



CHITTENDEN COUNTY RPC

Communities Planning Together

Transportation Advisory Committee Agenda

Tuesday, December 7, 2021

9:00 to 10:30 am

**Meeting will be hosted virtually with staff available at our office
to assist anyone who may wish to participate in person.**

Join at CCRPC Offices:

110 West Canal Street, Suite 202, Winooski, VT

Join Remotely:

<https://us02web.zoom.us/j/82462008536?pwd=NVllaWlyZEU2aXRaNHUxZlY5cHoyZz09>

Meeting ID: 824 6200 8536

Password: 684952

One tap mobile: <tel:+16468769923>, [82462008536#](tel:+16468769923), [1#](tel:+16468769923), [684952#](tel:+16468769923)

Dial by phone: 1-646-876-9923 **Meeting ID:** 824 6200 8536

Agenda

1. Call to Order, Attendance (1 min)

2. Consent agenda (0 min)

No consent agenda this month.

3. Minutes of November 2, 2021* (Action Item – 1 min)

See attached minutes.

4. Public Comment Period (Information Item)

Members of the public are invited to raise issues of interest or concern to the TAC on items not on the agenda.

5. Vermont Freight Plan – final draft* (Discussion Item – 15 min)

Zoe Neaderland, VTtrans, will give a short overview presentation then be available to answer any questions and accept comments from the TAC on the final [draft Vermont Freight Plan](#) before the Plan is submitted to FHWA. See the attached Executive Summary and list of initiatives, as well as this [11-minute video](#) overview. More information is on the project webpage at <https://vttrans.vermont.gov/planning/freight>.

6. CCRPC Energy Program / VCCC Fleet Conversion Analysis (Discussion Item – 20 min)

Ann Janda, CCRPC, will talk about our energy implementation program, electrification of fleets and equipment, and offer resources, grants and other helpful resources. She will be joined by Peggy O'Neill-Vivanco, Vermont Clean Cities Coalition, who will give an overview of fleet conversion analysis tools and show a sample fleet analysis with up front vehicle cost, total cost of ownership, emissions, etc. More information is available at <https://vtccc.w3.uvm.edu/fleet-managers-2/>.

In accordance with provisions of the Americans with Disabilities Act (ADA) of 1990, as amended, the CCRPC will ensure public meetings are accessible to all people. Requests for free interpretive or translation services, assistive devices, or other requested reasonable accommodations, should be made to Emma Vaughn, CCRPC Title VI Coordinator, at 802-846-4490 ext. 121 or evaughn@ccrpcvt.org, at least 3 business days prior to the meeting for which services are requested.

7. CCRPC I-89 2050 Study (Information Item – 20 min)

Jason Charest and Eleni Churchill, CCRPC, will provide an update on the I-89 2050 Study and results of modeling TDM strategies. More information is available at <https://envision89.com/>.

8. Status of Projects and Subcommittee Reports (Information Item – 1 min)

See bulleted list at the end of the agenda for current CCRPC projects. TAC members are encouraged to ask staff for more information on the status of any of these on-going or recently completed projects.

9. CCRPC Board Meeting Report (Information Item – 2 min)

In November the Board heard a presentation on, and voted to accept the FY21 audit report, heard a presentation on telework trends from CATMA, voted to approve using the 2018 ECOS Plan forecasts for the 2023 ECOS Plan update, discussed the legislative breakfast topics, and heard an update from the Executive Director.

10. Chairman's/Members' Items (Information Item – 5 min)

- **Vermont Better Roads Program:** the use of erosion control and maintenance techniques that save money while protecting and enhancing water quality around the State. Applications for funding will be accepted until December 17, 2021. Funding will be awarded after the legislative appropriations process, which is expected to be July 2022. For the most up-to-date information or to download a copy of the application, please visit the AOT website at <http://vtrans.vermont.gov/highway/better-roads>

* = Attachment

Next Meeting: Tuesday, January 4, 2022

Potential Future Agenda Items:

- Title VI and racial equity update
- Traffic calming policies
- Bike lane design guidance
- Bike facility winter maintenance
- Elders and Persons with Disabilities update (June Summit)
- AID grant/ Bluetooth sensors update
- Burlington School District travel plans for 9 schools



Project List:

- Title VI program participation and Public Participation Plan implementation
- Participation in the Vermont Highway Safety Alliance
- Participation in the State's Rail Council
- Advanced Traffic Monitoring System through FHWA AID grant
- Regional Transportation Energy Planning
- Transportation Hazard Mitigation Planning
- ECOS MTP Plan (2023) Update
- Coordination with GMT on ADA and Elders & Persons with Disabilities advisory committees
- Regional Transit Funding Model
- E&D, ADA & Medicaid Call Center Feasibility Study
- Regional Park & Ride Plan
- Active Transportation Plan update/Close the Gaps in Regional Bike Facilities
- Chittenden County I-89 2050 Study
- I-89 Interchange Review (Bolton & Milton)
- North Winooski Avenue Parking Management Plan (Burlington)
- Queen City Park Road/Austin Drive Buke and Pedestrian Study
- 2021/2022 Way to Go!
- Greenride Bikeshare
- Property Transportation Plan: Reduce transportation emissions in commercial and affordable multi-unit sectors with Burlington Electric Department and Burlington 2030 District
- Richmond Bike/Ped/Trails Master Plan – Phase 2 (*Phase 1 Completed*)
- Richmond Village Sidewalks Scoping Study
- VT15 Corridor Pedestrian and Road System Study (Essex)
- City of Burlington School District School Travel Plan and Traffic Control Plan
- Shelburne Bicycling and Pedestrian Connectivity Study
- Winooski Traffic Calming Policy
- Winooski Parking Inventory, Analysis, and Management Plan
- South Burlington Bike/Ped Mapping Phase II
- South Burlington Swift and Spear St. Intersection Feasibility Study (*Completed*)
- Mary Street Sidewalk Feasibility study (South Burlington)
- Kimball Ave Path Feasibility Study for Crossing of Potash Brook (South Burlington)
- Form-Based Code for Williston's Growth Center
- CCRPC Bicycle Count Program Evaluation and Data Analysis
- Watershed Resiliency Mapping/Transportation Resiliency Planning Tool (TRPT; Bolton, Richmond, Huntington (and a little bit of Jericho, Essex and Williston)
- Westford Town Green Stormwater Treatment Assessment
- Right-of-Way Condition Inventory for Stormwater Retrofit Feasibility – Phase 2 (Burlington)
- LPM services for Underhill sidewalk construction on VT 15
- LPM services for Shelburne – Irish Hill Road Sidewalk and Pedestrian Bridge project
- Municipal Road General Permit (MRGP) Work
- Grants-In-Aid Coordination with Municipalities

CHITTENDEN COUNTY REGIONAL PLANNING COMMISSION
TRANSPORTATION ADVISORY COMMITTEE
MINUTES

DATE: Tuesday, November 2, 2021
TIME: 9:00 a.m.
PLACE: Hybrid Meeting: In-person at CCRPC Offices, 110 West Canal St. Winooski, VT, and
virtually via Zoom

Members Present

Justin Rabidoux, South Burlington
Dennis Lutz, Essex
Robin Pierce, Essex Junction
Amy Bell, VTrans
Ashley Atkins, VTrans
Chris Jolly, FHWA
Jonathon Weber, Local Motion
Bob Henneberger, Seniors
Deirdre Holmes, Charlotte
Sam Andersen, GBIC
Wayne Howe, Jericho
Chris Damiani, GMT
Kirsten Jensen, Milton
Barbara Elliott, Huntington
Andrea Morgante, Hinesburg
Sandy Thibault, CATMA
Kurt Johnson, Underhill

Lisa Schaeffler, Williston
Jon Rauscher, Winooski
Joss Besse, Bolton

Staff

Charlie Baker, Executive Director
Eleni Churchill, Transportation Program Manager
Bryan Davis, Senior Transportation Planner
Christine Forde, Senior Transportation Planner
Jason Charest, Senior Transportation Planning Engineer
Marshall Distel, Senior Transportation Planner
Chris Dubin, Senior Transportation Planner
Sai Sarepalli, Senior Transportation Planning Engineer
Sam Berry, Intern

Guests

Christopher Clow, VTrans
Joe Segale, VTrans

1. Justin Rabidoux called the meeting to order at 9:01 AM.

2. Consent Agenda

No consent agenda this month.

3. Approval of October 5, 2021 Minutes

Justin Rabidoux asked for any changes, which there were none. SAM ANDERSEN MADE A MOTION TO APPROVE THE MINUTES OF OCTOBER 5, 2021, SECONDED BY BOB HENNEBERGER. THE MOTION PASSED UNANIMOUSLY.

4. Public Comments

None.

5. VTrans Presentation of Act 145

Joe Segale and Chris Clow, VTrans staff, provided background and an overview of Act 145 Transportation Impact Fees, which became effective on July 1, 2014. The intent is to reduce the “last one in pays” situation, to reduce costs, and facilitate permitting. There are two ways that impact fees can be authorized: through VTrans established Transportation Impact Districts, and through Act 250 District Commission established fees. The presentation is posted to the CCRPC TAC webpage and includes more information such as the formula used to calculate fees, potential adjustments, other requirements, and statistics since its inception: <https://www.ccrpcvt.org/about-us/committees/transportation-advisory-committee/>. The fee isn’t a flat rate and can be adjusted. Chris provided the Catamount Industrial Park in Milton as a project example, for which there were an estimated number of trips to be generated. Developers were exempt from the fee until the trip number is met, then the fee amount would kick in. Chris also offered that pass-by trips aren’t included in impacts fee and offered a gas station as a project

1 example; trips to the station would already be on the transportation system rather than being new trips
2 solely to visit the gas station. There are also fee deductions for projects located in designated centers and
3 neighborhoods. Chris provided another project example: a hospital paid \$10,000 for intersection
4 improvements at an intersection slated to become a roundabout in the future. The \$10,000 would be
5 deducted from the hospital's anticipated \$40,000 fee as part of building the roundabout. In another
6 example, if a project were to come and go without any fees, then the project would close without 145
7 being assessed. In another example, a first developer pays the fee in a project area and is reimbursed by
8 future developers. This happened in South Burlington when FedEx paid for a new signal, and is being
9 reimbursed by other developers within 3 miles of the project. There is more guidance and information on
10 the [Act 145 Transportation Impact Fee Guidance](#), and interactive online [Act 145 Transportation Impact](#)
11 [Fee Map](#).

12
13 Discussion:

14 Jonathon asked whether lifetime maintenance costs are accounted for in the fee and process, and Chris
15 said not that he's aware of this. For example, traffic signal head maintenance wouldn't be accounted for.
16 Joe noted that for the impact fee you're not allowed to charge for maintenance costs, only projects that
17 add capacity. Jonathon asked that if a new lane is added, then is VTrans or municipality responsible for
18 future maintenance. Joe said yes that's normal for regular projects, non-Act 145 as well. Jonathon asked if
19 there is math to show that building a project is worthwhile relative to property tax values, etc.? Joe said
20 probably but it may not be useful and it's not the practice to do that. Justin said that each municipality has
21 to certify that they have ability to maintain a project, or that they don't. Andrea asked that when you're
22 evaluating developer traffic studies, what kind of verification do you have that their numbers are realistic,
23 and are there any instances of checking traffic study projections with data collected later to see what the
24 reality is to determine the accuracy of traffic studies? Chris said this is verified in a couple of ways:
25 Engineers use the ITE Trip Generation Manual to estimate trips, and Chris uses collected traffic data to
26 check against those numbers. Also, the appendix of consultant traffic studies includes files by a traffic
27 model called Synchro, and he looks at those to make sure there aren't errors. For Andrea's second
28 question – yes, there are instances of the Act 250 District Commission asking some developers to do
29 traffic counts at certain time intervals after construction. So far he's seen data that either matches what
30 was in the estimates, or traffic volumes that are less than the projections. Andrea asked projects in
31 designated zones, and Chris said that by building in those areas you create different types of non-auto
32 trips. Joe said the policy is designed to encourage developing in those areas, so the developer gets a
33 discount. Andrea asked what if an area doesn't have infrastructure, like sidewalks? Joe said the
34 infrastructure would already be there, or the fees would go toward that infrastructure. Andrea asked that
35 there has to be some scrutiny when those centers are created and what the true cost is, but that's probably
36 not part of this discussion. Dennis noted the Circ Highway in Essex, it's labeled red on the VTrans map
37 with an impact fee, that project was fully built out using federal funds as part of the Circ Alternatives
38 project, so what's happening to the funds collected to that account if that project is fully built; are fees
39 being collected, and what happens to them? Joe said that if the new capacity is built, then the fee
40 continues to be collected until all the capacity is used. Federal and state funds were used to build the
41 project so fees collected went to that project. VTrans fronted the cost to build the project using state and
42 federal funds, so over time as fees are collected they go into the transportation fund and get distributed in
43 other ways through that process. Dennis said that bothers him, if that project has no future worth
44 associated with it for a reasonable lifetime, why should local developers pay an impact fee to have those
45 funds distributed elsewhere when the project is already paid for. Developers might have an argument in
46 court using that reason. Joe responded that for the fairness question, developers have paid before, the state
47 gets a fixed amount of federal funds, the state doesn't get reimbursed when funds are used. You keep
48 paying until the capacity is gone, the capacity is the resource that you're selling. We may not agree on
49 this but that's what the statue is, so that's how we operate. Dennis said he would prefer those funds are
50 directed back to the community, not across the state. Dennis said that within the 3- or 5-mile project
51 radius he can identify other projects that could use that money. We're not talking big dollars, but it's
52 about the fairness of the system. Jonathon said that for pass by trips, like the gas station example, doesn't
53 access to the gas station degrade the roadway level of service so why isn't that considered an impact?
54 Chris said that the project isn't adding capacity to the signal or whatever, he agrees that the driveways

1 create extra turning movements, but the fee doesn't address that. Andrea asked about an increase in
2 crashes in that example, and Chris said that's getting away from Act 145 but in review the developer will
3 do a crash study if the project is in that kind of area. Andrea asked how Act 145 is going to evaluate
4 service stations, whether they're gas or electric, especially as more of them become quick stops, are they
5 held to same criteria, don't you have to account for a new gas station to be part of the Act 145 process?
6 Joe said it's never 100% pass by trips, a new gas station will attract some new trips, so this is probably in
7 the weeds but it's part of the traffic analysis that goes into it, there's never 100% pass by, so you could
8 look at turns into and out of driveways, but there's always additional trips for new development, unless a
9 less intensive use replaces a high intensive use. Restaurants also have pass by trips. Amanda said that 3
10 miles is a relatively large distance for charging fees. Can a developer submit a traffic analysis that shows
11 their operations will not add any additional traffic to the area that may be close to three miles away?
12 Would you waive any fees? Chris said he hasn't come across that, traffic impact studies have volume
13 distribution going in that direction, and Act 145 only addresses trips that will go through that intersection
14 project, not all trips go in the same direction, so they look at the volume distribution to determine the
15 number of trips to get assessed fee. Amanda said it looks like the guidelines come out of the Act 250
16 process, is there a way outside of Act 250 that triggers 145, like checking 1111 permits? Chris said the
17 simple answer is no, only Act 250 projects. The transportation improvement district (TID) process is the
18 more complicated method, if a TID was established then we would have 145 fees against 1111 permits,
19 but a TID hasn't been established yet. Andrea asked if there was any thought of creating new districts so
20 that whenever there's an 1111 process it triggers 145? Joe said in thinking back on process, that change
21 could be added, the law is seven years old and we've learned a lot, the issue Dennis raised comes up all
22 the time, maybe that needs to be fixed, at some point it may be worthwhile to look at the whole thing
23 objectively and decide if there are changes, and if it's necessary. This really started with Exit 16 in
24 Colchester, the DDI project that costs more than 10 million dollars, there were projects being created and
25 the Act 250 Commission was struggling, the Natural Resources Board was struggling with how do we
26 allow development to go forward knowing this big project is coming. It's been helpful but the downside
27 is you go from the last person pays a lot, to everyone pays a little, there's opportunity for conflict. In
28 some cases people have been surprised about having to pay rather than being against the process. Sandy
29 asked if VTrans is hearing any interest from developers about transportation demand management
30 (TDM), which reduces impact on roadways, she hasn't heard interest yet. Joe said they haven't been
31 asking developers if they are a member of a transportation management association (TMA) but if a
32 project has TDM impacts then that affects the fee. Chris said he also hasn't heard specific TDM interest,
33 it's mostly related to sidewalks, Rice Lumber looked into building a bus shelter which could help with
34 TDM, even if the bus stop already existed. Other projects have been near bus stops but VTrans hasn't
35 granted TDM because the bus stop was already there. Some developers say they'll contact GMT and see
36 if they can get some bus service or something additional. Joe said VTrans should encourage developers to
37 contact CATMA and Upper Valley TMA and join them. Criterion 5B requires looking at bike ped
38 impacts, there are small little changes as part of developments, but they may not always be in line with
39 what a municipality has planned. Jonathon said it's interesting in TDM to think about if an employer
40 charges for parking, what kind of facilities are provided on-site like indoor bike parking, showers. Joe
41 said certain strategies get TDM credit like indoor parking and showers. Sandy said they are looking to
42 expand bikeshare so this would be helpful.

43 44 **6. Municipal General Roads Permit Update**

45 Chis Dubin, CCRPC staff, and Sam Berry, CCRPC Intern, provided an update on the town status related
46 to the Municipal General Roads Permit. Chris said the CCRPC summer intern program assists with data
47 collection related to permits, and intern Sam Berry presented MRGP progress in Chittenden County. The
48 presentation is posted to the CCRPC TAC webpage: [https://www.ccrpcvt.org/about-](https://www.ccrpcvt.org/about-us/committees/transportation-advisory-committee/)
49 [us/committees/transportation-advisory-committee/](https://www.ccrpcvt.org/about-us/committees/transportation-advisory-committee/). Today the focus is on non-MS4 towns, which have a
50 different process and goals. She shared the MRGP timeline with some key dates and the progress
51 overview slide, noting that CCRPC can only report what we know, so please let us know if we're missing
52 information. One summer project was finding and assessing some of the missing segments, we updated
53 most of them but there are some remaining so will work with towns to finish. Very High Priority Segment
54 Compliance has a later deadline of December 31, 2025. All data is tracked in ArcGIS dashboard online,

1 which can be updated in the field. This is the most current, so she encourages towns to check and make
2 sure they're meeting deadlines. Chris said last December was a big lift to get data into the DEC portal,
3 which is complete, so moving forward year to year the lift will be smaller, he will be working this
4 December to send updated info to DEC. MS4 communities are looking at the April 1, 2022 deadline.

5
6 Andrea asked that if Class 4 roads are unassessed, what are the options for addressing those sections with
7 erosion, are there standards, and if it's downgraded to a trail, can you change alignments within a Class 4
8 so it's not so steep? Chris said according to MRGP there aren't roadway standards for Class 4 but if there
9 are gullies of certain type, or erosion issues, there are ways to address that. Downgrading is an option and
10 DEC knows that municipalities may go that route. Eleni said we'll keep an eye on this, we're not aware of
11 instances in Chittenden County. Andrea hopes that erosion issues get addressed whether road is
12 downgraded or not, which will help with water quality.

13 14 **7. FY 2023 Unified Planning Work Program**

15 Marshall Distel, CCRPC, provided information about the FY23 UPWP process, which serves as the
16 CCRPC's annual workplan, with materials to be released on November 19. New this year the CCRPC is
17 seeking energy projects for which we can provide staff assistance, and no match is required. He also
18 asked for two representatives from the TAC to participate on the FY 2023 UPWP Committee, which will
19 convene for three meetings in January, February and March. Justin said he has served on the committee
20 for years but is stepping down, please contact Marshall if interested. Barbara agreed to continue on the
21 Committee, and Robin also volunteered.

22 23 **8. Status of Projects and Subcommittee Reports**

24 See bulleted list at the end of the agenda for current CCRPC projects. TAC members are encouraged to
25 ask staff for more information on the status of any of these on-going or recently completed projects.

26
27 Justin guessed that the Route 15 path is stalled due to ped and traffic signal equipment delay? Ashley said
28 she has the question out to the contractor but assumes that's this issue because that has stalled other
29 projects in the state. Christine said CCRPC can also reach out to the project manager. Jonathon said he
30 has been in touch with someone who reported that the delay in October was due to Green Mountain
31 Power and moving utility poles. Justin asked clarification from CCRPC staff about the status of traffic
32 data, speed monitoring, etc., is that in post-processing? Eleni said we are working on it, we have most of
33 the data and are doing post processing so municipalities should be receiving results soon.

34 35 **9. CCRPC Board Meeting Report**

36 In October the Board participated in two racial equity trainings led by consultant Creative Discourse,
37 voted to approve a TIP amendment, voted to approve comments on the VPSP2 projects and submit to
38 VTrans, voted to approve the regional board member appointments, and heard updates from the Executive
39 Director on the Building Homes Together campaign, voted to approve the Lamoille Tactical Basin Plan
40 regional plan conformance, and voted to approve an increase in municipal dues.

41
42 The 2% increase in municipal dues is across the board but could be a little more or less depending on
43 grand list. There was no dues increase the last two years. CCRPC was finding it a challenge to draw down
44 federal funds through the UPWP process, which municipal fees help with by serving as match. Eleni
45 noted the Board also approved the VPSP2 comments from the TAC.

46 47 **10. Chairman's/Members' Items**

- 48
49
50
51
52
53
- **VTrans Transportation Alternatives Grant Program** – Applications are due by e-mail by Wednesday, November 24, 2021. <http://vtrans.vermont.gov/highway/local-projects/transport-alt>
 - **EPA Recreation Economy for Rural Communities** planning assistance program helps communities identify strategies to grow their outdoor recreation economy and revitalize their Main Streets. This is not a grant program. Communities will not receive funds directly from EPA. Partner communities will receive help from a planning team to consider challenges and

1 opportunities, convene a community workshop, and develop an action plan for community
2 revitalization through the recreation economy. Applications due Monday, November 22, 2021.
3 <https://www.epa.gov/smartgrowth/recreation-economy-rural-communities>
4

5 The next TAC meeting is scheduled for Tuesday, December 7, 2021.

6
7 The meeting adjourned at 10:26 am.

8
9 Respectfully submitted, Bryan Davis

DRAFT

EXECUTIVE SUMMARY

Why Does a Freight Plan Matter?

Almost everything in our lives relies on the freight system working well.

This includes food at grocery stores, logs for lumber, fuel to heat our homes, and the electronics ordered online that were delivered to your doorstep. Cheese producers rely on raw milk deliveries, farmers on key supplies, and breweries on hops and grain. These items reach their destinations by one or more of these important parts of Vermont's freight system: trucks, trains, aircrafts, pipelines, water—and don't forget the importance of the communication systems and people behind the scenes.



Approximately one-third of Vermont's workforce is employed in "freight-reliant" industry sectors (manufacturing, utilities, construction, wholesale and retail trades, and agriculture). These sectors also produce about one-third of Vermont's Gross State Product. However, all sectors rely upon freight at least to some degree.

The Vermont Freight Plan provides a framework to maintain and enhance the State's multimodal freight transportation system in a manner that also supports other State and national goals. It also helps the State to navigate an uncertain future by considering the potential effects of the COVID-19 pandemic and economic recovery, technological innovation, climate change and increasing extreme weather events, and other issues.

What Are We Trying to Do?

The Vermont Freight Plan has six goals. They are consistent with and support other State and national goals.

FREIGHT PLAN GOALS



Improve safety, security, and resilience



Modernize infrastructure and operations



Support data, technologies, and workforce



Increase rail usage



Ensure reliable travel times

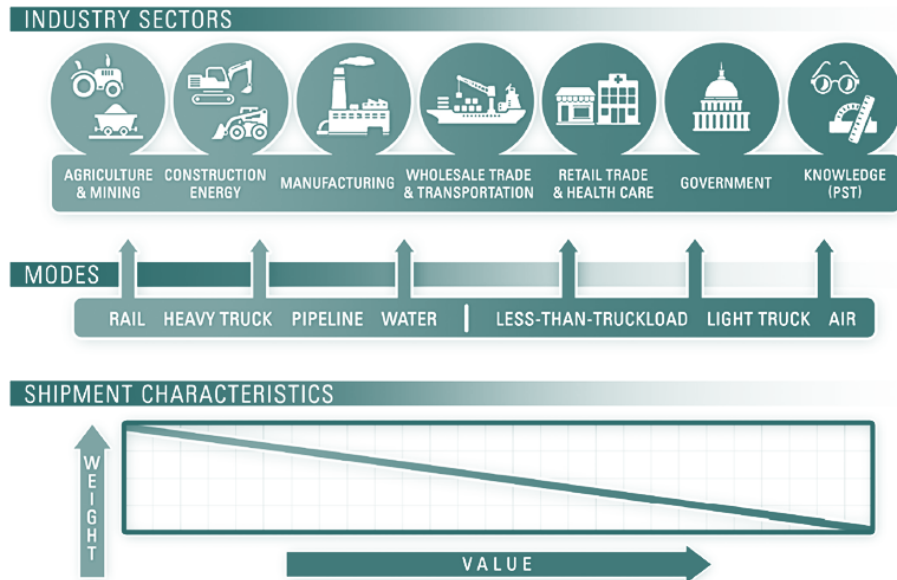


Maintain state of good repair

Freight Modes and Networks

Freight moves by different modes of transportation, including by truck, rail, air, pipeline, and water. Each mode has advantages and disadvantages, and is best suited for certain types of shipments as illustrated on the next page. Goods that are heavy, bulky, and moving long distances are ideal for rail. Truck transportation is ideal for distributing smaller shipments that may be dispersed across multiple origin or destination points. Trucks also play a key role in transporting goods for the "last mile" to their ultimate destination.

WHAT WOULD BE THE MOST SUITABLE MODE?



Note: PST includes the professional, scientific, and technical services industry sectors.

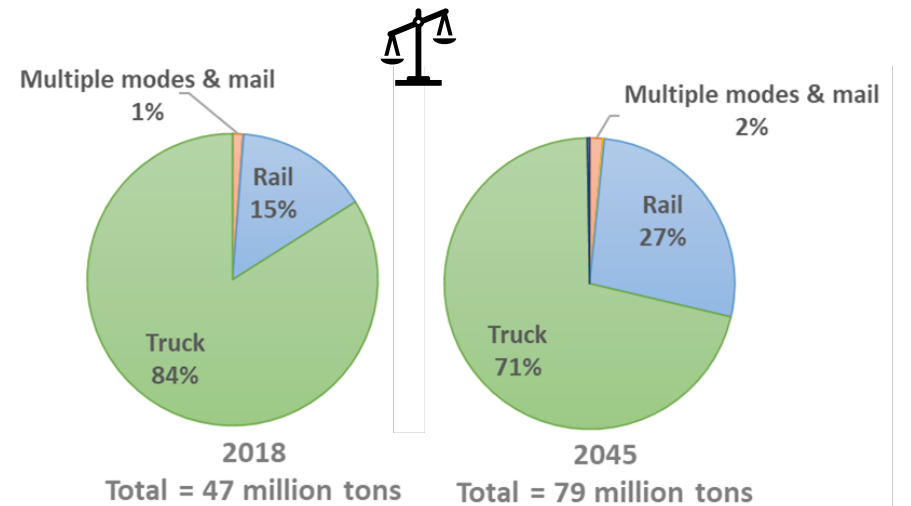
How Much Freight Went Where?

Approximately 46.7 million tons of freight moved into, out from, through, or within Vermont in 2018. Trucks carried approximately 84% of that freight and rail carried 15%. By 2045, the volume of freight (when measured by weight) is **expected to increase 68%** to 78.7 million tons. By 2045, rail is expected to move a larger share of freight in Vermont.

The value of freight moved in Vermont in 2018 was approximately \$71 billion. Trucks carried the highest dollar value share of freight flows (67%). However analysis by value highlights the contribution of multiple modes and mail (13%) and air (3%). Overall, an approximate doubling in total value (in constant dollars) across all modes is expected through 2045.

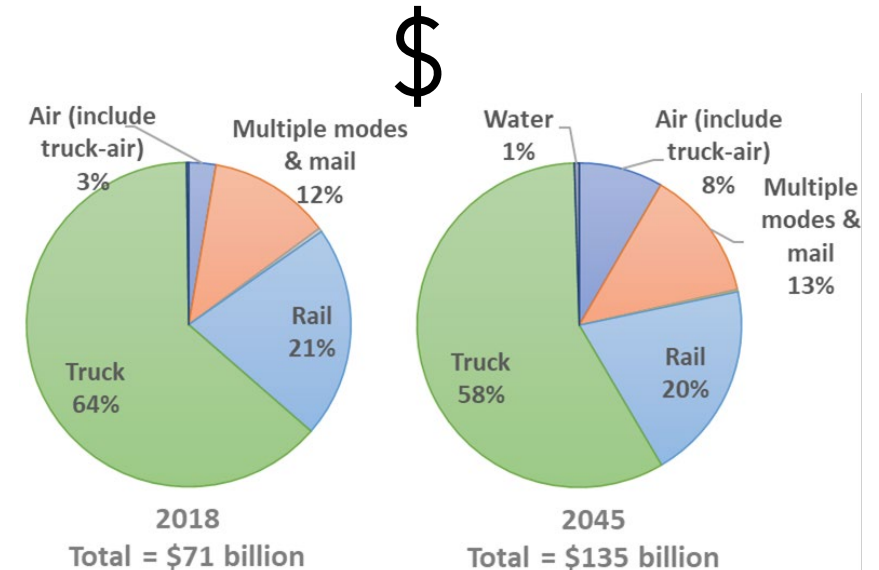
The charts to the right show the distribution of freight by mode of transportation used by weight in tons (top) and by value of goods (bottom).

MODE USED IN 2018 & ANTICIPATED IN 2045 IN VERMONT (BY TONS)



Note: Pipeline, Water, and Air carried less than 1% of freight tonnage in 2018 and are expected to carry less than 1% in 2045

MODE USED IN 2018 & ANTICIPATED IN 2045 IN VERMONT (BY VALUE)



Note: Pipeline and Water carried less than 1% of freight by value in 2018 and are Pipeline is expected to carry less than 1% in 2045

Source: Freight Analysis Framework (FAF), Surface Transportation Board (STB) Confidential Waybill Sample; Analysis by Cambridge Systematics, 2020.

What Needs Doing to Support Freight in Vermont?

Vermont is performing well across most freight performance targets. It either meets or exceeds specified targets or more general “desired outcomes.” There are additional areas where initiatives could help meet freight needs.

Issue	Need
Technological Innovation	Anticipate deployment; partner with innovators
COVID Recovery	Monitor to anticipate potential effects on freight in Vermont
E-Commerce and Last-Mile Delivery	Acquire data and estimate the potential effects of deliveries on highways, emissions, and the economy
Cross-Border Issues	Continue coordinating among stakeholders and taking actions
Truck Permitting and Harmonization	Consider talks with New York to join New England Transportation Consortium (NETC) or otherwise streamline permitting for trips between VT and NY
Freight Workforce	Support the development of workforce capabilities that improve freight system performance
Climate Change and Resiliency	Support initiatives to reduce greenhouse gas (GHG) emissions, and harden vulnerable freight infrastructure
Freight as a “Good Neighbor”	Coordinate discussions around “good neighbor” strategies and practices
Asset Management	Engage as Vermont Asset Management Information System (VAMIS) develops for freight planning aspects
Broadband Access	Expand the reach of broadband internet access statewide

Packages of Initiatives

There are 37 initiatives grouped into seven thematic packages. The graphic to the right lists a sample of important initiatives in each package. The full list of initiatives is provided in Chapter 7 of the Freight Plan.

KEY INITIATIVES IN EACH OF THE SEVEN INITIATIVES PACKAGES



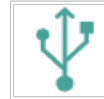
Freight Planning and Policy

- Ensure that freight needs are considered in VTrans Project Selection and Prioritization Process (VPSP2).
- Engage in equity and “good neighbor” elements of freight planning.



Climate Change and Resiliency

- Plan for freight sector alternative fueling capacity and access.
- Enhance resiliency of Vermont’s freight transportation infrastructure.



Technological Innovation

- Work regionally to harmonize regulations related to the deployment of new transportation technologies.



Trade Corridors and Economic Development

- Promote coordination between industry and education stakeholders to develop workforce.
- Provide full domestic double-stack railcar clearances on New England Central Railroad (NECR) and Western Corridor.



Highway Operations

- Maintain a state of good repair (SOG).
- Maintain or improve truck travel time reliability.
- Promote the safe movement of commercial vehicles through enforcement and leveraging technology and communications.



Rail Development

- Preserve and fully use industrial land parcels with access to rail sidings.
- Participate in multistate rail planning and programming to improve regional rail network.
- Improve weight capacity.



Air Freight

- Monitor obstructions to airport approaches and implement action plans as needed.

Implementation

Implementing the initiatives identified in the Vermont Freight Plan will require the participation of federal, state, regional, and local agencies as well as the private sector. Many of the initiatives involve regional issues, and will require participation from neighboring states and Canada.

Participation in the implementation of initiatives could include helping with education and outreach, advocacy, coordination, or contributing funds to support the implementation of initiatives.

Table 8.1 in the Freight Plan lists the initiatives, and includes some guiding parameters for implementation.

HOW ARE FREIGHT INITIATIVES IMPLEMENTED?



Key Proponents

- VTrans
- Other Vermont Agencies
- Regional and Local Agencies
- Private Sector
- Other States, Canada



Funding Sources

- Federal formula funds
- Federal discretionary Grants
- State revenues
- Local revenues
- Private Sector and/or public-private partnerships

Who Helped Develop the Plan?

- Freight Plan Advisory Committee
- Vermont Rail Advisory Council
- Widely advertised Vermont Freight Forum meetings
- Regional Planning Commission Transportation Advisory Committees
- Hundreds of other people invited and kept informed through e-newsletters, social media, and an ongoing online web tool.

The Vermont Freight Plan was also developed in coordination with the Draft 2022 Vermont Comprehensive Energy Plan and Draft Vermont Climate Action Plan.

Key Take-Aways and Themes



Address environmental effects of freight, including reducing emissions



Make Vermont's freight system more resilient



Address community effects and equity



Prepare Vermont for an uncertain future



Facilitate workforce development and training to meet industry needs



Plan and coordinate with other agencies, other states, and Canadian organizations



Think "bigger" and facilitate opportunities to innovate

For the Vermont Freight Plan, technical memoranda, webmap, presentations and more, please visit
<https://vtrans.vermont.gov/planning/freight>

State Freight Plan Initiatives (2021)

Package	Initiative	ID#	Key Proponents	Funding Sources	Management	Timeframe
Freight Planning and Policy	Participate in VTrans Project Selection and Project Prioritization Process (VPSP2) working group to ensure that freight needs are taken into appropriate consideration.	3	• VTrans	• VTrans staff time	• VTrans	Short (0-5 years)
	Engage in equity and "good neighbor" elements of freight planning including evaluating impacts and benefits to communities, as well as specific participation in the 2021 Section 41 Transportation Equity Framework legislative study and forthcoming Federal equity initiatives, and building collaboration across freight planning and climate change/resilience planning.	4	• VTrans; • Private sector; • RPCs and municipalities	• Private sector • State capital program; • Federal funds;	• Private sector; • VTrans; • RPCs and municipalities	Short (0-5 years)
	Identify up to two freight performance measures per mode to track and incorporate into VTrans dashboards as appropriate. Freight performance measures help to identify needed improvements and monitor their effectiveness.	50	• VTrans	• VTrans staff time	• VTrans	Short (0-5 years)
	Monitor the evolving freight rail corporate landscape and weigh in on industry activities as appropriate, including through Surface Transportation Board proceedings.	11	• VTrans; • Private sector	• VTrans staff time	• VTrans; • Private sector	Short (0-5 years)
	Assess post-COVID-19 recovery scenarios and provide analysis for decision-making. If resources allow, enhance travel demand modeling tools, develop freight forecasting and scenario planning tools, and/or other analytical datasets and models.	8	• VTrans; • Private sector; • Federal agencies	• Federal funds; • Private sector; • VTrans staff time	• VTrans	Short (0-5 years)
	Continue to engage freight stakeholders in the public and private sectors through ongoing communications and occasional meetings or webinars. These efforts should focus on assessing progress toward implementing the Freight Plan and Rail Plan initiatives and assessing potential impacts of emerging trends/issues.	55	• Vtrans; • Private sector; • RPCs	• Vtrans staff time	• VTrans	Short (0-5 years)
Climate Change and Resiliency	Coordinate with the Vermont Comprehensive Energy Plan, Vermont Climate Action Plan, and other efforts to slow climate change and its negative effects on freight movement. Pursue supportive grant opportunities such as to fund low- and zero-carbon fuel/propulsion technologies for all modes.	12	• VTrans; • Private sector	• Federal grant programs	• VTrans	Long (> 10 years)
	Continue to coordinate with multistate organizations and Canadian counterparts to develop a strategic plan for expanding electric charging and other alternative fueling capacity in the region with attention to freight vehicle access and capacity needs.	13	• VTrans; • Neighboring states; • Multistate coalitions; • Canadian agencies	• VTrans staff time for coordination activities; Federal funds and private funds for development of fueling/charging infrastructure	• VTrans; • Neighboring states; • Multistate coalitions; • Canadian agencies	Mid (5-10 years)
	Promote and prioritize capital investments that enhance resiliency of Vermont's freight transportation infrastructure against flooding and other climate change effects, building on Vermont's Transportation Resilience Planning Tool (TRPT) and Part 667 Reducing Repeat Damage efforts. Expand the road-focused TRPT to rail and use results to develop future initiatives.	14	• VTrans	• Federal funds; • VT Capital Program; • VTrans staff time	• VTrans	Long (> 10 years)
	Educate consumers about e-commerce purchasing behaviors that improve efficiency and reduce greenhouse gas (GHG) emissions, including ordering more goods less frequently and reducing return shipments.	15	• VTrans; • VT Dept of Public Service; • VT ANR	• VTrans; • VT Dept of Public Service; • VT ANR	• VTrans; • VT Dept of Public Service; • VT ANR	Short (0-5 years)
	Support technological innovation in freight transportation and supply chain logistics by leveraging partnerships with research organizations such as Transportation and Climate Initiative at Georgetown University, working with private sector innovators, and/or directing state and federal grants to support testing and/or implementing innovative technologies.	16	• VTrans; • VT AoE; • Georgetown Univ.; • UVM(?); • Private sector	• Federal funds; • Private sector; • Research grants	• VTrans; • VT AoE	Mid (5-10 years)

State Freight Plan Initiatives (2021)

Technological Innovation	Implement virtual weigh stations (VWS)/ weigh-in-motion (WIM) system, as recommended in the VTrans Intelligent Transportation Systems (ITS) Plan .	17	• VTrans	• Federal funds; • VT Capital Program	• VTrans	Short (0-5 years)
	Work with VTrans Operations and Safety Bureau and utilize the 2021 ITS Plan to consider replacing portable Dynamic Message Signs (DMS) with permanent DMS.	53	• VTrans	• Federal funds; • VT Capital Program	• VTrans	Mid (5-10 years)
	Explore the possibility of a "trucker mode" or a trucking module for the New England 511 and/or subsequent versions of New England 511. Include existing truck parking locations and technologies to communicate availability of open spaces.	18	• VTrans; • Maine DOT; • New Hampshire DOT		• VTrans; • Maine DOT; • New Hampshire DOT	Short (0-5 years)
	Work with neighboring states and Canadian officials to harmonize regulations related to deployment of new technologies in transportation applications including but not limited to Connected and Autonomous Vehicle (CAV) technologies .	19	• VTrans; • Neighboring state DOTs; • US & Canadian border agencies; • Canadian transportation agencies	• VTrans staff time; • Staff time of other proponent agencies	• VTrans; • Neighboring state DOTs; • US & Canadian border agencies; • Canadian transportation agencies	Mid (5-10 years)
	Complete computer/IT upgrade at DMV. Develop permitting technologies including online permit portal improvements and digitization of permit databases to support planning, enforcement, and safety activities. Build GIS maps from the database to serve ePermitting customers in their routing and travels .	54	• VT AoT/DMV	• VT AoT/DMV staff time	• VT AoT/DMV	Short (0-5 years)
	Consistent with the ITS Plan, continue and expand the use of Closed Circuit Television (CCTV) cameras to monitor transportation system performance. CCTV cameras allow for better monitoring and surveillance of the transportation infrastructure. In addition, CCTV cameras can be placed near critical infrastructure to provide additional coverage or near highway or arterial intersections or areas of recurrent congestion to assist in systems operations.	56	• VTrans;	• Federal funds; • State transportation funds	• VTrans;	Short (0-5 years)
Trade Corridors and Economic Development	Provide full domestic doublestack railcar clearances on New England Central Railroad (NECR) and Western Corridor.	20	• NECR/GW; • VTrans/VRS	• Federal funds; • Railroad funds	• Railroads; • VTrans	Long (> 10 years)
	Participate in cross-border working groups and related discussions of Quebec Autoroute 35 between I-89 in VT and Montreal and improvements to Highgate Springs POE, including coordination with officials in New York, Quebec, Canada Border Services Agency, General Services Administration, and U.S. Customs and Border Protection to mitigate upcoming construction impacts.	21	• VTrans; • US & Canadian border agencies; • Canadian transportation agencies	• VTrans staff time; • Staff time of other proponent agencies	• VTrans; • US & Canadian border agencies; • Canadian transportation agencies	Short (0-5 years)
	Work with US and Canadian border agencies to improve processing time for cross-border freight, including potential technological and pre-clearance solutions.	57	• Motor carriers; • US & Canadian border agencies;	• Federal funds; • Motor carriers	• US & Canadian border agencies; • Motor carriers	Short (0-5 years)
	Address Oversized/Overweight truck permitting inconsistencies in the northeast, including discussions regarding New York State joining the New England Transportation Consortium or other reciprocal permitting arrangements.	22	• New England Transportation Consortium; • New York State DOT	• Staff time of proponent agencies	• New England Transportation Consortium; • New York State DOT	Short (0-5 years)
	Promote coordination between industry and education/workforce development stakeholders (Agency of Commerce and Community Development [ACCD], educational institutions, etc.) to ensure workforce is prepared for current and future freight industry needs.	24	• VT ACCD; • Higher ed and trade schools; • Private sector	• Private sector; • VT ACCD	• VT ACCD; • Higher ed and trade schools; • Private sector	Long (> 10 years)

State Freight Plan Initiatives (2021)

Highway Operations	Maintain a state of good repair (SOGR) of pavement, bridges, and other assets on highways across the state to support safe and efficient freight operations; consider freight needs in updates of the Transportation Asset Management Plan (TAMP) and related processes.	25	• VTrans	• Federal funds; • VT Capital Program	• VTrans	Long (> 10 years)
	Make investments that maintain or improve truck travel time reliability on National Highway System routes and other key freight highway corridors , including managing the effects of winter weather events on truck travel time reliability.	26	• VTrans	• Federal funds; • VT Capital Program	• VTrans	Long (> 10 years)
	Keep highways open and safe through prompt and effective snow removal consistent with AOT's "safe-roads-at-safe-speeds" policy, incident management and prompt clearance .	27	• VTrans	• VTrans OM budget	• VTrans	Long (> 10 years)
	Maintain traffic operations and minimize travel delay associated with highway improvement and maintenance projects.	28	• VTrans		• VTrans	Long (> 10 years)
	Promote the safe movement of commercial vehicles through enforcement considerations consistent with Vermont's Commercial Vehicle Safety Plan, and outcomes of the Automated Speed Enforcement in Work Zones One-Year Pilot . Continue to leverage VTrans Operations and Safety Bureau capabilities to improve effectiveness and efficiency of these efforts.	31	• VTrans; • State Police	• VTrans staff time; • State Police	• VTrans; • State Police	Long (> 10 years)
	Monitor Vermont's truck parking capacity and utilization, and develop strategies to ensure sufficient, safe truck parking is available across the state.	30	• VTrans; • State Police	• VTrans staff time; • State Police	• VTrans; • State Police	Short (0-5 years)
	Promote communication of truck size and weight limits and permitting requirements to the public sector agencies and motor carrier industry, including the specifications of the extended Heavy Truck Pilot Program.	58	• VTrans/DMV; • Motor carrier industry	• VTrans/DMV; • Motor carrier industry; • Federal funds;	• VTrans/DMV; • Motor carrier industry	Short (0-5 years)
Rail Development	Upgrade all State-owned freight rail lines to be able to efficiently carry the industry-standard railcar weight of 286,000 lbs. (286k).	32	• VTrans; • VRS	• VT Capital Program; • Federal funds;	• VTrans; • VRS	Long (> 10 years)
	Maintain trackage to allow maximum freight travel speeds of 25 mph (FRA Track Class 2) or better.	33	• VTrans; • Railroads	• Federal funds; • VT Capital Program; • Railroads	• VTrans; • Railroads	Long (> 10 years)
	Preserve and fully use industrial land parcels with access to rail sidings in order to maintain a sustainable inventory for freight rail and transload uses.	34	• Businesses and rail operators • Municipalities; • Economic development agencies; • RPCs • VTrans	• Staff time of proponent agencies ; • VT Transportation Planning Initiative funding	• Municipalities; • Economic development agencies • RPCs	Long (> 10 years)
	Participate in multistate rail planning and programming to improve regional rail network.	38	• VTrans; • Neighboring state DOTs; • Multistate coalitions; • Railroads	• Staff time of proponent agencies	• VTrans; • Neighboring state DOTs; • Multistate coalitions; • Railroads	Long (> 10 years)
	Maintain and modernize freight rail yards.	41	• Railroads; • VTrans	• Railroads; • Federal funds; • VT Capital Program	• Railroads; • VTrans	Long (> 10 years)

State Freight Plan Initiatives (2021)

Air Freight	Maintain airport runway surfaces, approaches, and instrumentation in state of good repair.	42	• Airports	• Airport capital budgets • Federal funds; • VT Capital Program;	• Airports	Long (> 10 years)
	Evaluate potential need for more advanced instrumentation at some state airports if/when opportunities to expand air traffic and cargo may arise.	43	• Airports; • VTrans	• Airport capital budgets • Federal funds; • VT Capital Program;	• Airports; • VTrans	Long (> 10 years)
	Continuously evaluate the status of Runway Safety Areas (RSA) and Runway Protection Zones (RPZ) and develop action plans to remedy any deficiencies (Airport Sponsors).	44	• Airports	• Airport capital budgets • Federal funds; • VT Capital Program;	• Airports	Long (> 10 years)
	Continuously evaluate the status of obstructions to airport approaches and develop action plans to remedy any deficiencies and to avoid potential future obstructions (Airport Sponsors). VTrans is developing an informational handout to help educate municipalities in approach zones.	45	• Airports	• Airport capital budgets • Federal funds; • VT Capital Program;	• Airports	Long (> 10 years)
	Seek federal funding to replace the aging weather observation stations at our State airports. Incorporate weather data into New England 511.	46	• Airports; • VTrans; • Maine DOT; • New Hampshire DOT	• Federal funds; • VTrans staff time	• Airports; • VTrans	Long (> 10 years)