

Transportation Project Prioritization and Project Selection at the Vermont Agency of Transportation (VTrans)

This paper describes the VTrans transportation project prioritization approach. It includes the background, and describes the steps to prioritize projects that drive the project choices in the annual budget. The paper also includes sample reports.

Background:

The Vermont Agency of Transportation's (VTrans) mission is to provide travelers a safe and reliable transportation network in every part of the state. Most citizens are familiar with the orange VTrans plow trucks and maintenance equipment, but VTrans also manages projects related to paving, bridge, roadway, park & rides, bike paths, rail, and airport improvements. In addition to highways, the Agency's mission also includes rail, aviation, public transit, and DMV.

Related to this, VTrans is responsible for evaluating competing demands and establishing priorities that best serve the long-term interests of Vermonters. In 2006, VTrans divided \$436 million among many competing projects and activities.

What is a "transportation project"?

A "project" refers to significant transportation work such as paving, bridge reconstruction, new bridges, a new highway, a new park & ride, etc. Normally, projects are done by contractors who won a competitive bid. It does not include every-day "maintenance" work such as filling potholes, crack sealing pavement, replacing damaged signs, mowing, etc.

How do projects originate?

Ideas for projects originate from several sources including VTrans, the legislature, towns, regional planning commissions, and businesses. If the project idea/concept has enough merit, VTrans or the region will define the project in a "purpose and need" statement. If the purpose-and-need statement indicates the proposed project should move forward, VTrans will get permission from the legislature to make it a "candidate" project. At that point, the project is assigned a project number and is tracked in the financial system.

Most candidate projects go through a project scoping study. During "scoping", engineers, planners, and citizens analyze whether the project is feasible as described. The scoping considers questions such as: What are the environmental impacts? Does it need right-of-way? Are there alternative solutions? What are the estimated costs? After scoping, projects normally go into a holding pattern. However, if the project has little merit or needs too many resources, it might never advance further and eventually be removed from the candidate list.

Most candidate projects, however, will eventually be promoted to an "active" status. (Within VTrans, "Active" is called D&E for Development and Evaluation, or FOB for Front-of-Budget-

Book. For simplicity, this paper will use the term “active”.) At that point, VTrans may spend state and federal money on detailed engineering, right-of-way acquisition, and permitting. Once VTrans spends money on design, we won’t turn back barring highly unusual circumstances. The project will eventually go to construction.

VTrans has many candidate projects on hold waiting to be promoted to active status. Similarly, we have many active projects competing for engineering, survey, permitting, right of way, etc. That is where project prioritization comes into play. Which candidates do we promote first? How do we allocate our resources? The priority scores drive those decisions. Project age, politics, and geography are not part of the decision process.

(Paving projects, however, are somewhat different. Paving projects do not go through a purpose & need or scoping, and most bypass the Candidate phase. Paving is an annual program driven by pavement condition and cost-effectiveness of treatment.)

Why do we prioritize projects?

- VTrans owes transportation stakeholders an explanation of why one project is chosen over another.
- Good stewardship mandates that VTrans use limited dollars to preserve and improve Vermont’s transportation assets in an efficient and fair manner.
- Prioritization moves the most important projects to the top.
- Prioritization is an essential part of VTrans’ asset management approach. Do the right projects at the right time to best preserve the transportation system.

VTrans takes a long-term view of the overall transportation network, and chooses activities that minimize long-term costs. Generally, more emphasis is placed on preservation of existing assets such as bridges and pavement rather than on building new highways. Prioritization guides VTrans as to which projects to advance and which ones to postpone.

Project prioritization is required by state legislation enacted in 2005 and 2006. The statute directs VTrans to develop a project prioritization approach that assigns a numeric score resulting in a priority rating for transportation projects. Per statute, the rating system must 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 Chittenden County Metropolitan Planning Organization (CCMPO)

The legislation also requires that VTrans 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.” In other words, get local input as part of the priority scoring.

The legislation refers to “asset management-based factors”. Simply put, good asset management is putting limited transportation dollars to work where they do the most good. That means maintaining an aging transportation infrastructure before it becomes unusable. In principle, this is just common sense. In practice, it requires balancing many competing interests. VTrans must consider tradeoffs between paving, bridge, new highways, rail, airports, and more.

Prioritization steps:

VTrans and the RPCs and the CCMPO work together to prioritize projects. Each VTrans Program Manager developed a prioritization method appropriate for the asset category. (A “Program Manager” manages a particular asset class such as paving, bridge, roadway, park & rides, etc.) The prioritization methods take advantage of available data and computer analysis, and always incorporate the local RPC or the CCMPO priorities.

The prioritization steps are as follows:

1. Determine RPC and the CCMPO priorities:

- By February 1 of each year, VTrans sends the RPCs and the CCMPO a list of all of transportation projects in their geographic area.
- VTrans Policy & Planning Division develops the *RPC and the CCMPO Project List* by analyzing transportation project files and selecting all projects with the status of:
 - Candidate projects: These projects have not advanced beyond the scoping phase as described above. They are in a holding pattern waiting for a “promotion”.
 - Active projects in engineering or soon to be constructed: Priorities influence how projects move through the VTrans development process.

Typically, the RPCs and the CCMPO have about 30 to 60 transportation projects in their geographic area. The projects are in the asset classes of:

- Paving
- Interstate Bridge
- State Bridge
- Town Highway Bridge
- Roadway
- Safety & Traffic Operations &
- Bike & Pedestrian
- Park & Ride
- Aviation

The dollars in each asset class varies widely and the amounts are influenced by the availability of state and federal funds, and federal funding restrictions.

- RPCs and the CCMPO meet with their associated Transportation Advisory Committees to prioritize each project within each asset class. They may use

whatever criteria they choose although most of them consider traffic volume, condition, and the regional transportation plan.

- RPCs and the CCMPO prioritize within each asset class. For example, paving is compared only to other paving projects within the RPC and the CCMPO's geographic area.
- The RPCs and the CCMPO email the prioritization results to VTrans by June 1.

2. Apply RPC Priorities to VTrans Priorities:

- VTrans Policy & Planning Division consolidates the RPC and the CCMPO input into a single spreadsheet sorted by asset class and priority.
- Each VTrans Program Manager receives a list of the RPC and the CCMPO priorities for the asset class they manage.
- Program Managers incorporate the RPC and the CCMPO priorities into the VTrans prioritization system and produce a prioritized list of projects by July 1. (These priorities are used in the preparation of the annual transportation program & budget that will be submitted to the legislature in January.)
- RPC and the CCMPO priorities account for 15 – 20% of the total score within each asset class.

3. Prioritization factors for each asset class:

- There is no single prioritization formula that works for every asset class. The criteria must be appropriate for the asset class. For example, paving decisions are driven by a computer model that examines history, deterioration rates, and economic analysis. In contrast, VTrans' 25 park & ride examine usage, lot condition, and amenities.
- In 2005, the formulae were vetted within VTrans and distributed to the RPCs and the CCMPO. Only a few changes have been made since then.
- The process and detailed formulae are open for anyone to examine. To learn more about the prioritization formulae, please see the attached document titled *Prioritization Factors in VTrans Programs*. That information is provided to the legislature as part of the annual budget document.

4. Develop draft program budget for the fiscal year starting in 12 months:

- In July and August, VTrans Program Managers present their proposed budgets to the VTrans Budget Committee. The committee is chaired by the Deputy

Secretary. Members are the five Deputy Directors, the VTrans Federal Funds Administrator, and two others from the Policy & Planning Division.

- The committee and program managers discuss preliminary budget figures, asset performance measures, and prioritization results. The priority scores “drive” the proposed program. In other words, the most important projects should be advancing through VTrans. There will be exceptions where a lower priority project jumps over a higher priority project due to permitting issues, right-of-way, federal fund availability, or congressional earmarks. That’s OK, but the manager must be able to explain why that happened.
- The budget is available for public scrutiny after the Governor presents it to the legislature in January.

5. Critical need new projects:

- VTrans has a large project backlog and cannot accept new project requests from the RPCs or the CCMPO unless the project is of a critical nature. The process is described in the attachment *Criteria and Process for Considering Critical Need Project Requests*. In that process, VTrans reviews the documentation and denies or accepts the project. If VTrans supports the critical-need new project, we will recommend the legislature place it in the transportation program as a candidate. (This process does not refer to true emergency projects such as a landslide or a collapsed culvert that closes a highway. VTrans, of course, works on those immediately.)
- This process is intended to create a very high hurdle for new candidate projects. If the RPC or the CCMPO feels they have such a project, it should be submitted to VTrans early in the year. Normally, the project would have a higher priority over existing candidate projects.

6. Governor’s Budget:

- In January, the Governor submits the transportation program & budget to the legislature. At that point, the stakeholders can see the status of their projects for the upcoming fiscal year. VTrans can provide an explanation of the status of any particular project.
- The budget document lists projects and shows the VTrans priority if available. Note that some projects do not go through the prioritization process. This includes culverts, enhancement grants, statewide projects, rest areas, rail, transportation buildings, and certain safety related projects.

7. Project status reports to the RPCs and the CCMPO.

In January, the Policy & Planning Division produces a report for the RPCs and the CCMPO that shows the status of every project they prioritized the previous June. Data includes the project name, the VTrans ranking, RPC/CCMPO ranking, and the budget book status. See the attached example titled *RPC Priorities Compared to VTrans Program*.

Of particular interest is which projects are moving forward. Over a project's life, it is "promoted" from a candidate status to development & evaluation (D&E) and then to "front of book". VTrans is committed to completing D&E and front-of-book projects. There is no commitment, however, to move candidate projects beyond project scoping.

8. Project Status Database:

- The VTrans Policy & Planning Division produces special reports such as projects by county, town, legislative district, asset type, etc. These are done on request to the Policy & Planning Division.

In February, the process starts over for the next year with Step 1 above.

Prioritization Factors in VTrans Programs

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This paper describes the factors used by VTrans to prioritize projects. The VTrans program managers have even more detail as to how each individual factor is evaluated. Those are available, but are not included here.

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 (17.5 points)
 - Weighted based on condition; more points are assigned for higher levels of deterioration.
- Benefit/Cost (65 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 (17.5 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, type of highway, and other factors to produce a numeric score. Prioritization factors for bridges are:

- Bridge Condition (30 points)
 - Weighted based on condition; 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.

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, 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.

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:

Thirteen 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 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.

Criteria and Process for Considering Critical Need Project Requests at the Vermont Agency of Transportation

The following criteria will be considered when evaluating RPC/MPO requests to add projects to the candidate list:

The Agency will consider non-preservation projects that are of a critical nature. (Preservation projects for paving, bridge repair/maintenance, and highway repair/maintenance are part of the Agency's normal programs and will be scheduled as conditions and priorities warrant them.)

- The RPC/MPO must provide enough information so that the applicable Agency Program Manager can prioritize it. (The prioritization factors for each program are published by the Agency.)
- Proposed projects must be of a critical nature. Examples of such projects are:
 - A suddenly failed bridge with a high AADT that is to be restricted to one lane controlled by lights thereby creating a traffic issue.
 - External factors have suddenly created a highly dangerous road or intersection.
- Projects that are essential for an important economic development effort may be considered.
 - Proposed substantial increases in Vermont employment might be considered. VTrans will seek advice from the Agency of Commerce and Community Development regarding the economic development and employment claims for a particular project.
 - Substantial local and/or private funding for the project should be available and described. Evidence of Act 250 review should be provided along with any statement of conditions and costs that have been assigned to the developer.
- Inserting a new project within the RPC prioritized list will lower the priorities of projects under it. The RPC/MPO should assure VTrans that the affected local communities know that their project priorities have been lowered. If the proposed project is accepted by VTrans, it will go on the candidate list.

Each year, VTrans will identify a set of “preferred” candidate projects that will normally be the next ones to advance to the D&E phase if extra funds become available within the budget year. These projects will typically have the highest VTrans priority score.

All candidate projects – both old and new - will compete each year within the prioritization scoring based on their own merit. Time-in-program is not one of the factors.

Steps:

1. The RPC/MPO submits the proposed project to the Director of Policy and Planning. The package must contain the justification that addresses the criteria above. The RPC/MPO should have done a feasibility study in accordance with the Agency's prioritization system that includes relevant information such as AADT, ROW/permit issues, etc. A draft purpose and need statement should be provided. The study should include a qualified cost estimate and the basis for that estimate.
2. Present the information to a high-level Agency review panel consisting of the Director of Program Development, the Director of Operations, and the Director of Policy & Planning. A representative from ACCD might be asked to participate if the project has significant economic benefit. If accepted, the project will be put on the candidate list. Once on the Candidate list, the project may require additional analysis (scoping) prior to being advanced in the project development process.
3. The Review Panel will then pass the project to the Agency's Project Development Team (PDT) for their analysis. If scoping is required, the PDT review will occur after the scoping report is complete.
4. If the PDT votes in favor of the project, and if the Secretary accepts the PDT recommendation, it will stay in the program. Further steps depend on available funds and other project priorities.

RPC Priorities Compared to VTrans FY'08 Program

<i>RPC</i>	<i>FY'08 Priority</i>	<i>PIN</i>	<i>PROJECT NAME</i>	<i>PROJECT NBR</i>	<i>VTrans FY07 Priority out of</i>	<i>VTrans FY08 Priority out of</i>	<i>FY'08 Budget Book</i>	<i>PROJECT DESCRIPTION</i>		
<i>ARPC</i>										
BikePed	1	05F040	NEW HAVEN	STP WALK(17)	5	27	6	29	D&E	CONSTRUCTION OF APPROX. 1,775 FEET OF SIDEWALK ALONG VT17 IN NEW HAVEN, INCLUDING LANDSCAPING
Bridge Maint	1	05F394	SHOREHAM	STP EH06()					FOB	PRESERVATION OF COVERED RAILROAD BRIDGE IN SHOREHAM.
Bridge St	1	78F187	BRISTOL	STP F 021-1(15)	14	61	11	55	D&E	PROJECT BEGINS 2.5 MILES NORTH OF THE MIDDLEBURY-BRISTOL TOWN LINE AND EXTENDS NORTH 1.03 MILES, REPLACING BRIDGES (Sand Hill). 'REPLACEMENT OF BR13 IN THE TOWN OF MIDDLEBURY OVER THE MIDDLEBURY RIVER.
Bridge St	2	78F217	MIDDLEBURY	RS 0174(8)	59	61	53	55	CANDIDATE	RR Bridge; 'REHABILITATION OF BR102 ON VT30 IN MIDDLEBURY, OVER THE VERMONT RAILWAY.
Bridge St	3	98B258	MIDDLEBURY	BHF 0161(9)	18	61	14	55	D&E	RR Bridge; 'REHABILITATION OF BR2 ON MERCHANTS ROW (TH8) IN MIDDLEBURY, OVER THE VERMONT RAILWAY.
Bridge St	4	98D256	MIDDLEBURY	BHF 5900(4)	53	61	48	55	CANDIDATE	RR Bridge; 'REHABILITATION OF BR2 ON MERCHANTS ROW (TH8) IN MIDDLEBURY, OVER THE VERMONT RAILWAY.
Bridge St	5	85E042	CORNWALL	BRS 0172(6)	46	61	37	55	FOB	Lemon Fair Bridge; 'REPLACEMENT OF BR9 ON VT125 IN CORNWALL, OVER THE LEMON FAIR RIVER.
Bridge St	6	00B166	WEYBRIDGE-NEW HAVEN	BHF 032-1(7)S	54	61	47	55	CANDIDATE	PROJECT IS FOR REHABILITATION OF BR8 ON VT17 BETWEEN WEYBRIDGE AND NEW HAVEN, OVER OTTER CREEK.
Bridge St	7	86E067	RIPTON	BHF 0174()	21	61	18	55	CANDIDATE	WIDENING OF BR15 ON VT125 IN RIPTON OVER THE MIDDLE BRANCH OF THE MIDDLEBURY RIVER.
Bridge TH	1	96J266	LINCOLN	BRO 1445(25)	47	74	32	68	FOB	Gove Hill Bridge; 'REPLACEMENT OF BR48 ON TH9 IN LINCOLN, OVER THE NEW HAVEN RIVER.
Bridge TH	2	CapPrg	MIDDLEBURY							Rehab Pulp Mill Covered Bridge on Seymour street
Bridge TH	3	96J268	SALISBURY-CORNWALL	BHO 1445(27)	31	74	8	68	FOB	REHABILITATION OF BR8 (COVERED BRIDGE) ON TH1, OVER OTTER CREEK BETWEEN SALISBURY AND CORNWALL.
Bridge TH	3	NewReq	Middlebury Batell Bridge							Rehab
Bridge TH	4	89J081	NEW HAVEN-WEYBRIDGE	BHO BTN 2005(1)	38	74	28	68	FOB	"Ratlin' Bridge"; 'REHABILITATION OF BR26 ON TH7 IN THE TOWNS OF NEW HAVEN AND WEYBRIDGE, OVER OTTER CREEK.
Bridge TH	5	89E039	RIPTON	FH 010-1(2)	44	74	34	68		WIDENING OF BR17 ON TH18 IN THE TOWN OF RIPTON. Goshen Rd.
Bridge TH	6	05J352	BRISTOL	BRO 1445()	74	74	30	68	CANDIDATE	REPLACEMENT OF BR31 ON TH5 (SOUTH ST.) IN BRISTOL, OVER THE NEW HAVEN RIVER. PROJECT INCLUDES RELOCATION OF EXISTING PROJECT IS FOR CONSTRUCTION OF A PARK AND RIDE FACILITY IN FERRISBURGH, IN THE NORTHWEST QUADRANT OF THE US7/VT22A
P&R	1	99K010	FERRISBURGH	CMG PARK(15)	3	16			FOB	
Paving	1	01D048	MIDDLEBURY	STP 2304(1)	20	48	11	64	FOB	RESURFACE CLASS I PORTION OF VT30 IN MIDDLEBURY, BEGINNING 0.55 MILE NORTH OF THE CORNWALL-MIDDLEBURY
Paving	2	97B166	MIDDLEBURY-NEW HAVEN	NH 9813(1)S	27	48				PROJECT IS FOR RESURFACING US7 IN MIDDLEBURY AND NEW HAVEN, BEGINNING 0.627 MILE NORTH OF THE US7/VT30
Paving	3	05B038	NEW HAVEN-FERRISBURGH	NH 2503()	33	48	40	64	FOB	RESURFACING US7 IN NEW HAVEN, WALTHAM AND FERRISBURGH, BEGINNING APPROX. 0.515MILE NORTH OF THE US7/VT17 WEST