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It is the intent that all VAOT administered projects from all VAOT Divisions regardless of funding source will be developed in accordance with the process described in this manual. While it is expected that larger, more involved projects will follow the process rather closely, it is possible that smaller, less involved projects may be expedited by omitting some of the process steps that may not be applicable. It is imperative that the responsible Project Manager be cognizant of the steps that their respective projects will need to follow while developing their project in keeping with the philosophy and spirit of this process.

This project Development Process is intended for use on those Federally-Aided projects for which the NEPA document is anticipated to be a Categorical Exclusion only. Projects requiring an Environmental Assessment or an Environmental Impact Statement will follow a similar, but different, process.

This narrative is intended as an overview of the steps depicted in the accompanying flow chart. Detailed procedures, or requirements, describing individual steps should be documented in the respective operating manual(s) of the Division, Section, or Unit responsible for administering the applicable project.

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I. Project Selection

A. Transportation Planning Initiative - Selection of State System Projects

In 1992 the Vermont Agency of Transportation (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 addressed, as well as the scale of those improvements.

When 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 identifies and prioritizes regional transportation needs for projects not specified further in this section. In this way, the regions are considered partners with VAOT throughout the entire project process.

One of the primary functions of each RPC is to develop a prioritized list of transportation needs within their region. This list begins at the municipal level, with each having input to the region regarding the municipalities' transportation problems, wants, and needs. The RPC considers all of these problems, ranks them in priority and recommends 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 forwarded to the Director of the Planning Division for authorization and finally to the Project Managers so project development may begin.

In the area under the jurisdiction of the Metropolitan Planning Organization (MPO), selection of projects is slightly different. The MPO has the responsibility to select their own projects. This list of projects, referred to as a Transportation Improvement Program (TIP), which is fiscally constrained, must be incorporated into the list of projects to be developed by the VAOT.

B. Selection of Town Highway Bridge Projects

Selection of town highway bridges for addition to the program is based upon structural deficiencies and requests from municipalities via the District Transportation Administrator. The structural deficiencies will be identified during a regularly scheduled bridge inspection and the information will be entered into the bridge management program (PONTIS). A tentative list for addition to the program will be produced each fiscal year. This list will be forwarded to the respective AOT Planning Coordinator, RPC, DTA, and Town for comment. Since this program contains a local match, there must be preliminary concurrence from the municipality to initiate a project.

When the list is approved by the respective towns, it is forwarded to the Secretary of Transportation for approval. Once approved, the list will then be forwarded to the Planning Division for addition to the Capital Program and State Transportation Improvement Program.

C. Selection of Maintenance Projects

These projects are selected by the appropriate Maintenance District Transportation Administrator within the budgetary constraints established by the VAOT.

1. Bridge Deck Rehabilitation

To qualify for the Bridge Deck Rehabilitation program the bridge must be without a membrane and not on the capital program. The younger decks are chosen prior to the older decks in an attempt to save them before extensive repairs are required. They may be chosen in a random pattern based on above or modified to saturate a corridor (road) or a region.
2. Bridge Paint Program

The oldest paint systems are selected first, as well as bridges with large areas of rust and paint failure. They may be chosen in a random pattern or to saturate a corridor or region.

3. Culvert Replacement Program

This program is developed on worst first or corridor basis. A major consideration for prioritization of any specific culvert entails staying ahead of the paving program by two years.

4. Guardrail Program

An inventory of deficient guardrail sites, as well as coordination with the paving program are driving factors for this program.

5. Maintenance and Capital Improvement to District Buildings Program

Candidates for this program are selected primarily on a worst first basis, but some projects may move in priority based upon a need to encumber (purchase) property.

D. Selection of Enhancement Projects

Towns initially interested in an enhancement project will notify the enhancement coordinators. These Coordinators will provide the guidelines of the program and assistance. The Town will be required to submit a letter of intent. The Project Manager holds a briefing session, after the letter of intent deadline passes, to discuss the federal and state processes that need to be followed and the application procedure.

After the briefing, those Towns still interested in an enhancement project, will submit an application. The application must contain information about the proposed project, such as; how the proposed project satisfies the ten selection criteria, how the Town will meet the local finance match requirements and how the project meshes with other funding sources.

The Transportation Enhancement Advisory Council (TEAC) reviews the applications and makes a recommendation to the Secretary of Transportation. The TEAC consists of a cross section of the public and one representative from the AOT. With the Secretary's approval, the proposed projects are forwarded to the Legislature for approval. Once approved, the projects are added to the program so that their development can commence.

E. Selection of Interstate Bridge Projects

Selection of interstate bridges for addition to the program is based upon structural deficiencies. These deficiencies will be identified during a regularly scheduled bridge inspection and the information will be placed into the bridge management program (PONTIS).

A tentative list for addition to the program will be produced each fiscal year. This list will be forwarded to the respective regions and towns for comment.

The list will then be forwarded to the Planning Division for addition to the Capital Program and State Transportation Improvement Program.

F. Selection of Paving Projects

Interstate, state and Class 1 Town highways are surveyed biannually to collect pavement distress information. This information is then placed into a pavement management system.

The management program software determines remaining life for each road segment, based on the field
conditions and the degradation curve for that type of pavement structure.

Using the established budget, possible areas for treatment are selected based on a benefit cost analysis. Treatment selection generally provides for a greater level of treatment on roads of higher functional classification and traffic.

This draft list may be modified based on concerns from the Maintenance Districts, legislature and the RPCs.

The draft program is sent out for review to AOT personnel and the RPCs for appropriateness and conflicts. Comments from this review are used to finalize the program.

The Pavement Management Engineer has the responsibility to administer the program.

**G. Selection of Rail Projects**

A ten-year maintenance plan is established for state owned railroads. This plan focuses on maintaining the existing system. This program is also constrained by the AOT budget. Based upon funding and needs outlined in the plan, projects are included into the program.

**H. Selection of Airport Projects**

A ten-year plan is established for maintenance of the State's airports. The amount of work done in any year is constrained by the AOT budget. Projects are added to the program based on funding and needs as outlined in the plan. Additionally, certain Federal Aviation Administration (FAA) standards need to be maintained. Based upon FAA inspection certain projects can be inserted into the program on an as needed basis.

**I. Selection of Public Transit Projects**

The Transit Association meets with the Secretary of Transportation on an annual basis, as outlined in state statutes, to discuss their predetermined prioritized list of transit capital needs. This list is then compared to the financial constrains of the VAOT's transit budget for the upcoming year, and the top priorities which can be accomplished within the budget form the basis for the transit projects to be accomplished.

**J. Selection of Rail Crossing Projects**

Rail highway crossing projects are selected based upon an inventory of all crossings and an evaluation based on an established federal analysis. The analysis creates a prioritized list which becomes the basis for adding projects to the program. In addition, crossings can be added to the program on an "as-needed" (ad hoc) basis as conditions at rail crossings change or specific hazards are brought to the VAOT's attention.

**K. Selection of Bicycle/Pedestrian Path Projects**

Similar to state system highway projects, the TPI process is followed for the selection of bicycle/pedestrian paths.
II. Authorization to Proceed

A. State System Projects Selected Through the Transportation Planning Initiative

Projects that are prioritized and approved by the Director of Planning as candidates for Development and Evaluation will be submitted to the Director of Project Development for the project development process to begin.

The Director of Project Development will assign the project to the appropriate Program Manager. The Program Manager will determine if adequate funds are available in the program to fund the project. When adequate funds are available, the Program Manager will notify the Programming Section to request authorization to proceed with preliminary engineering through the Conceptual Plans phase if scoping is required. If scoping is not required, the Program Manager will request authorization to proceed for the entire preliminary engineering phase. The Program Manager should make sure the project is included on the approved Statewide Transportation Improvement Program (STIP) and/or Transportation Improvement Program (TIP) before making the request. A project location description and estimated cost should accompany the request.

The Programming Section will request authorization to proceed with preliminary engineering from the Federal Highway Administration (FHWA). When authorization to proceed is received from FHWA, the Program Manager will be notified of the date of authorization, and the State Transportation Accounting and Reporting System (STARS) Expenditure Account (EA) and Subjob numbers that have been assigned to the project.

B. Town Highway Bridge Projects

When a Town Highway Bridge Program has been approved by the Secretary of Transportation, the Program Manager will notify the Programming Section to request authorization to proceed with preliminary engineering from FHWA on the projects that have federal participation. The Program Manager should make sure the project is on the approved STIP and/or TIP before making the request. When authorization to proceed with preliminary engineering is received from FHWA, the Project Manager will be notified of the date of Authorization, and the STARS EA and Subjob numbers that have been assigned to the projects.

The Program Manager will request the Programming Section to establish STARS EA and Subjob numbers for projects that are funded with State and Local funds only. Programming will notify the Program Manager when numbers have been established.

C. Maintenance Projects

The Director of Construction and Maintenance or his designated Program Manager will notify the Programming Section to request authorization from FHWA to proceed with the various maintenance projects that utilize federal funds. They include, but may not be limited to, the guardrail, bridge deck rehabilitation, culvert rehabilitation, pavement marking, and sign installation programs. The funding requested for these projects should be in agreement with the amounts included on the approved STIP. Programming will notify Maintenance when project numbers, and EA's and Subjob numbers have been established.

D. Rail/Highway Crossing Projects

When the Director of RAPT or his designated Program Manager has identified the projects that will be advanced under this program, the Programming section will be notified to request authorization to proceed
with preliminary engineering and/or construction from FHWA. The funding requested for these projects should be in agreement with the amounts included on the approved STIP. Programming will notify RAPT when project numbers, and EA's and Subjob numbers have been established.

E. Enhancement Projects

When the annual Enhancement Program has been approved by the Secretary, the Program Manager will notify the Programming Section to request authorization to proceed with the various phases of the project (PE, ROW, and/or construction) from FHWA. Programming will notify the Program Manager when project numbers, and STARS EA and Subjob numbers, have been established. Individual enhancement projects do not appear in the STIP. A line item showing the total dollar amount expected to be obligated on the entire Enhancement Program during the Federal Fiscal Year is included in the STIP.

F. Interstate Bridge Projects

The Program Manager will notify the Programming section to request authorization from FHWA to proceed with preliminary engineering on Interstate Bridge Projects that have been identified through the project selection process. The Program Manager should make sure the project is included on the approved STIP and/or TIP before making the request. Programming will notify the Program Manager of the date of authorization and the STARS EA and Subjob numbers.

G. Paving Projects

When the Pavement Management Program Manager has developed an approved annual listing of new paving projects, the Programming Section will be notified to request authorization from FHWA to proceed with preliminary engineering. The Program Manager should make sure the project is included on the approved STIP and/or TIP before making the request. Programming will notify Pavement Management of the date of authorization, and the STARS EA and Subjob numbers that have been assigned to the projects.

H. Bike Path and Park & Ride Projects

Projects are authorized in a similar manner as the Enhancement Program projects.

I. Rest Areas

The Department of Buildings and General Services (BGS) is responsible for project development for some of Vermont's rest areas in compliance with the Rest Area Memorandum of Understanding dated April 11, 1997, or if amended, with VAOT, BGS, and Agency of Commerce and Community Development (CCD). The VAOT retains the responsibility for obtaining the FHWA program authorizations including funding, and the right of way function.

BGS will request from VAOT programming authorization to proceed with preliminary engineering on projects they identify. When the project is included on the VAOT approved STIP, the Programming Section will request authorization to proceed with preliminary engineering on the project from FHWA. Subsequent programming authorizations for right of way when applicable and construction will be requested and/or coordinated with the Programming Section. When FHWA authorizations are received, Programming will notify BGS.

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III. Project Definition

A. Purpose and Need

1. Information Collection

a. General Overview

(1) Projects selected through the TPI process have been developed by the RPC in concert with the Town(s). These projects should already have a draft Purpose and Need Statement developed based on input from the RPC and Town(s). If a draft Purpose and Need Statement is not provided, the Project Manager should solicit the RPC's and Town(s)'s input. This draft statement will be the foundation from which the more formalized Purpose and Need Statement is developed.

(2) A great deal of background information is needed in order to make an informed decision regarding the identification of transportation problems and the development of successful project solutions. There are several sources available to the Project Manager to obtain this background information to refine the Purpose and Need Statement.

(a) A site visit affords a chance to view the potential project area with local representation and technical specialists for those features potentially affected by the project.

(b) All major intersections within the project area should be evaluated.

(c) Traffic and accident data are necessary to identify any capacity and/or accident problems, or potential safety problems.

(d) Hydraulic analysis to help to determine hydraulic adequacy of the structure or the effect on the floodplain.

(e) The Rail/Highway Crossing Coordinator can help identify problem crossings.

(f) Pavement and structure sufficiency and inventory information is helpful in determining the extent of treatment necessary for these features.

(g) Right-of-Way information helps to identify property owners and property lines.

(h) Utility information is useful in determining any special needs required for utility relocation(s).

(i) A detailed survey of the project area helps to identify the location of various features and resources potentially affected by the proposed improvement.

(3) Coordination with other state agencies, such as the Agency of Natural Resources (ANR), Division for Historic Preservation (DHP), and Department of Agriculture (DA), the municipality's Selectboard and Planning Commission, the RPC, and the Corps of Engineers is an important part of the development of a Purpose and Need Statement. The Project Manager provides these agencies with a general description of each problem, and any information about known resources, local and regional concerns, and site contextual (regional, landscape, visual, etc.) information, and requests their comments regarding the area where potential solutions may occur.

b. Collect Existing Data

(1) Site Visit

(a) Before making a field inspection, the Project Manager should view the problem area on the Agency's
video logs. This allows an initial inspection of possible areas of concern, traffic flow patterns, and a preliminary sense of the project limits.

(b) 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 physical context of the problem area. Other individuals that might provide a unique perspective at the site visit include the Town or Municipality representative, the Agency's environmental resource specialists and appropriate district administrator(s), and an individual representing the interests of the project's main function, e.g., structures, congestion, maintenance, etc. These data will be collected in accordance with the project schedule developed by the Project Manager.

(c) Field inspections of bridges, culverts, bus route(s), sidewalks, freight movements, traffic control devices, lighting, drainage, access control, and highways 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 or hydraulic deficiencies, identify sight distance deficiencies, and identify conditions in or adjacent to the roadway which may place constraints on any on- or off-alignment design. Photographs will be taken for future reference, as well as inclusion in the Scoping Report, if a Scoping Report is required for the project. The approximate location and direction of the photograph shall be indicated on each photo.

(d) It is important that the Project Manager understand the planning context, land uses, and character of the problem area and surrounding community. Understanding the planning context is described in Item 2 below. The site visit is the most important step in understanding surrounding land uses and community character. A USGS topographic base map, GIS mapping information, and orthographic photos should be utilized in the field to identify and describe: surrounding land uses and land cover (open fields, forest and forest type if known, agricultural land, town, village, city, or commercial corridors), corridor view sheds, visually distinct areas such as buildings, land forms, valleys, hill tops, notches, water bodies, rivers, streams, and watercourses; prominent views and vistas along the road, public facilities or places, recreational facilities and street trees, the relationship to intersecting roads, and the related alignment and typical relative to surrounding visual resources. This information, which is available through the Towns and RPCs, should then be reviewed and discussed with local and regional officials.

Appendix A contains a checklist that highlights over thirty 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 Environmental Analysis Sheet, Appendix B, may serve as a reminder to explore those items.

(e) 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 area 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. In no case should the project limits expand beyond what is needed to address the problem identified in the project Purpose and Need.

(f) It is important for the Project Manager to understand the inter-modal aspects of the project location. During the site visit, the Project Manager should be cognizant of bicycle and pedestrian movements, or the potential for these movements. The Project Manager should also be aware of the proximity of connectivity points for other modes of freight and passenger transportation.

(2) Any transportation solution must conform with local and regional plans and the Agency's Level of Improvement (LOI) policy. The Project Manager must review in detail all pertinent sections of the local and regional land use and transportation plans. This includes transportation and land use, local and
regional policies as they relate to the problem area, the roadway involved, the town, and the region. Areas such as designated growth centers, historic districts, designated scenic roads and areas, unique natural areas, agricultural conservation districts, areas designated for future access management, and areas governed by official town maps should be acknowledged in the vicinity of the problem area. It is of critical importance that future planned land uses be understood and the town's and region's goals for growth, protection of natural and historic resources, and future transportation facilities be acknowledged.

(3) The Project Manager shall contact the traffic research and highway research units of the Technical Services Division and request current five-year accident data, high accident locations, roadway sufficiency ratings, turning movement data, any available traffic counts, pedestrian counts, and bicycle counts, and any other traffic information related to other modes of travel. The Project Manager is responsible for the development of current, five-year, and 25-year traffic data for roadway and bridge projects and current, five-year, and 15-year data for intersection projects. This data shall include, but not necessarily be limited to, ADT, ADTT, DHV, %D, and %T. A signal design requires 12-hour turning movement counts, peak-hour factors (PHF), a gap study, and pedestrian counts, if applicable. Recommendations to enhance mobility, such as climbing lanes, widening for bicycle use, pedestrian accommodations, and any inter-modal needs, shall be included in the Scoping Report.

(4) 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 Commerce and Community Development. The Scoping Report will include information concerning deficient equipment or operation, the need for turn lanes, and signal warrants.

(5) The Project Manager shall contact the Rail/Highway Crossing Coordinator of the VAOT RAPT Division for input regarding any pertinent issues.

(6) The Project Manager shall contact the VAOT Pavement Management Unit of the Construction and Maintenance Division for any inventory data related to pavement conditions, any data related to the existing subsurface materials, and any "near-term" projects.

(7) 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.

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

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

(10) Survey information is an essential part of the scoping process. The Project Manager is responsible for the development of 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 DTMs will be in metric and therefore, all scoping reports will be in metric units.

(11) Resource agencies shall be notified as soon as possible of the scoping effort and the Project Manager will obtain any existing information that may be available about the area. More in-depth discussions will take place after the Purpose and Need Statement is finalized. VAOT Technical Services resource personnel also shall be contacted for existing data.

(12) As a minimum, the Project Manager must be kept informed of all correspondence, both incoming and outgoing. Whether the Project Manager authors the correspondence, or correspondence is written by others, the Project Manager must receive a copy. The Project Manager will be responsible for logging project-related correspondence in the project file and for ensuring that copies of outgoing correspondence are filed in the Central File and Project File. Correspondence includes all inbound and outbound letters, memoranda, and inter-office communications relating to the project.

2. Local Concerns Meeting

a. General Overview

The Local Concerns Meeting is aimed primarily at garnering local and regional comments and is not a forum to present proposals. The function of this meeting is not just to gather information and answer questions, but to also foster a working relationship with the local community(ies). This is accomplished by listening to their concerns and ideas and making every attempt to incorporate them into the analysis of solution alternatives if they are sound and cost effective. The Public Participation followed by the VAOT is described in Appendix C and provides some perspective regarding the Local Concerns Meeting and its importance in the Agency's overall public involvement efforts. Appendix C also contains valuable checklists, covering issues pertinent to the environmental resources and structures, which may be used to highlight issues within the vicinity of the project.

b. 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 District Transportation Administrator (DTA) and VAOT Planning Coordinator, and to solicit input from the RPC, municipal officials, regulatory/resource agencies, and special interest groups including abutting property owners. 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 instance will the public be turned away.

(2) The purpose of this meeting is to introduce local and regional officials and those parties directly affected to the transportation problem and initiate a dialogue between them and the VAOT. It is the first step in determining the community's concerns, recognizing that these concerns are not always clear and may evolve as the project is defined.

One of the Project Manager's biggest challenges, once the concerns have been identified, is to balance these concerns with all of the other project issues and work to incorporate community concerns in project decision-making and design as appropriate. It is important to give due consideration to all concerns at this meeting.

Environmental issues are identified, if known, and public response sought as appropriate at the meeting. However, formal inter-agency discussion and resolution of regulatory issues occurs at other steps in the Project Development Process. Regulatory agencies, in coordination with AOT resource staff, may provide available resource information for the meeting. The regulatory agencies must be notified of the meeting no less than three weeks prior to the meeting date.
A successful Local Concerns Meeting requires that the Project Manager communicate with community officials, community leaders, and the RPCs before the meeting in order to set the agenda and after the meeting to make sure there is appropriate follow-up and continued communication. A sample agenda may be found in Appendix C.

The Project Manager should contact the appropriate local planning staff, planning commission chairs, conservation commission chairs, select board chairs, and major local property owners in the vicinity of the project area to help determine initial concerns and issues. The Project Manager should confer with the Town to determine which property owners may have legitimate concerns or issues that should be addressed by the project. This effort will help identify important local groups such as neighborhood associations, village improvement societies, historical societies, recreation committees, responsible growth advocates, and others who need to be informed of the issues and the meeting. It is better to be as inclusive as possible at this stage of the Project Development Process. It is a lot harder for others to find fault with our process when they have been invited to participate and have been afforded an opportunity to contribute to the decision-making for project development.

The Project Manager should work closely with local and regional officials on meeting logistics, including location, time, and format. The Project Manager should also consult with local and regional officials for the most effective means to provide meeting notice. In all cases mailings that include background information and a location map should be sent to all identified stakeholders at least three weeks before the meeting. In some cases articles in local newspapers announcing the meeting should be sought, notices posted at various locations or announcements made at appropriate gatherings such as Select Board or Planning Commission meetings.

The Project Manager conducts the Local Concerns Meeting to gather information and concerns. The Project Manager will emphasize this meeting is not intended to develop solutions, and they will not be discussed at this meeting. 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. Often meetings will have to be held at night to accommodate volunteer public officials and the general public; otherwise, a daytime meeting may be more appropriate. If controversy is expected, it may help to have a neutral facilitator run the meeting. This may include someone from outside the AOT who is respected in the community. The AOT staff persons facilitating the meeting and taking flip chart notes should be different from those providing background or technical information.

Meeting ground rules, such as no interruptions, addressing the issues at hand, and no personal attacks should be established at the beginning of each session. Everyone should be allowed to speak; however, the facilitator will have to step in if the ground rules are violated. Participants will also be given the opportunity if they choose to provide written comments within two weeks of the meeting. 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.

It should be made clear to all those attending how comments will be treated and any follow-up that is expected. The Project Manager will need to record the comments from the Local Concerns Meeting, prepare minutes of the meeting, and distribute them to all who were present, as well as any stakeholder who could not be present. The minutes of the Local Concerns Meeting will be included in the Scoping Report. In all cases, a copy of the meeting minutes will be circulated to all attendees and stakeholders within four weeks of the Local Concerns Meeting to provide for amendments or clarifications. The recipients of the minutes will have two weeks from the postmarked date to question or debate the minutes.

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 preliminary 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.
(7) Following the Local Concerns Meeting, the Project Manager will evaluate the comments received and ensure that appropriate details are integrated into the Scoping Report.

3. Purpose and Need Statement

a. 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 Scoping Report. 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 conclusively show 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 for concurrence to the VAOT Director of Project Development, FHWA, the RPC, and the municipality for a two-week review period. A copy of the Purpose and Need Statement shall also be sent to resource agencies and the VAOT Planning Coordinator for concurrence. If it is not accepted, the Project Manager will need to determine if the Purpose and Need Statement requires modification. If the Purpose and Need Statement is rewritten, it will be resubmitted for review and concurrence.

B. Project Scoping

1. Resource Team Review

Resource identification will not commence until a survey of the project area has been performed and a request to plot resources is sent to the Environmental Unit. A base resource file will be created for the Environmental Unit that includes survey information (less rod shots, tick marks, and descriptions), project name and number, name of river and direction of flow, north arrow, scale bar, and resource check-off box. Areas of sensitivity will be identified that include wetlands, historic sites, structures, and districts, archaeological sensitive areas, 4(f) properties, 6(f) properties, agricultural land, fish and wildlife habitat, flood plains, endangered species/habitat, and hazardous waste sites.

The Transportation Biologist or consultant will conduct a site visit and investigate the problem area for critical habitats, threatened & endangered species, or the presence of wetlands. Wetlands will be sketched onto the base resource file and a written report will be provided that gives a brief description of the location and function of the wetland.

The Transportation Archaeologist or consultant will conduct an initial background search to determine if the project area is sensitive for archaeological resources. The background search will include investigating the database at the Division for Historic Preservation for areas of archaeological significance. Using this information, the archaeologist will complete a predictive model concerning the archaeological importance of the project area. The archaeologist will conduct a site visit to obtain on-location knowledge and to aid in determining whether additional study is needed. Areas that are archaeologically sensitive will be depicted on the base resource file. All work must be conducted in accordance with the Agency's current guidelines and policies. The Project Manager will obtain as-built plans for the existing bridge or roadway, if possible, to help establish areas of prior construction activity.

The Transportation Historic Preservation Coordinator or consultant will review the data base in the Division for Historic Preservation for all buildings, structures, sites districts that are or may be eligible for the National or State Register of Historic Places. In addition, the historian performs field reconnaissance to gather additional information necessary to address issues related to Section 106 of the National Historic
Preservation Act of 1966 and Section 4(f) of the Department of Transportation Act of 1966. In some cases, archival research is required. The Project Manager will obtain this information in memo form. Buildings, structures, sites, historic districts Section 4(f) property shall be identified on the base resource file. Development of the Section 106 determination of effect will commence at this time. If a Section 4(f) property is present in or near the project, coordination with FHWA and development of the Section 4(f) document will commence.

All environmental resource information will be incorporated into the base resource file and a resource reference file is generated. Alternatives can now be developed that attempt to minimize impacts to resources to the greatest extent possible.

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.

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 (i.e., 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.

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

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

All information gathered above will be documented and summarized in the CE analysis sheet.

2. Prepare Alternatives with Footprint

Several reasonable build alternatives might need to be investigated and considered. The alternative set shall always contain a "no-build" option. Other alternatives that could be investigated are: preservation (maintenance), rehabilitation, and one or more build alternatives. Alternatives shall be developed utilizing the tool of "Level of Improvement" (LOI) as stated in the Vermont State Design Standards. In some instances, only cursory review may be needed for an alternative. If one or more build alignments are developed, they 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. 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 1.2 m (48") or larger.**

- **e. Earthwork estimate.**
f. Cost Estimate, in accordance with the VAOT Conceptual Cost Estimate.

Plans will be developed in accordance with appropriate design standards.

The cost of a project is a significant portion of the transportation related decision making process and must be justified by improvements in safety and public need, balanced with environmental constraints. Therefore, the cost estimate procedure must be comprehensive (to include all preliminary engineering, right of way, utility relocation costs, and construction costs) and unbiased. It must place all reasonable alternatives on the same level for fairness in the Project Definition Team (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.

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

All reasonable alternatives will be developed to comparable levels and presented in an evaluation matrix. 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 0.18 hectares (0.45 acres) of wetlands, that figure should be presented in the matrix. See Appendix E for an example of an evaluation matrix.

A meeting may be convened by the Project Manager with representatives from other AOT divisions to review the alternative plans, cost estimates, and the evaluation matrix. This meeting, if convened, shall occur at least two weeks prior to the Alternatives Presentation Meeting.

3. Resource Agency Coordination

All projects are coordinated with affected state and federal regulatory agencies throughout the Project Development Process.

For example, regulatory agencies are notified when Local Concerns meetings are scheduled. They can quickly research the "problem area" to assess the presence of resources and decide whether or not to attend the meeting. It is anticipated that these agencies will only attend meetings when significant resources are known to occur at the site.

Following the Local Concerns meeting, resources are identified in the project area and discussed at the bi-monthly COE coordination meetings with representatives from ANR, COE, EPA, USF&W, and DHP in attendance. It is anticipated that concurrence on the project purpose and need will be arrived at this meeting.

Regulatory agencies will be notified when other meetings are scheduled as well. These include, but are not limited to Alternative Acceptance meetings, 502 Public Hearings, and Act 250 Hearings. It may be necessary at times for these regulators to participate in these discussions, to enable the public to understand why a particular solution to a problem is not permitted.

In addition to these meeting opportunities for the regulatory agencies, all resource assessments conducted by the agency or its consultants and other project correspondence related to environmental issues will be distributed to affected agencies. It is imperative that the agencies be well informed of any project changes that might take place during the "Project Design" phase of the development process.

4. Alternatives Presentation Meeting
The Project Manager shall set up a meeting with the local officials, the RPC, FHWA, 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. A sample agenda for this meeting can be found in Appendix C. 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, as long as the municipality is informed.

If all alternatives are rejected, the Project Manager will attempt to resolve any conflicts. Failing this, the Project Manager will develop new alternatives and evaluation matrix, and will schedule a new Alternatives Presentation Meeting. This process will continue until acceptance of an alternative is achieved.

Comments from resource agencies regarding their views on the various alternatives are required at this time. Written comments must be submitted by the resource agencies 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 scoping report.

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 as well as its drawbacks. The visual representation shall be prepared so that a layperson can understand the alternative being presented.

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 scoping report.

5. Alternative Acceptance

Following public, local, regional, and resource agency acceptance of an alternative, the scoping report can be completed and made ready for review. The scoping report documents the public involvement outcome, resources identified and existing conditions, Purpose and Need of the project, alternatives considered, and the solution finally recommended. The first review of the scoping report is done by the Program Manager. After corrections are made and comments are addressed following this "in-house" review, the Project Manager may, at their own discretion, distribute the scoping report to any of the following people/organizations/files for a two-week review period if PDT review is not anticipated:

VAOT PDT Chair
VAOT Roadway and Traffic Design Engineer
VAOT Structures Engineer
VAOT Construction Engineer
VAOT Technical Support Engineer
VAOT Environmental Services Engineer
VAOT District Transportation Administrator
VAOT Pavement Management Engineer
VAOT Maintenance Engineer
VAOT Bikeway Coordinator
VAOT RAPT Representative
VAOT Transportation Planning Coordinator
FHWA
Town (either Town Manager or Select board)
Regional Planning Commission
Resource Agencies (COE, ANR, DHP, and others affected)
The following people/files require only a copy of the cover memo:

- VAOT Director of Planning, Outreach, and Community Affairs
- VAOT Director of Technical Services
- VAOT Director of Project Development
- VAOT Director of Construction & Maintenance
- VAOT Central Files
- VAOT Project Development Files

If the number of comments received from the above review is limited, an addendum to the scoping report is sufficient to address the comments. If the comments suggest a significant change from what was originally presented in the scoping report, the Project Manager may have to create new alternatives and hold another Alternatives Presentation Meeting or revise the scoping report.

PDT review is required if a project meets at least one of the following criteria:

1. the project has an estimated construction cost in excess of $1,500,000,
2. the latest construction estimate shows a "significant cost increase," as defined by the PDT, or
3. at the Project Manager's discretion.

For those projects requiring PDT action, the Project Manager shall notify the PDT chair, who has the responsibility of scheduling a meeting of the PDT to discuss the scoping report. The Project Manager must provide to the PDT chair a sufficient number of copies of the scoping report for PDT members' review. The Project Manager will be required to present the project including the recommendation and addendum at the PDT meeting. If the PDT recommends approval of the scoping report, it will be forwarded to the Project Development Division Director. The Director can recommend approval or disapproval of the scoping report, but regardless, it shall be forwarded to the Secretary of Transportation. The Secretary of Transportation has ultimate approval authority. If the scoping report 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.

For projects not requiring PDT action, the Project Manager will forward the scoping report to the Project Development Division Director. The Director can recommend approval or disapproval of the scoping report, but regardless, it shall be forwarded to the Secretary of Transportation. The Secretary of Transportation has ultimate approval authority. The FHWA will be able to determine the level of NEPA documentation necessary for the project at this time. Projects requiring an EA or EIS will follow a separate process.

C. Conceptual Design

1. Applicability

Under normal circumstances conceptual design is only needed for projects which require the acquisition of any lands or rights to construct the project. Maintenance projects, interstate improvements (bridge or roadway), paving projects, rail/highway crossing projects, and the like usually do not need to go through this phase of project development. However, the Project Manager may have reason to develop a conceptual design for any project.

2. Definition

Once the preferred alternative has been approved, work can begin on developing conceptual plans. Plans generated during the scoping process can be used as the foundation for producing the conceptual plans.
Because the Project Manager will be involved in the scoping process, the development of conceptual plans should be a smooth and continuous operation. The development of conceptual plans includes developing typical sections, calculating rough earthworks, making a field review (when appropriate), adjusting line and grade, and obtaining approval of the line and grade.

3. Content of Design Submittal

These plans generally consist of the title page, typical sections, base plan and profile sheets showing the roadway centerline and approximate construction limits and existing right-of-way limits, any identified sensitive resources, grade line, cross sections with templates, channel sections (when a structure is involved), pavement structure thickness design, conceptual traffic control plans, design parameter documentation, and a construction cost estimate.

4. Approvals

a. Line and Grade

Initial line and grade approval, prior to the formal submittal of the plans, is the responsibility of the Project Manager. After other sections have reviewed the plans and given their approval, if appropriate (Example: projects involving a structure need the approval of the Hydraulics Engineer), the Program Manager will give final approval of the line and grade.

b. Resource Team

The resource team (primarily the Agency’s environmental resource specialists) will review the conceptual plans, prior to the formal submittal, to ensure that the identified resources have been adequately considered in the project design.

5. Coordination

a. Utilities

Contact should be made with the Utilities Section to discuss the impact of this project relative to utilities and to try to identify potential or known conflicts with existing utilities and recommend possible ways of resolving those conflicts. This is particularly important since Act No. 60 of 1995 (codified in 19 V.S.A. ' 1 and ' 501) was enacted. As part of the procedures/rules to satisfy these requirements, the utility companies will work generally within an eight foot band outside the clear zone when identifying the relocation route.

b. Right-of-Way

Contact should be made with ROW to place the existing highway ROW on CADD for use on the base plan (layout) sheets, if it was not done in the previous phase. In addition, it will be necessary to obtain the names and addresses of the adjacent property owners from ROW for the invitation to the 502/Informational hearing.

6. Submission

Once the Program Manager and resource team approve the line and grade, a formal submittal will be made. Plans may be submitted for review and comment to various Agency Divisions, FHWA, municipalities, and others depending on the project type. The Program Manager will give the final approval of the plans. The Project Manager will send these plans to various resource agencies to begin the process of obtaining necessary permits.

7. Environmental Determinations and Applications for Federal/State Permits
Various environmental determinations and applications are made using conceptual plans. A listing of the various permits and their sequencing can be found in Appendix F. Two of the more important permits are listed below.

**a. Act 250**

Act 250 area is calculated after the construction limits are determined. If the total affected area exceeds 10 acres (4.0 hectares) an Act 250 permit is required. The total affected area is defined as the area of proposed construction, including approaches, to include all areas anticipated to be disturbed by construction. It will also include a ten foot wide construction zone outside the plotted construction limits. The Project Manager should notify the Environmental Unit as soon as possible to begin the application process.

**b. Wetlands Determination**

The wetlands within the project area have been previously identified in the resource review phase. The wetland impacts of the various alternatives were estimated during the alternatives phase. The conceptual plans show an accurate determination of the wetlands impacts of the preferred alternative. These plans will be sent to the various resource agencies for their review and comment. The preferred alternative should not be unfamiliar to them in light of their participation in the alternatives analysis phase of project development.

**D. 502/Informational Hearing**

1. **Revisions to Plans**

Depending on review comments received, revisions to the plans may be necessary before going to a hearing. If minor revisions are made, the Program Manager should review the project again and approve the proposed project, if appropriate. If major revisions, such as any revision to the project footprint, are made, the project should be reviewed by all concerned parties including the resource team.

2. **Hearing**

A public hearing is held for the purpose of receiving suggestions and recommendations from the public regarding the proposed project. The Project Manager must determine and schedule the type of hearing (502 or Informational) required for a project (see Appendix G for hearing procedures). The Project Manager is responsible for preparing the hearing displays and handouts which will be sent out with the Property Owner notices.

Under 19 V.S.A. ’ 502, a public hearing shall be held for the purpose of receiving suggestions and recommendations from the public prior to the Agency's initiating proceedings for the acquisition of any lands or rights. This hearing is strictly for projects involving state highways. The hearing shall be conducted by the Agency's representative. Public notice shall be given by printing the official notice not less than 30 days prior to the hearing in the newspaper having general circulation in the area affected. A copy of the notice shall be mailed to the Transportation Board, the legislative bodies of the municipalities affected and a copy sent certified mail to all known owners of lands and rights in land affected by the proposed improvement.

A Public Informational Hearing may be held on state highway projects which do not require any acquisition of any lands or rights, and for any off system projects such as the Town Highway bridge projects. The procedures, i.e. mailings and displays, are similar to those used for 502 Hearings with the exception of the mandatory 30 day notice. However, the 30 day notice is usually followed for these hearings as well.

**a. Receive/Consider Comments**
At the hearing the Agency shall set forth the reasons for the selection of the route intended and shall hear and consider all objections, suggestions for changes and recommendations made by any interested person. Following the hearing a review meeting is normally held to discuss the comments received at the hearing and decide whether any changes will be made to the proposed project. If a 502 Hearing is held the Transportation Board may direct the Agency not to proceed with the proposed project if it so chooses. A letter is usually sent to the officials of the affected municipality(ies) stating the Agency's intentions for the proposed project.

b. Revise Plans

If deemed appropriate the plans will be revised to reflect the outcome of the review meeting. After the revisions have been made, the Project Manager will identify any additional impact(s) these changes had on any environmental resources within the project area and notify the Environmental Unit of said impacts. Any changes to the footprint which have resulted from these revisions will be defined for use in appropriate permit applications.

E. NEPA Documentation (CE) Approval

The CE environmental analysis sheet and other appropriate documents will be updated with current information and sent with a cover letter to the FHWA for approval. The CE is the umbrella for all the other executive orders, laws, and regulations in addition to NEPA.

1. CE Analysis Sheet

This sheet is updated to reflect any changes which occurred since the alternative acceptance phase.

2. Section 106

If Section 106 resources are within the project area a determination of effect on those resources needs to be done. A determination of effect is normally recommended by the Agency first, then a request for concurrence is sent to the Division for Historic Preservation. If there is an adverse effect, a Memorandum of Agreement (MOA) is necessary to mitigate the adverse impacts of a project if we cannot avoid a particular resource.

3. Section 4(f)

If Section 4(f) resources are to be used or acquired for project purposes the Project Manager will ensure that a Section 4(f) document will be prepared. There are four (4) types of involvement with 4(f) resources which are covered by programmatic 4(f) statements:

i. Historic site

ii. Historic bridge

iii. Minor involvements with Public Parks

iv. Bike path

F. Act 250 Application Submittal (Part 1)

If applicable, the Project Manager shall ensure that the Technical Services Division submits an application accompanied with Conceptual plans to the appropriate District Environmental Commission. The Commission will set up a hearing to gather testimony from interested parties including Agency personnel. One or more hearings may be required. The Commission will issue a Draft Permit and Findings of Fact. This document should be reviewed by the
Technical Services Division and the Project Manager to determine the necessary changes, if any, to the plans in order to satisfy the conditions of the permit.

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IV. Project Design

The Project Design Phase begins following receipt of FHWA's concurrence that the project is properly classified as a Categorical Exclusion and FHWA's authorization to proceed with "preliminary engineering for contract plan preparation." There are a number of activities that occur during the development of the project design.

A. Preliminary Plan Development

1. Applicability

All projects should go through this phase of project development.

2. Definition

Preliminary Design is the first step in the Project Design Phase. During the development of Preliminary Plans, the Project Manager will design such features as width and depth transitions, roadside barriers, cut-to-fill transitions, drives, intersecting highway approaches, drainage and erosion control, traffic signs, pavement markings, street lighting, signalization, and detours. The Project Manager will template all cross sections and place construction limits and notes on the layouts. We will also compute quantities for all known construction items.

3. Run and Tie Centerlines

The Project Manager shall submit a request to the Route Survey Unit to run and tie the centerlines of the mainline and any necessary sideline approaches. This series of reference points is used by the designers and the Right-of-Way Section when discussing project impacts with property owners. It is also useful for locating environmental resources and for geotechnical investigations.

4. Subsurface Investigation

The Project Manager shall submit a geotechnical investigation request to the Materials and Research Section for every project that may require the use of a cofferdam and for all projects that involve the design of structural foundations. Geotechnical investigations are advisable on large plate pipe projects as well and should be considered on all projects. Geotechnical investigations should also be requested within all excavation areas where ledge is expected and for those areas where potential contaminated soils were identified during the Project Definition Phase.

5. Contaminated Soils

If the boring logs indicate the presence of contaminated soils, the Project Manager shall provide this information to the Agency's Hazardous Materials and Waste Coordinator to determine what, if any, action is necessary. The Project Manager shall also provide this information to the Right-of-Way Section as soon as possible.

6. Preliminary Plans Submittal

The Project Manager shall submit Preliminary Plans for review and comment by the appropriate internal and external entities. The Project Manager needs to inform the Technical Services Division of any changes in the footprint that could substantially affect environmental resources.

7. Utility Relocation Routes
The Utilities Unit shall submit a set of Preliminary Plans to the utility companies having utility facilities within the project area that require relocation. The utility companies shall develop relocation plans to cover the adjustment of their facilities that are in conflict and shall submit these plans to the Utilities Unit within two months of receiving the Preliminary Plans.

8. Property Owner Visits

Following completion of the Preliminary Plan review period, the Project Manager shall ensure that any necessary changes are made to the Preliminary Plans and shall schedule visits with affected property owners to explain the project and its impact on their property. Representatives from the Right-of-Way Section and the affected utility company(ies) shall accompany the Project Manager as applicable. If aerial utilities are impacted by the project and shall require relocation, the preliminary utility relocation route(s) is(are) shown on copies of the Preliminary Plans for use during the property owner visits.

9. Permits

There are a number of permits or sign-offs which must be obtained from several resource agencies during the development of Preliminary Plans (see below). These various resource agencies will have already been exposed to the project during the Project Definition phase and will have given their informal concurrence that the proposed project is permitable. However, most of these agencies need to look at Preliminary Plans before issuing a permit or signing off on the project.

   Stormwater Discharge Permit

b. Stream Alteration Permit (SAP)

c. Conditional Use Determination (CUD)

d. Lakes & Ponds Permit

e. Section 401 Water Quality Certificate (WQC)

f. Threatened & Endangered Species (T&E)

g. Section 404 (COE) Permit

For more information on the above listed permits, see Appendix F.

B. Semi-Final Plan Development

1. Applicability

This phase of design is applicable to any project that requires the acquisition of land and/or rights.

2. Definition

Semi-Final Design activities include incorporating any changes in design details as a result of meeting with property owners or in response to comments received from permitting agencies. The final utility relocation routes shall also be added to the plans.

3. Act 250 Submittal (Part 2)

If applicable, the Project Manager shall ensure that the Technical Services Division submits a set of plans to the District Environmental Commission for the purposes of obtaining the land use permit. The letter and the attached plans should address any outstanding issues and/or preliminary findings of fact.
4. Semi-Final Plans Submittal

The Project Manager shall submit Semi-Final Plans to the Chief of Right-of-Way, DTA, Utilities and Permits Chief, Structures Engineer (if a structure is involved), Environmental Permits Chief, and the Special Agreements Administrator (if project requires a railroad, finance and/or maintenance agreement). These plans are considered firm for detailed design purposes. No changes should be made to the plans at this stage of development. However, if any changes are considered, they must be coordinated with the appropriate section of the Technical Services Division.

5. Right-of-Way Plans Development

a. Definition

Right-of-Way (ROW) Plans detail land, rights, and easements which the Agency will need to acquire in order to construct the project.

b. Acquisition Line Establishment

The ROW Section shall use the Semi-Final Plans to develop proposed acquisition lines for all necessary land, rights, and easements.

c. ROW Plans Submittal

The ROW Section shall submit a set of ROW Plans showing the proposed acquisition lines for review and comment by various units as applicable. The ROW Section shall then make any necessary changes to the acquisition lines and shall submit completed ROW Plans which have been approved by the Director of Project Development and the Chief of Right-of-Way to the Project Manager. If any changes are considered, they must be coordinated with the appropriate section of the Technical Services Division.

6. Reevaluation of the CE

Prior to requesting authorization to acquire right-of-way, the Technical Services Division shall establish whether or not the CE designation remains valid. Further details regarding the reevaluation criteria may be found in Appendix H. If either of the following conditions are met, the Project Manager shall request that the Technical Services Division submit a written CE Reevaluation to the FHWA:

a. Time

More than three (3) years has elapsed since the original CE determination.

b. Changes

The project scope, construction limits, or impacts have changed substantially or where the proposed mitigation has changed.

7. Act 250 Permit Issuance

Once the District Environmental Commission issues the land use permit, the Technical Services Division shall forward one copy of this permit to the Project Manager and one copy to the Contract Administration Section. The Project Manager shall review the conditions of this permit and, if necessary, shall request that the Technical Services Division file a motion to alter or an appeal. If the conditions of the permit are acceptable, the Project Manager shall make any necessary changes to the plans and shall discuss these changes with any affected Agency sections and property owners. Any changes to the plans which would affect a property owner must be authorized by the Chief of Right-of-Way.

8. Authorization to Acquire Right-of-Way
The Right-of-Way Section shall ask the Programming Section to submit a request to the FHWA for authorization to acquire right-of-way. If a written CE Reevaluation is required, the request for authorization of right-of-way acquisition may be submitted simultaneously with the written CE Reevaluation. The acquisition of right-of-way involves several steps, using the Final ROW Plans.

a. Necessity

The Right-of-Way Section shall request that the Agency's Office of the Attorney General petition the applicable Superior judge to find that it is necessary to take certain lands and/or rights in order to construct the project. The Superior judge fixes the time and place for the hearing. Following the necessity hearing, the Superior judge shall issue a judgement order. If no appeals are taken within the time provided or, if appeal is taken, upon final disposition of the appeal, a copy of the order of the court shall be placed on file within ten days in the office of the clerk of each town in which the land affected lies.

b. Appraisal, Review, and Negotiations

The Right-of-Way Section shall appraise all property or rights to be acquired. The Reviewing Appraiser, an independent appraiser of the Right-of-Way Section, shall analyze and approve the appraisals. The Right-of-Way Section then contacts each property owner to make an offer based on the approved appraisals. If an agreement is reached, option documents and/or temporary use agreements are executed.

c. Compensation Hearing

If an agreement is not reached, the Right-of-Way Section shall request that the Transportation Board schedule and hold a Compensation Hearing. Within 45 days after the hearing, the Transportation Board shall issue a Condemnation Order fixing compensation to be paid for the taking of land and/or rights.

d. ROW Change Orders

Throughout the course of acquiring land and/or rights, the Right-of-Way Section may submit ROW Change Order requests to the Project Manager. If the Project Manager approves a ROW Change Order request, the Project Manager shall ensure that the plans are updated accordingly.

e. Right-of-Way Clearance Certificate

Once payments have been made to all property owners and all necessary land and/or rights have been acquired, and vacated if necessary, the Right-of-Way Section shall issue a clearance certificate to the Project Manager.

C. Final Plan Development

1. Applicability

All projects should go through this phase of project development.

2. Definition

There are a number of activities that run concurrently during the Final Design phase. If applicable, most of the structural design and traffic signal details are developed during this phase. Landscaping details may also be developed at this time. This phase also includes the acquisition of any necessary land and/or rights and the development and execution of any necessary utility or rail road agreements. All necessary special provisions are also developed. This phase of design culminates in the completion of the contract plans, specifications and estimate and the advertisement of the project for receipt of bids.
3. Final Plans Design Memo

Upon receiving the Right-of-Way Clearance Certificate, the Project Manager shall distribute a memo requesting information or materials necessary to complete Final Plans. Construction field office requirements, utility bid items, special provisions for aggregate items, employee traineeship and speed enforcement requirements, and a final review of environmental permits are among the requested information.


Once all necessary utility agreements have been executed, the Utilities Unit sends a memo to the Project Manager and to Contract Administration indicating that all necessary arrangements with affected utility companies have been made. If no utility relocation is required, the Utilities Unit sends a memo to that effect. Either one of these memos constitutes the utility clearance and allows for the submittal of Final Plans. The Utilities Unit then prepares and distributes utility special provisions to the Project Manager and to Contract Administration.

5. Railroad Agreements

A railroad agreement is necessary if the project impacts railroad property/rights-of-way. Contract Administration prepares any necessary railroad agreements, based on information supplied by the Project Manager and the R.A.P.T. Division. This agreement should be executed prior to submittal of Final Plans.

6. Final Plans Submittal

The Project Manager shall submit Final Plans for review and comment by various internal and external entities. The Project Manager needs to inform the Technical Services Division of any significant changes in the footprint for environmental resource review purposes. The Project Manager needs to inform the Contract Administration Section of any special conditions which may need to be included in the Special Provisions. Environmental permit conditions/mitigation measures are of particular interest for inclusion in the Special Provisions. The Project Manager shall inform the Right-of-Way Section of any design changes that may require changes to the Right-of-Way Plans.

7. Special Provisions

Special Provisions are used to alter the requirements of the Standard Specifications and/or Supplemental Specifications where such requirements are not appropriate for work on the proposed project. They are also used to call the bidder's attention to any unusual conditions, environmental mitigations, regulations, or laws affecting the work. Upon receipt of Final Plans, the Contract Administration Section shall develop proposed Special Provisions and shall distribute them for review and comment.

8. Contract Plans Submittal

The Project Manager shall ensure that all necessary changes have been made to the plans based on the Final Plans review comments. Once these changes have been made, the Project Manager shall submit the Contract Plans, cost estimate, and IPARM list to the Contract Administration Section. At this point, the Contract Administration Section shall assemble the Plans, Specifications, and Estimate (PS&E) package for advertising the project.

9. Reevaluation of the CE

Prior to requesting authorization to advertise the project for the receipt of bids, the Project Manager, in consultation with the Technical Services Division, shall establish whether or not the CE designation remains valid. Further details regarding the reevaluation criteria may be found in Appendix H. If either of the following conditions are met, the Project Manager shall request that the Technical Services Division
submit a written CE Reevaluation to the FHWA:

a. Time

More than three (3) years has elapsed since the last CE Reevaluation or since the original CE determination, if a reevaluation has never been performed.

b. Changes

The project scope, construction limits, or impacts have changed substantially or where the proposed mitigation has changed.

10. Authorization to Advertise for Receipt of Bids

If the FHWA will be approving the PS&E, the Contract Administration Section shall submit a request to the FHWA for authorization to advertise for the receipt of bids. Otherwise, the Programming Section shall submit a request to the FHWA for authorization to advertise for the receipt of bids.
V. Construction

A. Waste and Borrow Areas

Section 105.25 of the Vermont Agency of Transportation Standard Specifications for Construction identify the Agency's control over supply and disposal areas for material to be used or disposed of in the project.

This section gives specific instructions for:

1. Opening of all gravel pits, sand pits, existing or new quarries or borrow pits.

2. Opening of all disposal areas for material removed from the project site and deemed not usable in the new construction.

3. Outline of procedure to follow to secure required permits to open supply and disposal areas.

4. Procedure for operating in and around supply and disposal areas to minimize environmental effects.

Procedure for properly closing of supply and disposal sites.

Approval and required permits to open any supply or disposal areas shall be obtained by the contractor. All written approvals are submitted to the Resident Engineer for review and approval by the Construction Engineer prior to any work at these areas. The Resident Engineer shall also submit the requested approvals to the Agency's Environmental Section for their review and approval.

B. Staging Areas

The Contract Plans contain project construction limits and right-of-way limits (permanent and temporary) to enable the contractor to construct the project according to the plans and specifications. The Contract Plans or contract Special Provisions may contain restrictions on the use of any areas in or adjacent to the above limits that are available to the contractor for staging.

The Resident Engineer shall ensure that the contractor is aware of any special construction conditions in the project Special Provisions dealing with the use of adjacent property for staging under the permits approved for the project. The contractor will be responsible for obtaining any additional environmental permits required due to staging operations outside the limits shown in the Contract Plans.

C. Mitigation

Many projects receive permits from resource Agencies contingent upon a certain amount of work to be performed as mitigation for a loss of existing resources required to construct the project. Mitigation work is shown in the Contract Plans and other Contract documents. The Project Manager will develop a listing of specific mitigation and permit requirements and provide this listing to the Resident Engineer. The Resident Engineer must be fully knowledgeable relative to the concerns of the resource agencies and to what areas of the proposed construction are included as mitigation. The Project Manager is the key person to inform the Resident Engineer relative to these matters. Occasionally construction items used to perform mitigation are modified from the standard specifications due to concerns in allowing the contractor to work in environmentally sensitive areas.

D. Pre-construction Conference

The Project Manager should attend the pre-construction conference to clarify any design issues, as applicable. The Project Manager should receive notice at least one week in advance of the pre-construction conference to insure attendance. The pre-construction conference is the ideal time for
personnel from all interested parties to express their concerns and desires for the construction of the project. The contractor's sequence of construction, type of equipment for performing various tasks, and methods of construction are presented. The pre-construction conference gives all interested parties the opportunity to express their concerns relative to their specific interests. Many contractors are somewhat flexible to reasonable modifications to their proposed sequence or construction methods.

The contractor provides a construction schedule and an erosion control plan and schedule for major aspects of the project. Individuals interested in certain activities can be informed as to when this work is planned to be done so they can schedule to be at the site to inspect the work. Any changes to the proposed schedule can be obtained from the Resident Engineer.

**E. Project Inspections During Construction**

Representatives from resource Agencies quite often visit the project site during construction to inspect the progress of the work for which they are interested. Generally, these visits are satisfactory and many people do not choose to attend the final inspection.

Any outside resource Agency that has a concern relative to any aspect of the construction on an project can have an on-site meeting be required as part of the permit and that requirement can be incorporated into the project Special Provisions. This is quite common when construction is required close to or on sensitive wetlands, archaeological or historic resources. It is critical that the requested resource "expert" be available on scheduled meetings along with the Agency's resource specialist so that decisions can be made at this meeting to reduce the contractors claim for projects delay.

**F. Change Orders**

There may be changes from the Contract Plans which occur during the construction of a project. These changes may be required due to updates or revisions to the field survey, unknown subsurface conditions, design modifications, requests for changes by property owners, or other reasons.

Many Change Orders are of relatively small magnitude in quantity, environmental effect, or dollar amount. The resident shall notify the Project Manager that these changes were necessary to construct the project. The Project Manager shall keep a record of these changes for future reference.

1. **Notice**

The Resident Engineer has the authority to make the final decision concerning a field change if the associated dollar value is less than $10,000 and the change does not have an impact on:

   a) the scope of the project
   
   b) material modifications
   
   c) adding a feature to the project
   
   d) designer's intent, assumptions, calculations, etc.

The Project Manager will be notified of this type of change via fax as soon as possible (or Site Manager when implemented).

2. **Impacts**

If the proposed change does affect one of the aspects of the project mentioned above, the decision on whether to make the change or not will be made cooperatively between the Project Manager and the Resident Engineer. (If not refer to 3. below) In addition, if there is likely to be an effect on the public
perception of the project, due to the proposed change, the Program Manager shall be consulted.

3. Need for Administrative Intervention

In the case where there is an unresolvable difference of opinion between the Project Manager and the Resident Engineer on whether or not a change should be made, the Construction Engineer and the Program Manager will resolve the issue. In all cases, resolution will be made at the lowest possible level.

4. Major Changes

When additional costs reach $50,000 in aggregate or 5% of the contract amount, whichever is greater, the changes have to be approved by the Construction Engineer, the Program Manager and the Director of Construction and Maintenance. The Project Manager will be notified of this type of change as soon as possible.

5. Bulletin 3.5

In addition, the requirements for cost reviews contained in Administrative Bulletin 3.5, as modified by the VAOT contract plan, shall be followed by the Construction Engineer.

6. Work Beyond Contract Limits

The Resident Engineer must notify the Project Manager of Change Orders which extend beyond the contract plan construction limits (temporary or permanent) even if additional right-of-way is not required.

The Resident Engineer must be familiar with the resources adjacent to the project area and with the restrictions set forth in the permits associated with the project. The extension of drives, flattening of slopes or installation of culverts are some examples of design changes which may be in conflict with the permits approved for the project. The Resident Engineer shall receive approval from the Project Manager for all changes which result in modification to the permanent or temporary contract plan construction limits.

Sensitive areas that require special attention are outlined on the Contract Plans and in the project Special Provisions. Specific contract items may require modification to address special construction conditions imposed by individual environmental permits.

The AOT Construction Manual Section 2-180.50 "Improvement Release" describes a process useful for obtaining property owners approval to do certain work not already in the Contract Plans. Usually, this situation involves acquiring temporary rights for minor work to be performed outside the project's purchased right-of-way. This work is usually to the benefit of the property owner and will be the responsibility of the property owner to maintain.

F. Right-of-Way Changes

1. Temporary Rights

As mentioned above under "Change Orders" most temporary rights can be handled by the Resident Engineer with an agreement with the property owner. The Section 2-180.50 improvement release forms are applicable but only give the contractor the right to access the property and construct the improvement. When future maintenance issues are required, the AOT Right of Way Section should be contacted to acquire the rights needed from the property owner.

All Contract Plans contain a temporary erosion control plan for the project. Quite often changes to this plan are required due to varying field conditions or individual contractor's operations. All contracts require the contractor to submit an erosion control plan prior to construction. Erosion control plans submitted with construction limits outside of the temporary construction limits in the project plans must be submitted to
the Project Manager for review by the permitting section prior to obtaining the additional temporary right needed

2. Permanent Acquisitions

Changes in the permanent property acquisition required during construction must be submitted to the Project Manager prior to any construction work on the required acquisition. The Resident Engineer shall detail the additional features to be constructed or coordinate the change with the Project Manager for submission to the AOT Right of Way Section. The new proposed take-line shall be reviewed by the Project Manager and the Resident Engineer prior to appraisal and acquisition to insure conformance with Agency design criteria and environmental permits.

This type of property acquisition, although rare, must take top priority with the Project Manager and the Right of Way Section to avoid claims by the contractor for delays in the project.

G. General Permit 3-9001 for Stormwater Runoff from Construction Sites

All projects will require a "General Permit 3-9001 for Stormwater Runoff from Construction Sites" from the Federal EPA which will be administered by the Vermont ANR. The permit is directed toward the construction effort of erosion control. This permit is required for any project which will disturb an area over five acres. The permit is obtained by onstruction and acknowledges that an erosion control plan has been developed and will be implemented.

The turn around time from application to issuance is typically ten days. Plans are not required to be submitted with this permit. Municipal projects are exempt from this permit.

The intent of this permit is to insure that erosion control is followed during the construction process and to provide the name of the person responsible to insure that erosion control is maintained.

H. Final Inspection

After notice from the Contractor of presumed completion, the Construction Section, in coordination with the Project Manager, will schedule a date for a final inspection of the project. An example of a final inspection notice is in Appendix I. If the inspection finds all work completed, the Contractor will be informed in writing of the acceptance of work, as of the final inspection date. If the work is not complete, or unsatisfactory, the Contractor will be given instructions for corrective action. The corrective action must be completed to the satisfaction of the Resident Engineer and the Project Manager before the project will be accepted.

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Appendix A - 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

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
- hydraulic adequacy
- culverts that need extensions and/or cleaning
- throated drop inlets along the road
- guard/bridge rail, including end section(s), that needs upgrading
- 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
- condition of curbing

Environmental Resources

- historic or potentially historic structures, wetlands, and agricultural lands
- streams posted as spawning waters
- deer yards or potential deer yards
- parks or other 4(f) properties

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

Other Transportation Resources

- sidewalks
- bike paths
- bus stations and stops
- bus routes
- freight depots
- railroad stations
- airport accesses
Bring the Categorical Exclusion Environmental Analysis Sheet into the field as well.

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Appendix B - CE Request Form Letter and CE Analysis Sheet

____________________, Division Administrator

Date __________________
USDOT, Federal Highway Administration
P.O. Box 568
Montpelier, VT 05601

Attn: ______________________, Environmental Program Manager

Re: Project name

Mr. Sikora:

Project _______________________ is located on ___________________________ beginning
at ______________________________ and extending ________________________________

Construction will consist of:

____________________________________________________________________________________

( include temporary detour info. if required )

We recommend that the project be classified as a Categorical Exclusion pursuant to 23 CFR 771.117(d)( )
"Environmental Impact and Related Procedures - Categorical Exclusions" as the project consists of:

____________________________________________________

The project will not involve substantial planning, resources, or expenditures; nor is it likely to induce
significant alterations in land use, planned growth, development patterns, traffic volumes, or traffic
patterns.

The project will involve__ (describe any resource effects indicated on environ. analysis sheet.)

No significant environmental impact is expected to result from construction or maintenance of this facility.

Please contact us if you need additional information.

Sincerely,

______________________________, Director of Technical Services

Attachments

Project

CE Page 2
Endorsement to the Vermont Agency of Transportation

Concur ___________________________________________  Date __________________________

Environmental Program Manager

( if project will affect wetlands, include the following )

Based upon documentation provided, it has been determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which might result from such use.

Endorsement to the Vermont Agency of Transportation

Concur ___________________________________________  Date __________________________

Environmental Program Manager

cc: __________________________, Chief of ROW

________________________, Contract and Specifications Engineer.

(Responsible Project Manager)
Project Development Files
Central Files

Categorical Exclusion

Environmental Analysis Sheet

Town __________________ Project No. ____________________________ Route ______

Project Setting:  Urban _______ Village _______ Rural ______

Traffic _______ Year _______ Typical ______

Project Purpose & Need:
The purpose of the project is: __________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

The need for the project is due to: ______________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Alternatives Considered:

_________________________________________________________________________________
_________________________________________________________________________________
Project Description:
The project will involve: ______________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

1. Air Quality
Ten year increase in ADT __________________________ (10,000 allowed maximum per MOA)
Urban intersection improvement Yes _____ No ______

2. Noise
Alignment moved closer to developed property Yes _____ No ______
If yes, apply nomograph. Results ____________________________________________________

Environmental Analysis Sheet
Page 2

3. Water Quality
Lakes or Ponds
VANR Lakes & Ponds permit Yes _____ No _____ Acquired _____
Rivers or Streams
VANR Stream Alteration permit Yes _____ No _____ Acquired _____
Wetlands involved Yes _____ No _____ Vermont Classification __________
Wetland Impact area: Temporary _________ Permanent _________
Buffer Impact area: Temporary _________ Permanent _________
VANR Conditional Use Determ. Yes _____ No _____ Acquired _____

401 Water Quality Certification Yes _____ No _____ Acquired _____
Stormwater Discharge Permit Yes _____ No _____ Acquired _____
Floodplains encroachment Yes _____ No _____ Area _________
Significance (Describe) ________________________________________________________________

Ground Water/Surface Water/Well Impacts Yes _____ No _____
Describe) ________________________________________________________________

ANR Comments ________________________________________________________________

COE Comments ________________________________________________________________

4. U.S. Army Corps of Engineers
Section 404 Permit Required Yes _____ No _____
5. **U.S. Coast Guard**
   - Navigable Waters: Yes ____ No ____
   - Section 124a Permit Required: Yes ____ No ____

6. **Threatened and Endangered Species and Habitat**
   - Present in Project Area: Yes ____ No ____
   - ANR Non-Game and Natural Heritage Program comments: 

   USF&WS comments: 

7. **Agricultural Land**
   - Prime/secondary/locally important soils affected: Yes ____ No ____
   - Current Land Use: 

   Form 1006 Parts I, III, VI, VII, completed: Yes ____ No ____
   Form 1006 Parts II, IV, V completed: Yes ____ No ____
   Vermont Department of Agriculture comments: 

Environmental Analysis Sheet
Page 3

8. **Hazardous/Residual Waste Liabilities**
   - Present in project area: Yes ____ No ____
   - Determination from VANR list: Yes ____ No ____
   - Determination from field visit: Yes ____ No ____
   - Borings completed: Yes ____ No ____
   - Petroleum related wastes: Yes ____ No ____
   - CERCLA involvement: Yes ____ No ____
   - Remediation required: Yes ____ No ____
   - Describe: 

9. **Historical or Archaeological Resources (Section 106)**
   - Historic Resources: Present in project area: Yes ____ No ____
   - Archaeological Resources: Present in project area: Yes ____ No ____
   - Section 106 findings: 

   Memorandum of Agreement needed: Yes ____ No ____ Executed ____
   SHPO coordination completed: 
   Advisory Council coordination completed: 

10. **Section 4(f) Resources**
    - Present in project area: Yes ____ No ____
    - Nature of Section 4(f) involvement: 
      - Public Land ____ Wildlife and Waterfowl Refuge ____ Historic Property ____
    - Temporary use? Yes ____ No ____ (Coordinate with FHWA on determination)
    - Section 6(f) involvement (LWCF Funding): Yes ____ No ____
    - Dept. Of Interior coordination completed: 

11. **Right of Way**
    - Acquisition involved: Yes ____ No ____
    - Area of New Acquisition: 
    - Improved properties acquired: Yes ____ No ____
    - Displacement(s) Rental Units ____ Private Homes ____ Businesses ____
12. **Public Participation Opportunity**

Pre-Design Site meeting  
Yes _____ No _____ Date __________

Public Information Meeting  
Yes _____ No _____ Date __________

Public Hearing required  
Yes _____ No _____ Date __________

Comments by Local Officials/RPC's

13. **Social & Economic Concerns**

Project consistent with local and Regional Land Use Plans  
Yes _____ No _____

Describe _________________________________________________________________________

(Attach correspondence from officials)

Neighborhood and Community Concerns:  
Yes _____ No _____

____ Churches  
____ Elderly  

____ Schools  
____ Minorities  

____ Low Income Housing  
____ Handicapped  

____ Emergency Services  
____ Pedestrian / Bike facilities  

____ Environmental Justice Executive Order 12898

Describe _________________________________________________________________________

Effect on local business  
Yes _____ No _____ (Describe)__________

Temporary effect(s) on business  
Yes _____ No _____ (Describe)__________

14. **Temporary Effects or Aesthetic Concerns**

Detour required  
Yes _____ No _____ Length _____ (Attach Plans)

Temporary bridge required  
Yes _____ No _____ (Attach Plans)

Adverse effects

Public and public official notification or involvement

Scenic Byway/VT Scenic Highway  
Yes _____ No _____

National/State Forest Highway  
Yes _____ No _____

Describe _________________________________________________________________________

________________________________________________________________________________

Environmental Analysis Sheet
Page 5

**Field Inspection Comments:**

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

Signature  
Date

Reviewed by
(Note: Full documentation of the information summarized herein is preserved in the project files of the VAOT Planning Division. When appropriate, more detailed descriptions of resources and/or impact analyses should be attached to this form.)

Impact Mitigation Requirements

Describe:

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
Appendix C - Public Participation

Introduction

An integral part of developing transportation projects is bringing in public participation throughout the endeavor. Many changes have occurred over the past few years that have allowed for greater public involvement. The Project Development Manual describes in greater detail the work that needs to occur during different steps of project development.

Public participation is not limited to the certain points listed below, it is something that needs to be constant and ongoing through the life of any project. This paper mainly discusses the formalized interaction during the project development process that specifically addresses public participation.

The portions of the Right-of-Way phase of project development are not discussed in this chapter. Interactions during this phase are outlined by Federal and State Statute and policies of the State. The Right-of-Way Section should be consulted for any matters regarding this issue.

Additionally, other formalized public interaction points often occur during Project Development, for example the US Army Corps of Engineers Highway Methodology hearings, Act 250 hearings, 502/Informational Hearings, public workshops and others. Some of these hearings are outlined by State and Federal Regulations. Since these interactions are formalized in their respective codes and regulations, they will not be discussed here.

Authorization to Proceed

Before a problem area is worked on, a letter will be sent to the RPC/MPO by the Project Manager to notify them that work on the problem area will soon commence in the near future. This notification will be sent at least two months before starting work. The intent of the letter is twofold, background informational and public participation. First it allows the RPC to gather pertinent background information and comments concerning the problem area. The two-month notice allows the RPC/MPO to gain comments and inform their respective TACs.

Secondly, the letter will serve as the invitation to the RPC/MPO to conduct the public notification for the problem area for the scoping phase. If the RPC/MPO accepts the responsibility, they will invite the town, local and regional stakeholders and abutters not just to the Local Concerns Meeting, but to all meetings that occur during "Project Definition." The AOT will retain the responsibility to inform interested units within AOT, the regulatory agencies, and Federal Highway. Communication between the RPC/MPO and the Project Manager will be key to ensure the successful outcome of the Local Concerns Meeting.

If the determination has already been made, the letter will also inform the RPC/MPO if the project will be developed by a consultant or by AOT personnel.

Local Concerns Meeting

The Project Manager shall organize and participate in a Local Concerns Meeting to gather input from State and Federal agencies, including the District Transportation Administrator (DTA) and VAOT Planning Coordinator, and to solicit input from the RPC, municipal officials, regulatory/resource agencies, and special interest groups including abutting property owners. 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. If the RPC/MPO or Town feels that a larger gathering is warranted for a particular problem area, then the RPC/MPO should notice the meeting appropriately. If the RPC/MPO does not want to take the lead on public participation invitation, than the Project Manager must assume this responsibility. It is also imperative that the RPC/MPO informs the Project Manager of the Town's needs so that the invitations and notices fit the particular situation.
A typical agenda of the Local Concerns Meeting should be as follows:

- **Introduction** - Explain who the VAOT representatives and contact people are and the purpose of the Local Concerns Meeting

- **Discussion of the Project Development Process** - Summarize the current status of the project and the anticipated schedule of the remaining steps in the development of the project

- **Purpose & Need Statement** - Discussion of the Purpose and Need Statement that was developed by the RPC/MPO and the importance of it

- **Background Information** - Problems or facts collected thus far, having graphics of the area or the video log may be helpful

- **Comment and Concern Period** - Open the floor for discussion and have an easel to record comments it gives greater credibility and helps to prevent redundancy

- **Summary** - Highlights of concerns and comments received

- **Closing Remarks** - Closing out the meeting, let people know what is next

Minutes of the meeting need to be written and distributed to all present for comment, and to resource agencies for their files. These minutes do not need to be an exact transcription, but simply a summary of what happened.

It is important to remember that the VAOT is there to listen and to find out what the problems are. This is not the time and place to discuss solutions.

**Alternatives Presentation Meeting**

The *Alternatives Presentation Meeting* is the opportunity for the Project Manager to present to the Town, Region, Public, and the Regulatory Agencies the alternative solutions developed for the project. This is also an opportunity for the Project Manager and the Town to confirm that the problem(s) expressed at the *Local Concerns Meeting* were adequately addressed.

If the RPC/MPO decides to conduct the public notification, which is decided before the Local Concerns Meeting, then the responsibility to conduct this meeting will be theirs. If the RPC/MPO decides not to be the lead for the public notification then the Project Manager will be responsible for setting up this meeting. The Project Manager will need to keep in mind that there are three key factors that may require change from standard notification procedures - the uniqueness of the Project, the RPC/MPO, and the Town. The VAOT Regional Coordinator and the RPC/MPO are valuable resources that can make public involvement run much more smoothly. They can provide guidance for the public notification. All involved will need to work as a team.

If there is some resource in the area that is particularly important to the project be sure that the resource specialists are involved and actually attend the meetings. Although the Project Manager should be aware of the importance of a particular resource, the specialist will speak much more knowledgeably.

The safest time to schedule the Alternatives Presentation Meeting is during a Town's regular Selectboard meeting. However, remembering that every project is different is important and there may be situations where a stand alone meeting would be more appropriate.

A typical agenda of the Alternatives Presentation Meeting should be as follows. All items are the responsibility of the AOT except Alternative Endorsement.
Introduction - Explain who the VAOT representatives and contact people are and the purpose of the Local Concerns Meeting

Overview of the Scoping Process - Summarize the current status of the project and the anticipated schedule of the Project Definition portion of the development of the project

Review of the Local Concerns Meeting - This is very important to both reinforce the problems that are being solved and that the Town and Region have recognized the problem area/project as a priority through the Transportation Planning Initiative

Review of the Purpose and Need Statement - If it defines the problem well, the alternatives developed should seem logical to the audience

Review of Project Area Resources - An honest and unbiased presentation of the area resources. Feasibility of impact versus nonpermitability must be discussed

Presentations of Alternatives - The alternatives developed should range from doing nothing/minimal construction to maximum improvements. The alternatives should be presented in ascending order of improvement and each should be discussed with respect to its ability to solve the transportation problem as defined by the P & N statement and its environmental impact. Enough information should be presented to educate the audience adequately as to the benefits and drawback of each alternative so that they can form an opinion which alternative they see as most appropriate

Alternative Endorsement - This endorsement is key to the project flowing smoothly through "Project Design." Explain to the Town that their involvement and endorsement is very important. However, there may be situations where the Project Manager cannot recommend the alternative that the Town's Selectboard has endorsed due to the other constraints of the project, such as Historic Sites, Archaeology, Economics, Environmental Resources, etc.

Closing Remarks - Closing out the meeting, let people know what is next, explain the Project Definition Team involvement

Following the meeting, the Town's Selectboard should be given time to think about the presentation and endorse an alternative.

Be as flexible as possible when confronted with the prospect of additional alternatives if the Purpose and Need Statement seems inadequate. Work with the Town/Region to resolve inadequacies in the Purpose and Need Statement. If for some reason the Purpose and Need Statement cannot be changed as the town desires, it is up to the Project Manager to say why.

PDT Meeting

During this meeting the scope of the project, the work to be done, is approved by a committee mainly comprising personnel from the AOT. Although the Town and RPC/MPO will each receive only one vote on the proposed action, they will have hopefully been integrated into the solution earlier in the "Project Definition Phase."

This meeting is the responsibility of the Chair of the PDT. The Chair will be responsible for recording salient points, including the motions and votes. The Project Manager has the responsibility to present an overview of the purpose and need, alternatives investigated, the recommendation and to field questions by members of the PDT.

Property Owner Visits
All property owners abutting the work area will be individually contacted and met with at their property. There is no set forum for these visits, although the Project Manager should be willing to work with the individual property owners to reach common ground. The earlier that this interaction occurs, the less likely that a design is set in stone which will allow for greater flexibility and ability to work with the property owner. It is a good idea to take very good notes during these visits and to follow up by sending a letter to each of the property owners visited summarizing the high points of the discussion.

It is highly likely that additional interaction with property owners will continue throughout the remainder of the Project Development Process.

These visits are normally conducted early in the Project Design Phase, but can occur in the later stages of the Project Definition Phase, depending on the situation or needs of the project.

**Summary**

The most important part of early interaction with the public, especially at the *Local Concerns Meeting* and the *Alternatives Presentation Meeting* is to build a strong working relationship with the town and resource agencies. Through this we can provide a quality product that will solve the transportation problem within all of the project parameters.

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Appendix D - Purpose and Need Statements

Purpose and Need Statements (P&N) are the backbone of our work. They are the crux of the Project Definition Phase. 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 as reached during the Project Definition Phase.

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 emphasizes the following:

"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 is very important to justifying and defining a project. The statement needs to be able to be proven by facts, statistics, or even by photographs. If all aspects of the statement cannot be proven, either the statement is poorly written and thus weak, or the project is not needed, at least in the form originally thought.

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 curve. 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.

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

"PROBLEM STATEMENT."

**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 mobility and safety 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 the levels recommended by the Vermont State Standards An analysis of the accident history indicates a relationship exists between the accidents documented and the limited sight distance.

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 causes erosion to the road and damages the bridge, and also provides an unsafe condition for motorists traveling the road during these conditions.
**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 #### (#)**

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<th>Alternative B REHABILITATION</th>
<th>Alternative C OFF ALIGNMENT</th>
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Appendix F - State and Federal Environmental Constraints

State and Federal Laws and Regulations require that appropriate environmental permits or clearances be obtained for projects which involve State or Federal funds, or actions by State or Federal authorities.

The purpose of this appendix is to provide a basic overview of State and Federal Laws and Regulations that apply to transportation projects, the Agencies from which permits must be obtained, and the general processes involved in acquiring permits. In addition, this appendix provides general terminology and references.

Vermont Environmental Laws and Regulations

The Vermont Agency of Transportation (AOT) is required to comply with the following State Laws and Regulations for all activities involving State Funds, including participation in Town Transportation projects.

Title 10 VSA Chapter 37 Section 905 (7)
"The Vermont Wetland Rules":
A) Protect wetlands which are determined to be "so significant that they merit protection."
B) Establish Criteria for evaluating wetland significance.
C) Establish Allowed wetland uses and provide for Conditional wetland uses.
   (1) Conditional uses require a Determination by the Secretary of the Agency of Natural Resources (ANR). A Conditional Use Determination (CUD) will only be issued upon conclusion that the proposed activity will have no undue adverse effect on protected functions of the wetland or that the impacts are sufficiently mitigated.

Title 10 VSA Chapter 41
"Regulation of Stream Flow":
A) Protects all waters of the State.
B) Establishes the ANR as Certifying Agency for Section 401 of the Federal Clean Water Act.
C) Requires consultation with the ANR prior to altering or modifying the course, current or cross-section of waters of the State.
   (1) Consultation is accomplished through the ANR Stream Alteration Permit (SAP) process.

Title 10 VSA Chapter 47 Section 1264
"Stormwater Management":
A) Protects all waters of the State.
B) Applicability:
Most projects do not require Stormwater Discharge Permits. The following type of projects require no action in this regard:

1. Existing roadway is being paved or reconstructed without a significant increase in impervious surface, a change in roadway alignment, or a change in discharge points to a different drainage system. A significant increase in impervious surface is defined as an increase in roadway surface such that both the number of travel lanes and the highway capacity is increased.

2. Existing drainage structures/discharge points are being repaired or otherwise improved.

3. A bridge is being reconstructed without altering the approaches to the bridge.

The following type of project requires only a Letter of Compliance assuring that the criteria for adequate treatment shall be met:

1. All of the roadway is new or the alignment of a portion is being significantly altered, and the distance from the end of the highway drainage systems (such as a swale, ditch, or culvert) to Waters of the State is greater than 200 feet at less than a 5% slope.

All other types of projects will require a determination by the Agency of Natural Resources as to the need for a Stormwater Discharge Permit. The Project Manager shall submit one partial set of plans (title, typical, layouts, cross sections, channel sections) with a detailed narrative description of the project to the Department of Water Resources, Permits and Compliance Division, of the Agency of Natural Resources for their review and determination. These plans should be submitted as soon as we have come up with a conceptual drainage design.

**Title 10 VSA Chapter 151**

*"The Land Use and Development Law, Act 250":*

A) Was established "to protect and conserve the lands and the environment of the state and to insure that these lands and environment are devoted to uses which are not detrimental to the public welfare and interests."

B) Established "a state environmental board and district environmental commissions ... to regulate the use of lands."

C) Established Conditions and Criteria for the issuance of permits by the district commissions.

D) Is applicable to "Construction by state or local government if the project involves more than 10 acres."

E) Also applies to "substantial changes" in pre-existing developments.

**Title 19 VSA Chapter 25**

*"The Scenic Road Law of 1977":*

A) Protects roads designated as scenic under the Vermont Scenic Roads program.

B) Requires that reconstruction or improvements conform with standards established by the Transportation Board.

**Title 22 VSA Chapter 14**
"The Historic Preservation Act of 1975":

A) Established the VT Advisory Council on Historic Preservation and the Division for Historic Preservation, headed by the State Historic Preservation Officer (SHPO), to identify and protect historic and archaeological resources.

B) Requires all State Agencies to consult the Advisory Council before altering any property that is potentially of historical, architectural, archaeological or cultural significance.

C) Requires all State agencies and municipalities to cooperate with the State Archaeologist in the preservation, protection, excavation, and evaluation of specimens and sites.

Title 24 VSA Chapter 117

"Municipal and Regional Planning and Development, Act 200":

A) Established a specific set of goals to encourage appropriate development of all lands in the state, and provided means for prevention of land development problems.

B) Created a Council of Regional Commissions to review state agency and regional plans.

C) Prohibits state agencies from preparing, adopting, or implementing plans, which are inconsistent with said goals.

Title 29 VSA Chapter 11 Sections 403 and 404

"Management of Lakes & Ponds":

A) Protects public waters and lands below mean water level.

B) Requires a Lakes & Ponds Permit from the ANR Water Resources Board for construction involving temporary or permanent encroachment (such as concrete, sheet piling, earth or rock fill, or similar construction).

   (1) The Water Resources Board will require proof that the encroachment will not adversely effect the public good.

The Endangered Species Act of 1981:

A) Protects threatened or endangered plants and animals.

B) Requires possession of a Threatened & Endangered Species (T&E) Permit before one can take, possess, transport or transplant threatened or endangered species.

   (1) T&E Permits are acquired through coordination with the ANR.

Executive Order No. 52-80, 3 VSA App. Ch. 3:

A) Protects farmland.

B) Requires coordination with the Department of Agriculture to avoid or minimize impacts on farmlands.

The Memorandum of Understanding between the Agency of Transportation (AOT) & Agency of Natural Resources (ANR) regarding Bridge Rehabilitation & Replacement:
A) Provides for cooperation between the ANR and AOT to provide for the State's dual needs to protect the environment and to provide for safe and efficient transportation.

B) Requires site visits during the Conceptual Plan stage for the AOT, ANR, and Town to identify issues involved.

C) Requires cooperation between agencies to address unresolved issues prior to completion of Preliminary Plans.

**Federal Environmental Laws and Regulations**

The Vermont Agency of Transportation is required to comply with the following Federal Laws and Regulations for all activities involving Federal Funds or requiring permits from Federal Agencies.

**Section 106 of the National Historic Preservation Act of 1966:**

A) Protects historic and archaeological resources. Potential resources include: houses, bridges, historic districts, and historic & prehistoric sites.

B) Requires the lead Federal Agency (and AOT), the ACHP, and the SHPO together to determine the effect of projects, which they fund or permit, on historic resources.

   (1) The Advisory Council on Historic Preservation (ACHP) is responsible for reviewing the effects of projects on historic and archaeological properties.

   (2) The Army Corps of Engineers (COE) requires historic and archaeological resource coordination on projects involving wetlands and waters of the US.

   (3) The VT AOT coordinates with the VT State Historic Preservation Office (SHPO) to address the Section 106 process during project planning and construction.

**Section 4(f) of the Dept. of Transportation Act of 1966:**

A) Protects lands described under Section 4(f) from transportation project impacts. Potential 4(f) lands include: public parks, recreation areas, historic houses structures and districts on or eligible for the National Register, etc.

B) Prohibits the Department of Transportation (DOT), Federal Highway Administration (FHWA), from approving a transportation project which requires the "use" of 4(f) land of National, State, or Local significance unless it is Determined that:

   (1) there is no feasible and prudent alternative to the use of such land, and

   (2) the project includes all possible planning to minimize harm to such land resulting from such use.

C) Definition: a 'use" occurs:

   (1) when land from a Section 4(f) site is acquired for a project, or

   (2) when occupancy of the 4(f) land is adverse in terms of the statute's preservation purposes, or

   (3) when proximity impacts of a project are so great that the purposes for which the site exists are "substantially impaired."
D) A "Determination of No Feasible and Prudent Alternative" must document "unique problems or unusual factors involved in the use of alternatives" or that "the cost, environmental impact, or community disruption resulting from such alternatives reach extraordinary magnitude." Unique Problems include adverse factors such as socio-economic impacts, safety and geometric constraints, decreased traffic service, etc. and may be considered collectively to show that an alternative presents unique problems.

**Section 6(f) of the Land & Water Conservation Act of 1965:**

A) Preserves, develops, and assures the quality and quantity of outdoor recreation resources for present and future generations through purchase and improvement of recreational lands, wildlife and waterfowl refuges, and such resources, with Land and Water Conservation Funds (LWCF).

B) Protects LWCF lands from conversion to "non-public" outdoor recreational uses.

C) Allows conversions only on approval from the Secretary of the Interior.

**The National Environmental Policy Act of 1969 (NEPA):**

A) Requires federal agencies to consider the environmental impacts of all projects involving federal funds.

B) Requires public participation.

C) Requires preparation of an Environmental Document describing all environmental considerations involved in the project.

   (1) An Environmental Impact Statement (EIS) is required for projects having significant impacts. An Environmental Assessment (EA) is prepared for projects having limited impacts of uncertain significance. A Categorical Exclusion (CE) is prepared for projects that will not have significant impacts.

   (2) Environmental considerations may include: air, noise & water quality; wetlands; water bodies; wildlife; floodplains; wild and scenic rivers; T&E species; historic & archaeological resources; hazardous wastes; land use; farmlands; use vs. productivity; commitment of resources; social impacts; relocation; economics; joint federal uses; pedestrians; bicycles; aesthetics and other items.

**The Farmland Protection Policy Act of 1981:**

A) Protects farmland and seeks to maximize compatibility with state and local farmland programs and policies.

B) Requires early coordination with the USDA Soil Conservation Service (SCS), completion of a Farmland Conversion Impact Rating, and determination of whether or not to proceed with conversion based on the severity of impacts and other environmental considerations.

**The Federal Clean Air Act:**

A) Protects and seeks to improve the nation's air quality to promote public health and welfare.

B) Requires conformance with State Implementation Plans (SIP) and Transportation Control Measures (TCM) in non-attainment areas. The State of Vermont is not presently a non-attainment area, and so is in conformance.

**Executive Order 11988 "Floodplain Management":**
A) Addresses avoidance of adverse impacts associated with occupancy and modification of floodplains.
B) Requires assessment of flood hazards.
C) Requires a specific finding statement in the NEPA document.

**Executive Order 11990 "Protection of Wetlands":**

A) Requires federal agencies to: "avoid to the extent possible --- destruction or modification of wetlands" ; "avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative" ; "avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds that there is no practicable alternative to such construction and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use."

   (1) If wetlands are impacted, a specific wetland finding based on Executive Order 11990 is required in the NEPA document.

**The Wild & Scenic Rivers Act of 1982:**

A) Protects and preserves rivers listed on the National Wild and Scenic Rivers System and their immediate environments.

   (1) There are no Wild & Scenic Rivers currently listed in Vermont.

**The Fish & Wildlife Coordination Act of 1958:**

A) Provides for protection of fish and wildlife resources when federal actions, such as permitting, control or modify a natural stream or body of water.

B) Requires consultation with the US Fish & Wildlife (USFW) to determine if there is a need for, and to develop, mitigation measures.


A) Established guidelines concerning liabilities for hazardous wastes on projects involving federal participation.

B) Requires avoidance or remediation measures if hazardous materials are involved.

**Section 401 of the Clean Water Act of 1977**

A) Established procedures to protect water quality by regulating discharges.

B) Requires applicants for Section 404 permits to obtain a certification or waiver from the state water pollution control agency (VTANR) to discharge dredged or fill materials.

   (1) In Vermont, 401 Water Quality Certification (WQC) is contained in the SAP, CUD, or Lakes & Pond permit.

**Section 404 of the Federal Water Pollution Control Act of 1972 as amended by the Clean Water Acts of 1977 & 1987:**

A) Prevents water pollution by regulating discharges of dredged or fill material into waters of the US.
(1) Discharge includes placement of any permanent or temporary fill necessary for the construction of a structure.

(2) Waters of the US include: navigable waters (Lake Champlain, Lake Memphremagog); all tributaries to navigable waters; adjacent lakes, ponds and wetlands; individual wetlands; any other waters of the US where the degradation or destruction of those waters could affect interstate or foreign commerce.

B) Requires a permit for discharge of fill in waters of the US. The Permit program is administered by the US Army Corps of Engineers (COE).

(1) General permits are granted for activities involving minimal or insignificant environmental impacts.

(2) Nationwide permits are a series of permits granted for certain minor projects as defined in the Corps regulations.

(3) Individual permits are required for projects which do not fall under the criteria for general or nationwide permits.

(4) All 404 permits require a Section 106 determination and a Section 401 Water Quality Certification.

C) The COE bases the decision to issue a permit on evaluation of impacts identified during a Public Interest Review, and compliance with the 404(b)(1) guidelines.

(1) The Public Interest Review: Provides for evaluation of the probable impacts of a proposed project on public interests; Insures that water resources are safeguarded and used in the best interest of the public; Considers environmental, social, and economic concerns of the public; Includes comments of federal, state, and local agencies, as well as the general public.

(2) The EPA 404(b)(1) guidelines prohibit discharges: where less environmentally damaging, practicable alternatives exist; which result in violations of State or Federal Water Quality Standards, the Endangered Species Act, or the Marine Sanctuaries Act; which cause or contribute to significant degradation of waters and wetlands; where appropriate and practical mitigation has not been taken; or if there is not sufficient information to determine compliance.

(3) If the project is in compliance with 404(b)(1), and is not contrary to the public interest, the COE will grant a permit.

Title 23 USC as amended by the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA):

A) Contains the Federal Regulations governing the operations of the National Highway Traffic Safety Administration and the Federal Highway Administration, divisions of the US Department of Transportation.

B) Requires, and provides for, compliance with other Federal Regulations governing: land, water, air, natural, cultural, physical, and other resources of, or within, the United States.

C) Established a National Highway System to focus federal resources on interstate and non-interstate highways of major regional importance.

D) Requires States to establish continuing transportation planning processes and provides twenty minimum
considerations to encourage intermodal efficiency and provide greater flexibility in use of federal funds for new technologies and remedial type projects.

E) Provides for use of federal funds for activities that enhance the environment, such as wetland banking, mitigation of impacts upon wildlife habitat, historic sites, bicycle and pedestrian projects, and highway beautification.

**Environmental Considerations in Project Development**

Following is a brief summary of the primary agencies involved in Environmental Permit Processes during Project Development, and brief outlines of the issues which they are required to address.

**VT Agency of Transportation, Technical Services Division**

Wetlands:

A) Review National Wetland Inventory (NWI) maps, photos, and SCS maps for wetlands in project area.

B) If indicated, verify wetlands existence by field inspection.

C) If likely to be impacted, commence coordination with the ANR for 401 Water Quality Certification and possible CUD, and the COE for early 404 permit coordination.

D) Survey wetland locations and types (delineation and functions and values assessment). Determine the impact area, and coordinate with Design to eliminate or minimize impact.

E) Document impacts for inclusion in the NEPA document (which must include an EO 11990 Wetland Finding statement), and the COE permit.

Threatened & Endangered Species:

A) Review ANR Significant Habitat Maps for threatened & endangered species habitat in project area.

B) If indicated, coordinate with ANR Non-Game & Natural Heritage Program to verify presence of T&E species.

C) If verified, then: field survey T&E species locations and types, determine if impact will occur, coordinate with Design to avoid or minimize impact, coordinate with the USF&W, contact the ANR Non-Game & Natural Heritage program for a T&E Species Permit.

D) Document impacts for inclusion in the NEPA document.

Noise:

A) Review plans for alignment moving closer to a residence, church, or school.

B) If so, use Noise Analysis program to determine whether noise level will increase more than 10 dBA or go above 67 dBA.

C) If so, evaluate practicality of Noise Abatement and coordinate with Design to eliminate or minimize impact.

D) Document determinations for inclusion in the NEPA document.

Farmland:
A) Review SCS maps for presence of agricultural soils (primary or secondary).

B) If indicated, consult VT Dept. of Agriculture.

C) If verified coordinate with Design to avoid or minimize impact, coordinate with Agriculture Department as required by EO 52, coordinate with SCS per FPPA, and complete Farmland Conversion Impact Rating Form.

D) Document determinations for inclusion in the NEPA document.

Hazardous Waste:

A) Review plans, photos, and site for: automotive or industrial buildings or ruins nearby. Automotive buildings or ruins may contain petroleum contaminated soils which might be disturbed by construction. Industrial buildings or ruins may contain assorted hazardous materials.

B) If indicated, contact AOT Hazardous Materials and Waste Coordinator to conduct a site inspection and determine if an impact will occur.

C) If so, coordinate with Design to avoid or minimize impact and contact the ANR and EPA to develop and coordinate a remediation plan.

D) Document determinations for the NEPA document.

Section 4(f), Section 6(f):

A) Review plans for: National Register properties such as historic bridges, houses, districts or sites (including archaeological sites), publicly owned parks, recreation areas funded by LWCF, and wildlife or waterfowl refuges.

B) If indicated, refer to the definitions in 23 CFR 771.135 "Environmental Impact and Related Procedures - Section 4(f)" to determine if a "use" will occur.

C) If so, determine if "Programmatic Section 4(f)" evaluations are applicable.

   (1) Refer to the 08/22/83 Federal Register Programmatic 4(f) for historic bridges.

   (2) Refer to the 08/19/87 Federal Register Programmatic 4(f) for historic sites.

   (3) Refer to the 08/19/87 Federal Register Programmatic 4(f) for public parks, recreation lands, and wildlife and waterfowl refuges.

D) If a "Programmatic Section 4(f)" evaluation is not applicable, then:

   (1) Refer to the 10/30/87 FHWA Technical Advisory T 6640.8A Section IX. "Guidance for Preparing and Processing Environmental and Section 4(f) Documents - Section 4(f) Evaluations -- Format and Content."

(2) Process the "Section 4(f) Evaluation."

E) Include the "Section 4(f), 6(f) Evaluation" in the NEPA document.

Pedestrian & Bicycle:

A) Contact AOT RAPT unit and ANR Dept. of Forests, Parks and Recreation, to determine if facilities exist, or are proposed.
B) If so, coordinate to preserve, or include arrangements for, them.
C) If not, consider the potential benefit of providing such.
D) Document determinations for inclusion in the NEPA document.

Air:
A) If the projected 10 year Average Daily Traffic (ADT) increase is less than 10,000 vpd, the project will comply with air quality regulations.
B) If the 10 year ADT increase is greater than 10,000 vpd, then coordinate with ANR Air Quality and EPA for further analysis, permits and/or mitigation, as required.
C) Document determinations for inclusion in the NEPA document.

Water Quality:
A) Water quality issues are addressed under 401 & 404 Permits.
B) Document determinations for the NEPA document.

Water Bodies & Wildlife:
A) Are protected by the Fish & Wildlife Conservation Act, but are typically addressed in the 401 and 404 processes.
B) Document determinations for the NEPA document.

Floodplains:
A) Review Flood Insurance Maps for floodplains in project area.
B) If present, request the VAOT Hydraulics Unit to: determine limits of the floodplain, determine if an impact will occur, determine if the Q100 flood elevation will increase.
C) If so, then: coordinate with Design to avoid or minimize impact, coordinate with ANR for 401 Water Quality Certification, coordinate with COE for 404 Permit.
D) Document determinations for the NEPA document.

Historic & Archaeological:
A) Historical review.
   (1) Buildings, Bridges and other structures, defined districts and sites, over 50 years old, are potentially eligible for the National Register of Historic Places.
   (2) AOT historic resources personnel will review the project area to identify resources that are on or eligible for the National Register of Historic Sites. The review will be coordinated with the DHP.
   (3) If there are historic resources in the project area, then it must be determined if the project will effect those resources.
   (4) If so, coordinate with Design to avoid or minimize impacts.
(5) If unavoidable: coordinate with DHP in drafting a Memorandum of Agreement (including measures for mitigation of the adverse effects), coordinate the Memorandum of Agreement (MOA) with the Advisory Council on Historic Preservation.

(6) Document impacts for the NEPA document.

B) Archaeological Review:

(1) Old structures, ruins, ground terraces or confluences of rivers are potential archaeological sites.

(2) AOT historic resources personnel will review the project to identify sites with potential for archaeological resources. The review will be coordinated with the DHP.

(3) If the project area includes potential sites, then field inspection by an archaeologist is needed to determine probability of discovery of archaeological resources.

(4) If probable, then Phase I archaeological investigation is needed to determine if archaeological resources are present, the potential significance of the resource, and whether the project is likely to impact the resource.

(5) If so, then coordinate with Design to avoid or minimize impacts.

(6) If unavoidable, a Phase II archaeological investigation is needed to: identify the resource, determine the physical extent of the resource, and the eligibility of the resource for the National Register of Historic Sites.

(7) If it is determined that the project will impact the resource, then coordinate a Memorandum of Agreement with the DHP for mitigation of adverse effects of the project.

(8) If the resource is eligible for the National Register, then Phase III archaeological investigation will be needed, along with coordinated mitigation for the adverse effect of the project and preservation of the archaeological resource by data recovery.

Visual and aesthetic:

A) If project involves a designated scenic highway, it will be necessary to comply with provisions of Scenic Road legislation and regulations.

NEPA requirements:

A) All projects involving federal action (including permits) require preparation of an Environmental Document. The Environmental Document provides information for evaluating project purpose and need and resultant environmental impacts.

B) The great majority of projects can be documented with a Categorical Exclusion through the FHWA.

C) A CE should include:

(1) A project description and Categorical type recommendation.
(2) Historical and archaeological clearance in the form of a Section 106 determination from the DHP.

(3) A Section 4(f) 6(f) evaluation if 4(f) or 6(f) land will be used.

(4) T&E, CERCLA, Air Quality, FPPA, and Coast Guard non-impact statements.


(6) ANR SAP/401 clearance and COE 404 Permit statement.

(7) Any other permit approvals or clearances, if applicable.

D) A CE becomes a Final document, per NEPA, upon approval by the FHWA.

E) An Environmental assessment or Draft Environmental Impact Statement should include greater detail concerning analyses and comparisons of the alternatives considered.

F) A final Environmental Document, whether CE, EA or Final EIS, must be approved by the FHWA before property acquisition or the project can occur. As soon as the Environmental Document is approved, the AOT Right-of-Way Section will be authorized to commence acquisition procedures.

**VT Agency of Natural Resources**

Stream Alteration Permit & Water Quality Certification:

A) The ANR reviews stream alteration applications for potential impacts on aquatic habitat and water quality.

B) If the project will not cause impacts, or if impacts are mitigated, a Stream Alteration Permit (SAP) will be issued.

C) Section 401 of the Clean Water Act is administered through the ANR Water Quality Certification process and is done in conjunction with the SAP.

Wetlands:

A) The ANR will inspect the project site for wetlands.

B) If wetlands are present a field survey to delineate the wetland area and determine its functions & values will be recommended.

C) If wetland is impacted, a COE 404 permit will be required.

D) If the wetland is a Class I or II under the Vermont Wetland Rules, then a Conditional Use Determination will be required, including a 401 WQC to accompany the COE 404 permit application.

1. The areas of Direct & Buffer Zone impacts must be determined.

2. Efforts to avoid, minimize, and mitigate impacts must be documented.

3. A CUD Application must be submitted.

4. Upon acceptance, A Notice of Approval will be distributed.
E) If the wetland is Class III under Vermont Wetland Rules, then:

(1) Efforts to avoid or minimize impact must be documented.

(2) A 401 WQC will be needed for the COE 404 permit.

Non-Game, Natural Heritage, and T&E Species:

A) ANR may do a site inspection or request one by the AOT biologist.

B) If a Threatened or Endangered specie is indicated, the ANR will require a survey to identify, delineate the range and determine the potential impact of the project.

C) Efforts to avoid or minimize impacts must be documented.

D) If impacts are unavoidable, a Threatened & Endangered Species permit will be required.

Lakes & Ponds Permit:

A) If the project involves fill in a lake or pond, ANR must review the project.

B) ANR will require a survey to delineate the shore line and construction limits to determine the potential impact of the project.

C) Efforts to avoid or minimize impact must be documented.

D) If impact is unavoidable, a Lakes & Ponds permit will be required.

**Division for Historic Preservation**

Per Section 106 and the Vermont Historic Preservation Act:

Historic Resources:

A) The DHP will coordinate with the AOT Historic Preservation Coordinator and Transportation Archaeologist to identify historic properties within the project area and compile information about the resources.

B) The DHP will review the project to determine if it will affect historic properties.

C) If no historic properties are affected the DHP will provide a determination of no effect on historic properties.

D) If the project will affect historic properties, the DHP will assess the significance of the historic properties, determine whether the properties are eligible for the National Register of Historic Places (NR), and whether the effect is adverse or not adverse.

E) If a historic property which is on or eligible for the NR is affected the DHP will request documentation of the resource which complies with the Historic American Building Survey/Historic American Engineering Record standards (HABS/HAER).

Archaeological Resources:

A) The DHP will advise the AOT whether the project area has any potential for Prehistoric or Historic archaeological sites.
B) If the area has potential for archaeological sites, the DHP will recommend a Site Inspection by the AOT Archaeologist or another qualified archaeologist to determine if a site is probable.

C) If so, DHP will request a Phase I Archaeological Investigation, to assess the potential of the site.

D) If significant potential is indicated, DHP will request a Phase II Investigation, to determine the quality of the site and its potential to meet the criteria of eligibility for National Register.

E) If warranted, a Phase III process will be required, to preserve the site through recovery of artifacts and documentation.

F) The DHP and AOT will coordinate in determination of effect.

Memorandum of Agreement:

A) Where there is a determination of adverse effect on a historic or archaeological resource, an MOA approved by the ACHP & SHPO will be required to address the impact(s).

(1) AOT and SHPO will coordinate conditions for the MOA.

(2) AOT will draft the MOA.

(3) FHWA will review and approve the MOA.

(4) ACHP will review and approve the MOA.

B) The MOA concludes with a Section 106 Determination of Effect from DHP (for inclusion in the CE and 404).

US Army Corps of Engineers

404 Permit:

A) A 404 Permit from the COE will be required if:

   (1) The project will affect lakes, ponds, or streams with an average flow greater than 5 cubic feet per second.

   (2) Wetlands will be filled.

B) The COE recommends early coordination, involving review of Conceptual plans, assessment of potential impacts, and potential for impact avoidance.

C) If it is determined that impacts are unavoidable, the COE will require a 404 Permit application accompanied by plans which provide project construction limits, impact delineations and area calculations, fill quantities below Ordinary High Water, and other details.

D) Upon determination that the project is the least environmentally damaging practicable alternative and that all practicable measures to minimize harm have been provided for, the COE will issue a Conditional Permit.

E) As soon as the COE receives an approved Environmental Document, CE, EA, or EIS it will issue a Final 404 Permit.

F) The Final Permit will contain conditions to be met prior to or during construction, including review of Semi-Final Plans.
G) After the permit is received, renew the expiration dates as necessary.

**Vermont Environmental Board, District Environmental Commissions**

ACT 250 Permit:

A) If the construction area of a highway or bridge project is 10 acres or greater, an Act 250 permit is required.

B) If a highway or bridge project will result in a "substantial change" to an existing facility, an Act 250 permit may be required.

C) If a permit is required, the District Environmental Commission (DEC) in the project area will require a Permit application (including Plans) addressing each of the 10 Criteria of Act 250.

D) The DEC will review the application for completeness and request additional information if required.

E) Upon receipt of complete application information, the DEC will schedule a public hearing to evaluate the project under the Act 250 Criteria, and to obtain input from affected parties.

F) Upon conclusion of the initial hearing, or following any decision to continue the hearing process, the DEC will issue Findings of Fact and Conclusions reached and list any remaining unresolved issues.

G) If issues are raised during the hearing that require additional study or project modifications, the hearings will resume upon submission of the required information.

H) When the Hearing process is concluded the DEC will either issue a Permit including Finding of Fact and Conditions, or Deny the application.

I) If an Act 250 Land Use Permit is issued, then:

1) Provide information required in the Findings of Fact.

   2) Coordinate with the District Environmental Coordinator regarding implementation of permit conditions.

3) File required Plans with the DEC.

4) Renew construction deadline and expiration dates if necessary.

**Glossary**

A-95 Act-95, VT's Intergovernmental Consultation Law  
ACHP Advisory Council for Historic Preservation  
ACT 250 VT's Land Use Regulation Law  
ADT Average Daily Traffic  
ANR VT Agency of Natural Resources  
AOT VT Agency of Transportation  
CE Categorical Exclusion  
CFR Code Federal Regulations  
COE US Army Corps of Engineers  
CUD Conditional Use Determination  
dBA Decibels A weighted  
DHP Division for Historic Preservation  
DOI United States Department of the Interior
EA Environmental Assessment
EIS Environmental Impact Statement
EO Executive Order
FHWA Federal Highway Administration
FPPA Farmland Protection Policy Act
ISTEA Intermodal Surface Transportation Efficiency Act
L&P Lakes and Ponds
LEDPA Least Environmentally Damaging Practicable Alternative
LWCF Land and Water Conservation Funds
MOA Memorandum of Agreement
MOU Memorandum of Understanding
NCHP National Council for Historic Preservation
NEPA National Environmental Policy Act
NHS National Highway System
NWI National Wetlands Inventory
Q100 100 year flood elevation
RPC Regional Planning Commission
SAP Stream Alteration Permit
SCS Soil Conservation Service
SHPO State Historic Preservation Officer
SIP State Implementation Plan
STIP State Transportation Improvement Plan
T&E Threatened and Endangered Species
TCM Transportation Control Measures
TIP Transportation Improvement Plan
USC United States Code
USDA United States Department of Agriculture
USDOT United States Department of Transportation
USF&W United States Department of Fish And Wildlife
vpd vehicles per day
VSA Vermont Statutes Annotated
VSS Vermont State Standards
WQC Water Quality Certification
4(f) Section 4(f) of the Department of Transportation Act
6(f) Section 6(f) of the Land and Water Conservation Act
401 Section 401 of the Clean Water Act
404 Section 404 of the Federal Water Pollution Control Act
502 Section 502 of VSA Title 19 Highway law

**A List of State and Federal Permits and Approvals**

**Agency Name Type Plans Needed For Application**

Env. Brd. Land Use Regulation Act 250 Permit Conceptual/Semi-Final
Dept. Ag. Executive Order 52 Coordination Conceptual
SHPO VT Historic Preservation Act Clearance Conceptual
ANR Lakes and Ponds Permit Preliminary
ANR Stormwater Discharge Permit Preliminary
ANR Stream Alteration Permit Preliminary
ANR Threatened & Endangered Species Permit Preliminary
ANR Wetlands Conditional Use Determination Clearance Preliminary
FHWA Dept. of Trans. Act Section 4(f) Determination Conceptual
ACHP Historic Preservation Act Section 106 Review Conceptual
DOI Land & Water Conserv. Act Section 6(f) Approval Conceptual
SCS Farmland Protection Policy Act Determination Conceptual
USFW Fish & Wildlife Coordination Act Coordination Conceptual
EPA National Environmental Policy Act Approval Conceptual
COE Clean Water Act Section 401 Certification Preliminary
COE Water Pollution Control Act Section 404 Permit Preliminary
Appendix G - Hearing Procedures

The Special Projects' Administrative Secretary will set up all hearings for Project Development.

The Administrative Secretary should have the following information from the Project Manager at least 6 to 8 weeks before the desired hearing date:

1. Names and addresses of all property owners (you will have requested and received these from Right-of-Way or from the Consultant).

2. Project Description.

3. If it is a consultant engineered project, the Administrative Secretary will need the name, address, and phone number of the consultant project manager so she can coordinate the hearing with them.

The Administrative Secretary will coordinate with all involved to be sure that the date selected for the hearing and all meetings regarding the hearing are suitable for everyone.

The consultant will be responsible for getting the appropriate number of Hearing handouts to the Administrative Secretary in plenty of time to go out with the Property Owner Notices. The consultant is responsible for bringing extra copies of the handout to the hearing.

The Hearing handouts for non-consultant projects shall be supplied to the Administrative Secretary in plenty of time to go out with the Property Owner Notices. It is the Project Manager's responsibility to make sure extra copies of the handout are brought to the hearing.

After the Hearing, the transcript will be forwarded from the Court Reporter to the Administrative Secretary. She will make the appropriate distribution. The Court Reporter Invoice will also be sent to her (this is sent with the transcript). Upon receipt of the invoice from the Court Reporter, she will stamp, approve for payment and pay the invoice through the STARS system. She will need the EA-SUBJOB-TASK CODE for each project in order to make these payments.

The Newspaper bills will be sent to the Administrative Secretary from the Newspaper. Upon receipt of the newspaper invoices, she will stamp, approve for payment, and pay the invoice through the STARS system.

It is the responsibility of the Project Manager to be sure that if any correspondence comes to them after the hearing, (letters from Property Owners, etc.) that the original is forwarded to the Administrative Secretary. Copies of all correspondence are made a part of the transcript and all originals should be kept in the hearing folder.

After the final response goes back to the Town, and all invoices have been received and paid vouchers returned to the Administrative Secretary, she will forward the original hearing folder to the Project Manager. She will also maintain a copy of the entire record.

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Appendix H - CE Reevaluation Process

23 CFR 771.129 addresses the requirements for reevaluations of Environmental Impact Statements, Findings of No Significant Impact, and CE's, and their relationship to federal funding authorization steps to advance projects. These authorization steps include (1) preliminary engineering (PE) through final design, (2) acquisition of a significant portion of the right-of-way, and (3) approval of the plans, specifications, and estimates (PS&E). PE authorization allows the development of a project through Contract Plans submittal with the understanding that a CE must be approved prior to commencing the "Project Design" phase of the Project Development Process and/or the acquisition of ROW.

Once a CE has been approved, a project and its CE must be reevaluated prior to acquisition of ROW and/or authorization from FHWA for PS&E (advertise for bid) if either (1) the original approved CE, or last reevaluation is more than three years old or (2) whenever potentially significant changes have occurred: in the scope or design footprint of a project, in anticipated project impacts or in proposed mitigation measures, regardless of the age of the CE, or reevaluation. The determination of whether potentially significant changes have occurred will be based on the Environmental Section's review of changes in the project as identified by the Project Manager.

Prior to requesting authorization for PS&E (advertise for bid), the Project Manager will provide the Environmental Section with a summary of project changes made since approval of the original CE, or the last reevaluation. If three years has elapsed since approval of the CE and no significant changes have occurred, a letter will be sent to FHWA stating: "Based on the reevaluation of the proposed project there have been no significant changes in the project scope, design footprint, anticipated impacts or proposed mitigation measures." This letter will constitute the CE reevaluation document and will not need formal concurrence from FHWA.

When it is perceived that potentially significant changes have occurred, a more detailed letter will be prepared that addresses the significance of the changes. The presence of several potentially significant changes may require completing a new Environmental Analysis Sheet. The review, submittal, and concurrence process for this type of reevaluation document is the same as required for the original CE. This process is complete when the FHWA concurs with the reevaluation document and notifies the VAOT.

Appendix I - Final Inspection Memo Form

Agency of Transportation Office Memorandum

CONSTRUCTION DIVISION

TO: G. B. MacArthur, Director of Construction and Maintenance

FROM: Thomas K. Pierce, Construction Engineer

By: Leon Dunn, Regional Construction Engineer

DATE: October 28, 1996

SUBJECT: Final Inspection Schedule "Confirmation"

Sheldon BHO-BTN 2008(1)

Day/Date: Friday, November 1, 1996
Time: 10:00 a.m.

Location: On the project site.

TKP:LHD:clhc Contractor
DTA #8
Central Files/ Agency Secretary
Materials and Research Engineer
Project File/Gerry Waldo/Regional Construction Engineer
Resident Engineer
Finals Engineer
Traffic Operations Engineer
Utilities Engineer
Employee Relations Specialist
Peggy Moon
Structures Engineer
Safety Officer
District Environmental, B. Cahoon
Chief of Fisheries Biologist

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Location: **On the project site.**

TKP:LHD:clh

c Contractor

DTA #8
Central Files/ Agency Secretary
Materials and Research Engineer
Project File/Gerry Waldo/Regional Construction Engineer
Resident Engineer
Finals Engineer
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Employee Relations Specialist
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