 AM	9:20 AM
Trailways*	\$9.50	7:25 AM	8:15 AM	8:35 AM	9:30 AM
St. Lawrence County	\$4.00	1:30 PM	2:40 PM	3:00 PM	4:00 PM
Trailways	\$9.50	1:45 PM	2:35 PM		
St. Lawrence County	\$4.00	4:00 PM	5:05 PM	5:10 PM	6:10 PM
Trailways	\$9.50			6:50 PM	7:45 PM

* Trailways offers a 10% military discount

Despite the limited schedule, ridership is relatively good with approximately 70 passengers per day riding six one-way trips operated by St. Lawrence County Transit, and an estimated 40 - 50 passengers per day riding four one-way trips operated by Trailways. Limited data provided by Trailways¹⁹ suggests that soldiers picked up at the North Gate and Amish residents along Route 11 form a significant component of ridership in the US 11 corridor. Trailways does make flag stops at the North Gate; however, survey and focus group findings indicate that this may not be widely known. In the month of August, Trailways sold 65 tickets at Gouverneur and 921 at Watertown. Anyone picked up as a flag stop must buy their ticket at the next terminal; therefore these numbers show a significant amount of activity in the Watertown area.

Service Solution

Working within the current service structure, extension of one operator or a third operator could be integrated into the existing schedule. Understanding that St. Lawrence County is seeking to save costs, a service planning component could include shortening Route 6 from Gouverneur to Watertown to end at Wal-Mart as a transfer point. A draft schedule showing modified St. Lawrence County runs and an additional provider is shown below.

Figure 6-7 Draft Route 11 Schedule

SOUTHBOUND				NORTHBOUND			
Gouverneur	WalMart	WalMart	Watertown	Watertown	WalMart	WalMart	Gouverneur
5:50 AM	6:25 AM	6:25 AM	6:35 AM	6:15 AM	6:25 AM	6:25 AM	7:15 AM
7:25 AM	8:00 AM	8:00 AM	8:15 AM	8:30 AM	8:45 AM	8:45 AM	9:30 AM
10:45 AM	11:25 AM	11:25 AM	11:35 AM	11:15 AM	11:25 AM	11:25 AM	12:10 PM
		1:25 PM	1:35 PM	1:15 PM	1:25 PM		
1:45 PM	2:20 PM	2:20 PM	2:35 PM				
2:45 PM	3:30 PM	3:30 PM	3:45 PM	3:20 PM	3:30 PM	3:30 PM	4:15 PM
4:30 PM	5:30 PM	5:30 PM	5:40 PM	5:20 PM	5:30 PM	5:30 PM	6:15 PM
				6:50 PM	7:05 PM	7:05 PM	7:45 PM
		8:15 PM	8:30 PM	8:00 PM	8:15 PM		
		9:45 PM	10:00 PM	9:30 PM	9:45 PM		

Additional Trips	St. Lawrence County	Trailways
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¹⁹ Trailways does not have data on linked origin and destination.

Provider Option 1: Citibus

Citibus route C-1 can be extended from Kelsey Creek (its current northern terminus) to the Wal-Mart, which is 4.4 miles north of Kelsey Creek. Citibus may be operated outside city limits through an inter-municipal agreement with Jefferson County or with the Town of Watertown and the Town of LeRay.

Provider Option 2: JRC

This organization could be contracted to run service in the short-term. JRC could become a public transit operator in the long-term, accepting fares as well as federal and state operating support programs.

Option 1 and 2 Cost

An estimate of the cost of the schedule above to both a public operator or a non-profit is shown below. To calculate operating cost per hour, the average cost for the three regional public providers was used. Costs take into account increases to ADA coverage required through a route extension. Typically the cost of incremental service nets out to approximately 75% of the current operating cost per hour, thus a high and low estimate of operating cost is shown. For non-profit operating cost, the statistic from JRC was used.

Inter-Municipal Agreements

Efficiencies in any service delivery are realized when two or more parties agree to share costs because of a shared benefit. In New York State, the municipal law code provides authority for municipalities and districts to cooperate with each other to provide a range of services including transportation.

As in most communities in New York State, services are often limited to city or village boundaries. Given growth and development patterns, however, population centers are often outside these boundaries. Providing services to these areas can be tricky due to complex political factors and funding structures. Should two (or more) organizations agree that a certain service is needed, they can enter into an inter-municipal agreement.

In the case of Citibus or the LOOP extension, these agreements can allow operators to extend their boundaries without obtaining public transit operating authority.

The New York State Comptroller's office has published useful information on forming inter-municipal agreements.

Shared Services Among New York's Local Governments.

<http://www.osc.state.ny.us/localgov/pubs/research/sharedservices.pdf>

Intermunicipal Cooperation.

<http://www.osc.state.ny.us/localgov/pubs/lgm/intermunicipal.pdf>

Figure 6-8 Draft Operational Costs

Proposed Changes	Public Provider			Non-Profit
	100% Fixed Cost	Incremental Fixed Cost	ADA	
Operating Cost Per Hour	\$76.10	\$57.08	\$12.02	\$43
Additional Hours per Day	2.5			
Additional Hours per Year (M-Sa)	780			
Total Cost	\$59,358.00	\$44,518.50	\$9,375.60	\$33,540
	High Estimate	Low Estimate		

Funding could be provided through a partnership with benefitting agencies such as Jefferson County and Fort Drum.

Provider Option 3 - Vanpool program

Operating efficient public transit in rural areas can be extremely challenging. Vanpools are an interim step between individuals driving alone to work and riding a fixed transit route. Vanpools are typically funded by the individuals who subscribe and ride, with the van provided by either a private vanpool service or by a public transit agency.

Vanpools are especially attractive in the Fort Drum region because of the Mass Transit Benefit Program (MTBP) offered to soldiers and other military employees for commuting cost reimbursements. The MTBP was created by the Department of the Army in 2001 to reimburse federal employees for transportation costs associated with commuting to work. This program is available for employees using commuter buses or trains, subway, light rail, ferries, and vanpools. Each individual is allowed up to \$230 per month for commuting transportation costs. Eligible individuals include Army Active Component military service members, Army Reserve Component military service members, DA Federal civilian employees (including part-time, temporary, and interns), and DA Non-Appropriated Fund personnel.

Vanpools that transport MTBP recipients may also transport non-recipients who pay their own way. However, MTBP vanpools must be operated by a public transit agency or a private transportation company.

The vanpool company VPSI operates a significant portion of vanpools across the nation, including those serving military installations. The company began looking into vanpools for Fort Drum in recent years when their business partner, Firestone Tires, opened a storefront at Fort Drum Watertown. The effort has since diminished, but the company is willing to be a helpful partner to the installation for developing vanpools.

To access the MTBP funds, the installation must establish a Point of Contact to process participant applications for MTBP. Individuals using a vanpool are eligible for reimbursement under the MTBP.

Vanpool Costs

Instituting a vanpool program requires some staff time at the beginning – primarily to establish a Fort Drum Point of Contact for the MTBP and to make connections with a vanpool operator. After these initial steps, the only administrative costs are reviewing participant applications and processing individual reimbursements. There are no additional capital or program costs for this recommendation.

Most individuals – recipients and non-recipients - pay a flat base rate (such as \$60) plus a variable rate based on mileage and gas each month. Sample rates are shown in the table below.

One-Way Miles	Roundtrip Miles	Monthly Fare
26.1	51	\$72.90
15.4	31	\$55.72
22.5	45	\$67.75

Members of the general public can often deduct vanpool costs tax-free from their paychecks.

Recommendations

- Create a transfer point at Wal-Mart for the St. Lawrence County bus (which already stops there) and the new service.
- Make the best use of existing services who currently pick up (albeit unofficially) at Fort Drum on Trailways. Currently the fare between Gouverneur and Watertown on Trailways is \$9.50 one-way. Likely most of the people boarding at the North Gate are on long-haul trips to Syracuse or New York City. In order to make Trailways more attractive for the short trip to Watertown, the North Gate can be made into an official flag stop. Trailways calculates fares based on bands of service. For example, a trips from 0-5 miles costs \$4.75. Since the North Gate is 8 miles from downtown Watertown, the fare would be \$5, and military personnel also receive a 10% discount. For those using Trailways for employment, a 15% discount is available on bulk tickets. Trailways is interested in selling tickets on-post at Fort Drum.
- Integrate new provider or extend Citibus to create a realistic schedule.
- ITO office to explore Mass Transit Benefit Program for vanpools; this recommendation is applicable to most of the service strategies.

Fort Drum – US 11 Vending Area Connection

An improved level of transit service in the US 11 Corridor clearly facilitates the potential for increased transit utilization by soldiers and their families to the extent that riders can travel seamlessly between on-post and off-post services. Key concerns are the current absence of a safe transfer point where on-post shuttle and transit buses can meet, and the lack of schedules that are timed for convenience with short wait times.

Service Solution

The preferred location for a transfer point given prevailing conditions would be the Wal-Mart store in LeRay, which already serves St. Lawrence County buses and even provides a small payment as the bus brings in customers (approximately \$50 per week). However this would require that on-post shuttle services be extended off-post for the 1.1 mile stretch of US 11 between the central on-post area and the Wal-Mart store. Since the Wal-Mart is a major destination,

transfers at this site work in the interest of soldiers, St. Lawrence County residents, and Watertown residents.

Alternatively, an area closer to the Fort Drum North Gate could be workable. Trailways buses have explored picking up passengers at the North Gate (rather than simply along Route 11 as they do today) and turning the bus around before the security gate. A small building that used to be a visitor center sits along this stretch and could be retrofitted to provide shelter, although that might require a capital investment depending on the condition of the building.

Cost

Based upon the Fort's current operating cost per hour of \$36.28, the table below shows the cost of meeting the five trips per day heading south to Watertown.

Figure 6-9 Draft Costs Shuttle from Tigris River Valley Rd & Riva Ridge to Wal-Mart

Line Item	Data Point
Miles per Trip, On-Post to Wal-Mart round trip	8.4
Time (Minutes)	25
Cost per Trip	\$15.24
Trips per day	5
Total Cost per Day	\$76.19
Cost per Year	\$23,771

Figure 6-10 Draft Costs Shuttle from Tigris River Valley Rd & Riva Ridge to North Gate

Line Item	Data Point
Miles per Trip, On-Post to North Gate	5.2
Time (Minutes)	15
Cost per Trip	\$9.07
Trips per day	5
Total Cost per Day	45.35
Cost per Year	\$14,149

Recommendations

- Explore having Trailways buses turn around at the North Gate to make more attractive the current trips on Route 11.
- ITO office can work with Trailways to sell tickets on-post.
- Consider contracting on-post shuttle to a private provider. As the installation peer review showed, and as experience at Fort Drum has verified, serving area of the installation with shuttle is difficult when service is provided by the ITO office. The Fort Drum shuttle cannot pick up passengers in residential areas, which limits its ridership. Several area providers could be used to operate the on-post shuttle without geographic limitations, including Freeman Bus or Roethel Coach. An approximate quote for service cost was provided as 1 bus for 12 hours per day costing \$497 total, assuming no fare from soldiers.²⁰

Lowville – Watertown Corridor

The lack of service in the NY 12 corridor linking Jefferson and Lewis counties represents another significant spatial gap in the regional transit network. It isolates the Village of Lowville and surrounding rural townships in Lewis County from employment opportunities largely concentrated in Watertown and on Fort Drum. It also restricts access to dialysis and other critical

²⁰ Quote provided by Freeman Bus, E-mail message, 9/8/11

medical services, as well as shopping, education and recreational destinations that are concentrated in and around Watertown. Focus groups noted that 15 people need to access dialysis treatments three times per week in Watertown. Additionally, the absence of this link prevents Jefferson County and St. Lawrence County residents from getting to the Utica-Rome urbanized area via Lewis County.

Both surveys and comments heard from stakeholders and focus group participants point toward further consideration of a public transit connection between Lowville and Watertown. Presumably this “missing link” in the regional transit network would operate as part of the Lewis County LOOP system with transfers from the routes serving the outlying rural townships possibly three or four daily trips to the Citibus Terminal in downtown Watertown.

Service Solution

The Purple Route goes to Copenhagen, which is the closest the LOOP goes to Watertown. Adding Watertown to the route would add 40 minutes (20 minutes each way from Copenhagen) and 32 miles (15.8 miles each way). As a test, this service could be offered three times per week.

Cost

The following shows the total cost of service to Watertown. This will be offset somewhat by potential increases in transit operating assistance from New York State plus passenger fares.

Figure 6-11 Draft Schedule Lowville-Watertown

Morning	
Lowville	6:45 AM
Copenhagen	7:05 AM
Watertown	7:25 AM
Afternoon	
Watertown	3:50 PM
Copenhagen	4:10 PM
Lowville	5:00 PM

Figure 6-12 Draft Cost Estimate Lowville-Watertown Service

Hour/Day	Days/Week	Annual Hours	Incremental Cost/Hour	100% cost/Hour	Total Cost - Low Estimate	Total Cost-High Estimate
1.5	3	234	\$68.81	\$91.74	\$16,100.37	\$21,467.16

A long-term goal of the LOOP voiced by stakeholders is to revamp routes and schedules to provide more travel options throughout the day. Most routes offer one morning and one afternoon trip, meaning people end up stuck at their destination all day. Adding midday service would greatly increase service attractiveness.

Recommendations

- Begin extension of Purple Route to Watertown three days per week. This extension must be paired with announcements and revised schedules and maps to be effective.
- Test midday service on popular routes.
- Develop vanpools from Lowville to Watertown/Fort Drum.

Connecting Jefferson County towns to Watertown

Another perceived gap in the transit system is the lack of connectivity between the villages and rural townships between Jefferson County and the City of Watertown, which the study has shown clearly to be the hub for employment and other trip purposes. The demographic analysis shows

that there are transit-dependent population groups living in outlying towns such as Clayton, Alexandria Bay, Cape Vincent and other enclaves in Jefferson County.

Service Solution

The JRC is the only provider who makes daily, fixed-route trips to many of Jefferson County's towns. The JRC is considering opening six of those routes to the public.²¹ Although JRC cannot accept fares because they are not an official transit operator, they can accept donations. Like many Arc organization in New York State, the JRC could transition itself long-term into a public provider. As shown below, the JRC's current routes cover nearly all the population centers in Jefferson County.

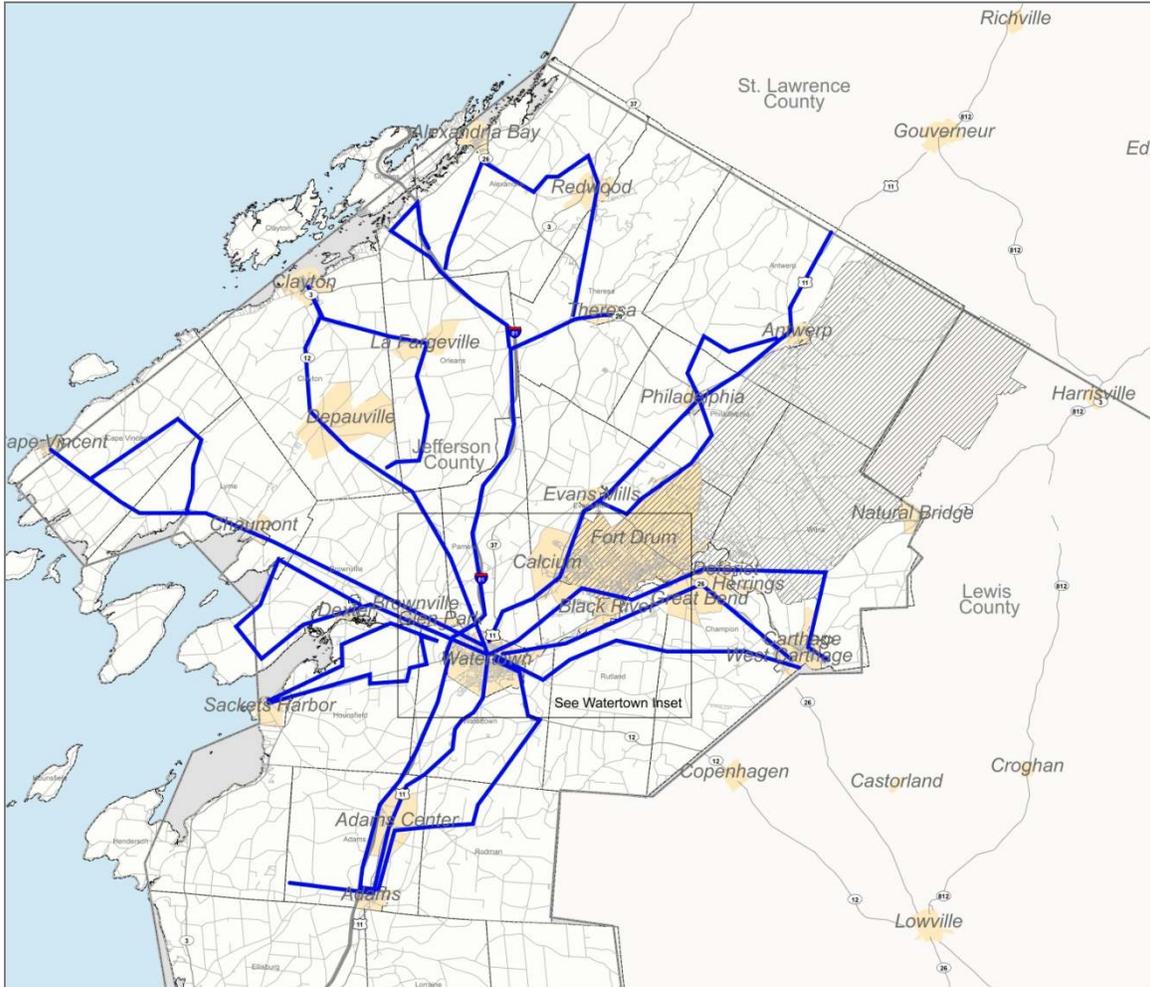
As another solution, any Fort Drum soldiers living in these towns can form a vanpool and use their Mass Transit Benefit Program to cover its cost.

Recommendation

- JRC routes should be opened to the public on an incremental basis, with a suggested donation of \$2 to \$4 depending on trip length. This will increase the JRC's operating costs, as it means more driver hours, fuel, maintenance, etc. Either the towns or Jefferson County must be willing to partner with JRC to fund this service expansion.
- Develop vanpools.

²¹ Howie Ganter, phone conversation

Figure 6-13 JRC Daily Routes



ARC CASE STUDIES

Steuben County STAR

The Steuben County ARC has been providing transportation for its clients as well as NEMT trips for 30 years. The ARC obtained operating authority to become a public provider and opened six of its routes in 2008. Obtaining operating authority was not difficult as its vehicles were already DOT-inspected. The ARC is a third-party operator to the local transit agency, Hornell Area Transit. Opening the ARC routes did not incur expenses to the county. Currently the public routes carry 8,000 trips per year. Funding comes from fares and 5311 FTA funds, and the ARC had to show that their routes did not overlap with any existing public routes. To calculate funding, the ARC estimates the percent of their ridership who will be general public passengers and this estimate is re-evaluated as ridership data becomes available each year. In 2011, they received \$90,000 from NYSDOT, which covers 6% of their transportation program costs. Fares make up approximately \$10,000. ARC vehicles transport Medicaid trips as well and charge the county for reimbursement. Other agencies may also contract with the ARC, who has a set per mile and per hour charge. Steuben County's ARC service is part of a coordinated transportation system that includes a mobility manager funded through a JARC and New Freedom fund.

Source: Debra Gleeson, Steuben County, phone conversation

Schuyler County ARC

The ARC runs curb-to-curb dial-a-ride and public transit in addition to service for its clients. Like Steuben County, the ARC is a contract provider for DSS trips, so vehicles were always DOT-inspected. Recently the ARC began buying passes on the public system for its clients, and enough people have switched to public service that the ARC can eliminate one client route. Public ridership is currently 1,000 per month. The county pays the ARC a monthly fee to run service. The county is reimbursed through 5311 and STOA, and currently is breaking even. The arrangement between the county, the ARC, and DSS was reached only after an all-day, lock-in-a-room session with NYSDOT and the county's finance office, working through all the cost-sharing and partnerships that were needed. The current system was not easy to set up, but the benefits are that DSS is saving money because clients are taking public transit and the county is saving money by contracting public service with the ARC rather than First Transit.

Source: Jeannette Frank, Schuyler County, phone interview

Watertown Airport

Stakeholders from Watertown and Jefferson County identified the lack of transit or quality taxi service to the Watertown Airport as a gap of significant concern. A key assertion is that the transition of air service from Cape Air to American Eagle in 2011 will increase the capacity of commercial passenger arrivals at Watertown Airport from 54 per day to 176 per day. The proposed American Eagle schedule will include two daily arrivals from Chicago at 4:25 PM (except Sunday) and 9:30 PM (except Saturday), and two departures at 7:10 AM (except Sunday) and 5:05 PM (except Saturday).

There is little data available concerning airport customers beyond an anecdotal estimate that 75-80% of airport business is related to Fort Drum (e.g., soldiers, dependents, contractors).²² Currently there are no formal shuttles operated by private carriers, area hotels or Fort Drum. Two area rental car companies in Watertown offer airport pickup service upon request, although wait times can be long.

Potential Solution

The transportation services analysis shows that there are hundreds of vehicles in operation in the Fort Drum region (refer to Figure 3-1). Historically American Eagle has also focused upon working with the community to connect customers and hotels and destinations. Working with hotels to contract for service can make better use of existing vehicles with down time before hotels purchase vehicles on their own.

Recommendation

- Work with hotels and existing providers to use existing resources for a shuttle service

Information Gaps

In rural areas, lack of information about existing services is a common theme. People are geographically isolated and in turn become unaware of services they could use. Also, transportation providers typically do not work together to create comprehensive marketing materials, despite the fact that many of their customers travel across jurisdictions. Gaps identified in this category include:

- Soldiers are unaware of Trailways & St. Lawrence County services that run up and down Route 11
- Lewis County LOOP residents are not aware of bus service
- Informational materials such as schedules and maps are difficult to understand
- Watertown residents do not know about St. Lawrence County buses connecting to the Route 11 vending area and Gouverneur

Solutions to these information gaps support solutions that address geographic gaps, for if a service exists but there is no marketing, no one will use it. The following solutions address the identified information gaps.

²² Interview with John Dellas, Airport Manager.

Centralized Information

Centralized information programs are designed to assemble information about available public, nonprofit, and private sector transportation resources in a single location, staffed by an individual who can answer questions of a caller or maintain an online database of services. In many communities, there are services available for the public, low income individuals, seniors, and persons with disabilities, but it is up to the consumer to find out hours and days of operation, availability, eligibility, and how to access such services. In a centralized resource directory, information regarding all available providers is assembled in a single place.

On Fort Drum, information about available transit services should be included in soldiers' welcome packets.

Centralized Call Center

The array of transportation services, eligibility criteria and contact information can be confusing for individuals trying to find information about a ride. Creating one number for residents to call for information and reservations for trips can greatly streamline the process for consumers. All of the existing operators would continue to operate in the present configuration. However, all information and reservation functions would be turned over to the coordinated call center. This may result in some cost savings for existing providers and may result in greater efficiency in the execution of this function. Some counties and regions have invested in a centralized call center that also schedules trips for clients on the appropriate transportation service.

To realize the most efficiencies, coordination software can be used to book trips between multiple operators. This level of coordination requires transportation providers to consider whether they have available vehicle capacity during the day, as well as interest picking up coordinated transportation business in addition to their core business. Trip coordination of this level requires those leading the process to work through some institutional issues such as computer scheduling, mixed fares, and operating hours. Intergovernmental agreements have been used in the past in the region for housing assistance and can provide a useful framework for this type of collaboration.

In the Fort Drum region, a call center covering all three counties has the most potential to impact regional mobility and save resources. The call center would assist clients from all programs including soldiers, the general public, Medicaid clients, seniors, and persons with disabilities, among others.

A call center could initially exist just for informational purposes – clients could call for referrals to transportation services for which they are eligible. This call center could be managed by a mobility manager.

A longer-term initiative is developing a fully coordinated call center, in which one central location schedules trips on any participating agency's vehicles, depending on the eligibility of the caller. This coordinated call and scheduling center requires more functional changes and hurdling of institutional barriers, such as developing appropriate cost allocation models and creating standards that meet each participating agency's requirements. Coordinated call centers have the potential to save participating agencies significant administrative costs since these transportation management functions are shifted to the call center.

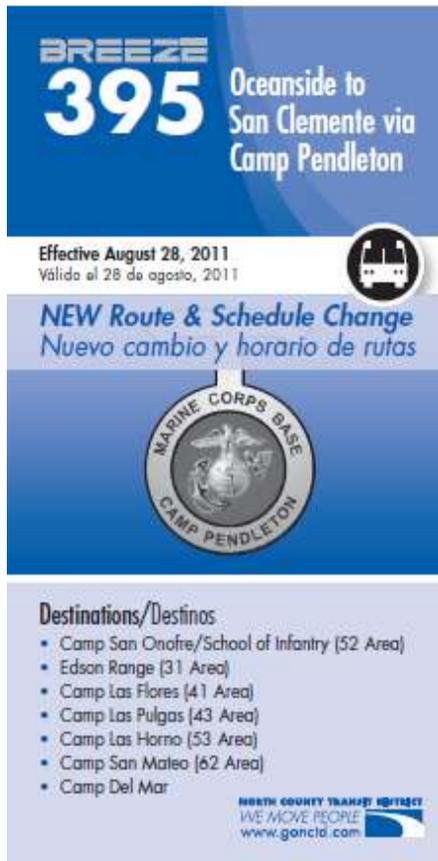
Fort Drum stakeholders discussed the potential of integrating this type of service with NEMT services in the region, especially since Jefferson County already contracts NEMT trip scheduling

out to a transportation broker. However, with the future of NEMT service delivery in flux at the state level, each county's DSS may not be able to participate in a fully coordinated call center that schedules trips. Importantly, NEMT has the most stringent regulations and reporting requirements of any transportation program, and their participation would require study of peer counties and regions and consultation with their regional Medicaid liaison.

Information & Marketing Materials

The current Lewis and St. Lawrence County schedules are difficult to read for some individuals. Any marketing materials should follow certain design principles (see Figure 6-14). Regional operators, such as Trailways, should also be included on local maps to show regional connections.

Figure 6-14 Bus schedule for Camp Pendleton



The following table shows some best practices in route and schedule design to apply to St. Lawrence County and Lewis County. Citibus information is clear.

Figure 6-15 Best Practices in Map & Schedule Design

	Best Practices	What to Avoid
Font	Font point size between 10 and 16 Sans serif font	Print that is too small to be legible to readers with visual impairments
Colors	Black and white is acceptable for systems that do not rely on color coding of routes. If color is used, number of colors is limited and not too busy.	
Printing	Balance cost of printing (higher for color, lower for B&W) with higher level of distribution for less expensive materials.	High cost printing that result in low level of distribution.
Route Schedules	List time points for only key stops along the route. For linear routes, as few as three stops can be listed: two terminal points and a mid-point. (Riders interpolate arrivals at other time points.)	
Layout/Display	Focus on clear information. Similar content elements grouped together.	Focus on graphics or aesthetic elements.
Maps	Route lines do not overlap. Names of all streets on which the routes operate are visible and legible on the map. Names of key adjoining streets are also legible. Minor street names are provided when they do not otherwise interfere with overall map legibility. On map, streets are white on a grey background.	Street names omitted. Maps difficult to use for non-locals.

Figure 6-16 and Figure 6-17 show some well-designed system maps. The Connecticut River Transit map uses numbers correlating stops with the schedule, making it easy to follow the route. The Hop schedule shows a clear street map of downtown, which makes it easy for passengers to find their bus stop.

Figure 6-16: Connecticut River Transit Schedule

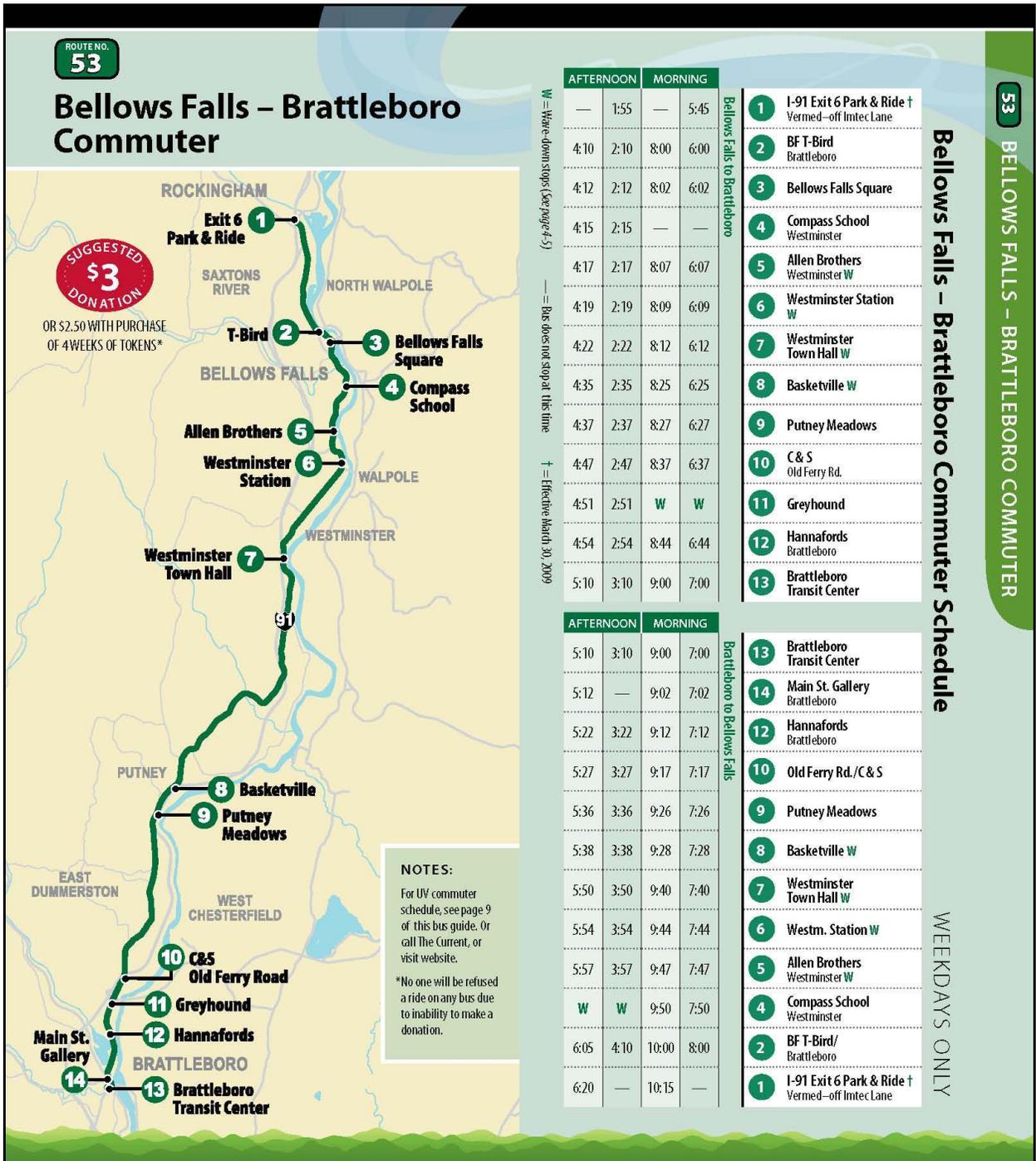
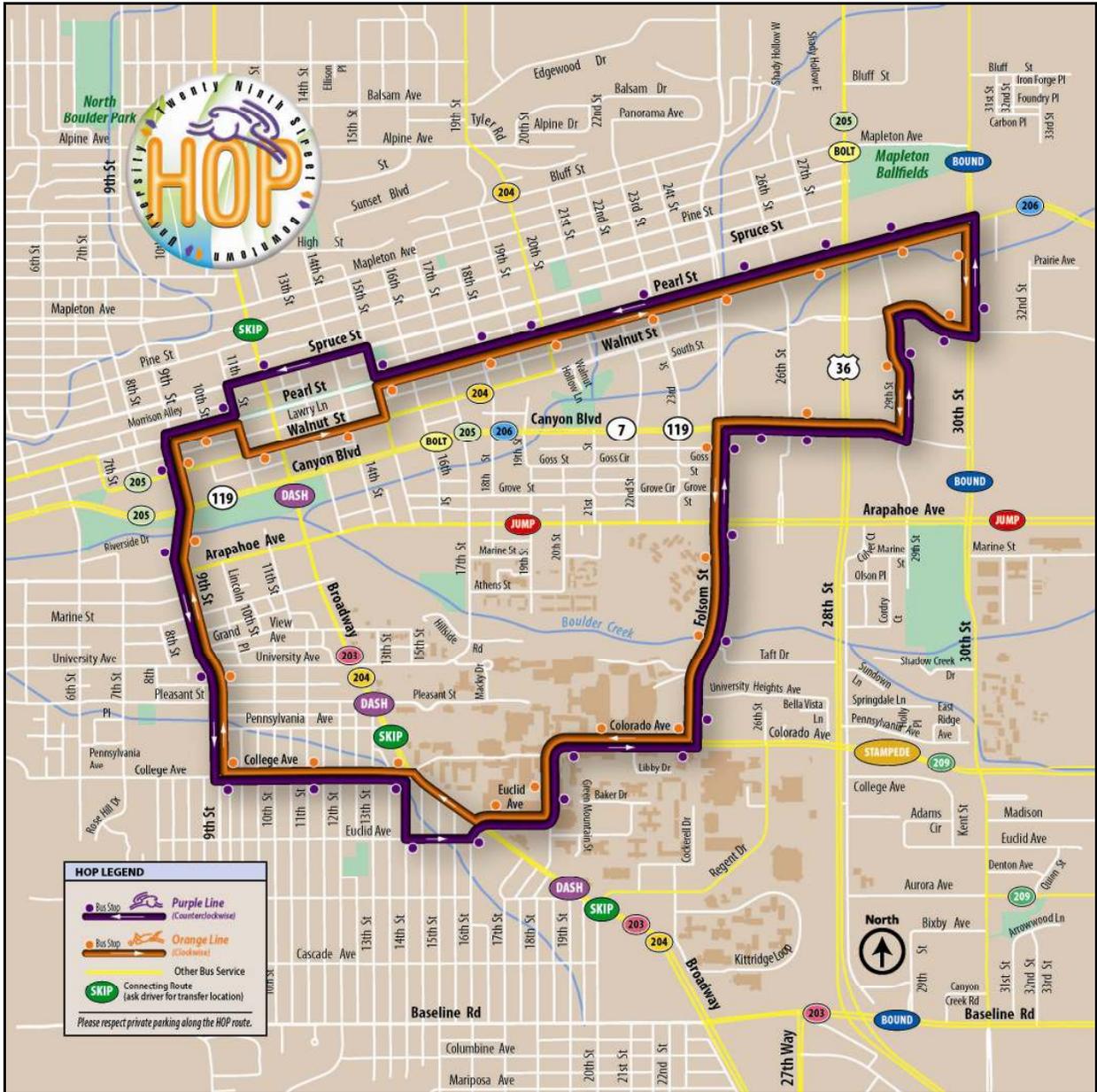


Figure 6-17: System map for “The Hop” in Boulder



Recommendations

- Current providers should revamp marketing materials to maximize passenger legibility
- Fort Drum ITO should include transit information in welcome packets
- Create centralized information directory in hard copy or online

Coordination Gaps

In a rural region, where resources are scarce, coordination is the key to providing service without major funding outlays. Gaps in the coordination network include:

- No single entity works across agencies and jurisdictions on regional transportation issues
- Watertown Citibus and Jefferson County NEMT broker do not coordinate

The following solutions are overarching way to not only solve coordination gaps but also to further the recommendations in all other sections.

Regional Transit Committee

A committee made up of a variety of stakeholders in the region, including transit providers, governmental agencies, members of the military community, and human service organizations, could continue the work of this study with a more formalized committee. This committee can begin to address some short-term strategies that do not require multi-year planning, including information distribution, taxi service standards, and facilitating vanpools.

A committee dedicated to transit keeps the issues on the table and ensures that lines of communication between organizations and regional entities remain open. The committee is an essential first step in achieving enhanced mobility in the Fort Drum community.

Mobility Management

Two mobility managers already exist in the Fort Drum study area. In St. Lawrence County, a mobility manager was hired to handle many of these tasks; however, soon after the position was filled that person was also given responsibility over the Office for the Aging. Thus the coordination between transit and NEMT has never been strong. Lewis County hired a mobility manager in 2010 whose goal was to reduce the cost of NEMT trips to the county by moving clients onto the Loop. Jefferson County does not have a mobility manager at this time. Some initial duties for a mobility manager to take on include:

- Working with transit agencies and other transportation providers to build partnerships, such as pulling together funding for the Watertown-Fort Drum route by planning with Fort Drum, Jefferson County, Watertown Citibus and St. Lawrence County transit representatives.
- Supporting the Volunteer Transportation Center's significant efforts and working with them to become the region's overarching volunteer driver manager, taking on St. Lawrence and Lewis County volunteers as done in Jefferson.
- Working closely with county ARCs to open routes to the public in Jefferson and St. Lawrence counties.
- Integrating Citibus fixed route and paratransit into Jefferson County's Medicaid brokerage contract to effect cost savings.
- Facilitating an ongoing partnership between Fort Drum's transportation office and area transportation providers to ensure soldiers, soldiers' families, DA civilians and veterans' transportation needs are being met.
- Incorporating hospitals like Samaritan and Lewis County General into the picture, as they typically have transportation programs. Stakeholders like River Hospital also have a new vehicle they are seeking to use.

Costs

The annual salary cost of a (single) mobility manager in the Fort Drum region (overhead and program function cost additional) might range between \$45,000 and \$60,000. Depending on the mobility manager's exact assignments, it may be staffed as a part-time position reducing annual salary costs to between \$30,000 and \$35,000.

Current expenditures on mobility management in the region include \$25,000 in St. Lawrence County and \$24,200 in Lewis County. These represent approximately 50% and 40% of staff time, respectively. Thus the total spent in the region is \$49,200. Typically mobility managers are funded through JARC and New Freedom grants.

Medicaid-Transit Partnerships

If transit operators become NEMT providers, they can increase ridership on transit routes and provide a new revenue stream for transit services. On the DSS side, trip costs can go down if these trips are diverted from higher cost modes such as taxi trips. This partnership is relatively easy to facilitate and is one of the best ways to realize trip cost savings.

St. Lawrence County does utilize public transit to some degree for its DSS clients when possible. Lewis County has not in the past, but has hired a mobility manager with the intent of using the Lewis County Loop for some NEMT trips, as appropriate. Volunteer drivers could potentially drop off clients at fixed routes, greatly reducing the cost to the VTC to provide service.

To maximize use of the services in Lewis and St. Lawrence counties, transit routes and stops would be mapped in a program as simple as Google Maps, and county DSS workers would need to check a client's origin and destination relative to transit stops to determine mode. If a client is within 1/4 or 1/2 mile of a transit stop and is ambulatory, fixed route may be a viable option. Each DSS knows their client population - eligibility parameters must be determined locally, and transitioning clients accustomed to a trip from their doorstep will require an education process to get used to riding a bus. The DSS offices would need to negotiate with the transit providers to determine trip costs.

Jefferson County already has a client screening process to decide which clients need ambulette services and which are ambulatory enough to ride in a taxi or in volunteer cars. A similar screening process could be used to determine clients who could ride in transit vehicles and those that needed a higher level of service and assistance in/out of the vehicle or with medical equipment. A strong partnership with transit operators would require Watertown Citibus and St. Lawrence County Transportation to become providers under Coordinated Transportation Solution's network. Citibus and St. Lawrence County would have to work closely with CTS to determine trip costs and billing procedures, or to negotiate bulk purchase of transit tickets.

Costs

There are no costs to implement this recommendation aside from some minimal staff time. Below is a table representing sample cost savings of transit-NEMT partnership by county.

County	Average NEMT Trip Cost	Average Transit Trip Cost	Average Paratransit Trip Cost	Total Trips	Total Cost	If 5% diverted to Transit/ Paratransit	DSS Savings	Increased Fares to Transit
Jefferson	\$22.04	\$4.75	\$8.55	101,043	\$1,818,606	\$1,740,853	\$77,753	\$33,597
Lewis	\$57.05	\$14.34	N/A	7,000	\$399,342	\$384,394	\$14,949	\$5,019
St. Lawrence	\$45.84	\$15.63	N/A	34,047	\$1,560,611	\$1,509,183	\$51,428	\$26,608

Potential Long-Term Initiative: Regionalize NEMT Programs

As NYS continues looking into regionalization of NEMT service delivery, the Tri County area has the opportunity to explore a regional model for NEMT service delivery.

A qualified contractor such as CTS could become the call center for the region, enabling DSS staff in St. Lawrence and Lewis counties to focus on other projects instead of managing a cumbersome authorization and trip assignment process and creating a single entity with which to work on other transportation issues - such as increased utilization of transit services.

If the region decides to regionalize under a single call center, the responsible entity such as CTS or another entity, could potentially take on the management of other transportation services in the counties. Small programs such as senior meal site transportation could be managed by CTS, releasing the counties from the administrative and programmatic costs of staff time, vehicle maintenance, fuel and insurance. Larger programs with more complex regulations such as ADA paratransit in Watertown, could potentially also be managed by this regional call center, provided that stakeholders wanted to make this move to create even more efficiencies.

Recommendations

- Form a Regional Transit Committee.
- Explore the idea of hiring a mobility manager. This person may be a new staffer or an existing whose role is shifted, and may be housed in a government agency or a non-profit. The VTC might be a logical place for a mobility manager and/or a trip coordination effort. However, VTC would need to get livery licenses to transport fare-paying customers, which is expensive. Many states exempt volunteer service from livery law. Instead of attempting to change the law, a voucher, grant or contract system could be used to avoid the fare collection issue.
- Include mobility management into the next county coordinated plan update in order to be attractive for funding.
- Have CTS work with DSS and Citibus to add Citibus to the list of approved providers.

Service Quality Gaps

- Taxi service can be poor and inconsistent

Solution - Taxi Incentive Program

Taxis are critical elements of the transportation network in many rural areas. Many demand-response transit services are unable to schedule same-day or urgent trips, and for some clients, the long wait times and flexible pick-up/drop-off windows of demand-response service does not work with their tight schedules. Many clients also do not live in the service areas for public transit, fixed-route or demand-response.

In jurisdictions where taxis are not regulated, taxi companies have little reason to upgrade service quality or make changes. However, incentives such as potential new customers can be created in return for establishing service quality standards.

Watertown taxi companies are not regulated. Some customers reported that taxi drivers were very late, did not show up at all, or charged different fares for the same trip. Taxis are an important way for families to get around, as well as for soldiers at night. Fort Drum provides a card warning them not to drink and drive, and listing the name of several taxi companies.

Costs

Costs for this initiative involve staff time to draft policies and work with Fort Drum to turn away noncompliant taxi companies. No other capital or program costs are involved. Possibly the mobility manager or the Fort Drum ITO could lead this effort.

Recommendations

Given the feedback from taxi customers, we recommend the installation adopt several policies:

- List the ITO office for soldiers to register complaints about poor service
- Companies who receive more than three complaints will be turned away at the gate if they are picking up passengers
- Create a passenger bill of rights and ask companies to post it in their vehicles
- List reliable taxi companies online

Hours of Service/Temporal Gaps

- Nighttime transportation for soldiers
- Midday service in Lewis County
- Weekend service

Nighttime transportation

This the biggest and easiest-to-reach market for transit to and from Fort Drum. Focus groups and anecdotal evidence reveal that Watertown is a major destination for dining and bars every night of the week, and even more so on weekends.

Service Solution

The service options created in the Watertown/Fort Drum gap above can also be used for nighttime service.

Another method of meeting needs on-post is to use the private market. Carriers like Freeman Bus Corporation and Lyme Lite Limo are currently used for special events, but service could be contracted and subsidized by the Fort Drum. For example, a "happy hour" shuttle leaving the installation at 6 PM and returning at 10 PM with a \$5 fare each way would cost approximately \$217 and require a \$167 subsidy.²³

Midday Service in Lewis County

Lewis County LOOP schedules per route generally consist of one morning and one afternoon trip, which is not practical for those with medical or shopping trips as they end up stranded at their destination.

Service Solution

Skeletal transit service has very limited effectiveness. Lewis County has accrued some extra STOA, which they could use to pilot some midday service on popular routes.

²³ Quote provided by Freeman Bus, E-mail 9/8/2011

Weekend Service

Limited Saturday public service exists at Citibus and St. Lawrence County. There is virtually no Sunday public transportation.

Service Solution

A weekend volunteer network could be created and branded as such to transport Saturday and Sunday general public trips.

Recommendations

- Explore private market or public-private partnership to serve nighttime trips to Watertown
- Pilot midday service on popular Lewis County LOOP routes

CONCLUSION

There are numerous opportunities in the study area for new and increased transportation services. The most implementable recommendations in the short-term include:

- Maximize use of Trailways - The service already exists. The ITO can coordinate selling tickets on-post and publicizing the service. The on-post shuttle's more than doubling in ridership was attributed to increased marketing.
- Develop vanpools and tap into Mass Transit Benefit Program - This program is being used at other peer military installations. Soldiers living off-post can pool together and have the cost of a vanpool paid for by the government. This requires some administrative time on the part of Fort Drum but provides a great return on investment.
- Extend Lewis County LOOP Purple Route to Watertown - Lewis County has accrued some unused STOA money which can be dedicated toward a pilot program.
- Information & Marketing materials - Existing staff at Fort Drum and the providers can improve legibility of service information.
- Include transit information in soldiers' welcome packets.
- Taxi service standards - The ITO's office could spearhead this effort.

FUNDING SOURCES

Public transit systems in the United States are funded through a combination of programs, and most systems typically get a significant portion of the system costs from federal grants. The State of New York also provides funding to support public transportation. As a result, most systems rely on a combination of resources for the remaining funds, such as state grants, passenger fares, advertisement revenues and local contributions. This chapter provides an overview of available federal funding programs. It also highlights the current funding structures utilized by transportation programs around the Fort Drum region.

FEDERAL FUNDING PROGRAMS

There are four major federal programs managed by the Federal Transit Administration (FTA) that are used to support rural public transit.²⁴ Some programs are dedicated to pay for capital, operating or planning purposes, while other programs offer more flexibility.

In general, federal programs will pay for up to 80% of capital costs and up to 50% of operating and planning costs. Most funding programs are formula based, meaning the funds are distributed according to a population based formula. Other grants, most notably the Elderly and Disabled Transportation Program (Section 5310), Job Access Reverse Commute (Section 5316), and New Freedom Funds (Section 5317) are awarded based on a competitive grant process. An overview of these major FTA funding programs is provided below.

- Elderly and Disabled Transportation Program (Section 5310) – funds capital projects to support transportation services for older adults and persons with disabilities. Funds are awarded based on a competitive grant process that is managed by the State of New York. Funds may be distributed to both urban and rural areas.
- Rural Transit Assistance Program (Section 5311) – funds capital, operating and administrative purposes, including training and technical assistance. Program may also be used to fund intercity bus service. Funds are distributed according to a formula to small urban fixed-route and community transportation services in areas with populations less than 50,000.
- Job Access and Reverse Commute (JARC) Program (Section 5316) – funds new transit service to assist low income individuals with transportation to jobs, job training and other support services, such as child car. Funds are awarded based on a competitive grant process that is managed by the State of New York. Funds may be distributed to both urban and rural areas.
- New Freedom Program (Section 5317) – funds new transportation services and public transportation alternatives beyond those required by the Americans with Disability (ADA) action. Funds are awarded statewide based on a competitive grant process and are available to both rural and urban areas.

In the Fort Drum region, St. Lawrence County received a \$150,000 two-year JARC grant.

²⁴ Does not include FTA Section 5309 New Starts Funds, which can be used to fund new or extensions to fixed guideway systems.

Figure 7-1 New York State Funding Availability 5316 and 5317

Program	FFY 2008	FFY 2009	FFY 2010	FFY 2011
JARC	\$1,000,593	\$1,265,534	\$1,628,220	\$3,251,585
New Freedom	\$616,468	\$1,160,301	\$1,449,150	\$2,168,501

STATE FUNDING PROGRAMS

One of the advantages that New York State has relative to other states is that it has developed an effective cost sharing arrangement to support transit in rural areas. This allows the cost of the service to be divided among different funding sources based on ridership. As a result it creates a clear incentive for service coordination. There are several counties in New York, most notably Steuben, which has taken full advantage of this cost sharing arrangement. Ontario County is also pursuing this approach by partnering with the Ontario Arc to provide general public trips in rural areas of the county. Implementing this type of shared service approach requires willing partners and a cost sharing agreement at the very least, but is most easily implemented with software that can automate the process of tracking trips and mileage and billing multiple parties accordingly.

Statewide Transportation Operating Assistance

Statewide Transportation Operating Assistance (STOA) is a New York State formula fund issued to public transit operators based on the number of passengers and number of miles they serve. The current formula is \$0.405 per passenger, \$0.69 per vehicle mile. In order to collect STOA, an agency must be identified by the county as a public operator. Funds received through this program may be counted as part of the local match required by federal grants. For example, should the independent operator write an application for a \$100,000 5316 JARC grant to add new routes for job access, and the local share must be \$50,000 for operations, then any STOA money the operator is receiving counts towards the \$50,000.

The Federal Transit Authority (FTA) programs that provide funding for public transportation services typically will only match operating costs at 50% of the deficit (i.e. 50% of the cost of the service after fares have been included in the calculation). The STOA program also helps fund public transportation and pays based on the miles driven and passengers carried. Despite these programs, local governments still must provide matching funds, which may range between 20% - 30% depending on the service design.

In the Fort Drum region, three public transit providers currently receive STOA reimbursements. For Watertown Citibus, STOA reimbursement comprises approximately 25% of its operating costs, or \$168,000. In St. Lawrence County, approximately \$200,000 of STOA is received annually, comprising nearly 43% of its operating costs in 2010.

Transit State Dedicated Fund (SDF) Program

The Transit State Dedicated Fund (SDF) provides funds for capital projects. Eligible projects should be identified in a needs' analysis and may include projects such as replacement buses, facilities and garage modernization projects; and transit related equipment needs.

The fund is primarily used by New York State public transportation agencies to match federal resources for capital purchases. As discussed, FTA typically funds transit capital projects at 80%; SDF funds may be used for half of the remaining share (10%) and local funds for the remaining portion of the non-federal share (10%).

LOCAL SOURCES

Nearly all federal transportation funding programs require local matching resources, with matching requirements for capital programs set at 20% and operating programs at 50%. Finding and maintaining local matching funds is typically among the most challenging aspects associated with developing and maintaining local public transportation services.

In New York State, the STOA program can be used to match federal programs. The amount of funding provided by STOA varies by location, but in general local entities must raise as little as 2-5% and as much as 25% of the service operating costs, depending on how their service is structured.

HEALTH AND HUMAN SERVICES

Administration on Aging - Grants for Supportive Services (Title III-B)

The Administration on Aging (AoA) is responsible for the administration of a number of programs authorized by the Older Americans Act. Title III of the Older Americans Act (OAA) supports programs and services which are intended to aid active seniors and older adults who are at risk of losing their independence. Part B (Support Services) of Title III considers transportation as an allowable expense. People transported using these funds must be aged 60 or more and the operator cannot charge passengers a fare, although voluntary contributions are allowed. In New York State, OAA funds are administered by the 59 local agencies for the aging, which in most, but not all, cases are county programs or departments for the aging.

Temporary Assistance for Needy Families (TANF)

The Temporary Assistance to Needy Families (TANF) Program provides block grants to states to help finance support services for individuals receiving federal cash assistance in their efforts to find and maintain employment. According to guidance jointly issued by the Departments of Health and Human Services, Labor and Transportation,²⁵ examples of allowable uses of TANF funds (both federal dollars and state funds that are used to provide the required non-federal share) for transportation include the following:

- Reimbursement or a cash allowance to TANF recipients for work-related transportation expenses
- Contracts for shuttles, buses, car pools or other services for TANF recipients
- Purchase of vehicles for the provision of service to TANF recipients

²⁵ *Use of TANF and WTW Funds for Transportation*; Dear Colleague letter from the Secretaries of Health and Human Services, Labor, and Transportation dated May 4, 1998.

- Purchase of public or private transit passes or vouchers
- Loans to TANF recipients for the purpose of leasing or purchasing a vehicle for work travel
- Programs to obtain and repair vehicles for use by TANF recipients
- One-time payments to recipients to cover expenses such as auto repair or insurance
- Payment of "necessary and reasonable" costs for new or expanded transportation services for use by TANF recipients
- Assistance to TANF recipients with the start-up of a transportation service
- Transfer of TANF funds to a Social Services Block Grant for use in efforts to provide transportation services for disadvantaged residents of rural and inner city areas
- Payment of TANF agency expenses associated with the planning of transportation services for TANF individuals

A caveat concerning the use of TANF funds for transportation services is that, according to the definition of "assistance" in the proposed TANF regulations, a transit pass constitutes assistance, and counts toward the lifetime limit of 60 months (states may set shorter limits, or provide assistance for a longer period using state funds) that a family is entitled to receive TANF benefits. This is an important stipulation that may influence an individual's decision to obtain transportation assistance.

In New York State, a portion of TANF funds are administered as Flexible Funds for Family Services (FFFS), a program that gives local entities more control over how the funds are used, as long as they are used only for programs and activities which further the goals of the TANF program, which includes the provision of transportation service for use by eligible TANF recipients traveling for work and work-related activities. According to the regulations, TANF funds may not be used to subsidize the use of such transportation services by non-TANF individuals. However, per New York State cost allocation arrangement, some counties use TANF funds to pay for a portion of shared transportation service costs directly associated with TANF clients.

Centers for Medicare and Medicaid Services (CMS)

Title XIX of the Social Security Act of 1965 established the Medicaid program as a joint effort on the part of the federal and state governments to ensure health care services for individuals and families who meet certain income and resource requirements, or who belong to other needy groups. Medicaid issues program guidelines and requirements, but each state is responsible for the design of its own Medicaid program, including such components as eligibility standards; the type, amount, duration and scope of services to be provided; rates of payment for services; and administrative procedures.

Access to health care is considered part of the Medicaid services, thus non-emergency medical transportation (NEMT) funded by Medicaid has emerged as a major transportation program. In New York State, oversight for the NEMT program is largely carried out by the Department of Health. Administration of the program is decentralized and assigned to a network of 58 separate and unique districts. As a result, counties are responsible to ensure that Medicaid clients have transportation to Medicaid eligible services.

New York State Developmental Disabilities Planning Council

Also part of the OPDD, the New York State Developmental Disabilities Planning Council (DDPC) is a Federally-funded New York State Agency.

The DDPC is responsible for developing new ways to improve the delivery of services and supports to New Yorkers with developmental disabilities and their families. The Council focuses on community involvement, employment, recreation and housing issues faced by New Yorkers with developmental disabilities and their families. In 2007, the DDPC supported a series of demonstration projects that addressed transportation barriers affecting individuals with disabilities.

DEPARTMENT OF LABOR

Workforce Investment Act

The Workforce Investment Act (WIA) provides support for national, state and local programs directed at supporting workers and employers. At the state and local level, WIA provides funding for workforce development programs as well as the establishment of “One-Stop” centers. “One Stop” centers provide employers and individuals with a centralized site for job training and development, job skills assessment, job search and placement assistance. Transportation expenses and support services are an allowable use of these funds.

DEPARTMENT OF EDUCATION

Rehabilitation Act

The Rehabilitation Act authorizes formula grant programs to support vocational rehabilitation, support employment, independent living and client assistance for individuals with disabilities. Among the programs funded by the Rehabilitation Act, the Vocational Rehabilitation (VocRehab) Grants to State are highly relevant to transportation funding. This formula program offers grant funds for services, including transportation. There is a local matching requirement of 21.3% of program costs.

DEPARTMENT OF THE ARMY MASS TRANSIT BENEFIT PROGRAM

In 2001, the Department of the Army created a Mass Transportation Benefit Program (MTBP) to reimburse federal employees for transportation costs associated with commuting to work. This program is available for employees using commuter buses or trains, subway, light rail, ferries, and vanpools. Each individual is allowed up to \$230 per month for commuting transportation costs. Individuals can receive transit passes directly, vouchers for a specific type of fare media or transit pass, or reimbursement for transportation costs, such as a vanpool.

Individuals eligible for the MTBP include:

- Army Active Component military service members
- Army Reserve Component military service members

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- DA Federal civilian employees (including part-time, temporary, and interns)
- DA Non-Appropriated Fund personnel

The program does not allow several other groups of affiliated individuals to be eligible for the program, including Army Reserve Component service members in an Inactive Duty for Training status, contractors, service members and civilian employees on TDY, deployed service members, ROTC students, Army military and Army civilian employee retirees, dependents of military or civilian personnel, and several other groups. Funds could be used to purchase tickets or vouchers for Watertown Citibus, Adirondack Trailways, St. Lawrence County service, or the Lewis County LOOP, if service were available to Fort Drum.

A flexible and highly useful aspect of the MTBP is the vanpool allowance. A qualifying vanpool can be operated by a transit authority or a private company (such as VPSI) and can have as few as six passengers. Vanpools are especially conducive to low density areas where fixed route or flex bus service may not be a viable option. Individuals pay a flat base rate (such as \$60) plus a variable rate based on mileage and gas each month and are reimbursed by the MTBP. All riders do not have to be Federal employees participating in the MTBP program; other individuals must pay the same rate, but through other means.

Fort Drum is not currently set up to administer the MTBP. The installation would need to designate a Point of Contact to process applications from potential participants and to review reimbursement forms for accuracy.

This program does not directly contribute funds to transit services; however, as a user-side subsidy, the MTBP has the potential to increase ridership on existing transit services and increase mobility in the region.

The table below summarizes the funding sources available.

Figure 7-2 Funding Table

Highlighted boxes are most relevant to Fort Drum

Agency	Programs with Major Transportation Component	Passenger Eligibility	Matching Requirement	Coordination Potential
Department of Health and Human Services (DHHS)				
Centers for Medicaid and Medicare	Medicaid	Medicaid Recipient	None	Medium - Medicaid cannot pay for non-Medicaid eligible service or individual but cost sharing arrangements allow for shared service delivery.
Administration on Aging	Title III-B	Individual aged 60+	15%	Medium – Title III-B funds can be used to purchase service from existing providers, but passengers cannot pay a fare.
Administration for Children and Families	TANF	TANF eligible	None	High – TANF funds can purchase service from existing providers, including bus passes.

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Agency	Programs with Major Transportation Component	Passenger Eligibility	Matching Requirement	Coordination Potential
Department of Transportation (DOT)				
Federal Transit Administration	5307 Urbanized Area Formula Program	General Public	20% Capital 50% Operating	High – Most fixed-route services serve a multitude of populations.
	5309 Bus and Bus Facility Program	General Public	20% Capital	High – Most fixed-route services serve a multitude of populations.
	5310 Capital Assistance Program for Elderly Persons and Persons with Disabilities	Older Adults and Persons with Disabilities	20% capital	High – In NY, funds are used for capital purchases only. Vehicles may be used to support some but not all other client based transportation services.
	5311 Non urbanized Area Formula Program	General Public	20% Capital 50% Operating	High – Rural and small urban transit services serve general public and special populations.
	5316 Job Access and Reverse Commute	General Public	20% Capital 50% Operating	High – Program design is intended to serve low income and high need populations.
	5317 New Freedom	Services and programs that go beyond ADA	20% Capital 50% Operating	High – Program design is intended to serve low income and high need populations
Department of Labor (DOL)				
	Workforce Investment Act	Support workers and employers	None	Medium – Potential for service contracts with transportation services, but many programs are arranged based on individual needs
	Vocational Rehabilitation Grants to States	Services for individuals with disabilities	21.3% for programs	Medium – Potential for service contracts with transportation services, but many programs are arranged based on individual needs.
State Funding Programs				
NYSDOT	STOA	General Public	None	High – Program must serve general public but funds can be used to match other federal DOT and non-DOT programs
	SDF	General Public	None	High – Program must serve general public but funds can be used to match other federal DOT and non-DOT programs
Department of the Army	Mass Transportation Benefit Program	Federal employees	None	Medium - Allows for increased use of public transit and creation of vanpools to share rides.

Typically the biggest hurdles in attaining these funds are:

- Creating a competitive grant application showing a coordinated transportation effort
- Finding the local match

Other counties make their match by contributions from the general fund or the public transit fund. In Dutchess County, the local match to the New Freedom grant that funded the county's mobility manager came from contributions from all the towns who would be served by the mobility manager. Local matches can also include in-kind expenses such as staff time. For public operators, STOA counts toward the local match. The following charts give a sense of scale to how much other New York counties pay into public transit.

Figure 7-3 Annual Public Transit Expenses, 2005

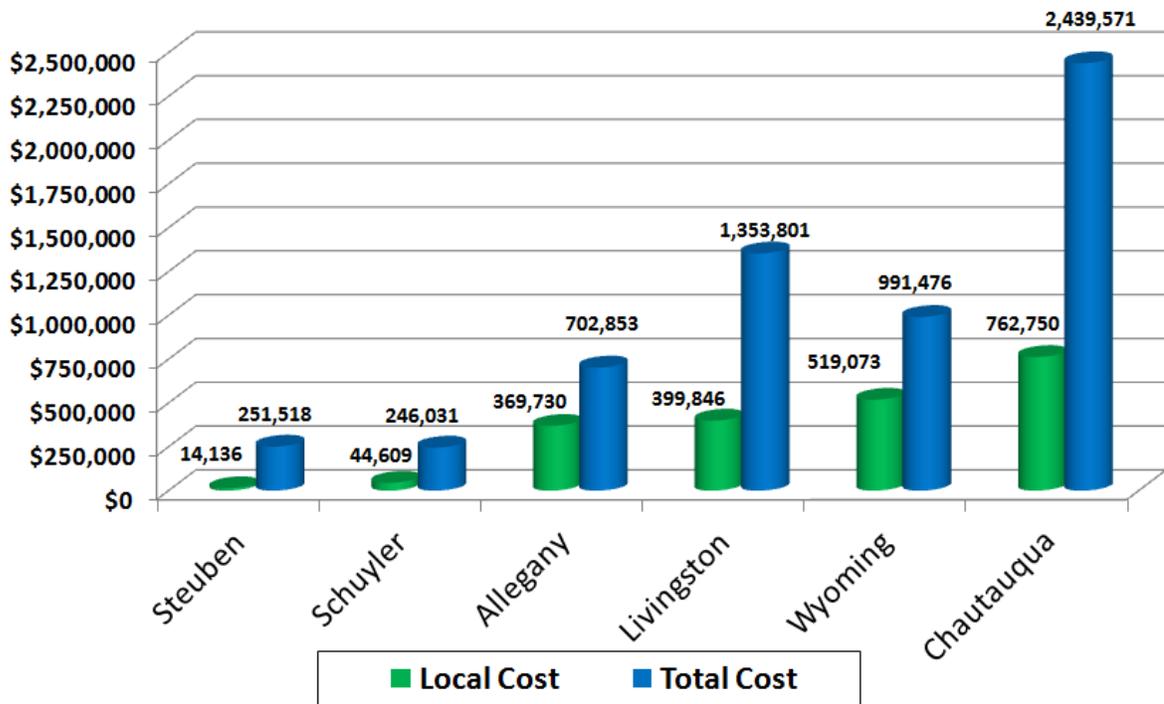
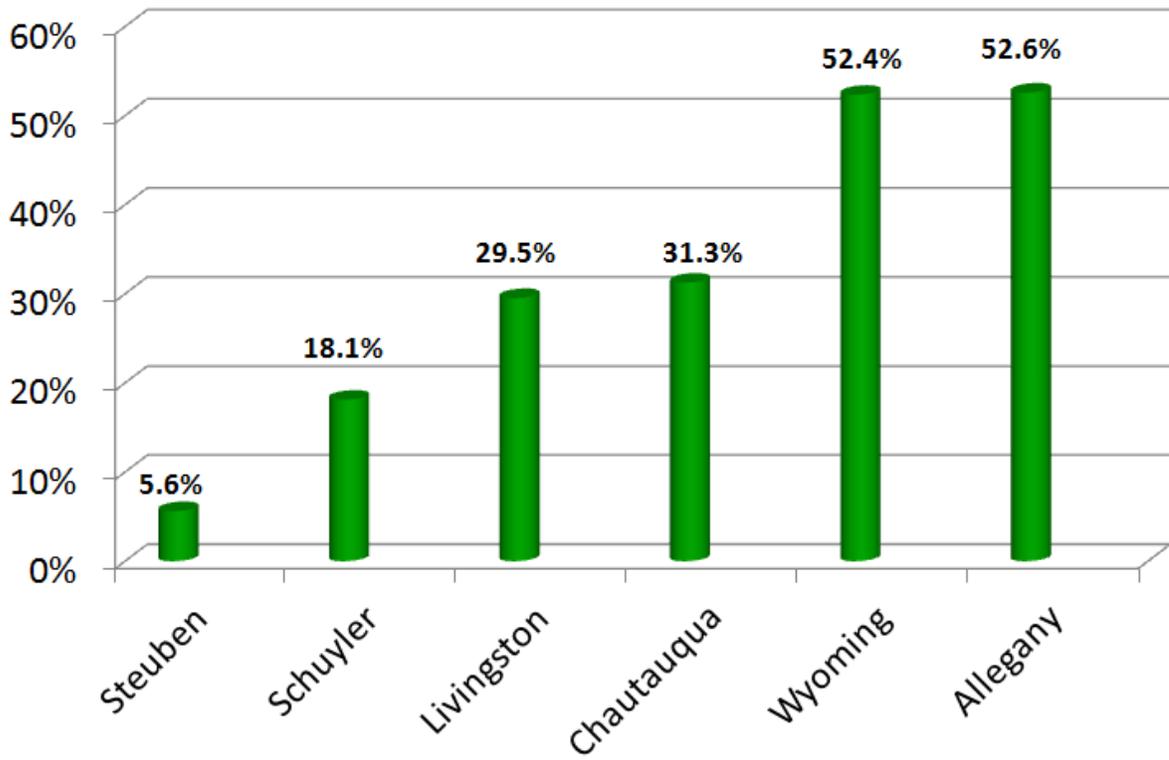


Figure 7-4 Local Expenses as a Percent of Total Expenses, 2005



IMPLEMENTATION MODELS

Nearly every successful transportation coordinating effort in New York State and elsewhere around the country has emerged from some form of locally-driven process that engaged stakeholders in fact finding and eventually led to a formal institutional structure to carry study results forward to detailed planning and implementation. In terms of the Tri-County region, each of the three county governments must determine either to become actively involved in developing the transit function within their respective jurisdictions, or alternatively to delegate that responsibility to other entities willing to accept responsibility. Similarly, either Fort Drum or FDRLO on its behalf will need to step forward to represent the transportation interests of the military community.

As these deliberations will take time beyond completion of the present study, it is important the Study Technical Committee continue to function as an interim forum through which transportation strategies and concepts may continue to be discussed. The Fort Drum Regional Transit Committee, as this group could be called, should include stakeholder organizations and providers from an area including all of Jefferson County, the southern portions of St. Lawrence County, and the northwestern portions of Lewis County.

At a minimum, the committee should meet quarterly to continue to discuss and assess transit coordination options. As part of this study process, governance models in other counties were profiled and can be viewed in Appendix C.

The following options were produced by project stakeholders and outlines different options for continuing work on transportation issues. These options are then used as a framework for implementing projects discussed in the recommendations and potential strategies section of this report.

These outlines are presented to provide guidance to the committee as they move forward. All strategies and tasks listed by year are suggestions provided by the study team, and the associated timelines are highly variable and dependent upon local conditions.

Option 1	Regional Transit Committee forms, including organizations and providers in Jefferson County, southern St. Lawrence County, and northwestern Lewis County
Option 2	Regional Transit Committee forms and hires a temporary mobility manager (3 years or fewer)
Option 3	Regional Transit Committee forms and hires a permanent mobility manager

Options 2 and 3 are very similar and thus have many of the same implementation timeline suggestions. The primary difference is that a permanent mobility manager would provide a sustainable model for facilitating and implementing transit project in the Fort Drum region, especially for projects that require a longer planning timeline, such as new transit routes or creating a centralized call center for the region. These types of strategies are difficult to

implement without a lead planner such as a mobility manager taking them on as a primary job function.

YEAR BY YEAR IMPLEMENTATION PLANS

The following text can be used as a road map for addressing transit issues in the Tri-County region. More detail is given for years one and two as short-term tasks are more easily specified. Medium-term strategies are generalized as years three through five, though planning for some strategies may begin earlier and actual implementation may occur later.

OPTION 1 IMPLEMENTATION PLAN

Option 1 relies solely on the momentum of a Regional Transit Committee. Even without dedicated staff, a Committee can address some of the programmatic issues in the region and begin to discuss some of the larger transit gaps identified in this study.

Year 1 Plan

In the first year, the Regional Transit Committee should be established to help guide the implementation process. This committee may be comprised of the same membership as the Study Technical Committee for this project; membership could be expanded to include more stakeholders or streamlined to be more of a working group.

Suggested focus areas for the Committee in the first year include:

- Development of a centralized directory of services. This directory should be online and could be published as a brochure, depending on resources. To begin addressing the issue of making services known to the public, a transit advertising campaign could be undertaken to market existing services. This campaign should include presentations at various community meetings and at Fort Drum, dissemination of information through Newcomer Welcome packets, and meetings with government agencies whose clients would use transit service.
- Working with Departments of Social Services in each county to coordinate with local transit providers to send NEMT trips on transit as much as possible. Though this is occurring to some extent in St. Lawrence and will be in Lewis soon, the Committee could help facilitate this process. Host meetings with Watertown Citibus, CTS (Jefferson County's NEMT broker), and Jefferson County DSS.
- Track NYS Department Of Health regionalization of NEMT service delivery. As discussed, the future of NEMT service delivery is uncertain. The Committee should remain informed about developments on the state level. If the state is moving toward implementing the regional model, the three counties should consider becoming a region themselves and discussing with NYS DOH.
- Establish vanpools through the use of the Mass Transit Benefit Program. This task can be exclusively managed by Fort Drum staff and costs nothing but staff time to organize and process applications, while making more attractive transit options for soldiers.
- Coordinate ticketing on post with Trailways.

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Figure 8-1 Option 1: Timeline for First Year Implementation Steps

Strategy	Year 1, Q1	Year 1, Q2	Year 1, Q3	Year 1, Q4
Regional Transit Committee	Convene committee, establish by-laws, elect officers	Meet quarterly		
Information and Marketing		Create comprehensive transit services website	Maintain website	
NEMT and Transit Partnerships	Host initial meetings between NEMT managers, CTS (as needed), and transit agencies Begin process for transit agencies to become Medicaid providers	Follow-up meetings to establish cost structures and procedures	Begin using transit providers as appropriate (new fiscal year)	
Establish Vanpools	Identify Point of Contact at Fort Drum for MTBP	Meet with VPSI, public transit agencies, other private agencies to discuss vanpool options Process MTBP applications (ongoing)	Identify vanpool corridors and establish rates	Advertise vanpool corridors and MTBP
Coordinate with Trailways			Meet with Trailways	Establish point on-post for ticket sales
Track DOH NEMT Changes	Ongoing			

Year 2 Plan

In Year 2, the Committee can begin work on additional programmatic changes that require a bit more focus and involvement than the initiatives in Year 1.

- **Watertown and Syracuse airport information dissemination** - Demand for travel to both airports is strong, but no transit link exists. The Committee can work with existing private companies to develop general service guidelines and advertise service to the public and to soldiers and families. New air service at the Watertown Airport will continue to be developed, and working closely with the airport, the hotel industry, and the installation will ensure easy access that promotes use of the local airport.
- **Taxi service standards** - Minimum service quality standards for taxis can be developed and distributed to taxi companies. Close coordination with Fort Drum must occur to ensure that taxis that adopt increased service quality standards receive more advertising, and those that do not are not allowed to enter the installation.
- Work with Lewis County LOOP to use excess STOA for Purple Line extension.

Years 3-5 Plan

After Year 2, the Committee can continue to select projects appropriate to existing conditions and resources. Some projects that will require more planning and a longer time frame include:

- Working with the Arcs in the region to open routes to the public
- Developing transit service along Route 11 between Watertown and Fort Drum
- Working with the installation to create an on-post connection to the Route 11 service
- Establishing a centralized call center for the region

Though all of these projects have the potential to significantly enhance regional mobility and fill transit gaps, addressing all simultaneously would not be sustainable for the Committee. Selecting priority projects on a year-by-year basis is important for continued impact on the transit network and needs of residents and soldiers.

OPTION 2 IMPLEMENTATION PLAN

Option 2 includes the Regional Transit Committee and a temporary mobility manager. The temporary mobility manager is assumed to be on staff for approximately three years from the date of hire.

Year 1 Plan

Year 1 activities for the Committee are the same as those listed in the Option 1, with the addition of hiring a mobility manager. This process involves not only putting together resources for a salary and benefits and locating office space and office resources, but also advertising the position, screening and interviewing candidates, and coming to an agreement on the most appropriate individual. A mobility manager can then assist in the Year 1 initiatives, along with a few other tasks.

If a **mobility manager** is hired in the first year, initial mobility management tasks to accomplish include:

- Meetings with stakeholders, centers, and other organizations to discuss training, information dissemination initiatives, and build relationships with stakeholders

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- Guiding the development of centralized directory of services and transit marketing campaign
- Working with Fort Drum to develop vanpools
- Working with DSS, CTS, and Watertown Citibus to use Citibus for NEMT trips
- Monitoring State DOH developments relating to Medicaid transportation

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Figure 8-2 Options 2 & 3: Timeline for First Year Implementation Steps

Strategy	Year 1, Q1	Year 1, Q2	Year 1, Q3	Year 1, Q4
Regional Transit Committee	Convene committee, establish by-laws, elect officers Begin mobility manager hiring process (see below)	Hire mobility manager Meet quarterly	Meet quarterly	
Hire Mobility Manager (MM)	Compose job description Conduct interviews	Hire MM	Introduce to local stakeholders	MM presents available services and MM job description to local stakeholders and organizations
Information and Marketing		Create comprehensive transit services website Locate funding for publication of hard-copy brochure	Maintain website Design hard-copy brochure	Publish and disseminate hard-copy brochure
Watertown and Syracuse airport		Create list of existing services to airports	Meet with existing services and other private operators	Develop partnerships and advertise new/revised services
NEMT and Transit Partnerships	Host initial meetings between NEMT managers, CTS (as needed), and transit agencies Begin process for transit agencies to become Medicaid providers	Follow-up meetings to establish cost structures and procedures	Begin using transit providers as appropriate (new fiscal year)	
Establish Vanpools	Identify Point of Contact at Fort Drum for MTBP	Meet with VPSI, public transit agencies, other private agencies to discuss vanpool options Process MTBP applications (ongoing)	Identify vanpool corridors and establish rates	Advertise vanpool corridors and MTBP
Track DOH NEMT Changes	Ongoing			

Year 2 Plan

As the Committee becomes more established and the mobility manager becomes more familiar with issues and existing providers, they should begin to look at strategies that require more effort to implement but can have a greater effect on regional mobility.

- Transit service changes can include working with the local Arcs to open routes to the public. St. Lawrence County and NYSDOT are working together to develop this option with NYSARC already. The JRC is also considering this option. If, in the process, either decides to become a public transit provider under NYSDOT, they will require cooperation and possibly assistance during the application process. This application process can take many months, so starting early and having assistance is key.
- In the second year, the mobility manager can begin writing grants to support continued transit coordination and activities to ensure continuity of the Committee.
- The mobility manager should begin working with the installation and area transportation providers to design a service connecting Fort Drum with Watertown.
- The mobility manager should work with the Installation to develop an on-post shuttle connection to the Route 11 transit service connecting to Watertown.
- Work with Lewis County LOOP to use excess STOA for Purple Line extension.

Years 3-5 Plan

The Committee and mobility manager should continue Years 1 and 2 activities. By this time, the planning for a Watertown-Fort Drum transit connection would be underway, and service, of any type selected by stakeholders, will be ready to start. An on-post shuttle with connections to this Watertown-Fort Drum service will also be ready to implement.

The mobility manager will only be on staff for a portion of this date range, depending on when the individual was hired during Year 1. The Committee must prioritize projects for the mobility manager to complete before departure.

After the departure of the mobility manager, the Committee must monitor the projects implemented by the mobility manager. Though taking on significant long-term regional changes - such as establishing a centralized call center for the region - can be daunting for a body with no assigned full-time staff, continuing to meet quarterly to maintain partnerships and discuss transportation issues is essential to meeting the needs of the region's residents and soldiers. Still, long-term projects can be accomplished by committees even without full-time staff, and the Committee should continue to identify unmet needs and projects that will fill gaps in the region's transportation system.

OPTION 3 IMPLEMENTATION PLAN

Option 3 is very similar to Option 2, the significant difference being that the mobility manager is permanent. The Committee would still need to prioritize projects in the region to guide the mobility manager's work, but the mobility manager can begin work on long-term projects with the guarantee that staff will be dedicated to the project for its duration, and not just for the initial stages.

Year 1 Plan

Year 1 tasks are the same as Option 2 Year 1 tasks. A permanent mobility manager can be hired initially with temporary funding. Often, a task for mobility managers is to write grants and raise funding that will also support their own salaries.

Year 2 Plan

Tasks for Year 2 are the same as for Option 2 Year 2 tasks.

Years 3-5 Plan

Years 3-5 should include tasks from Option 2 Years 3-5. Since the mobility manager will be permanent, additional projects can begun to be discussed and facilitated. These include:

- In this year, a closer look at Lewis County Loop routes is recommended. Commuters traveling to the installation and others needing connections to Watertown may be better accommodated by revised route configurations.
- As the Committee and mobility manager have continued Years 1 and 2 coordination activities, regional stakeholders may find it beneficial to create a centralized call center for scheduling client trips. As discussed in strategies section, a central call center can greatly alleviate administrative costs and free staff to perform other duties at their home organizations. Since this is a long-term project that requires coordination with a large number of local agencies, it is recommended that efforts begin after the Committee has a few smaller coordination successes to help garner support.

It is important to keep in mind that if federal funding is to be pursued to hire a mobility manager in Option 2 or 3, it may be prudent to spend Year 1 continuing the planning process as a Regional Transit Committee, working with St. Lawrence and Lewis County Mobility Managers, and folding recommendations from the committee into the next Jefferson County Human Services Coordination Plan Update. Application for federal money goes through a competitive grant process, thus such a recommendation must be part of the coordination plan and clearly demonstrate expansion of mobility options in an area currently unserved, or consolidated mobility functions at a regional level.

CONCLUSION

This study has resulted in numerous recommendations, many of which can be quickly implemented and have a high return on investment. Information and marketing, for example, can be begun at the local level, even without a mobility manager, with a few hours of staff time dedicated to creating a map and service schedule for Lewis County LOOP, for example. Taxi service standards greatly improve quality of life for soldiers at Fort Drum, but do not require any regulatory changes or funding. Whether through a Regional Transit Committee or a mobility manager, the longer-term recommendations requiring greater funding and collaboration can be tackled as monies and partnerships are formed and solidified.

GLOSSARY

Technical Definitions

TECHNICAL DEFINITIONS

<u>Accessible Vehicle</u>	(Or Wheelchair-Accessible Vehicle or ADA Accessible Vehicle) Public transportation revenue vehicles, which do not restrict access, are usable, and provide allocated space and/or priority seating for individuals who use wheelchairs, and which are accessible using ramps or lifts.
<u>Ambulatory</u>	Capable of walking.
<u>Arc or ARC</u>	ARCs were founded in the 1950s with the mission to provide quality of life and independent living programs to those with intellectual or developmental disabilities. Originally founded as the Association for Retarded Children, the organization was renamed Arc of the United States in 1992. State and county chapters are a part of the overall national association.
<u>Charter Service</u>	A vehicle hired for exclusive use that does not operate over a regular route, on a regular schedule, and is not available to the general public.
<u>Coordination</u>	A group of people working together to expand one or more transportation related activities through joint action for increased benefits.
<u>Demand Response</u>	A transit mode comprised of passenger cars, vans or small buses operating in response to calls from passengers or their agents to the transit operator, who schedules a vehicle to pick up the passengers to transport them to their destinations. Demand response operation does not operate on a fixed route and typically vehicles are dispatched to pick up multiple passengers at one or many origins before taking them to their destinations.
<u>Eligible Rider/Client</u>	An individual meeting a set of criteria that qualifies him/her for an organization's services. For example, eligibility for ADA paratransit services is determined according to ADA law.
<u>Fixed Route Service</u>	Service provided on a repetitive, fixed schedule basis along a specific route with vehicles stopping to pickup and deliver passengers to specific locations, such as rail and bus. Unlike demand response and vanpool services, each fixed route trip serves the same origins and destinations. (NTD)

Flex Service

A bus service which operates along a fixed route with normal bus stops, but that can also travel off-route to pick up and drop off passengers closer to their origin or destination. Flex service only occurs within a designated service area and passengers must make advance reservations for a flex trip. There are no eligibility requirements; anyone within the designated boundaries may schedule a flex trip.

Level of Assistance

Level of assistance given to passengers who need help boarding or exiting transit or agency vehicles, especially paratransit vehicles. Assistance can be curb-to-curb, meaning the passenger is not given assistance to and from the door of their destination; door-to-door, meaning the passenger is assisted from the door of their residence to the door of their destination; or door-through-door, meaning the passenger is assisted out of their home to the vehicle, and from the vehicle into their destination.

Mass Transit Benefit Program (Or **MTBP**)

A program created by the Department of the Army in 2001 to reimburse federal employees for transportation costs associated with commuting to work. This program is available for employees using commuter buses or trains, subway, light rail, ferries, and vanpools. Each individual is allowed up to \$230 per month for commuting transportation costs. Individuals can receive transit passes directly, vouchers for a specific type of fare media or transit pass, or reimbursement for transportation costs, such as a vanpool. Eligible individuals include Army Active Component military service members, Army Reserve Component military service members, DA Federal civilian employees (including part-time, temporary, and interns), and DA Non-Appropriated Fund personnel

Metropolitan Planning Organization (MPO)

These agencies distribute federal transportation dollars in urbanized areas and are responsible for regional planning and air quality conformity.

Mobility Manager

(Or **Coordinator**)

The person (or agency) responsible for leading a coordination program or otherwise causing coordination to occur.

Multi-Modal Hub

(Or **Multi-Modal Station**)

A passenger station or central location that serves a variety of transportation modes, including transit services and non-transit services such as bicycling and walking.

Non-Emergency Medical Transportation

(Or **NEMT**)

Transportation to or from any medical service for the purpose of receiving treatment and/or medical evaluation. NEMT service can be provided by ambulance (ground and air), ambulette (wheelchair van) and taxi or livery vehicles.

Paratransit

Passenger transportation which is more flexible than fixed-route transit, but more structured than private automobile use. Paratransit is often used to describe only Complementary ADA Paratransit, which is a demand-response service specific to ADA clients, governed by ADA law. Paratransit most often refers to wheelchair-accessible, demand response service, but can also include shared-ride taxis, carpooling, vanpooling and jitney services.

Productivity

A ratio comparing the number of passengers per revenue service hour. Errors in reporting from affiliated transportation services such as taxi services used during overbooking, etc, can result in overstating productivity; for instance, if an organization reports the number of passengers carried by taxis but not the length of time the trips took.

Ride-Sharing

A program that encourages or arranges for two or more individuals to share a vehicle for a commuting trip. Examples include carpooling and vanpooling.

Service Area

A measure of access to transit service in terms of population served and area coverage (square miles). For fixed-route service, service areas are typically arranged in corridors. Complementary ADA paratransit services are required by ADA law to extend $\frac{3}{4}$ mile beyond the fixed-route corridors. As demand response serves a broad area and does not operate over a fixed route, the “service area” encompasses the origin to destination points wherever people can be picked up and dropped off. (NTD)

Service Span

The hours at which service begins and ends during a typical day.

Travel Training

A training program that teaches users how to use public transportation services, including reading a schedule, paying a fare, and transferring between routes or services.

Vanpool

A transit mode comprised of vans, small buses, and other vehicles operating as a ride sharing arrangement, providing transportation to a group of individuals traveling directly between their homes and regular destination within the same geographical area. Vehicles have a minimum seating capacity of seven persons, including the driver. Some programs are sponsored by a public entity, which can own or lease the vehicle(s). Programs can be combined with ridesharing arrangements. (NTD)

Vehicle Hours/Miles

The hours/miles that a vehicle is scheduled to or actually travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service. This measure includes deadheading, operator training, and maintenance testing. (NTD)

Vehicle Revenue Hours/Miles

The hours/miles that vehicles are scheduled to or actually travel while in revenue service, including layover/recovery time, but excluding deadheading, operator training, and maintenance testing. (NTD) For demand response service, this covers the time from the first completed pick up to the last completed drop off.

Volunteer Drivers

Individuals who drive vehicles in revenue service to transport passengers for a transit provider but are not employees of the transit provider and are not compensated for their labor. (NTD)

Voucher/Subsidy/Pass Program

Any financial assistance covering some or all of the cost of a trip on public transit, in a taxi, or in another private transportation service. Programs are typically sponsored by governmental agencies serving older adults, persons with disabilities, or persons with low income, or by nonprofits serving these populations. Some programs use paper vouchers or scrips, which are distributed on a regular (i.e., monthly) or as-needed basis. Some programs assign participants a number that can be used to reserve trips or as a pin code to pay for spontaneous taxi trips.