

**Legislative Report**

**PROJECT PRIORITIZATION AND ADDITION OF NEW  
PROJECTS FOR THE STATE TRANSPORTATION  
PROGRAM**

**By the  
Vermont Agency  
of  
Transportation  
(VTrans)**



**By: Policy and Planning Division**

**December 1, 2008**

## **Project Prioritization and Addition of New Projects For the State Transportation Program**

**Introduction:** This report presents changes to the system of prioritizing transportation projects mutually agreed upon and adopted by the Vermont Association of Planning and Development Agencies (VAPDA) and the Vermont Agency of Transportation (VTrans). The report was co-authored by the VAPDA and the VTrans for the House and Senate committees of transportation of the 2009 Session of the General Assembly.

**Background:** During the 2008 Session of the General Assembly language was considered, but not added, to H.0889 AN ACT RELATING TO THE STATE'S TRANSPORTATION PROGRAM. The language was in regard to the Project Prioritization Process and Proposal of New Projects for the State Transportation Program by Regional Planning Commissions. The intent of the language was for the Vermont Agency of Transportation (VTrans) - in cooperation with the regional planning commissions of the state - to (a) modify the existing project prioritization systems to ensure that local input is assigned appropriate weighting in the system; (b) develop, adopt and implement a written procedure that allows a regional planning commission to propose a new project be substituted for an existing project or projects within the same region; (c) for VTrans to annually include in the proposed transportation program a separate report to describe the proposed changes emanating from the adopted "project substitution" protocol; and (d) for the agency and the regional planning commissions to report to the "committees of transportation" the adopted written procedure and changes made in the prioritization system no later than January 15, 2009.

Although the language was not included in H. 0889, a May 5, 2008 email communication to the Vermont Association of Planning & Development Agencies (VAPDA) - which includes all regional planning commissions in the state and the Chittenden County Metropolitan Planning Organization (CCMPO) - expressed (then) Secretary of Transportation Neale Lunderville's desire to meet the expectations of the Senate Proposal of Amendment (see [Attachment I](#)). VAPDA concurred in doing this.

It was further agreed that although the language cited "regional planning commissions of the state" - the Chittenden County Metropolitan Planning Organization (CCMPO) should be included in the discussion. In Chittenden County, the CCMPO is the responsible authority under federal law – and as approved by the CCMPO and the Governor - for transportation planning and providing input regarding regional priority.

This report has been co-authored by the VAPDA and the VTrans, and is respectively submitted to the committees of transportation, in accordance with the wording and intent of paragraph (d) of the language.

**Procedure:** The procedure agreed to by VTrans and VAPDA involved a series of three (3) “face to face” discussions between VTrans and VAPDA. Per mutual agreement, the meetings were held at the VTrans central offices in Montpelier on June 2, 2008; July 14, 2008; and September 22, 2008. The participants included the following:

VAPDA: Peter Gregory, TRORC Executive Director; Mark Blucher, RRPC Executive Director; Catherine Dimitruk, NRPC Executive Director; Tom Kennedy, SWCRPC Executive Director; and Christine Forde, CCMPO Senior Transportation Planner.

VTrans: Mel Adams, Director of Policy & Planning; Richard Tetreault, Director of Program Development; Mike Fowler, Pavement Management Engineer; Mike Hedges, Structures Program Manager; Kevin Marshia, Roadway, Traffic & Safety Manager; Al Neveau, Local Transportation Facilities Manager; Bart Selle, AOT Asset Management Systems Manager; and, Clay Poitras, Systems Planning Manager.

(Then) Deputy Secretary of Transportation David Dill participated in the first of the meetings, providing background and direction regarding the task. He opened the meeting with several thoughts including the belief that the discussions were an excellent opportunity to “fine tune” the prioritization processes – distinguishing between what people want and don’t want. Additional important objectives should be clarifying how we communicate, keeping the project list reasonable and making the entire prioritization and new project addition processes “visible” to regions, legislators and the public.

## **Results:**

- (a) **Weight of Local Input:** Considerable discussion was devoted to this issue, including presentations on July 14 by the VTrans Structures, Pavement Management and Roadway program managers on their respective prioritization processes. Information was also provided by VTrans concerning the specific prioritization factors and weights used in all the VTrans asset categories. As a consequence of these discussions, the weighting for regional priorities was increased for the Paving Program from the previous 17.5% weight to 20% to align it with all of the Roadway programs. The factors and weights used by VTrans - including the weights assigned to local input – were otherwise deemed to be sufficient by both the VAPDA and VTrans.

An important focus of the discussions was the importance of all regions providing local input. A few had chosen to “abstain” from providing local input for certain asset categories – essentially deferring to whatever priority the VTrans determined. The Paving Program manager explained that one region not wanting to provide input skewed the results for that region – illustrating that it is to a region’s benefit to provide local input. It was mutually agreed that it was important for all regions to provide input for all asset categories to which local input was agreed to be important – and the VAPDA leadership has encouraged their membership accordingly.

Another important outcome of this phase of the discussion was that two asset categories should not require local input, nor be candidates for a project substitution process, for the following reasons:

- 1) Interstate Projects: The FHWA requires VTrans to maintain the Interstate system to a high standard and will step in if they feel the standard is not being met. Interstate projects are of national and state importance beyond the interest of an individual regional planning agency.
- 2) Safety Projects: Per direction from the FHWA, states are implementing Highway Safety Improvement Programs (HSIP). The HSIP planning process required by the FHWA emphasizes actual crashes and engineering studies rather than RPC/MPO input. Safety projects often involve signals, signs, intersections, curve & grade alignment and more.

**(b) Written Procedure for Substituting Candidate Projects:** The “Procedure” is presented as Attachment II to this report. It identifies the protocol for substituting highway transportation projects mutually agreed to and adopted by VAPDA and VTrans. As previously mentioned, Interstate projects and Highway Safety projects are not candidates for substitution. Also, the “Procedure” provides that a region and VTrans can consider a new project without substitution if it is of a critical nature as defined therein.

**(c) Annual Report to be included in the State’s Transportation Program titled “RPC Proposals”:** The intent of this report is to describe all regional planning commission and CCMPO proposed changes to the state’s transportation program made in accordance with the “Written Procedure for Substituting Candidate Projects” presented as Attachment II. The discussion group’s recommendation is that it be included as a separate section of the proposed state transportation program in a spreadsheet format similar to that for the “front of book”. For all projects –

proposed new and proposed deleted - the report should identify the following:

- Project name
- Project description
- Best cost estimate available
- Regional priority score - (if available).

For those projects proposed to be deleted, it is also recommended that information be included regarding the amount spent to date and the reason the project is no longer needed.

**(d) Report on the adopted procedures described in subsection (b) and changes made to the priority system in response to subsection (a):**

The adopted procedure is Attachment II of this document. Changes made to the priority system in response to subsection (a) include the following:

- 1) Mutual agreement that the annual prioritization cycle should continue, but be moved up by two months in order that VTrans program managers will receive regional priority input early April rather than early June.
- 2) The weighting for regional priorities was increased for the paving program from the previous 17.5% weight to 20% to align it with all the Roadway programs. Prioritization factors and weights used by VTrans will otherwise remain the same (see Attachment III).
- 3) Agreed that regional priority input will be requested for all candidate projects for all highway asset categories excepting Interstate projects and Highway Safety projects. The state prioritization processes are sufficient for rail capital projects; airport capital projects and public transit grants – and they will continue to be exempt from the need for regional priority input.

**(e) Other ideas emanating from the discussions:**

- 1) There should be flexibility with regard to the specific process and approach to be used by each region, but that all RPCs and the CCMPO should, at minimum, use certain criteria – including criteria specified by the Legislature - as follow:
  - The impact of the project on congestion and mobility conditions in the regions;
  - The availability, accessibility and usability of alternative modes;
  - The functional importance of the facility as a link in the local, regional or state economy;
  - The functional importance of the facility in the social and cultural life of the surrounding communities;
  - Conformance to local and regional plans;
  - Local support for the project.

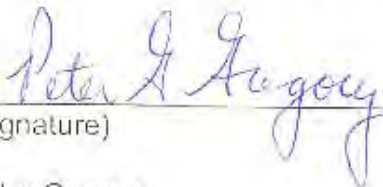
- 2) There should be close consultation between a region and VTrans from the earliest stages of a project substitution – including the initial idea, need/exigency and preparing “qualified estimates”. Absent better information, the estimated cost of a project should be the most recent estimate made by VTrans. Absent any previous estimate of cost, VTrans should prepare an estimate.
- 3) Ideas for new projects proposed by a region – for substitution or otherwise - will emanate from the region’s ongoing transportation “needs assessment”, the regional transportation plan, a corridor management plan, or other conceptual planning report or study. Irrespective of the source, there should be sufficient planning analysis to support an accurate and well defined “purpose and need” statement. Related to this, the regional planning process should ensure that potentially effected communities will be consulted and have the opportunity to participate in the regional decision to add or substitute a project.
- 4) In order that each region has an accurate “big picture” of the transportation needs and issues for its region, VTrans program managers will provide information to regions on an ongoing basis regarding the candidates for projects emanating from their respective asset management and program management systems.
- 5) VTrans, after conferring with the host town that a project is desired, will submit a list of town highway bridges that are of particular concern to the VTrans Structures Section for each region. The lists will be based on inspection reports, traffic volumes, available detours, and other factors that go into the bridge prioritization evaluation. Each region will prioritize the candidate town highway list for its region. The priorities will be factored into the VTrans priorities to determine which town highway bridges move to D&E in the future.
- 6) General agreement on the principle of maintaining project “momentum” once it is into or beyond the Development and Evaluation (D&E) stage of project development, or has otherwise experienced an important investment of state funding and staff time.

A last point on which there was mutual agreement is on the importance of regional planning agencies and VTrans to be mutually consultative on the issues concerning the process and procedure associated with the identification of transportation needs and their priorities. To this end, VAPDA and VTrans also agreed to share information and concerns on these issues freely, and report any intended change to prioritization procedures, factors or weights relative to the factors in advance of their implementation or adoption. Whenever possible, consideration will be given to the views of the other party prior to the decision to implement or adopt.

This report has been co-authored by the VAPDA and the VTrans, and is respectively submitted to the committees of transportation.

For the Vermont Association of  
Planning & Development Agencies:

For the State of Vermont  
Agency of Transportation:

  
(Signature)

  
(Signature)

Peter Gregory  
(Name)

David Dill  
(Name)

VAPDA Trans. Committee Chair  
(Title)

Secretary of Transportation  
(Title)

December 1, 2008  
(Date)

December 1, 2008  
(Date)

**ATTACHMENT I: LANGUAGE ENTERTAINED BY THE GENERAL ASSEMBLY IN H.0889 SENATE PROPOSAL OF AMENDMENT DURING THE 2008 SESSION:**

\* \* \* Project Prioritization and Addition of New Projects\* \* \*

Sec. 18. PROJECT PRIORITIZATION PROCESS AND PROPOSAL OF

NEW PROJECTS FOR THE STATE TRANSPORTATION

PROGRAM BY REGIONAL PLANNING COMMISSIONS

(a) To better reflect regional economic development, land use, and project priorities, the agency, in cooperation with the regional planning commissions, shall modify the existing project prioritization system to ensure that local input is assigned appropriate weighting in the system.

(b) The agency and the regional planning commissions shall jointly develop and adopt and the agency shall implement a written procedure that allows a regional planning commission to propose that a new project be substituted for an existing project or projects within the same region that are in the state transportation program. The procedure shall:

(1) ensure that the proposed new project for addition to the transportation program and the existing project or projects to be deleted from the program are roughly comparable in cost, using updated cost estimates;



(2) consider for removal from the transportation program only projects that are in candidate status;

(3) describe the project identification requirements and time line requirements that an RPC must satisfy to present the proposed change in the transportation program to the general assembly in a particular fiscal year; and

(4) describe the agency-regional planning commission communication protocols that will apply to the process.

(c) Each year, the agency's proposed transportation program shall include a separate report entitled "RPC Proposals" which shall describe all regional planning commission-proposed changes to the state's transportation program made in accordance with the procedure adopted pursuant to subsection (b) of this section.

(d) The agency and regional planning commissions shall report on the adopted procedure described in subsection (b) of this section and on changes made to the priority system in response to subsection (a) of this section to the committees on transportation by January 15, 2009.

**ATTACHMENT II: SUBSTITUTING CANDIDATE PROJECTS**  
**December 3, 2008**

*[Note: This attachment is the written procedure for substituting candidate projects mutually agreed to by VAPDA and VTrans.]*

This document describes steps for an RPC/MPO to replace an existing candidate <sup>1</sup> project with another project that is not in the VTrans program.

1. General Considerations:
  - The RPCs/MPO and VTrans will work collaboratively with one another throughout the process. This will increase the likelihood that the proposed transportation program changes have enough merit to advance through the VTrans project development process.
  - Candidate projects must be for highway transportation.
  - Interstate projects and safety projects may not be substituted.
  - Once a project has reached the D&E phase, it cannot be substituted except in highly unusual conditions, and it may require FHWA approval.
  - Substitutions may be between different programs. For example, an RPC could drop a roadway project and add a TH Bridge although adding a functionally obsolete bridge that is still in good structural condition is strongly discouraged.
  - Verify with VTrans that there are no other factors that would block a project from being substituted.
  
2. A proposal for a new project should:
  - Identify the nature, scope, and estimated cost of the project. A draft purpose and need statement should be provided that articulates why this project is important to the local economy, safety, and to the social and cultural life of the surrounding communities.
  - Analyze the feasibility of the project discussing to the degree possible the expected complexities of the project such as ROW issues, environmental permitting, historical, archaeological, etc.
  - Provide relevant information so that VTrans may assign a priority score based on the published criteria for that asset class.
  - Be of a similar cost to the project being substituted; the relative magnitude should be estimated.

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<sup>1</sup> If the proposed new project is of a critical nature, VTrans might not require the RPC/MPO to remove another project to “make room”. A “critical” project example might be:

- External factors have created a serious safety problem.
- A specific economic development opportunity mandates a transportation improvement, and local and/or private funding is available.

- Demonstrate that the community which may lose a project has had an opportunity to participate in the decision making process, and was informed of the region's final decision.
- Indicate that other affected parties such as neighboring RPCs, legislators, or businesses have been informed.
- Show that the project to be removed is not linked to another project which may have a higher priority.

### **ATTACHMENT III: PROJECT PRIORITIZATION & PROJECT SELECTION**

*[Note: This attachment is an excerpt from the SFY-09 Budget Book issued in January, 2009 which has been updated pursuant to the discussions between VAPDA and VTrans. The “update” was increasing the weight of regional priority for Paving Program projects from 17.5% to 20.0%.]*

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

The agency owes transportation stakeholders an explanation of why one project was chosen over another. To that end, the agency developed a quantitative project prioritization method that assigns a numeric score to competing projects. This score is a crucial part of the *Road to Affordability* program. Under that strategy, more 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 19 V.S.A. paragraph 10b(c) of the 2006 Legislative Session directs the Agency of Transportation to explain how projects are prioritized and selected for inclusion in the annual budget.

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 19 V.S.A. paragraph 10g of the 2005 session. 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, transportation enhancements, and new public transit routes. Each Program Manager develops a method appropriate for the asset. Those methods take advantage of available data and technology.

### **Background:**

The agency started the project prioritization program in 2005 and expanded it in 2006. It continues to evolve in 2007 for the FY'09 budget. The Agency strives to minimize long-term costs by using available data and engineering analysis to determine the optimum treatment at the right time.

As explained in the following document, 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.

### **RPC/MPO Input:**

As of 2007, VTrans has gone through three iterations of project prioritizations with the RPCs/MPO. VTrans is doing the following:

By February 1 of each year, VTrans' Policy & Planning Division produces a list of all Capital Program projects that are not yet under contract. The RPCs/MPO prioritize these projects and return the results to the Agency by June 1. The VTrans Policy & Planning Division assembles the RPC/MPO priorities and delivers them to the Program Managers who incorporate the priorities into their own scores. These scores drive the budget for the fiscal year starting twelve months later.

In 2007, the agency implemented a process for RPCs/MPO to formally request a "critical need" new project to be added to the transportation program. The project request must clear a very high hurdle since the state simply cannot afford to add to the large project backlog. We do recognize, however, that in some highly unusual cases a critical new project might rise to the top. RPCs/MPO may submit documentation for a critical-need

project to VTrans. It will be evaluated by a team in VTrans after which VTrans will accept or deny project. The process is described in another document titled *Criteria and Process for Considering Critical Need Project Requests* provided to the RPCs/MPO.

## **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 poor alignment 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. There is a large backlog of projects that the Agency is working through. 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 2007 legislation Sec. 38. 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 Operation (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 29 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:**

The Bicycle/Pedestrian Section solicited bicycle and pedestrian projects from the Regional Planning Commissions and the MPO. The project prioritization scoring is as follows:

- 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 ends 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 Projects:**

Applications are reviewed by VTrans' Policy and Planning Division and the Local Transportation Facilities (LTF) Section to ensure that 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 Policy and Planning Division where the scores are averaged for each project.

The TEGC awards funds usually 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

### **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 (BIA) projects are prioritized by BIA. The state, by statute, can provide up to three fifths of the match funds, and serves as a pass through for federal funds.

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)

### **Public Transit New Starts:**

Twelve independent public transit providers cover regions of the state. VTrans subsidizes their operation under a variety of federal and state programs related to transportation and human services. A major component of public transit in Vermont is a federal program to maintain air quality by encouraging expansion of public-transit routes. That program, CMAQ (Congestion Mitigation and Air Quality), provides 80 percent of the operation of new public transit routes for a period of three years. Proposals for New Start funding involve an open competitive process through VTrans' Public Transit Section. Proposals for new public-transit routes are evaluated and scored. New Start awards are based on that score.

The scoring weights for the New Start program are:

- Mobility improvements: This gauges the project's capacity to shift travelers from single-occupancy vehicles to public transit. (15 points)
- Environmental Benefits. (10 points)
- Operating Efficiencies: This looks at the proposed project's estimated cost per vehicle mile and cost per hour. (15 points)
- Project coordination: This evaluates how well the proposed route fits in with existing routes. (10 points)
- Regional Connectivity: This evaluates route connectivity to outside transportation agencies including coordination of schedules. (15 points)
- Local financial commitment: This looks at the stability and reliability of the local match, and the provisions to cover unanticipated cost overruns and funding shortfalls. (20 points)
- Sustainability of funding continuation: This examines the continuation of funding after the three-year, start-up funding ends. (15 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 determine 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

- **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 done.

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 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 ensure that future grants bring the equitable distribution back into line.

### **Municipal Mitigation Grants:**



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

- Better Back Roads Program.
- Clean and Clear Program.
- Two federal storm water mitigation earmarks.

These four 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.