

INTRODUCTION AND OVERVIEW

The Vermont Agency of Transportation (VTrans) has a vision of a safe, efficient and fully integrated transportation system that promotes mobility, Vermont's quality of life and economic strength.

VTrans' mission is to provide for the movement of people and commerce in a safe, reliable, cost-effective and environmentally responsible manner.

GOALS

SAFETY: Make safety a critical component in the development, implementation, operation and maintenance of the transportation system.

EXCELLENCE & INNOVATION: Cultivate and continually pursue excellence and innovation in planning, project development, and customer service.

PLANNING: Optimize the movement of people and goods through corridor management, environmental stewardship, balanced modal alternatives, and sustainable financing.

PRESERVATION: Protect the state's investment in its transportation system.

ENVIRONMENTAL STEWARDSHIP: Build, operate and manage transportation assets in an environmentally responsible manner.

AREAS OF EMPHASIS

Vermont's economic strength depends upon a 21st Century infrastructure. We will continue to leverage forward-thinking investment into the state to enhance mobility, economic development, community vitality and environmental stewardship.

- *Building Bridges to the Future:* Deferred maintenance of our aging bridges (many were built after the 1927 flood) and the many interstate bridges that are reaching their critical time for rehabilitation have both contributed to a high rate of structural deficiency in Vermont's bridges. Thirty percent (30%) of Vermont's bridges are either structurally deficient, functionally obsolete, or both. Nationally, this ranks Vermont 42nd among the 50 states for percentage of structurally deficient bridges. This administration is committed to improvement of these bridges – by expanding the bridge preventive maintenance program, developing new procedures and models to expedite bridge replacement projects, and continued funding for the town highway bridges and structures programs.
- *Preserving our highways:* Keeping our roads safe is a fundamental mission for VTrans. However, as of 2010, twenty-eight (28%) of the state roads are listed in "very poor" condition. While this marks an improvement in past trends, down from thirty-four (34%) in 2009, we seek continued improvement to our roadway condition ratings with a robust investment into our paving program and by utilizing asset management, performance measurement, and project prioritization to ensure that we optimize our transportation investments.

- *Expanding our investment across modes:* While our primary function continues to be keeping our roads and bridges safe, we will also enhance investments in our railroads, public transit systems, and bicycle and pedestrian programs.
 - Rail: As part of improving our connection to our northern neighbors we are placing a high priority on re-establishing our passenger rail connection to Montreal, thereby boosting tourism and trade across our borders. We are committed to achieving several long awaited rail goals: upgrading rail bridges to industry standard to enable an expansion of the freight haul economy and improving the western rail corridor to facilitate passenger service from Bennington to Burlington, and beyond.
 - Public Transit: The mobility needs of our expanding aging population and our goal of reducing our carbon footprint requires us to enhance our focus on a robust public transportation system. This budget supports the existing transit routes, invests in capital needs, and looks toward new opportunities to reduce single-occupancy automobile use through the Go Vermont Program.
 - Bicycle & Pedestrian programs: Increasing opportunities for bicycling and walking can enhance our recreational tourism economy, revitalize communities, reduce carbon emissions, and help address our obesity epidemic. After a six-year halt in new bicycle projects, this administration will create opportunities for new bicycle and pedestrian projects, following a process to assess statewide and regional priorities, through a statewide competitive process. This is in addition to the continued support for many other programs such as Safe Routes to Schools
- *Mobility, Sustainability & Livability:* Our transportation investments need to be directed toward a changing future – preparing us now for the monumental changes that will come with escalating oil prices and climate change. We will work to shape VTrans into an efficient engine that helps fuel economic development and support Vermont’s land use policies and goals. We will pursue strategic infrastructure investments into planned growth areas, increase options for telecommuting (including broadband access), build housing close to jobs, and link communities with new models for rural public transit. We will work to help our communities become greater centers of commerce and more livable and sustainable through investments into all transportation modes.
- *Resiliency and Adaptation:* The devastation resulting from Tropical Storm Irene and the spring flooding have underscored the need to improve our roads and bridges in a manner that can withstand future floods and other weather extremes. We will incorporate lessons during the response and recovery efforts into project planning and development to systematically build a resilient transportation system.

TROPICAL STORM IRENE:

Tropical Storm Irene caused massive damage to Vermont's transportation network. On August 28, 2011, 146 State road segments and 34 bridges were closed for a total of 531 miles. VTrans quickly mobilized to establish safe detours and re-establish contact with communities isolated by road damage. VTrans worked closely with utilities to restore power and phone service, and within 48 hours had established three regional incident command centers in Dummerston, Rutland and Berlin to coordinate recovery efforts.

More than 700 VTrans workers were mobilized for recovery efforts with support from the Maine and New Hampshire Departments of Transportation, National Guard Units from Vermont and six other states and over 200 private contractors. By September 28, 2011, there were only six closed road segments totaling 13 miles and six closed bridges. On December 29, 2011, the "Last Mile" of work was completed on Route 107 between Bethel and Stockbridge. All State roads and bridges are now open. But there is still much work to be done. Temporary repairs will be followed by permanent fixes and new hazards could emerge during the freeze-thaw cycle. Lessons learned from Irene will be applied throughout the agency.

The majority of emergency repairs will be funded 100 percent by Federal Highway Administration (FHWA), but all permanent repairs require a 20-percent state match. FHWA does not reimburse individual repairs costing less than \$5,000. VTrans estimates the total state road, bridge and culvert repair bill could be close to \$250 million. Irene caused \$24.3 million in damages to state-owned track and rail bridges. Railroad emergency funds flow through the Federal Emergency Management Agency (FEMA) and are expected to require a 10-percent state match. In total, VTrans estimates some \$27 million in Irene-related repairs to roads, bridges, rail and culverts will need to come from state funds. Some debris removal will not qualify for either FHWA or FEMA funding, and at this time there is no funding source identified.

VTrans' current budget does not accommodate state financial assistance to municipalities affected by Irene. Some could face road and bridge repair bills greater than their annual budgets. Statewide, it is estimated that that as much as \$1.3 million to \$1.6 million in municipal funds will be needed to pay for emergency repairs to town roads on the federal aid highway system. Another \$7 million in municipal funds will be needed to pay for town-road repairs if FEMA funds 90 percent of town road damage. The estimated municipal share increases to \$17.5 million if FEMA assumes only 75 percent of municipal emergency-repair costs. Even where work is well underway, the federal reimbursement process can take months to years.

ASSET MANAGEMENT:

VTrans takes a system-wide view of transportation problems, needs, and opportunities. The rationale is to ensure the maximum benefit per dollar of investment, while at the same time achieving system-wide performance goals (see below for a more extensive performance measurement description). That system-wide viewpoint is reflected in the annual budget development process.

VTrans views asset management, performance measures, and project prioritization as a means to get the most out of limited transportation dollars. The state's transportation budget must preserve an aging infrastructure that includes:

- 3,200 two-lane miles of pavement on state roads
- 2,694 bridges greater than 20 feet in length
- 1286 short structures
- 216 railroad bridges
- 10 state-owned airports
- 453 miles of state-owned rail line, 305 miles of which is active, and 265 bridges
- 122 heated and 289 unheated buildings
- 68,000 + traffic signs under VTrans jurisdiction
- Over 100,000 small culverts
- Other assets including a fleet of vehicles, park & ride lots, rest areas, bike paths, and ancillary highway assets

The tradeoffs are evaluated through a quantitative project prioritization approach (see below for a more extensive description of project prioritization efforts). In essence, asset management is a tool to maximize the value of existing transportation infrastructure. Databases and computer models compare scenarios with different levels of funding for pavement and bridges. Other models are in various stages of development.

Vermont is one of the few states with asset-management principles, performance measures and project prioritization written into statute. To accomplish this, VTrans worked on a cooperative basis with the General Assembly, the Joint Fiscal Office, and the Legislative Council in developing the language.

Current VTrans Asset Management Systems

Vermont analyzes investments within each type of asset. The critical components of VTrans' asset-management process include a system inventory and condition assessment, performance measures, project prioritization, and the annual budget-development process.

The status of Vermont's asset management systems is:

- Pavement – Vermont for many years has used the DTims software to analyze condition data associated with our pavements to determine cost effective solutions considering budget constraints.

- Bridges – Like most DOTs, Vermont uses AASHTO’s Pontis bridge management software. VTrans’ Structures Section inspects State and Town bridges using the National Bridge Inspection Standards and is working to make more use of the Pontis deterioration models to plan effective preventive maintenance.
- Safety – This is not an “asset” in the traditional sense. However, safety and crash statistics are important factors in project prioritization and selection. VTrans is a leader in developing a multi-agency Strategic Highway Safety Plan. This program works with multiple agencies to reduce Vermont’s crash rate despite rising traffic volume.
- Roadway – Within VTrans, when the asset Roadway is considered it includes all items essential to the overall highway, including many assets identified in this section. This includes such items as economics, mobility, drainage, the entire pavement structure, guardrail, signs, geometrics, safety and underdrain. Analysis of the roadway asset requires integration across asset classes. VTrans continues to evaluate and implement systems to consider the various factors required to effectively manage the highway network.
- Maintenance Management – VTrans’ Operations Division uses MATS (Managing Assets for Transportation Systems) to record most highway maintenance work by location. MATS is being expanded to include culverts, transportation buildings, and ancillary assets.
- Central Garage Fleet and Equipment – The Central Garage must have the right equipment available at the right time, especially for snow removal and emergencies. VTrans uses a computerized system to not only track equipment usage but also to optimize maintenance and replacement cycles at the least cost.
- Buildings – The Operations Division uses facility-inventory and condition-reporting software to both calculate a building health index and to recommend repairs in a priority sequence.
- Small Culverts – Several years ago, VTrans began a program to locate with GPS coordinates, evaluate condition and create a database of all small culverts on the state system. Currently, the interstate system has been completed and work continues on the National Highway System.
- Signs – Highway Safety and Design currently maintains a database of over 68,000 signs. This data allows VTrans to review the condition and age of signs within specific corridors in an effort to optimize the effectiveness and management of highway signs.
- Aviation – The Aviation Section uses the Airport Information Management System (AIMS) to identify, prioritize and track progress on aviation-related projects. Aviation safety is the primary project driver at both the federal and state level.

PERFORMANCE MEASUREMENT:

VTrans has been systematically developing performance measures since 2001, and they have become a crucial part in managing the assets and services entrusted to the Agency. Performance measures indicate the effectiveness of the Agency in accomplishing its mission and indicate where shifts in funding are needed. The public expects VTrans to manage transportation assets and services in the most cost-effective manner.

Nationwide, transportation agencies manage assets that are absolutely critical to the economy. Bridges, pavement, sidewalks, lighting, and highway assets are just a few examples. In an era of decreased revenues, agencies are responsible for minimizing asset deterioration and long-term costs by investing in and maintaining the right assets at the right time; VTrans is no exception. In developing the annual transportation program, VTrans staff evaluates options and tradeoffs that adhere to Agency goals and objectives. VTrans managers estimate how the proposed program expenditures will impact the particular asset performance measure such as statewide pavement condition, bridge health, safety, or DMV services.

VTrans is emphasizing system preservation as the best long-term way to provide mobility, safety, and economic well-being. Once a transportation program is executed, performance measures indicate whether the desired results are achieved. The performance results show where adjustments to the transportation program are needed in the next budget cycle.

Performance measures show Vermonters that VTrans is exercising good stewardship over the assets/services it manages, and is spending tax-payers' money wisely. Key system performance measures related to condition and safety are available in the following on-line publications:

2011 [Structures Annual Report](http://www.aot.state.vt.us/progdev/Documents/Structures/2011_Structures_Annual_Report.pdf)

http://www.aot.state.vt.us/progdev/Documents/Structures/2011_Structures_Annual_Report.pdf

2011 [Highway Safety and Design](http://www.aot.state.vt.us/progdev/donna's%20pages/sections/Highway%20Info/DocumentsRoadwayPages/2010HSDyearendreport.pdf)

<http://www.aot.state.vt.us/progdev/donna's%20pages/sections/Highway%20Info/DocumentsRoadwayPages/2010HSDyearendreport.pdf>

2011 [Strategic Highway Safety Plan Measures](http://www.aot.state.vt.us/highwaysafety/goalsmeasures.htm)

<http://www.aot.state.vt.us/highwaysafety/goalsmeasures.htm>

PROJECT PRIORITIZATION:

The demand for transportation improvement far exceeds the funds available. Good stewardship mandates that VTrans use limited dollars to preserve and improve Vermont's transportation assets in the most efficient manner. The Agency applies asset management principles to take a long-term view of the overall transportation network, and choose activities that minimize long-term costs.

The Agency developed a quantitative project prioritization method that assigns a numeric score to competing projects. Under that strategy, greater emphasis is placed on preserving bridges, pavement, culverts and other assets. Priority scores guide VTrans and other stakeholders as to which projects to postpone and which ones to accelerate.

Project prioritization is the result of legislation in 2005 and 2006. Sec. 48 of Act 175 of the 2006 Legislative Session (19 V.S.A. paragraph 10b(c)) directs the Agency of Transportation to explain how projects are prioritized and selected for inclusion in the annual budget. In 2006, VTrans worked with the state's various Regional Planning Commissions and the Chittenden County Metropolitan Planning Organization to assign a numerical score to transportation projects based on defined criteria. The scores drive the transportation program and are an essential part of the budget process.

The legislation reads:

The agency of transportation, in developing each of the program prioritization systems schedules for all modes of transportation, shall include the following throughout the process:

The agency shall annually solicit input from each of the regional planning commissions and the Chittenden County Metropolitan Planning Organization on regional priorities within each schedule, and those inputs shall be factored into the prioritizations for each program area and shall afford the opportunity of adding new projects to the schedules.

Each year the agency shall provide in the front of the transportation program book a detailed explanation describing the factors in the prioritization system that creates each project list. (Emphasis added: This write-up satisfies that directive.)

The legislation builds on Section 53 of Act 80 of 2005 (19 V.S.A. paragraph 10g). That legislation requires the Agency to develop a numerical grading system to assign a priority rating to paving, roadway, bridge, and bridge maintenance projects. It requires the rating system to include asset management-based factors which are objective and quantifiable including:

- Safety
- Traffic volume
- Availability of alternate routes
- Future maintenance and reconstruction costs
- Priorities assigned by the regional planning commission or the MPO

The legislation also requires that the Agency consider the functional importance of the highway or bridge to the economy as well as its importance to the social and cultural life of the surrounding communities.

The Agency is prioritizing projects related to bridge, pavement, roadway, buildings, bike/pedestrian, park & ride lots, aviation, rail, and new public transit routes. Each Program Manager develops a method appropriate for the asset. Those methods take advantage of available data and technology.

The project prioritization and selection approach continues to evolve. In 2008, VTrans and the Directors of the Vermont Association of Planning and Development Agencies met several times to further improve the process. 2009 was the first year when the changes were in place. The results of the meetings are in a legislative report titled, *Project Prioritization and Addition of New Projects for the State Transportation Program*. In summary, the meetings resulted in the following:

- Increased local input in the selection of paving projects.
- Developed an approach for the regions and MPO to substitute a candidate project with a new project.
- Emphasized the importance of obtaining local input for project priorities. Although local input is not needed for Interstates and certain FHWA funded safety projects, it is an essential component of the VTrans project selection process for most other asset classes.
- Although the RPCs and MPO have flexibility in how they prioritize projects, they will, at minimum, use common criteria as specified by the Legislature.
- VTrans Program Managers will provide more information on candidate projects in order that each region has an accurate “big picture”.

A close working relationship between VTrans and the RPCs/MPO assures the success of project prioritization and selection. The changing transportation environment will necessitate further changes over time.

The priorities balance Agency asset-management principles with regional priorities. Local transportation priorities are an important factor that helps determine where a project falls on the Agency’s prioritization list. Each Regional Planning Commission (RPC) and the Metropolitan Planning Organization (MPO) rank all projects in their region in order of importance. These rankings are given “weight” within the Agency’s scoring process to reflect a region’s needs.

Prioritization factors by project type

Paving:

The Paving Section is responsible for providing the traveling public with the best highway surface condition, with the funding available, using a variety of surface treatments. The Paving Section collects information about pavement surface condition with a specially equipped van that measures several factors including rutting, cracking, and pavement roughness. These data are analyzed for the entire State Highway network to determine the optimum treatment to maximize the pavement’s life expectancy. These factors are combined with regional priorities to develop the annual paving program. Factors for paving are:

- Pavement Condition Index (20 points)
 - Weighted based on condition; more points are assigned for higher levels of deterioration.
- Benefit/Cost (60 points)

- The B/C is provided by the Pavement Management System, a.k.a. dTIMS. Factors include optimal treatment, traffic volume, and type of traffic (trucks).
- Regional Priority (20 points)
 - Does the regional planning commission support the project from a local land-use and economic-development perspective?

The results from these analyses are summarized for the three program funding categories/functional classifications: Interstate (90% Federal/10% State), State Highways (80/20), and Class 1 Town Highways (80/20).

Bridge:

The Structures Section inspects long bridges (greater than 20 feet) at least every two years as required by the Federal Highway Administration’s National Bridge Inventory. Engineering factors from the inspection are combined with regional priorities, and other factors to produce a numeric score. Prioritization factors for bridges are:

- Bridge Condition (30 points)
 - Weighted based on condition of major inspected components (deck, superstructure, substructure, and culvert); more points assessed for higher levels of deterioration. The condition is determined at the most recent inspection.
- Remaining Life (10 points)
 - Correlates the accelerated decline in remaining life to condition.
- Functionality (5 points)
 - Compares roadway alignment and existing structure width, based on roadway classification, to accepted state standards. Too narrow or poorly aligned bridges are safety hazards and can impede traffic flow.
- Load Capacity and Use (15 points)
 - Is the structure posted or restricted? What is the inconvenience to the traveling public if the bridge is out of service? What is the average traffic use on the structure?
- Waterway Adequacy and Scour Susceptibility (10 points)
 - Are there known scour issues or concerns? Is the structure restricting the natural channel? Are channel banks well protected or vegetated?
- Project Momentum (5 points)
 - Points are assigned if the project has a clear right of way, has all environmental permits, and the design is ready and waiting for funds to become available.
- Regional Input and Priority (15 points)

- Does the regional planning commission support the project from a local land-use and economic-development perspective?
- Asset – Benefit Cost Factor (10 points)
 - This compares the benefit of keeping a bridge in service to the cost of construction. The “benefit” considers the traveling public by examining the traffic volume and the length of a detour if the bridge were posted. For example, a bridge with a high traffic count that does not have a good detour around it would get a higher benefit score.

Assigned points are summed together to yield a maximum point value of 100.

Roadway:

Roadway projects include full depth highway reconstruction, realignment, increasing highway width, adding lanes, and more. Some of these projects take years to develop due to the time required to obtain permits and to purchase right of way. VTrans is currently working to reduce the backlog of large projects within this program. Factors in Roadway prioritization are:

- Highway System (40 points)
 - 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 points)
 - 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 points)
 - 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 points)
 - 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
 - Per 19 V.S.A. § 10g(1)(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 Operations (Intersection Design):

- Intersection Capacity (40 points maximum)
 - 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 points maximum)
 - 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 points maximum)
 - 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 points maximum)
 - 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 points maximum)
 - This factor considers:
 - Where the project is in the development process
 - Anticipated problems such as right of way or environmental permitting
 - Funding

Park & Ride:

The Agency of Transportation has 27 Park & Ride lots strategically placed in various locations in the state. Demand for Park & Ride spaces and new lots is increasing, especially as fuel prices rise. Requests for new lots are evaluated based on the following criteria:

- Total Highway and Location (40 points)
 - An accumulation of points from individual scorings of Highway Sufficiency Rating, Current Average Daily Traffic, Highway Function (Network), distance from Primary Network and Public Transit Service.
- Cost/Parking Space (20 points maximum)
 - Correlates the facility project cost with the total number of parking spaces.
- Regional Input and Priority (20 points)

- Regional Planning Commission support for the project from a Regional perspective, and the project's priority within the region.
- Project Momentum (20 points)
 - Projects that are already underway, projects that are already in VTrans' capital program and have identified funding, and projects that do not anticipate permitting or right-of-way problems are assigned more points.

Bicycle/Pedestrian:

There are several ongoing projects in the program, chosen by either a competitive selection process or through congressional earmarks. The project prioritization scoring is as follows for projects leading to construction. We will be reviewing our prioritization strategies as we develop a new program in the upcoming year in concert with our partners.

- Land Use Density (20 points)
 - Weighted based on surrounding land use condition.
 - Downtown or Village center
 - Connects outlying area to Downtown or Village Center
 - Connects Residential Area to School or Recreation area
 - Part of Regional Network
- Connectivity to a larger network of bicycle and pedestrian facilities (10 points)
 - Correlates the proximity of the proposed bike or pedestrian improvement to a larger (local or regional) network of facilities.
 - Completes critical missing link
 - First facility in a community
 - Links to both ends of facility
 - Links to one end of facility
 - Does not link to existing facility
- Multi-Modal Access (5 points)
 - Correlates the proximity of the proposed bike or pedestrian improvement to other transportation modes. For example, points are given if the sidewalk, path or bike lane provides access to a bus station, train station or a Park & Ride lot.
- Designated Downtown or Village Center (5 points)
 - Points are assigned if the proposed facility is completely or partially within a downtown area.
- Project Cost (20 points)
 - Cost is analyzed per linear foot plus a consideration for bridges and retaining walls.
- Regional Priority (20 points)
- Project Momentum (20 points)

Two points are assigned for each of 10 different factors:

 - Project Development Process
 - Project definition complete
 - Preliminary design complete
 - Environmental permits acquired
 - ROW clear

- Funding
 - Project was funded in previous fiscal year
 - Project construction identified in the State Transportation Improvement Plan
 - Project construction expenditures are in the current Capital Program
- Anticipated Workflow Problems
 - No environmental/resource problems anticipated
 - No design problems anticipated
 - No ROW problems anticipated

Transportation Enhancement Project Selection Process:

Applications are reviewed by VTrans' Local Transportation Facilities (LTF) Section to ensure that the proposed projects meet all eligibility requirements for consideration.

LTF staff reviews and comments on the applications for technical feasibility, budgetary feasibility, cost/benefit of the proposed project, and the capability/track record of the project sponsor.

Applications and the LTF comments are scored by the Transportation Enhancement Grant Committee (TEGC). The score is based on the following ten criteria: (Note: Per legislative directive, preference is given to bicycle and pedestrian facilities as well as projects that are within Designated Downtowns and Villages.)

- The project promotes quality, linkage, and variety in Vermont's transportation system. (10 points)
Points are given for project characteristics such as:
 - Has a clear, desirable, and defensible relationship to surface transportation.
 - Creates or completes a new transportation facility where it is needed.
 - Enhances the function and/or aesthetics of an existing transportation system.
 - Makes linkages to other modes of transportation, including public transportation, bicycling and walking facilities.
- Benefits a substantial number of Vermonters and visitors to the State. Does the project serve populations currently not served or underserved? (10 points)
- The project is compatible with its surroundings as well as relevant state, regional, and local planning. The project is supported by the RPC or MPO. (10 points)
- The project is feasible and likely to be finished. (10 points)
 - There are no substantial environmental concerns, property ownership issues, or design challenges.
 - The project has a completed study demonstrating its feasibility.
 - The project has completed an analysis other than a feasibility study, has a detailed budget and firm commitment of local matching funds.

- The project sponsor has made provisions for long-term maintenance and its costs.
- The project enjoys strong community support. Indicators of support are: (10 points)
 - Letters of support from organizations and individuals
 - A local financial match greater than 20 percent
- The project accurately and effectively addresses one or more of the 12 eligible Transportation Enhancements activities. (10 Points)
- The project is particularly innovative or creative. For example, points are given if the project has unique partnerships, innovative design, and use of local materials. (10 points)
- The project budget is 50 percent or more for pedestrian and bicycle travel surfaces. (10 points)
- The project benefits an economically disadvantaged area, as evidenced by State designation or the town's most recent U.S. Department of Labor rate of unemployment. (5 points)
 - The Project is located within Orleans and Essex Counties or within the geographic area of the Springfield Regional Development Corporation.
 - The project is located in a town where the rate of unemployment exceeds 5.9 percent.
- The project benefits a designated downtown or village, as determined by the Vermont Downtown Board.
 - The project is within a Designated Downtown District. (5 points)
 - The project is directly adjacent to a Designated Downtown District. (3 points)
 - The project is within a Designated Village District. (2 points)

The TEGC members return their scores for each project to the LTF Section where the scores are averaged for each project.

The TEGC awards funds in the priority ranked order until there is approximately \$500,000 left. At that time, the committee considers the geographic distribution of projects. If necessary, projects might be elevated in priority to achieve better geographical distribution

Public Transit - New Services:

New Public Transit Route applications are solicited yearly through an open competitive process from all transit providers as funding is available. The primary purpose of the New Start is to fund transportation projects in nonattainment and maintenance areas which reduce transportation-related emissions. The Vermont Agency of Transportation (VTrans) accomplishes this through our Congestion Mitigation and Air Quality Improvement (CMAQ) program administered by the Federal Highway Administration. Funding match is 80/20 and operations are limited to 3 years from date of service.

The Program Goals are to:

- Support cost-effective investments to preserve and maintain public transportation infrastructure.
- Invest in connectivity to other regions and to other alternative modes of transportation to improve accessibility and increase ridership in Vermont.
- Support the goals and objectives of the current Public Transportation Policy Plan.
- Maintain air quality attainment in Vermont.

Applications must document the purpose of the service, the intended market and how it will relate to the program goals. Feasibility studies provide this information as well as projected ridership and budget.

Proposals are rated based on the following measures: mobility improvements; environmental benefits; operating efficiencies; project coordination; regional connectivity; local financial commitment; and sustainability of funding continuation.

Aviation:

The Aviation Program prioritizes projects by scoring 14 airport and project factors. Safety is paramount. To maintain safety, the Federal Aviation Administration (FAA) has stringent regulations that trigger airport improvements and projects. Projects are also initiated by the aviation community and by the Agency to meet our own standards.

Airport project descriptions, costs and scoring factors are maintained in the Airport Information Management System (AIMS) data base. AIMS is updated annually when the Capital Improvement Program is negotiated with the FAA for federal funding. Projects that are accepted by the FAA are presented to the Legislature in the Aviation Program's annual budget request for the state's 10 percent matching funds.

Burlington International Airport (BTV) projects are prioritized by BTV. The state has historically provided an amount of transportation funds equivalent to 3% of project costs, which are 95% federally funded. This year those funds will not pass through VTrans, but will go directly from the Federal Aviation Administration to BTV. The 3% state match is continued in this budget.

Scoring weights for state-owned airports are:

- Airport Activity (number of operations and based aircraft) (0 to 100 points)
- Population served & local government support (0 to 24 points)
- Economic Development (0 to 40 points)
- Project Type (runway type, paving, navigation, etc.) (0 to 120 points)
- FAA Priority & Standards ranking (0 to 120 points)
- Previous Federal/State Funding (0 to 200 points)
- Cost/Benefit for Projects less than \$75,000 (100 points)
- Resource Impacts (0 to 40 points)
- Local Interest/Support (0 to 20 points)

The scores are totaled, ranked by priority, and made available to the public. The VTrans Aviation Section selects vendors to complete the projects that are funded.

Rail:

VTrans owns 305 miles of active rail line that is leased to private operators. The rail operator is responsible for maintaining the track and bed. VTrans, however, is responsible for the bridges and sometimes contributes towards track upgrades. To remain viable and provide increased support for Vermont's economy, most of the lines require substantial work to support higher weight limits, double-stack containers, and higher-speed passenger service. As with other assets, the needs are greater than the available funds. This necessitates hard choices among competing projects.

The Agency collaborates with the Rail Advisory Council to identify broad priorities. Prior to initiating new projects, it is necessary to assure that the current system is preserved. Preservation represents a significant challenge due to the age of the infrastructure. Preservation of the current system is the Agency's number one priority. The second priority is to improve the infrastructure to a modern standard that supports the movement of people and goods. A flow chart in the State Rail and Policy Plan depicts the process for that decision making. Once identified, new projects are subjected to the following ranking system for prioritization:

- Railroad freight operations: This measures the increase in ton-miles or car-miles. (60 points)
- Railroad passenger operation: Points are awarded for an increase in passenger count or passenger miles traveled. (60 points)
- Line conditions: Points are awarded if the project increases the Federal Rail Administration track condition. (60 points)
- Operational costs: Points are awarded based on the operational costs required from the state. (60 points)
- Facility Standards: Does the proposed project address clearance and/or weight limitations? (60 points)
- Priority Route: Points are awarded if the project is on one of the rail priority routes. (60 points)
- Vermont-based activity: Points are awarded for carloads and passengers in Vermont and/or rail jobs created in Vermont. (40 points)
- Government and local support (40 points)
- Economic Development (40 points)
- Documented non-state funding opportunities (60 points)
- Resource Impacts: Does the project require environmental mitigation? (60 points)
- Regional scope: Points are awarded if the project increases competition, partners with other states, or improves intermodal connections. (60 points)
- Utilization of resources: More points are awarded if the project schedule is one year or less. (30 points)
- General safety: Safety can involve rail crossings, ROW, security, etc. (60 points)

Central Garage Vehicle Fleet:

The Central Garage provides VTrans safe and reliable vehicles through an internal service fund. Within that system, there is an understanding that some fleet activities are critical and require the most reliable response times. Replacement purchases and repairs are prioritized accordingly. Equipment can be grouped into three priority tiers:

- The top tier is:
 - Snowplows are most critical as maintaining winter travel is the highest profile activity of the Agency.
 - Front-end loaders are critical to loading sand and salt into those trucks, and are also a high priority.
 - DMV enforcement vehicles provide a significant portion of the state's commercial vehicle law enforcement activities and are also considered critical.
- A second tier of equipment is important but not as time critical. Examples of those are:
 - Pick-up trucks and heavy utility vehicles that provide the mobility the Agency staff needs to do their jobs.
 - Graders that are used to clear ice, wing back snow drifts, and are generally difficult to rent.
- Least critical are those pieces of equipment whose work can be scheduled ahead of time and which could be obtained through other sources. The Agency has rental agreements with equipment owners throughout the state.
 - Excavators
 - Backhoes
 - Tractors
 - Miscellaneous construction equipment

There is no rigid formula that dictates when equipment should be replaced. Age, mileage (or hours of service), historic and anticipated repair costs, and consequences of failure enter into priorities for replacement vs. repair.

Safety:

VTrans runs a Highway Safety Improvement Program (HSIP) to enhance safety on all Vermont roads. The prioritization process starts with determining high-crash locations from reported crashes, crash severity, road geometry, and anecdotal information.

The Agency scores each location and sorts the list. Agency staff closely reviews the top 50 crash locations, and determines possible improvements. A cost/benefit analysis is conducted to determine the maximum safety improvement for limited dollars. Most high-crash sites get a low-cost improvement such as signs/lines, but a few are targeted for more expensive geometric improvements based on the severity and types of crashes.

The crash analysis is for both state- and town-owned roads. HSIP projects are considered on all public highways.

District Decision Making

The Agency has nine district offices throughout the state. These offices are responsible for normal highway operations and maintenance such as plowing, minor repairs, culverts, guard rails, installing signs, etc. Districts respond to immediate problems and conduct normal maintenance required for a safe and efficient transportation network. A number of factors go into District decisions to address a particular problem or condition. Those are, in priority order:

- **Time critical activities:** These are related to safety such as snow and ice control, critical bridge repairs, guardrails, sign repairs, potholes, other emergency repairs and storm damage. The focus is on keeping the transportation system functional and safe. These activities take place primarily on state facilities, but Districts often provide aid to towns.
- **Maintenance Activities:** These are often seasonal activities such as mowing, ditching, and culvert maintenance that maintain the overall condition of the transportation system. The amount of these activities accomplished is determined by Best Maintenance Practices, funding and staffing resources.
- **Preventive Maintenance Activities:** These strategic activities add service life to the system and include bridge repair as well as culvert linings and inverts. Funding often dictates the amount of work accomplished.

Support Activities such as personnel administration, technical support to towns, administration of grant programs, and maintenance of equipment and facilities are done to support all of the above or in support of towns.

Town Programs

The Agency manages several programs for the benefit of towns. These are not listed separately in the Annual Budget; however, the decision process is described below.

Class 2 Roadway:

The Agency distributes grants to towns for Class 2 Town Highways. Projects are selected from town applications by VTrans District Administrators based on town input and VTrans' knowledge of the transportation problem. The District Administrator tracks the history of the grant awards by town to ensure, over time, an equitable distribution of the available funds based on the number of Class 2 Town Highway miles. Occasionally, a critical Class 2 highway need arises in a town that is not due for a grant based on the equitable distribution formula. When this occurs and the District awards a grant to such a town, the District will then work to ensure that future grants bring the equitable distribution back into line.

Town Highway Structures:

Town Highway Structure grants are awarded to towns for bridges or large culverts. Bridge projects are selected from town applications by VTrans District Administrators based on town input and VTrans' knowledge of the transportation problem. The District Administrator tracks the history of the grant awards by town to ensure that, over time, there is an equitable distribution of the available funds based on the number of structures on the town's highway system. Occasionally, a critical bridge need arises in a town that is not due for a grant based on the equitable distribution formula. When this occurs and the District awards a grant to such a town, the District will then work to ensure that future grants bring the equitable distribution back into line.

Municipal Mitigation Grants:

The Municipal Mitigation Grant program consists of two separate grant programs.

- Better Back Roads Program
- Two federal storm water mitigation earmarks

These two programs address roadside erosion problems as well as environmental problems associated with stormwater runoff.

Projects are selected by committees made up of representatives from VTrans, the Vermont Local Roads Program, the Northern Vermont Resource Conservation and Development Council, and the Vermont Agency of Natural Resources. Projects are prioritized and selected by these committees based on the applicant's ability to demonstrate that the project will reduce or eliminate roadside erosion or reduce water pollution generated by, or directly associated with, existing public roads and road maintenance activities.

FEMA Public Assistance Program:

The FEMA Public Assistance program provides assistance to eligible applicants for damages to publicly-owned facilities. In Vermont, this is primarily for municipally-owned roads and bridges (not federal-aid town highways). Municipal buildings are also covered under this program and certain private non-profit entities that provide critical or essential services may also be eligible for assistance. Federal and state funding under this program only becomes available to eligible applicants in qualifying counties if the state receives a federal disaster declaration under this program.

FHWA Emergency Relief Program

The FHWA Emergency Relief (ER) program provides assistance to eligible applicants for damages to federal-aid highways and bridges. This includes town owned federal-aid highways, as well as state-owned highways.