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Rural Multimodal Planning

Why and How to Improve Travel Options in Small Towns and Rural Communities

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Many rural communities and small towns are improving walking, cycling, public transit and taxi services to provide mobility for non-drivers, improve public fitness and health, and support economic development.

Summary

Multimodal planning creates communities where it is possible to get around by walking, bicycling and public transport. This provides various direct and indirect benefits to individuals and communities. This report explores why and how to implement more multimodal planning in rural areas and small towns. Current trends are increasing demand for non-auto travel options in rural communities, including aging populations, rising poverty, growing health and safety concerns, and growing tourist industries. Various strategies can help rural communities improve and connect walking, cycling, public transport, including innovative facilities and services, and Smart Growth development policies. New planning resources described in this report can help rural communities and small towns develop integrated multimodal plans and programs.

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Preface – Rural Multimodal Fun

Our car-free family enjoys visiting rural areas. Whenever possible we rely on walking, bicycling and public transit, which is challenging but often rewarding. For example, a few years ago we took a car-free winter holiday to Washington State's Olympic Peninsula, a rural area famous for giant trees and romantic vampires. We had a terrific time!

We were able to make this trip because the Washington State Department of Transportation has a program that supports rural public transit services, including funding for local and interregional bus services, coordination among local transit agencies, development of bus terminals in small towns, and construction of park and ride lots along rural highways. Although the services were limited, with only a few buses per day on some routes, it was sufficient to meet our needs.

Our family enjoyed riding local buses around Washington State's Olympic Peninsula. Because the state supports rural transit services, residents and tourists can travel affordably. This provides various direct and indirect benefits.

Well done Washington!

Part of the fun of public transit tourism is to interact with locals. For example, on a bus we met Mike, an older man with medical problems who was returning from Port Angeles, where he had made use of the regional public swimming pool, back to his home in Neah Bay. Although he owns a truck, he could not afford the fuel or the stress of driving the 150-mile round trip on a winding and wet highway. We became friends; Mike showed us around Neah Bay and helped us find food (the best smoked salmon on earth!) and our accommodations.

In this case, the state's investment in multimodal rural transportation provided these benefits:

- Supports tourist industries, increasing business activity in economically depressed areas.
- Affordable and safe access to shopping and recreation for isolated rural residents.
- Reduced crash risk on a dangerous rural roadway.
- Affordable and enjoyable holidays for our family.
- Increased understanding and friendship between urban and rural residents.

Thank you, Washington State! We hope other jurisdictions follow this example.

Introduction

To be efficient and fair a transportation system must be diverse in order to serve diverse demands. For example, it needs *active transport* (walking and bicycling) for local trips, exercise and enjoyment; *public transportation* to provide affordable mobility for non-drivers, and a*utomobile travel* when it really is the best mode for a particular trip, considering all impacts.

This principle is often overlooked, particularly in rural communities. Urban transportation planning tends to be multimodal; many of these practices are also appropriate in small towns and rural communities. More multimodal planning can provide many direct and indirect benefits to users, motorists and communities. Current demographic and economic trends are increasing the importance of multimodal planning in rural communities. Recent studies indicate significant unmet transportation needs for rural residents, including many who cannot or should not drive, and so need better non-auto travel options (Barajas and Wang 2023).

This report explores these issues. It examines the roles that walking, bicycling and public transit play in smaller communities (suburbs, towns and rural area), discusses suitable multimodal planning practices, identifies multimodal rural planning resources, and describes examples of successful programs. This report should be useful to public officials, planners and citizens who are interested in creating more diverse mobility options in rural communities.

Multimodal Planning

Multimodal planning involves an integrated set of improvements to non-automobile modes so non-drivers have affordable independent mobility. It requires changing many common planning practices to give more consideration to non-automobile transport options. This usually includes collecting more information on active and public transport travel demands, more funding for non-automobile modes, and better planning for active and public transport, "complete streets" policies that integrate multiple modes into roadway planning. Multimodal planning can also include Smart Growth development policies that create compact, mixed villages and towns where commonly-used services are located within walking distances of homes. Multimodal planning can be tailored to various conditions including low-density suburbs, small towns and rural areas (Retrofitting Suburbia; Rural Placemaking; Sisson on 2023).

Success can be evaluated based on *inputs* (resources devoted to alternative modes), *outputs* (changes in the quantity and quality of travel options) and *outcomes* (changes in travel activity and associated costs), as summarized below.

Table 1 **Multimodal Performance Indicators**

Inputs →	Outputs →	Outcomes
Resources devoted to each mode	*Use of each mode*	*Ultimate results*
Increased investments in non-automobile modes (active and public transport)	Increased quantity and quality of non-automobile modes, improved user information, more accessible development	Increased non-automobile travel, reduced automobile ownership and use, reduced transport cost burdens, reduced crashes and pollution emissions.

Various indicators can be used to evaluate multimodal planning success.

Rural Community Multimodal Transportation Needs

Transportation demands refers to the type of travel people want to use, including *latent demands*, options they do not currently use but would if available. Many rural residents have non-auto travel demands (Barajas 2023; Kim 2018; Laska and Bellis 2021; Espeland and Rowangould 2024), and current trends are increasing these need as discussed below.

Table 2 **Trends Affecting Rural Multimodal Travel Demands**

Trend	Impact on Multimodal Demands
Isolation. Rural non-drivers experience social and economic isolation, particularly as rural services consolidate.	Rural non-drivers need independent mobility options to participate in social and economic opportunities, and avoid imposing chauffeuring burdens.
Population aging and disability. Many rural areas are experiencing population aging and high disability rates.	Many residents want to age in place, which requires mobility options for older and disabled people.
High transportation costs. Many rural households spend more than they can afford on motor vehicles.	Many rural residents want affordable mobility options, including public transit services suitable for commuting, shopping and socializing.
Poverty. Many rural areas have high poverty rates.	
Changing travel preferences. Many residents, particularly youths, want alternatives to driving.	Many rural residents want improved walking, cycling and public transit options.
High traffic fatality rates. Rural areas have high traffic death rates, and many traffic safety programs depend on some travelers' ability to reduce their driving.	Improving travel options, particularly for youths, people with disabilities, and law abiding drinkers can help increase traffic safety.
Poor public fitness and health. Many rural residents are sedentary and overweight, and suffer associated health problems including diabetes and heart diseases.	Improving and encouraging active modes (walking and cycling) is an effective strategy for improving public fitness and health.
Economic opportunity and development. Many rural areas want to improve education and employment opportunities, and support local industries.	Improving travel options increases economic opportunity and development by providing access to schools and jobs, and by supporting industries such as tourism and retirement services.

Various demographic and economic trends are increasing demands for walking, cycling and public transit.

Geographic Isolation

Because rural areas are dispersed and automobile dependent, non-drivers tend to be isolated. This increases as public services, such as healthcare, shops and schools, are consolidated for efficiency sake. Because of this isolation, rural residents travel more than urban peers: overall, rural *residents* drive about 33% more, rural *workers* about 38% more, and *lower-income rural workers* 59% more annual miles, than in urban areas (Brown and Schafft 2011).

In a typical community 20-40% of residents cannot, should not or prefer not to drive, About 20% of rural households are vehicle deficit, they have more divers than vehicles (Barajas 2023). Without suitable travel options non-drivers will lack independent mobility, require chauffeuring, bear excessive transport costs, or move to another community that offers better travel option, as indicated in Table 3. Aging population increases the number of residents who need rides and reduces the number who can offer rides. Improving rural travel options can provide large benefits to both users and other community members, such as reduced chauffeuring burdens imposed on drivers, and more tourist business activity.

Table 3 **Types of Non-Auto Travel Demands** (Litman 2023)

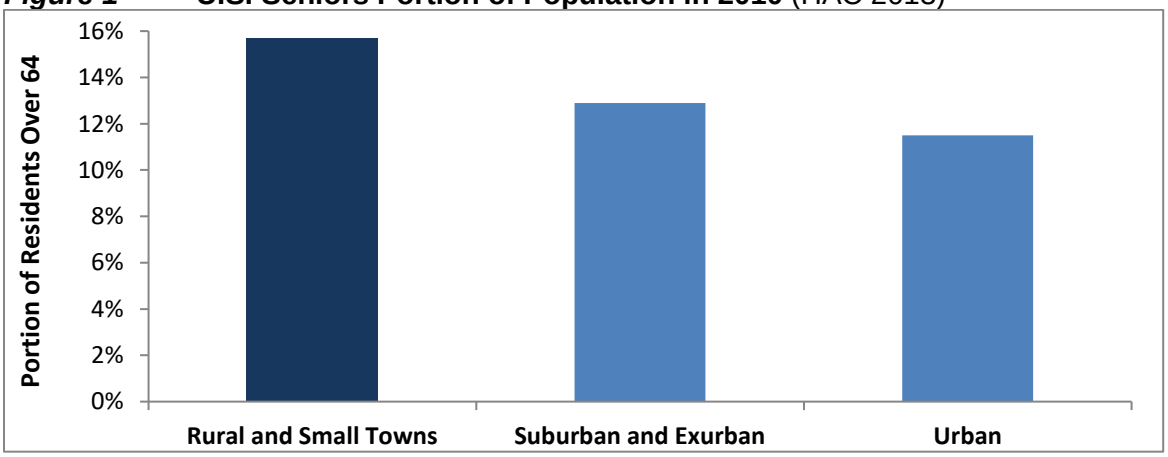
Type	Prevalence	Consequences
Seniors who do not or should not drive.	5-10% of residents and increasing.	• Experience limited mobility and accessibility. • Bear high costs for expensive options (such as taxi and delivery services). • Require chauffeuring. • Move to another community with better transport options.
People with mobility impairments.	5-10% of residents	
Youths (12-22 years).	10-20% of residents	
Zero-vehicle household members.	5-15% of households	
Drivers who temporarily lack vehicles.	Varies	
Drivers who share vehicles.	5-15% of motorists	
Low-income motorists.	20-40% of households	Lack mobility or are burdened by transport costs.
Tourists and visitors who lack vehicles.	Varies	Lack mobility or visit other areas.
People who walk for religious reasons, such as observant Jews.	0-3% of households	Lack mobility during religious days or move to more walkable areas.
Travellers impaired or distracted by alcohol, drugs or devices.	A small portion of trips.	Drive impaired or distracted, risking citations and crashes.
People who want to walk and bike for health and enjoyment.	40-60% of residents	Have insufficient exercise or must spend time and money exercising at a gym.
Families with pets to walk.	20% of households	May need to drive to dog walking area
Motorists who benefit from better travel options for others.	Most motorists.	Motorists bear more congestion, risk and chauffeuring burdens.

In a typical community, 20-40% of travellers cannot, should not, or prefer not to drive everywhere and will use non-auto modes if they are convenient, comfortable and affordable.

Seniors and People with Disabilities

Senior populations are growing, particularly in rural and small town communities (Werner 2011), as illustrated in the following figures.

Figure 1 **U.S. Seniors Portion of Population in 2010** (HAC 2013)



A relatively large portion of rural and small town residents are over 64 years of age.

Figure 2 **Rural and Urban Age Trends** (Mattson 2015)

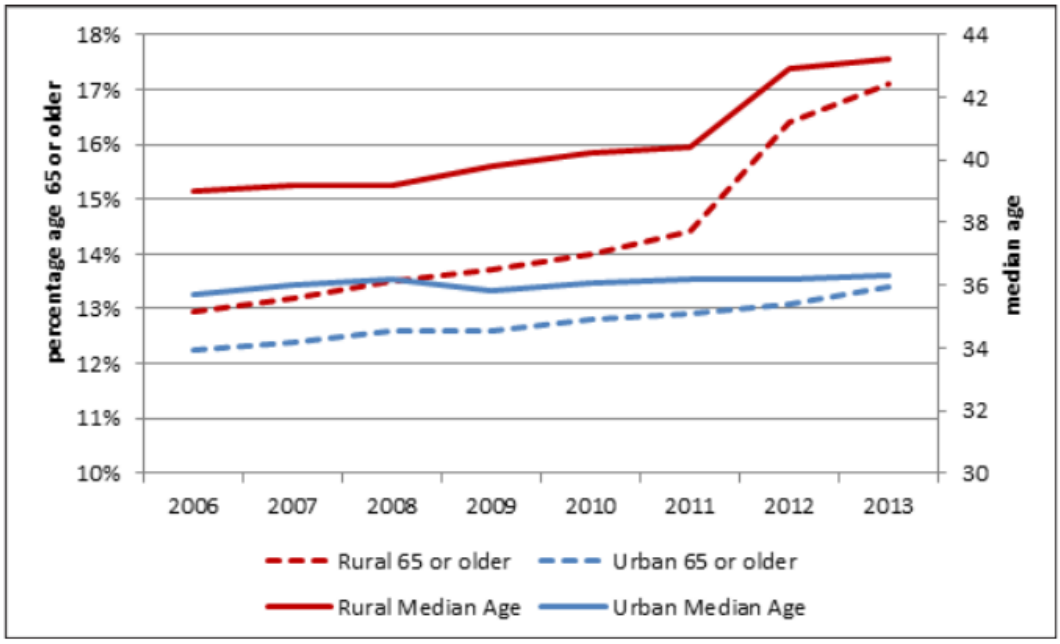
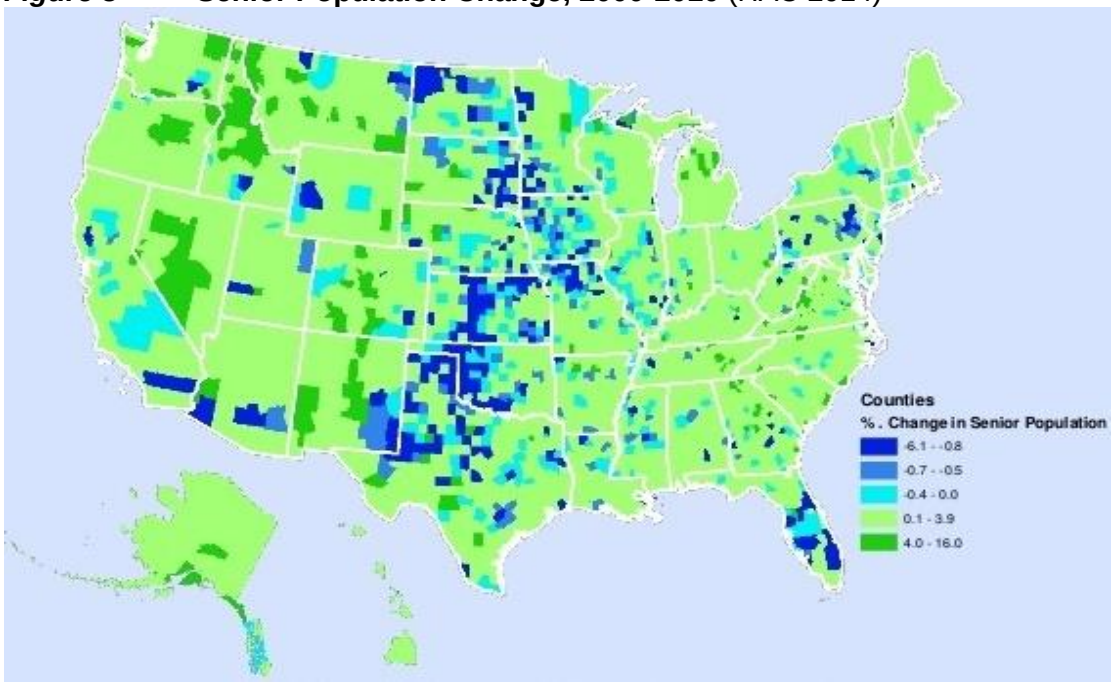


Figure 1. Median Age and Percentage of Population Aged 65 or Older, 2006-2013
Source: American Community Survey 1-Year Estimates, 2006-2013

Rural population median age and portion of residents 65 years or over are increasing rapidly.

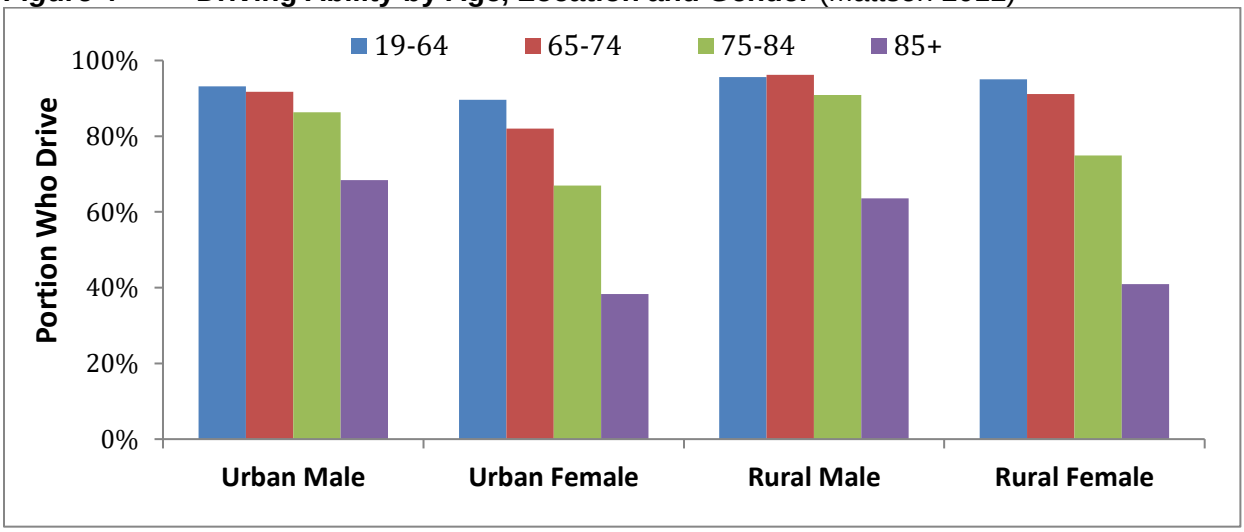
Figure 3 **Senior Population Change, 2000-2010** (HAC 2014)



Many rural areas are experiencing rapid senior population growth.

Although many seniors drive safely, as people age, particularly over 75 years, their driving ability tends to decline, as illustrated in Figure 4. By choice or necessity, many seniors must rely on alternative modes, including walking and public transit (Wood, et al. 2016).

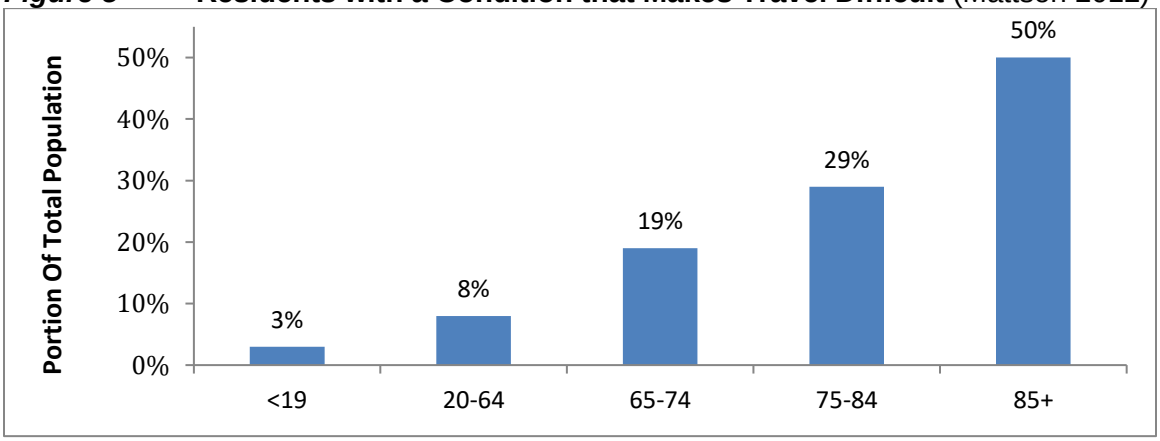
Figure 4 **Driving Ability by Age, Location and Gender** (Mattson 2012)



The ability to drive decreases with age.

At some points in their lives, most people have temporary or long-term disabilities that limit their ability to drive. A growing number of rural residents have disabilities due to aging population (disability rates tend to increase with age, as illustrated in Figure 5), and therefore require more community-based services.

Figure 5 **Residents with a Condition that Makes Travel Difficult** (Mattson 2012)



The chance that people have a condition that makes travel difficult increases with age.

Many people with disabilities who would previously have been institutionalized now live in private homes in residential neighborhoods, reflecting community integration goals. This tends

to provide a better quality of life and overall cost savings, but to be successful requires support services, including appropriate public transportation. Even if they live in automobile-owning households, people with disabilities often want transit services in order to be independent and minimize the chauffeuring burdens they may impose on family members who drive.

Surveys indicate that most seniors want to *age in place*, that is, continue living in their current communities as they grow older. To make this possible, rural communities and small towns need appropriate mobility options (Farber and Shinkle 2011). As Lydia Morken and Mildred Warner explain in their report, *Planning for the Aging Population: Rural Responses to the Challenge* (Morken and Warner 2011),

> "Whether older adults can age in place hinges largely on transportation. Can they reach the services available to them, get to a routine doctor's appointment, or attend a social event? Older adults' diverse mobility needs present some of the most pressing challenges for rural communities. Most people will outlive their ability to drive, and many will face isolation when they can no longer get behind the wheel. Older adults in rural and suburban areas will feel this acutely as communities designed for the car offer few other transportation options."

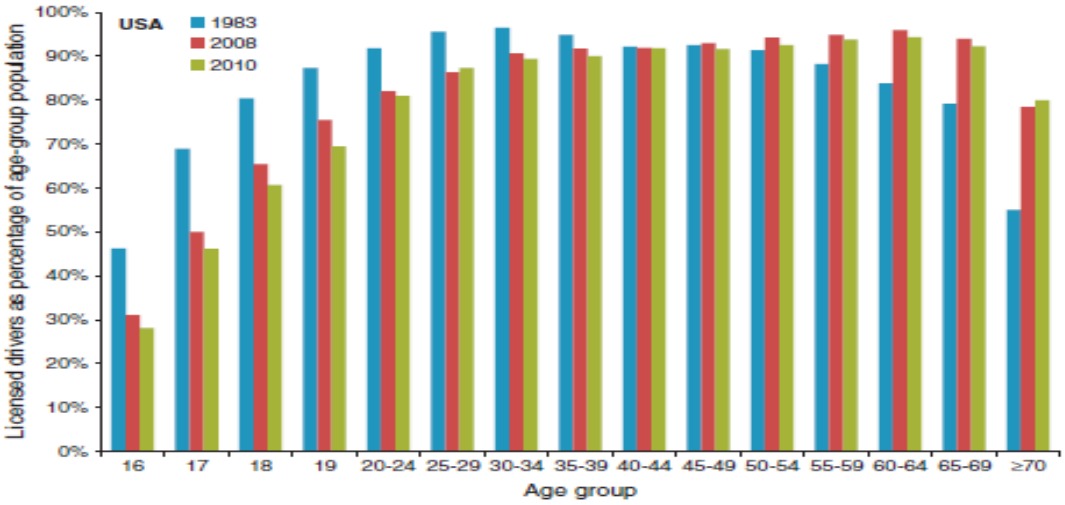
More than a third of state rural health offices reported lack of transit was the biggest barrier to elderly people staying in their homes (Rembert 2023). There is a particularly urgent need for public transit that serves disabled military veterans living in rural communities (Ellis, et al. 2013). Almost 30% of total veterans, and 41% of those enrolled in the Department of Veterans Affairs Health Administration system, live in rural areas (Peterson 2014). Rural veterans tend to have more severe disabilities (such as service-connected disability ratings above 50%) and so tend to require more and more specialized healthcare services than those in urban areas (Burkhardt et al. 2011). Rural locations create challenges for veterans and their families, including more isolation and longer travel distances to obtain services.

To address these needs, rural communities need special mobility services for people with severe disabilities, and other public transportation services, such as local and interregional public transit suitable for veterans and their families, and healthcare workers (VA 2014). Rural communities tend to have the greatest gaps in senior transportation services (NCST 2010; Wood, et al. 2016). By better serving these demands, rural communities can attract and retain more seniors and the economic activity they generate, which helps support local economic development.

Changing Travel Preferences

Many people, particularly youths between 15 and 25 years of age, want to drive less and rely more on alternative modes for enjoyment and financial savings. The portion of young people that have driver's licenses and own cars has declined steadily during the last three decades (Figure 6), in part due to changing needs and preferences (APTA 2013; Interrante 2014; McDonald 2015). For example, although only about 10% of rural youths use public transit during a typical week, more than half (54%) want more transit services in their communities (Villwock-Witte and Clouser 2016). Rural communities that want to retain these residents will need to improve travel options.

Figure 6 **Drivers Licensure Rates by Age** (Sivak and Schoettle 2012)

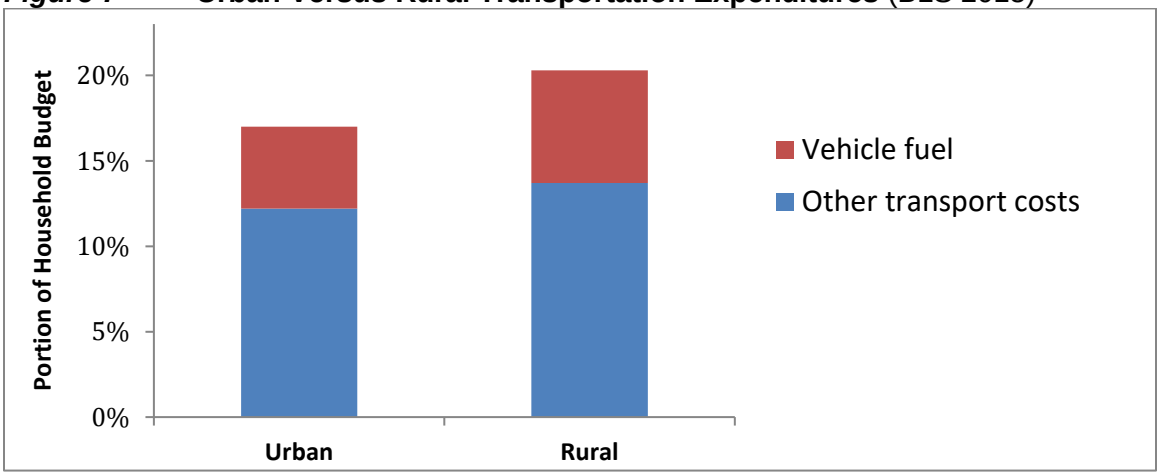


Driver licensure rates for adolescents declined significantly during the last three decades.

Rural Poverty

Rural areas tend to have lower incomes and higher poverty rates than urban areas. In 2012, median household incomes were $41,198 in rural areas, 22% less than the $52,988 in urban areas (USDA 2014). As a result of lower incomes and higher vehicle mileage, rural households spend a much greater portion of their budgets on transportation than urban households. In 2013, rural households spend 20% of their budgets on transport, 19% more than the portion (17%) spent by urban household, and rural households spend 38% more of their budget on fuel than urban households (Figure 7).

Figure 7 **Urban Versus Rural Transportation Expenditures** (BLS 2015)

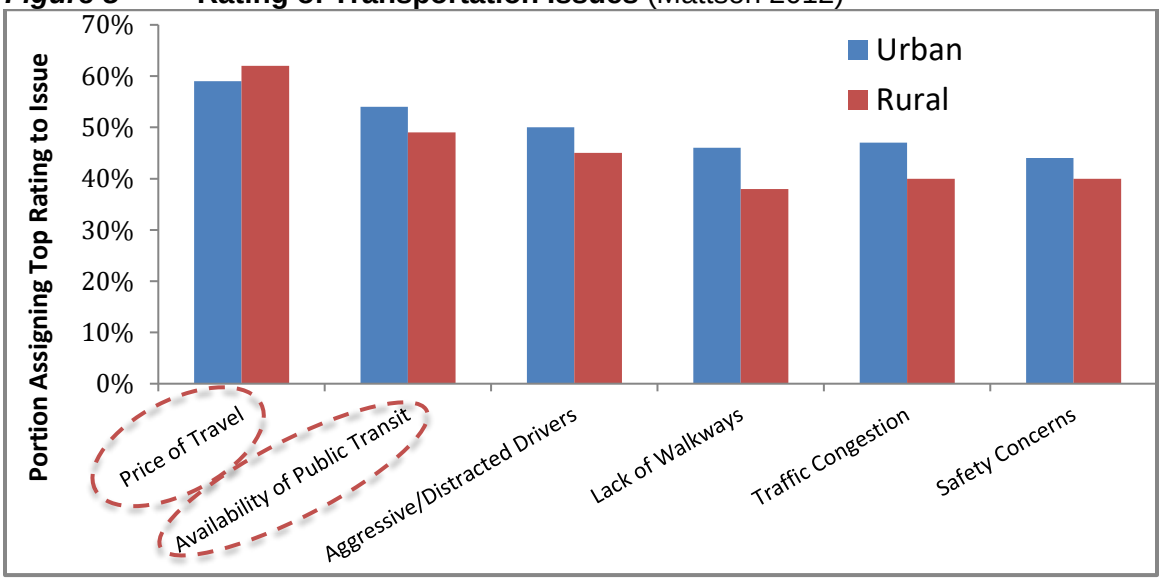


Rural household spend 19% more on transport and 38% more on vehicle fuel than urban households.

This combination of low incomes and long travel distances make motor vehicle expenses a major financial burden to many lower-income rural households, sometimes leaving residents with insufficient money to purchase other essential goods such as utilities, medicine and healthy foods. Although lower-income motorists use various strategies to minimize expenses, such as owning older vehicles, performing some of their own repairs, and purchasing minimal insurance coverage, owning and legally operating an automobile usually costs several thousand dollars annually, sometimes including large unplanned expenses from mechanical failures or accidents.

The 2009 *National Household Travel Survey* asked respondents to rate the importance of various transport planning issues. "Price of travel" rated highest by a significant margin, particularly for rural respondents, 62% of whom assigned it the highest rating, higher than the 59% of urban respondents, and "Access or availability of public transit" rated second, as illustrated below.

Figure 8 **Rating of Transportation Issues** (Mattson 2012)

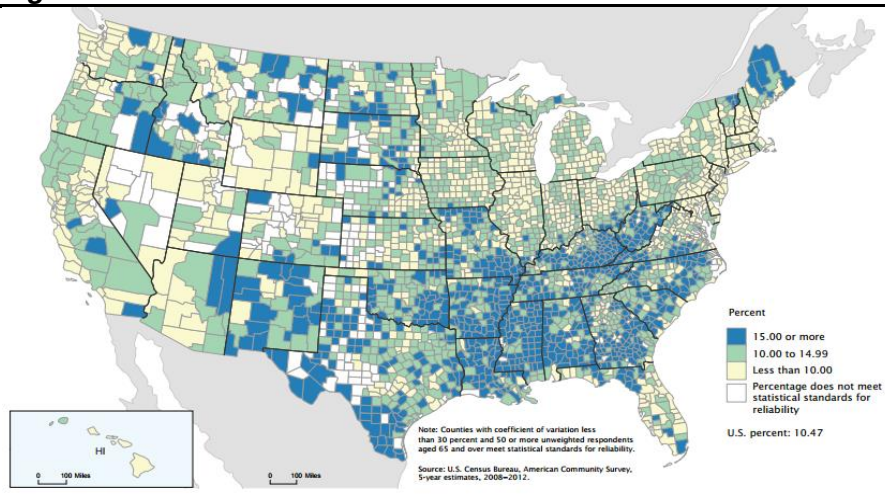


High transportation costs and inadequate public transit services were the two most important transport issues identified by both urban and rural National Household Travel Survey respondents.

This indicates that transportation affordability is particularly important for rural residents. Many factors affect transportation affordability. Minimizing vehicle operating costs, such as fuel, parking fees and road tolls, provide some savings, but these are a minor portion of total vehicle expenses. Depreciation, financing, maintenance and repairs, insurance and registration fees tend to be much larger in total. As a result, true affordability requires that households be able to reduce vehicle ownership, for example, reducing from three to two, or two to one vehicles, or becoming car free. As a result, having alternative modes, including adequate public transit services required to meet daily needs, can be a financial lifesaver. For example, lower-income rural residents may use transit to save fuel and vehicle wear when travelling to another community, to avoid the need to own a second car, and as an emergency option when their vehicle is temporarily unavailable. The ability to survive with fewer vehicles tends to be particularly important for households that are experiencing crises, such as a job loss, vehicle failure, traffic accident or fuel price spike.

Public transit tends to be particularly important for people with both disabilities *and* low incomes. Figure 9 shows the percentage of seniors (over 65 years) who have disabilities and live in low-Income households (below 150 Percent of poverty threshold).

Figure 9 **Percent Seniors That Are Both Disabled and Poor** (He and Larsen 2014)

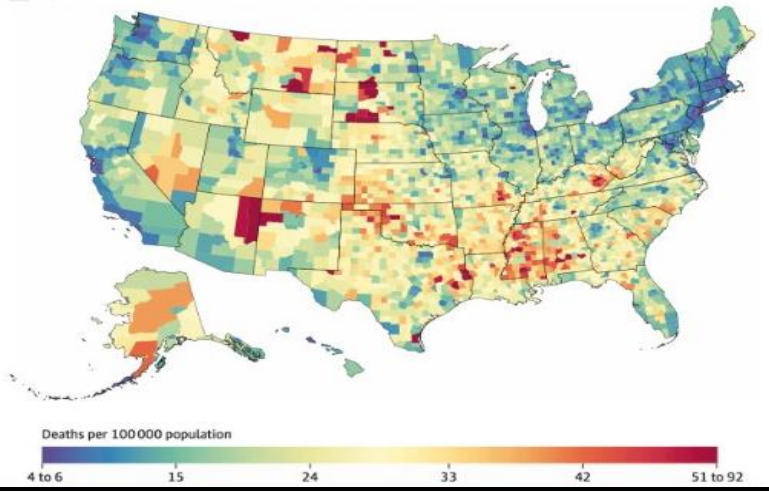


Many rural areas have a large portion of seniors who have a disability and live in poverty.

Safety and Security

Rural communities tend to have high traffic casualty (death and injury) rates. Although rural areas have only 19% of the U.S. population they accounted for 54% of traffic fatalities, and rural vehicle travel averages 1.88 deaths per 100 million vehicle miles traveled (VMT), 2.6 times the 0.73 rate in urban areas (NHTSA 2014). Traffic safety is therefore particularly important in rural areas. Multimodal planning can help reduce traffic risks.

Figure 10 **County-Level Mortality from Transport Injuries (CNN 2016)**



Rural areas tend to have higher traffic fatality rates than in urban areas due to greater exposure (people drive more), higher traffic speeds and slower emergency response.

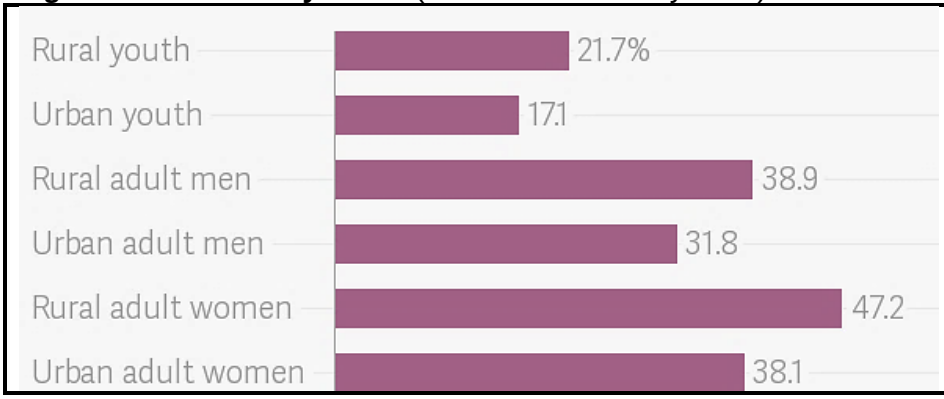
Multimodal planning can help reduce crash rates by reducing exposure, particularly by higher risk drivers.

Many traffic safety strategies, such as special senior driver testing requirements, graduated licenses for young drivers, and campaigns to discourage impaired and distracted driving, depend on reducing higher-risk driving. To be effective and fair, this requires suitable mobility options, so higher risk groups can reduce their driving without giving up independence and activities.

Public Fitness and Health

Health experts are increasingly concerned about health problems caused by sedentary (lack of physical exercise) lifestyles and associated increases in obesity, which tend to increase healthcare and disability costs, and reduce longevity. These problems tend to be particularly severe in rural communities. For example, 22% of rural children are obese, compared to 17% of urban children, and 40% of rural adults are obese, compared to 33% of urban adults (Hansen and Hartley 2015).

Figure 11 **Obesity Rates** (Hansen and Hartley 2015)



Obesity rates are much higher in rural than urban areas.

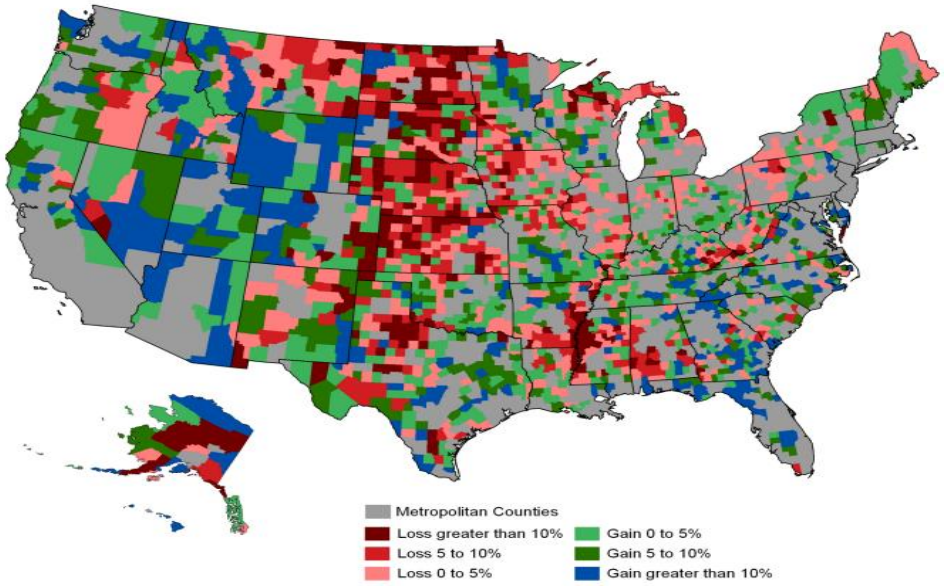
To address these risks, public health officials encourage more physical activity, and many people want to lead more active lifestyles. Although there are many ways to be active, including organized sports and exercise programs, these usually require special time and expense, which tends to discourage participation, particularly by people who are currently sedentary and overweight, and so have the greatest risks. One of the most effective ways to increase physical fitness and health is to increase active transport (walking and cycling) for both utilitarian and recreational travel. Many people, especially young people, prefer to rely on active transportation, including cycling and skateboards, as a substitute for automobile travel. In response, many communities are improving pedestrian and cycling conditions by building sidewalks and bike lanes, developing paths, and implementing complete streets policies.

Public transit supports, and is supported by, these trends. For example, improving sidewalks and cycling paths tends to increase walking and cycling activity, and makes it easier for residents to walk to and from bus stops. Since most transit trips include walking and cycling links, residents who switch from driving to public transit tend to get more exercise.

Economic Opportunity and Development

Many rural communities are experiencing economic shifts. Resource industries such as logging, fishing, mining and farming are increasingly automated, which reduces employment, and many experience boom and bust cycles which can lead to layoffs and lower incomes. These contribute to the population and economic declines occurring in many rural communities, shown below.

Figure 12 **Nonmetropolitan Population Change, 2000 to 2010** (Johnson 2012)



Many rural communities and small towns are losing population.

In response, many of these communities are working to diversify their economies by attracting new industries. Public transit can support these efforts by expanding the pool of potential employees available to businesses, particularly lower-income residents, youths and working seniors, and residents of adjacent communities, which can be particularly important for industries such as tourism, senior services, farming and food processing. Supporting such industries can help rural communities grow. Between 2000 and 2010, 277 rural counties considered retiree destinations on average gained 13% population, and 299 rural counties considered recreational destinations on average gained 11% population (Johnson 2012).

Multimodal transportation planning can help rural economies in several ways:

- It helps attract and retain residents who cannot drive, including seniors, young people, people with disabilities and lower-incomes, and therefore supports local businesses that serve these residents, including stores, restaurants, professionals, and institutions such as hospitals and schools.
- It helps non-drivers access jobs, which increases residents' incomes and expands the pool of employees available to businesses, allowing them to be more productive.
- It helps consumers reach local shops, restaurants, and services, rather than driving to more distant commercial centers.
- It helps attract tourists and the business activity they support.
- It can help businesses reduce their parking costs, which is particularly important for redeveloping older downtowns, and for developing large institutions such as colleges and hospitals.

As a result, public transit can provide significant economic benefits to rural communities. For example, one hundred retirees will typically spend more than a million dollars in the local economy each year, and one hundred tourists will typically spend tens of thousands of dollars during their visits, supporting local businesses, their employees and public services. This helps support local businesses, which might otherwise close down, and their employees who might otherwise move away.

Summary of Trends

Most communities, including small towns and rural areas, have significant demand for walking, bicycling, public transit and their variants (Barajas and Wang 2023). *National Household Travel Survey* data found higher rates of unmet mobility needs (not traveling because a person lacks a transport option) and financial burdens (respondents report that travel is a financial burden) among people of color, those with low income, and those without a vehicle, particularly in rural areas (Espeland and Rowangould 2024).

These demands, and the benefits of serving these demands, are increasing due to demographic and economic trends. Although specifics vary, during the next two decades most rural areas and small towns can expect the number of seniors to approximately double, with even larger increases in low-income seniors. In addition, many rural communities will have more residents with disabilities, more poverty, more economic shifts, more disincentives for high-risk driving, increased preferences for healthier lifestyles, and more demand for car-free tourism. While the need for rides is increasing, the portion of rural residents who can offer rides is decreasing, so communities that previously relied on informal transport to serve non-drivers will increasingly require more formal transit services. As a result, rural public transit demands will be several times higher in the future than in the past.

Benefits of Serving Diverse Rural Transport Demands

Serving multimodal travel demands can provide various benefits to users, motorists and local economies, as summarized below.

Table 4 **Potential Rural Transit Benefits**

Users	Motorists	Local Communities
• More independent mobility • Financial savings • Improved fitness and enjoyment • Reduced accident risk • Reduced impaired driving citation or accident risk	• Reduced chauffeuring burdens • Reduced traffic risks due to less higher-risk driving • Reduced traffic and parking congestion • Improved mobility option for times when they cannot drive	• Improved public fitness and health • Retains and attract more residents • Supports industries such as tourism • Helps attract major employers such as colleges and hospitals

Serving multimodal travel demand can provide various direct and indirect benefits.

Considering all economic impacts, investments to improve walking, cycling and public transit are often cost effective: their benefits exceed their total costs. Rural area and small town public transit services typically cost $20-40 annual per capita (Lynott 2014; Mattson and Hough 2015; ROI 2015). This is lower than national per capita transit spending, the total costs of owning and operating automobile, including vehicle, fuel, road and parking facility costs, or even the costs automobile association membership fees (transit services are similar to automobile association memberships that provide a mobility option that motorists can use in an emergency).

For example, a typical 5-mile rural transit trip costs about $7.00 in total (driver, fuel and vehicle expenses). That is cheaper than:

- The costs to own and operate an automobile for infrequent use ($3,000 annual costs divided by 150 annual trips equals $20 per trip).
- Total vehicle operation and time costs for driver to chauffeur a passenger 5 miles to a destination and return alone (10 miles at 50¢ per mile equals $5 in vehicle operating costs, plus 20 minutes charged at $15 per hour equals $5 in time costs).
- A taxi fare for the same trip (typically $10-15 for a 5-mile trip).
- The accident costs of a higher-risk (youth, senior or impaired) driver forced to drive due to inadequate alternatives.

As a result, public transit investments can provide positive return on investment (a dollar spent on public transit services provides more than a dollar in total savings and benefits) if it reduces even a small amount of automobile travel, or provides small increases in local economic activity.

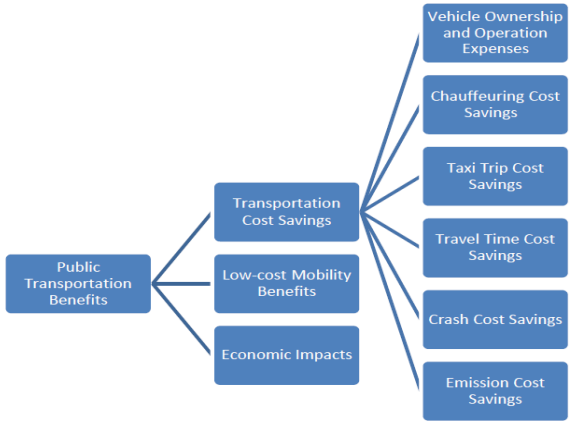
Public transit services can also help government agencies and businesses save money. For example, they can reduce the costs for healthcare and social service programs that pay client travel expenses, and reduce the number of parking spaces that governments and businesses must provide in a commercial area for customers and employees.

Public transit investments may also be economically justified if they help attract and retain more residents and businesses in a community, and therefore increase local economic activity and tax revenues. For example, if inadequate public transit services cause 100 households to leave a community, it will lose about one million dollars each year in local economic activity (assuming household spend $10,000 annually on local goods, services and taxes), contributing to further declines in population, employment, public services, and economic activity. Public transit can increase total employment by expanding the pool of potential employees available to businesses and the pool of potential jobs available to willing workers.

Some recent studies have estimated benefit-cost ratios for various types of transit services (Ferrell 2015; Mattson 2020). They indicate that public transit investments generally provide positive economic returns, that is, a dollar spent on transit services provides more than a dollar in economic benefits. Although the highest benefit-cost ratios tend to be found in larger urban areas, most rural transit economic studies indicate that they provide net monetary benefit. In their report, *Cost-Benefit Analysis of Rural and Small Urban Transit*, Godavarthy, Mattson and Ndembe (2014) estimated the benefit/cost ratio for rural public transit services in each U.S. state, considering various categories of benefits, as illustrated in Figure 13. Because that study only considered a portion of transit benefits (for example, it ignores parking cost savings, and the value that non-drivers place on having independent mobility rather than being forced to depend entirely on rides by family members and friends), total benefits are probably greater.

Figure 13 **Rural Transit Benefit Analysis** (Godavarthy, Mattson and Ndembe 2014)

Benefit Categories



Benefit Estimates

Table 8.4 Benefit-Cost Ratios for US States/Regions in Rural Areas

Benefit-Cost Ratio of Public Transit in Rural Areas

State	B/C Ratio	State	B/C Ratio
Alabama (AL)	1.46	Montana (MT)	1.93
Alaska (AK)	1.48	Nebraska (NE)	1.67
Arizona (AZ)	1.34	Nevada (NV)	1.26
Arkansas (AR)	0.82	New Hampshire (NH)	2.28
California (CA)	1.14	New Jersey (NJ)	0.72
Colorado (CO)	2.01	New Mexico (NM)	1.53
Connecticut (CT)	1.27	New York (NY)	1.17
Florida (FL)	0.37	North Carolina (NC)	0.46
Georgia (GA)	0.55	North Dakota (ND)	1.30
Hawaii (HI)	1.79	Ohio (OH)	0.84
Idaho (ID)	1.01	Oklahoma (OK)	1.05
Illinois (IL)	0.86	Oregon (OR)	1.50
Indiana (IN)	1.26	Pennsylvania (PA)	1.11
Iowa (IA)	1.87	South Carolina (SC)	1.48
Kansas (KS)	2.01	South Dakota (SD)	1.45
Kentucky (KY)	0.41	Tennessee (TN)	0.66
Louisiana (LA)	0.32	Texas (TX)	0.66
Maine (ME)	0.32	Utah (UT)	4.19
Maryland (MD)	2.57	Vermont (VT)	0.70
Massachusetts (MA)	1.79	Virginia (VA)	1.39
Michigan (MI)	0.61	Washington (WA)	1.48
Minnesota (MN)	1.77	West Virginia (WV)	1.16
Mississippi (MS)	1.60	Wisconsin (WI)	0.63
Missouri (MO)	1.29	Wyoming (WY)	3.00
		Total	1.12

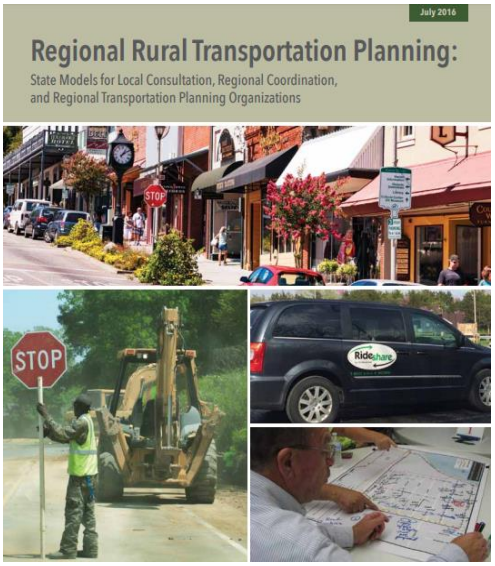
This figure illustrates the categories of benefits, and benefit estimate results for each U.S. state.

Similarly, some studies indicate that, considering all impacts, pedestrian and cycling improvements are often cost effective. Conventional transportation planning tends to overlook or undervalue many of these benefits. As a result, few rural areas invest in public transit to the degree justified by comprehensive economic evaluation.

Rural Multimodal Planning

This chapter describes appropriate types of public transit for rural communities and small towns.

Multimodal Planning Reforms



Multimodal planning often starts with basic changes to planning and funding practices that:

- Recognizes the unique and important roles that walking, bicycling and public transit play in an efficient and equitable transport systems, and therefore the importance of supporting them.
- Collects more data on walking, bicycling and public transit demands, activities, services and facilities in travel surveys, geographic information systems and travel models.
- Evaluates transportation system performance based on *accessibility* rather than just *mobility* and so recognizes the benefits of slower modes, transport network connectivity and compact development.
- Integrates planning between modes, and between transport and land use development.

Resources

AARP Livable Communities (www.aarp.org/ppi/issues/livable-communities) provides guidance on policies and planning practices to create safe, accessible, affordable and vibrant communities.

CALTRANS (2014), *Main Street, California: A Guide for Improving Community and Transportation Vitality*, California Department of Transportation (www.dot.ca.gov); at https://bit.ly/3JQQav3.

SUMC (2024), *Rural and Urban Transportation Coordination*, Shared Use Mobility Center (https://learn.sharedusemobilitycenter.org); at https://tinyurl.com/5xywm34k.

ITF (2021), *Connecting Remote Communities: Summary and Conclusions*, International Transport Forum (www.itf-oecd.org); at www.itf-oecd.org/connecting-remote-communities.

Ruth Miller and Christopher Ganson (2015), *Mitigating Vehicle-Miles Traveled (VMT) in Rural Development*, TRB Annual Meeting (https://trid.trb.org); at https://trid.trb.org/view/1336805.

Rural Transportation (http://nationalcenterformobilitymanagement.org/by-topic-rural-transportation), National Center for Mobility Management.

Rural Assistance Center Transportation Topic Page (www.raconline.org/topics/transportation) provides practical information on ways to improve transport options in rural communities.

Rural Transportation Planning Clearinghouse (www.ruraltransportation.org).

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Active and Micromodes (Walking, Bicycling and E-Bikes)

Active transportation provides affordable basic mobility for non-drivers and healthy exercise. This is particularly beneficial because many rural residents are overweight and sedentary. Although there are many possible ways to be physically active, including organized sports and gym exercise, these generally require special time and expenses, which discourages their use. For many sedentary people, active travel is the most practical way to achieve regular, lifelong exercise. Multimodal planning helps create communities where this is possible.

E-bikes can travel faster and farther, carry heavier loads, and climb steeper inclines than human powered bicycle, but cost far less than automobiles and don't require a driver's license. As a result, e-bikes can provide equitable and affordable rural transportation. However, to achieve their potential, electric vehicle encouragement programs should subsidize e-bikes as well as automobiles, and rural communities will need to provide suitable infrastructure.

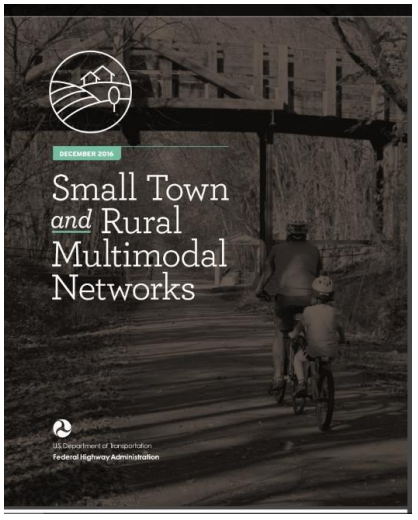
Active transportation planning includes development of sidewalks, crosswalks, bike lanes, paths, plus education and encouragement programs, generally including both utilitarian and recreation uses. In rural areas, pedestrians and cyclists often travel on road shoulders. The Oregon DOT developed these recommended road shoulder width standards.

Table 5 **Minimum Road Shoulder Widths by Traffic Volume (Meters)**

	ADT < 250	ADT 250-400	ADT 400-DHV 100	DHV 100-200	DHV 200-400	DHV >400
Rural Arterials	1.2	1.2	1.8	1.8	2.4	2.4
Rural Collectors	0.6	0.6	1.2	1.8	2.4	2.4
Rural Local Routes	0.6	0.6	1.2	1.8	1.8	2.4

ADT = Average Daily Traffic; DHV = Design Hour Volume

Resources



FHWA (2016), *Small Town and Rural Multimodal Networks*, Federal Highway Administration (www.fhwa.dot.gov); at https://bit.ly/2io6A3T. Provides resources to help small towns and rural communities support active transport.

Rural Transportation (http://nationalcenterformobilitymanagement.org/by-topic-rural-transportation), National Center for Mobility Management.

S.A. Aytur, et al. (2011), *Pedestrian and Bicycle Planning in Rural Communities: Tools for Active Living*, Family & Community Health, 34(2), 173-181 (DOI: 10.1097/FCH.0b013e31820e0d47); at https://bit.ly/2KoJdq4.

Anushka Thakkar, et al. (2023), *An Active Roadmap: Best Practices in Rural Mobility*, Smart Growth America (https://smartgrowthamerica.org); at https://smartgrowthamerica.org/ruralroadmap.

USEPA (2015), *Smart Growth Self-Assessment for Rural Communities*, U.S. Environmental Protection Agency (www.epa.gov); at https://tinyurl.com/3w3f6zst.

Public Transportation and Transit-Oriented Development

Public transit and variants such as ridehailing services provide many benefits to rural communities. Some types are most suitable for smaller communities, as summarized in Table 6. Many communities use a combination of services, with subsidized taxis and demand response to serve people with special needs, fixed-route buses connecting local destinations, and interregional bus and train routes connecting towns and cities.

Table 6 **Public Transportation Services Suitable for Smaller Communities**

Name	Description	Service Quality	User Costs	Public Costs
Taxi and ridehailing subsidies	Taxi and ridehailing services receive subsidies for some trips. Users usually pay a portion of fares.	Moderate to high, depending on local taxi service availability.	Varies depending on size of subsidy and length of trip.	Varies.
Volunteers driving their own vehicles	Non-profit organizations coordinate volunteer drivers who provide rides in their own vehicles.	Low. Limited to what volunteers can provide.	Users may be asked to help pay for gas.	Varies. May help reimburse drivers.
Community buses	Non-profit organizations use volunteer or paid drivers to offer rides, often in vans.	Low to moderate, depending on resources.	Varies. Users may be asked to help pay expenses.	Low. Helps fund vehicles.
Paratransit (demand response)	Non-profit organizations or government agencies coordinate paid drivers using vans or small buses.	Moderate, depending on resources.	Varies. Generally requires a fare of several dollars.	High.
Vanpool services	A government agency or business group organizes vanpools	Good for longer commute trips	Low compared with driving a private vehicle	Very low. Vanpools are generally self-supporting
Fixed route transit bus services	Government agencies or contractors operate buses on scheduled routes.	High in service area, depending on resources.	Generally requires moderate fares.	Moderate to high.
Integrated regional transit services	Local and regional agencies coordinate transit services to connect communities.	High, depending on funding: more funding allows more service.	Generally requires moderate fares.	Moderate to high.

Various types of public transit services can be appropriate in rural areas and small towns.

Public transit services are often provided through partnerships that involve various organizations and government agencies. For example, many rural communities use a combination of funding sources to support local non-profit organizations or government agencies that provide public transit services (NCMM 2015). In many cases, federal and state funds are available to help communities establish and operate mobility services to meet special needs, such as mobility for disabled veterans (Peterson 2014; USDOT 2024).

The table below shows a level of service (LOS) ratings that can be used to evaluate particular routes. High quality service can attract many discretionary travellers who would otherwise drive. Lower frequencies (typically less than five daily trips) preclude most daily errands, such as travelling to another city, performing business and returning that same day, and lack of late-

night service prevents travellers from attending evening events. To provide independent mobility for non-drivers and attract travellers who could otherwise drive requires LOS A or B.

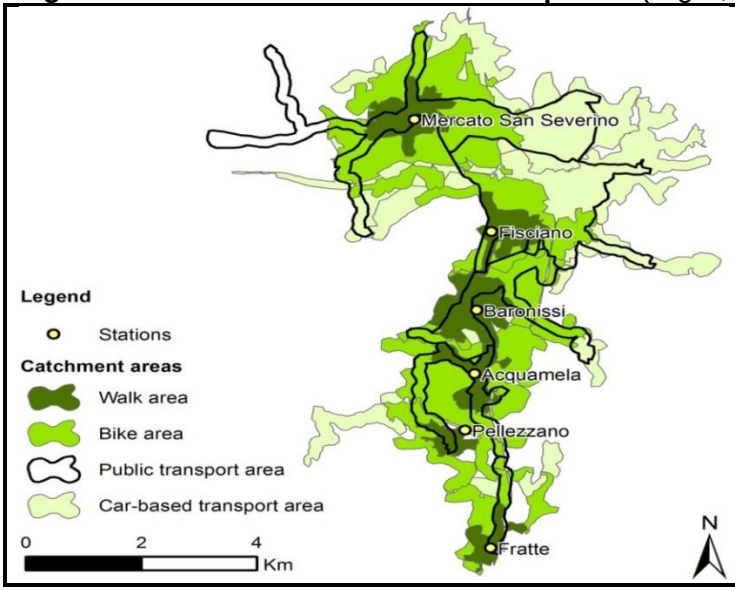
Table 7 **Interregional Public Transit Level of Service Ratings**

Level of Service	Frequency & Speed	Affordability	Comfort & Amenities	Overall Utility	Transit Mode Share Targets
A	25+ daily trips, as fast as driving.	Much cheaper than driving	Very good. Free internet, on-board washrooms, etc.	Very high. Attracts discretionary travellers who could drive.	15-25%
B	10-24 daily trips.	Cheaper than driving.	Attractive stations with washrooms.	High. Suitable for most trips.	12-20%
C	5-9 daily trips.	Slightly cheaper than auto.	Uncrowded. All passengers seated.	Moderate. Suitable for many trips.	6-12%
D	1-4 daily trips.	Costs comparable to driving.	Clean and comfortable.	Low. Suitable for some trips.	3-6%
E	Less than daily trips.	Slightly more costly than driving.	Vehicles and stations are safe.	Low. Suitable for few trips.	1-3%
F	No transit service.	Much more costly than driving	No amenities.	Non-drivers lack independent mobility.	0%

This table defines transit service quality factors and their mode share targets. To provide independent mobility for non-drivers and attract discretionary travellers who would otherwise drive generally requires LOS A or B.

Transit-Oriented Development (TOD) refers to multimodal neighborhoods that have good walking, bicycling that public transit services. Many older towns reflect this pattern with a strong downtown with a central rail or bus station, and walkable neighborhoods. Nigro, Bertolini and Moccia (2019) describe methods for evaluating multimodal access rural regions.

Figure 14 **Transit-Oriented Development** (Nigro, Bertolini and Moccia 2019)



Transit-Oriented Development integrates walking, bicycling and public transit to provide multimodal accessibility. This concept can be applied in many ways, including suburbs and small towns that have at least hourly bus or rail services connecting regional urban centers.

Resources

Elizabeth Ellis and Brian McCollom (2014), *Guidebook for Rural Demand-Response Transportation: Measuring, Assessing, and Improving Performance*, TCRP Report 136, TRB; at http://bit.ly/1Lj51OB.

Ranjit Godavarthy, Jeremy Mattson and Elvis Ndembe (2014), *Cost-Benefit Analysis of Rural and Small Urban Transit*, Upper Great Plains Transport Ins. (www.ugpti.org); at https://bit.ly/4iJ9P1V.

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KFH Group (2014), *Effective Approaches to Meeting Rural Intercity Bus Transportation Needs*, TCRP Report 79; at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_79.pdf.

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Reconnecting America (2012), *Putting Transit to Work in Main Street America*, Reconnecting America and Community Transportation Association (www.ctaa.org); at https://bit.ly/3bC756i.

Rural Transportation (http://nationalcenterformobilitymanagement.org/by-topic-rural-transportation), National Center for Mobility Management.

Rural Assistance Center Transportation Topic Page (www.raconline.org/topics/transportation) provides practical information on ways to improve transport options in rural communities.

Rural Transportation Planning Clearinghouse (www.ruraltransportation.org) serves as the national professional association for rural transport planning professionals and other stakeholders.

Joseph P. Schwieterman, Blythe Chesney and Akshara Das (2024), *Back on the Bus: 2024 Outlook for the Intercity Bus Industry*, Chaddick Institute (https://las.depaul.edu); at http://tinyurl.com/d296mc8x.

Small Urban & Rural Transit Center (www.surtc.org) at North Dakota State University.

Steer Davies Gleave (2014), Transit-oriented Development Goes Rural; at www.steergroup.com/insights/transit-oriented-development-goes-rural.

USDOT (2024), *Intercity Bus*, Climate Strategies that Work, US Department of Transportation (https://climate-strategies-that-work-usdot.hub.arcgis.com); at https://dot-climate-strategies.my.canva.site/intercity-buses.

Shared Mobility Services

Shared Mobility Services include taxis, ridesharing (car- and vanpooling), and ridehailing services (also called *ridesourcing* and Transportation Network Company, or TNC) such as Uber and Lyft.

Ridehailing services such as Uber and Lyft are generally somewhat cheaper than conventional taxies but more expensive than public transit per trip (Cecco 2019). Mobility as a Service (MaaS) apps integrate these and other transportation services (bike sharing and conventional public transport) to provide more user convenience and efficiency. Bruun (2021) argues that these new technologies and services can provide efficient rural mobility, but only if given suitable public support, with coordination and funding similar to what is provided to urban public transit, small airports and essential rural air services.

Carpooling generally uses participants' own automobiles. *Vanpooling* generally uses rented vans (often supplied by employers, non-profit organizations or government agencies). Most vanpools are self-supporting – operating costs are divided among members. Vanpooling is particularly suitable for longer commutes (10 miles or more each way). *Dynamic ridesharing* refers to apps and services that match travelers for individual trips. Ridesharing has minimal incremental costs because it makes use of vehicle seats that would otherwise be unoccupied. It tends to have lower costs per vehicle-mile than public transit because it does not require a paid driver and avoids empty backhauls.

Table 8 **Comparing Mobility Services**

	Driver	Vehicle Ownership	Vehicle Size	Schedule Flexibility
Conventional Public Transit	Paid	Public	Large	Flexible
Paratransit	Paid	Public	Medium	Some flexibility
Vanpool	Unpaid	Group Rental	Medium	Inflexible
Carpool	Unpaid	Personal	Small	Inflexible
Taxi and ridehailing	Paid	Business	Small	Flexible

Different mobility services have different attributes. Modes with paid drivers tend to have relatively high operating costs. Vanpooling and carpooling have low cost per passenger-mile, but are only suitable for prescheduled trips, such as commuting.

Ridesharing is one of the most common and cost effective alternative modes, particularly in areas that are not well served by public transit. Many commuters can rideshare part-time, for example, twice a week. Ridematching is a common component of Commute Trip Reduction programs intended to reduce urban traffic problems, and is also an important mobility option for non-drivers, particularly in small towns and rural areas, where notices are often posted on bulletin boards and travel needs are shared through informal networks.

Rideshare programs typically provide carpool matching, vanpool sponsorship, marketing programs, and incentives to reduce driving. Some employers offer incentives such as a cash payment to employees who carpool, or a voucher that covers vanpool fees, provided as an alternative to a free parking space. Because they have significant economies of scale (the more people who register, the more effective they are at successfully matching riders), it is helpful if one well-publicized ridematching program serves an entire geographic region.

Resources

Eric Bruun (2021), *Building and Managing Hierarchical Rural Transportation Networks*, Rural Public and Intercity Bus Transportation TRB Conference; at https://vtpi.org/Bruun_RIBTC_Jan2021.pdf.

CTA (2009), *Rural Transportation*, Community Transportation Association (www.ctaa.org); at http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=19&z=40. Provides information on various programs that provide transportation services in rural areas.

Natalie Delgadillo (2017), "How an Eco-Friendly Rideshare Is Changing Life in a Tiny Rural Town," Governing Magazine (www.governing.com); at www.governing.com/topics/transportation-infrastructure/gov-eco-friendly-rideshare-cantua-creek-rural-california-unincoporated.html.

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Michael Kodransky and Gabriel Lowenstein (2014), *Connecting Low-Income People to Opportunity with Shared Mobility*, Institute for Transportation and Development Policy (www.itdp.org) and Living Cities (www.livingcities.org); at www.itdp.org/wp-content/uploads/2014/10/Can-Shared-Mobility-Help-Low-Income-People-Access-Opportunity-.pdf.

Mike Mangan (2018), "The Value of Vanpooling as a Strategic, Cost-effective, and Sustainable Transportation Option," *ITE Journal*, Vol. 88, Is. 2, pp. 36-39; at https://bit.ly/2pxiMTb.

Ryan McCauley (2017), "Determining the Feasibility of Shared Mobility Services in Low-Income, Rural Areas," *Government Technology* (www.govtech.com); at www.govtech.com/fs/Determining-the-Feasibility-of-Shared-Mobility-Services-in-Low-Income-Rural-Areas.html.

Caroline Rodier (2018), *The Effects of Ride Hailing Services on Travel and Associated Greenhouse Gas Emissions*, A National Center for Sustainable Transportation White Paper, Institute for Transportation Studies, UC Davis (https://ncst.ucdavis.edu); at https://bit.ly/2qTLXja.

Dan Ryan (2015), *Vanpools are a Success Story*, Seattle Transit Blog (http://seattletransitblog.com); at http://seattletransitblog.com/2015/03/14/vanpools-are-a-success-story.

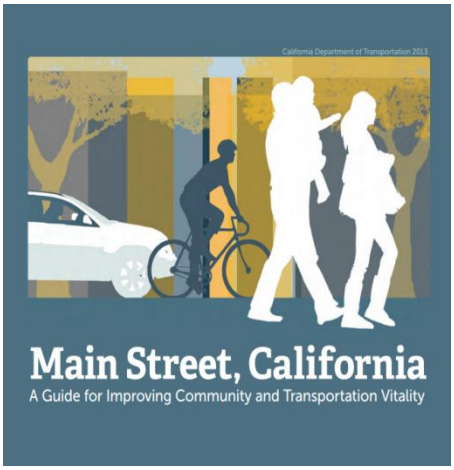
Complete Streets

Complete Streets policies ensure that public roads are designed to accommodate diverse users and uses, including walking, cycling, public transport, plus nearby businesses and residents. In rural communities this tends to justify wider road shoulders to safely accommodate walking and cycling, plus more sidewalks, crosswalks and bike lanes where roadways pass through towns, reduced traffic speeds, and bus stops and park & ride facilities.

Figure 15 **A Highway Through the Town or Village**

A major highway forms the main street of many small towns and villages, requiring careful planning to balance conflicts between motor vehicle traffic and other uses of the street including walking, bicycling, local business activities, and residents' quality of life.

Resources



AARP (2015), *Evaluating Complete Streets Projects: A Guide for Practitioners*, National Complete Streets Coalition and Smart Growth America (www.smartgrowthamerica.org); at http://bit.ly/1D7vQvK.

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DEA & Associates (1999), *Main Street…When a Highway Runs Through It*, Transportation and Growth Management Program, Oregon DOT and Dept. of Environmental Quality (http://egov.oregon.gov/LCD/TGM/publications.shtml); at https://nacto.org/wp-content/uploads/2015/04/mainstreethandbook.pdf.

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National Complete Streets Coalition (www.completestreets.org) promotes adoption of policies to ensure communities effectively accommodate multiple modes and support local planning objectives in all transportation projects.

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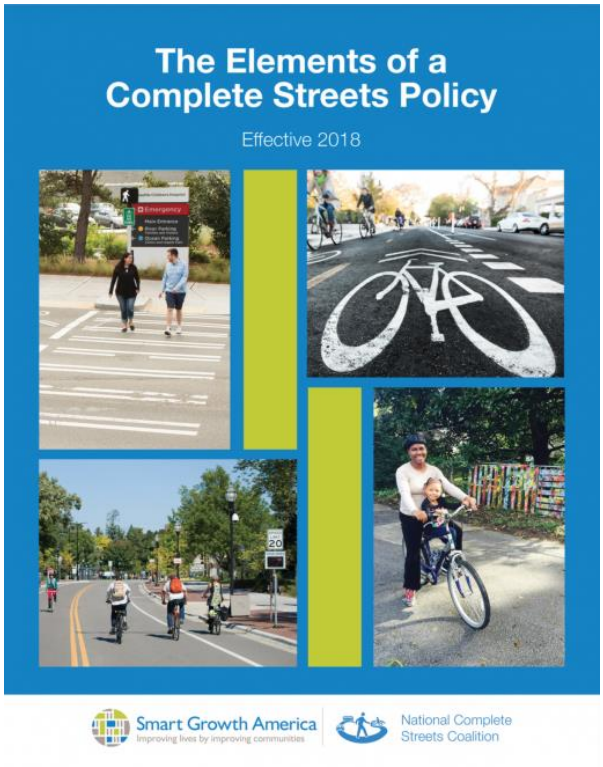
Michael K. Park (2013), "Livable Streets: Lee's Summit (Part I and II)," *ITE Journal* (www.ite.org), Nov. and Dec..



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SGA (2018), *Elements of a Complete Streets Policy*, Smart Growth America (https://smartgrowthamerica.org) at https://bit.ly/2XXrPfc.

Smart Growth Development

Smart Growth development policies create more accessible and multimodal communities. People often assume that Smart Growth policies require high densities and frequent transit services available in cities, but the principles are flexible and can apply in small towns and rural communities. This can help preserve many of features that rural residents value including compact towns with walkable mainstreets, and preservation of farmlands and wildlife habitat that are degraded by sprawled development. Well-planned small towns can provide multimodal accessibility similar to cities (McCahill 2024).

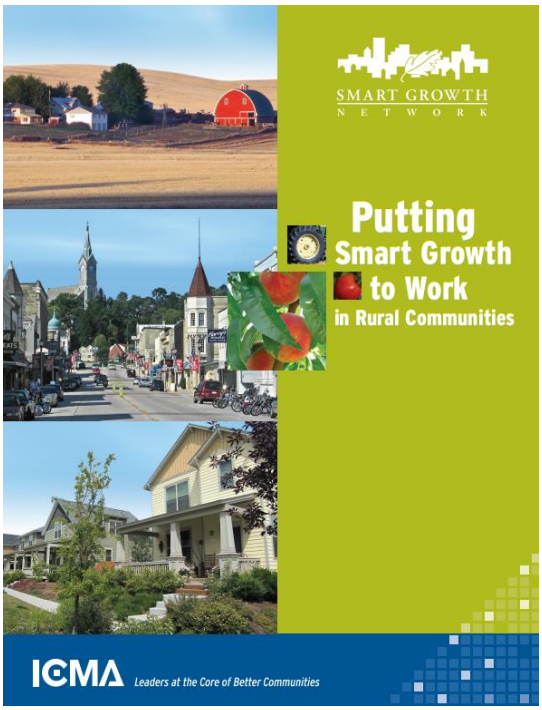
Smart Growth Principles

1. Mix land uses
2. Take advantage of compact design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Direct development towards existing communities
8. Provide a variety of transport options.
9. Make development decisions predictable, fair, and cost effective
10. Encourage community and stakeholder collaboration in development decisions

In small towns and rural areas Smart Growth typically involves preserving openspace (farmlands and habitat), locating more public services such as shops, schools, healthcare facilities and housing into villages and small towns, so residents can walk or bike to more activities. It includes more housing types such as residential over commercial and low rise apartments in town centers. It also includes multimodal planning, including more sidewalks and bikelanes, paths, pedestrian amenities such as benches and pedestrian-oriented street lamps, and interregional bus or trains services.

Resources

AARP Livable Communities (www.aarp.org/ppi/issues/livable-communities) describes resources for livability planning.



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Performance Indicators and Targets

It is useful to define specific performance indicators, in order to define problems, evaluate potential solutions, set targets and evaluate progress (Anderson and Khan 2014; Kohen and Spandonide 2016). Below are indicators suitable for rural multimodal transport planning.

Planning and Funding

This considers the degree that non-auto modes are considered in a transport planning, and the amount of funding invested in these modes. This can be measured relative to demands; for example, areas with more senior or poor residents, who tend to rely on walking, bicycling and public transit, should rationally spend more on these modes than where demand is lower.

Facilities and Service Coverage

Service coverage refers to where and when transit service is offered. Service coverage analysis can be used to understand service gaps, and to align transit service with planning objectives, such as providing basic mobility for non-drivers, increasing employment opportunities, or support for tourism. The following factors can be considered when evaluating coverage:

- **Area.** Fixed-route transit can generally only serve a limited area, generally around urban centers and along major highways. Demand response and subsidized taxi services may serve a much larger area, but in rural communities there are often some areas unserved.
- **Population and jobs.** With GIS tools it is possible to measure the portion of households and jobs that are served, and even the portion of transit-dependent residents.
- **Schedules.** Rural transit often operates with limited schedules, such as only during weekdays, and for some routes, only once or twice weekly.
- **Restrictions.** Many transit services must limit the amount of service they can provide to certain users, for example, the number of demand-response trips that people with disabilities may take each week or month.
- **Demand types.** Public transit may serve various types of demands, including basic mobility for people with disabilities and low incomes, commute trips, intercity transit, recreation and tourist trips. Analysis can investigate the degree the transit system serves these demands.

Portion of Need Served and User Satisfaction

By comparing transit service coverage with demands it is possible to identify the portion of demands that are served, define gaps, and set targets. It is also useful to survey users and community members to evaluate their satisfaction, and identify barriers and problems with existing and proposed transit services. The following are examples of transit need indicators:

- The number of seniors, people with disabilities, immigrants, and lower income households.
- Industries that attract non-drivers, such as colleges, retirement communities and tourism.
- Whether the community has goals to create more compact, multimodal communities.

Supply (Transit Trips or Vehicle-Revenue-Miles Per Capita)

Standard transit service performance indicators include vehicle *revenue-miles* (mileage when vehicles are actually in service), *revenue hours*, and *unlinked transit trips* per capita. Currently, smaller community transit systems (communities with fewer than 60,000 residents), average 5-10 vehicle revenue-miles per capita, and 2-6 annual transit trips per capita.

The table below summarizes indicators for evaluating multimodal planning effectiveness.

Table 9 **Multimodal Planning Performance Indicators**

Inputs	Outputs	Outcomes
Planning process effects	*How users respond*	*Ultimate results*
• Spending on walking, cycling and public transit. • Quantity of sidewalks, paths and transit services.	• Changes in travel activity, such as increases in walking, cycling and public transit travel, and reductions in driving.	• Changes in non-drivers' participation in activities (school, jobs, healthcare, etc.), household cost burdens, physical fitness and health, traffic accidents, chauffeuring costs, etc.

Outcomes (Ultimate Results)

- Trips per capita, by demographic group
- Transportation expenditures and affordability, by group
- Access to school, jobs, healthcare, etc.
- Crash rates

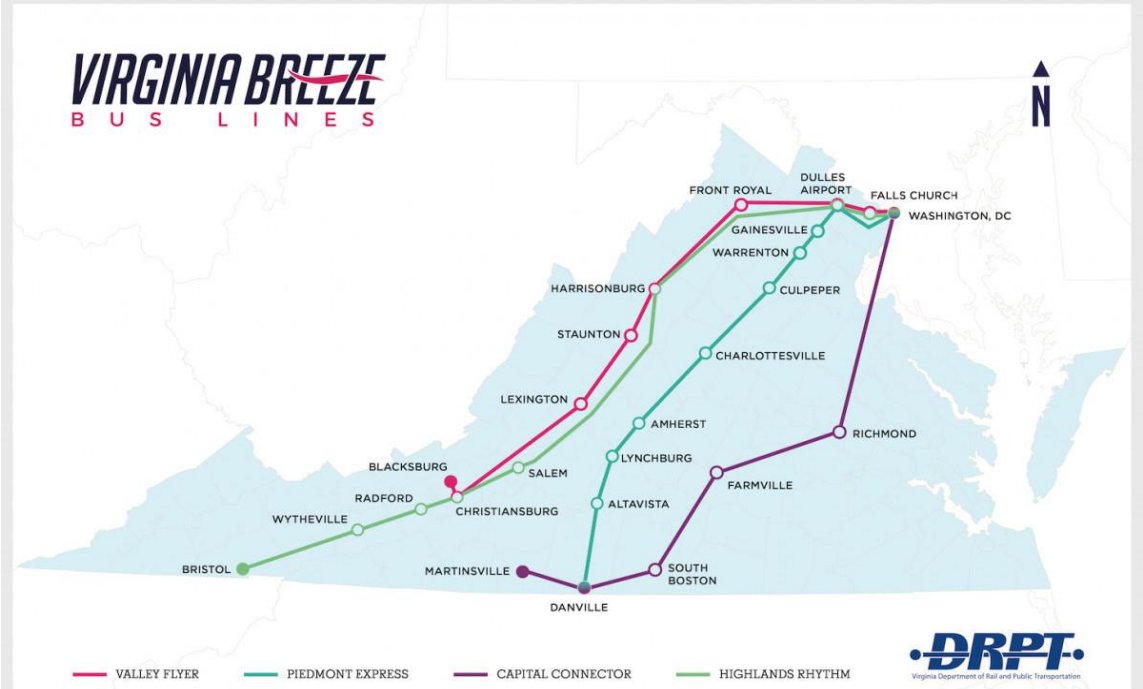
Examples

This section describes examples of rural multimodal planning and programs. For international examples see, "Connecting Remote Communities: Summary and Conclusions" (ITF 2021).

Virginia Breeze (Gordon 2022)

Virginia's Department of Rail and Public Transit (DRPT) provides an expanding range of intercity bus services connecting rural areas. The first route, dubbed the Valley Flyer, begins in Blacksburg and makes its way north to Washington, DC via a handful of cities along the I-81 corridor and Dulles International Airport. With fares as low as $15 in an area of the state that has few to no other intercity travel options, the Flyer immediately exceeded ridership expectations.

With the model a proven success, in 2019 DRPT conducted an expansion alternatives analysis to identify other areas of the state that could benefit from their own Breeze bus. Southside Virginia soon emerged as a top candidate: In the two years since the launch of the Valley Flyer, Danville, Farmville and South Boston had all lost intercity service, leaving residents in two of the three localities no other options to leave town besides driving. To restore service to the region, in August 2020 DRPT introduced two new Breeze routes. The Capital Connector starts in Martinsville and passes through all the cities that lost service plus Richmond before terminating in DC. The Piedmont Express leaves from Danville and heads straight up Route 29 to the nation's capital via Lynchburg, Charlottesville, a handful of other cities and Dulles.

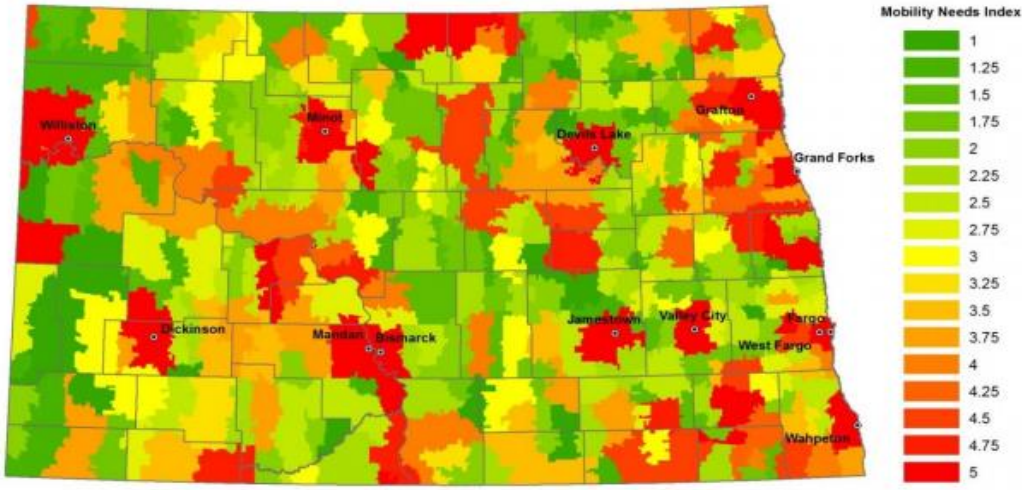


With 2021 ridership on the Valley Flyer 28% higher than expected, DRPT introduced a fourth route — called the Highlands Rhythm — to serve a similar corridor. Although the two Southside routes have faced slower growth trajectories due to their launch at the height of the pandemic, the Highlands Rhythm is already showing signs of success in terms of reaching its ridership goals.

North Dakota

A study, *Identifying and Satisfying the Mobility Needs of North Dakota's Transit System*, by the Upper Great Plains Transportation Institute (Mattson and Hough 2015) analyzed demographic and economic trends that affect transit demands, and surveyed various service providers, to identify existing and future transit service gaps and estimate the additional funding required to satisfy future needs. It calculated a *Mobility Need Index* rating for each county, based on projected growth in total population, residents aged 65 or older, people with disabilities and low incomes, workers without access to a vehicle, and population densities (Figure 16). Each number represents a quintile (20% of total areas), so for example, the areas rated 1 represent the 20% with the lowest transit need, and those rated 5 represent the 20% with the highest need.

Figure 16 **Mobility Needs Index Map** (Mattson and Hough 2015)



The Mobility Needs Index indicates where transit demand is projected to increase due to growth in population groups that rely on public transportation. Each number represents a quintile (20% of total areas). Higher ratings indicate greater projected future transit demands.

The analysis indicates that demand for both conventional transit and specialized mobility services will increase significantly, particularly in areas experiencing population growth. Many areas need longer service hours, weekend service, and more services in rural areas, particularly for medical and work trips.

The study evaluated four possible scenarios:

1. Each region meets at least *one* of the three benchmark values (per capita vehicle-miles, vehicle-hours or passenger-trips compared with peer transit agencies).
2. Transit services increase at a rate equal to or greater than growth in total and senior population, although days and hours of service are limited.
3. Requires that each region meet at least *two* of the three benchmarks.
4. Requires that each region increase service by at least 10%.

The results were used to project service, staffing, facility, vehicle and funding needs for each scenario, as summarized in Table 9. This analysis indicates that the state's rural transit funding must increase 30-63% in order to meet future needs, although, since rural transit services are a small portion of total transit programs, this only represents a 9-18% increase in total statewide transit funding needs. Under the highest growth scenario, annual funding must increase by $3.9 million ($1.5 million local and $1.9 million state), or about $11.50 total additional annual expenditures per rural resident (according to the U.S. Census, rural North Dakota has about 300,000 residents).

Table 9 **Funding Increases Required** (Mattson and Hough 2015)

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Rural Transit				
Annual operating expense	$2,836,425	$4,026,537	$5,657,762	$5,957,448
% increase over 2012	30%	42%	60%	63%
Vehicle expense (one-time cost)	$1,800,000	$2,550,000	$3,600,000	$3,800,000
Urban Fixed-Route Transit				
Annual operating expense	$2,173,276	$2,622,757	$3,244,377	$3,276,157
% increase over 2012	7%	9%	11%	11%
Vehicle expense (one-time cost)	$6,750,000	$8,100,000	$9,450,000	$9,450,000
Urban Demand-Response Transit				
Annual operating expense	$0	$345,648	$345,648	$382,239
% increase over 2012	0%	2%	2%	3%
Vehicle expense (one-time cost)	$0	$260,000	$260,000	$260,000
Total				
Annual operating expense	$5,009,701	$6,994,942	$9,247,787	$9,615,844
% increase over 2012	9%	13%	17%	18%
Vehicle expense (one-time cost)	$8,550,000	$10,910,000	$13,310,000	$13,510,000

This table estimates the additional funding required to achieve various future service targets.

Montana (Farber and Shinkle 2011)

Montana has made a concerted effort to provide public transit in rural communities. The number of rural transit systems increased from nine in 2008 to almost 40 in 2015. To achieve this, the state government partnered with local councils on aging that offered community bus services. Montana Department of Transportation transit section supervisor Audrey Allums explained, "We went to these Councils on Aging and said, 'You're already running a senior bus service; if you open your doors to everyone, print a schedule and follow the FTA guidelines, we will help you pull it all together and receive FTA funding.'"

Local governments provided matching funds using Older Americans Act funding, property taxes, donations and other local government money. Sanders County in northwest Montana established public transportation services after a resident died because she was unable to access cancer treatments. The community responded by saying, "Never again in our town."

Washington State

Travel Washington Intercity Bus and Rural Mobility Programs

For many years, Washington State's intercity bus service was declining, leaving may rural communities without scheduled public transportation to other towns and cities. In response, Washington State created the *Travel Washington Intercity Bus Program* which contracts with private companies to provide services to many rural communities (Figure 17). It relies largely on Federal grants and so requires minimal state funds. The State Department of Transportation works with communities to design the program and select service providers (Lynott 2014). Program Manager, Steve Abernathy, says that this approach has garnered strong community support. "When the Gold Line (northeastern Washington) was announced, communities were falling over each other to see who could bring the most to the ribbon cutting."

Figure 17 **Washington Intercity Bus Network** (https://bit.ly/3rJcI9n)

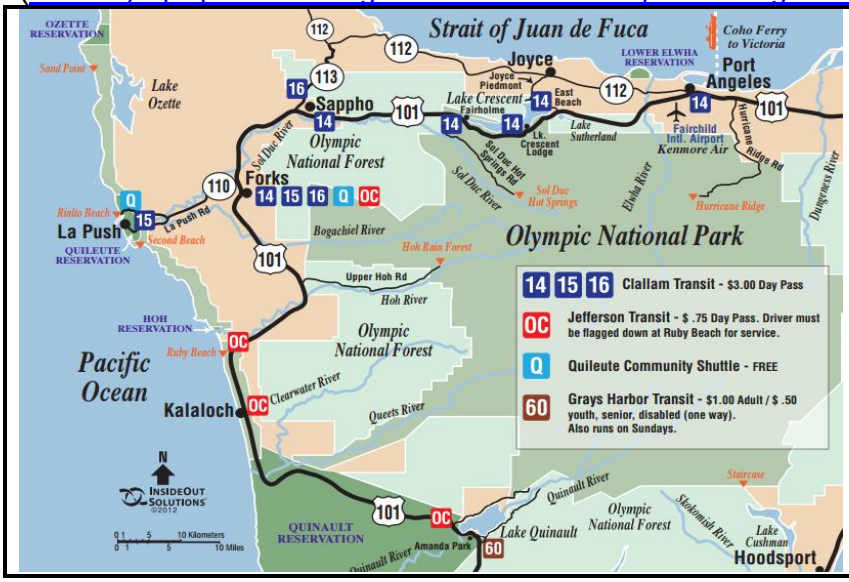
The Washington State Department of Transportation's Travel Washington Intercity Bus and Rural Transit Assistance programs provide planning support and funding for services that connect rural communities and urban centers. This fills critical gaps in the public transport network, making travel more accessible, convenient and affordable.

The intercity buses connect to local transit services and are catalysts for private investment. Homes, hotels and banks are being developed around transit centers, and their parking lots are sometimes used for farmers' markets and concerts. Abernathy describes the program as, "allowing people to stay where they want to live, yet still have the mobility, connections and access to the state, national and international transportation network. It allows older adults to stay in the communities where they have friends, where they raised their children and where they are part of a community."

Washington State has other programs to help rural communities plan, coordinate and fund local public transit services including the *Rural Mobility Grant Program* (WSDOT 2017; USDOT 2011). Public transit is provided through government agencies and community transportation providers which include private non-profit, private for-profit and Tribal organizations. These organizations can access various federal, state and local funds, including voter-approved special taxes. The Washington State Department of Transportation provides administrative and technical assistance to regional transportation planning organizations and public transit service providers.

As a result of these resources, most rural counties in Washington State have coordinated public transit services, which provide travel to and within most communities. For example, it is possible to travel around the Olympic Peninsula, visiting many small communities, Indian reservations and tourist destinations, using the Olympic Transit Loop, which consists of six different but coordinated local public transit agencies (OPTC 2012), as illustrated below.

Figure 18 **Olympic Peninsula Public Transportation**
(www.olympicpeninsula.org/sites/default/files/onp_transit_guide_2012.pdf)



It is possible to visit most Olympic Peninsula communities using integrated local transit services.

Rural and Small Town Transit Service Innovations

Many rural areas and small towns are implementing transit service partnerships and management innovations (Hosen and Powell 2014):

- Some communities offer TaxiBus service: passengers must reserve a ride, and are carried between numerous fixed stop locations in the community by taxis which can pick up other passengers during the same trip (http://citso.org/en/taxibus-service).
- Some small towns offer once- or twice-a-week bus services to regional centers to allow residents to access healthcare services and stores.
- Some community transportation organizations provide seasonal or special bus services to recreation activities, such as beaches or ski hills, and to special events such as fairs and festivals.
- Some small towns support vanpooling or commuter bus service to help residents commute to nearby cities.

The Rural Overland Utility Transit (TROUT) provides public transport services in eight rural municipalities with approximately 15,000 permanent residents in central Ontario, Canada. It supports various types of transportation services, including scheduled regional routes, door-to-door demand response, special event and charter transport, depending on community needs and resources. The program has a $300,000 total annual budget (about $20 annual per capita), of which $60,000 is generated by fares and $240,000 ($16 per capita) by public subsidies.

Comprehensive Rural Affordability (Latham 2022)

A Federal Reserve Bank article, *Intersecting Costs: Housing and Transportation in the Rural Fifth District*, used the Center for Neighborhood Technology's *Housing and Transportation (H+T) Affordability Index* (https://htaindex.cnt.org) to calculate total housing and transportation costs in rural Virginia. It shows that rural residents current travel a third more and spend a larger portion of their incomes on transportation (31.7%) than in urban areas (21.8%). To reduce these costs the article recommends improving rural public transit services, improving affordable housing options in walkable town centers, and improving rural broadband. It concludes, " In most rural counties, households spend more on transportation than housing, pushing these combined expenses well beyond what is commonly considered affordable. Policymakers, local leaders, and community-based organizations can help defray rural residents' transportation expenses by reducing the number of trips requiring a personal vehicle while at the same time improving local connectivity."

Minnesota (Mattson 2020)

The study, *Measuring the Economic Benefits of Rural and Small Urban Transit Services in Greater Minnesota*, developed a framework that identifies, describes, and classifies the potential benefits of transit services in specific communities. It includes a spreadsheet tool that can be used by any transit agency to calculate the benefits of its services. These tools were applied to a series of six case studies across Greater Minnesota.

Idaho (Mattson and Hough 2015)

The Community Transportation Association of Idaho (CTAI) is a non-profit organization which supports development of multimodal transportation services in Idaho communities, including fixed route, demand response and ridesharing services. CTAI helps distribute federal and state funds. Agencies must have a coordinated plan in order to receive these funds. To accomplish the state is divided into 17 local networks that discuss community needs and implementation strategies. The CTAI employs a full-time mobility manager in each of Idaho's six transportation districts. These managers facilitate the coordinated planning process and bring together key stakeholders, elected officials and leaders from the senior center or agency on aging.

Campus Transportation Management (Van Heeke, Sullivan and Baxandall 2014)

Many small towns have colleges and universities that are implementing campus transportation management programs to encourage students and staff to reduce automobile travel in order to help address local traffic and parking problems, increase affordability and safety, improve the community's quality of life. These programs usually include a combination of campus shuttle buses, public transit service improvements, discounted or free transit services, walking and cycling improvements, plus incentives to reduce driving such as parking pricing reforms.

For example, the University of North Carolina at Chapel Hill (town population 57,233) provides financial support to enable fare-free transit service throughout the community. Between 1997 and 2011, the proportion of students using transit to commute to campus more than doubled, from 21% to 53%. Morgantown, West Virginia (population 29,660) operates twenty bus routes, which are free for university and high school students, including one between the University of West Virginia campus and downtown which operates until midnight, in order to discourage drunk driving. Similarly, the University of Arkansas in Fayetteville (population 73,580) has ten bus routes that are free for students, plus a *Safe Ride* program that provides students who feel threatened or impaired a free ride home from any location within the city limits.

People's Transit (Barry 2010)

Huron, population 12,000, is the county seat of Beadle County, at the midpoint of eastern South Dakota. With extreme weather and a large senior population, many residents were worried about how to access life's essentials. This led, mid-1970s, to the establishment of People's Transit, which helps seniors access meals, recreational activities, and health services. In the late 1990s, a building committee was established. Then-City Commissioner and current Mayor, David McGirr, worked with community members to locate a site for today's transit center, called Huron's Great Station. Given South Dakota's frigid winters, the center had to be energy efficient just to pay the bills. It takes a lot of work to shovel through the parking lot and thaw buses before they go out on the road, but the community has come to heavily rely on the system. McGirr explains, "Transit service is a critical element in our infrastructure. Without People's Transit, there would be a lot of people here living a lower standard of life. If ever they went away, I don't know how we'd replace them."

Smart Rural Transport Areas (SMARTA) project

The two-year Smart Rural Transport Areas (SMARTA) project examined ways to provide rural shared mobility. Since its beginning in 2018, the SMARTA project has focused on how to exploit existing mobility policies and solutions in European rural areas and explore ways to support sustainable shared mobility, interconnected with public transport. The project has aimed to provide reliable guidance to policy makers, local authorities, and practitioners to develop suitable policies and efficient operational solutions for rural mobility. The following are key products from the SMARTA projects, with links to access the various resources.

Key outputs:

- **SMARTA Video** (c. 6 minutes): Provides an overview of SMARTA project and key messages in easily-accessible visual format.
- **SMARTA Brochure**: Provides a readable synthesis of the SMARTA activities, good practice and main recommendations.
- **SMARTA Policy Recommendations**: Provides the European Commission, the European Parliament, and other relevant stakeholders and policymakers with policy recommendations for sustainable shared mobility and public transport in European rural areas.
- **SMARTA Final Conference**: Presents results of the December 2020, conference, "Rural Mobility Matters-Developing Smart Rural Transport Areas.".
- **SMARTA Evaluation Report**: Presents the key findings of the SMARTA evaluation of 14 pilot sites (5 SMARTA pilot sites, 4 SMARTA 2 pilot sites, and 5 in-depth Good Practices).
- **SMARTA Webinar series**: Aims to share and discuss important issues about rural mobility with pilot sites, transport authorities, and relevant stakeholders.
- **SMARTA Insight Papers**: Analyses the European policies and frameworks for rural shared mobility in the EU countries.
- **SMARTA Good Practices**: Analyses key good practices in the rural shared mobility domain.
- **SMARTA Report on rural Good Practices**: Presents the key findings from the SMARTA analysis of Good Practices (GPs) in rural mobility.

Small Community Transit Service and Ridership Targets (CUTA 2009)

In 2009, the Canadian Urban Transportation Association (CUTA) identified existing public transit service and ridership rates in various size communities, and used this information to set targets for 2040 to accommodate growing demands associated with demographic and economic trends such as aging population and rising future fuel prices, as illustrated below.

Table 10 **Small Community Transit Service and Ridership Targets** (CUTA 2010)

	Current	2040 Targets
Service: annual per capita vehicle-hours	0.7	1.3
Ridership: annual per capita passenger trips	21	40

This indicates service and ridership targets to meet projected rural and small town transit needs.

Research for Community Access Partnership (www.research4cap.org)

ReCAP works to increase accessibility of the rural poor through improvements to infrastructure and transport. It supports a variety of programs including motorcycle safety, unpaved roadway planning, and the *Rural Access Index* (RAI) which measures 'the proportion of the rural population who live within 2 km of an all-season road'. This has been adopted by the UN as Sustainable Development Goal (SDG) indicator 9.1.1. ReCAP has collected baseline for more than 60 countries.

Transit's Contribution Rural Community Livability (Godavarthy and Mattson 2016)

A study of Valley City and Dickinson, North Dakota found that residents believe that transit should be provided in their community as a transportation option for seniors, people with disabilities, those who cannot or choose not to drive. Transit riders in both cities indicated that transit is very important to their quality of life, and stakeholders from both communities said transit is a critical lifeline for people who are elderly and/or have a disability, individuals with no vehicle, and those who cannot drive. The study indicates that public transit services make important contributions to rural community livability.

Ride to Wellness (Ducote and Ducote 2016)

Rides to Wellness (R2W) is a non-emergent medical transport program available to residents of Union County in rural Oregon. Community Connection of Northeast Oregon (CCNO), a non-profit, operates the program through its subsidiary organization Northeast Oregon Public Transit (NEOPT). An evaluation found that the program is highly valued, effective, and underutilized in Union County. The program provides 3,000-14,000 annual round trips in an area with an estimated 1,100-5,000 residents who lack transportation to medical services. This is estimated to provide benefits $2.2-9.8m annual net benefits.

Better Rural Transportation Policies (TFA 2021)

The report, *Rural Communities Need Better Transportation Policy* proposes various policy reforms to create more accessible and multimodal rural communities including more public transit investments, more accessible and multimodal community design, more emphasis on traffic safety, prioritize road maintenance over expansion, and improve broadband access.

Norway (ITF 2015)

The Norwegian government provides financial support for developing new public transport systems in rural districts in Norway. This has resulted in several types of demand-response service in sparsely populated areas. The services vary in the types of passengers served, frequency and flexibility. All require travelers to request the service by phone at least two hours in advance. These services are popular. Key user groups include young and older people without a driver's license, and motorists who benefit from reduced chauffeuring burdens.

An example is Østfold in the south-eastern region. In addition to regular express bus services from the municipality to nearby cities, the inhabitants of more sparsely populated areas have access to a local demand-responsive service. The service was initially restricted to older users but has expanded to serve all residents. It offers two different routes: One serves the northern part of the area three days a week, the other serves the southern part on the two other weekdays. The buses can deviate up to two kilometres from their specified route to passenger's homes. There are two departures on each service day. The first departure is at about 10 o'clock, after the school transport is finished, the second service runs about 3 hours later. This makes it possible to carry out errands in the municipality centre. If nobody demands the service at least two hours in advance of scheduled departures, there will be no trip. Depending on the number of passengers and their special needs (for example, due to wheelchair) the lines will be serviced by minibuses or regular taxis, owned and administrated by the local taxi central. The service was meant to replace subsidized taxies for people with special needs.

Another demand-response model was developed for a large and sparsely populated municipality in the eastern part of Norway (Hedmark). The public authorities introduced it as a new public transport concept with departures from the municipality centre every hour, if requested at least two hours in advance, using regular taxis. The service has fixed stops but there is some flexibility in routes. The passengers have to be at the bus stop at specified time. As the stops are fixed, the service is not intended to replace services for people with special needs. The structure of the time schedule is based on the time of departure from, and arrivals to, the municipality centre: Every route starts from, and arrives at, the municipality centre half past every hour. The operating time is between seven o'clock in the morning and ten o'clock in the evening on workdays and between nine and seven o'clock on weekends. From the centre, it is possible to change to railway and express bus services for trips that cross the border of the municipality. The fares are regular and equal to ordinary public transport tickets.

Communicating Multimodal Planning Benefits

Public transportation can provide a variety of direct and indirect benefits. Table 11 identifies ways in which various constituents will benefit from public transportation.

Table 11 **Pro-Transit Arguments for Various Stakeholders**

Interest Group	Reasons to Support Public Transit
Seniors and people with disabilities	• Improves their independence and ability to participate in activities • Saves money compared with car ownership and taxi travel • Supports "aging in place," which allows non-drivers to remain in an area.
Youths	• Improves their independence and ability to participate in activities • Saves money compared with car ownership
Motorists	• Reduces chauffeuring burdens • Provides a mobility option if their vehicle fails or they are unable to drive • Reduces crash risk to all road users
Business leaders	• Helps attract and retain residents, and their business activity • Expands the pool of lower-wage employees • Allows non-driving tourists to visit • Reduces parking costs
Transportation professionals	• Serving non-drivers' travel demands is an important and growing responsibility for transportation professionals • Reduces crash risks • Reduces traffic and parking congestion
Public health professionals	• Reduces crash risks • Encourages physical activity (since most transit trips include walking links) • Reduces hitchhiker assault risk

Reasons to support public transit can be tailored to the concerns of various interest groups.

Responding to Rural Multimodal Planning Criticisms

This section addresses common criticisms of rural transit.

Myth #1: Walking and Bicycling are Unimportant in Rural Areas

People in small towns and rural areas often walk and bicycle for transportation and recreation, and e-bikes greatly expand the portion of trips that can realistically be made in rural areas. These modes are particularly important to provide independent mobility for youths, seniors, people with disabilities and low incomes, and to improve public fitness and health. Some rural communities also benefit from hiking and biking tourism. However, to achieve their potential, small towns must develop sidewalk networks and rural communities must develop safe road shoulders and paths, and provide other support.

Myth #2: Public Transit Is Only Justified In Large Cities

Public transit serves various roles in an efficient and equitable transportation system. In large cities, it provides space-efficient mobility on major travel corridors, which reduces traffic and parking congestion. In both large and small communities, it provides basic mobility for non-drivers, affordable transportation for lower-income households, transportation for tourists, and support for local economic development. Although it only serves a smaller portion of total travel in most rural communities, those trips tend to be particularly important, including travel for healthcare, basic shopping, school, work, and tourism. Public transit can help reduce many of the problems facing rural communities and small towns, including population and economic declines, poverty and high traffic fatality rates.

Many smaller towns and rural villages are quite walkable and have good local services, and so are well suited for non-drivers, provided that there are appropriate options for travelling to other communities in the region. Public transit can serve this need.

Myth #3: Public Transit Is Costly and Inefficient

Public transit services are sometimes criticized for being costly, particularly in rural areas where low ridership and dispersed development results in high costs per passenger-mile and low cost recovery (portion of total costs financed by fares). However, public transit can actually be very cost effective compared with alternatives. For example, a typical 5-mile rural transit trip costs about $7.00 in total expenses, which is cheaper than many alternatives, including taxi fares for the same trip, the total costs to own and operate an automobile for infrequent use, chauffeuring driver time and vehicle costs, and accident costs, particularly for higher-risk (youth, senior or impaired) travelers forced to drive due to inadequate alternatives.

As previously discussed, per capita transit expenses are small in rural areas compared with larger cities, with motor vehicle costs, and even compared with Automobile Association memberships, which motorists join in order to have assistance if their vehicle fails. Public transit serves a similar function; it provides a mobility option that residents can use if their vehicle fails, they lose their ability to drive or become impaired. Even residents who do not currently use that option may value having it available.

Considering all of these factors, public transit investments are cost effective if they result in even small reductions in motor vehicle expenses. For example, residents would benefit overall if $30 annual transit funding allows them to save just 1% of their vehicle, road and parking facility costs.

Myth #4: Transit is subsidized, unlike roads which motorists finance through user fees

Many people assume that roads are fully financed by user fees such as fuel taxes and road tolls. Although user fees finance most highway costs, city and county roads are financed primarily by general taxes (Henchman 2013). Of the $221 billion spent on U.S. roadways (about $712 per capita), only $105 billion (about $338 per capita) was financed by user fees (FHWA 2012, HF-10), the rest was financed by general taxes which residents pay regardless of how much they drive.

As a result, people who drive less than average tend to subsidize the roadway costs of people who drive more than average. For example, if two residents both pay $300 annually in local taxes to finance local roads, one who does not drive and only travels 1,000 annual miles subsidizes the roadway costs of their neighbor who drives 20,000 annual miles. Public transit subsidies offset these cross subsidies; they ensure that residents who do not drive receive a share of government transportation spending.

Myth #5: Buses Run Empty

People sometimes complain that transit vehicles (buses and vans) often appear empty. It is true that transit vehicles often operate with extra capacity due to fluctuating demand, just as private vehicles generally operate with empty seats, but most transit also have times when vehicles are nearly or completely full.

Myth #6: Small towns and rural communities rely on informal transport services

Although rural and small town residents tend to be generous, and often offer rides to their non-driving family members and friends, this cannot fully satisfy all travel demands. Informal travel arrangements can be unreliable or uncomfortable. Formal transit services offer reliable, professional service with fixed schedules and amenities such as wheelchair lifts and bike racks. As a result, non-drivers often prefer paying for public transit rather than relying entirely on the generosity of family and friends.

The need for more formal public transit is increasing in many communities. As rural populations age, the portion of residents who require rides increases while the portion who can offer rides declines, resulting in unmet needs. Many rural community organizations are finding that they cannot serve growing demand with volunteers.

Myth #7: Self-driving cars will soon eliminate the need for public transit

Some people argue that autonomous (self-driving) cars will soon eliminate the need for communities to subsidize public transit services. Such claims are unrealistic. Although vehicle manufactures are making progress developing self-driving technologies, it will be several years before such vehicles can operate reliably under all travel conditions – for example, no current technologies can navigate safely in heavy rain and snow – and even longer before they are affordable enough for lower-income households to purchase such a vehicle on the second-hand market. Even when they operate reliably, many people with disabilities and children will still need human assistance or supervision when traveling by motor vehicle. As a result, it is unlikely that self-driving cars will replace public transit services before the 2030s, and subsidies will still be needed to provide basic mobility for people with disabilities and low-incomes.

Conclusions

More multimodal planning can help rural communities become more efficient and equitable. It helps ensures that all residents, including non-drivers, enjoy independent mobility and receive a fair share of public spending on transport facilities and services. Serving these demands can provide multiple benefits. However, current planning practices tend to overlook or undervalue many of these benefits, as summarized below. More multimodal planning recognizes these additional benefits, providing more support for walking, cycling, public transit and their variants.

Table 12 **Multimodal Transportation Benefits**

Benefit Category	Degree Considered in Current Planning
Users	
More independent mobility	Seldom included in formal economic evaluation
Financial savings compared with private automobile or taxi travel	Generally overlooked
Reduced accident and assault risk	Generally overlooked
Less risk of impaired driving citation or accident	Generally overlooked
Motorists	
Reduced chauffeuring burdens	Sometimes recognized by individuals but seldom included in formal economic evaluation
Reduced traffic risks (less higher-risk driving)	Generally overlooked
Reduced traffic and parking congestion	Generally overlooked
Provides a mobility option when they cannot drive	Generally overlooked
Local Economy	
Retains and attracts more residents	Seldom included in formal economic evaluation
Supports industries such as tourism	Seldom included in formal economic evaluation
Helps attract major employers such as colleges	Seldom included in formal economic evaluation

Rural public transit can provide various benefits to users and communities. Many of these benefits tend to be overlooked, so public transit improvements are often worth far more than recognized.

Although walking, bicycling, micromodes (e-bikes) and public transit serve a relatively small portion of travel in rural areas, many of those trips are important, for example, allowing seniors and people with disabilities to access healthcare and stores, young people to reach school and jobs, and allows car-free tourism. Failing to serve these needs can be costly. If suitable mobility options are unavailable, residents miss medical appointments and lose jobs, or must be chauffeured by drivers. Automobile-dependent community planning demonstrates that non-drivers are unimportant and unwelcome. As a result, some households with seniors, people with disabilities and youths, and tourists who lack cars, may choose other communities that provide better mobility services. This contributes to the spiral of declining population and economic activity that threatens many rural areas. Public transit is not the only solution to these problems, but it can make important contributions.

Current demographic and economic trends are increasing rural transit demands, and the benefits of serving these demands. Aging population, more residents with disabilities, industrial shifts and rising poverty, increasing restrictions on higher-risk driving, and changing consumer preferences are increasing the number of residents who cannot, should not, or prefer not to drive. Many residents who previously *offered* rides are now reaching the age at which they *require* rides, so informal transportation networks and volunteer programs can satisfy a declining portion of mobility needs. Communities that serve the growing demand for alternative modes and "carfree" or "carlite" lifestyles can attract and retain more residents and visitors, and the economic activity they generate. Motorists also benefit from reduced chauffeuring burdens and chances of being injured by a higher risk driver.

Analysis in this report indicates that during the next two decades, rural multimodal travel demands will increase several fold, so for example, if a community currently operates 5 transit revenue vehicle-miles (RVM) per capita (a typical low value), it should plan to provide 10 to 50 in the future. New planning and funding practices will be needed to meet these needs.

Of course, rural communities are diverse, and so are their mobility needs. There are many possible ways that rural communities can provide mobility services ranging from volunteer programs operated by local charities, subsidized taxi services, community transport, demand response and fixed-route bus services. Many rural communities have demonstrated that with creativity and good management it is possible to significantly improve public transit services with modest investments.

Rural transit spending is currently low, particularly compared with:

1. Per capita spending on transit in urban areas.
2. What many motorists pay for Automobile Association memberships.
3. What motorists spend on automobiles.
4. What governments and businesses spend on roads and parking facilities.
5. The potential benefits of such investments.

Many federal and state programs support rural transit, although local communities must usually provide matching funds. Examples described in this report indicate that many rural communities are using innovative partnerships and diverse funding sources to finance transit improvements. Overall, such programs are often very cost effective, considering all benefits and costs; each dollar invested often provides far more than a dollar in total savings and benefits.

Improving transit service requires broad community support. To build this support, proponents must create a vision of a more diverse transportation system, and demonstrate the resulting benefits to various stakeholders. It is important to have credible technical analysis about these benefits, but it is important to support such analysis with stories which vividly illustrate how transit can benefit local individuals, businesses and communities. To meet growing public transit demands, local leaders will need to overcome various obstacles including misunderstandings about the roles that transit plays in small towns and rural communities, and biases in transport planning and funding practices which undervalue and underinvest in public transit.

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