# VERMONT AGENCY OF TRANSPORTATION 2020 FACT BOOK and Annual Report



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**NEWPORT CITY.** Remediating slope failures along VT-191 required full-depth reconstruction of the roadway, replacement of a failed culvert, and installation of three active wells to extract water from below the road surface.



Crews from Thetford and Williamstown teamed up to install a new guardrail terminal end system, the first installation of its kind in the United States. These new systems will be replacing old ones throughout the state, increasing durability and safety while decreasing long-term costs.

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DUMMERSTON. The State's Infants in the Workplace program has been a huge win for parents as they ease their way back into work, and a great way for VTrans to retain our excellent staff.



**COVENTRY.** All VTrans construction projects require proper planning and usually bring together diverse parts of the agency. An upcoming rail project gathered Rail, Geological, and Materials crews to collect core samples for close inspection.



**NORTH HERO - GRAND ISLE.** Supporting STEM education is essential to the Agency's goals. Playing host to class trips on sites like the North Hero/Grand Isle Drawbridge replacement project is a great way to expose students to engineering in action.



Each year, VTrans teams up with VT Tech to hold a statewide popsicle stick bridge building competition. This year's event brought 264 students from 20 schools around the state. Some bridges held more that 2,000 pounds!



**RICHFORD.** The restoration of the historic Richford-Sutton bridge along VT-105 is a shining example of two governments working together for the improvement of both sides of the border.

# Agency of **Transportation**

With oversight from the Vermont Legislature, the Vermont Agency of Transportation (AOT) is responsible for planning, development, implementation, and maintenance of transportation infrastructure including roads, bridges, state-owned railroads, airports, park and ride facilities, bicycle facilities, pedestrian paths, public transportation facilities and services, and Department of Motor Vehicles operations and motor carrier enforcement. AOT serves the entire population of the State of Vermont.

## Secretary

Joe Flynn

## SFY 2020 Staff

- Total 1271
- 228 Department of Motor Vehicles
- 849 Highway Division
- 122 Finance and Administration
- 72 Policy, Planning, and Intermodal Development







## DEPARTMENTS AND DIVISIONS

#### Dept. of Motor Vehicles \$. Oversees vehicle licensing, registration, tax, and titling; provides commercial licensing, permitting, \$335M 1.09M 743K 206K and enforcement/inspection services; investigates Revenue Transactions Licenses Registrations fraud/violations: provides driver training programs; collects motor fuel revenue. Highway Oversees the maintenance and operation of the interstate and state highway system; oversees 69 208 95 2.6M 275 construction/materials; supports municipal projects; Highway Major Miles Paved, Projects Under Lane Miles Plowed inspects and maintains bridges, culverts, signs, and Fatalities, 2018 Crashes, 2018 2019 Construction, 2019 Winter 18-19 signals: provides road condition information. Policy, Planning and Intermodal . \$ Development 95.2K Oversees state-owned rail lines and airports: 5.1M \$6.1M 210 supports public transit providers; provides statewide Passenger Rail Public Transit Aviation Grant Municipalities planning and policy support, including research, Awards FFY18 Ridership, Vermont-Ridership, FFY19 Engaged in Regional development review, and outreach. Stations, FFY19 (Federal Share) Transportation Planning Finance and Administration Provides services in contract administration. accounting, budgeting, audit, performance 160 \$976M \$238M monitoring, civil rights, labor compliance, training, Public Records Value of Contracts and Federal Funds workforce development, and recruitment. Requests Amendments Obligated

Note: All data is from State Fiscal Year 2019 (SFY19), unless otherwise noted. Definitions: FFY refers to Federal Fiscal Year SFY refers to State Fiscal Year

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# Accomplishments

#### MISSION

Through excellent customer service, provide for the safe and efficient movement of people and goods.

#### VISION

A safe, reliable, and multimodal transportation system that grows the economy, is affordable to use and operate, and serves vulnerable populations.

### STRATEGIC GOALS

#### GOAL ONE

Promote organizational excellence by attracting, developing, and retaining a talented, diverse, and engaged workforce.

#### **GOAL TWO**

Grow Vermont's economy by providing a safe, reliable, and efficient transportation system in a state of good repair.

#### **GOAL THREE**

Make Vermont more affordable and serve the vulnerable by providing accessible, convenient, and affordable travel choices.

#### **GOAL FOUR**

Transition to an energy efficient, advanced technology transportation system.

#### GOAL FIVE

Modernize and improve government efficiency through innovation, continuous improvement, and quality customer service.



VERGENNES. The emerging UAS Program continues to find new applications for drone technology. Here, the team was deployed to survey the area around the historic Ferrisbrugh-Vergennes Train Station in preparation for expansion of Amtrak services in 2021.

#### AGENCY MOVE TO BARRE

The Agency moved its headquarters from National Life in Montpelier to Barre City Place, 219 N. Main Street, Barre. Employees moved to Barre in planned stages, and by the end of the year, the move was 85% complete, with 300 employees settled into Barre City Place.

The final stage of the move is scheduled for April 2020, when Finance, Performance, and Audit will move into the second floor.

## Unmanned Aircraft System (UAS) Program

The Unmanned Aircraft Systems Program has grown under the direction of the first program manager, hired in January of 2019. The team now has six FAA certified remote pilots and five additional crew members. AOT's need for rapid updated aerial imaging and documentation dates back to Tropical Storm Irene in 2011. By the end of 2019, four drones were operational, all acquired under the FHWA STIC grant, with 80% federal funding and 20% state funding.

The UAS Program completed 38 missions in 2019. Highlights include use of drones during the statewide catastrophic exercise in October to provide a live video feed into AOT's Transportation Incident Command Center and the State Emergency Operations Center. In the immediate aftermath of the Halloween rainstorm, the UAS Program created a geo-reference orthomosaic map of the Richford VT-105 bridge washout using specialized software that stitches high-resolution images together. The map was used for situational awareness and public outreach.

The UAS Program played a vital role in the I-89 Colchester Bridge 76/77 deck replacement. After the roadway was repaved to prepare for the project and crossover traffic pattern in the work zone, the UAS Program flew a drone over the entire area and overlaid that imagery onto a map with labels. A GIS specialist on the UAS team then added mile markers and additional labels to create a series of detailed maps that were used to train local first responders about the new traffic patterns in the work zone. First responders used the maps when incidents occurred in the work zones.

With the UAS Program now well established, the next step is to make the drones a statewide resource. AOT has already worked with other agencies on some of their big projects. In June, the UAS Program assisted the Vermont Geological Survey in the Agency of Natural Resources after the Cotton Brook landslide in Waterbury by providing high resolution maps and imagery of the landslide for use in their analysis and public outreach.

AOT aims to expand the UAS Program into other sections and train others, such as bridge inspectors, to use the drones on their own.

## Vehicle Electrification in Vermont

AOT serves on an interagency team that is administering a \$2.8 M grant program for electric vehicle charging stations. The funding comes from Vermont's share of the nationwide settlement stemming from Volkswagen's sale of diesel vehicles containing fraudulent emissions defeat devices. The first two funding rounds of the program granted approximately \$1 M to support about 30 charging stations across the state. The next funding round will dedicate about \$1.7 M of the settlement money, supplemented by almost \$300,000 of AOT state funds, to filling gaps in the state's highway corridor fast-charging network. Once constructed, these new charging stations will put a fast charger within about 30 miles from almost every address in Vermont.

AOT continued the transition to more electric buses in the statewide transit system, with an additional eight electric buses in the process of joining the fleet. Two buses were ordered to be delivered in December. VW settlement funds awarded two additional electric buses, and AOT Public Transit was awarded another competitive grant for the purchase of another two large and two small electric buses.

AOT worked with the Legislature, the Public Utility Commission (PUC), and other agencies and stakeholders to remove PUC jurisdiction over public charging stations. This allows charging companies to construct and operate new stations without the need to obtain a certificate of public good and to price charging by the per-kilowatt hour. AOT and other agencies continue to work to establish a system of highway user fees for electric vehicles.

As required by the 2019 Transportation Bill, AOT has established a point-of-sale or lease incentive program for new plug-in electric vehicles. The incentives are now available to individuals with household incomes of approximately \$90,000 annually or less and will apply to vehicles with a base MSRP of \$40,000 or less.



MONTPELIER. The State of Vermont launched an incentive program for the purchase or lease of new plug-in electric vehicles (PEVs), with a total of \$1.1 million available to encourage Vermonters to go electric. AOT worked with electric utilities, car dealers, and Vermont Energy Investment Corporation (VEIC), through Drive Electric Vermont, to administer the program.

## **Transportation Operations**

### Transportation Management Center (TMC)

In 2019, the Transportation Management Center (TMC) improved service provided to Vermonters by increasing staff numbers and establishing 24/7 operations. In addition to responding to roadway and mobility incidents at all times, the TMC focused on providing pertinent and active mobility restriction information to motorists on Vermont highways. Real-time traffic alerts are sent to Vermont's media outlets and public subscribers of VT Alerts (https://vem. vermont.gov/vtalert). Additionally, the TMC became a critical component of AOT's Incident Management System (IMS), which is designed to respond to transportation-related emergencies in our state. The TMC is now the direct line of communication between AOT and Vermont's Emergency Operations Center in Waterbury.

### Traffic Signals

The number of Traffic Signals with remote communication capabilities increased from 50 to 64 (39% of the system.)

## Aviation

The Agency received approximately \$3.1 million in federal funds to build a new taxiway at Morrisville-Stowe State Airport that will enhance safety by allowing new traffic patterns for the private, commercial, and glider pilots who use the busy airport. The new parallel taxiway will be added to runway 19, at the north end of the runway, and extend to the current apron location. The resulting traffic pattern will enable pilots to enter and exit the north end of the runway without having to back-taxi the runway, thus improving safety at the airport. The funding is part of the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP) 2018-2020 Supplemental Appropriation.

## Rail

AOT was awarded a \$20 million federal grant from the U.S. Department of Transportation's Better Utilizing Investments to Leverage Development (BUILD) program to upgrade 31 rail bridges to handle a capacity of 286,000 pounds. The funding supports the rehabilitation or replacement of rail bridges along 53 miles of the Vermont Railway. The project is estimated to cost \$31 million, with the State of Vermont and Vermont Rail Systems contributing \$11 million toward the upgrades to the southern section of the state-owned rail line that runs between Rutland and Bennington. In addition to many economic benefits, the infrastructure improvements will reduce truck traffic along U.S Route 7 and adjacent highways, enable the expansion of intercity passenger rail, and ensure a state of good repair for the rail bridges for the next 75-100 years.

## **Department of Motor Vehicles**

## Enhanced Driver's Licenses and ID Cards

DMV fully transitioned to a new style of driver's licenses and ID cards that have advanced security features, are printed at a highly secure site out of state, and get mailed to Vermonters. The new credentialing system was rolled out at all DMV offices throughout the state in late spring/early summer. These new credentials go further to prevent fraud and identity theft, a key mission of the DMV.

#### 100th Annniversary of DMV Enforcement

AOT and DMV commemorated the 100th anniversary of Motor Vehicle Inspectors enforcing motor vehicle and criminal laws at a celebration in June. The celebration of 100 years of service was a testament to the significance of the program, and the commitment and value of promoting highway safety. The Motor Vehicle Inspectors were established in 1919, with a sole Inspector that patrolled the entire state that first year. The anniversary celebration included a gathering on the State House lawn and an open house at the DMV building in Montpelier, where there was a display of historical memorabilia and photos.

#### **Commercial Vehicles Operation**

DMV continued its modernization efforts by beginning the process of transferring Commercial Vehicle Operations (CVO) to an online system. Significant progress was made in 2019, and the new system is on schedule to launch in May 2020. CVO customers will be able to file International Fuel Tax Agreement (IFTA) returns online. International Registration Plan (IRP) renewals will be generated and mailed automatically. Customers who file online will know the amount they owe immediately and be able to pay online. The taxes and fees on all returns filed within the system are automatically calculated, and all returns, registration documentation, forms, and customer correspondence will be housed electronically, resulting in less paper used and greater efficiency.

#### Third Gender Option on Credentials

In 2019, DMV began offering a third gender option on driver's licenses and ID cards. Now, nonbinary Vermonters and those who do not identify as either male or female will have the option to select "other" for their gender. DMV worked with the LGBTQ community and had the support of the governor's office in making the decision to add the third gender option "X" to credentials, for increased safety and inclusion of all Vermonters.

## **Public Transportation**

#### Service Expansion

Service expanded into Barre including a new LINK service from Burlington through Waterbury direct to downtown Barre serving two state offices and the Department of Libraries, and Morrisville through Hardwick over Route 14 into Barre. This service connects with the US-2 commuter service from St. Johnsbury providing access to Montpelier and Barre from a previously underserved area. Additional service to Barre from Randolph was also added. The new Montpelier Downtown Transit Center was completed and allows for



smoother through service to the trip generator and destination of Montpelier. Tri-Valley Transit ACTR division introduced new Saturday service on the Middlebury Shuttle College Route and new midday service on the Tri-Town Bristol route. Advance Transit extended service during the morning and afternoon hours to Bugbee Street and the Upper Valley Aquatic Center via the new yellow route and has added more service to the Veterans Administration Hospital in White River Junction and other points along the orange route.

#### Statewide Automatic Vehicle Locator (AVL)

In summer of 2019, AOT did a soft launch of a statewide application, The Transit App, which shows when each scheduled bus will arrive in real time. Bus riders now will know if they just missed a bus or if it's running a few minutes late. This is a major asset that should make the riding experience much more marketable. Go! Vermont launched a trip planner tool on the www. connectingcommuters.org website. The primary advantage of this tool over Google Trip Planner is that it includes more information about local transportation options, including bus flag downs, bus deviations from route, and access to Dial-A-Ride information if there are no relevant bus route options.

#### Grant Awards

AOT received several grant awards: two awards for No or Low Emission electric buses; a \$2 million competitive grant for a bus garage in Bradford; and two awards that total \$2.6 million to purchase about 35 new buses and allow 25 aging buses to be retired across the state, increasing the number of buses able to serve the Stowe area to relieve seasonal congestion. The agency received a Human Service Coordination Research grant for \$170,000. The grant funds additional transportation services for recovery and job access for those suffering from substance use disorder. AOT also expanded the Rides to Wellness pilot project to include Porter and Gifford medical centers in addition to the current pilots in the Northeast Kingdom and Mt. Ascutney Hospital region.

## **Clean Water**

The Agency continued its work as stewards of water quality across all projects and sections, with significant achievements during the past year:

• 30 new projects went through the stormwater design and permitting process under the State Operational Program

12 new projects constructing new stormwater treatment
practices

• 82 previously constructed projects with stormwater treatment practices were inspected and maintained

• 31 of the 88 active construction projects required Construction Stormwater Permit coverage and implemented erosion prevention and sediment controls, with a total of 91 compliance visits by agency staff

• 58 practices identified, 20 designed, and 17 constructed to meet the agency's Flow Restoration Reduction Targets across 10 stormwater impaired watersheds.

AOT continued work under the Generalized Phosphorus Control Plan (PCP) and the Missisquoi Bay Watershed Phosphorous Implementation Plan to address Lake Champlain Total Maximum Daily Load and the agency's phosphorus reduction targets.



**PROCTOR.** Simple erosion control fixes, like this one along US-4, have a demonstrable effect on improving water quality.

The story map at https://arcg.is/ODS4LCO summarizes the work completed by the Vermont Department of Environmental Conservation and AOT, as supported by Stone Environmental, to develop the plans for the various transportation land uses included in the AOT PCP Area.

AOT also completed nine new Stormwater Pollution Prevention Plans (SWPPPs) for its maintenance facilities. An existing 32 SWPPPs are already in place for other district facilities, airports, and gravel pits.

In 2019, the total expenditure on clean water program and compliance costs, including planning, design, construction, operation and maintenance, and staff time, was approximately \$5 million.



The VTrans phosphorous reduction dashboard can be found in an online story map available at https://arcg.is/ODS4LC0. This dynamic dashboard shows the VTrans phosphorous reduction targets per lake segment, along with VTrans baseload and acreage by landuse type.

## **Automated Vehicles**

The Automated Vehicle Testing Act became law in June 2019 (24 VSA Chapter 41) and creates a permitting process to allow the testing of automated vehicles, often referred to as self-driving cars, on state and town highways in Vermont. A testing permit is required from the Traffic Committee, whose members are the Secretary of Transportation, Commissioner of Motor Vehicles, and Commissioner of Public Safety. The Traffic Committee is authorized to issue testing permits for the state highway system, class 1 town highways which are the continuation of U.S. and state numbered routes through municipalities, and class 2, 3, and 4 town highways in municipalities that have pre-approved testing on their roads. In 2019, AOT began to provide outreach and education to local officials through a variety of mechanisms and is available to any municipality that is considering pre-approval.

## **Emergency Management**

In 2019, AOT used the Incident Management System to create, test, and deploy its own full-scale Incident Command System (ICS). During the statewide catastrophic exercise in October, AOT exercised and tested five objectives:

1. Ability to coordinate with Vermont National Guard and Vermont Emergency Management to open and operate Commodity Points of Distribution sites at state airports

2. Use of the Survey 123 post-disaster damage collection tool and provide data to applicable state and federal agencies

3. Deploy the Unmanned Aerial System in support of emergency mission requirements

4. Resource the State Emergency Operations Center with AOT personnel and use the Transportation Management Center to facilitate information flow

5. Activate and operate AOT's statewide ICS and demonstrate positive information flow

Several of these objectives were further tested and practiced in real life during the Halloween rainstorm when AOT partially activated its Transportation Incident Command Center as well as the Northwest Regional Command and used the ICS.

In the past year, the Agency also took steps toward implementing Emergency Procedures Plans for all of its core buildings to prepare for active shooter, fire, bomb threat, lock down, medical emergency, gas leak, and evacuation events.



**BERLIN.** In October 2019, AOT activated its Transportation Incident Command Center (TICC) and four regional commands to participate in the three-day statewide catastrophic exercise. The Agency's statewide Incident Command System is staffed by 130 AOT employee volunteers and designed to allow the agency to be proactive, deft in response and recovery operations, and able to improve transportation resiliency.

## e-Construction

The Agency vision is to initiate paperless plans within four years, in order to increase the quality, efficiency, and collaboration with the construction industry, while increasing transparency for all stakeholders. Current and upcoming immediate e-construction initiatives include e-ticketing, e-box, digital inspection, and model based design.

## Structures and Hydraulics

In the Structures unit, 18 projects were advertised in 2019, representing an 83% success rate of advertising on time. Of the 18 projects advertised in 2019, 61% (11 projects) are state highway projects, 6% (1 project) are town highway projects, and 33% (6 projects) are interstate projects. Three projects were not advertised on time due to a lack of funding. Thirteen projects were transferred from scoping into design.



28 bridge replacement, rehabilitation, and preventative maintenance projects were under construction during 2019, totaling \$300.3 million dollars. Three of the projects utilized Accelerated Bridge Construction (ABC).



HALLOWEEN FLOOD RESPONSE. Structures assisted with work pertaining to culverts in Eden and Georgia due to flooding during the Halloween rainstorm. Structures responded to these Emergency Relief projects by developing contracts for the replacement of these two large culverts. In Georgia, Structures partnered with AOT construction teams and contractor SD Ireland to develop a site plan and contract to replace the existing pipe with a 20' X 8' precast concrete box culvert under the I-89 off ramp. This 100+ year replacement will have been contracted, fabricated, and installed in less than two months. In Eden, Structures developed a complete set of contract plans for the replacement of the failed culvert under VT Route 100 in less than four weeks. Replacement of this prefabricated arch bridge was expected to be completed in phases during a six-week period.



**BETHEL.** The Bethel VT Route 12 Bridge 38 project replaces the existing four-span steel deck trusses. Traffic is currently being maintained on the existing bridge while the new bridge is constructed upstream of the existing structure. When the project was contracted, a flood came through and stabilization had to take place for the road to remain open.



**BETHEL.** The new three-span bridge has a weathering steel plate girder superstructure. The new bridge is 364 feet long including two approach spans of 110 feet and a center span of 144 feet. An ornamental steel lattice treatment similar to that on the existing bridge will be attached to the outside of the standard two-rail box beam for aesthetic purposes.



**COLCHESTER.** This Accelerated Bridge Construction project utilized "Construction Manager/General Contractor" (CM/GC) contracting and included the replacement of four bridge decks on Vermont I-89 between exits 16 and 17 in the town of Colchester. The 7 <sup>1</sup>/<sub>2</sub>" concrete decks on Bridges 76N and 76S over Bay Road and Bridges 77N and 77S over Mallet's Creek were replaced with 8 <sup>1</sup>/<sub>2</sub>" precast Deck Panels. Each bridge deck was replaced over the course of one weekend. Crossovers were used to maintain traffic during construction.



MIDDLEBURY. This project is replacing two nearly 100-year-old rail bridges in the center of Middlebury with a tunnel. The two bridges are about 300 feet apart, with one located on Main Street/VT-30 and the other on Merchants Row. The 360-foot tunnel replacing the two bridges will address several railroad deficiencies. The design balances community needs and character, local and regional mobility, and construction feasibility, while keeping the rail line active, except during the 10-week closure period, as communities along the line depend on rail for deliveries of various commodities.



NORTH HERO - GRAND ISLE. Multi-year construction of the North Hero/Grand Isle drawbridge along US-2 continued throughout the year. 2019 saw the completion of the temporary bridge and the demolition of the old bridge decks. The new permanent drawbridge will be built in the footprint of the historic structure.

## Construction Management System (CMS)

In July of 2018, the Agency signed a contract with ExeVision Inc. to replace its aging enterprise-wide Construction Management System (CMS), comprised of five modules: Estimation, eContracting, Materials, Construction, and Civil Rights. The Estimation module has been developed, and the e-Contracting module is in design. Those two modules are planned to be deployed in July 2020. Materials, Construction, and Civil Rights modules will be designed during the next five years, with full deployment of the new CMS expected by 2024.

## Recruitment

In 2019, AOT hired 122 permanent employees and 172 interns and temporary employees. The Civil Rights section coordinated the Agency's participation in 96 outreach and recruitment events, and collaborated with hiring managers to arrange for the participation of staff and equipment at job fairs, career panels, and conferences. Agency employees are the best ambassadors to promote AOT as an employer of choice. Civil Rights networks with other state agencies, academic institutions, trade groups, and communitybased organizations to build a robust applicant pool and a workforce that thrives and embraces the AOT culture of respect, teamwork, safety, customer service, and innovation.

Youth is vital to the transportation industry, and today's students represent the pool of workers for the future workforce. AOT promotes year-round youth outreach to expose students to rewarding and diverse careers at AOT. The Agency participates in job fairs, panels, and conferences; serves as a host site for Community Based Learning, and more. In 2019, AOT employed 31 interns.



I-89 DIVERGING DIAMOND INTERCHANGE. To help the public better understand exactly what changes will be coming to Exit 16 in Colchester, VTrans worked with a graphics company to produce a driving simulator that lets users drive through a virtual mock-up of the future diverging diamond interchange.



VTRANS TRAINING CENTER. This year, several VTrans employees took part in the State's Assessment of Prior Learning Program. In partnership with the Community College of Vermont, the program takes employees' career experience and transfers it into college credit enabling them to pursue a degree in a related field.



In 2019, a total of 1,299 agency staff participated in several mandatory trainings, including Workplace Civility and Unconscious Bias training.



VERMONT HIGHWAY SAFETY ALLIANCE. 2019 saw the second annual VHSA Video PSA contest. Dozens of Vermont high-school students submitted 25-second videos to help educate their peers about the dangers of distracted driving. The students were joined by Gov. Phil Scott for the contest award ceremony at the State House.



**"TROIS TRACES".** In the spring of 2019, VTrans archeologists came upon three marble art pieces created by Japanese artist Yasuo Mizui in 1968 located at a former I-89 rest area. Our Cultural Resources team plans to work with the Vermont State Curator, Vermont State Architectural Historian, and others to survey, conserve, and improve the interpretation of these unique sculptures, which were long forgotten and in a state of disrepair.



WINDSOR. VTrans is committed to STEM education and encouraging the bridge builders of tomorrow. Our engineers are constantly out in the community making their pitch. Events like "Introduce a Girl to Engineering Day" at the American Precision Museum are a great opportunity for girls and young women to learn about potential career paths directly from people in the field. And some hands-on activities always help!

## **Contract Administration**

Work Authorization Requests (WAR)/Work Order Requests (WOR)) In 2017, in consultation with FHWA, AOT developed a second-tier selection process for primary contracts to be in accordance with the current Code of Federal Regulations and the Brooks Act. As of December 2019, AOT has 13 different types of services that have been utilizing the new process, resulting in more than 60 contracts. FHWA recently commented that Vermont has one of the best second-tier selection processes in the country. In addition to the second-tier process, a robust work authorization and invoice review was put into place wherein many manual processes were transitioned to automated functions to ensure consistency and eliminate errors.

#### Salesforce

In April of 2019, Indefinite Delivery/Indefinite Quantity (IDIQ) contracting went live on Salesforce, a new CRM platform being used for management of the Task Bid process. Salesforce has introduced IDIQ contractors to a new online bidding platform, along with providing an open portal for contractor bid inquiries, document management for projects in the bid process, and automated bid reporting. VTrans hopes to expand the use of Salesforce in 2020 to a broader audience of contractors and VTrans project managers.

#### Job Order Contracting (JOC)

In February of 2019, Job Order Contracts (JOC) replaced the former Category I Maintenance Rental Agreement (CAT I MRA) contracts. These contracts are utilized for highway and rail preventive maintenance and repair.



**INDEFINITE DELIVERY/INDEFINITE QUANTITY CONTRACTING.** ID/ IQ was utilized for one State highway bridge project and one town highway bridge project in 2019. The Bradford bridge project on Creamery Road included a deck replacement for the historic pony truss. The project had a limited scope to replace the existing failed FRP deck with a half-filled concrete steel grid deck. The Hinesburg project on VT Route 116 involved the replacement of the existing cattle pass with a new 78-inch diameter polymer coated corrugated steel pipe.



INTERN MAINTENANCE WORKER PROGRAM. As part of the Agency's committment to recruitment, VTrans has been utilitizing a new intern program. The part-time internship offers high-school and college students who are interested in tech the opportunity to earn money while gaining practical experience and learning life-long skills. The program has been tried by different garages around the state, with our dedicated staff becoming great mentors to the young men and women eager to start careers of their own.



# Project Prioritization



## VERMONT PROJECT SELECTION AND PRIORITIZATION PROCESS (VPSP2).

The Agency is working diligently with its Regional Planning Commission partners to revamp the current project prioritization system. The revised processes will provide a clearer understanding of how a project comes into being and how projects are prioritized based on the value they provide to taxpayers. Transportation value is determined by evaluating each project against eight criteria: safety, asset condition, health access, environment, community, economic access, resilience, and mobility and connectivity,

This new system is expected to be in use for the 2022 fiscal year capital program, During 2020, AOT and the RPCs will test the new tools and examine the proposed methodology while piloting the new processes. Teams will be looking for incremental improvement opportunities. In the interim, the existing prioritization will remain in effect.

## Structures Criteria

Structures Criteria	Maximum Points
Bridge Condition	30
Load Capacity and Use	15
Regional Input and Priority	15
Remaining Life	10
Waterway Adequacy and Scour Susceptibility	10
Asset-Benefit Cost Factor	10
Functionality	5
Project Development and Momentum	5

Note: These criteria were developed in 2007, in compliance with 19 V.S.A. paragraph 10b(c).

Points are summarized for each program, and the highest score receives the top ranking. Rankings change from year to year as projects are completed, bridges change in condition, or regional planning commissions' priorities change. These priorities are used to develop the capital program, help decide which bridges to advance next, and enable the agency to clear a backlog of projects in a defined, documented, and efficient manner.

Selection for proposed rehabilitation and reconstruction projects will continue to utilize the priority system. To become a project and have design initiated, the bridge will need to be among the highest ranked.

The bridge priority system is used to rank major bridge replacement and rehabilitation projects, and will continue to be used to select projects and determine funding needs. This system is not comprehensive as it does not rank short structures or maintenance needs, both preventive and routine.

Bridge replacement and rehabilitation projects progress through the agency's Project Development Process. The Structures section aggressively seeks opportunities to streamline project delivery and reduce project scope, impacts, and costs.

Scope reduction can be achieved by reducing approach work and/or minimizing or eliminating enhancements, phased construction, or road closures. Although inconvenient for a community, the elimination of a temporary bridge reduces timelines, cost, need for significant right-of-way acquisition, and resource impacts. Benefits of road closures include faster construction and improved safety conditions. Where appropriate, accelerated bridge construction (ABC) and materials are utilized. The technique minimizes traffic disruptions and congestion, improves workzone safety, and lessens environmental impacts. Additionally, prefabrication can improve constructability, increase quality, and lower life-cycle costs.

The establishment of the bridge maintenance program enabled the agency to perform much-needed preservation activities and routine (cyclical) maintenance activities on a limited number of bridges, but that was only the beginning. Preservation and maintenance are not high-profile activities when performed on a routine schedule The benefits, however, are obvious, as these activities extend service life and lower the asset deterioration rates.

As we continue to focus efforts on preservation and routine maintenance activities, the number of bridges becoming structurally deficient will slow down but not be reduced. Preservation activities will not correct existing structural deficiencies, but these activities will slow the deterioration so that a bridge's lifespan can be extended, thus preventing the bridge from becoming structurally deficient. To this end, preservation and routine maintenance activities are essential to slowing the rate at which bridges deteriorate over time.

The value of preservation and routine maintenance will be appropriately demonstrated in the future through new performance measures that evaluate the sustainability, asset consumption ratio, and asset value for the agency's bridge assets.

## **Roadway Criteria**

Roadway Criteria	Maximum Points	Criteria Description
Highway System	40	This factor looks at the Highway Sufficiency Rating and the network designation. Interstates are held to the highest standard, followed by non-Interstate primary and then off- primary roads. The Highway Sufficiency Rating considers traffic, safety, width, subsurface road structure, and more.
Cost per Vehicle Mile	20	This is the project cost divided by the estimated number of miles vehicles will travel on the project. This is a relatively easy method to get a benefit/cost ratio for comparing similar projects.
Regional Priority	20	The top RPC Roadway project is assigned 20 points. The score is reduced for lower RPC priorities. Projects listed as priority #10 and lower get two points
Project Momentum	20	This factor considers where the project is in the development process and anticipated problems such as right of way or environmental permitting. Some projects are so far along that they must be completed or the Agency would have to pay back federal funds.
Designated Downtown Project	10	Per 19 V.S.A. § 10g(I)(3), VTrans awards ten bonus points to the base score for projects within a designated downtown development district established pursuant to 24 V.S.A. § 2793.

## Traffic Design Criteria

Traffic Design Criteria	Maximum Points	Criteria Description
Intersection Capacity	40	This factor is based on Level of Service (LOS) for the intersection and the number of intersections that are in the coordinated system. Projects with a lower LOS and that are part of a larger coordinated system receive higher scores for this category.
Accident Rate	20	This factor is based on the critical-accident ratio for the intersection. Projects with higher critical-accident ratios receive higher scores for this category.
Cost per Intersection Volume	20	This factor uses the estimated construction cost and average-annual-daily traffic through the intersection. VTrans calculates the construction cost of the project for each anticipated user through the intersection. Projects with lower costs per intersection volume receive higher scores for this category.
Regional Input and Priority	20	This factor is based on the ranking of projects from the RPCs/ MPO. The RPCs/MPO rank the projects based on criteria they develop. Projects with higher regional rankings receive higher scores for this factor.
Project Momentum	10	This factor considers where the project is in the development process, anticipated problems such as right of way or environmental permitting; and funding.

## **Pavement Criteria**

## Asset Condition (PCI)

**Pavement Condition Index** 

- Combination of ride, rut, and cracking
- Scoring structured to recognize need to address roads in very poor condition regardless of traffic

## **Project Economics (Benefit Cost)**

**Benefit Cost Ratio** 

- Benefit compares condition difference between the selected treatment and doing nothing on the project section over the lifespan of the treatment
- Benefits are weighted by traffic volume
- Cost is present value financial cost to the state
- Measures the "bang for the buck" among candidate projects

## Regional Planning Commission (RPC) Rank

## **Regional Importance**

- Allows RPCs to address socioeconomic, cultural/local importance and impact on local economy of candidate projects
- Scoring structure helps create a geographically distributed program



VTRANSPARENCY. Our online data portal allows the public to see the latest rating of pavement conditions for any stretch of State highway, along with an interactive map that includes the date of most recent construction.



**STATEWIDE.** DMV made a great effort to educate Vermonters about the added security features of the new credentialing system and the important changes in processing.



**ENFORCEMENT & SAFETY.** This division of DMV is composed of three sections responsible for a wide range of functions, including highway safety, fraud investigation, driver training, law enforcement, and more.





**STATEWIDE.** DMV's certified inspectors conduct a Level I Inspection, a 37-step procedure that includes an examination of driver operating requirements and vehicle mechanical fitness.



**SOUTH BURLINGTON.** Excellent customer service is a cornerstone of DMV's mission. Recognizing the efforts of the staff behind the counter is a great way to boost morale and show appreciation for their service.

# Department of Motor Vehicles

The Department of Motor Vehicles oversees vehicle licensing, registration, tax, and titling; provides commercial licensing, permitting, and enforcement/inspection services; investigates fraud/violations; provides driver training programs; and collects motor fuel revenue.

## Commissioner

Wanda Minoli

SFY 2020 Staff Total: 228

## SFY 2020 Funding

Total Appropriation: \$33.2 M

## Locations

Montpelier Bennington Dummerston Middlebury Newport Rutland Saint Albans Saint Johnsbury South Burlington Springfield White River Junction



MONTPELIER. 120 State Street is DMV headquarters and serves Vermonters five days a week for everything from license renewals and vehicle registrations to title transfers and road tests.



Note: All data is from State Fiscal Year 2019 (SFY19), unless otherwise noted.

## 20 DEPARTMENT OF MOTOR VEHICLES: REVENUE AND TRANSACTIONS

#### **Revenues FY2019, in millions**

(including all Education Fund allocations and other out-transfers)

Total	\$317.9
Other Revenue (Includes Title Certificates, Oversize Permits, State Civil Traffic Fines, Inspection Sticker Fees, and other sources)	\$24.3
Diesel	\$18.6
Purchase & Use	\$111.8
Jasoline	\$77.8
Aotor Vehicle Fees (Licenses & Registrations)	\$85.4

Transportation Infrastructure	e Bond Gasoline	\$14.6	
Transportation Infrastructure	e Bond Diesel and Other	\$2.1	
	Total	\$16.7	
OMV Rates			
Gas Tax, Assessments, and Clean Up Fee	\$0.121, plus MFTIA, plus M \$0.01 Clean Up Fee	IFTA, plus	
Motor Fuel Transportation Infrastructure Assessment (MFTIA)	\$0.0396 per gallon or 2% of the adjusted retail price upon each gallon of motor fuel sold by the distributor, whichever is greater		
Motor Fuel Tax Assessment (MFTA)	\$0.134 per gallon or 4% of the tax- adjusted retail price upon each gallon or motor fuel sold by the distributor not to exceed \$0.18, whichever is greater		
Diesel Tax, Clean Up Fee, and Infrastructure Fee	\$0.28 and \$0.01 and \$0.03	3	
Sales Tax, Purchase and Use Tax, Motor Homes, Trucks up to 10,099 lbs.	6%		
Driver Training	\$50 - \$150		
Clean Air Fund	\$2/year		
Conservation Plates	\$26/pair, in addition to regi	stration fee	
Title Fees (Vehicle)	\$35		
Title Fees (ATV, Boats, Snowmobiles)	\$22		
Oversize Permits	\$1 - \$500		

\$300 - \$10,000









Survey Fee

# Finance and Administration

The Division of Finance and Administration provides services in contract administration, accounting, budgeting, audit, records management, performance monitoring, civil rights, labor compliance, training, workforce development, and recruitment.

Director

Wayne Gammell

SFY 2020 Staff Total: 122

## SFY 2020 Funding

Total Appropriation: \$15.5 M



**BERLIN**. Graduates of the 2019 Transportation Leadership Institute represented a diverse cross section of AOT, reflecting the Agency's commitment to supporting the professional development of our workforce.



Note: All data is from State Fiscal Year 2019 (SFY19), unless otherwise noted.



**RICHMOND.** When duty calls, VTrans crews step up to the task, like working through the weekend to complete emergency bridge repairs on I-89 southbound.



**STATEWIDE.** With thousands of culverts in our highway network, maintenance crews work year-round to keep them flowing and clear of debris.





**STATEWIDE.** Flooding from the Halloween rainstorm closed more than 20 state highways. Crews from different regions teamed up and worked tirelessly to repair the damage.



**GROTON.** Pothole patching can be an effective temporary fix but often requires a little heat in colder months to help the material stick to the road surface.

# **Highway Division**

The Highway Division oversees the maintenance and operation of the interstate and state highway system; oversees construction/materials; supports municipal projects; inspects and maintains bridges, culverts, signs, and signals; and provides road condition information.

Director Wayne Symonds

SFY 2020 Staff Total: 849

## SFY 2020 Funding

Total Appropriation: \$477.7 M



SPRINGFIELD. VTrans divides the state into eight transportation districts that operate out of more than 60 garages, which are responsible for all maintenance activities on state highways.



Note: All data is from State Fiscal Year 2019 (SFY19), unless otherwise noted. \* Data from 2018-2019 Winter Season

## 24 HIGHWAY: SAFETY

2017-2021 Strategic Highway Safety



## Fatal Crashes, by calendar year

Impaired
 Both
 Improper Safety Equipment
 Neither



#### Major Crashes Reported, by calendar year



2019 NORTHEAST SAFETY TRANSPORTATION CONFERENCE VTrans' annual event brings together highway safety professionals from across the region to share lessons, practices, and technologies to focus on a common goal: the reduction of fatalities and injuries on our roadways

## HIGHWAY: WINTER MAINTENANCE 25





The current fleet supporting winter highway maintenance efforts consists of 268 dump trucks, 96 pickups with plows, 55 loaders, and 8 graders.





Our maintenance workers are constantly shifting gears. As early as mid-October, VTrans crews are busy preparing equipment for another winter season.

This past year, VTrans welcomed the newest addition to the fleet. Affectionately dubbed the "MEGA" Plow, this extendable plow enables crews to clear wide bridges in a single pass, saving time and money.

## 26 HIGHWAY: WINTER MAINTENANCE STATISTICS



SOUTH	IWEST	SOUTI	HEAST	NORTI	HWEST	NORT	HEAST
District 1 Bennington East Dorset Readsboro Wilmington Marlboro	District 3 Brandon Castleton Clarendon Ludlow Mendon Rutland Sudbury	District 2 Ascutney Chester Dummerston Jamaica Londonderry Rockingham Springfield	District 4 Randolph Rochester Royalton Thetford Tunbridge White River Jct Windsor Williamstown Woodstock	District 5 Chimney Corners Colchester Middlebury New Haven Waitsfield Middlesex	District 8 Cambridge Eden Enosburg Georgia N. Hero Highgate Montgomery Morrisville St. Albans	District 7 Bradford W. Danville Lunenburg Lyndon Newbury North Montpelier Orange St. Johnsbury	District 9 Barton Bloomfield Canaan Derby Irasburg Island Pond Westfield
193.6K	293.7K	204.0K	331.8K	361.0K	434.8K	375.5K	364.2K
Lane Miles	Lane Miles	Lane Miles	Lane Miles	Lane Miles	Lane Miles	Lane Miles	Lane Miles
Plowed	Plowed	Plowed	Plowed	Plowed	Plowed	Plowed	Plowed
\$3.6M	\$4.9M	\$4.0M	\$7.7M	\$7.1M	\$7.5M	\$6.8M	\$5.4M
Cost of Winter	Cost of Winter	Cost of Winter	Cost of Winter	Cost of Winter	Cost of Winter	Cost of Winter	Cost of Winter
Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance	Maintenance
15.8K	22.9K	22.2K	37.4K	32.9K	31.5K	26.7K	19.5K
Salt (tons)	Salt (tons)	Salt (tons)	Salt (tons)	Salt (tons)	Salt (tons)	Salt (tons)	Salt (tons)
1464	625	169	404	752	350	2368	702
Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
(cubic yards)	(cubic yards)	(cubic yards)	(cubic yards)	(cubic yards)	(cubic yards)	(cubic yards)	(cubic yards)

## HIGHWAY: WINTER MAINTENANCE PLOW ROUTES 27



## **28 HIGHWAY: STRUCTURE POPULATION AND CONDITION**

In conformance with the National Bridge Inventory, Vermont maintains a historical record of all bridges subject to the National Bridge Inspection Standards (NBIS). These standards establish requirements for inspection procedures, frequency of inspections, qualifications of personnel, inspection reports, and both the preparation and maintenance of a state bridge inventory. The NBIS apply to all short and long structures located on public roads. Short and long structures are defined below.

### "Highway" Structure Population (as submitted to FHWA in April 2019)

Structure Type	Interstate	State Highway	Town Highway	Other	Total
Long Structures	313	811	1,652	7	2,783
Short Structures	211	1,056	*	*	1,267
Total	524	1,867	1,652	7	4,050

#### Structure Count by Age (in years)



## Percent Structural Deficiency Over Time by System

## DEFINITIONS

#### Long Structure

Bridges having a span length greater than 20 feet in length and located on public roads.

#### **Short Structure**

Bridges having a span length of greater than six feet up to or equal to 20 feet and located on public roads.

\* VTrans does not maintain an inventory of or inspect town highway or other short structures.



SPRINGFIELD. Proper "basket training" is essential for VTrans staff to properly inspect many of the bridges in our highway network.



#### **HIGHWAY: PAVEMENT CONDITION** 29

72

#### Travel Weighted Average Network Condition

#### 100

Performance Measures

Automated surveys are conducted annually to determine pavement conditions across the state. Each segment of road 80 is rated on a scale of 0 to 100 based on rutting, cracking, and roughness. These are then weighted by their respective traffic volumes. The VTrans goal for performance is 70.

## **Conditions Over Time**

While the "Travel Weighted Average Network Condition" graph measures VTrans performance for the majority of road users. the "Unweighted Condition Distribution" graph measures the Agency's performance for all users, including those on low volume roads. The VTrans goal for the percentage of roads in very poor condition is no more than 25%.

## Good

Like new pavement with few defects perceived by drivers Composite Pavement Condition Index 80-100

## Fair

Slight rutting, and/or cracking, and/or roughness become noticeable to drivers

Composite Pavement Condition Index 65-79

## Poor

Multiple cracks are apparent, and/or rutting may pull at the wheel, and/or roughness causes drivers to make minor corrections

Composite Pavement Condition Index 40-64

## Very Poor

Significant cracks may cause potholes, and/or rutting pulls at the vehicle, and/or roughness is uncomfortable to occupants. Drivers may need to correct to avoid defects. Composite Pavement Condition Index 0-39

## Paving Mileage Maps

Paving mileage maps are available through VTransparency, the Agency's public information website, at vtrans.vermont. gov/vtransparency.

Paving Mileage Summary (Two-lane miles, rounded to the nearest mile)



## Paving Mileage Summary

Crack Seal
 State Paving
 Preventive Maintenance
 Paving



0%

2010

2012

2014

2016

2018



LYNDON. Our Aviation crew often plays host to students and is glad to share its knowledge and experience to help educate the next generation.



MONTPELIER. Amtrak's "The Vermonter" makes daily trips from St. Albans to Washington, D.C., stopping in the great cities of the Northeast along the way.





**BARRE.** Trains move more than people. The "Rock Train" regularly travels on VTrans-maintained tracks, hauling granite from the quarries in Barre as it makes its way to all different corners of the country.



MORRISTOWN. Our Aviation Program promotes a vibrant air transportation system in Vermont by assuring a safe, well-maintained system of public-use airports.

# Policy, Planning, and Intermodal Development (PPAID)

The Division of Policy, Planning, and Intermodal Development oversees state-owned rail lines and airports; supports public transit providers; and provides statewide planning and policy support, including research, development review, mapping, and outreach.

Director Michele Boomhower

SFY 2020 Staff Total: 72

SFY 2020v Funding

Total Appropriation: \$89.2 M



BERLIN. VTrans' Rail and Aviation Bureau staff keep our State-owned rail lines and airports in great shape year-round.



Note: All data is from State Fiscal Year 2019 (SFY19), unless otherwise noted. Definitions: FFY refers to Federal Fiscal Year SFY refers to State Fiscal Year

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## 32 **PPAID: RAIL & AVIATION**



Amtrak ridership from Vermont-based stations only: Ethan Allen Express: 16,561 Vermonter: 78,673 Total: 95,234

## **Passenger Rail Service**

The State of Vermont partners with Amtrak to provide rail service.

Amtrak Vermonter: runs on the New England Central Railroad (NECR/GWI) from Saint Albans to Brattleboro, continues through Massachusetts and Connecticut, and then down the Northeast Corridor to New York City and Washington, DC. www.amtrak.com/vermonter-train

Amtrak Ethan Allen Express: runs on the Clarendon and Pittsford Railroad (CLP) from Rutland to Whitehall, New York, and continues south to Albany and on to New York City. www.amtrak.com/ethan-allen-express-train

## FY2019 Amtrak Ridership and Revenue

Lines	Ridership	% Change	Revenue	% Change
Vermonter	99,280	+1.82	\$6,826,619	+5.1
Ethan Allen Express	50,515	+1.7	\$3,078,246	+2.5

## Aviation

The Aviation Program manages 90 runway lane miles at 10 state-owned airports in Vermont, providing a safe environment for users of the system, preserving the publicly-owned infrastructure, promoting aviation-related activities, and expanding travel opportunities.



The Policy, Planning, and Research Bureau is responsible for state transportation planning, policy analysis, mapping, research and development, and permitting services.

## Discretionary Grants Submitted & Funding Awarded

Morrisville-Stowe State Airport Taxiway (FAA AIP Supplemental)

Construction of a new taxiway at the Morrisville-Stowe State Airport. Awarded \$3.1 million

## Brattleboro-Hinsdale Bridge Replacement (BUILD Grant Program)

Full replacement of the Brattleboro-Hinsdale bridge in a project jointly undertaken with the New Hampshire Department of Transportation. Awarded \$2 million (Vermont's portion)

## Upper Valley Electric Buses and Facilities (Lo-No Emissions Program)

Purchase of all-electric buses and charging equipment and upgrade of Advance Transit's bus facility to support electric charging. Awarded \$3 million.

## **Regional Planning**

Through the Transportation Planning Initiative (TPI), the Agency provides grants to Vermont's 11 Regional Planning Commissions (RPCs) for transportation planning and to facilitate collaboration between municipalities and the agency.

## More information at vtrans.vermont.gov/planning/policy-planning/regional

## TRANSPORTATION PLANNING INITIATIVE ACCOMPLISHMENTS

Enhance cooperation and coordination between Agency, RPCs, and municipalities	Better connect Federal, regional, and statewide transportation planning	Provide technical assistance to municipalities	Advance Agency Strategic and Long-Range Transportation Plans	Provide a mechanism for improved public outreach and education
210 Municipalities actively engaged in regional transportation planning	63 # of Coordination Activities in Support of Public Transit	<b>47.8%</b> TPI budget spent on municipal technical assistance.	406 Data collection activities conducted for Agency	<b>113</b> Municipalities assisted with transportation related grants

## RESEARCH

The Research section assures completion of the Agency research program, represents the state on regional and national research efforts, and fulfills the federal mandate to provide required transportation research. In 2019, seven projects were completed on topics including quantifying the vulnerability of bridges to seismic loading, snow and ice performance measurement, and concrete pay factors analysis. More information is available at vtrans.vermont.gov/planning/research



## BALANCED MIX DESIGN FOR ASPHALT MIXTURES

To address premature rutting and cracking after construction, VTrans has started to implement Balanced Mix Design (BMD) to identify asphalt mix distresses before production as a verification tool, and potentially during Quality Assurance testing.



QUANTIFYING NUTRIENT POLLUTION REDUCTIONS ACHIEVED BY EROSION REMEDIATION PROJECTS ON VERMONT'S ROADS Research aimed at making Vermont's transportation system more resilient to extreme weather events (responsible for a bulk of the erosion that occurs along roadways) and minimizing environmental impacts of the transportation system

## 34 **PPAID: PUBLIC TRANSIT**

The Public Transit Section is responsible for the planning, administration, funding, and oversight of the statewide network of public transit providers. Transit providers operate multiple types of service including fixed-route, fixed-deviated route, commuter, demand response, health care and shopping shuttles, winter seasonal routes, ADA complementary transportation, special services for the state's elders and disabled citizens, and intercity bus services. For more information, visit: www.connectingcommuters.org/bus-info



Map Produced by the VTrans Mapping Section - 1/3/2019

## Farebox Revenue & Local Share

The Agency has a statewide goal of 20% local share participation for public transportation, which includes fare revenue, private contributions, contracts from outside agencies, payments from cities and towns, and in-kind contributions. Local share analysis found that 25% of statewide transit funding comes from local sources. Of the seven state providers, five charge fares on at least some routes. Other routes are offered fare-free because of local contributions from towns and institutions. Total fare revenue statewide in SFY19 was \$2.8 million, the majority of which was collected in Chittenden County. Fare recovery ratios (percentage of operating costs covered by fares) range from roughly 1% on some rural and small-town routes to more than 50% on the Montpelier-Burlington LINK Express. The average among all routes that collect fares is 9%. Fare revenue comprises 17% of the operating budget for Green Mountain Transit-Urban.

## Elders & Persons with Disabilities "E&D" Transportation Program

In SFY19, the total amount spent on the E&D program in Vermont was \$5.27 million, 80% of which (\$4.2 million) was federal money. Overall, E&D ridership was mostly unchanged from last year, with about 200,000 trips carried. Green Mountain Transit (GMT) with its partners Special Services Transportation Agency in Chittenden County and CIDER in Grand Isle County accounted for the largest share at about 30% of the total. Tri-Valley Transit (TVT), with its partner Elderly Services, Inc. accounted for the second largest share at 25%. The cost per passenger trip ranged from about \$23 at Marble Valley in Rutland to about \$35 at Southeast Vermont Transit.

#### E&D Trips by Mode

As in SFY 18, van and volunteer driver trips accounted for the majority of E&D trips in SFY 19. Bus and taxi trips accounted for 14% and 3% of E&D trips, respectively. Van trips decreased by 8% from SFY 18 to SFY 19, while bus trips decreased by 28%, sedan trips increased by 5%, and volunteer driver trips increased by almost 11%.

## **Ridership Trends**

In SFY19, Vermont's public transit systems provided nearly 5.1 million trips. A little less than half of those rides are provided in the Chittenden County region, and the remainder is spread throughout the rest of the state. Over the past year, all categories saw ridership growth except for rural routes which dropped by 6% and tourism routes which were essentially unchanged. Small town and express commuter routes grew by about 5%. The demand response category saw an enormous change as the previous volunteer driver category was merged into demand response, and Medicaid trips served by agency vans, as well as ADA paratransit trips, were both included for the first time. This expansion of the definition of demand response service accounts for the majority of the overall increase of nearly 350,000 trips compared to SFY18.



Elders & Persons with Disabilities Ride Modes



# <sup>36</sup> Boards and Councils

## **Boards and Councils**

## **Transportation Board**

John Zicconi Executive Secretary

David Coen Chair

Richard Bailey James Fitzgerald Wendy Harrison Timothy Hayward Pam Loranger Philip Zalinger

#### **Motor Vehicle Arbitration Board**

John Zicconi Lemon Law Administrator (802) 828-2943 LemonLaw@vermont.gov

David Baker, Chair Technician Member

Michael Loschiavo New Car Dealer Member

Gina Germond Citizen Member

Peter Hood, Vice Chair Citizen Member

Vacant Citizen Member

Alternates Vacant Technician Member

Jeffrey Handy New Car Dealer Member

#### **Public Transit Advisory Council**

Joe Flynn Secretary, Agency of Transportation Michele Boomhower is designee

Elaine Haytko Vermont Public Transit Association

Nick D'Agostino Rural Community Transportation

Jim Moulton Addison County Transit Resources

Brian Maroney Green Mountain Community Network

Jon Moore Green Mountain Transit

Mike Smith Secretary, Agency of Human Services Kelly Dougherty is designee

Michael Harrington Acting Commissioner, Department of Labor

Lindsay Kurrle Secretary, Agency of Commerce and Community Development Richard Amore is designee

Peter Johnke Vermont Center for Independent Living

Brenda Siegle Council of Vermont Elders (COVE)

John Sharrow Mountain Transit

Chip Desautels Premier Coach

Dan Currier, Central Vermont RPC

Meredith Birkett Village Manager, Town of Johnson

Lucas Herring Mayor, Barre City

Senator Jane Kitchel, Caledonia

Rep. Mollie Burke, Windham

## **Aviation Council**

Joe Flynn

Secretary, Agency of Transportation, Chair Chris Carrigan Paul Carroccio Kelly Colling George Coy Steven Dolgin Robert Flint Bob McEwing Barbara Murphy Janice Peaslee Michael Schirling, Commissioner, Dept, of Public Safety Douglas White

#### **Rail Council**

Joe Flynn Secretary, Agency of Transportation, Chair

David Allaire Christopher Andreasson Charles Baker Joann Erenhouse Carl Fowler Charles Hunter Charlie Moore Rick Moulton Jeff Munger Rep. Brian Savage Arthur Whitman David Wulfson

#### **Vermont Traffic Committee**

Joe Flynn Secretary, Agency of Transportation

Wanda Minoli Commissioner, Department of Motor Vehicles

Michael Schirling Commissioner, Department of Public Safety

# Projects Completed in 2019

## Rail Maintenance Projects Completed

Project Name & Number	Line	DOT Crossing #	Project Type	Asset
Alburgh, VT 78	CN	171-041A	Maintenance	Crossing
Arlington, Cemetery Rd	VTR B&R	851-182M	Maintenance	Crossing
Barre, Berlin St	WACR M&B	837-342P	Maintenance	Crossing
Barre, Quarry St	WACR M&B	837-359T	Maintenance	Crossing
Barre, Willey St	WACR M&B	837-339G	Maintenance	Crossing
Barton, Maple Hill Rd	WACR CONN	850-892W	Maintenance	Crossing
Barton, May Farm Rd	WACR CONN	850-887A	Maintenance	Crossing
Bennington, Houghton St	VTR B&R	851-161U	Maintenance	Crossing
Burlington, Bartlett Bay Rd	VTR Northern	851-414A	Maintenance	Crossing
Burlington, Maple St	VTR Northern	837-100U	Maintenance	Crossing
Burlington, Sears Ln	VTR Northern	837-098V	Maintenance	Crossing
Coventry, Howse Rd	WACR CONN	850-872K	Maintenance	Crossing
Coventry, River Rd	WACR CONN	850-871D	Maintenance	Crossing
Fair Haven, Prospect St	CLP	248-940C	Maintenance	Crossing
Fairlee, Ely Rd	WACR CONN	053-559J	Maintenance	Crossing
Irasburg, River Rd	WACR CONN	850-877U	Maintenance	Crossing
Montpelier, Bailey Ave	WACR M&B	837-321W	Maintenance	Crossing
Montpelier, Main St	WACR M&B	837-323K	Maintenance	Crossing
Mt. Tabor, Depot St Ext	VTR B&R	851-230A	Maintenance	Crossing
Mt. Tabor, Norse Lodge Rd	VTR B&R	851-229F	Maintenance	Crossing
Mt. Tabor, S End Rd	VTR B&R	851-227S	Maintenance	Crossing
Norwich, River Rd	WACR CONN	053-543M	Maintenance	Crossing
Pittsford, Whipple Hollow Rd	VTR Northern	837-139X	Maintenance	Crossing
Shrewsbury, Town Hill Rd	GMRR	859-884K	Maintenance	Crossing
Sutton, Station Rd	WACR CONN	850-908R	Maintenance	Crossing
Thetford, Pavilion Rd	WACR CONN	053-552L	Maintenance	Crossing
Wallingford, Hartsboro Rd	VTR B&R	851-234C	Maintenance	Crossing
West Rutland, Thrall Ave	CLP	248-921X	Maintenance	Crossing

## Rail Standard and Emergency Projects Completed

Project Name & Number	Line	DOT Crossing #	Project Type	Asset
Bellows Falls-Chester GMRC(23) - Phase 4	GMRR		Programmed Project	Track
Coventry WCRL(8)	WACR		On-Call Project	Bridge
Coventry WCRL(9)	WACR		On-Call Project	Bridge
Coventry WCRL(10)	WACR		On-Call Project	Bridge
Coventry WCRL(25)	WACR		On-Call Project	Bridge
Leicester STP 2033(29)	VTR Northern	851-340K	Programmed Project	Crossing
Manchester VTRY(7)	VTR B&R		Programmed Project	Bridge
Manchester STRB16(1)	VTR B&R		Programmed Project	Bridge
Manchester STRB16(2)	VTR B&R		Programmed Project	Bridge
Middlebury STP 2035(20)	VTR Northern	851-351X	Programmed Project	Crossing
Montpelier WACR(8)	WACR M&B		On-Call Project	Bridge
New Haven NH 019-3(61)	VTR Northern	851-367U	Programmed Project	Crossing
Pittsford VTRY(11)	VTR Northern		Programmed Project	Bridge
Pittsford STP 2033(30)	VTR Northern	851-316J	Programmed Project	Crossing
Proctor VTRY(10)	VTR Northern		Programmed Project	Bridge
Salisbury STP 2035(21)	VTR Northern	851-344M	Programmed Project	Crossing
Salisbury STP 2035(22)	VTR Northern	851-346B	Programmed Project	Crossing
Wallingford STP 2033(28)	VTR B&R	851-250L/249S	Programmed Project	Crossing
Wallingford STRB16(3)	VTR B&R		Programmed Project	Bridge

## Aviation Projects Completed

Airport	Project Name	Project Type	Asset
Franklin County, Highgate	Environmental Assessment	FAA Airport Improvement Program	Airport
Middlebury	Obstruction Removal	FAA Airport Improvement Program	Airport Safety
Morrisville-Stowe, Morristown	Avigation Easements	FAA Airport Improvement Program	Airport Safety
Northeast Kingdom International, Coventry	Runway Extension & Obstruction Removal	FAA Airport Improvement Program	Airport Safety
Northeast Kingdom International, Coventry	Taxiway A Extension, Taxiway F (new)	FAA Airport Improvement Program	Taxiway
Northeast Kingdom International, Coventry	Avigation Easements	FAA Airport Improvement Program	Taxiway
Rutland-Southern, Clarendon	Taxiway A middle	FAA Airport Improvement Program	Taxiway
Statewide	Pavement Maintenance	FAA Airport Improvement Program	Runway/Taxiway
W. H. Morse, Bennington	Obstruction Removal	FAA Airport Improvement Program	Airport Safety

## Highway Projects Substantially Completed

Project Name & Number	Route Number	Description of Work
BETHEL-ROYALTON STP 2964 (1) ROYALTON- TUNBRIDGE STP 2967 (1)	VT-107, VT-110	Resurfacing existing roadway
BRANDON-GOSHEN ER STP 0162 (22)	VT-73	Resurface existing roadway
BRIGHTON STP PC19 (1)	VT-105	Resurface existing roadway
BRISTOL BF 021-1 (33)	VT-116	Bridge deck replacement
BRISTOL-STARKSBORO STP FPAV (19)	VT-17	Resurface existing roadway
CABOT-DANVILLE FEGC F 028-3(26) C/2	US 2	Reconstruct existing roadway
EAST MONTPELIER BRF 037-1(7)	VT-14	Replace existing bridge
ENOSBURGH-RICHFORD STP 2969(1) & RICHFORD STP 2916 (1)	VT-105, VT-105A	Resurface existing roadway
ESSEX NH 2931 (2) & JERICHO-RICHMOND STP 2931 (1)	VT-117	Resurface existing roadway
ESSEX STP 5400 (7)	VT-2A	Intersection improvements
ESSEX-UNDERHILL STP PS19 (6)	VT-15	Resurface existing roadway
FAIRLEE STP SCRP (15)	VT-244	Replace existing culvert
GUILFORD IM 091-1 (79)	I-91	Resurfacing the welcome center
HIGHGATE BO 1448 (43)	TH4	Replace existing bridge
JAMAICA-WINHALL STP 2904 (1)	VT-30	Resurface existing roadway
JAY STP 034-2 (16)	VT-105	Ledge removal
JERICHO STP HES 030-1 (21) (RE-AD)	VT-15	Resurface existing roadway
LEICESTER WCRS (23) C/1	VTR	Construction of new track section
LEICESTERSTP2033(29)PITTSFORD/ MIDDLEBRY/SALISBURY	VARIOUS TH'S	Reconstruct rail crossing
MANCHESTER STP 2970 (1) & MANCHESTER STP BP15 (5)	VT-7A, VT-11, VT-30	Sidewalk improvements and resurface existing roadway
MIDDLEBURY EWP3(2)	VT-30 (TH2) & TH8	Preparatory work for the Middlebury Tunnel project
MIDDLEBURY-STARKSBORO STP 2953(1)	VT-116	Resurface existing roadway
MONTPELIER-WATERBURY IM SURF (59)	I-89	Resurface existing roadway
MORRISTOWN BRS 0240(3)S & MORRISTOWN STP HES 030-2(28)	VT-15 & VT-15A	Replace existing bridge and intersection improvements
MORRISTOWN STP PC19 (3)	VT-12	Resurface existing roadway
MORRISTOWN-WOLCOTT STP FPAV (22) & CRAFTSBURY STP FPAV (24)	VT-15	Resurface existing roadway
MT. HOLLY ER STP 0133 (8)	VT-155	Slope and roadway reconstruction
NEW HAVEN NH 019-3 (61)	US 7	Replace rail crossing
NEWPORT CITY STP 134-3 (22)	VT-191	Slope and roadway reconstruction
PITTSFIELD BHF 022-1 (24)	VT-100	Replace existing bridge
POULTNEY BF 0138 (12)	VT-140	Replace existing bridge
POULTNEY STP 015-2 (9)	VT-30	Resurface existing roadway

## Highway Projects Substantially Completed (continued)

Project Name & Number	Route Number	Description of Work
POULTNEY-CASTLETON STP FPAV (25)	VT-30	Resurface existing roadway
READING-WINDSOR-WEATHERSFIELD STP FPAV (11)(12)(13)	VT-44, VT-44A, VT-106	Resurface existing roadway
RICHFORD-SUTTON, PQ BHF 0814 (1)	VT-105A	Rehabilitate existing bridge
ROCKINGHAM-CLARENDON NH SURF(49)	VT-103	Resurface existing roadway
RUTLAND-MIDDLEBURY WCRS (23) C/2 (RE-AD)		Siding upgrade to rail yards
SPRINGFIELD STP 016-2 (23)	VT-11	Intersection improvements
SPRINGFIELD-HARTLAND IM SURF (62)	I-91	Resurface existing roadway
STAMFORD STP FPAV (23)	VT-100	Resurface existing roadway
STATEWIDE IMG SIGN (69)	I-89, I-91, I-93	Sign replacement
STATEWIDE NE STPG MARK (310)	MISC	Roadway line installation
STATEWIDE NW STPG MARK (311)	MISC	Roadway line installation
STATEWIDE NW STPG SIGN (63)	US 2, US 7	Sign replacement
STATEWIDE NW STPG SIGN (65)	VT-12, VT-118, VT-100C, VT-109	Sign replacement
STATEWIDE SE STPG MARK (312)	MISC	Roadway line installation
STATEWIDE STP CRAK (36)	VARIOUS	Crack sealing
STATEWIDE SW STPG MARK (313)	MISC	Roadway line installation
STATEWIDE SW STPG SIGN (64)	MULTI	Sign replacement
WALLINGFORD STP 2033 (28)	TH 7	Replace rail crossing
WATERBURY-STOW STP 2945 (1)(READ) & STOWE STP STSW (1)(READ)	VT-100	Resurface existing roadway
WEST HAVEN-WHITEHALL,NY BO 1443 (51)	TH 3	Replace existing bridge
WEYBRIDGE-NEW HAVEN BF 032-1(19)	VT-17	Replace existing bridge
WILLISTON IM SWFR (1)	I-89	Stormwater upgrades
WILLISTON STP FPAV (10)	US 2	Resurface existing roadway
WINHALL STP SCRP (14)	VT-30	Replace existing culvert
WOODFORD BF 010-1 (52) & WEATHERSFIELD STP 0146 (16)	VT-9, VT-131	Rehabilitation of existing culvert

## Municipally Managed Construction Projects Substantially Completed

Project Location	Project Number	Description of Work
Barre Town	STP EH11(1)	Construction of sidewalk along Bridge Street.
Bennington	STP EH08(11)	Installation of historic-style street lighting, repair and replacement of sidewalks and curbing, and landscaping along Pleasant and School Streets.
Brandon	BHF 019-3(58)	Rehabilitation of Bridge No. 114 on US7, over the Neshobe River.
Burlington	TAP TA15(1)	Construction of five new pedestrian crossings on North Avenue.
Castleton	STP BP13(10)	Construction of sidewalk along VT4A from East of the Fair Haven-Castleton town line to Drake Road.
Colchester	STP SDWK(16) / TAP TA13(5) / STP BP15(4)	Construction of a shared-use path along West Lakeshore Drive from Church Road to Prim Road.
Essex Jct.	ST BP18(22)	Installation of Rectangular Rapid Flashing Beacons at Main Street and Railroad Avenue, Hiawatha Avenue and West Street, and CVE (Fairgrounds) crossing on Route 15.
Essex Town	STP BP14(7)	Construction of sidewalk along Towers Road.
Fair Haven	STP BP16(9)	Construction of sidewalk along Mechanic Street from Second Street to the High School.
Fairfax	STP EH12(8) & BP18(4)	Installation of sidewalk along VT104 from Hunt Street to the Village Center.
Franklin	ST BP17(21)	Construction of sidewalk on the East side of Main St./VT 120 to connect to Square Road.
Guilford	IM 091-1(78)	Temporary repairs to the existing pump station that serves the Guilford Welcome Center on I-91.
Hartford	STP BIKE(62) & BP16(4)	Sidewalk and bike path improvements along East end of the Sykes Mountain Avenue (Segment 5).
Hinesburg	STP BIKE(54)	Construction of sidewalk along VT116 from Commerce Street to Riggs Road.
Manchester	STP BP15(5) & BP17(5)	Streetscape modifications on Depot Street to improve bicycle and pedestrian access and safety.
Middlebury	STP BP14(8)	Construction of the Pulp Mill Bridge sidewalk along Seymour Street and Pulp Mill Bridge Road.
Montpelier	STP MMTC(3) & STP EH07(15)	Construction of a multi-modal transit center/bike path and pedestrian facility.
Montpelier	TAP TA14(7)	Construction of sidewalk along Elm Street.
Montpelier - Berlin	STP BIKE(33)S	Construction of shared-use path. Phase 1 – Montpelier – From Granite Street/Stone Cutters Way paralleling the former Montpelier and Wells River to Gallison Hill Road and ending at the Civic Center. Phase 2 – Berlin – From US Route 2 in Montpelier, following the former Barre and Chelsea Railroad and ending at US Route 302 (entrance to Price Chopper Shopping Center).
Norwich	ST BP17(23)	Installation of rapid flashing beacons with double sided activation at two locations in the Village area (in front of Tracy Hall, Main Street and by the Elementary School on US5).
Old Bennington	ST BP18(20)	Replacement of sidewalk along Monument Avenue.
Putney	STP TA14(1)	Construction of sidewalk along US5 and Vinegar Lane, from the Village Center to Landmark College.
Randolph	STP BP17(25)	Construction of sidewalk along Elm Street.
Rochester	ER 0176(11)	Reconstruction of Bethel Mountain Road due to storm damage.
Rutland	BIKE(61)	Rutland Creek Path - Segment 4: Shared-use path from Meadow Street Park to River Street.
Rutland City	TAP TA14(5)	Installation of rapid flashing beacons along the Rutland Creek Path at Crescent/Earle, State/ Labor, and West Street, and 17 sidewalk ramps.

## Municipally Managed Construction Projects Substantially Completed (continued)

Project Location	Project Number	Description of Work
Shelburne	ST BP17(26)	Installation of rectangular rapid flashing beacon (RRFB) equipment on existing pedestrian crosswalk connecting Town Hall and the Town Parade across US Route 7.
South Burlington	STP 5200(17)	Construction of Market Street.
South Burlington	TAP TA17(6)	Construction of a stormwater infiltration basin and drainage infrastructure along Picard Circle.
Springfield	TAP TA14(006) & STP BP17(10)	Construction of new sidewalk along South Street from Union Street to the High School.
Springfield	ST BP17(27)	Construction of pedestrian improvements along Main Street (VT11) between Summer Street and Valley Street.
Statewide Better Roads - Construction		116 Municipal Mitigation projects at various locations statewide.
Swanton – St. Johnsbury	STP LVRT(6)	Rail trail construction from Bridge Street in Sheldon to Sheldon Junction.
Thetford	STP 0180(10)	Trailhead parking improvements at Elementary School.
Williston	TAP TA17(8)	Construction of critical drainage areas infiltration trench at the Lamplite Acres residential neighborhood.
Williston	IM REST(10)	Replacement of sidewalks and guardrail at the I-89 Williston North and South Rest Areas.
Williston	SB VT09(3)	Acquisition of informative displays, photo murals, benches and audio-visual equipment for the Windsor Waypoint Center.

## Municipally Managed Scoping Projects Substantially Completed

Project Name	Project Number	Description of Work
Montpelier	STP BP16(13)	Scoping study for bicycle and pedestrian improvements along Barre and Main Street.
Pomfret	TAP TA17(4)	Scoping study for pedestrian/ADA access and compliance, lighting, and other safety related infrastructure at the area joining the Pomfret Town Office and Town Hall.
Royalton	STP BP17(8)	Scoping study to conduct inventory of current sidewalk infrastructure, identify gaps in the network with potential linkages to other areas of town and recommend priority segments for future construction on the South Royalton Village.
South Burlington	STP MM18(3)	Scoping study for the replacement of a failed culvert on Kimball Ave. at the South Burlington - Williston town line.
Statewide Better Roads - Road Erosion Inventories		53 Road Erosion Inventory projects at various locations statewide.
Winooski	TCSP TCSE(10)	Scoping study for upgrade and expansion of existing trail in Casavant Park.





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AGENCY OF TRANSPORTATION

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