



TRANSIT-ORIENTED DEVELOPMENT (TOD) PLAN *for* NORTHWEST VERMONT

US DOT RAISE
Chittenden County Regional Planning Commission
Winooski, Vermont
April 2022

PROJECT FAST FACTS

Project Name:	Transit-Oriented Development (TOD) Plan for Northwest Vermont
Project Type:	Planning, Transit-Oriented Development (TOD)
Project Location:	Northwest Region of Vermont. Centered around Chittenden County, Vermont (44.4759° N, 73.2121° W) and includes the four surrounding counties of Franklin, Addison, Rutland, and Washington.
Project Summary:	<p>This TOD project for the Northwest region of Vermont will develop a comprehensive plan for transit-oriented development for 12 communities across a five-county region in Northwest Vermont. In conjunction with TOD planning, it will also support improved bus services and/or commuter rail to connect economically disadvantaged rural residents to employment opportunities and services in the economic hub of the greater Burlington region and other employment areas.</p> <p>The Northwest region of Vermont includes 13 areas of <i>Persistent Poverty</i> (Burlington, Winooski, Barre, and Rutland), 11 designated <i>Opportunity Zones</i>, and one area designated as <i>Historically Disadvantage Community</i> (Barre). This project will provide opportunities for economic growth, improved equity, and improved connectivity among these communities.</p> <p>The project envisions that developing transit-oriented developments with accessible and convenient public transportation services, will provide a viable alternative to automobile-dependent living for Vermonters, reduce household transportation costs, and provide rural residents with job opportunities. Furthermore, it will support the development of walkable centers in village areas while also providing new transit connections for rural, mobility-challenged Vermonters.</p>
RAISE Funds Requested:	\$2,100,000
Other In-Kind Match:	\$150,000
Total Project Cost:	\$2,250,000

Contents

PROJECT FAST FACTS	1
PROJECT DESCRIPTION.....	4
I.A. Description of the Project	4
I.B. Transportation Challenges	5
I.C. Addressing Transportation Challenges	7
I.D. Project History and Previously Completed Project Components	9
Western Vermont Corridor Transportation Management Plan.....	9
Amtrak Ethan Allen Express Service to Burlington	9
Vermont Statewide Intercity Bus Study	10
Montpelier to St. Albans Commuter Rail Service Feasibility Study	10
Middlebury Bridge & Rail Project.....	10
HULA IT Accelerator Campus	11
I.E. Relation to Other Transportation Infrastructure Investments Being Pursued	11
The Champlain Parkway	11
The Railyard Enterprise Project.....	12
Interstate 89 2050 Scoping Study	12
I.F. Detailed Draft Statement of Work.....	12
II. PROJECT LOCATION.....	14
II.A. Project Location	14
II.B. Project Map & Geospatial Data.....	14
III. GRANT FUNDS, SOURCES AND USES OF ALL PROJECT FUNDING	17
III.A. Project Costs	17
III.B. Funding Sources & Amounts	17
III.C. Non-Federal Funding Commitments.....	17
III.D. Federal Funding Commitments.....	17
III.E. Budget.....	18
IV. SELECTION CRITERIA	19
IV (1) Primary Selection Criteria.....	19
IV(1)(a) Safety	19
IV(1)(b) Environmental Sustainability	19
IV(1)(c) Quality of Life	21

IV(1)(d) Improves Mobility and Community Connectivity	22
IV(1)(e) Economic Competitiveness and Opportunity	22
IV(1)(f) State of Good Repair	23
IV (2) Secondary Selection Criteria.....	23
IV(2)(a) Partnership and Collaboration	23
IV(2)(b) Innovation.....	24
V. Project Readiness	24
V.A. Project Schedule.....	24
Partners	24
V.B. Required Approvals.....	25
V(b)(1) Environmental Permits and Reviews.....	25
V(b)(2) State & Local Approvals	26
V(b)(3) Federal Transportation Requirements Affecting State & Local Planning.....	27
V.C. Assessment of Project Risks & Mitigation Strategies.....	27
VI. Benefit Cost Analysis	27

PROJECT DESCRIPTION

I.A. Description of the Project

In this project we propose to develop a comprehensive plan for transit-oriented development (TOD) and the expansion of public transportation across a five-county region of Vermont, with a goal of creating momentum for the development of denser, compact, connected, and walkable neighborhoods that are linked together through robust transit connections. A primary focus of this planning project will be to use land use changes to create compact, pedestrian-oriented, mixed-use neighborhoods centered around high-quality transit systems to lift up underserved communities and provide new multimodal connections to the greater Burlington region, the economic engine of Vermont, and other employment areas.

Through TOD, the possible restoration of rural-scale commuter rail and the expansion of other public transportation services, this project will enhance economic development, facilitate multimodal connectivity and accessibility, increase access to transit hubs for pedestrians and bicyclists, and support the development of vibrant communities for economically disadvantaged rural residents living in 11 Opportunity Zones, 13 Areas of Persistent Poverty and one Historically Disadvantaged Community, while reducing vehicle miles traveled (VMT) and greenhouse gas emissions.



Winooski, Vermont

Overall, this planning project will determine how rural, community-oriented transit services will connect to other TOD districts at stations along the existing rail lines, both within and outside of Opportunity Zones. The proposed TOD will take place within Opportunity Zones in Burlington, Vergennes, Rutland, St. Albans, Winooski, and Barre, in addition to the communities of Middlebury, Montpelier, Waterbury,

Richmond, Milton and Essex Junction. The planning process will also determine the financial, political, and operational feasibility of public transit and/or commuter rail connecting rural and urban centers.

This will be a multi-phased project that will start with determining which of the identified municipalities will be committed to moving forward with a TOD plan and corresponding zoning changes.

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Following the market evaluation, community master planning and municipal zoning updates will be conducted in the selected communities. To implement TOD master planning, changes to municipal zoning are likely needed to support the development of dense, walkable, and human-oriented communities. Integrating transit and land use policies through increased density will make transit more viable and accessible in these communities.

Lastly, the final phase will evaluate how to finance TOD and transit operations, while also assessing the most efficient governance structure to manage a new regional transit system connecting communities across Northwest Vermont. An economic model will also be developed to assess the revenue generated by TODs/economic activity at transit hubs. Value capture strategies will also be evaluated to determine the feasibility of using the increases in land value and TOD revenues to finance future transit infrastructure investments in addition to opportunity zone investment funds and other innovative financing options.

As a rural state, Vermont has a high percentage of people driving in single-occupancy vehicles (SOVs) for work and other trips. In Chittenden County, the most populous county in the State, the rate of SOV work trips increased from 56 percent in 1980 to 73 percent today (American Community Survey).

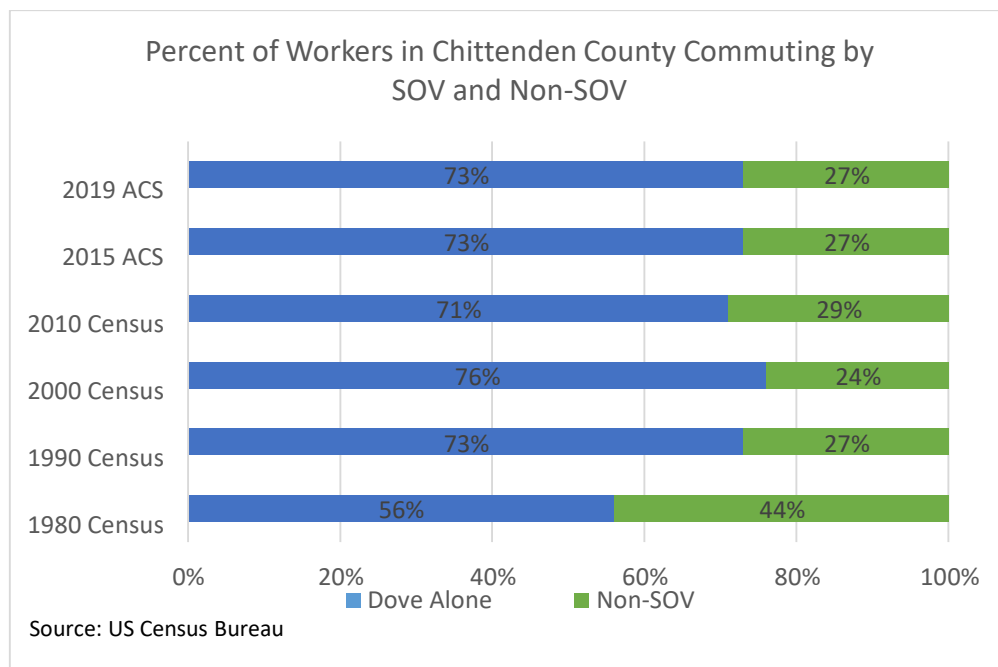
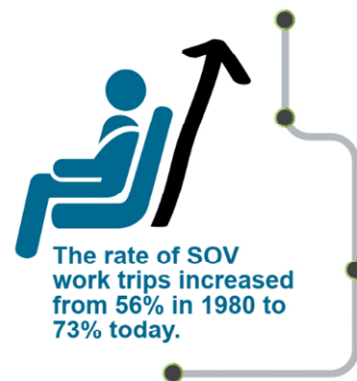


Figure 1: Percent SOV and non-SOV trips in Chittenden County

Even though the Vehicle Miles Traveled (VMT) per person was on a downward trend between 2007 and 2014, that trend was reversed in 2014, likely due to significantly lower fuel prices. Between 2014 and 2019, VMT in Chittenden County increased by five percent. Continued employment growth and the resulting growth in VMT is expected to increase congestion and traffic delays, while also having a negative impact on economic development, the climate, and human health.

In order to meet our state transportation and energy goals, it's critical to continue to support efforts to reduce VMT per capita and single-occupancy vehicle (SOV) travel by investing in compact land use patterns; improving transit services; expanding walk and bike facilities; promoting carsharing and ridesharing; and increasing participation in Transportation Demand Management (TDM) programs. Compact communities that allow for more biking, walking, transit trips and less driving alone will reduce congestion and traffic delays; enhance the economic well-being of our residents, businesses and visitors; reduce emissions; reduce social isolation; and improve public health. The lack of safe and convenient alternatives to automobile travel disproportionately affects vulnerable populations.



Some population segments – youth, the elderly, low-income, minorities and new Americans– lack access to viable public and private transportation options. The lack of safe, reliable, and complete connections within the transportation system and between transport modes reduces

access to employment, as well as social, economic, and recreation opportunities; and limits access to basic needs by means other than a personal vehicle.



Increasing investment in denser, mixed use growth areas will improve economic opportunities, housing options, transportation options and improve community health. Focusing growth in our historic downtowns is also a cost-effective approach to increasing the supply of affordable housing and using existing infrastructure efficiently. This pattern of growth reduces energy consumption for transportation and emissions. Homes are in closer proximity to jobs and other services, making trips shorter and making travel by walking, biking, transit and carsharing more feasible.

There is scarcity of affordable housing in Vermont.

Employers in Chittenden County are creating jobs faster than housing for employees can be developed. Transportation costs are a barrier for many; access to good jobs continues to challenge those without the means to own and operate a car. Lack of access to safe and reliable transportation options not only makes employment inaccessible to many, but it also limits social, economic, and recreation opportunities for Vermonters.

According to CCRPC's 2018 [ECOS Metropolitan Transportation Plan](#) (MTP), there is an increase in the percent of Chittenden County employees who live outside the county. In 2002, around 24,000 workers were employed in Chittenden County but living outside. By 2019, this figure rose to nearly 34,000 commuting to work from outside the county. Conversely, the number of residents employed and living in Chittenden County has fallen during the same period. In 2002, nearly 72,000 residents were employed and living in Chittenden County. By 2019, this figure dropped to about 69,000.

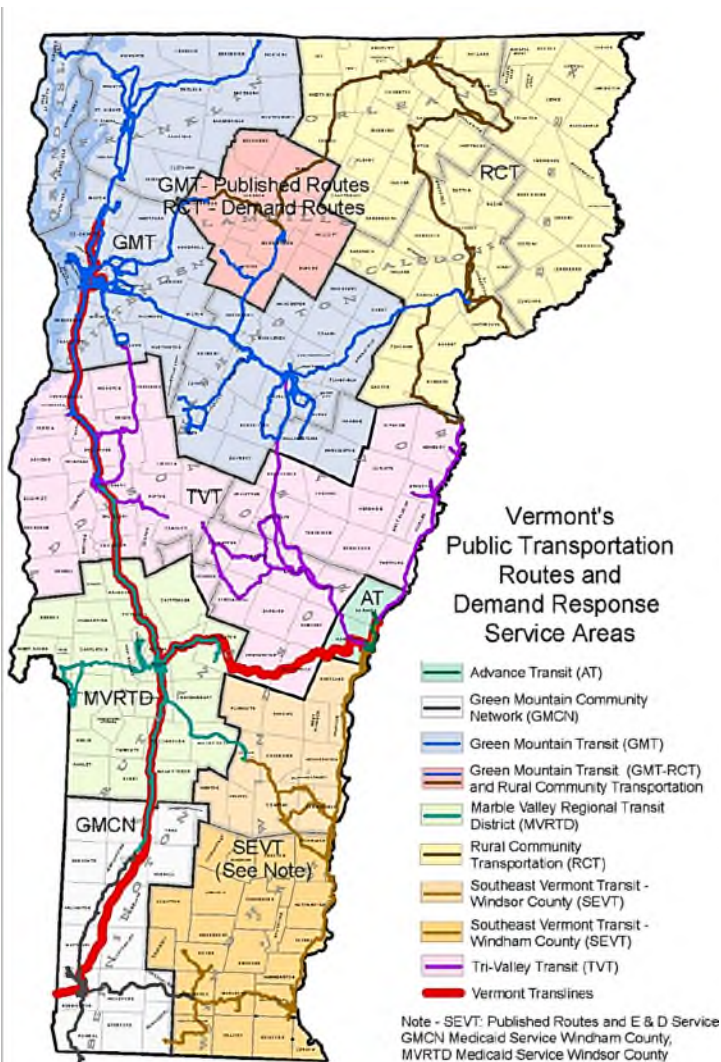
Since Interstate 89 is the major commuter corridor, congestion on the Interstate and its interchanges is increasing (long-term impacts of the pandemic on commuter travel still need to be evaluated). Unless this trend is reversed and there is a substantial shift from SOV to other modes of transportation, capacity improvements may be necessary. The [Chittenden County Interstate 89 2050 Study](#) is currently under way and will be completed in 2022.

I.C. Addressing Transportation Challenges

Climate: The State of Vermont has adopted strong climate change goals that will demand a reduction in single occupancy vehicle travel as well as the conversion to electric cars, buses, trains and bicycles. Transportation's 45% statewide contribution to GHG emissions is closely mirrored by the 49% Chittenden County estimate (<http://climatechange.vermont.gov/climate-pollution-goals>) and is substantially higher than the nationwide share of 29% from transportation according to 2019 EPA Greenhouse Gas Emissions data. The CCRPC [Regional Energy Plan](#)

calls for a 30% reduction in overall energy use and for 89% of the vehicle fleet to be converted to electric vehicles. In addition, the Cities of Burlington and Montpelier have adopted Net Zero Energy policies which will be supported by this project.

Rural Issues: Rural communities across the region face numerous challenges in providing accessibility and the transportation connections to employment centers. Local markets and shops have been closing as they face competition from “big box” and online retailers. This means not only that people may have to travel farther to do their shopping, but also that local jobs associated with these businesses have disappeared. Years ago, small town residents may have been able to accomplish most of their trips on foot—to work, to eat, to shop, to conduct personal business—but now many of these trips may require longer travel with personal vehicles. The University of Vermont Transportation Research Center has found that Vermonters travel longer distances than the national household average for shopping trips, including groceries and clothing: 6.7 miles (one-way) compared to the national average of 5.6 miles.



Transit Access: According to [Vermont's Public Transit Policy Plan](#) (PTPP), there is a strong need to address the lack of transit access in rural areas. While it is the case that traditional bus services cannot operate efficiently in areas without a significant amount of population density, the need for public transit access outside of urban areas and small towns exists and is likely to grow as the population ages. The challenge is both one of service supply—having sufficient resources available to operate appropriate service in rural areas — and one of information and awareness in that people may not know that resources exist nor how to gain access to them.

The PTPP also outlines how there is a lack of transportation for access to jobs in Vermont. The need for improved access to jobs was raised in all eleven regional forums held as part of the development of the latest PTPP. The need was expressed both as critical to low-income Vermonters

who face challenges reaching their jobs, especially if they work second or third shift, but also

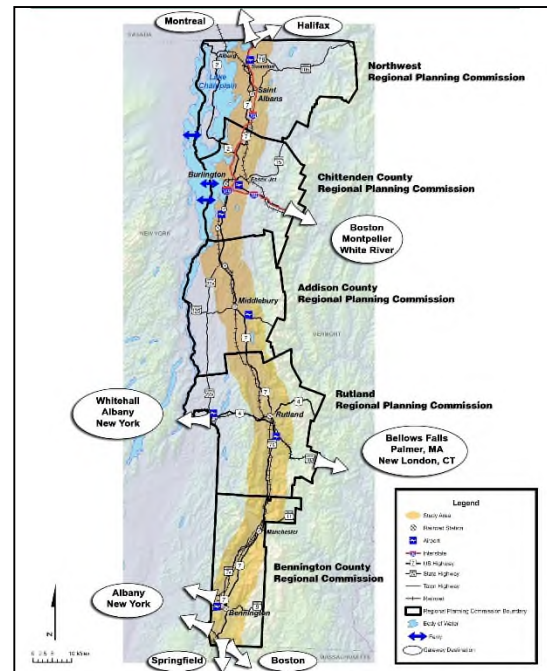
critical to employers, many of whom face labor shortages and cannot fill open positions because the portion of the labor force looking for work cannot overcome the transportation barrier to get to those jobs.

I.D. Project History and Previously Completed Project Components

This project builds upon decades of state and private priorities, studies, and projects, including the Western Vermont Corridor Transportation Management Plan, Amtrak service to Burlington, Vermont Intercity Bus Study, Middlebury Bridge & Rail Project, and the HULA IT Accelerator Campus.

Western Vermont Corridor Transportation Management Plan

The purpose of the [Western Corridor study](#) was to evaluate transportation, land use and related conditions and create a Transportation Management Plan that presents a unified, long-term vision for managing and improving the transportation system in western Vermont. As an initial effort to coordinate planning over a vast study area, the plan does not recommend specific projects. Rather, it presents a broader vision and framework for transportation investment policies and strategies. Continuing the ongoing collaboration among the study partners will be key to developing and implementing specific projects and programs consistent with the recommendations of this plan. The plan is being coordinated with the Vermont Agency of Transportation's ongoing project development efforts in the Corridor, including various railroad initiatives.



Amtrak Ethan Allen Express Service to Burlington

In 1964, to ensure the continued safe and affordable movement of freight by rail, the state purchased the track from Rutland to Burlington. Beginning in 1972, efforts to return intercity passenger trains, resulted in Amtrak's Ethan Allen Express from New York City to Rutland and in the summer of 2022 to Burlington. Since then, federally funded track upgrades,

including \$22.5 million in TIGER grants, made the service extension to Burlington possible.

Vermont Statewide Intercity Bus Study

As part of the 2012 PTPP, Vermont conducted a consultation process that included an inventory of existing services; a demographic analysis of needs for intercity bus service; and an outreach effort that included a survey of providers, regional planning agencies, and a statewide meeting. The [Vermont Statewide Intercity Bus Study](#) is an additional analysis recommended by the 2012 PTPP in a white paper, “Intercity Bus Needs Assessment and Policy Options,” that identified potential needs for replacement intercity bus service. This study concluded that Vermont has unmet rural intercity transportation needs, and that the state should begin implementation of these services on high-priority corridors using FTA Section 5311 funding as a grant solicitation program.

Montpelier to St. Albans Commuter Rail Service Feasibility Study

The [Montpelier to St. Albans Commuter Rail Service Feasibility Study](#) examined the feasibility of implementing a commuter rail service between Montpelier, St. Albans and Burlington. The goal of the study was to evaluate the capital costs, operating costs, and necessary conditions for operating a commuter rail system in Northwest Vermont. The legislature defined the purpose of the study as to “determine the feasibility of implementing a commuter rail system within the corridor, to estimate the time horizon to plan for and design the service, to estimate ridership potential, to estimate costs for operations and capital acquisition, and to identify any other general operational, capital, legal, and administrative requirements.”

Middlebury Bridge & Rail Project

The [Middlebury Bridge & Rail Project](#) is a \$71 million federal- and state-funded VTrans project in collaboration with the Town of Middlebury. Two nearly 100-year-old rail bridges in the center of Middlebury have been replaced with a 360-foot-long tunnel to allow for the movement of international containers.



HULA IT Accelerator Campus

With more than \$64 million in investment by HULA, an IT Accelerator Campus was created at the former Blodgett Oven Company factory in one of Burlington's Opportunity Zones. HULA recruits IT companies to locate on its campus and provides financial support for startup. Once companies reach 100 employees, they graduate from the campus. A company that "graduated" is Beta



Technologies – a three-year-old company that designs and builds electric aircraft. They recently received \$368 million in financing and will be supplying UPS with 10 planes. HULA is now investing in multiuse development near its campus that will include housing (with some affordable units), childcare, and other amenities for workers and professionals that work in the Burlington so they can walk, bike or take transit to their jobs in the city. The CCRPC is funding a study of a multimodal intercept facility near the HULA campus. The study will examine the feasibility of a transit center and new housing, while also investigating site layout options that tie together the planned uses, develop conceptual construction cost estimates, investigate potential funding streams, and support stakeholder outreach.

I.E. Relation to Other Transportation Infrastructure Investments Being Pursued

Other relevant projects and studies that are nearing completion or are currently in process include the Champlain Parkway, Railyard Enterprise Project, and Chittenden County I-89 2050 Study.

The Champlain Parkway

The \$29.5 million investment in the [Champlain Parkway](#) will provide access between Interstate 189 and the Lakeside site as the parkway terminates at this location. The Champlain Parkway will improve traffic circulation, alleviate capacity issues, improve safety on some local streets, and enhance connectivity between Burlington and I-89. The completion in the next few years will provide new opportunities to increase economic development and accommodate Smart Growth principles within the Lakeside redevelopment.

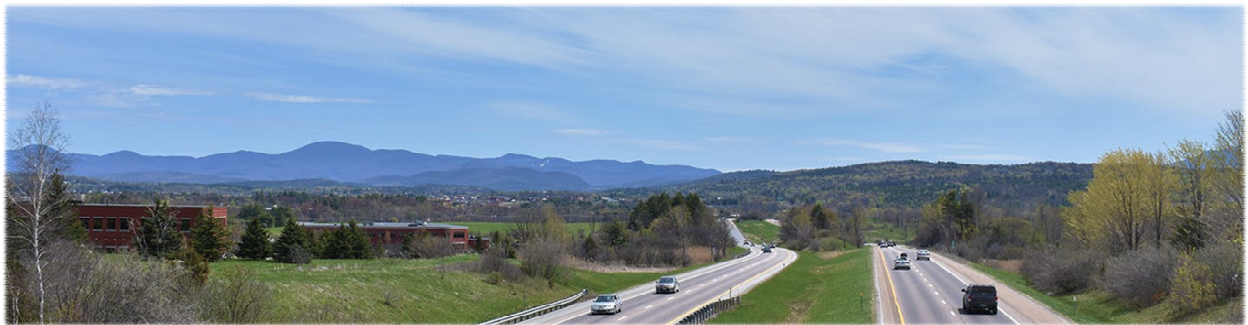
The Railyard Enterprise Project



The [Railyard Enterprise Project](#) (REP) aims to create a network of multimodal transportation infrastructure improvements in the South End of Burlington's waterfront, adjacent to the Burlington Railyard (located a half mile north of Lakeside Avenue). Phase I scoping was completed in 2016 and Phase II in 2020. The REP was included in the VTrans FY22 Transportation (Capital) Program and it is advancing to preliminary engineering by the City of Burlington. The purpose of REP is to support economic development, improve livability of the surrounding neighborhoods, reduce vehicular traffic through low-income neighborhoods in the study area, enhance multimodal connectivity, and improve intermodal connections to the Burlington railyard.

Interstate 89 2050 Scoping Study

According to the 2018 [ECOS MTP](#), there is an increase in the proportion of Chittenden County employees who live outside the county. Since Interstate 89 is the major commuter corridor, congestion on the interstate and its interchanges is increasing. Unless this trend is reversed and there is a substantial shift from SOV to other modes of transportation, a major capacity improvement may be necessary.



A full list of completed studies is available [here](#).

I.F. Detailed Draft Statement of Work

Below is an initial draft scope of work. If the grant is awarded, the scope will be refined with input from participating municipalities, regional planning commissions (RPCs), transit providers, rail operators, and other stakeholders.

Task 1: Project Management, RPC Sub-agreements, and Stakeholder Coordination

The CCRPC will provide ongoing project management, budget and schedule tracking, and team communication to ensure this project proceeds in an efficient manner and concludes

successfully. In addition to general project management and coordination, this task will include the following:

- Work with the other four RPCs – Northwest, Central Vermont, Rutland, and Addison – to define roles, responsibilities, and draft sub-agreements.
- Each participating RPC will engage with municipalities in their region to determine which will formally participate in the project and move forward with TOD planning and subsequent zoning changes (Task 2). Several municipalities already indicated they will be participating if the grant is awarded (see letters of support).
- Each participating RPC will review the draft work products of Tasks 2, 4, and 5 with their municipalities and other stakeholders.
- Refine the project scope of work and schedule and go out for an RFP to select a consultant team to work on the various elements of the project.
- Contract with the selected consultant and conduct an initial kickoff/orientation meeting and progress meetings with all participating entities.
- Work collaboratively with other RPCs and the consultant to develop the committee structure for this project and the public participation plan including outreach to traditionally underserved populations.

Task 2: Conduct real-estate market analyses for participating municipalities

The selected consultant will conduct a real estate market analysis for each participating municipality in the five-county region. This task will also engage the State of Vermont, RPCs, regional development corporations, municipalities, and other stakeholders.

***Deliverable:** Market demand report for participating municipalities.*

Task 3: TOD Master planning and municipal bylaw updates

The selected consultant, in close collaboration with the RPCs, municipalities, and other stakeholders, will develop a customized TOD master plan for each municipality and work with the appropriate municipal body to draft zoning updates for review and adoption. These master plans and zoning updates are necessary in order to support the development of dense, walkable and human-oriented communities. Integrating transit and land use policies through increased density will make transit more viable and accessible in these communities. Community engagement will also be conducted as part of this task with a special emphasis on traditionally underserved populations and communities that have not been included in the planning processes. Municipalities that may participate in this task include Rutland, Middlebury, Vergennes, Burlington, Milton, St. Albans, Winooski, Richmond, Waterbury, Montpelier, Barre, and Essex Junction.

***Deliverables:** Master plans and municipal zoning changes needed to implement Transit-Oriented Development in participating municipalities.*

Task 4: Conduct ridership demand analyses and evaluate short- and long-term transit options

A comprehensive transit ridership forecast will be developed and the feasibility of new and improved bus and/or rail services will be evaluated. These analyses will take into account the increased land use density and projected new ridership from the TODs in the participating municipalities. Potential bus and/or commuter rail services will be identified, and the capital and operating costs estimated. During this task there will be extensive engagement with the transit providers, rail operators, state agencies, the municipalities, other stakeholders, and the public with an emphasis on underrepresented communities.

Deliverables: *Report detailing forecasted ridership demand; determination of the best transit option in the short- and long-term (bus and/or rail); and estimated capital and operating costs of any new and/or improved services.*

Task 5: Develop a Financial Plan and Governance Structure

One of the most important benefits of transit is its ability to serve as a focal point for future development, by attracting property investors and increasing property values (and taxes). As part of this planning process, we will examine innovative financing options including, but not limited to: land value capture, opportunity zone investment, government financing programs, and other types of real estate and venture capital funding. The objectives are 1) to identify financing vehicles for TOD and 2) to develop an economic model to assess the revenue generated by TODs/economic activity at transit hubs to see if there would be enough of income and/or increased property tax stream to support transit operating costs. The other part of this task is assessing the most efficient governance structure to manage the regional transit system connecting the participating communities.

Deliverables: *Report detailing a proposed financing plan for TOD and an economic model for supporting transit operating costs. Report recommending a governance structure based on the financing and economic model.*

II. PROJECT LOCATION

II.A. Project Location

The project is centered around Burlington, Chittenden County, Vermont (44.4759° N, 73.2121° W) and includes the four surrounding counties of Franklin, Addison, Rutland, and Washington in Northwest Vermont. Chittenden County is the heart of the Burlington – South Burlington Metropolitan Statistical Area (the economic engine of Vermont) and is situated between Lake Champlain and the Green Mountains.

II.B. Project Map & Geospatial Data

Figure 2 is a map of the project area that shows the extensive reach of this TOD project.

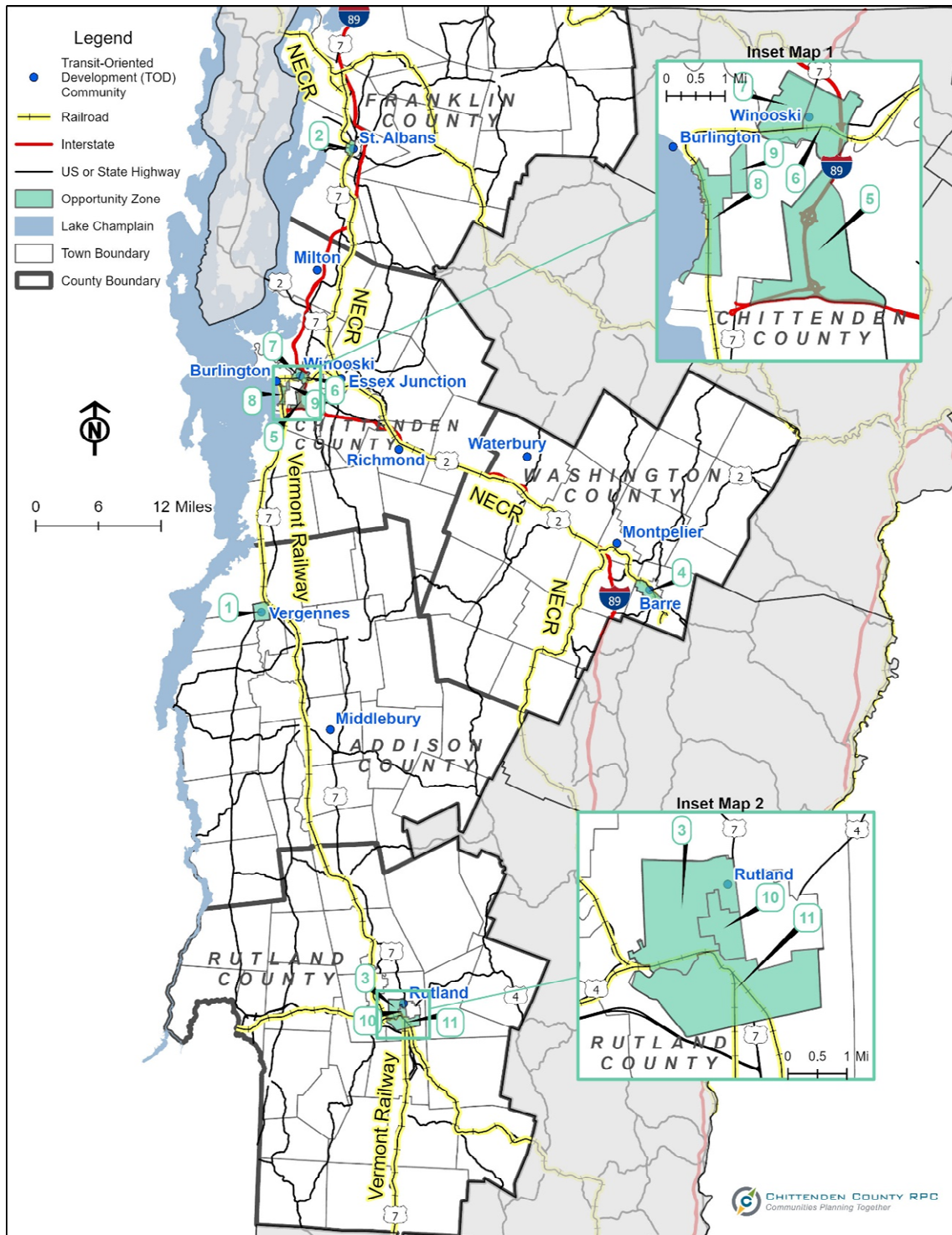


Figure 2: Map of the Project Area

Relevant Qualified Opportunity Zones Impacted					
Map Label	State	Name	Municipality	Area of Persistent Poverty	Historically Disadvantaged Community
1	Vermont	Census Tract 9603, Addison County	Vergennes	No	No
2	Vermont	Census Tract 107, Franklin County	St. Albans	No	No
3	Vermont	Census Tract 9632, Rutland County	Rutland	No	No
4	Vermont	Census Tract 9552, Washington County	Barre	Yes	Yes
5	Vermont	Census Tract 36, Chittenden County	South Burlington	No	No
6	Vermont	Census Tract 25, Chittenden County	Winooski	Yes	No
7	Vermont	Census Tract 24, Chittenden County	Winooski	Yes	No
8	Vermont	Census Tract 10, Chittenden County	Burlington	Yes	No
9	Vermont	Census Tract 5, Chittenden County	Burlington	Yes	No
10	Vermont	Census Tract 9631, Rutland County	Rutland	No	No
11	Vermont	Census Tract 9633, Rutland County	Rutland	Yes	No

Figure 3: Relevant Qualified Opportunity Zones Impacted

Opportunity Zone Municipalities:

The project area includes opportunity zones in Barre, Burlington, Rutland, St. Albans, Vergennes, and Winooski. See Figure 3 above for more details about the Opportunity Zones, which are also identified within Figure 2: Map of the Project Area.

II.B.(a) Identification of Areas of Persistent Poverty

The project is envisioned to have a beneficial impact on a total of 11 Opportunity Zones within Vermont, six of which have also been identified as areas of persistent poverty and one has been identified as a historically disadvantaged community. This project will also have a beneficial impact on nine other areas of persistent poverty not located within Opportunity Zones.

Areas of Persistent Poverty:

Census Tract 3, Chittenden County, Burlington;
 Census Tract 4, Chittenden County, Burlington;
 Census Tract 5, Chittenden County, Burlington;
 Census Tract 6, Chittenden County, Burlington;
 Census Tract 8, Chittenden County, Burlington;
 Census Tract 9, Chittenden County, Burlington;
 Census Tract 10, Chittenden County, Burlington;
 Census Tract 24, Chittenden County, Winooski;
 Census Tract 25, Chittenden County, Winooski;
 Census Tract 39, Chittenden County, Burlington;
 Census Tract 9552, Washington County, Barre;
 Census Tract 9551, Washington County, Barre;
 Census Tract 9633, Rutland County, Rutland.

Historically Disadvantaged Community:

Census Tract 9552, Washington County, Barre.

II.B.(b) Census-Designated Urbanized Area

N/A. We are a rural applicant because the entire State of Vermont has been defined as rural under this grant program.

III. GRANT FUNDS, SOURCES AND USES OF ALL PROJECT FUNDING

III.A. Project Costs

Requesting \$2,100,000 in USDOT RAISE funding.

III.B. Funding Sources & Amounts

Source	Amount	% Of Project	Type
DOT RAISE Funds	\$2,100,00	93.3%	100% Federal
CCRPC's FHWA PL Funds	\$150,000	6.7%	80% Federal/10% State/10% Local
TOTAL	\$2,250,000	100%	

III.C. Non-Federal Funding Commitments

N/A

III.D. Federal Funding Commitments

CCRPC will contribute \$150,000 of FHWA/FTA MPO PL funds (80 percent federal with a match of 10 percent state and 10 percent local funds) to supplement the project management activities for this project and conduct additional engagement with stakeholders and the public with a focus on underrepresented populations in Chittenden County.

Due to federal match requirements, these funds are considered a contribution rather than match.

III.E. Budget

Task Description	RAISE Funds	CCRPC Funds*	Total Project Funds
<i>Task 1: Project Management, RPC Sub-agreements, and Stakeholder Coordination. (This will include funding for partner RPCs to work with their communities and the public.)</i>	\$250,000	\$150,000	\$400,000
<i>Task 2: Conduct real-estate market analyses for participating municipalities (up to 12 communities)</i>	\$250,000		\$250,000
<i>Task 3: TOD Master planning and municipal bylaw updates (up to 12 communities)</i>	\$1,200,000		\$1,200,000
<i>Task 4: Conduct ridership demand analyses and evaluate short- and long-term transit options</i>	\$200,000		\$200,000
<i>Task 5: Develop a Financial Plan and Governance Structure for the Transit System</i>	\$200,000		\$200,000
TOTAL	\$2,100,000	\$150,000	\$2,250,000

*CCRPC funds are federal MPO PL funds and should not be considered match.

IV. SELECTION CRITERIA

IV (1) Primary Selection Criteria

IV(1)(a) Safety

This project will investigate new public transit connections to provide transportation options to Vermonters and visitors, address transportation inequality, reduce SOV travel, reduce GHG emissions, and maximize safety. According to the 2018 [ECOS MTP](#), performance measures for safety include the number of fatalities, rate of fatalities per 100 million Vehicle Miles Traveled (VMT), number of serious injuries, rate of serious injuries per 100 million VMT, and the number of non-motorized fatalities and non-motorized serious injuries. By implementing additional bus services and/or commuter rail service, safety will improve as residents and visitors lessen their dependence on driving, as the new transit services are expected to significantly reduce car use.



Furthermore, supporting TOD in Vermont will provide opportunities to develop a mix of residential and commercial uses in downtowns and village centers that will be designed to make public transit successful while also enhancing the convenience and safety of walking and bicycling. There is a robust link between TOD and roadway safety. An efficiently planned TOD ensures seamless integration of public transit with different modes of transportation that are accessible, safe, and convenient, with the highest priority being given to pedestrians and bicyclists.

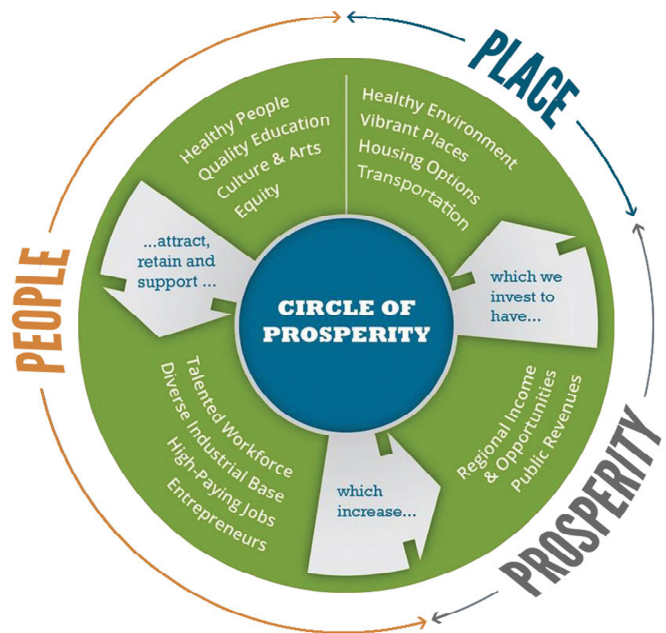
IV(1)(b) Environmental Sustainability

Vermont's [Comprehensive Energy Plan](#): The state established new planning goals for reducing the emissions, including a 40 percent reduction below 1990 Green House Gas (GHG) levels by 2030 and an 80-95% reduction by 2050. The goals support recommendations from the Intergovernmental Panel on Climate Change, representing the level of emissions reduction needed worldwide to prevent the worst potential effects from climate disruption. Vermont's [Comprehensive Energy Plan](#) calls for a 10% reduction in transportation energy use by 2025. State agencies are working to provide non-SOV travel options and supporting electric car charging stations to support the conversion to hybrid and fully electric vehicles.

Vermont recently passed the Global Warming Solutions Act (GWSA) which includes a "Just Transition" requiring that climate solutions reduce energy burdens and minimize negative impacts on rural and marginalized communities. The GWSA builds on the success of other New England states that have cut climate pollution while growing their economies. The Act requires the Agency of Natural Resources to promulgate regulations take coordinated and strategic action to reduce greenhouse gas emissions to net zero by 2050 and to build climate resilient communities

[Net Zero Energy by 2030](#): In 2018, the City of Burlington announced one of the most ambitious climate goals established by any community in the United States. The Plan aims to reduce and eventually eliminate fossil fuels from the heating and ground transportation sectors. The City has had some success; in 2019 and 2020, fossil fuel use and greenhouse gas emissions were reduced as compared to the 2018 baseline. Increased low-carbon transportation, especially public transportation, is a cornerstone of the City's plan. This project when fully implemented, will significantly contribute towards the city's goals. The City of Montpelier has a similar goal.

[ECOS Plan](#): The Chittenden County Regional Planning Commission (CCRPC) which serves as Vermont's only MPO integrated its Metropolitan Transportation Plan (MTP), the Comprehensive Economic Development Strategy (CEDS) and the Enhanced Energy Plan into the ECOS Regional Plan. ECOS/MTP supports improving transit services, expanding bike and pedestrian infrastructure, and investing in and supporting Transportation Demand Management (TDM) partners. To support climate action, [ECOS](#) supports moving the transportation sector away from fossil fuels to electric and other non-fossil fuel transportation options. This project will further the ECOS goals and strategies in Chittenden County.



This TOD project for Northwest Vermont supports the state, regional, and municipal climate and energy action goals that represent the aspirations and commitment of our state and our communities to address climate change. The approaches this project will use to further the state, regional and local climate and energy goals are listed below.

- The project will strengthen and direct development toward areas planned for growth with TOD and adaptive reuse of existing buildings. Moreover, municipal plan and bylaw revisions will promote the development of walkable and bikeable communities that will be connected by a regional public transportation network.
- By clustering housing (both affordable and market-rate) close to work and creating a robust, safe and efficient public transit system, this project will also support biking, walking and Transportation Demand Management (TDM) programs such as carsharing instead of SOV travel.
- Through the upgrades of municipal plans and local zoning bylaws, the project will enable new opportunities to expand charging stations for electric vehicles, which will support the transition away from fossil fuels and toward electrification.

The TOD project will also enhance the overall resiliency of the region's transportation system by concentrating development and providing alternatives to automobile-dependent travel with public transit and new opportunities for walking and biking.

IV(1)(c) Quality of Life



Burlington, VT waterfront

According to the [Partnership for Sustainable Communities](#), there are a series of core livability principles adopted by federal agencies. These principles dovetail with Vermont's [2020 Comprehensive Economic Development Strategy](#) (CEDS) to improve the quality of life for Vermonters while maintaining the state's natural resources and community values. Providing more transportation options, increasing access to equitable and affordable housing and supporting the development of vibrant communities and neighborhoods in Vermont's existing downtowns and

village centers will bolster the quality of life for Vermonters.

One of the primary barriers to a high quality of life in Vermont is access to affordable housing. As the demand for and cost of housing rises, the proportion of Chittenden County employees who live outside the county continues to increase. To sustain the economic growth in Chittenden County, it is imperative to increase investment in denser, mixed-use growth areas that will improve economic opportunities, housing options, transportation choices, and community health. Supporting TOD will provide new opportunities for housing and promote a lifestyle that is attractive to young professionals. Between 1990 and 2010, Vermont's population of 20- to 39-year-olds shrunk by 20 percent while the state's overall population grew by 11 percent. Studies have shown that young professionals prefer to live in dense and vibrant communities that are within walking distance to goods and services. It is vital to Vermont's economic well-being and quality of life to support initiatives that reverse the troubling trend of young people fleeing the state.

The Chittenden County Regional Planning Commission's [2018 ECOS Metropolitan Transportation Plan](#) clearly outlines an overarching goal to provide accessible, safe, efficient, interconnected, secure, equitable and sustainable mobility choices for the region's businesses, residents and visitors. The ECOS Plan also has a goal of 80 percent of all new housing developments go in "areas planned for growth" which are our city centers, downtowns, villages, and other growth centers. The 2018 [ECOS MTP](#) plan envisions an even denser development pattern with 90 percent of new households going into areas planned for growth. This goal allows for the creation and preservation of livable communities and neighborhoods that are walkable,

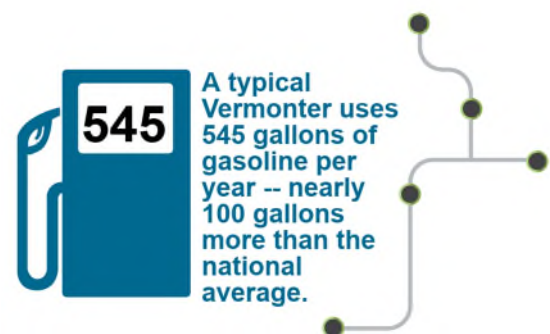
bikeable, and serviced by transit, which help reduce vehicle congestion in the neighborhoods and increase safety. This project further advances the goals of the ECOS/MTP in Chittenden County.

The ECOS Plan also includes equity as one of its eight key strategies. The CCRPC is committed to including underrepresented and marginalized communities in our planning process. For the TOD project, the CCRPC will include potential impacts to low-income and underrepresented communities consistent with Title VI by utilizing an Environmental Justice screening tool such as EJSCREEN to minimize adverse impacts to environmental justice communities. Last year, the CCRPC hired a consultant and formed an Equity Leadership Team to better inform their work by comprehensively addressing Environmental Justice in their plans, studies, and programs. A significant part of the planning process for this TOD project will focus on engaging underrepresented communities in planning for the TODs and the regional transit system.

IV(1)(d) Improves Mobility and Community Connectivity

Vermont is a predominantly rural state with very low population densities outside of Chittenden County and the other small cities located along the I-89, I-91 and US 7 corridors. This rural land use pattern emphasizes the challenge of mobility for all Vermonters and especially older adults, youth, and people who do not have access to a private vehicle. It also represents an opportunity for public transit and TOD to connect Vermonters with alternative forms of mobility besides the automobile.

Because of its rural character, Vermont has one of the highest automobile dependency rates in the country. A typical Vermonter uses 545 gallons of gasoline per year – nearly a hundred gallons more than the national average. One of the primary goals of this project will be to provide transportation choices to Vermonters and mobility options that connect rural residents to urban centers for work, shopping, and other activities using a mode other than a private automobile.



One of the underlying principles of TOD is that it enables the creation of compact and walkable communities that enhance mobility for all residents. Walkable communities with safe and contiguous infrastructure to support active transportation and a robust transit network encourage physical activity and have a lower dependency on automobiles. From an equity standpoint, TODs will offer greater levels of mobility for all, especially for Vermonters who because of age, disability or income cannot drive and rely on public transit for their mobility. Promoting development centered around public transit hubs will improve mobility and enhance community connectedness.

IV(1)(e) Economic Competitiveness and Opportunity

The implementation of the TOD project will not only strengthen connections among communities in Northwest Vermont but will also establish new regional economic partnerships between Chittenden County and the rest of the State.

The greater Burlington area is the economic engine of the State of Vermont, hosting more than 25% the State's population and 33% of Vermont's total jobs (covered employment). This TOD project offers a great opportunity to rural residents in Northwest Vermont to access jobs with the State's largest employers such as the UVM Medical Center, Global Foundries, GE Healthcare, My Web Grocer, Dealer.com, and emerging technology companies such as Beta Technologies. The development of an extensive regional transportation system will enhance connectivity and provide access to high paying jobs, medical services, the Burlington International Airport, Amtrak service to New York City and beyond, recreational opportunities at Vermont ski resorts and lodges, arts and entertainment, and a vibrant farm-to-table industry. A robust public transportation network also provides opportunities low-income residents to access employment opportunities within this regional network.

IV(1)(f) State of Good Repair

N/A for a planning project.

IV (2) Secondary Selection Criteria

IV(2)(a) Partnership and Collaboration

The TOD Plan for Northwest Vermont is an ambitious effort that requires strong partnerships among the five Regional Planning Commissions, participating municipalities (up to 12), state agencies public transit providers, rail operators, economic development agencies, walk/bike advocates, developers, and many other stakeholders and partners. Collaboration among the various partners is crucial for this effort to be successful and it will be centered around the goals of enhancing public transit, supporting active transportation networks, bolstering economic development, climate change mitigation and adaptation, equity, transportation demand management programs, electrification of the vehicle fleet, and Opportunity Zone connectedness and community development.

Existing Stakeholders: Regional Planning Commissions (Chittenden, Northwest, Central, Rutland, Addison), Municipalities in the five-county region of Northwest Vermont, Vermont Agency of Transportation and other state agencies, Regional Development Corporations, transit providers, rail operators, and transportation demand management partners.

The applicant is the Chittenden County Regional Planning Commission (CCRPC), which is the only metropolitan planning organization (MPO) in Vermont. The CCRPC will work with a diverse set of partners and stakeholder groups to ensure that the governance, environmental sustainability, equity and inclusion, fiscal responsibility, operational requirements and agreements, maintenance responsibilities, and infrastructure ownership issues are fully vetted publicly and agreed upon, to position this project favorably for further private and public funding.

IV(2)(b) Innovation

IV(2)(b)(i) Innovative Technologies

Not Applicable to this planning grant application.

IV(2)(b)(ii) Innovative Project Delivery

Not Applicable to our planning grant application.

IV(2)(b)(iii) Innovative Financing

One of the most important benefits of transit is its ability to serve as a focal point for future development, by attracting property investors and increasing property values (and taxes). As part of this planning process, we will examine innovative financing options including, but not limited to: land value capture, opportunity zone investment, government financing programs, and other types of real estate and venture capital funding. The objectives are 1) to identify financing vehicles for TOD and 2) to develop an economic model to assess the revenue generated by TODs/economic activity at transit hubs to see if there would be enough of income and/or increased property tax stream to support transit operating costs. This activity benefits both well-established communities and growing rural regions. Moreover, creating walkable neighborhoods within easy access of rail and bus lines is essential to maximizing the return of new transit investments.

V. Project Readiness

V.A. Project Schedule

Below is the proposed project schedule for the major tasks including the roles of the partners.

Partners

1. Chittenden County Regional Planning Commission (CCRPC)
2. Northwest, Central Vermont, Rutland, and Addison RPCs
3. Participating municipalities
4. Vermont Agency of Transportation and other state agencies
5. Stakeholders (GMT, other transit and rail operators, and others)
6. Consultants (to be procured)

Timeline from date the agreement is executed

Task Description	Qtr/Year	Partners Responsible
Project Management and Stakeholder Coordination; Develop RPC Sub-agreements; Refine scope of work and procure consultant; Develop committee structure and a public engagement plan	1-2/1	CCRPC with partner RPCs

Conduct real estate market analyses.	2-3/1	CCRPC with consultant and partner RPC review
Develop TOD Master plans and draft municipal zoning updates for up to 12 municipalities with public engagement	3/1-4/2	RPCs with consultant, municipalities, and regional development corporations
Conduct ridership demand analyses and evaluate short- and long-term transit options	3/2-1/3	CCRPC with consultant, transit providers, rail operators, VTrans, and partner RPC review
Develop a Financial Plan and Governance Structure with public engagement	2-4/3	CCRPC with consultant, municipalities, transit providers, rail operators, VTrans, and partner RPC review

V.B. Required Approvals

V(b)(1) Environmental Permits and Reviews

V(b)(1)(a) NEPA

Not Applicable to our planning grant application.

V(b)(1)(b) Reviews, Approvals, Permits by Other Agencies

Not Applicable to our planning grant application.

V(b)(1)(c) Environmental Studies & Other Documents

Not Applicable to our planning grant application.

V(b)(1)(d) Discussions with Appropriate DOT Field Office Regarding Reviews

The Secretary of Transportation has provided a letter of support for this planning effort.

V(b)(1)(e) Public Engagement

The CCRPC will use its [Public Participation Plan](#) as a guide for a robust public and stakeholder outreach effort to inform, consult, involve, collaborate, and empower communities and their residents. This Spectrum of Participation provides a framework for continual improvement in public outreach techniques. The CCRPC is committed to the principles of its Public Participation Plan, including promote respect, provide opportunities for participation, be responsive to participants, offer substantive work, provide a predictable planning process, and extensive outreach and communication. In addition, we recognize that public participation is a dynamic activity that requires commitment at all levels of the organization and constant vigilance. As

such, CCRPC will ensure that public outreach plans get revised and updated as the project progresses.

CCRPC Public Participation Plan Spectrum of Participation

Spectrum of Participation				
INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
The CCRPC will provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	The CCRPC will obtain public feedback on analysis, alternatives and/or decisions.	The CCRPC will work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered. <i>At the INVOLVE level and above, staff will complete the CCRPC Equity Impact Worksheet.</i>	The CCRPC will partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	The CCRPC will place final decision-making in the hands of the public.
CHARACTERISTICS OF PARTICIPATION				
· Primarily one-way channel of communication	· Primarily one-way channel of communication	· Two-way channel of communication	· Two-way channel of communication	· Two-way channel of communication
· One interaction	· One to multiple interactions	· Multiple interactions	· Multiple interactions	· Multiple interactions
· Term-limited to event	· Short to medium-term	· Medium to long-term	· Medium to long-term	· Medium to long-term
· Addresses immediate need of county and community	· Shapes and informs county programs	· Advancement of solutions to complex problems	· Advancement of solutions to complex problems	· Advances solutions to complex problems
STRATEGIES OF PARTICIPATION				
Website & online calendar, database, informational brochures, posters and flyers, display ads, press releases, social media, email announcements, newsletters	Public hearings & legal ads, work groups, comment forms, surveys and questionnaires, visualization techniques, analysis reports, technical assistance studies	Advisory/steering committees, project meetings/workshops/open houses/forums, direct mailings, staff outreach, CCRPC Equity Impact Worksheet	Community or co-led committees, advisory boards, coalitions and partnerships, policy development and advocacy	Community-led planning efforts, community-hosted forums

V(b)(2) State & Local Approvals

Not Applicable to our planning grant application.

V(b)(3) Federal Transportation Requirements Affecting State & Local Planning

Not Applicable to our planning grant application.

V.C. Assessment of Project Risks & Mitigation Strategies

This project centers on TOD planning and financing to improve transit service and these often require complicated trade-offs to negotiate between policy goals and stakeholder interests, for example, in considering how to keep housing affordable while also upgrading infrastructure to support market-rate development.

As the Project applicant, the Chittenden County Regional Planning Commission (CCRPC) is well prepared to manage a RAISE grant from the US DOT. The CCRPC, serving as the only metropolitan planning organization (MPO) in Vermont, manages an average of \$3 million annually in consultant and contract services with federal and state funds from the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Environmental Protection Agency (EPA), and State of Vermont.

In addition, the CCRPC has been awarded and successfully managed direct federal grants including an FHWA Accelerated Innovation Deployment (AID) grant (\$934,000); a Transportation, Community and System Preservation (TCSP) grant (\$408,000) from the USDOT; and a Sustainable Communities Regional Planning grant (\$995,000) from the US Department of Housing and Urban Development.

The CCRPC has a dedicated, professional staff of land use and transportation planners and engineers that manages the annual work program tasks. Staff is familiar with procurement policies and administration of federal grants and over the years have demonstrated their ability to successfully complete work on all federal grants awarded to the CCRPC.

The CCRPC conducts independent single audits annually and complies with audit requirements according to the US Office of Management and Budget (OMB) 2 CFR Part 200 Uniform Administrative Requirements Cost Principles and Audit Requirements for Federal Awards. The CCRPC has undergone federal Single Audits each year since 2012 without a Qualified Opinion, Material Weakness, or Significant Deficiency found or noted. The CCRPC has qualified as a low-risk auditee every year since 2014.

VI. Benefit Cost Analysis

Not Applicable to planning grant applications.