



The Decline of Driving Navigating Vermont Without a Car

Vermont Transportation Board 2015 Report to the Legislature's
House and Senate Transportation Committees
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INTRODUCTION

The Vermont Transportation Board is established according to Title 19 V.S.A. § 3, and is attached to the Agency of Transportation. The Board consists of seven members who are appointed by the Governor with the advice and consent of the Senate. The Governor appoints Board members, so far as possible, whose interests and expertise lie in various areas of the transportation field. The Governor appoints the Board's chair, and members are appointed to three-year terms. Board members may be reappointed for two additional three-year terms, but are not eligible for further appointment. No more than four Board members can belong to the same political party.

The Board's authority affects all modes of transportation, including air, rail and roadway travel. The Board primarily performs regulatory and quasi-judicial functions. Its cases are varied and involve appeals of both Agency decisions and select-board rulings, as well as initial adjudication of contract disputes, small claims, land-compensation challenges, scenic-roadway and byway designation, and requests for a host of things including railroad bridge variances, public and private aviation landing areas, and utility instillation. The Board also adjudicates disputes between towns regarding roadway discontinuance, as well as disputes between local auto dealerships and their national auto manufacturers.

Challenges to quasi-judicial Board decisions are filed in Superior Court.

Oversight and administrative responsibility for the New Motor Vehicle Arbitration Board also sits with the Transportation Board. The Arbitration Board adjudicates the state's "Lemon Law," and employs one, full-time employee.

The Board experienced significant change in 2015 as the Governor appointed three new members. Richard Bailey of Hyde Park was appointed to replace Wesley Hrydziusko of Windsor, while Larry Bruce of St. Albans was appointed to replace Robin Stern of Brattleboro. Both Mr. Hrydziusko and Ms. Stern had completed the statutory maximum of serving three terms on the Board. David Coen of Shelburne was appointed to replace James Fitzgerald of St. Albans, who chose to retire upon the expiration of his term. Other members of the Board include William Tracy Carris of Poultney, Thomas Dailey of Shaftsbury, Vanessa Kittell of Fairfield, and Nicola Marro

of Montpelier. Mr. Marro serves as the Board's chairman. The Board is administered by its Executive Secretary, John Zicconi of Shelburne.

While most of the Board's duties involve regulatory and quasi-judicial functions, Title 19 V.S.A. § 5(d)(8) charges the Board to work together with the Agency of Transportation to annually hold public hearings "for the purpose of obtaining public comment on the development of state transportation policy, the mission of the Agency, and state transportation planning, capital programming and program implementation."

Prior to 2012, the Board scheduled public hearings with little agenda other than seeking public comment on whatever transportation-related topics or projects attendees wished to broach. In 2012, the Board altered this approach and began structuring its public hearings to seek comment regarding specific topics, while still providing time for public comment on whatever topic or projects attendees wished. The Board in 2012 also began accepting written comment via its website from Vermonters unable to attend the public hearings.

In 2014, the Board focused its public hearings primarily on the thoughts and concerns of young adults (ages 18-34), and scheduled eight forums at various college campuses around the state. In 2015, the Board chose to focus on the same topics that were broached with young adults but instead the Board targeted an older audience. This decision was made to obtain a broader understanding of how the public perceives these issues. To achieve this, six additional forums were conducted in more traditional public-meeting locations.

To prepare for the forums, the Board reviewed national research and consulted with both VTrans staff as well as representatives of the state's 11 Regional Planning Commissions. The forums focused on the general topic of navigating Vermont without the use of a personal automobile, and included the following subjects:

- Transportation options that influence decisions on where people live and work.
- Car ownership and car sharing.
- Bicycle and pedestrian issues.
- Public transportation, including passenger rail.
- Roadway safety.

These topics were originally chosen in 2014 because national research indicates that issues related to these topics are important to young adults who are just beginning their careers. The Board discussed these issues with young adults to gain insight into how future transportation policy can be shaped to best position Vermont in the economic marketplace as it courts so-called millennials to live, work and raise a family among the Green Mountains. These same topics in 2015 proved to be just as relevant to older adults as national research also indicates that both middle-aged Americans and senior citizens in growing numbers are seeking ways to lower their transportation dependence on personally-owned motor vehicles.

By focusing attention on these specific topics, public comment included in this report can be considered before transportation policy decisions are finalized, thus providing decision makers with a tool

to help them better understand public opinion.

To help the Board choose public-hearing locations, it worked with various Regional Planning commissions to select six communities that were not only geographically spread across Vermont but also contained railroad infrastructure. This consultation resulted in public hearings being held in Bellows Falls, Essex Junction, Middlebury, Saint Albans, St. Johnsbury and Waterbury.

Attendance at these public hearings, which were held in October and November, was strong. The Board worked with local chambers of commerce, economic development corporations, social service organizations, municipal governments, front porch forums, regional planning commissions and the news media to spread the word. The effort resulted in an average attendance of about 30 participants with a high of 43 in Middlebury and a low of 13 in Essex Junction.

Hearing participants included a mix of business owners, town officials, social service providers, members of the general public, and, in several locations, members of the Vermont General Assembly. The Board also accepted comment via its website, and received 55 written submittals.

At the hearings, discussion on each subject was preceded by a short PowerPoint presentation to both provide background and help set the stage for comment. This report is broken down into similar sections so that the reader can easily understand not only the issues at hand, but also what the public had to say.

EXECUTIVE SUMMARY

From the end of World War II until 2004, the number of miles the average American drove an automobile annually increased. But beginning in 2005, Americans reversed this trend and began reducing the number of miles they spend behind the wheel.

According to the State Smart Transportation Initiative, a transportation research organization based at the University of Wisconsin, vehicle miles traveled per person in the U.S. has dropped every year since. By 2013, the last year for which the Transportation Board could find statistics, the average American drove more than 6 percent fewer miles per year than in 2005.

This trend not only holds true in Vermont, but locals appear to be leading the charge. In 2007, Vermonters drove an annual average of 12,400 miles. But in 2013, Vermonters, according to VTrans, drove an average of just 11,356 miles, which is an 8.4 percent drop.

As Americans drive less, their use of alternative transportation modes such as riding a bus, taking a train or using a bicycle have increased.

Americans in 2013, according to the American Public Transportation Association, logged 10.7 billion transit trips, an amount not seen since 1956. Biking is also on the rise. According to a 2012 Commuter Survey conducted by the U.S. Census Bureau, more than 860,000 Americans commuted to work by bicycle more than half the year, a 9 percent increase over the year before. All told, bicycle commuting increased 61 percent between 2000 and 2012.

Vermont does not keep cycling commuter data, but it does track train and bus use. Both are on the rise.

According to VTrans, Vermont transit providers logged 4.6 million riders in 2011. That figure grew to 4.84 million in 2014 even though the state's largest transit provider, the Chittenden County Transit Authority, shut down for several weeks due to a driver strike. Had there been no strike, VTrans estimates ridership would have grown to nearly 5 million, which would represent an 8.7 percent increase over the past four years.

Vermont also is served by two intercity Amtrak train routes that have nearly doubled in ridership

during the 10-year stretch between 2005 and 2014, increasing from 57,121 passengers annually to 107,688. Amtrak's Vermonter service during this time experienced a sizable uptick in intrastate trips, which have increased from 3 percent of its total ridership in 2004 to 12 percent in 2013.

The Transportation Board became interested in these trends last year after it learned that nationwide young people are primarily responsible for these changes. The Board then analyzed national transportation statistics associated with the so-called Millennial Generation (people ages 18-34), and in 2014 held a series of forums that attracted young Vermonters with the goal of understanding whether they conformed to or bucked these national behaviors.

The Board not only discovered that young Vermonters conformed to these trends, but also learned that they are deeply troubled that the Green Mountain State does not offer enough in the way of alternative transportation to retain them as residents. Vermont millennials warned that Vermont's lack of transportation options also acts as a deterrent to attracting their peers who grew up elsewhere.

The Board published its findings in a report titled "Getting Millennials from A to B," which can be found at the Board's website at tboard.vermont.gov.

Realizing that millennials make up only a part of the population, the Board in 2015 set out to understand how older generations view the state of Vermont's alternative transportation options. To do this, the Board held six public forums specifically designed to attract Vermonters 35 years and older. The forums were held in various geographic locations around the state so that the Board could look for trends that transcend specific local communities or state regions.

To attract people to the forums, the Board worked with a verity of local organizations – chambers of commerce, economic development corporations, social service agencies, arts councils, regional

planning commissions, and front porch forums – in each community to spread the word.

Forum participants included a mix of business owners, town officials, social service providers, members of the general public, and, in several locations, members of the Vermont General Assembly. The effort resulted in an average attendance of about 30 participants per forum. The Board also accepted comment via its website, and received 55 written submittals.

At each forum, the Board provided a PowerPoint presentation as a way to provide participants with background information on each topic, as well as prompt them to provide feedback.

After engaging participants at each of the six forums for about two hours at a time, the Board was able to identify common concerns, reoccurring themes and nearly universal suggestions, all of which are identified in this executive summary and detailed in the various chapters of this report.

While the information presented in this executive summary is meant to synthesize participant's most common thoughts, it by no means is meant to represent a complete offering of what was on the minds of those who answered the Board's call to provide insight into how they view the state of transportation in Vermont, and how these views affect whether they find Vermont an attractive place to live, work and raise a family.

To understand the full depth of what was on participant's minds, the Board recommends that the reader digest in full each of the report's chapters, which are written to provide an in-depth perspective of each topic.

■ Transportation Options Influence Choices

The vast majority – almost 100 percent – of Vermonters who attended the Board's forums acknowledged owning at least one motor vehicle. Despite this large showing from vehicle owners, about half said they would like to use their vehicle less often than they do. Few said they would like to rid themselves completely of automobile ownership, but many who own two vehicles said they would like to divest to just one.

Reasons for wanting to drive less, or for families wanting to own just one vehicle instead of two, were consistent with the reasons young adults told the

Board in 2014: economics – you can save thousands of dollars a year by cutting back on vehicle ownership or use – as well as a lifestyle preference that supports both public transportation and other vehicle-free alternatives.

Cars, older Vermonters said, always will be vital to living in some state regions because of how rural they are. But if there were other transportation options, like greater frequency of bus service or bike-ways that connect population centers, these options would help reduce their dependence on automobiles and make Vermont a more attractive place.

Many participants told the Board they purposefully selected housing close to village centers so that they can walk or bike to stores and restaurants, which is consistent with national trends that show an increasing number of Americans prefer to live within mixed-use, compact developments that provide easy access to such amenities.

Vermonters approaching retirement age told the Board they can envision a time when they either want to slow down and drive less, or when their health may force them to drive less. But with few transportation options other than the motor vehicle, trying to live such a lifestyle in Vermont likely will be difficult.

■ The Decline of Driving

Vermonters since 2007 have curtailed their driving habits more than the average American, reducing their vehicle miles traveled between 2007 and 2013 by 8.4 percent compared to the nationwide drop of just 6 percent over the same time period.

Curiously, this dip in local driving is significantly more pronounced than the drop seen in other rural states.

The University of Vermont's Transportation Research Center collects driving statistics. For comparison purposes, the University considers the states of Maine, West Virginia, North Dakota and South Dakota to be so-called sister states to Vermont as they contain similar rural and other characteristics.

Combined, the average driver living in these sister states decreased their vehicle miles traveled 3.7 percent between 2007 and 2013, compared to the national average drop of 6 percent and Vermont's 8.4 percent reduction.

As for vehicle ownership, Vermonters own fewer

of them per capita than the national average.

According to a UVM report, per-capita vehicle ownership nationwide declined between 2007 and 2013 from 1.18 per licensed driver to 1.15. During this same time period, however, Vermont's ownership rose from 1.04 vehicles per licensed driver to 1.06. Despite this increase, Vermonters own fewer vehicles per licensed driver than those living in all four of their sister rural states.

During the Board's 2014 forums that focused on young-adults, millennials expressed a love-hate relationship with cars. The majority said they owned a vehicle, but many also stated that they do so out of necessity and not because they want to own a vehicle. Given the choice, many said they would rather not own a car.

In 2015, few Vermonters older than age 35 expressed an interest in abandoning their vehicles. But many expressed interest in reducing the amount they drive.

One of the biggest reasons older adults cited for wanting to reduce their vehicle miles traveled was climate change. Transportation accounts for about 45 percent of Vermont's greenhouse gas emissions, something the state hopes to reduce significantly by 2028. Many forum participants said they wanted to do their part to achieve the state's goal.

Electric vehicles interested many forum participants. Several encouraged the state to foster their proliferation by moving quickly to increase Vermont's number of electric charging stations.

A tool that could help Vermonters reduce the number of personal motor vehicles that they own is car sharing.

Young adults in 2014 overwhelmingly called for the state to aid the expansion of car-sharing services. Older adults were not as gung-ho – they questioned how non-urban Vermont communities could support such a service – but those who expressed interest said proliferation would not only make it easier to live in many Vermont locations without a car, but also would allow families that currently own two vehicles to divest to just one.

■ Walking and Biking

Nationwide, the number of Americans who walk and bike to work is growing.

According to the Frontier Group, a national

research and policy organization, the number of Americans commuting to work by bicycle increased by 39 percent between 2005 and 2011, while the number of people commuting on foot increased by 20 percent between 2005 and 2009.

Similarly, a significant increase in commuting by bicycle also was reported in 2013 by Streetsblog.org, a national non-profit organization.

Using data from the U.S. Census Bureau's American Community Survey, Streetsblog reported that 0.61 percent of the nation's overall commuting public, about 865,000 people, reported biking as their primary method of getting to work in 2011, which is a whopping 61 percent jump from a similar survey conducted in 2000.

Even more recent information using American Community Survey (ACS) data collected by the University of Vermont Transportation Research Center indicates that the nation's number of bicycle commuters continues to rise. According to UVM, an average of 0.63 percent of Americans, an uptick of 3.2 percent over the 0.61 percent calculated in 2011, reported commuting to work by bicycle between 2011 and 2013.

UVM found that Vermonters bike to work significantly more often than their national counterparts as nearly 1 percent of Vermonters reported bicycling to work between 2011 and 2013 compared to just 0.63 percent nationwide.

UVM also reported that Vermonters walk to work significantly more often than the average American. Again using ACS data from 2011 to 2013, UVM found that 6.2 percent of Vermonters reported walking to work, which is substantially greater than the 2.9 percent of Americans nationwide that reported commuting on foot.

When walkers and cyclists are combined, 7.2 percent of Vermonters, according to UVM, either walked or bicycled to work as their primary mode of transportation between 2011 and 2013, compared to just 3.6 percent nationally.

UVM also found that when compared to states with similar rural and other characteristics, Vermont's population still outwalks and outbikes them all.

Those who attended the Transportation Board's 2015 forums overwhelmingly said that the ability to walk and bike to destinations has become increasingly important to them, but safety concerns often

prevent them from abandoning their automobiles.

Cyclists expressed frustration that Vermont roads often lack significant shoulder width to safely separate them from passing motor vehicles. And when a road has adequate shoulders, it often contains crumbling pavement that makes them impossible for a bicyclist to use.

Vermonters stressed that the best way – some said the only way – to adequately address safety is for the state to invest in the proliferation of transportation infrastructure such as sidewalks, dedicated on-road bike lanes, and off-road multi-use paths that are separated from automobile traffic.

Many forum participants said they agreed with an existing state policy to establish 3-foot shoulders on as many roads as possible when those roads are repaved. Several others, however, encouraged the state to go one step further and narrow the standard 12-foot travel lane to 11 feet in most places in order to gain additional room for cyclists.

Participants also said the state and its municipalities need to better maintain the bike-ped infrastructure they already have, especially when it comes to sidewalks.

People were well aware that building such infrastructure would cost money. They encouraged lawmakers to either raise additional funds or reprioritize the way some transportation funds are currently allocated.

■ Public Transportation

Americans in 2011 took nearly 10 percent – or 900 million – more trips by public transportation than they did in 2005.

More than 60 percent of this growth, the Frontier Group concluded, is attributable to young people between the ages of 16 and 34. Vermont does not track public transit ridership by age, but statistics kept by the Vermont Agency of Transportation show a similar overall growth trend.

According to VTrans, Vermont public transit providers logged 4.57 million riders in 2011. This total grew to 4.84 million riders in 2014, a 6 percent increase.

It is worth noting, however, that Vermont's 2014 numbers were negatively affected by a multi-week bus-driver strike at the Chittenden County Transportation Authority, the state's largest public transit

provider. If the strike had not occurred, it is believed the state's 2014 passenger total would have been about 5 million, which compared to the 2011 total of 4.6 million represents nearly a 9 percent increase over the 4-year period.

Passenger rail ridership across Vermont also is on the rise.

Vermont offers two intercity passenger train routes via Amtrak. Each route offers one round-trip service per day. In the decade between 2005 and 2014, train boardings and disembarkation at Vermont stations increased 89 percent from 57,121 to 107,688.

Not surprisingly given the state's rural nature, a lower percentage of Vermonters commute to work by bus or train when compared to the national average. According to figures compiled by the University of Vermont, only 1.3 percent of Vermonters use public transportation as their primary method of getting to work, compared to 5.3 percent of commuters nationwide.

Vermonters, however, take the bus to work significantly more often than commuters in Vermont's sister states of Maine, North Dakota, South Dakota and West Virginia, where residents use public transportation only between 0.4 percent (North Dakota) and 0.8 percent (West Virginia) of the time.

Despite more people in recent years riding both the train and the bus, participants at all six of this year's Transportation Board forums – as did millennials before them in 2014 – criticized Vermont for not offering enough public-transit options.

Participants said buses and trains in Vermont do not run often enough to be convenient, they don't run late enough into the evening to accommodate their schedules, and they don't reach many of the places to which they would like or need to travel.

Even if they can use public transit to reach their ultimate destination, participants said doing so often requires multiple connections if they need to travel any kind of distance, which makes the trip take too long to be practical.

The inability of low-income residents to commute via public transportation to employment centers from outlying communities is a factor that often prevents rural Vermonters who are unemployed from finding work, participants said.

■ Highway Safety

Vermont highway fatalities and roadway crashes transcend geography and whether a community is urban or rural. According to statistics kept by the Vermont Agency of Transportation, the Green Mountain State annually experiences about 12,000 crashes, of which some 2,000 result in injury, including more than 300 incapacitating injuries.

On average, Vermont roadway crashes result in 70 annual highway deaths. Data shows that during a recent five-year period, nearly 75 percent of Vermont's 251 towns had at least one fatal crash occur within its borders. Quite literally, highway crashes and deaths happen everywhere.

The Transportation Board at its forums asked participants four basic questions:

- What can the state do to curb mobile-phone use while driving?
- How can the state get drivers to slow down and pay better attention?
- How can the state reduce driving under the influence?
- Will legalizing marijuana make Vermont roads more dangerous?

When the Board asked these same questions of millennials in 2014, the marijuana question drew the most consistent response. Almost to a person, young adults said they believed that legalizing the use of marijuana would not deteriorate highway safety.

This opinion, however, did not carry the day in 2015. While hardly a millennial who spoke with the Board in 2014 believed legalization would make Vermont highways less safe, the majority of older adults who addressed the issue this year believed otherwise.

After assessing both points of view, the Board concluded that neither was based on reliable data. In fact, people with each opinion said they formed their belief after reading studies based on data collected from the State of Colorado – which began allowing the legal sale of marijuana on January 1, 2014.

Several forum participants noted these dueling conclusions based on the same sources, and encour-

aged Vermont lawmakers to seek the truth before they form their own opinions by gathering accurate data from not only Colorado but also other states, like Washington, that have already legalized marijuana's sale and use.

Regardless of their personal belief, those who attended the Board's forums pushed for the state to understand marijuana toxicity levels and to develop ways that drivers suspected of driving under the influence could accurately be tested to determine if their level of intoxication was actually dangerous.

While older Vermonters commented on marijuana legalization, they showed much more interest in other highway safety topics, the most significant being handheld mobile devices and distracted driving.

Participants gave the Legislature high marks for outlawing the use of cell phones while driving unless the phone is engaged with hands-free technology. But even though hands-free use is now the law, participants said they have noticed no discernible difference in actual driving habits. As a result, participants told the Board that greater enforcement of the hands-free law is needed.

As for drinking and driving, participants expressed concern over how Vermont punishes drunk drivers, believing that state policy targets driving when instead it should stop people from drinking.

State laws, participants said, focus too much on taking away the offender's right to drive, which often has the unintended consequence of preventing them from getting to work. Instead, the state should look into ways to curtail an offender's right to drink.

Several people said they believed aging drivers pose a safety risk, and called for the Legislature to impose mandatory retesting based on age.

Other participants called for increased traffic calming measures such as the instillation of flashing speed-limit signs, reducing the width of travel lanes from 12 feet to 11 feet, the installation of more flashing beacons at pedestrian crossings, and the construction of more roundabouts at busy intersections.

TRANSPORTATION OPTIONS INFLUENCE CHOICES

In 2014, the Vermont Transportation Board visited eight college campuses to conduct forums specifically designed to engage young Vermonters in a conversation about their habits, needs and concerns regarding transportation within the confines of the Green Mountain State. During this time, the Board learned that while the vast majority of Vermont's young people between the ages of 18-34 own automobiles, a considerable percentage did so out of necessity rather than choice.

At every stop the Board made, young adults mentioned transportation "options" as being a key factor in determining how attractive they view Vermont. Owning a car, they said, always will be vital to living in some Vermont regions. But if there were other transportation options – such as greater frequency of bus service, easily accessible car-sharing services, and bikeways that connect population centers – these options would help reduce their dependence on automobiles and make Vermont a more attractive place for them to live, work and raise a family.

Expanding Vermont's transportation options, young people said, is extremely important if the state hopes to reverse a troubling trend of losing its youth – between 1990 and 2010 Vermont's population of 20-39 year-olds shrunk by 20 percent while the state's overall population grew by 11 percent – and begin attracting young professionals who are highly mobile, have considerable employment options and prefer to live in an environment where they can easily get around using a combination of buses, trains and bicycles.

The Board documented these and other findings in a report entitled "Getting Millennials From A to B," which can be found at the Board's website at tboard.vermont.gov. With this information as background, the Board in 2015 set out to understand the thoughts of older Vermonters (ages 35 and older) regarding the same topics.

What the Board found was that a considerable portion of older Vermonters seek many of the same things sought by young adults. At every location the Board visited, almost everyone who attended said they owned a motor vehicle. But also at every stop, half of these same people said they wished Vermont offered other transportation options that allowed them not to have to use that motor vehicle as much

as they do.

This sentiment is not surprising given the current state of driving across the United States as a whole.

Nationwide, Americans for the first time in decades are driving less and as a result are turning to alternative means of transportation such as bike riding, walking and using public transportation with increased frequency. While millennials are leading this charge, all other age groups are engaged. And with Baby Boomers now beginning to retire in droves (an estimated 10,000 Americans will reach retirement age every day for the next 15 years) the recent trend of driving less is expected to continue.

■ What We Know Nationally

From the end of World War II until 2004, miles driven in the United States annually increased. But beginning in 2005, vehicle miles traveled suddenly began to decrease.

According to the State Smart Transportation Initiative, a transportation research organization based at the University of Wisconsin that is supported by many state DOTs including the Vermont Agency of Transportation, vehicle miles traveled per person has dropped every year since. By 2013, the last year for which the Transportation Board could find statistics, the average American drove more than 6 percent fewer miles per year than in 2005.

This trend not only holds true in Vermont, but locals appear to be leading the charge. In 2007, Vermonters drove an annual average of 12,400 miles. But in 2013, Vermonters, according to VTrans, drove just 11,356 miles, which is an 8.4 percent drop.

Not surprisingly, this decline in driving has been paralleled by a nationwide drop in vehicle ownership. According to a 2013 study conducted by the Transportation Research Center at the University of

Michigan, vehicle ratios per person, per licensed driver and per household have all declined in the United States since 2006. Here in Vermont, however, vehicle ownership per licensed driver increased slightly during this same period even though individual use of these vehicles declined.

As Americans drive less, their use of alternative transportation modes such as riding a bus, taking a train or using a bicycle have increased.

Americans in 2013, according to the American Public Transportation Association, logged 10.7 billion transit trips, an amount not seen since 1956. Biking is also on the rise. According to a 2012 Commuter Survey conducted by the U.S. Census Bureau, more than 860,000 Americans commuted to work by bicycle more than half the year, a 9 percent increase over the year before. All told, bicycle commuting increased 61 percent between 2000 and 2012.

In Vermont, commuting trends related to bike and bus usage mirror what is happening nationally.

According to U.S. Census survey data, Vermont cyclists actually exceed the national commuting rate by about 50 percent.

Local bus usage also is on the rise. According to VTTrans, Vermont transit providers logged 4.6 million riders in 2011. That figure grew to 4.84 million in 2014 even though the state's largest transit provider, the Chittenden County Transit Authority, shut down for several weeks due to a driver strike. Had there been no strike, VTTrans estimates ridership would have grown to nearly 5 million, which would represent an 8.7 percent increase over the past four years.

While Vermont does not offer commuter rail service, the state is served by two intercity Amtrak train routes that have nearly doubled in ridership during the 10-year stretch between 2005 and 2014, increasing from 57,121 passengers annually to 107,688. Amtrak's Vermonter service during this time also experienced a sizable uptick in intrastate trips, which increased from 3 percent of its total ridership in 2004 to 12 percent in 2013.

The Vermont Transportation Board in October and November presented these statistics to six focus groups comprised mostly of adults 35 years and older. The group sessions lasted between 90 minutes and two hours, and were held in various communities that are situated along railroad lines. Participation totaled 171, or an average of about 30 people per

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“It’s part of my wish to have a low carbon footprint.”

group. Participants were asked what transportation options influence their decision when choosing a place to live and work. The following is a synopsis of their answers.

■ Vermont Responses

The vast majority – almost 100 percent – of Vermonters who attended the Board's forums acknowledged owning at least one motor vehicle. Despite this large showing from vehicle owners, about half said they would like to use their vehicles less than they do. Few said they would like to rid themselves completely of automobile ownership, but many who own two vehicles said they would like to divest to just one.

Reasons for wanting to drive less, or for families wanting to own just one vehicle instead of two, were consistent with the reasons young adults told the Board in 2014: economics – you can save thousands of dollars a year by cutting back on vehicle ownership or use – as well as a lifestyle preference that supports both public transportation and other vehicle-free alternatives.

When asked what kind of community in which they prefer to reside, a majority of participants said they would prefer to live and work in an environment that promotes vehicle independence, and encouraged the state to work towards achieving that goal.

“I want to live where I please,” said a Bellows Falls participant, echoing the sentiments of many who attended the Board's forums. “And I want that place to be somewhere where I can walk or take public transit and drive only when I have to.”

“Having a short commute and the ability to walk and bicycle to places is what influences where I want to live and work,” said a St. Johnsbury participant. “It’s important for me to live close to public transit,”

added a Middlebury participant. “It’s part of my wish to have a low carbon footprint.”

Many who attended the Board’s forums spoke about their wish for more public-transportation options as well as a wish for better walking and biking facilities so they could drive less.

“I want to live in a rural community with the ability to bike and walk safely,” said a Waterbury participant, echoing the sentiments of many. “I own a car and would like to do away with it if I could, but I can’t because I would not be able to get anywhere,” added an Essex participant.

“It’s a necessity for us to have two vehicles,” lamented a St. Albans participant. “I would love to divest from one car to two, but I can’t.” Added another St. Albans participant: “My wife and I each need a car for work, but we would like to get down to one car for the cost savings. Unfortunately, I don’t see that happening anytime soon.”

“I always had one car, but when we moved here we found we needed two,” added a third St. Albans participant.

“I may leave the State of Vermont because I can’t get anywhere without a car,” said a Bellows falls participant. “That would be tragic.”

Vermonters approaching retirement age told the Board they can envision a time when they either want to slow down and drive less, or when their health may force them to drive less. But with few transportation options other than driving a motor vehicle, trying to live such a lifestyle in Vermont will be difficult.

“As a retiree, I want to be close to civilization,” a Waterbury participant said. “I don’t want to be isolated.” Added a St. Albans participant: “As I age, I want to be able to walk to things.”

A Bellows Falls participant said the ability to navigate Vermont without a car also is important to young people, many of whom want to remain in Vermont to become part of its future but who are

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struggling to find ways to make that happen.

“It’s amazing that they want to stay here,” the Bellows Falls participant said. “But to do that, we have to get them to where the jobs are,” which in southeast Vermont is Keene and Claremont New Hampshire.

Even in places where bus routes are available, the last run usually takes place at about 6 p.m. which makes it impossible for young people to work the night shift because “there is no way to get back home,” the participant said. “And if they have to work weekends, good luck” because Saturday and Sunday service is almost unheard of.

“We see these limitations,” the participant said. “These kids are looking to stay here, but it is difficult when they can’t find the means to get where they have to go.”

The Board in 2014 conducted similar forums targeted specifically at young adults. During those forums, many young people mentioned transportation “options” as a key factor when it comes to determining how attractive they find a place to both live and work. But when it comes to options, Vermont is often lacking, they said.

“Cars will always be vital to living in some Vermont regions because of how rural they are,” a young adult told the Board in 2014. “But if we had other options, like frequency of bus service or bike-ways that connect (population) centers, it would help reduce the dependence we have on automobiles.”

THE DECLINE OF DRIVING

Between 2007 and 2013, American motorists significantly reduced the amount they drive, lowering their per capita vehicles miles traveled (VMT) from 10,050 annually to 9,452, a 6 percent decline. This downward trend was even more pronounced in Vermont.

Likely due to the state's rural nature, Vermont residents drive significantly more miles than their national counterparts. Ranked 10th highest in the nation, Vermonters drove an average of 11,356 miles per capita in 2013 compared to the national average of just 9,452. But despite this need to drive a whopping 20 percent more than the national average, Vermonters since 2007 have curtailed their driving habits more than the average American, reducing their VMT between 2007 and 2013 by 8.4 percent compared to the nationwide drop of just 6 percent over the same time period.

Curiously, this dip in local driving is significantly more pronounced than the drop seen in other rural states.

The University of Vermont's Transportation Research Center collects driving statistics that are used to help develop Vermont's Comprehensive Energy Plan. For comparison purposes, the University considers the states of Maine, West Virginia, North Dakota and South Dakota to be so-called sister states to Vermont as they contain similar rural and other characteristics.

Combined, the average driver living in these sister states decreased their VMT 3.7 percent between 2007 and 2013, compared to the national average drop of 6 percent and Vermont's 8.4 percent reduction.

Why Vermonters reduced their driving more than not only the nation as a whole but also their rural cousins in sister states is not exactly known. UVM believes the decline likely reflects a combination of the recent economic downturn, demographic trends and changing travel preferences, particularly among teens and young adults.

In fact, nationwide young people appear to be leading this charge. Citing a recent National Household Travel Study conducted by the Federal Highway Administration (FHWA), the Frontier Group, a national research and policy organization, in 2012 concluded that the annual vehicle miles traveled by a

16-34 year old decreased from 10,300 to 7,900 between 2001 and 2009, which is a 23 percent drop.

Aside from taking fewer automobile trips and driving shorter distances, fewer young people also have driver's licenses. According to the FHWA study, the percentage of young people ages 20-34 without a license increased from 10.4 percent to 15.7 percent during the decade between 2000 and 2010.

To compensate for driving less, the Frontier Group concluded that a large number of young adults (an estimated 77 percent according to the Brookings Institution) plan to move to compact urban areas where they either do not need a vehicle to reach many of their destinations, or when they do drive they can make shorter trips to reach destinations.

As for vehicle ownership, Vermonters own fewer cars and trucks per capita than the national average. But while vehicle ownership is on the decline nationwide, it is actually on the rise here in Vermont.

According to the UVM report, per-capita vehicle ownership nationwide declined between 2007 and 2013 from 1.18 vehicle per licensed driver to 1.15. During this same time period, however, Vermont's ownership rose from 1.04 vehicles per licensed driver to 1.06. Despite this local increase, Vermonters own fewer vehicles per licensed driver than those living in each of their rural sister states, according to UVM.

During the Board's 2014 forums that focused on young-adults, millennials expressed a love-hate relationship with cars. The majority said they owned a vehicle, but many also stated that they do so out of necessity and not because they want to own a vehicle. Given the choice, many said they would rather not own a car. In 2015, few Vermonters older than age 35 expressed an interest in abandoning their vehicles. But many did express an interest in reducing the amount they drive.

"I need my car," a St. Johnsbury participant said. "But I wish I could drive it less."

■ **Combatting Climate Change**

One of the biggest reasons older adults cited for wanting to reduce their driving was climate change. Transportation accounts for about 45 percent of Vermont's greenhouse gas emissions, something the state hopes to reduce significantly by 2028.

Many forum participants said they wanted to do their part to help the state achieve its reduction goal.

"One of my biggest carbon footprints is my car, so I want to use it less," said a Middlebury participant.

"I'm very concerned about climate change," a Waterbury participant said. "I don't want to burn so much gas."

Said a Bellows Falls participant: "I like driving, but I'm aware of climate change and a lot of environmental reasons not to drive too much so I struggle with driving. What I really would like is an affordable electric car."

Electric vehicles were a subject of interest to many forum participants. Several encouraged the state to foster their proliferation by moving quickly to increase Vermont's number of electric charging stations.

Given how few electric charging stations Vermont has, "electric cars are really only for people who drive a short distance," said an Essex participant. "They really are not for those who drive all around the state."

"The problem with electric cars," the Essex participant said, "is I like to go to Montpelier... but if I can't charge my car I might have to spend the night."

The participant said he is aware that Montpelier does have charging stations. The concern is that there are not enough of them, and upon arriving they may all be in use.

"Unless you are guaranteed a charging station, you can't go more than a few miles from your home," the participant said.

Speaking to this issue, the Vermont Energy Investment Corporation in a written comment encouraged the state to "accelerate the transition towards the electrification of transportation" by supporting the Vermont Zero Emission Vehicle Action Plan, which outlines ways Vermont can achieve a smooth and well-planned transition from a vehicle fleet propelled by fossil fuels to one that is charged by electricity.

While helping to save the environment was on

some participants mind, the cost associated with driving was on others. Several attendees said the reason they would like to either drive less or not own a car was financial.

"Owning a car is expensive," said a Waterbury participant.

"Given the cost of insurance, maintenance and fuel, who would not want to cease being an indentured servant to the auto industry?" asked a Middlebury participant.

Participants encouraged the state to support ways more Vermonters could quickly and effectively navigate Vermont without having to own a motor vehicle.

"I don't believe our dependence on a car is sustainable," said an Essex participant. "I want to be part of the solution, but I need ways to make that happen."

A Bellows Falls participant expressed similar sentiments.

"I lived 13 years in Burlington without a car," the participant said. "When I moved here I also tried to resist, but I found it hard" due to a lack of alternative transportation. "If alternative means could be expanded so people could do without a car, that would be great."

■ **Car Sharing**

One of the tools that allows people to make due without a personal motor vehicle is car sharing, which is still in its infancy here in Vermont.

Established in December of 2008, Carshare Vermont offers a variety of vehicles for short-term rental (usually by the hour) at 15 locations around Burlington and 1 location in Winooski. The not-for-profit company in 2015 teamed with the Agency of Transportation to expand beyond the greater Burlington core to place two vehicles in Montpelier.

Zipcar, a national for-profit car sharing company, also has a limited presence in Vermont offering services for five total cars in Middlebury, Poultney and Royalton, which are mostly college communities.

Carshare Vermont users must be members. The cost of membership plans range from as little as \$5 per month for those who infrequently need a vehicle, to \$15 per month for those who need a vehicle more than an average of five hours per month. Vehicle reservations can be made via phone or on the

Internet. Cost is typically \$5.50 per hour plus 30 cents per mile, which includes insurance. Day rates are also available.

Carshare vehicles range in size, most are economy cars with hatchbacks, but Carshare Vermont does offer one truck – a Toyota Tacoma – and one mini van – a Dodge Caravan – for those who either need to haul bulky items (think transporting yard waste to the dump or moving furniture) or transport several people. Some cars come equipped with bike racks during warm-weather months and ski racks during the winter.

Young adults in 2014 overwhelmingly called for the expansion of such car-sharing services. Older adults in 2015 were not as gung ho – they questioned how rural Vermont communities could support such a service – but those who expressed interest said proliferation would not only make it easier to live without a car, but also would allow families that currently own two cars to divest to just one.

“Something like this would be ideal for my family as we could give up a car because I could get where I needed to once or twice a week,” said a St. Albans participant.

“I would shed my car if I had access to car sharing,” said a Middlebury participant. “This is a really important resource.” Said an Essex participant: “Car sharing is something that can allow someone who would like to live without a car make that leap.”

A Middlebury participant who does not own a car agreed.

“I choose not to own a car and use public transit,” the participant said. “It takes an hour to get to Burlington. Car sharing would make this trip much easier and allow me to do what I need to in a much shorter amount of time.”

Several participants encouraged the state to work with car-sharing companies to coordinate the location of their cars with local bus service.

“If you have to drive to get to the car, this is not going to work,” a St. Albans participant said. But “if you tie this into public transit it would allow people to get to the market, or skiing, or wherever they need to go,” another St. Albans participant said.

The majority of forum participants who spoke

“I would shed my car if I had access to car sharing,” said a Middlebury participant.

“This is a really important resource.”

on this subject encouraged the state to expand its partnership with car-sharing companies to more communities than just Montpelier. Others, however, questioned the cost.

“How much is this going to cost the taxpayer?” asked a St. Albans participant. Another St. Albans participant concurred. “Most things are possible, but there is a cost,” the participant said. “You cannot equate this to a bus or a train... We are a small state... I just don’t see this happening here.”

Even some supporters of car sharing questioned how many Vermont communities could support such a service. They thought car sharing could be successful in urban centers such as Rutland, St. Albans, St. Johnsbury, and Brattleboro, but they questioned how the finances would work in more rural areas.

“In the bigger cities, I could see this working,” said a St. Albans participant. “But I just don’t see it working in small towns.”

Others, however, said the mobility of people who live in small towns where there is either limited or no public transportation would be greatly buoyed by car sharing.

“If there was one parked in Dummerston village or in other rural towns this would help people outside of places like Burlington, Winooski and Montpelier,” a Bellows Falls participant said.

Most participants, however, expressed no preference. They encouraged the state to monitor how well car sharing works in not only Vermont towns but those in other states, and explore the idea of spreading it to places where research and data says it makes sense.

“If you build this, people will use it,” a St. Albans participant said. “Focusing on this and spending some time looking into where it would work is not a bad idea.”

WALKING AND BIKING

Nationwide, the number of Americans who walk and bike to work is increasing. Using data supplied by the Alliance for Biking & Walking, the Frontier Group in 2013 calculated that the increase is substantial.

According to a Frontier Group report titled “A New Direction, Our Changing Relationship with Driving and the Implications for America’s Future,” the number of American workers commuting to work by bicycle increased by 39 percent between 2005 and 2011, while the number of people commuting on foot increased by 20 percent between 2005 and 2009.

Similarly, a significant increase in commuting by bicycle also was reported in 2013 by Streetsblog.org, a national non-profit organization with a mission to inform people about sustainable transportation and livable communities.

Using data from the U.S. Census Bureau’s American Community Survey, Streetsblog reported that 0.61 percent of the nation’s overall commuting public, about 865,000 people, reported biking as their primary method of getting to work in 2011, which is a whopping 61 percent jump from a similar survey conducted in 2000.

More recent information using American Community Survey (ACS) data collected by the University of Vermont Transportation Research Center indicates that the nation’s number of bicycle commuters continues to rise. According to UVM, an average of 0.63 percent of Americans, an uptick of 3.2 percent over the 0.61 percent calculated in 2011, reported commuting to work by bicycle between 2011 and 2013.

Interestingly, UVM found that Vermonters, despite the harsh winter climate, bike to work significantly more often than their national counterparts.

According to UVM, which worked with VTrans to compile the Agency’s 2015 Vermont Transportation Energy Profile, nearly 1 percent of Vermonters reported bicycling to work between 2011 and 2013 compared to just 0.63 percent of workers nationwide.

UVM also reported that Vermonters walk to work significantly more often than the average American. Again using ACS data from 2011 to 2013, UVM found that 6.2 percent of Vermonters reported walking to work, which is substantially greater than

the 2.9 percent of Americans nationwide that reported commuting on foot.

When walkers and cyclists are combined, 7.2 percent of Vermonters, according to UVM, either walked or bicycled to work as their primary mode of transportation between 2011 and 2013, compared to just 3.6 percent nationally.

UVM also found that when compared to states with similar rural and other characteristics, Vermont’s population still out walks and out bikes them all.

For comparison purposes, the University considers the states of Maine, West Virginia, North Dakota and South Dakota to be so-called sister states to Vermont. Of these four, South Dakota came closest to Vermont, reporting that 5.1 percent of its population regularly bikes or walks to work, compared to 7.2 percent of Vermonters.

While data associated with commuting is tracked by several sources, reliable biking and walking statistics related to either non-work trips or recreational activity is more difficult to obtain.

In its 2015 Transportation Energy Report, VTrans found that a 2009 National Travel Household Survey conducted by the U. S. Department of Transportation concluded that 31.6 percent of Vermonters reported taking five or more trips on foot during the past week, compared to just 26.6 percent nationally. The same survey concluded 3.6 percent of Vermonters reported taking five or more bicycle trips during the past week, compared to just 2.2 percent nationally.

The VTrans report, however, cautioned that this data may not be reliable because it is based on “self-reported tendencies as opposed to diary records.” And when people self report travel tendencies, they “tend to overestimate rates of actual bike and walking.”

■ Safety & Infrastructure

While reliable Vermont walking and biking statistics may not be available, those who attended the Transportation Board’s 2015 forums overwhelmingly said

that the ability to walk and bike to destinations has become increasingly important to them over the years, but safety concerns often prevent them from abandoning their automobiles.

“It all comes down to safety,” a St. Johnsbury participant said. “If you feel safe walking and riding a bike, you will walk and ride a bike. If you don’t feel safe, you won’t.”

Said an Essex participant: “We have a long way to go before biking and walking is a viable alternative to a car.”

At every forum, Vermonters told the Board that the main obstacle that prevents them from walking and biking to more destinations is safety.

“The biggest issue is safety, an Essex participant said. “People have to feel safe. I’m an experienced rider and will ride in places other people won’t. But it’s very individual. People won’t do something when they don’t feel safe.”

Suggested safety improvements ranged from building more sidewalks and bike paths, to better maintaining the ones that we already have. Enacting a law that would require motorists to give walkers and cyclists at least three-feet of clearance when passing also received some support.

Safety would be enhanced if law enforcement cracked down on aggressive cyclists, some participants said.

“I have seen cyclists blow through stop signs and lights at top speed, apparently thinking motorists can stop on a dime,” a Bristol resident wrote via the Board’s website. “It isn’t a matter of who would win in the battle between a car and cyclist. It’s a matter of who is creating the hazard. It would be wonderful if cyclists received tickets for not following the rules of the road, as do motorists.”

Numerous cyclists expressed frustration that Vermont roads often lack significant shoulder width to safely separate them from passing motor vehicles. And when a road does have adequate shoulders, the shoulders often contain crumbling pavement that makes them impossible for a bicyclists to use.

These sentiments closely mirrored those expressed by millennials who attended the Board’s 2014 forums. And just like those young people, older Vermonters stressed that the best way – some said the only way – to adequately address safety is for the state to invest in the proliferation of transportation

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infrastructure such as sidewalks, dedicated on-road bike lanes, and multi-use paths that are separated from automobile traffic.

“The biggest part of this is the infrastructure,” said an Essex participant who mentioned that in Holland communities like Amsterdam contain separate facilities for each mode of transportation. “In Vermont, we talk about complete streets and other concepts but we seem to do very little. We need to relook at how we design our communities.”

Said a Waterbury participant: “Having an interconnected network of biking and walking facilities is very important... as are having rural roads with shoulders. The important thing is to have links between these facilities that are very safe.”

Forum participants encouraged the state to prioritize such infrastructure development and plan to make them a reality.

“It is very frightening to bike on our roads,” a Middlebury participant said. “I would like to see the state prioritize things so they work for everyone. That would include bike lanes, wider shoulders, and bike paths separated from motor-vehicle traffic wherever possible.”

Such planning, a Waterbury participant said, must be for “a coherent system of bike paths and sidewalks that includes crosswalks with sound pedestrian lighting.”

This kind of effort must include significant input from the local community, a St. Albans participant said. “Seek priorities from individual communities so you can customize solutions,” the participant said.

VTrans in recent years has, in fact, begun efforts to understand where it should prioritize roadway improvements that advance bicycle safety. A St. Johnsbury participant, however, questioned the fairness of the methodology used in some of these efforts, saying it relied on data collection that

discriminates against rural communities.

“This is a concern,” the participant said. “The methodology used cell-phone data and we don’t have good cell coverage throughout the Northeast Kingdom. As a result, we were underrepresented... So based on this methodology, we may not be in line for some of the funding that we should be.”

VTrans acknowledges purchasing statewide data from the mobile app company Strava when doing its analysis, but according to the Agency the app collects data via GPS technology and therefore is not dependent on cell-phone coverage. GPS technology does not have the same limitations in mountainous regions as does cell phone service.

■ Wider Shoulders and More Sidewalks

Many forum participants said they agreed with an existing state policy to establish 3-foot shoulders on as many roads as possible when those roads are repaved. But several others encouraged the state to go one step further and narrow the standard 12-foot travel lane to 11 feet in most places to gain additional room for cyclists.

“Eleven-foot travel lanes and four-foot shoulders is the sweet spot,” said a Waterbury participant.

A Middlebury participant encouraged the state to create a bike-friendly corridor connecting Bristol to Vergennes while passing through Middlebury. The participant then added: “I would like to see narrower roads and wider shoulders... I’d like to see that standardized across the state.”

And once these wider shoulders are established, the state needs to stencil cycling logos at regular intervals within these lanes to not only encourage cyclists to use them, but as a way to educate motorists that these roadways are purposefully designed for bicycle use.

“Every time a road is paved it should be paved with cyclists in mind,” a Bellows Falls participant said. “Paint a bike logo (within the shoulder) so that drivers expect bikers to be there.”

While many people focused on creating bike lanes, others stressed a need for additional sidewalks.

“We need connectivity,” said a St. Johnsbury participant. “I live in Barton Village and I can’t walk to the school on a sidewalk. I also can’t walk to Crystal Lake – our greatest natural resource – without walking in the road.”

A Middlebury participant expressed a similar frustration: “I live a mile outside of town. For years now, we have been told they will put sidewalks in our neighborhood.... But year after year we see nothing.”

Forum participants were well aware that building such infrastructure would cost money. They encouraged lawmakers to either raise additional funds or reprioritize the way some transportation funds are currently allocated.

“To do this, we need more money,” said a St. Johnsbury participant, echoing the sentiment of others around the state.

Another St. Johnsbury participant reminded the Board that Vermont has an aging population. As people age, they drive less and seek alternate transportation more often, the participant said. So in the near future, the call for better bike and pedestrian infrastructure, as well as for increased access to public transportation, will only grow, the participant said.

“The 60-to-75 age group is the biggest growing segment of our population,” the participant said. Providing for this population’s needs only will increase in importance “so I hope you all throw lots of money at it.”

■ Better Maintenance

While building new bike and pedestrian infrastructure was encouraged everywhere the Board visited, forum participants also said the state, as well as Vermont’s cities and towns, need to better maintain the infrastructure they already have, especially when it comes to sidewalks.

“I love to walk, but the issue is maintenance of sidewalks... they are crumbling,” said a Bellows Falls participant.

“Having sidewalks is very important, but having well maintained sidewalks is particularly important – especially in the winter,” said a Waterbury participant.

“It’s very difficult to walk in Vermont during the winter because the roads are often better maintained than the sidewalks,” added another Waterbury participant. “So I end up walking in the road, which is dangerous.”

While many advocated for better snow-removal along sidewalks, year-round cyclists called for better plowing techniques when it comes to maintaining roadway shoulders.

“There are beautiful shoulders along Route 7,” said a Middlebury participant. “But during a storm when they plow, they spray slushy water onto the shoulders which turns into ice that can last a week or two. I would like to see them make sure they plow the shoulders as well.”

Cyclists for years have told the Board that one of the best things the state can do to improve their safety is maintain roadway shoulders so they do not crumble. Well-paved shoulders ensure cyclists do not have to suddenly, to the surprise and often anger of motorists, “take the lane” in order to ride safely.

This message was reiterated during 2015.

“A big issue is the pavement to the right of the fog line and the condition that it’s in,” said a Bellows Falls participant. “It’s the first part of the roadway that crumbles, and it is the last place to get repaired.”

Preventing crumbling pavement is one critical issue, cyclists said. Sweeping roadway shoulders each spring to remove winter debris, which also forces cyclists to take the lane for safety, is another.

Both state and town road crews “need to sweep the roads,” a St. Albans participant said. “The way they think now is to let the summer rains take care of it. But that is not cutting it.”

“A big issue is the pavement to the right of the fog line and the condition that it’s in,” said a Bellows Falls participant. “It’s the first part of the roadway that crumbles, and it is the last place to get repaired.”

Participants also called for outreach campaigns designed to educate motorists that it is their responsibility to safely share the road with cyclists. Such campaigns should involve a combination of public media, roadway signage and better bicycle-safety awareness during driver education classes.

“Every time I ride a bicycle I risk my life,” a Bellows Falls participant said. “There has to be a campaign to keep people from killing me.”

PUBLIC TRANSPORTATION

Nationwide, use of public transportation is growing. In 2013, the Frontier Group after reviewing data provided by the U.S. Department of Transportation's Federal Transit Administration concluded that Americans in 2011 took nearly 10 percent – or 900 million – more trips by public transportation than they did in 2005.

The Frontier Group used additional data attributed to the Federal Highway Administration to show that not only are Americans taking more trips on buses and trains, but they also are travelling significantly more miles. According to the group, Americans increased their annual number of passenger miles travelled on public transit by 10 billion between 2001 and 2009.

More than 60 percent of this growth, the Frontier Group concluded, is attributable to young people between the ages of 16 and 34.

Vermont does not track public transit ridership by age, but statistics kept by the Vermont Agency of Transportation show a similar overall growth trend.

According to VTrans, Vermont public transit providers logged 4.57 million riders in 2011. This total grew to 4.84 million riders in 2014, a 6 percent increase. It is worth noting, however, that Vermont's 2014 numbers were negatively affected by a multi-week bus-driver strike at the Chittenden County Transportation Authority, the state's largest public transit provider. VTrans estimates the strike to have cost the organization about 150,000 riders.

Had the strike not occurred, it is believed the state's 2014 passenger total would have been about 5 million, which compared to the 2011 total of 4.6 million represents nearly a 9 percent increase over the four-year period.

Passenger rail ridership across Vermont is also on the rise.

Vermont offers two intercity passenger train routes via Amtrak. Each route offers one round-trip service per day.

The Vermonter – which stops in the Vermont towns of St. Albans, Essex Junction, Waterbury, Randolph, White River Junction, Windsor, Bellows Falls and Brattleboro – makes numerous connections in New Hampshire, Massachusetts, Connecticut, New York, Pennsylvania, Delaware, Maryland and the District of Columbia, while Amtrak's Ethan Allan

Express offers train service from the Vermont towns of Rutland and Castleton to several New York destinations, including transit hubs in Albany and New York City.

In the decade between 2005 and 2014, train boarding and disembarkation at Vermont stations increased 89 percent from 57,121 to 107,688.

While Vermont's Amtrak routes are designed to primarily provide interstate service between Vermont and points south like New York, Connecticut, and Washington D.C., the Vermonter train in recent years has experienced a significant uptick in passengers traveling from one Vermont location to another.

In 2004, only 3 percent of those who boarded the train at a Vermont station disembarked elsewhere within the Green Mountain State. By 2013, such interstate travel had grown to 12 percent, for a total of 8,400 riders.

Not surprisingly given the state's rural nature, a lower percentage of Vermonters commute to work by bus or train when compared to the national average. According to figures compiled by the University of Vermont for VTrans, only 1.3 percent of Vermonters use public transportation as their primary method of getting to work, compared to 5.3 percent of commuters nationwide.

Vermonters, however, according to UVM take the bus to work significantly more often than commuters in Vermont's sister states of Maine, North Dakota, South Dakota and West Virginia, where residents use public transportation only between 0.4 percent (North Dakota) and 0.8 percent (West Virginia) of the time.

Despite more people in recent years riding both the train and the bus, participants at all six of this year's Transportation Board forums – as did millennials before them in 2014 – criticized Vermont for not offering enough public-transit options.

Participants said buses and trains in Vermont do not run often enough to be convenient, they don't

run late enough into the evening to accommodate their schedule, and they don't reach many of the places to which they would like or need to travel.

Even if they can use public transit to reach their ultimate destination, participants said doing so often requires multiple connections if they need to travel any kind of distance, which makes the trip take so long that using public transportation is not worth the effort.

"When I use the bus to get to Bennington to visit my daughter, it takes five hours," said a Middlebury participant. "So when I get there, it's pretty much time to turn around and come back."

Added another Middlebury participant: "People will ride public transit if it is done well... It's an issue of putting a system together that works... People want to use public transportation, but they don't use the system that we have because it does not work for them."

■ Economic Opportunity

An Essex participant who lives in Jericho but needs to travel regularly to Burlington echoed the sentiments of many across the state when she said she would save money by using public transportation, but Vermont does not provide frequent enough service that she can abandon her car.

"I would like to get to the point where I don't need a car because owning a car is becoming very unaffordable," the participant said. "I would like more public transportation because right now there really is none... There is only a bus that leaves early in the morning" (6:50 a.m. and 7:20 a.m.) and does not return until late in the afternoon (5:20 p.m. and 6 p.m.).

If you live in a Vermont community outside a hub city, you can catch a bus either "early in the morning or late in the afternoon, but not in the middle of the day," said a Bellows Falls participant. "There is no middle ground."

The inability of low-income residents to commute via public transportation to employment centers from outlying communities is a factor that often prevents rural Vermonters from finding work, participants said.

"Two thirds of the unemployed want to work but have lost their jobs because they don't have transportation," said a St. Albans participant who works in

social services. "I know it's expensive, but if we had (a significant network of) bus routes, these people would be working and not collecting public assistance."

A Vermont resident who works with low-income Vermonters in Barre echoed this sentiment.

"The lack of personal transportation affects everything" low-income Vermonters "do or want to do," the participant said via email. "Their options and opportunities are limited to what is immediately local. And let's face it, in parts of the state that means they are effectively trapped at home for want of a car."

Nowhere is this issue more significant than in the Northeast Kingdom, said participants who attended the Board's forum in St. Johnsbury.

"If we improve public transportation in the Northeast Kingdom, we will see a lot more people going back to work because they want to work. They just can't get there."

Said another St. Johnsbury participant: "We need more public transportation. In the Northeast Kingdom, we have the lowest incomes and the lowest job rate of anywhere in the state. Therefore people just don't have the money to buy a car. We need more options because what we have is not enough."

Individual bus lines that connect rural communities to economic hubs was one issue of concern. Ensuring these routes make timely connections with other bus or train routes so people can use public transportation to travel longer distances was another.

"Going from one system to another seamlessly is key," a Bellows Falls participant said. As is ensuring that buses that make such connections run on time so you don't get stranded for hours, or possibly even overnight, because you miss the one and only connection, said others.

Bus systems must also include regular connections to other modes of public transportation such as train stations and airports, participants said. These connections are financially important because depending on where you live, taking a taxi to these facilities can cost more than the plane or train ticket.

"There needs to be much better public transportation to the Burlington airport from places like Montpelier," A Waterbury participant said.

Participants who live in southern Vermont expressed similar sentiments when it comes to reaching Bradley International Airport outside of Hartford,

CT as well as the airport in Albany, NY.

“Connections to the airport are something people really want,” a St. Albans participant said.

■ Greater Headways & Evening Service

While the lack of bus service to rural communities where lower-income Vermonters can afford to live was a critical issue for many, those who can afford to own cars were also critical of the state’s current public-transportation offerings.

State policy makers have set goals to both reduce carbon emissions and curb congestion created primarily by the drivers of single-occupancy vehicles. Yet Vermont offers little in the way of alternative transportation for those who want to curtail their driving.

“We need more bus routes to outlying towns like Enosburg and Richford that get people back and forth to St. Albans,” a St. Albans participant said.

Participants across the state echoed this sentiment. The only difference was when they spoke they mentioned the need to connect cities and towns within their home region, whether it be connecting Newport and White River Junction to St. Johnsbury, or connecting Middlebury south to Rutland or north to both Vergennes and Burlington.

“We need more regular service to these destinations, as well as service that runs later into the evening,” a St. Johnsbury participant said.”

The need for evening bus service was a common theme in 2014 when the Board met with millennials. In 2015, older Vermonters said such service was not only critical for those who work nights, but establishing night bus service also is key for people to attend recreational events, many of which take place in the evening.

“I live in Waterbury and I like to go to the movies in Montpelier,” a Waterbury participant said. “I can get there by bus in the early evening, but I can’t get a bus home when the movie lets out.”

An Addison County resident who regularly uses the bus to commute to work in Middlebury said “I am often expected to attend events and meetings after the usual end-of-day at 5 p.m. But because the last possible bus home leaves just before 6:30 p.m., making these meetings is often extremely inconvenient or impossible.”

Those outside of the Burlington core who wish to

“Vermont’s population is aging, and as we age most of us at some point will give up our cars,” said another Waterbury participant. “So it will be even more important in the future that the state supply public transportation.”

use public transportation on weekends for recreation or shopping also find themselves similarly out of luck.

“I was told the (Burlington to Middlebury) link was going to run on the weekends, but I am still waiting to see it,” a Waterbury participant said. The link “should also operate longer hours... so that people can spend the day in Burlington,” said a Montpelier resident via email.

“Vermont’s population is aging, and as we age most of us at some point will give up our cars,” said another Waterbury participant. “So it will be even more important in the future that the state supply public transportation.”

The state’s decision whether or not to increase public-transportation options could mean the difference between seniors being able to stay in Vermont or being forced to move to another state, said a Central Vermont resident participating via the Board’s website.

“I do worry about what happens in the future when I will no longer be able to drive,” the resident wrote. “I expect at some point to have to leave Vermont and move closer to family to maintain some independence.”

■ Paying For New Services

Since the beginning of the decade, Vermont’s overall transportation budget has risen nearly 9 percent, from \$567 million in fiscal year 2010 to \$616 million in fiscal year 2016. During this same time period, Vermont’s annual public transportation budget has increased just 3 percent, from \$26.3 million in FY10 to \$27.1 million in FY16.

Forum participants questioned how the state

could increase annual overall transportation spending nearly \$50 million, yet only dedicate an additional \$800,000 to public transportation.

“The general transportation budget went up significantly while the public-transportation budget pretty much stayed stable?” questioned a St. Johnsbury participant. “That is ludicrous.”

Given the recent increase in transportation spending, “I’m dismayed to see that bike-ped is only 1 percent of the overall budget, transportation alternatives only 0.3 percent, and public transit only 4.4 percent,” said a Shelburne resident via the Board’s website.

“There is too much subsidy going to the infrastructure that supports driving cars,” said an Essex participant. “It amazes me how many people in Vermont want to use public transportation, which is a viable tool to reduce traffic. People want more of it.”

If the Legislature can’t see fit to provide public transportation its fare share of these revenues, then it should seek ways to raise additional funds to improve bus and train service, participants said.

“It’s time to increase the gas tax,” said several forum participants, including one in Middlebury. “With the price of fuel so low, it’s time to do this and use the money to fund these things.”

■ Intercity Train Expansion

As already stated, 107,688 riders in 2014 either exited or boarded Amtrak trains at Vermont stations. The Vermont Energy Plan sets a goal of increasing this ridership to 400,000 annual passengers by 2030. To get there, the Vermont Agency of Transportation established four priorities, and is working to accomplish each within the next decade or so. These priorities are:

- Extend the Ethan Allen Express Amtrak service to Burlington.
- Extend the Vermonter Amtrak service to Montreal.
- Establish Amtrak service between Albany, NY and Burlington through Bennington and Manchester.
- Add a second roundtrip to Amtrak’s Vermonter service.

Forum participants widely supported these priorities, and encouraged policy makers to make them happen as soon as possible.

“There is too much subsidy going to the infrastructure that supports driving cars,” said an Essex participant. “It amazes me how many people in Vermont want to use public transportation, which is a viable tool to reduce traffic. People want more of it.”

“These are all good ideas,” a Middlebury participant said. “Do them.”

Said a St. Albans participant: “These priorities are spot on... especially adding a second Vermonter run.” Another St. Albans participant agreed: “Establishing a night train from Montreal to New York City is a good idea.”

While people generally recognized that train service from Vermont to the rail hubs of Montreal, Albany, NY and New York City were important, some also mentioned a need to connect to Boston.

“What you have are great priorities, but in this area there already is bus and train service to New York,” a Bellows Falls participant said. “But it is hard to get to Boston.”

Northeast Kingdom residents noted that they were generally left out of VTrans rail plan, and called for the state to figure out a way to connect them.

“Extending train service to Montreal is a no-brainer,” a St. Johnsbury participant said. “But the Northeast Kingdom has nothing on that map, so how do we connect to the service? Give us bus lines that connect to the service.”

Other St. Johnsbury participants called for light rail to be established along the area’s existing track network to serve communities north of White River Junction.

These lines could be used for passenger service, “but the freight railroads (who control the lines) don’t want it,” a St. Johnsbury participant said. “The state should get behind this and make it happen.”

When it extends the Ethan Allen Express from Rutland to Burlington, VTrans current thinking is to also add a stop in Middlebury. Addison County residents supported this, but some also asked that a stop

in Vergennes be included. Shelburne residents also asked for a stop, while a Sudbury resident requested a stop in Brandon.

“We have a train station in Vergennes that the state has put \$1 million into (for renovations) and it is ready to go,” a Middlebury participant said.

Train enthusiasts also had another gripe: Vermont offers little in the way of bus connections to its train stations, making the rail system unusable unless a car is involved.

“The Vermonter train stops in Waterbury,” which is about 20 miles from my home, a Hyde Park resident wrote via email. “But the Route 100 regional bus, which starts in Morrisville two miles from my house, doesn’t connect to the train station.”

■ Establishing Commuter Rail

While expanding Amtrak’s interstate passenger service has been discussed by the Vermont Legislature for years, the Transportation Bill passed in 2015 for the first time called for VTrans to assess the feasibility of establishing commuter rail service between Montpelier and Burlington, as well as between St. Albans and Burlington.

This study will not be complete for another year, so no details or cost estimates are available. This lack of information, however, did not stop forum participants from expressing early opinions, which were mixed. Some loved the idea, while others questioned adding such an additional cost to an already stressed transportation budget.

“I’m skeptical,” said a Waterbury participant. “For long distance travel, I think trains are great. But as a rural state, we should put money into flexible buses” when it comes to commuter service.

“How are we going to pay for this in a small state?” asked an Essex participant, echoing the thoughts of others, including some in St. Albans where possible service is being studied. “Everybody is being taxed to death now. I think this is a pipe dream.”

Others disagreed.

Creating commuter rail along these two corridors “should be a no-brainer,” said a St. Albans participant. “Given all the track upgrades that have recently been done, commuter rail service is going to get you there just as fast as you can drive.”

Said a Middlebury participant: “I live in Burlington and work in Middlebury, and I drive everyday. But if there were a train, I would use it... This kind of service could also help attract young people to Vermont.”

Although there was no consensus regarding the potential establishment of commuter rail, nearly everyone agreed that any new train stops that are established in Vermont, whether they are commuter service or intercity Amtrak service, should include timely connections to local bus routes.

“Make sure the trains are coordinated with the bus schedule,” a Middlebury participant said.

Such bus connections not only would aid Vermonters in their wish to decrease their reliance on motor vehicles, but the connections also are critical to ensure that tourists can maximize their experience in the Green Mountain State.

“Making sure we can go to Montreal and New York is great, but we also should be thinking about getting people from these places here to Vermont,” a St. Johnsbury participant said. “We have to have the transportation infrastructure for them to get around once they get here.”

Traveling by train should include an easy way to take your bicycle – something Amtrak has promised but not yet delivered – as well as offer a quality food and beverage service, participants said.

“I was appalled with the food situation on the train,” said a Waterbury participant, echoing a sentiment the Board has been hearing for years. “If you want to successfully compete for travelers, you have to do these services well. On the train, this service needs to be improved.”

HIGHWAY SAFETY

Vermont highway fatalities and roadway crashes transcend geography and whether a community is urban or rural. According to statistics kept by the Vermont Agency of Transportation, the Green Mountain State annually experiences about 12,000 crashes, of which some 2,000 result in injury, including more than 300 incapacitating injuries.

On average, Vermont roadway crashes result in 70 highway deaths. Data shows that during a recent five-year period, nearly 75 percent of Vermont's 251 towns had at least one fatal crash occur within its borders. Quite literally, highway crashes and deaths happen everywhere.

Not all of Vermont's 2015 data is in. Preliminary totals, however, show the year is on track for the state to experience more fatal crashes than it did during 2014, but still significantly fewer fatal crashes than the state's longtime average.

Highway fatalities in Vermont dipped to a modern-era low of 42 in 2014, but they increased to 57 in 2015, which is still well below the state's long-term average of 70.

Details involving Vermont's 2015 fatal crashes breaks down as follows:

- 15 unbelted persons.
- 15 operators suspected of speeding.
- 15 operators suspected of being under the influence of drugs or alcohol.
- 11 operators age 65 or older.
- 24 operators age 64 or younger
- 1 operator under a junior license
- 4 crashes involving a commercial motor vehicle.
- 11 motorcycles.
- 5 pedestrians.
- 4 bicyclists.
- 5 operators under a suspended license.

While both 2014 and 2015 statistically were good years in terms of highway fatalities, the fact that three of the previous four years saw 70 or more fatalities helps to illustrate the need for Vermont to be ever vigilant in its efforts to reduce both motor-vehicle crashes in general and fatalities in particular.

Motor-vehicle manufacturers recently have improved efforts to make their products safer, but at the same time drivers are increasingly distracted by the growing amount of technology that they either carry with them or have installed in their vehicles.

To combat this, the Vermont Legislature in 2014 banned the use of all hand-held mobile devices while driving unless the device is accessed via hands-free technology. In 2015, lawmakers strengthened the law by banning the handheld use of such technology even when the vehicle is motionless at locations like a stoplight.

While the new law is expected to have a positive effect on highway safety, the first of its provisions took effect on October 1, 2014, so it is much too soon to have data capable of assessing its impact.

What we do know, however, is that during 2015 law enforcement officials issued an average of 290 tickets per month for the violation of using a hand-held cell phone. As for texting, law enforcement issued an average of 16 tickets per month during this same time period.

Banning the use of handheld phones and texting are not the only recent safety efforts undertaken in Vermont.

In 2012, VTrans and the Governor's Highway Safety Program reenergized their efforts to enhance highway safety by creating a Vermont Safety Alliance. The Alliance in 2013 updated the State's Strategic Highway Safety Plan, which was initially developed in 2005, and launched renewed efforts to make Vermont's highways safer.

The plan prioritizes safety efforts into six critical emphasis areas – infrastructure improvement, age appropriate solutions for both young and older drivers, curbing speed and aggressive driving, increasing safety-belt use, reducing impaired driving, and curbing distracted driving – of which five are behavioral and only one (infrastructure improvement) focuses on efforts that involve engineering.

This new safety document is telling in that driver behavior and the acknowledgment that motorists need to take personal responsibility for their own safety, as well as the safety of others, is placed front and center.

The Transportation Board at its forums asked participants four basic safety-related questions:

- What can the state do to curb mobile-phone use while driving?
- How can the state get drivers to slow down and pay better attention?
- How can the state reduce driving under the influence?
- Will legalizing marijuana make Vermont roads more dangerous?

■ Legalizing Marijuana

When the Board asked these same questions of millennials in 2014, the marijuana question drew the most consistent response. Almost to a person, young adults said they believed that legalizing the use of marijuana would not deteriorate highway safety.

The reason young adults gave for this opinion was that they did not believe that legalization would cause more people to drive under the influence because legalization likely would not usher in a significant wave of new marijuana users.

The biggest effect legalization likely would have, millennials said, is simply eliminating the legal hassle that those who already use marijuana currently face. As a result, those who currently drive stoned probably will continue. But since it is unlikely that legalization will create a lot of new users, few additional motorists will drive under the influence.

Some older Vermonters who attended this year's forums agreed with this sentiment.

"I agree with the young people," said an Essex participant.

"People are already under the influence and driving," said a Bellows Falls participant, who did not believe legalizing pot would make Vermont's roads less safe. "The big question is if we make it legal, will legalization increase the number of people driving" while stoned?

The opinion that legalizing recreational marijuana use would have a negligible affect on highway safety, however, did not carry the day in 2015. While hardly a millennial who spoke with the Board in 2014 believed legalization would make Vermont highways less safe, the majority of older adults who addressed the issue this year believed otherwise.

"When I was young, I did inhale. And it did not improve my driving," an Essex participant said.

"Will legalizing marijuana negatively effect highway safety? Yes, you bet it will," said a St. Albans participant. "There is no question legalization of marijuana will increase the hazards on the road," added a Middlebury participant.

The problem with both these beliefs, as far as the Board could tell, is that neither was based on actual data. In fact, people with each opinion said they formed their belief after reading studies based on data collected from the State of Colorado – which began allowing the legal sale of marijuana on January 1, 2014.

Several forum participants noted these dueling conclusions based on the same data source, and encouraged Vermont lawmakers to seek the truth before they form their own opinions by gathering accurate data from not only Colorado but also other states, like Washington, that have already legalized marijuana's sale and use.

"Washington and Colorado are tracking these things, and we should be looking at what they have gathered before Vermont makes any decisions," a St. Johnsbury participant said.

"I have a hard time believing that all of a sudden everyone in these states is running out and starting to smoke and drive," added another St. Johnsbury participant. "The data needs to be carefully collected and analyzed before any of us start using it" to support personal positions.

Regardless of their personal belief, those who attended the Board's forums pushed for the state to understand marijuana toxicity levels and to develop ways that drivers suspected of driving under the influence could accurately be tested to determine if their level of intoxication was actually dangerous.

"We have to be prepared," said a Bellows Falls participant. "If marijuana is made legal, we have to have safety measures to determine if you are driving under the influence. And if you are, we have to know what levels are OK and what levels are not OK" to drive, just like we do with alcohol.

■ Cell Phones & Distractions

While marijuana legalization and how it could affect highway safety was a significant topic of discussion for millennials in 2014, older Vermonters in 2015 showed much more interest in other highway safety topics, the most significant being handheld mobile

devices and distracted driving.

Participants gave the Legislature high marks for outlawing the use of cell phones while driving unless the phone is engaged with hands-free technology. But even though hands-free use is now the law, participants said they have noticed no discernible difference in actual driving habits.

In other words, too many people still drive while using their hands to hold their phone to their ear. As a result, participants told the Board that greater enforcement of the hands-free law is needed.

“We are not doing enough to curb cell phones and texting,” a St. Albans participant said. “We can do more.”

Not “enough is being done,” said an Essex participant. “There are a lot of people driving with their cell phone in hand. More enforcement is necessary.”

Said a Waterbury participant: “we have not done a good enough job of enforcing the cell-phone ban. We also need to do more education about this issue.”

In addition to better enforcement, some participants called for harsher penalties.

“There has to be significant consequences,” said a St. Albans participant. “Make sure people pay dearly if they drive while holding their phone.”

How much people ignore the law “is out of control, and we are not dealing with it,” said a St. Johnsbury participant. “The fine of \$162 is a joke. It should be \$500 plus points on your license. The consequences have to have teeth.”

Participants often brought up the State of New York and how it provides pull-off locations along its roadways for cell phone use. They encouraged Vermont to create similar “safe-use” areas.

“New York state has some clever signs on its roads regarding texting, and they regularly advertise their pull-offs and rest areas as a place to pull over and use the phone,” a St. Johnsbury participant said.

Some participants encouraged Vermont officials to work with phone companies and auto manufacturers to develop and require that all new vehicles contain technology that disables cell-phone use when the vehicle is moving. Others called on lawmakers and state officials to lead by example and obey, rather than break, the law.

“It does not help when government officials are also seen driving and using their cell phones,” a St. Albans participant said.

“In a rural state, taking away people’s ability to drive takes away their ability to work,” a Middlebury participant said. “So the state needs to reassess and revise the way it looks at drinking and driving.”

While most participants focused on cell-phone use, others mentioned distraction in general. They encouraged the state to develop education campaigns to keep more drivers focused on the road instead of whatever may be diverting their attention.

“There are more distractions in a car than just cell phones,” said a St. Johnsbury participant. “There is Bluetooth in our ears and stereos... basically the use of technology in general. To help, we have to find ways to mitigate these distractions.”

Vermont’s biggest problem is “not drunk driving or cell phones, it is distracted driving in general,” said an Essex participant. “The only way to solve that problem is through education.”

■ Stop Drinking, Not Driving

As for drinking and driving, participants expressed concern over how Vermont punishes drunk drivers, believing that state policy targets driving when instead it should stop those who violate the law from drinking.

State laws, participants said, focus too much on taking away the offender’s right to drive, which often has the unintended consequence of preventing them from getting to work. Instead, the state should look into ways to curtail an offender’s right to drink.

“In a rural state, taking away people’s ability to drive takes away their ability to work,” a Middlebury participant said. “So the state needs to reassess and revise the way it looks at drinking and driving.”

Another Middlebury participant agreed: “taking away the drinking part, not the driving part, is a good strategy.”

The subjects of impaired driving, cell-phone use, distraction and legalizing marijuana dominated the conversation at all Board forums. Other safety topics,

however, also were raised.

On a positive note, participants applauded the state for its recent proliferation of centerline rumble strips, and encouraged VTrans to create more. On a critical note, participants said the Agency could do a better job maintaining line striping on many roads, particularly at intersections.

A St. Johnsbury participant complained that VTrans sometimes uses too much salt during snowstorms.

“They use too much salt, and it is turning our roads to grease,” the participant said. “We spend millions of dollars annually on salt, and it’s a waste. Use more sand and mandate snow tires.”

Several people said they believed aging drivers pose a safety risk, and called for the Legislature to both impose mandatory retesting based on age, as well as find ways to provide monetary incentives, like breaks in insurance rates, if seniors attend defensive driving classes.

“Older people are going to be a very major part of our population in future years,” a St. Albans participant said. “Some insurance companies will give you a break if you go through a program.”

Other participants called for increased traffic calming measures such as the instillation of flashing speed-limit signs, the proliferation of flashing beacons at pedestrian crossings, and the construction of more roundabouts at busy intersections. Some also called for a reduction in the width of roadway travel lanes from 12 feet to 11 feet, which would create more shoulder room for bicycles.

In fact, participants from all over the state encouraged policy makers to find ways to better educate motorists on the roadway rights of cyclists.

“Find ways to increase driver respect for bicyclists,” a Middlebury participant said. “Trying to address the relationship between drivers and cyclists, which is often adversarial, is very important.”

A Waterbury participant brought the entire safety conversation back to public transit, and said that the proliferation of additional bus or commuter rail lines would reduce the number of cars on Vermont roadways, and therefore make them safer.

“One of the best ways to reduce injury and fatalities on our highways is to increase the amount of public transportation,” that Vermont offers, the participant said.

INDIVIDUAL LOCATION & SPECIFIC CONCERNS

Throughout the Board’s public hearings, including comments made via the Board’s website, Vermonters sometimes raised concerns about a specific highway location or an issue that had nothing to do with the topics already raised in this report. This chapter captures these concerns as a way to bring them to the attention of VTrans, local government officials and the Legislature.

Two Vermonters commenting via the Board’s website independently encouraged policy makers to consider allowing motorized or battery-powered bicycles and tricycles to use Vermont’s roads, sidewalks, paths and trails.

A transportation subcommittee to Brattleboro’s Energy Committee also supported expansion of electric-assisted bicycles, as well as encouraged the Legislature to designate 10 percent of all highway funds for bicycle and pedestrian infrastructure improvements. It suggested allowing the state’s Regional Planning Commissions to play an important role in how these funds are used.

A Morrisville resident encouraged VTrans to expedite completion of the Lamoille Valley Rail Trail.

Several participants questioned why school busses are allowed to pick up only students. They suggested that lawmakers repeal any statutes that prohibit school buses from picking up non-school children, and encouraged local school districts to not only transform these bus routes into a greater form of public transportation, but also consider adding runs during other times of the day.

Several participants encouraged the state to develop a way that people can easily and without liability share their personal vehicles with others. Two participants via the Board’s website suggested the state explore “some form of Uber” that would allow Vermonters to provide rides in private vehicles for a fee.

A Middlebury resident submitted a letter signed by several others asking VTrans to withdraw its plan to replace two downtown Middlebury bridges that cross over train tracks with a tunnel that would involve lowering the tracks to accommodate double-stack train cars. The letter said accommodating double stack is unnecessary because there are many other height impediments elsewhere along the rail

line. Constructing the tunnel would negatively impact downtown commerce for two-to-three years, the letter said.

A participant at the Middlebury forum, however, said the state should work to accommodate double-stack train cars through the region as doing so would allow greater movement of freight by train, which in turn would reduce the number of trucks rumbling down Route 7 and passing through both Middlebury and Vergennes.

A visually-impaired Middlebury resident wrote that the state should add information about “white cane law” to both driver-education classes as well as other motor-vehicle education programs aimed at CDL and motorcycles. The resident also requested that a white-cane question be added to tests associated with obtaining both DMV permits and licenses, and that DMV offices display white-cane informational pamphlets.

■ Carbon Tax

A Vermonter participating via the Board’s website said that because the state offers little in the way of public transportation, lawmakers should reject any proposed carbon tax because both businesses and private citizens have no other alternative but to drive their own vehicles.

A Lincoln Vermont resident wrote and countered this argument by saying a carbon tax is a great way to help fund transportation improvements, and with gas prices so low now is the time to implement such a tax.

The Vermont Energy Investment Corporation (VEIC) also wrote to support a carbon tax, as well as to encourage the state to expand the regional cap-and-trade market into the transportation sector. VEIC also encouraged the Legislature to designate revenue collected via the Vermont Electric Efficiency

Charge – which is experiencing growth due to the proliferation of electric vehicles – to transportation needs.

A Colchester resident via the Board’s website encouraged the state to redesign the Winooski traffic circle as well as the nearby Winooski Bridge to Burlington to be more bicycle friendly. He suggested both dedicated bike lanes and possibly a separate bike-ped bridge crossing the river.

An Underhill resident wrote to say that VTrans’ use of salt brine in the winter is causing cars to rust within 7-10 years to the point where they will no longer pass inspection.

A Jericho resident wrote calling for VTrans to add “some type of protection,” such as a “guard rail or other railing,” at the newly renovated bridge along Route 15 over the Browns River in Jericho Corners that would physically separate pedestrians from vehicular traffic. Furthermore, the resident urged VTrans to adopt some kind of statewide protocol where such separation would become standard on all bridges that involve a similar roadway curvature.

A South Burlington resident wrote to encourage the state to create a safer and smoother way for the local bike path to cross Route 7 near Lindenwood Drive.

An Underhill resident via the Board’s website encouraged the Legislature to require cyclists to obtain a license, hold insurance, ride at a maximum speed, use “strong lights” at night, wear colorful and reflective clothing, and have “basic safety systems” on their bikes that include rear-view mirrors. The state should also outlaw side-by-side bike riding and prohibit VTrans from spending “highway taxes” on railroads, trails, airports and other non-highway items.

■ Swanton Bike Lanes

Two members of the Swanton Enhancement Program wrote encouraging the state to work to make roads in Swanton safer for cyclists by providing bike lanes or bike paths throughout town along “any roads that will allow.” One of the members specifically called for the intersection of Route 36 and 78 to have a bike lane.

The Swanton Arts Council wrote to support the development of bike lanes throughout town, as well as the expansion of both roadway shoulders and sidewalks. Also, a Swanton resident wrote that Route 36 is plenty wide to add a lane for bikers and walkers.

A St. Albans area resident wrote to encourage the state to collaborate with Quebec officials to “finish” the connection between Interstate 89 and Auto Route 35. The resident also urged state officials to work with U.S. Border Patrol officials to “adequately staff” the Highgate/Phillipsburg border crossing so that traffic flows faster. The resident also called for state officials to build the often-discussed highway corridor connecting St. Johnsbury and St. Albans. These improvements would prove valuable to the local economy, the resident said.

Several St. Albans participants said roadway signs along Route 7 north near South Main Street have faded and are hard to read.

A Burlington resident wrote that the bike racks on CCTA busses do not allow for enough capacity, thus preventing families from using a combination of bike and bus to reach their destinations. She encouraged the state to make “integration between bicycle and public transportation” a greater priority within the state’s urban areas.

A Rockingham resident wrote to support the local Dial-a-Ride “volunteer driver” service. The resident wrote that due to limited local bus service it would be impossible to get to doctor or other important appointments without this service, and encouraged lawmakers to continue to fund the program.

■ Bus Service Requests

The Lake Champlain Islands Economic Development Corporation wrote to encourage the state to construct park-and-ride lots in strategic locations within Grand Isle County, as well as to establish bus service both within and to the island communities.

A Waitsfield resident wrote seeking the return of bus or van service from the Mad River Valley to the employment hubs of Montpelier, Waterbury and Burlington. Such a service once existed but was discontinued, said the resident, who also called for more convenient bus service between the twin cities of Barre and Montpelier.

A Moretown resident wrote to support additional bus service between Waterbury and other Central Vermont destinations, as well as for the state to build more long-distance multi-use paths that connect Vermont communities.

A Lamoille County resident said there is no bus service connecting Jeffersonville to Morrisville,

which means Johnson State College students have no public transportation to nearby job markets.

A disabled South Burlington resident wrote that an ADA rider can arrange to get direct bus service to the medical facility at 62 Tilley Drive, but that the bus will not travel an eighth of a mile further down the road to the medical facility located at 192 Tilley Drive, forcing the resident to seek alternative transportation when visiting the facility. The resident also wrote that the pickup window when scheduling demand service is too long, forcing disabled people to sometimes wait outside in the elements for more than 30 minutes.

Several participants complained that bus stops all over the state are located in places that do not contain sidewalks or shelters, which makes them dangerous.

A Charlotte resident called for a gradual reduction in speed limits across the state, except for public-transportation vehicles, so that buses eventually becomes the fast way to travel. The resident also called for the cost to take public transportation to fluctuate so that off-peak fares are cheaper.

A Vermonter wrote that the General Assembly

A Lamoille County resident said there is no bus service connecting Jeffersonville to Morrisville, which means Johnson State College students have no public transportation to nearby job markets.

should pass legislation “friendly” to self-driving motor vehicles. Lawmakers, the Vermonter said, also should pass a law making the motorist presumed to be at fault anytime a cyclist or pedestrian is hit.

A Shelburne resident wrote to encourage the state to consider constructing off-road paths and sidewalks whenever utility work is conducted in a highway right-of-way. Utility work frequently includes grading the right-of-way and clearing vegetation, which is precisely what’s needed to prepare for sidewalk or path construction, the resident said.

CONCLUSION

The Transportation Board thanks all who participated in making this report possible, including the many employees of VTrans who provided background information, the University of Vermont Transportation Research Center which shared data it collected, all of Vermont's regional planning commissions who co-hosted various public forums, the community groups who helped spread the word about the forums and, of course, the nearly 240 Vermonters who participated by either attending a forum or providing the Board with written comments.

The Board's public-forum process is not meant to provide VTrans and the Legislature with a "scientific" cross section of opinions. Participation is both self-selected and 100 percent voluntary. The Board nonetheless considers the information it gathered to be a valuable resource to policy makers.

The people who participated in the Board's process represented a significant cross section of the Vermont population. Most, if not all, were neither activists nor professionals that typically lobby state and local officials for needed changes to the transportation sector, yet their views represent an extremely important perspective.

All across the nation, as well as here in Vermont, the growth rate of vehicle-miles traveled has slowed. After decades of steady increase, the U.S. Information Administration in 2000 projected that by 2010 the total number of vehicle-miles traveled on American roads would reach 3.4 trillion. The Frontier Group, however, noted that the nation's drivers undershot this projection by 11 percent, which is both significant and telling.

Most importantly for Vermont, as the information compiled in this report shows, Vermonters were not bystanders in this national phenomenon. They were leaders.

A review of national driving trends and statistics shows there are two population groups that either drive motor vehicles significantly less than all others, or if circumstances force them to drive as much as everyone else wish they could drive less. These two groups are young adults (ages 16-34) and retirees (ages 65 and older). Vermont faces specific challenges related to both these groups.

Young adults over the past two decades have left Vermont in droves. The number of state residents

between the ages of 20 and 39 shrunk 20 percent – a fall from 187,576 to 149,831 – over the 20-year period between 1990 and 2010, according to U.S. Census data.

This out migration is expected to continue.

According to a 2013 report issued by a legislatively created Population Projection Review Committee, Vermont can expect to see an additional 10 percent drop in 20-to-39 year olds by 2030 should the national economy remain similar to what was experienced since the beginning of the century.

During this same time-period, Vermont can expect a significant increase to its population of those aged 65 and older. According to the same 2013 state report, Vermont is expected to see a whopping 83 percent increase in this population – from 91,078 to a projected 166,996 – between 2010 and 2030.

The Frontier Group rightfully recognizes that "transportation infrastructure decisions have long-lasting implications. Highways, transit lines and sidewalks have useful lives measured in decades – and sometimes centuries. To make the best of limited resources, transportation planners must anticipate trends, 10, 20 or 40 years into the future."

While it is unknown whether the recent trend to drive less will continue, young adults who attended the Board's forums in 2014 overwhelmingly appeared willing to do their part if the state would only aid their ability. The big questions with this age group are will this attitude continue as today's young children grow older, and will today's young adults continue to drive less as they mature?

If the answers are yes, and if seniors continue their long-standing behavior of driving less than they did when they were of employment age, Vermont can expect to see a sizable drop in its

per-capita, vehicle-miles traveled well into the future.

While the aging of Vermont's population by all accounts is inevitable – the 2013 population report predicts an even larger growth in Vermont's older population if the economy significantly improves – the state's projected population drop in young adults appears more malleable. The report still predicts a drop in the size of Vermont's young-adult population come 2030, only a smaller one, should the nation's economy significantly improve.

Either way, these population expectations show that Vermont policy makers need to prepare for what can only be described as a potentially seismic shift in how the state's citizens wish to engage with their transportation system.

To attract more young people, something that is vital to the state's economic wellbeing, as well as to prepare for significant growth in retirees, Vermont must provide both greater public-transportation options and an environment that better caters to the safety and other needs of cyclists and walkers.

The Transportation Board is well aware that the Agency of Transportation has already begun to implement some improvements as well as study some of the details related to these issues.

As examples, VTrans in 2015 worked with Carshare Vermont to subsidize two vehicles in the Montpelier area, track improvements are underway and additional intercity train service is planned to begin later in the decade, and the Agency is working with various partners to develop a plan for revising Vermont's roadway design standards in such a way as to make walking, cycling and taking the bus safer and more convenient.

The Board applauds these efforts, and encourages VTrans to not only continue this work but also spawn other forward-thinking programs.

For more than a decade, the Vermont Legislature

and VTrans have rightfully placed a financial focus on improving the state's long neglected roads and bridges. These efforts, which in recent years produced several record-breaking bridge and paving budgets, have paid off handsomely.

Since 2008, Vermont's number of structurally deficient bridges fell from 494 to 180. Similar inroads have been made with pavement condition. In 2008, some 36 percent of Vermont state highways were rated very poor, while in 2015 the percentage had fallen to only 15 percent.

While there still may be work to do in both these areas, the state soon will reach the point where continued record-breaking or near record-breaking financial investment in these areas will achieve minimal returns. When this time comes, and should overall transportation funding remain strong, Vermont will be well served to shift some of its financial focus to other transportation areas.

To prepare, it would behoove the state to have a firm handle on what Vermonters not only want, but also require, from their future transportation system.

The Transportation Board strongly encourages the Legislature and VTrans to continue what the Board began in 2014, and spend the necessary time and resources to evaluate the wants, needs and wishes of Vermont's future population as all indications are that Vermonters – both young and old – have changed not only their transportation values but also what they expect transportation-wise from their local government.

Proper assessment and planning, as the Board first pointed out in 2014, is critical to ensuring Vermont spends its limited transportation dollars wisely, and is not left with an archaic transportation system that is outdated rather than useful to improving both economic conditions as well as the quality of life for coming generations.

