SUSTAINABLE MONTPELIER COALITION 15 State Street, Montpelier, Vermont 05602

Legislative Presentation to The Vermont Senate Committee on Transportation.

March 13, 2019

We are the Sustainable Montpelier Coalition would like to share our thoughts on local transit with an anticipation of a future request of **YOUR SUPPORT IN CREATING AN INTEGRATED TRANSIT PROJECT INCLUDING AN ON-DEMAND, MICRO-TRANSIT SERVICE IN MONTPELIER. THIS PROJECT WILL DEMONSTRATE THE POTENTIAL TO REVOLUTIONIZE TRANSPORTATION AND LAND USE FOR MONTPELIER AND BEYOND**.

Although our focus is on Montpelier, we believe the work we are doing here will create a model for many other small cities in Vermont. All of us will be dealing with the challenges of climate change and economic changes much sooner that we like to believe. Our effort is to figure out how to make changes in our land-use and ways of getting around so that we will be ready for those coming disruptions.

This mission grew out of a realization of the mis-use of our downtown as shown in this map. Notice how the majority of the land in the downtown surrounding us is dedicated to parking lots, much of it allocated to state employees. One thing we came to understand is that this condition equates land use with energy use. If we are allocating the most valuable and easily built real estate in our downtown to the demanding needs of our Greenhouse Gas emitting commuter cars, we are therefore cutting our city off from the ability for sustainable development. Obviously, we are not alone in this, and most other small cities in Vermont suffer the same mis-use of their downtown land. You can find the parking deserts in downtown Rutland and St Albans and White River Junction.

Two years ago, wondering if there were other ways of imagining this situation, we created the Sustainable Montpelier 2030 Design Competition. The competition attracted 20 entries from around the world. This is the winning design. Not only did this design suggest a denser downtown relieved of total commitment to parking, but also understood that a systematic approach to rethinking our land use required an integrated multi-modal approach to transportation. Here they show a rail link connecting parking on our peripheries with downtown and other new areas of development. That winning design led us to create the Sustainable Montpelier Coalition. Our mission is to find a way of turning these good design ideas into reality.

The first thing the red map indicates is that, in order to free-up that downtown real estate for more sustainable uses, we need to change the demand for this land from parking lots to land for people and green space. Our problem isn't a "parking problem," as so many believe. It is a "transportation problem" which created a "land-use problem." We need to find other ways of getting people in and out of town without their cars altogether. Simply shifting the commuters to EVs, while it might reduce some greenhouse gasses, it isn't going to change the unsustainable land-use reality for Montpelier.

I say unsustainable, because we have at least two demographics who would actually rather live downtown with a car-free lifestyle - than out in our car dependent rural sprawl. Those groups are the elderly who hope to downsize while continuing to be part of our community and the always desired young people who are clearly saying they want an affordable, less car dependent, housing. This is only possible in denser, energy efficient downtowns.

Getting people out of their cars and into town in some other mode of transport is the holy grail of transit planners. Our current Bus systems are created for those who need the service, but not for those who want it. Rail is good for in between city centers, but not for what is now called the "last mile" services. We need to envision a comprehensive service that will be almost as convenient as the personal car and potentially a lot cheaper while absolutely reducing the GHG emissions.

Over the past few years there has arisen a new concept that begins to fill these demands. It is called ON-DEMAND, MICRO-TRANSIT. Since you are probably familiar with the Uber and Lyft services, which are also On-Demand, you understand that computer managed demand response capacity does work. What micro-transit provides is the shared or "pooled" option that allows one multi-passenger van (the micro part) to pick up and deliver multiple passengers all heading in roughly the same direction. Meanwhile, different vans can then pick up people heading in other directions so that you don't have the time consuming fixed route problems of the traditional bus systems where everyone has to go to the same route no matter how long it takes.

We sensed there might be an opportunity to see if such service could work in a more rural environment such as Montpelier. Last September we held a roundtable on transportation for key stakeholders, such as the major employers, the merchants, and public sector representatives, and had presentations on various local transit options. People learned about micro-transit, local rail and remote parking as alternatives for getting people in to work and shop. VTrans was also at the table, and about a month and a half after the roundtable, I got a call from Ross MacDonald up at VTrans informing us that the micro-transit idea was intriguing people and that he had been instructed to create a working group to explore a possible micro transit pilot project in Montpelier. He asked the Sustainable Montpelier Coalition to be the community partner in this effort. We were delighted and honored. We joined with Ross to make sure key representatives of the community were included in the working group.

For our part, we went out to see what is happening in other parts of the country. We discovered that this micro-transit service is not a dream or a proposed concept. There are companies delivering it right now, and their work is demonstrating some notable successes providing service to a number of demographics that we all want to serve in Vermont.

A number of intriguing studies showing new on-demand, micro-transit may significantly raise the number of people using such transit over traditional bus services. But we also see that traditional bus service is declining and most people seem to still assume their personal car will be their mode of transport for the foreseeable future. But, it is beginning to become evident that this transportation habit can be shifted, but not by the traditional fixed-route, fixed-schedule transit systems.

New services can be desirable, but they need to radically change the mission of traditional local public transit which is available to all, but in reality, only carries those who don't have the money for a personal car. New approaches to transit will require listening more closely to the needs and desires of various interests in our local communities and then providing a desirable alternative. For all of our publicly desired benefits of lower carbon output, greater savings to the current costs of the personal car we still cannot assume that people will be wiling to personally sacrifice their precious time, convenience and comfort.

As part of our research for the Working Group, we went out and started talking to various cohorts in town. We were delighted that so many people got it and got excited. For instance, at the Montpelier Senior Center, where they are creating programs for aging in place, people thought this was a "Dream come true". They wouldn't have to scrape ice off the car, search for a convenient parking spot or wait for the fixed-route bus to show up on schedule. They could go downtown and meet friends for coffee, pick up a couple of things at the local market and get home, all without their car. For those of us who worried about our parents safety and when to take the keys away, such a service would be a godsend. The idea of sharing rides seemed more an inducement than a worry.

Actually, one of the key elements that we are discovering about the future of on-demand, micro- transit, was how important it is to create a new sense of public **OWNERSHIP and CONTROL.** This includes planning with the community rather than having an ill attended public presentation to tell people what your future plans will be. We believe this community centric approach will be crucial in helping bridge us into a low carbon, shared-resource future.

We have been doing our own searches on interesting findings from across the country and have discovered some intriguing prospect:.

Displacing personal cars — Our goal is to get the SOV off the road and out of downtown to make the land-use changes we need.

One Chicago study found that 200 shared vehicles could do the work of the entire city's taxi fleet, of 2,700 "This study shows how shared mobility services have the potential to dramatically reduce the number of vehicles on the road and the number of [miles] driven compared to unshared services. "Researchers at the University of Texas at Austin used computer models to show that one shared vehicle could replace over 10 single-occupancy vehicles with wait times less than the time it would take people to get into their cars, park and walk to their ultimate destinations. Emerging data from other trials show substantially greater displacement.

Lowered GHG — Currently, transportation carbon emissions continue to rise in Vermont. Montpelier alone has 6,889 cars emitting 27,900 tons CO_2 annually, with approximately 40 personal electric vehicles saving 60 tons of CO_2 per year. Our hand out for you gives you a graphic and more detailed comparison. Also, an article written by Alex Walker in the NYU ENVIRONMENTAL LAW JOURNAL in 2017 states that "Micro-transit can serve as a badly-needed alternative to private automobile usage, reducing greenhouse gas emissions from transportation. Most importantly, The Institute for Transportation & Development Policy and

UC Davis say: "There can be an 80% cut in CO_2 emissions when communities embrace electrification and ride sharing"

Lowered Cost — We are all aware that rural public transit is expensive on a per ride basis. In one successful project in Arlington, TX the local government only had a small budget and required an end-to-end service with limited ridership. In its first year of service, micro-transit provided over 100,000 rides. Mayor Williams, of Arlington, said "We have hit on something that is tremendously successful that is getting the ridership we've all been hoping for -- at a fraction of the costs of traditional transit".

Social equity — This is a big one. We know you have heard the idea of providing some kind of subsidy for low-income folks to purchase EVs with the VW settlement money. The question is how many cars and how much reduction in CO_2 emissions will the money buy? HOWEVER, shared mobility service like micro-transit, can overcome this problem. It is becoming apparent from local research with employers and service providers, a truly accessible low-cost service will make the difference for income limited folks to get to work, health appointments and other services that are difficult to access at best right now.

In West Sacramento CA, an on-demand, micro-transit service user survey report provides a couple of important findings:

1) Community members of all ages, incomes, educational backgrounds and genders are using the service, however young people under the age of 21 appear to be the most frequent users, followed by older adults who are 50+. Riders are more likely to come from households with between $15,000 and $35,000 household income and are slightly more likely to be women.

2) Specifically, 66% said they feel safer getting around town and 59% had a greater sense of independence. More than half said they are visiting local businesses more often or participating in social activities as a result of their use of the ride-share service, and around 40% said they are more civically engaged, have better access to healthy foods or medical care, and are spending less on transportation expenses every month.

We can certainly share a few of the studies that offered this information, with the committee, if any of you are interested in a deeper dive on the issue.

We started all this work with an understanding that for future environmental and economic vitality in Montpelier's downtown, we need to free-up the land now dedicated to parking lots so they can be used as housing, commercial and public green space. To do this, we cannot succeed without transportation revolution. To meet Vermont's 2025 and 2030 energy goals we may need to skip over Single Occupancy EVs and go directly to next generation of transportation On-Demand, Micro-Transit.

We believe we can make it happen here in partnership with VTrans. Once our Working Group had a good idea of the opportunities in developing micro-transit, VTrans sent out an RFI to companies we had identified as credible entities in the emerging field. From the responses to the RFI we have honed it down to two providers.

The VTrans working group will be producing a white paper on the prospects and a coming budget item for allocation of funds for the proposed pilot project. We hope that this white paper will be available to you before the end of the session.

To fully create a low carbon, efficient, local transit system we need to imagine a future in which the personal car is no longer believed to be the sole source of transportation. That is a challenge one for most folks, but the climate scientists are telling us that we don't have much time to radically adapt to the coming changes. Basically, we can assume things will not emerge as predicted and our environmental and economic futures are more stable than the alarmists state. But if that is not the case, what should we be building that will provide a humane and convenient set of transportation options without the carbon and economic costs of the current one?

We suggest that we can create and manage here in Vermont a transit system that would include two major components. The first is the major trunking connections between city centers. Traditionally, the most cost and environmentally effective source of such trunking were the railroads. Buses, such as the Link Express between Burlington and Montpelier provide a more limited version of such capacity. If we want to impel a post SOV future, then such rail links should be one of the focuses of our efforts.

For instance, there are 900 people a day who commute from Barre to Montpelier. Wouldn't it make sense for them to come by train rather than their personal cars? It could be just as fast and no worries about parking in Montpelier. VTrans has done one study of the cost of the tracks in the whole Burlington to Montpelier region which seems to prove excessive costs for such work. Admittedly, we have heard differently from other parties. We would like to urge a second look with some local construction and railroad people considered in the study.

With the city centers linked through railroad, we can imagine that a lot of the state workers coming from Barre would have a similar walk to work that they now have from state parking. For those workers such as those up at National Life, we can then imagine the "last mile" link provided by the micro-transit. In the morning rush hours there will be a fair number of rides from the periphery coming into downtown, which is also where they can pick up the riders to National Life or those going to one of the peripheral institutions.

This integrated "multi-modal" system could provide a model of how our small cities, networked together, can meet the state's 2025 and 2030 GHG goals. However, such a future can only be created by unique public/private partnerships such as is emerging between SMC and VTrans. It's a time when all parties are figuring out that we have to work together creatively to meet the coming challenges. Not only must we create a system that will allow our current population to respond to the climate and economic crises but we are going to have to figure out how to make our small rural state more attractive to the young

Demographic studies of the Millennials show a deep environmental consciousness and a lot of the cohort's members who do not want to be car dependent. With no affordable places to move to and our rural sprawl demanding the personal car, its no wonder that few young people want to move here. Then, as we mentioned before, there are our elder citizens who would love to age gracefully in place. A well conceived and integrated transit system would offer

them affordable freedom. We have discovered through our local research that the proposed system would be quite attractive to employers (including the State) who don't want to maintain liability of parking lots sending pollutants into the rivers and would love to offer a benefit of low-cost transit to work.

There is a lot more involved in this effort and we hope that we will be able to return in the coming session to update you on the process we are pursuing. This process could be made a lot easier if the Legislature could support a few of the following Asks:

1. Reserve $500,000 of the VW settlement money for purchase of a small fleet of 10 electric vans for the proposed On-Demand, Micro-Transit Pilot Project. And in the following year a similar amount to provide for future regional growth of the service (Such allocation of the VW money is already happening in Providence RI where they will be purchasing electric autonomous vans on a fixed-transit route.)

2. Provide for an alternate rail reconstruction study on the Barre Montpelier link and the money to rebuild track between Montpelier and Barre up to passenger grade. Such a study should include local public input on cost of such upgrade. We know from the response to the Design Competition that the local rail link was widely popular

3. Your response and questions regarding this proposed service would be very helpful in creating the proper approach to the 2021 budget. Before the end of the session, we plan to be sharing with you a white paper that will detail Budget commitment for long term development of On-Demand, Micro-Transit, first in Montpelier and then expanded along the regional corridor.