

# State of Vermont Agency of Transportation

## Project Scoping Manual



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Planning Division  
Project Planning Section  
December 1995

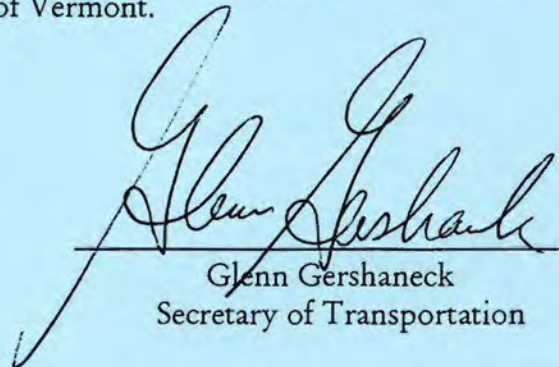
FORWARD

The Project Scoping Manual is intended to be used for any transportation project in the State of Vermont that will be scoped. The manual will be used by the VAOT, consultants under contract with the VAOT, Regional Planning Commissions, the Metropolitan Planning Organization and anyone else who will scope a transportation project.

We envision the Transportation Planning Initiative to reach a point in the near future when the Regional Planning Commissions provide the Planning Division a Purpose and Need Statement that describes each problem area that they are submitting for the state wide prioritized list. This would aid the regional selection process and speed up scoping. We hope that this manual is a step toward that goal.

We are pleased to present the Project Scoping Manual. This manual is approved for use on all transportation Project Scoping Projects in the State of Vermont.

  
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Director of Planning

  
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## I. INTRODUCTION:

### A. General:

1. The scoping of a project is a process that identifies a transportation problem, defines the purpose and need justifying the undertaking, identifies natural and manmade resources in the area, develops safe, efficient and environmentally prudent solutions to the problem and makes recommendations to solve the transportation problem. If the solution to correct transportation deficiencies avoids or minimizes harm to the environment, the permit process will be greatly simplified.

2. A significant portion of Vermont is home to sensitive resources. At the same time deficient transportation facilities are in use. These facilities must be maintained, upgraded or replaced to solve identified problems and the impacts to the environment kept to a minimum. All Vermont Agency of Transportation (VAOT) projects are expected to be technically sound, well designed, cost effective, compatible with their surroundings and acceptable to local and regional officials, and citizens. To meet this goal, the VAOT is committed to the scoping process so that a consistent approach to problem solving is in place.

3. The VAOT has expanded its role to investigate a broad range of concerns during the scoping process. This includes studying environmental, economic and social aspects in addition to the engineering considerations surrounding a transportation project. The VAOT has created the Project Scoping Section, within the VAOT Planning Division, which can draw from specialists to create a multi-disciplined team to accommodate these issues. To facilitate this process, the VAOT has made a commitment to early involvement with affected citizens and local and regional officials, and to explore environmental issues early in the scoping process. This requires interaction with many agencies, such as the U.S. Army Corps of Engineers (Corps), the U.S. Environmental Protection Agency, the U.S. Fish & Wildlife, the Federal Highway Administration (FHWA), the Vermont Agency of Natural Resources (ANR), the Vermont Department of Agriculture (DA), and the Vermont Division for Historic Preservation (DHP). Regional and local planning commissions and the local government must also be included. In this way the VAOT can develop a transportation project that not only meets technical requirements, but also fits with the environmental, social and economic context of the problem area. These initial studies will eliminate delays, emphasize cooperation within and among agencies, provide swift and fair resolution of disputes, identify environmental issues deserving of study at an early stage and better define the recommended solution. The Project Scoping Process only applies to projects that have a reasonable expectation of obtaining a Categorical Exclusion.

4. Public participation in transportation planning is a mandatory requirement of the Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA is the current federal legislation that directs federal emphasis and funding to transportation projects. For a project to

be eligible to receive these transportation funds, public participation in the early stages of the project is necessary. Public involvement is also mandated by Vermont Statute. The VAOT has affirmed their commitment to public involvement in the State Long Range Transportation Plan.

5. The Project Manager must be aware of all the objectives of the project including the goals concerning environmental issues. The solution developed through this process must minimize cost, disruption to residents, and land use impacts. It must also incorporate the input from the local community and have public acceptance. The best solution is the one that balances all of the issues.

### **B. Transportation Planning Initiative:**

1. In 1992 the VAOT, with the endorsement of the Vermont General Assembly, established the Transportation Planning Initiative (TPI). The goal of this initiative is to develop a public involvement process for all transportation activities. The intent is to ensure that the public, communities, and Regional Planning Commissions (RPC's) play a significant role in determining which problems are to be repaired, as well as the scale of those improvements.

2. In implementing the TPI, the VAOT Planning Division contracts with each RPC to perform public involvement activities, create regional transportation plans, review projects within VAOT's Capital Budget and Program, and identify and prioritize regional transportation problems. In this way, the regions are considered partners with VAOT throughout the entire project process.

3. One of the primary functions of each RPC is to develop a prioritized list of transportation problems within their region. This list begins at the municipal level, with each having input to the region regarding the municipalities transportation problems. The RPC considers all of these problems, ranks them in priority and gives the top problems to the VAOT Planning Division. The Planning Division, with regional participation, combines these lists into one and prioritizes it on a statewide level. Those of highest overall priority are given to the Director of the Planning Division for authorization and finally to the Project Planning Engineer so scoping may begin.

### **C. Project Definition Team (PDT):**

1. Scoping transportation projects in Vermont is a fairly recent development. In 1982 a Management Task Force was organized by the Vermont Agency of Transportation to establish the scope, location, and limits of projects proposed for inclusion in the Agency's Construction Program. In 1984, the Management Task Force was renamed the Project Definition Team. From 1986 to 1989 there was little activity in scoping. In 1989, the PDT was reactivated by the Director of Planning and Preconstruction to establish the scope of projects and address significant cost increases during the project development phases.

2. The PDT has the task of reviewing Initial Scoping Reports and making recommendations, through the Planning Division Director, to the Secretary of Transportation for

acceptance of the project. The PDT also reviews the scope-of-work changes and cost increases for projects in the engineering design phase and makes recommendations through the Director of Engineering, to the Secretary of Transportation.

3. The Project Definition Team consists of one representative member from the following sections of the VAOT: Project Planning; Design; Structures; Construction; Engineering Services; Pavement Management; Traffic and Safety; Consultant Management; Maintenance; Rail, Air and Public Transportation (RAPT); and the District Transportation Administrator (DTA) for that area. The other voting members include the FHWA; the RPC; and a local representative. All PDT members have equal voting rights, except FHWA, who only votes on Interstate, National Highway System, MG Signal and other project with 100% federal funds.

4. The Project Planning Engineer is the chair of the PDT and is responsible for scheduling the PDT meetings, organizing comments and forwarding PDT recommendations to the appropriate Division Director and the Secretary of Transportation.

## II. PHASES OF PROJECT SCOPING:

**A. Phases:** The phases of the Scoping Process and associated steps are graphically represented by the Scoping Process Flowchart in Appendix A. The following three phases describe the Scoping Process:

**PHASE 1 - Problem Identification.** Gather preliminary information regarding the problem area and perform a field survey. Properly define boundaries of resources. After collection of the existing data, a site meeting shall be held to receive local and regional concerns. Following this "Concerns Meeting", the Project Manager shall prepare a Purpose and Need Statement that outlines the problems associated with the transportation facility as well as the project goals.

**PHASE 2 - Initial Scoping Report (ISR).** Environmental resources shall be identified and investigated. With this knowledge the Project Manager shall present alternatives that strike a balance among all concerns. The alternatives must be safe, viable, enjoy VAOT, local, regional and resource agency support and be capable of receiving the necessary permits. These alternatives shall be reviewed through the use of an evaluation matrix. A local public meeting shall be held to present these alternatives to the local officials, RPC and resource agencies. This "Alternatives Presentation Meeting" will present alternatives that meet the objectives identified in the Purpose and Need Statement, discuss the advantages and disadvantages of each alternative and get a sense of public preference. Following this meeting the Initial Scoping Report, containing a recommended alternative, shall be completed. Any additional coordination with resource agencies shall be conducted. This phase shall culminate with a comprehensive review of the ISR by PDT members, a presentation to the PDT, recommended approval of the ISR by the PDT and the Planning Division Director and formal approval by the Secretary of Transportation.

If the degree of complexity is significant, the scoping effort will end and an Environmental Assessment or Environmental Impact Statement will be initiated. All information collected during project scoping will be incorporated into the environmental document effort.

**PHASE 3 - Final Scoping Report (FSR).** Upon approval of the ISR, an FSR will be developed. An Executive Summary will be prepared and contain a summary of



the major issues of the project and the recommended alternative. Comments from the PDT, the Planning Division Director and the Secretary will be addressed. The Executive Summary and responses to the comments will be included in the FSR. The FSR may include the ISR as an appendix. Any additional design work will be completed. If requested by the town or RPC, a Public Information Meeting will be held. Comments received at this meeting will require a response and be included in the FSR. Lastly, the FSR will be distributed to the VAOT division responsible for detailed project development and to all other interested organizations and individuals.

### **III. PHASE 1 - PROBLEM IDENTIFICATION:**

#### **A. General Overview:**

1. Traffic data, level of service analysis, accident listings and analysis, sufficiency rating information, and sight distance diagrams are obtained from the Planning Division's Transportation Data and Mapping Section. The Engineering Division is home to a great deal of information. Traffic sign inventories and pavement markings are obtained from the Traffic and Safety Section. The Structures Section provides the bridge reports, if any, for the project. The Hydraulic Unit of the Engineering Services Section provides hydraulic studies of any bridges included in the project. Also, information on any recent or pending maintenance work in the project area is provided by the District involved.

2. This phase of the scoping process also includes coordination with other state agencies, such as ANR, DHP, and DA. Early coordination is also done with the municipality's Selectboard and Planning Commission, the RPC and the Corps. The Project Manager provides these agencies with a general description of each problem and requests their comments regarding the area where potential solutions may occur.

3. The Local Concerns Meeting is a significant source of information. The function of this meeting is not just to gather information and answer questions, but to foster a working relationship with the local community. This is accomplished by listening to their concerns and ideas and making a good faith effort to incorporate them in the analysis of solution alternatives if they are sound and cost effective.

#### **B. Collect Existing Data:**

##### **1. Site Visit**

a. The Project Manager is required to conduct field inspection(s) of the problem area. The site visit will allow all involved to collect site data, ensure logical endpoints, note areas for off-alignment consideration and give the Project Manager an understanding of the context of the project need.

b. Bridges, culverts, bus route, sidewalks, freight movements, traffic control devices, lighting, drainage, access control and road inspections will be conducted. Measurements will be taken of the existing transportation facility, utility setbacks and obstacles in the right-of-way. The field inspection(s) will note any obvious structural deficiencies, identify sight distance deficiencies, and identify conditions in or adjacent to the roadway which may place constraints on any off alignment design. Photographs will be taken for future reference, as well as inclusion in the ISR. The approximate location and direction of the photograph shall be indicated on each photo. Appendix C contains a checklist that highlights important items that will be investigated

during a site visit. Also, the Project Manager will note non-tangible items that are not represented by a land survey, such as community character. The Categorical Exclusion Checklist in Appendix F will serve as a reminder to explore those items.

c. If there are significant side roads, the Project Manager will drive them to see whether the intersection has limitations or problems from the side road and/or the problem road. The project road should be examined beyond the limits of the problem in order to get a feel for how the road "fits in" with the transportation corridor as a whole. The problem limits should be checked to ensure that they are both logical and practical, as they may have been set several years prior. The project limits can be recommended for change in the scoping process.

d. Before making a field inspection, the Project Manager should view the problem area on the video logs in the Planning Division's Traffic Research Section. This allows an initial inspection of possible areas of concern, traffic flow patterns, and a preliminary sense of the project limits.

2. The Project Manager shall contact the Traffic Research and Planning Research Units of the Planning Division to have them provide current five year accident data, high accident locations, roadway sufficiency ratings, turning movement data, and any available traffic counts. The Project Manager shall develop present, five year and 25 year traffic data for roadway and bridge projects and present, five year and 15 year data for intersection projects. This data shall include, but not necessarily be limited to, ADT, DHV, %D, %T and the intersection and signal related traffic data noted below. Recommendations to enhance mobility, such as climbing lanes, shall be included in the ISR.

3. The Project Manager shall analyze all major intersections, including signalized intersections, in the problem area to insure adequate level of service in the design year. Signal warrants shall be investigated for present conditions and for the five year projection. Major intersections shall be defined as the intersection of U.S. and U.S. routes, U.S. and State routes, State routes with State routes and State routes with those major town highways shown on the latest edition of the Official State Highway Map, published by the Vermont Agency of Development and Community Affairs. The ISR will include information concerning deficient equipment or operation, the need for turn lanes and signal warrants.

4. The Project Manager shall contact the VAOT Pavement Management Unit of the Construction and Maintenance Division and have them provide any inventory data related to pavement conditions and any data related to the existing subsurface materials.

5. The Project Manager shall contact the Rail/Highway Crossing Coordinator of the VAOT RAPD Division to solicit their input regarding any pertinent issues.

6. The Project Manager shall contact the Structures Section of the VAOT for any bridge inspection reports and sufficiency ratings which pertain to the problem area. The Project Manager is not required to conduct thorough structural inspections as a part of this phase of the project. If a detailed structural analysis is warranted, based on field investigations, the bridge inspection reports or input from the various parties contacted, it shall be made as a recommendation for work to be accomplished during future stages of development. Retaining walls and pipes over 48" shall be considered structures.

7. The Project Manager shall request from the Right-of-Way Unit, Engineering Services Section of the VAOT Engineering Division, any available plans or documents so that the right-of-way limits can be identified. Any unusual or unique circumstances that might influence solutions will be included in the ISR by the Project Manager.

8. The Project Manager shall contact the Utilities Unit of the Engineering Services Section of the VAOT Engineering Division to discuss the problem area relative to utilities and to ascertain if there are any proposed developments which may affect any possible solutions.

9. Survey information is an essential part of the scoping process. The Project Manager must have an Intergraph Microstation/InRoads digital terrain model (DTM) in binary format of the problem area so that reasonable alignment alternatives can be developed and the DTM can be used throughout the entire project development process. The Project Manager shall determine if a usable survey has been done in the problem area. A usable survey is one that allows a DTM to be made to current VAOT accuracy standards, which is 90% of the surface points being within 60mm of actual ground location and elevation. The DTM and alternatives will be in the same measurement units the project was surveyed in. If there is not a usable DTM, one must be obtained. All future DTMs will be in metric and therefore, all future scoping reports will be in metric units.

10. Resource agencies shall be notified as soon as possible of the scoping effort and any existing information that may be available about the area will be obtained. Resource personnel affiliated with the Project Manager also shall be contacted for existing data.

11. All correspondence will be logged in the project file by the Project Manager. The Project Manager will be responsible for ensuring that copies of the outbound correspondence are sent to Central Files, Division Files and the Project Development Files.

### **C. Investigate Local and Regional Concerns:**

1. The Project Manager shall organize and participate in a Local Concerns Meeting to gather input from State and Federal agencies, including the DTA and VAOT Planning Coordinator, and to solicit input from the RPC, municipal officials, regulatory/resource agencies and special interest groups. The key point of this meeting is to obtain local and regional concerns. Generally, the public is not specifically invited since the focus of the meeting is to obtain a concise statement of concerns from the town leaders, rather than a broad public forum. However, every project is unique, and in some cases, it may be worthwhile to have a public meeting. In no instances will the public be turned away.

2. The Project Manager shall coordinate with local and regional officials on a meeting location and time. Generally, the Local Concerns Meeting is held during the day. The Project Manager shall send written notification of the Local Concerns Meeting with a location map to all parties. In general, this notification shall be sent out a minimum of three weeks prior to the meeting date.

3. Resource agencies shall be invited to the Local Concerns Meeting and asked to present, either in writing before the meeting, or in person at the meeting, the agency's prelimi-

nary comments regarding whether resources are present in the problem area and their extent and potential significance. The resource agencies shall also be given the minimum three-week notification.

4. The Project Manager conducts the Local Concerns Meeting to gather information and concerns. In no cases shall the Project Manager talk solutions, but rather the Project Manager shall facilitate the discussion to help determine the problems of the transportation facility or service and its alternate uses, such as pedestrian or bicycle traffic. Any written comments received from resource agencies, local or regional officials and citizens who could not be present will be placed in the record and summaries presented to the meeting participants. The Local Concerns Meeting is not a format to present proposals.

5. The Project Manager will need to record the comments from the Local Concerns Meeting, prepare minutes of the meeting and distribute them within two weeks to all who were present, as well as any stake holder who could not be present. The minutes of the Local Concerns Meeting will be included in the ISR. The recipients of the minutes will have two weeks from the postmarked date to contest them.

6. Following the Local Concerns Meeting, the Project Manager will evaluate the comments received and have the responsibility of ensuring that appropriate details are integrated into the ISR. The Project Manager shall also be responsible for including written responses to all reasonable comments.

#### **D. Purpose and Need Statement:**

1. From information obtained at the Local Concerns Meeting, the Project Manager shall write a "Purpose and Need Statement" that is consistent with the requirements of the state and local community. This statement will be the crux of the ISR. Refer to Appendix D for specific information on the crafting of a Purpose and Need Statement.

2. The Purpose and Need Statement is similar in form and function to the purpose and need statements of an Environmental Impact Statement. The problem must be adequately explained, identified and described. The needs for the project must be conclusively shown to prove that the project is justifiable and warrants the expenditure of public funds. The language should be clear and understandable to the layperson.

3. After the Purpose and Need Statement is written, it will be sent to the VAOT Project Planning Engineer, FHWA, the RPC and the municipality for a two-week review period. If it is not accepted, the Project Manager will need to rewrite the Purpose and Need Statement and resubmit it for review. A copy of the Purpose and Need Statement shall also be sent to resource agencies and the VAOT Planning Coordinator.

#### **IV. PHASE 2 - INITIAL SCOPING REPORT:**

##### **A. General Overview:**

1. During this phase of scoping, the bulk of the work is completed. This portion of the scoping process is the foundation for the total report. Its completeness will determine the speed at which an acceptable project can move forward. This comprehensive report must justify the recommended solution(s). In fact, a properly prepared ISR can be accepted by the PDT in total or in part, and will aid the Planning Division Director and the Secretary in their approval. It will form the basis of the FSR.

2. Resources shall be identified, alternatives developed, an evaluation matrix filled out and the information presented at an Alternative Presentation Meeting. Meeting minutes and the alternatives form the basis of the ISR. The Project Manager shall follow the outline in Appendix B for the format and content of the ISR.

##### **B. Identify Resources:**

1. The vast majority of resources surrounding a problem area can be classified into three main categories: environmental, social and economic. The level of inquiry should be of sufficient depth to identify these features, document their importance and address how they interact with the purpose and need of the project. The interactions of these features are important so that the PDT can correctly consider their importance and relationship to the project. Transportation plans will be excellent aids in the identification of the project's features.

2. The environmental resource identification can be very complex. The significance of each resource must be established. All resources in the project area will be identified. Resources include, but are not limited to the following:

- a. Wetlands & Water Quality
- b. Archaeological & Historic Sites
- c. Section 4(f) Properties
- d. Fish & Wildlife Habitats
- e. Endangered/Threatened Species/Unique Natural Areas
- f. Community Character/Aesthetics/Scenic Resources
- g. Floodplains
- h. Agricultural Lands
- I. Land and Water Conservation Fund Lands
- j. Public Recreational Land
- k. Hazardous Waste Sites
- l. Rivers, Streams, Lakes and Ponds

3. The Transportation Biologist (TB) will conduct a site visit and investigate the problem area for critical habitats, threatened & endangered species presence and wetlands. Wetlands shall be sketched onto the plan sheets and a summary sheet shall be made that gives a brief description of the location and function of the wetland. A written report from the TB is required for the ISR.

4. The Transportation Archaeologist (TA) shall conduct an initial background search to determine if the problem area is sensitive for archaeological resources. The background search shall include investigating the data base at the Division for Historic Preservation for areas of archaeological significance. Using this information, the TA shall complete a predictive model concerning the archaeological importance of the project area. The TA shall conduct a site visit to obtain on-location knowledge and to aid in determining whether additional study is needed. A written report from the TA will be included in ISR. Areas that are archaeologically sensitive shall be noted on the plan sheets. All work must be conducted in accordance with the "Guidelines for Archeological Studies", July 1989.

5. The Historic Preservation Coordinator (HPC) will review the data base in the Division for Historic Preservation for all buildings, structures, sites and districts that are or may be eligible for the National or State Register of Historic Places. In addition, the HPC performs field reconnaissance to gather additional information necessary to address issues related to Section 106 and Section 4(f). In some cases, archival research is required. The Project Manager will obtain this information in memo form. Buildings, structures, sites, historic districts and Section 4(f) property shall be identified on the plan sheets. Section 4(f) documentation is started by the HPC and the course of action is agreed to by the FHWA and DHP.

6. The social features are the attributes of the general population served by the transportation facility. Demographic data, including the population and projected growth should be determined by the Project Manager. Neighborhoods and other sensitive areas will need to be identified. Church, school and emergency service facility locations shall be determined and their relationship with the transportation facility or service discussed.

7. Economic growth and development are often dependent upon transportation facilities. This relationship must be clearly documented, by the Project Manager as it can play a decisive role in the alternative selection. The local economy (ie. tourism, farms, manufacturing, retail, etc.) must be considered, as well as tax revenues, employment opportunities, accessibility and public expenditures. Impacts on existing highway related businesses and established business districts must be documented.

8. The Town and Regional plans shall be reviewed for economic information, and to determine how the project fits in with their transportation plan. To obtain the Plans, the Project Manager may have to coordinate with the Agency of Housing & Community Affairs. This can be done by a written request or by visiting their office on the fourth floor of the Pavilion Office Building in Montpelier.

9. Community character and scenic resources shall be investigated and the potential for visual and aesthetic impacts will be investigated.

**C. Alignment Development:**

1. A minimum of three alternatives shall be developed for each scoping report. The alternative set shall always contain a "no-build" option. Other alternatives that could be investigated are: preservation (maintenance), rehabilitation and a build alternative. Several reasonable build alternatives might need to be investigated and considered. Alternatives shall be developed utilizing the tool of "Level of Improvement" (LOI) as stated in the State Long Range Transportation Plan. In some instances, only cursory review may be needed for an alternative. If a build alignment(s) is (are) developed, then it must include the following information:

- a. Plan sheets showing roadway alignment (existing and proposed), slope limits, stationing, curve data, construction limits and approximate boundaries of resources. Metric scale 1:1000 or English scale 1" = 100'. For smaller problems areas such as urban locations, intersections and bridges, a smaller scale should be used.
- b. Profile sheets will only be developed for the areas with proposed grade changes.
- c. Typical roadway sections.
- d. Roadway cross sections placed every 100 m for road projects and 20 m for intersection and bridge projects, metric scale 1:300 or English 1" = 20'.
- e. Critical cross sections, defined as points where structures and resources are avoided or impacted by the typical section. Structures are defined as buildings, barns, cattle passes and culverts 48" (1.2 m) or larger.
- f. Earthwork estimate.
- g. Cost Estimate, in accordance with the VAOT Conceptual Cost Estimate.

2. The Project Manager will ensure that all resource areas are placed on the plan sheets. This can be accomplished by TB, TA and HPC sketching the sensitive areas on the plan sheets.

3. All reasonable alternatives will be developed to comparable levels and presented in an evaluation matrix so that a fair comparison can occur.

4. The development of plans must be done in accordance with VAOT standards. See Section VI.

**D. Cost Estimation:**

1. Cost of a project is a significant portion of the transportation related decision making process. The cost of a project must be justified by improvements in safety and public need, balanced with environmental constraints. Therefore, the cost estimate procedure must be unbiased. It must place all reasonable alternatives on the same level for fairness in the PDT selection process. The goal is to produce cost estimates within 20% of the actual cost. Accurate estimates at this stage of project development are extremely important. An alternate with too high of an estimate might be eliminated, while an alternate with a low estimate could be selected



due to misrepresentation.

**E. Intermodal/Multi-modal Possibilities:**

1. The Project Manager will also examine intermodal/multi-modal possibilities during the scoping process. These possibilities shall be addressed in the scoping report and the feasibility and potential of such options shall be discussed.

**F. Evaluation Matrix:**

1. The purpose of the evaluation matrix is to visually present the alternatives in a manner that facilitates comparison and helps ensure that the impacts of each alternative are consistently considered. The matrix should quantify resource impacts of each alternative. For example, if one alternative alignment would require filling in 0.45 acres of wetlands, that figure should be presented in the matrix. See Appendix E for an example of an evaluation matrix.

2. After the Project Manager prepares the evaluation matrix, a meeting shall occur with the Project Scoping Engineer and Project Planning Engineer to review the alternative plans, cost estimates and the evaluation matrix. This meeting shall occur at least two weeks prior to the Alternatives Presentation Meeting. This meeting is also a forum to rehearse presentation for the Alternatives Presentation Meeting.

**G. Alternatives Presentation Meeting:**

1. The Project Manager shall set up a meeting with the local officials, the RPC, and environmental resource agencies to present the alternatives and the evaluation matrix. Generally, the Project Manager shall give at least three weeks written notice of the meeting. If one of the alternatives has local acceptance and will be able to obtain all required environmental permits, the Project Manager shall proceed further in the scoping process. If all alternatives are rejected, the Project Manager will develop new alternatives and matrix and schedule a new Alternatives Presentation Meeting. This process will continue until acceptance of an alternative is achieved.

2. Comments from resource agencies regarding their views on the various alternatives are also required as part of the ISR. This might require a meeting with a resource agency to present the alternatives if they are unable to attend the Alternatives Presentation Meeting. The PDT needs to know which alternatives will be able to obtain all required environmental permits when reviewing the ISR.

3. Minutes of the Local Concerns Meeting and the Purpose and Need Statement should be reviewed. The evaluation matrix will be handed out at the meeting so that the participants will have a reference to the type and amount of impacts for each alternative. A visual depiction of each build alternative is required, as well as a discussion of how each alternative solves the needs of the project and its drawbacks. The visual representation shall be prepared so

that a layperson can understand the alternative being presented. If there are serious environmental resources involved, a resource constraints map might help illustrate the issues.

4 Minutes of the Alternatives Presentation Meeting need to be recorded and sent out afterwards. These are very important to ensure that there are no misunderstandings concerning public acceptance of an alternative. The minutes should be sent to all attendees, local officials, the RPC and the resource agencies that have project jurisdiction or interest. The recipients of the minutes will have two weeks from the postmarked date to contest them. These minutes will also be included in the ISR.

5 If there is consensus among all participants that the only reasonable alternative is preservation or maintenance, such as a paving job or replacement of signal equipment, an Alternatives Presentation Meeting need not be held. However, the Project Manager would need to obtain permission from the Project Scoping Engineer to forego the Alternatives Presentation Meeting and proceed directly to the ISR distribution.

#### **H. Initial Scoping Report:**

1. Following public, local, regional and resource agency acceptance of an alternative, the ISR can be completed and made ready for review. The first review of the ISR is done by the Scoping Section/Project Scoping Engineer and Project Planning Engineer. After corrections are made and comments are addressed following the "in-house" review, the Project Manager can get the ISR printed. At a minimum, 23 copies need to be made. If there are multiple towns, planning commissions, transportation districts or impacted resource agencies more copies may be needed.

2. The ISR will be distributed to the following people/organizations/files for a two-week review period:

- a. VAOT Project Planning Engineer
- b. VAOT Design Engineer
- c. VAOT Structures Engineer
- d. VAOT Construction Engineer
- e. VAOT Engineering Services Engineer
- f. VAOT Traffic and Safety Engineer
- g. VAOT District Transportation Administrator
- h. VAOT Pavement Management Engineer
- I. VAOT Consultant Management Engineer
- j. VAOT Maintenance Engineer
- k. VAOT Bikeway Coordinator
- l. VAOT RAPT Representative
- m. VAOT Transportation Planning Coordinator
- n. FHWA
- o. Town (either Town Manager or Selectboard)
- p. Regional Planning Commission

- q. VAOT Director of Planning
- r. VAOT Director of Engineering
- s. VAOT Director of Construction & Maintenance
- t. VAOT Planning Division Files
- u. VAOT Central Files
- v. VAOT Project Development Files
- w. Interested Resource Agencies

3. If the number of comments received from the above review is limited, an addendum to the ISR is sufficient to address the comments and avoid a reprint of the ISR. If the comments suggest a significant change from what was originally presented in the ISR, the Project Manager may have to create new alternatives and hold another Alternatives Presentation Meeting or revise the ISR. In the event that the Scoping Plans are not acceptable to the PDT, the Project Manager will be required to submit revised Scoping Plans until PDT approval is received.

4. The Project Manager shall notify the Project Planning Engineer, who has the responsibility of scheduling a meeting of the PDT to discuss the ISR. The Project Manager will be required to present the ISR, including the recommendation and addendum at the PDT meeting. If the PDT recommends approval of the ISR, it will be forwarded to the Planning Division Director. The Director can recommend approval or disapproval of the ISR, but regardless, it shall be forwarded to the Secretary of Transportation. The Secretary of Transportation has ultimate approval authority. If the ISR is voted down by the PDT, or is disapproved by the Secretary of Transportation, the Project Manager needs to investigate further alternatives and go through the Alternative Presentation Meeting portion again.

5. Appendix B contains a listing of the topics that need to be discussed in the ISR. Remember, the reader should be presented with sufficient information to logically reach the same conclusion presented in the recommendations section of the ISR.

## **V. PHASE 3 - FINAL SCOPING REPORT:**

### **A. General:**

1. The amount of work that needs to be done for the FSR will vary significantly depending on the project and the amount of additional material the PDT deems necessary. After ISR approval by the Secretary of Transportation, the Project Manager may only need to write up an Executive Summary and provide any additional supporting information that may have been requested by the PDT, the Director of Planning or the Secretary. There must be a response for any comment received during the approval process. Minutes from the PDT meeting shall be included in the FSR and will be written by the Project Planning Engineer.

2. Computer files must be ready for use by the VAOT division responsible for detailed project development. The Microstation and InRoads files shall be archived and transferred to the lead division.

### **B. Public Information Meeting:**

1. This is an optional meeting at the request of the Town or the RPC near the conclusion of the scoping process. It is intended to inform the public of the outcome and recommendations of the report. If this meeting is held, the Project Manager shall attend and present the findings and approved recommendation of the ISR. The Project Manager shall produce the necessary graphics to display the approved alternative. Any comments that are collected at this meeting will be included and addressed in the FSR. This will be a separate appendix of the FSR. The Project Manager may have to collect additional information to address the comments collected at the Public Information Meeting.

### **C. Contents:**

1. The FSR shall contain an Executive Summary, responses to comments received during the ISR review period, any additional scoping design that is needed and any comments and responses from the Public Information Meeting, if one is held.

2. The approved alternative alignment will be shown as Scoping Plans. Scoping Plans may include, but are not limited to the following:

a. Title Page.

b. Plan sheets showing roadway alignment, slope limits, stationing, curve data, construction limits and approximate boundaries of resources. Metric scale 1:1000 or English scale 1" = 100'. For smaller projects such as intersections and bridges, a smaller scale should be used.

- c. Profile sheets showing the approved vertical alignment.
  - d. Approved typical roadway sections.
  - e. Roadway cross sections placed every 100 m for road projects and 20 m for intersection and bridge projects, metric scale 1:300 or English 1" = 20'.
  - f. Critical cross sections, defined as points where structures and resources are avoided or impacted by the typical section. Structures are defined as buildings, barns, cattle passes and culverts 48" or larger.
  - g. Earthwork estimate.
  - h. Cost Estimate, in accordance with the VAOT Conceptual Cost Estimate.
3. If needed, a detour plan shall also be developed.
  4. In conjunction with the submittal of the Scoping Plans, the Project Manager will identify potential or known conflicts with existing utilities and recommend ways of resolving those conflicts.
  5. The Categorical Exclusion Environmental Analysis Sheet needs to be filled out with available data. Any sections that require additional information will be completed by the Environmental Section as the project progresses through preliminary design. A copy of the current analysis sheet can be found in Appendix F.

#### **D. Distribution:**

1. The Project Manager will distribute the FSR to all involved parties. This is the culmination of the entire scoping process. Copies of the final approved report are provided to:
  - a. ANR
  - b. SHPO
  - c. Department of Agriculture
  - d. Director of Construction & Maintenance or Director of Engineering, depending upon the approved course of action by the Secretary of Transportation - Two copies.
  - e. Town
  - f. Regional Planning Commission
  - g. Planning Files
  - h. Central Files
  - I. Project Development Files
  - j. VAOT Transportation Planning Coordinator
  - k. FHWA
  - l. Corps of Engineers (Depended on type of impacts)
2. The Project Manager will clean up the file and present it to the VAOT Environmental Chief for reference during the permitting process.
3. The Microstation and InRoads files shall be archived and transferred to the lead division.

## **VI. SCOPING DESIGN CRITERIA:**

### **A. Structural and Highway Design:**

1. All structural and highway design must be in accordance with Vermont Agency of Transportation (VAOT) Standard Specifications for Construction (current edition), American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, and all applicable VAOT design standards.

2. Plans preparation will conform to the requirements of the VAOT Design Manual, the AASHTO Policy on Geometric Design of Highways and Streets (current edition), the Planning Design and Maintenance of Pedestrian Facilities, FHWA IP-88-019 and the "VAOT 3-R Policy - Metric Version". Guardrail design will conform to the AASHTO Roadside Design Guide (current edition). Pavement thickness design will conform to the VAOT Guide for Design of Pavement Structures (current edition). Landscaping shall conform to the VAOT Landscape Policy. Bikeway development shall conform to the VAOT "Guide for the Design of Bicycle Facilities".

3. Structures to be rehabilitated shall meet HS-20 loading criteria and new structures shall meet HS-25 loading criteria as specified by VAOT policy.

4. Any need for design exceptions will be brought to the attention of the Project Planning Engineer. All design exceptions will be approved through the current VAOT Design Exceptions Policy.

### **B. Signs, Signals and Markings:**

1. Traffic signs, signals and pavement markings shall meet the requirements of the most current edition of the Manual on Uniform Traffic Control Devices (MUTCD) and its VAOT supplement. Highway capacity calculations shall be made using the 1990 Highway Capacity Manual (TRB Special Report 209). Traffic signal and sign structures will be designed according to the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (current edition). The Project Manager shall also comply with the VAOT "Level of Service Policy" (May 1987), the VAOT "Traffic Signal Installation Policy" (December 28, 1993) and the VAOT "Street Lighting Policy" (Nov., 1991).

### **C. Hydraulics:**

1. The Project Manager shall contact the Hydraulics Section of the Engineering Services Division for all work in this area.

## VII. INFORMATION SOURCES:

The following information available at the VAOT may prove useful in the study. The various sections within the VAOT, such as the Structures Section and the Pavement Management Unit, each have information that the Project Manager will find helpful and informative.

- Record Construction Plans
- Traffic Data
- Route logs
- Sufficiency ratings
- Accident data
- Standards and specifications
- Various maps
- Agency Policy Plan
- Right of Way Plans
- Regional, Town and Village Transportation Plans
- Zoning Ordinances
- Orthophotos
- Photogrammetry

Data, maps, photos, reports, etc. not available at the Agency from current files will be obtained by the Project Manager on a project-by-project basis.

The Project Manager shall coordinate with other state agencies to obtain information that will be useful for this project, including, but not limited to:

- Agency of Development and Community Affairs.
- Agency of Natural Resources, Planning Division ( for coordination with all divisions).
- Division for Historic Preservation.
- Geographic Information Systems - Vermont Center for Geographic Information Services
- Department of Agriculture
- Department of Public Service
- Other Agencies

## VIII. GLOSSARY:

**ADT** - Average Daily Traffic

**Categorical Exclusion** - The environmental document prepared for actions or activities which do not have significant environmental affects based on federal code or the past experience of the Federal Highway Administration. This document is required by the National Environmental Policy Act.

**DHV** - Design Hourly Volume

**Digital Terrain Model** - A computer generated three-dimensional model used to portray existing ground features and conduct design work on.

**%D** - Directional Distribution Percentage

**Section 4(f) Property** - Protected lands described under Section 4(f) of the Department of Transportation Act of 1966. These lands are intended to be protected from transportation project impacts. 4(f) lands include: public parks, recreation areas, Land & Water Conservation Fund lands, wildlife and waterfowl refuges, historic houses, structures and districts on or eligible for the National Register of Historic Places, etc.

**Section 106** - Section 106 of the National Historic Preservation Act of 1966 which protects historic and archaeological resources such as houses, bridges, historic districts, and historic & prehistoric sites.

**Section 6(f) Lands** - Section 6(f) of the Land & Water Conservation Act of 1965. This law preserves, develops and assures the quality and quantity of outdoor recreation resources through purchase and improvement using Land & Water Conservation Fund money, and also protects these lands from conversion to non-public outdoor recreation uses.

**%T** - Percentage of truck traffic

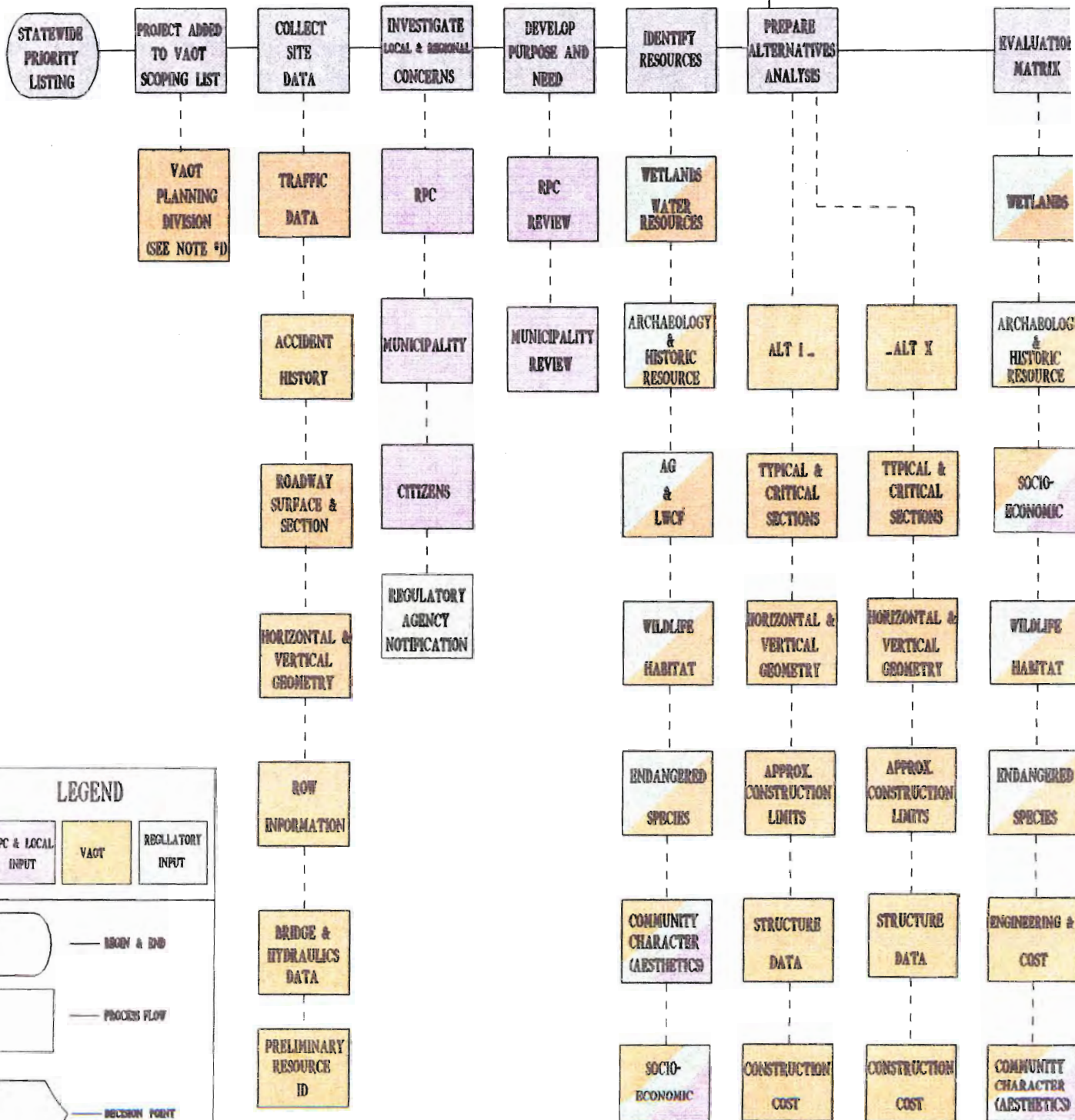


**APPENDIX A - SCOPING PROCESS FLOW CHART:**

The Scoping Process Flowchart is intended to be a graphical representation of Project Scoping. It is not intended to delineate a strict start-finish relationship between activities. Some of the activities on the Scoping Process Flowchart could be accomplished concurrently.

# PROBLEM IDENTIFICATION

**BEGIN**



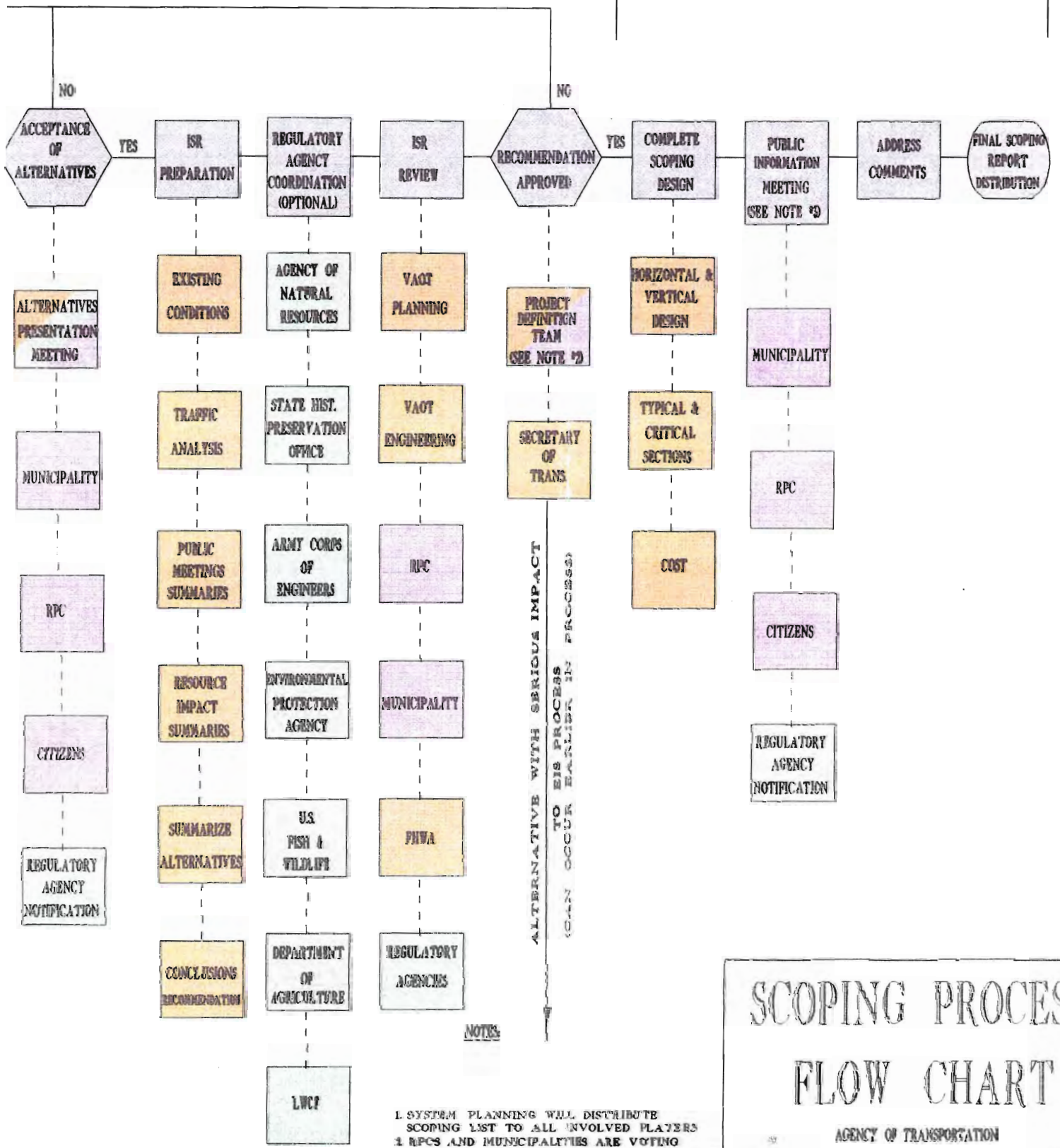
**LEGEND**

RPC & LOCAL INPUT	VAOT	REGULATORY INPUT
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	BEGIN & END
	PROCESS FLOW
	DECISION POINT

INITIAL SCOPING REPORT FINAL SCOPING REPORT



NOTES

1. SYSTEM PLANNING WILL DISTRIBUTE SCOPING LIST TO ALL INVOLVED PLAYERS
2. RPCS AND MUNICIPALITIES ARE VOTING MEMBERS OF THE PROJECT DEFINITION TEAM
3. THIS MEETING IS OPTIONAL AT THE REQUEST OF THE TOWN OR RPC
4. STEPS IN PROCESS NOT SEQUENTIAL SOME CAN BE CONDUCTED CONCURRENTLY

## SCOPING PROCESS FLOW CHART

AGENCY OF TRANSPORTATION  
PLANNING DIVISION  
PROJECT SCOPING SECTION

REVISED DATE: DECEMBER 29, 1996

**APPENDIX B - SCOPING REPORT FORMAT:**

Two styles of scoping reports are shown. They represent a list of the topics that could be discussed in a scoping report. The resources, alternatives and responses will vary with the type of project and the agencies that have comments. The complexity of a scoping report needs to directly correspond with the complexity of the problem area.

The font shall be 12 pt and the lines shall be single spaced. If at all possible the font style shall be *Garmond*. All referenced information will be properly footnoted. The format and outline can be modified for certain projects. All pages will be printed double-sided in order to conserve paper, except for pages containing photographs. All pages shall be numbered. Plastic covers shall not be used.

The following pages contain two outlines of scoping report formats. Style 1 shall be used for smaller project areas, areas with little or no concerns or ISRs concentrating on a preservation or maintenance alternative. Style 2 shall be used for long and complex projects.

TABLE OF CONTENTS (STYLE 1)

EXECUTIVE SUMMARY - FSR ONLY

PROJECT DESCRIPTION

BRIEF SUMMARY OF RECOMMENDATION

TABLE OF CONTENTS

INTRODUCTION

PURPOSE & NEED

PROBLEM DESCRIPTION & LOCATION MAPS

BACKGROUND INFORMATION

GENERAL

EXISTING CONDITIONS

ENVIRONMENTAL RESOURCES

Historic

Archaeological

Land & Water Conservation Fund

Department of Agriculture

U.S. Army Corps of Engineers

Nongame and Natural Heritage Program

Wetlands and Water Resources

HYDRAULIC

ACCIDENT

SIGN INVENTORY

TRAFFIC

INTERMODAL/MULTI-MODAL

LOCAL CONCERNS MEETING

General

Concerns

Consensus

Action Items - If any

Action Items Responses - If any

ALTERNATIVES PRESENTATION MEETING

General

Consensus

Action Items - If any

Action Items Responses - If any

PUBLIC INFORMATION MEETING - FSR ONLY

ALTERNATIVES

NO BUILD  
PRESERVATION  
RECONSTRUCT ON ALIGNMENT  
RECONSTRUCT OFF ALIGNMENT  
OTHER OPTIONS  
EVALUATION MATRIX

RECOMMENDATIONS

APPENDIX

PRELIMINARY COST ESTIMATE  
AVERAGE DAILY TRAFFIC  
ROUTE LOGS  
PICTURES  
SIGHT DISTANCE DIAGRAMS  
SUFFICIENCY RATINGS  
BRIDGE REPORTS  
ACCIDENT REPORTS  
SIGN INVENTORY  
MEETING MINUTES  
RESPONSES  
    Town  
    District Transportation Administrator  
    Hydraulics Engineer  
    Data and Mapping Engineer  
    U.S. Army Corps of Engineers  
    Department of Agriculture  
    Nongame and Natural Heritage Program.  
    Land & Water Conservation Fund.  
    Transportation Biologist  
    Others

PLANS - AS AN ATTACHMENT

CATAGORICAL EXCLUSION ENVIRONMENTAL ANALYSIS SHEET- FSR ONLY

TABLE OF CONTENTS (STYLE 2)

EXECUTIVE SUMMARY - FSR ONLY  
PROJECT DESCRIPTION  
BRIEF SUMMARY OF RECOMMENDATION

Introduction

Purpose and Need Statement

Problem Description and Location Maps

Problem Description  
Vermont Location Map  
Local Towns Location Map  
USGS Location Map  
Route Logs

Roadway Information

Design Criteria  
Terrain  
Design Speed  
Functional Classification  
Clear Zones  
Existing Roadway Conditions  
Roadway Width  
Subbase  
Horizontal Alignment  
Superelevation  
Vertical Alignment  
Sight Distance  
Residential and Commercial Drives  
Utilities  
Accidents  
Hydraulic Information  
Right-of-Way Information  
Traffic Data  
Sign Inventory  
Intermodal/Multi-modal Uses

Resource Information

- Natural Resources
  - Wetlands and Water Resources
  - Significant Plant and Animal Species
  - U.S. Army Corps of Engineers Involvement
- Land Use Resources
  - Land and Water Conservation Fund Sites
  - Hazardous Materials Sites
- Historic Resources
  - Historic Sites and Structures
  - Archaeological Sites
- Agricultural Resources
  - Agricultural Lands

Local and Regional Concerns

Alternatives

- Introduction
- No Build
- Pave
- Rehabilitate on Existing Alignment
- Other Options
- Evaluation Matrix

Recommendations

- Introduction
- Rehabilitate on Existing Alignment
- Provide Access Control

Appendix A – Preliminary Cost Estimate

Appendix B – Project Photographs

Appendix C – Roadway Information Correspondence

Appendix D – Resource Information Correspondence

Appendix E – Local Concerns Meeting Summary

Appendix F – Alternatives Presentation Meeting Summary



Appendix G – Public Information Meeting - FSR ONLY

Plans as an Attachment

Catagorical Exclusion Environmental Analysis Sheet - FSR ONLY

**APPENDIX C - SITE VISIT CHECKLIST:**

Following is a partial list of things which will be worth noting during the field inspection:

Roads, Intersections & Access Points

- \_\_\_\_\_ local road names, not just town highway numbers
- \_\_\_\_\_ field drives and class 4 roads
- \_\_\_\_\_ wide, uncontrolled access points for businesses

Roadside Characteristics

- \_\_\_\_\_ sign and mailbox posts that are not breakaway
- \_\_\_\_\_ regulatory signs that are not the correct height
- \_\_\_\_\_ ditches in need of repair or cleaning
- \_\_\_\_\_ general bridge and culvert conditions
- \_\_\_\_\_ culverts that need extensions and/or cleaning
- \_\_\_\_\_ throated drop inlets along the road
- \_\_\_\_\_ guard/bridge rail that needs upgrades
- \_\_\_\_\_ clear zone distances
- \_\_\_\_\_ lane, shoulder, and roadbed widths
- \_\_\_\_\_ pavement, sidewalk, and bike lane conditions
- \_\_\_\_\_ crosswalk locations
- \_\_\_\_\_ exposed ledge and other natural features
- \_\_\_\_\_ cemeteries, including small family ones
- \_\_\_\_\_ multi-modal sites and railroad crossings
- \_\_\_\_\_ fences, including stone, wood, and electric
- \_\_\_\_\_ horizontal and vertical sight distances

Environmental Resources

- \_\_\_\_\_ historic or potentially historic structures, wetlands, and agricultural lands
- \_\_\_\_\_ streams posted as spawning waters
- \_\_\_\_\_ potential deer yards
- \_\_\_\_\_ parks or other 4(f) properties <sup>1</sup>

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<sup>1</sup> Section 4(f) of the federal Department of Transportation Act of 1966 protects certain publicly accessible lands from transportation project impacts. These lands include public parks, recreational areas, Land and Water Conservation Fund lands, wildlife and waterfowl refuges, and historic sites.

Economic Development

- \_\_\_\_\_ names of large businesses, farms, and residential developments
- \_\_\_\_\_ building construction and the related roadway improvements or concerns
- \_\_\_\_\_ commercial truck entrances

Social Resources

- \_\_\_\_\_ fire or rescue stations
- \_\_\_\_\_ hospitals
- \_\_\_\_\_ town, village, city offices or garages
- \_\_\_\_\_ potential enhancement projects
- \_\_\_\_\_ recreational facilities and VAST or hiking trail crossings

Bring the Catagorical Exclusion Environmental Analysis Sheet into the field as well.

**APPENDIX D - PURPOSE AND NEED STATEMENTS:**

Purpose and Need Statements (P&N) are the backbone of our work. They are the crux of our scoping reports. The P&N needs to be written to state the problems of the transportation facility and the goal for that facility. A Purpose and Need Statement should not describe the author's recommended solution. The reader should be presented with sufficient material to understand the needs and goals of the project and then logically reach the same conclusion presented in the ISR.

FHWA has a seven-page memorandum on the purpose and need for environmental documents. Our scoping reports are not true environmental documents, but there are similarities. The FHWA memorandum can be confusing, but it does offer some good points.

*"Without a well-defined ... .. purpose and need, it will be difficult to determine which alternatives are reasonable, prudent and practicable, and it may be impossible to dismiss the no-build alternative."*

A P&N must conclusively illustrate that corrective effort is justifiable and worth the expenditure of public funds. The assumption for this is that there is local and regional support for something to be done to correct deficiencies.

The purpose of any transportation project is not to replace a bridge or replace a road. That decides the project outcome before the ink is dry on the P&N statement. The entire idea behind writing a P&N is to state in general terms the goals for the facility. In some cases the purpose behind a project might be to improve safety, to enhance mobility, to enhance commercial development, to improve structural capacity, to enhance pedestrian and bicycle movement, etc. It can be a combination of these or just one. But in no case does the P&N state a solution.

The need portion of a P&N should state the problems that are present and give substance to why something should be done. An example of a need could be the current intersection is hazardous because of the limited sight distances and its location on a crest vertical. Like the purpose part, the need portion does not state the method or author's ideas of correction. It states problems.

The following pages contain a reference for the writing of P&Ns, as well as an example.

# Purpose and Need Statement

Definitions From American Heritage New College Dictionary

**Purpose** - (*noun*)

- 1) The object toward which one strives or for which something exists.
- 2) A result or effect that is intended or desired; intention.
- 3) Determination; resolution.
- 4) The matter at hand; point at issue.

**Need** - (*noun*)

- 1) A condition or situation in which something necessary or desirable is required or wanted
- 2) A wish for something that is lacking or desired.
- 3) Necessity; obligation.
- 4) Something required or wanted; a requisite

By definition both of these words need an "object":

**Purpose**- "the object"; "for which something"

**Need**- "condition"; "situation"; "something necessary"

In our situation the "objects" of these words are

**Purpose Of The Project** - The goal which the project will reach

And

**Need Of The Location** - The characteristics that are inconsistent with the goal.

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The intention of the "Purpose and Need Statement" is to state, define and justify the problem. In other words, a "PROBLEM STATEMENT."

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## EXAMPLE

### Purpose

The purpose of Ryegate TH3 9443 is to enhance mobility from the farm to US 302 and to improve safety on Town Highway 50.

### Need

The performance of Town Highway 50 is considered deficient based on highway alignment, structural capacity and location. The following deficiencies define the need for the facility improvement:

#### 1) Highway Alignment

The current intersection with US 302 has limited sight distance which is below recommended levels by the American Association of State Highway and Transportation Officials.

#### 2) Structural Capacity

The bridge on TH 50 is subject to substructure scouring which severely limits the capacity of the bridge.

#### 3) Location

A portion of the TH, including the bridge, is within the flood plain of the Wells River. During high water, the access to the farm is cut off since the road and bridge are submerged. High water also causes erosion to the road and damages the bridge.

**APPENDIX E - EVALUATION MATRIX:**

A copy of an evaluation matrix is located on the following page. This sample is a guide only and modification is encouraged to fit the individual project.

Resource impacts should be qualified as exact as possible. For example, wetland impacts should be listed with the number of hectares (or acres, if an English measurement unit DTM) affected, historic structures impacts should list each individual structure that will be impacted, etc. The entries must make sense if the evaluation matrix were to stand alone.

EVALUATION MATRIX - Sample BRS #### (#)

		Alternative A DO NOTHING	Alternative B REHABILITATION	Alternative C OFF ALIGNMENT
COST	Roadway	\$0.00	\$177,000	\$353,000
	Structure	\$0.00	\$0.00	\$0.00
	Temporary Structure	\$0.00	\$0.00	\$0.00
	Traffic & Safety	\$0.00	\$15,000	\$31,000
	<b>TOTAL (\$)</b>	<b>\$0.00</b>	<b>\$192,000</b>	<b>\$384,000</b>
ENGINEERING	Typical Section (meters)	.5 - 3.5 - 3.5 - .5	1 - 4 - 4 - 1	1 - 4 - 4 - 1
	Alignment Change	No	No	Yes
	Bicycle Access	No Change	Enhanced	Enhanced
	Hydraulic	No Change	Improved	Improved
	Utility	No Change	N/A	N/A
IMPACTS	Agricultural	No	No	Yes. (0.25 ha)
	Archaeological	No	No	Yes (College Field)
	Historic Structures, Sites & Districts	No	No	Yes (College Gate)
	Hazardous Materials	No	No	No
	Floodplain	No	No	No
	Fish & Wildlife	No	No	No
	Rare, Threatened & Endangered Species	No	No	No
	Public Lands - Sec 4(f)	No	No	No
	LWCF - Section 6(f)	No	No	No
	Noise	No Change	No Change	No Change
LOCAL & REGIONAL ISSUES	Wetlands	No	No	No
	Concerns	Not Met	Satisfied	Satisfied
	Community Character	No Change	Enhanced	Lessened
	Economic Impacts	Unknown	Unknown	Unknown
	Conformance to Regional Transportation Plan	No	Yes	Partially
PERMITS	Satisfies Purpose & Need Statement	No	Yes	Yes
	ACT 250	No	No	No
	401 Water Quality	No	No	No
	404 COE Permit	No	No	No
	Stream Alteration	No	No	No
	Conditional Use Determination	No	No	No
	Storm Water Discharge	No	Yes	Yes
	Lakes & Ponds	No	No	No
	T & E Species	No	No	No
SHPO	No	Yes	Yes	
OTHER				



**APPENDIX F - CATAGORICAL EXCLUSION ENVIRONMENTAL ANALYSIS SHEET:**

The following pages contain the standard sheet that must be filled out when a Catagorical Exclusion is applied for. The sheet will need to be filled out as completely as possible with the information at hand. No additional information needs to be collected for this sheet.

The purpose of filling out this sheet is to streamline the permitting process as the project moves through the design phase. The FSR should be referenced as much as possible. For example, "See page 10 of the Final Scoping Report."

**CATAGORICAL EXCLUSION**  
Environmental Analysis Sheet

Town \_\_\_\_\_ Project \_\_\_\_\_ Route \_\_\_\_\_

**Project Purpose & Need:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Alternatives Considered:**

Alt. No. 1 \_\_\_\_\_

Alt. No. 2 \_\_\_\_\_

Alt. No. 3 \_\_\_\_\_

**Project Description:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Project Setting:**    Urban \_\_\_\_\_ Village \_\_\_\_\_ Rural \_\_\_\_\_  
Traffic \_\_\_\_\_ Year \_\_\_\_\_ Typical \_\_\_\_\_  
Scenic Byway/VT Scenic Road?    Yes \_\_\_\_\_ No \_\_\_\_\_  
National/State Forest Highway?    Yes \_\_\_\_\_ No \_\_\_\_\_  
Unique Features: \_\_\_\_\_

1.    **Air Quality**  
Ten year increase in ADT \_\_\_\_\_ (10,000 MOA allowed maximum)  
Urban intersection improvement?    Yes \_\_\_\_\_ No \_\_\_\_\_
  
2.    **Noise**  
Alignment moved closer to developed property?    Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, apply nomograph. Results \_\_\_\_\_
  
3.    **Water Quality/Streams, Rivers & Lakes**  
Stream Alteration Permit?    Yes \_\_\_\_\_ No \_\_\_\_\_ Acquired \_\_\_\_\_  
401 Water Quality Certification?    Yes \_\_\_\_\_ No \_\_\_\_\_ Acquired \_\_\_\_\_  
Stormwater Discharge Permit?    Yes \_\_\_\_\_ No \_\_\_\_\_ Acquired \_\_\_\_\_  
Erosion Control Plan in Contract?    Yes \_\_\_\_\_ No \_\_\_\_\_  
Groundwater/Wells/Surface Water Impacts?    Yes \_\_\_\_\_ No \_\_\_\_\_ Describe \_\_\_\_\_

4. **Wetlands**

Infringement? Yes \_\_\_\_\_ No \_\_\_\_\_  
Area affected \_\_\_\_\_ Estimated total area of wetland \_\_\_\_\_  
Area of temporary impact \_\_\_\_\_  
Vermont Wetland Classification \_\_\_\_\_  
ANR Comments \_\_\_\_\_  
(If Applicable)  
EPA Comments \_\_\_\_\_  
COE Comments \_\_\_\_\_  
USF&WS Comments \_\_\_\_\_  
Mitigation (Describe) \_\_\_\_\_  
\_\_\_\_\_

5. **Floodplains**

Encroachment? Yes \_\_\_\_\_ No \_\_\_\_\_ Acreage \_\_\_\_\_ Volume \_\_\_\_\_  
Significance (Describe) \_\_\_\_\_

6. **Threatened and Endangered Species and Habitat**

Present in Project Area? Yes \_\_\_\_\_ No \_\_\_\_\_  
ANR Non-Game and Natural Heritage Program comments \_\_\_\_\_  
\_\_\_\_\_  
USF&WS comments (if applicable) \_\_\_\_\_

7. **Agricultural Land**

Affected? Yes \_\_\_\_\_ No \_\_\_\_\_  
Active Farmland? Yes \_\_\_\_\_ No \_\_\_\_\_  
Current Land Use \_\_\_\_\_  
Form 1006 Parts 1, III, VI, VII, completed (AOT) Yes \_\_\_\_\_ No \_\_\_\_\_  
Form 1006 Parts II, IV, V completed by SCS Yes \_\_\_\_\_ No \_\_\_\_\_  
Vermont Department of Agriculture comments \_\_\_\_\_  
\_\_\_\_\_

8. **Historical or Archaeological Resources (Section 106)**

No Effect \_\_\_\_\_ No Adverse Effect \_\_\_\_\_ Adverse Effect \_\_\_\_\_  
Historic Resources: National Register eligible \_\_\_\_\_ Non-eligible \_\_\_\_\_  
Findings: \_\_\_\_\_  
Archeological Resources: National Register eligible \_\_\_\_\_ Non-eligible \_\_\_\_\_  
Findings: \_\_\_\_\_  
SHPO Comments \_\_\_\_\_  
\_\_\_\_\_ Review completed \_\_\_\_\_  
Advisory Council consultation comments \_\_\_\_\_  
\_\_\_\_\_ Review completed \_\_\_\_\_

9. **Section 4(f) Resources**

Property impacted? Yes \_\_\_\_\_ No \_\_\_\_\_  
Temporary Use? Yes \_\_\_\_\_ No \_\_\_\_\_

(Coordination with FHWA via correspondence may be required to justify "temporary use" or determination of no "use")

Section 4(f) involvement:

- Public Park
- Recreation Area
- Wildlife and Waterfowl Refuge
- Historic Site
- State/National Forest
- State/National Park

Acquisition required: Yes  No  Area

Non-acquisition use of 4(f) property (23 CFR 771.135 (p)) :

- Noise Level Increase
- Visual Intrusion
- Access Restriction
- Vibration Impacts
- Ecological Intrusion

Programmatic 4(f) Evaluation  4(f) Evaluation

Section 6(f) involvement (LWCF Funding): Yes  No

DOI Coordination \_\_\_\_\_

FHWA Statement on Legal Sufficiency \_\_\_\_\_

10. U.S. Army Corps of Engineering Permit (Section 404)

Permit Required? . Yes  No

Permit Type \_\_\_\_\_

Water Quality Certification acquired \_\_\_\_\_

11. Coast Guard Permit (Section 124a)

Navigable Waters? Yes  No  Permit Required? Yes  No

12. Hazardous/Residual Waste Liabilities

Petroleum related wastes? Yes  No

Determination from field visit? Yes  No  Borings Completed? Yes  No

CERCLA involvement? Yes  No

Remediation required? Yes  No

Describe \_\_\_\_\_

13. Right of Way

Acquisition? Yes  No

Area: Existing ROW \_\_\_\_\_ New Acquisition \_\_\_\_\_ Total \_\_\_\_\_

Improved properties acquired? Yes  No

Displacement: Rental Units \_\_\_\_\_ Private Homes \_\_\_\_\_ Businesses \_\_\_\_\_

Relocation services to be provided? \_\_\_\_\_

Available properties for relocation \_\_\_\_\_

14. **Public Participation Opportunity**

Public Hearing required? Yes \_\_\_\_\_ No \_\_\_\_\_ Hearing Date \_\_\_\_\_

On-site meeting? Yes \_\_\_\_\_ No \_\_\_\_\_ Date \_\_\_\_\_

Public Information Meeting? Yes \_\_\_\_\_ No \_\_\_\_\_ Date \_\_\_\_\_

Comments by Local Officials/RPC's \_\_\_\_\_

15. **Social & Economic Impacts**

Project consistent with local and Regional Land Use Plans? Yes \_\_\_\_\_ No \_\_\_\_\_

Describe \_\_\_\_\_

(Attach correspondence from officials)

Neighborhood and Community Impacts: Yes \_\_\_\_\_ No \_\_\_\_\_

\_\_\_\_\_ Churches

\_\_\_\_\_ Schools

\_\_\_\_\_ Elderly

\_\_\_\_\_ Minorities

\_\_\_\_\_ Handicapped

\_\_\_\_\_ Low Income Housing

\_\_\_\_\_ Emergency Service Facilities/Vehicles

\_\_\_\_\_ Environmental Justice Executive Order 12898

Describe \_\_\_\_\_

Impact to local business? Yes \_\_\_\_\_ No \_\_\_\_\_ Describe \_\_\_\_\_

Temporary impacts to business? Yes \_\_\_\_\_ No \_\_\_\_\_ Describe \_\_\_\_\_

16. **Impact to Actions by Other Federal Agencies**

Required for development of project? Yes \_\_\_\_\_ No \_\_\_\_\_

Describe \_\_\_\_\_

17. **Temporary Detour**

Detour required? Yes \_\_\_\_\_ No \_\_\_\_\_ (Attach Plans)

Length \_\_\_\_\_

Temporary bridge required? Yes \_\_\_\_\_ No \_\_\_\_\_ (Attach Plans)

Adverse impacts? \_\_\_\_\_

Public and public official notification or involvement \_\_\_\_\_

**Field Inspection Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signature Date

Reviewed by: \_\_\_\_\_  
Signature Date

**Note:** When appropriate, more detailed descriptions of resources and an explanation of the impact analysis should be attached to this form.

