

MEMORANDUM OF UNDERSTANDING BETWEEN THE VERMONT AGENCY OF
NATURAL RESOURCES AND AGENCY OF TRANSPORTATION

APPENDIX A

LONG RANGE PLANNING AND POLICY DEVELOPMENT

The Long Range Planning and Policy Development Working Group consisted of the following members:

Bruce Bender	representing	AOT Planning Division
Barry Cahoon	"	Dept. of Environmental Conservation
Barry Driscoll	"	AOT Planning Division
Canute Dalmasse	"	Dept. of Environmental Conservation
Peter Gregory	"	Two Rivers--Ottawaquechee RPC
Bernie Johnson	"	ANR Office of the Secretary
Rose Paul	"	ANR Planning Division
Jeff Squires	"	AOT Planning Division

Following is a report of this group's discussions, analysis and recommendations:

The working group agreed early in its discussions that their objective was to address the need for improved communication and coordination networks between the two agencies. The group reaffirmed that both agencies share common goals and agree that increased communication and collaboration will enhance each agency's ability to achieve their objectives. Furthermore, the working group agreed to consider the resources available in each agency that are needed to improve the effectiveness of cooperative planning and policy efforts as well as in project development and permitting activities.

It is the consensus of the group that successful implementation of the report recommendations is greatly dependent upon parallel coordination processes at both the staff and cabinet levels within each agency.

Complete cooperation is not possible without this parallel process, since power is dealt out to both the cabinet level members of an agency and the permanent staff. Each has a different and complementary type of power. Cabinet members have a large influence on how events happen in the immediate present: the power to make decisions in complex situations. Permanent staff have a large amount of knowledge and historical understanding: day-to-day decisions appear in the context of a relatively long continuum of events. To achieve effective policy coordination, policies must be aligned in both these arenas of power, and take place in a complementary fashion.

The desired result of this process would manifest itself as "no surprises" at cabinet meetings for cabinet members. They would go to meetings fully briefed. Staff would benefit by being able to participate in a fully informed decision-making process, with reduced "ad-hoc-ery" in the day-to-day operations of each agency.

Please consider the following issues and recommendations in this context:

Issue #1: Shared goals of the Vermont Agency of Natural Resources (ANR) and the Vermont Agency of Transportation (AOT) provide a foundation for collaborative planning and policy making.

Public perception tends to case AOT as developer and ANR as regulator which has some basis in practice. However, this relationship does not in any way predominate. In fact, the view serves to perpetuate a myth.

The agencies have many commonly shared goals.

Public accountability is a common goal. AOT-ANR are both charged with efficient use of public funds. There is a common responsibility to inform, educate and involve the public in decision making. The agencies share interest in maintenance of public health and safety.

Furthermore, in recognition of the connection between environmental health, transportation efficiency and economic prosperity, it can be said that the agencies share goals relating to quality of life. These include conservation of energy, land resources, wildlife habitats, aesthetics, air and water quality, economic vitality, productivity and Act 200 goals relating to the issue of land fragmentation and promotion of compact settlement patterns.

The management of transportation vehicles and modes is a shared interest as are the areas of risk assessment, standards assessment, limitations of human and financial resources and facilities and systems management.

The agencies share the task of exploring the limits and applying the benefits of technology in the pursuit and achievement of goals. Similarly, both agencies face the challenge of exploring and developing citizen awareness of options to transportation needs such as alternative fuels and transit modes, public transit opportunities and viable natural resource mitigation techniques.

However, AOT-ANR purposes occasionally diverge. There exist inherent differences in the bases for long range planning upon which the agencies depend; people and public transportation needs for AOT and natural resources for ANR. Federal mandates and the resultant accountability of the agencies sometimes conflict. But rather than be seen as a point of conflict, this should evolve into a platform for collaborative effort.

RECOMMENDATIONS:

** Emphasize the collaborative vision of AOT-ANR relationships through public forums, cabinet, management and staff level meetings and other appropriate opportunities.

** Use opportunities for collaborative effort to demonstrate the ability of the two agencies to work together for the benefit of all.

ISSUE #2: Capacity for AOT-ANR interactions

A major problem in the communications between the agencies has been the inability of ANR to adequately participate in AOT-ANR interactions. ANR responses to AOT requests for information, review or regulatory decisions may be delayed, conflicting or inadequate. ANR staff is often unable to attend AOT scheduled site meetings. ANR participation in long range planning initiatives is lacking.

The present system is not work due to ANR resources being limited to meet demands of AOT processes. Shared vision is therefore not being achieved.

RECOMMENDATIONS:

- ** Using ISTEA funding, AOT should underwrite a permanent position within ANR Planning Division for an AOT Projects Coordinator.
- ** Assure that AOT-ANR interactive procedures are compatible with the capacity of the respective agencies.

ISSUE #3: ANR-RPC Communication

AOT and Vermont's twelve regional planning commissions (RPCs) have created a partnership to de-centralize the transportation planning process. This process is designed to foster local and regional participation in determining priorities in infrastructure investment. The RPCs are in a unique position to assist in this important step which directly served AOT in achieving its mission(s).

Although ANR-RPC interaction is increasing, especially in data exchange, much more could be accomplished by formally structuring the ANR-RPC relationship. A more comprehensive and accurate natural resource database could be created thereby facilitating protection of critical resources. AS with the AOT-RPC relationship, ANR would see its goals and mission supported and implemented by the RPCs. ANR will be able to influence the process of transportation system improvement by increasing sensitivity of natural resource values at the RPC level.

RECOMMENDATIONS:

- ** Enhance ANR-RPC-AOT relationships which establish ANR as a full and meaningful partner in RPC transportation planning processes.
- ** Pursue funding and resources necessary to create two positions within ANR Planning Division to be direct liaison with RPCs on issues of mutual concern.
- ** Continue efforts dedicated to natural resource database creation, maintenance and refinement.

ISSUES #4: AOT-ANR interactions through initial scoping

AOT has developed a detailed scoping flow chart from which four opportunities for AOT-ANR interaction may occur. Those key areas of interaction are as follows:

1. Regulatory Agency Notification.

Following the addition of an identified problem to the annual scoping list, the AOT Planning Division, Scoping Section or, alternatively, an RPC scoping consultant, will contact ANR designated AOT Project Coordinator to schedule an on site meeting.

The coordinator will notify all potentially interested parties within ANR and will take primary responsibility for representation and presentation of ANR interests at the site investigation and for written documentation of ANR input.

Primary focus of this meeting is to familiarize personnel with the problem, define the geographic area potentially involved and provide an opportunity for contact with all stakeholders including locals.

The results of the meeting should help define purpose and need of a project and begin to establish an information base from which potential alternatives can be derived.

2. Identify Environmental Constraints

This is envisioned as free and open staff level interchange of information relating to all environmental issues potentially involved in order to satisfy the previously identified purpose and need for the project.

Environmental constraints will provide the framework for identifying and assessing alternatives. The identified constraints will be used to help develop alternative solutions to the problem. Solution options shall not be allowed to drive constraints identification and evaluation.

The staff level interchange should be encouraged to continue through development of the evaluation matrix.

3. Stakeholder Input

Immediately following identification of the recommended alternative, the Scoping Section will convene a meeting of all stakeholders and present the recommended alternative for comment. Based on level of stakeholder acceptance, project will either loop back to preparation of a new list of alternatives or will proceed on to development of the initial scoping report or will be routed through NEPA process.

4. Regulatory Agency Coordinator

The goal of this coordination step will be to confirm that the preferred alternative represents the least environmentally damaging scenario and an assessment by the regulatory agencies that all major issues can likely be resolved.

RECOMMENDATIONS:

- ** AOT should adopt the scoping flow chart with the text of issue #4 above attached as a formal procedure.
- ** Stress that commitments made during the scoping process will be honored during permitting.
- ** Commit to automatic, unlimited and unrestricted information and applicable resource sharing between agencies.
- ** AOT should review the policy that addresses which types of projects are or are not presently subject to scoping. Amend policy as appropriate to assure that consistency of review criteria, compatibility with state and regional plans and alternatives analysis is conducted. The initial assumption should be that all projects should be scoped. Project types may be eliminated from scoping only upon justification.

ISSUE #5: Adoption policies for agency practices, policies and rules.

Typically, ANR, by necessity, makes greater use of formal policy and rulemaking procedures than does AOT. ANR has developed a formal policy on rules adoption which emphasizes participation by the public and other interested agencies and departments. The procedure requires goal definition, a needs justification, a public participation plan and a schedule. It establishes procedures for draft reviews and coordination with stakeholders.

RECOMMENDATIONS:

- ** A formal rulemaking procedure analogous to that currently in effect at ANR should be adopted by AOT. It should, at a minimum, outline the procedural steps to be taken, analyses to be performed, and stakeholder interactions required as part of the formal rulemaking action.
- ** AOT and ANR should develop a complete inventory of adopted rules, procedures and practices. Determine which should be reviewed, updated or revised on a periodic basis. Examine all existing rules to determine which should be revised or eliminated.
- ** Both agencies should consider a review of existing policies and rules to eliminate, resolve and/or prevent conflicts or contradictions both inter and intra-agency.

ISSUE #6: Relationship of design standards and liability of public employees.

In this rapidly changing world where economic development, population growth and demands for greater mobility are combining to change the very character of Vermont's human and natural communities, opportunities to implement transportation infrastructure improvements are becoming increasingly constrained in the absence of design standards flexibility.

This may be one of the more intractable issues between the agencies. ANR often advocates for greater standards flexibility in order to protect environmental resources. AOT tends to consider the present standards as a current practice and as providing a safety net of liability protection.

Although there apparently is no case history in Vermont in which public officials have suffered liability as a result of implementation of reasonable exceptions to accepted standards, the concern has sometimes been promoted by AOT in its arguments against exceptions where proposed by ANR to avoid or minimize adverse impacts on natural resources.

A subcommittee of the AOT Long Range Plan initiative is actively developing a policy on design standards. ANR is represented in the work of the committee.

RECOMMENDATIONS:

- ** Continue to support work of the Design Standards Committee.
- ** Encourage development and adoption of Vermont Transportation Standards which would allow greater design flexibility and will be sensitive to Vermont's transportation needs and its environment.
- ** Introduce legislation for consideration by the general assembly which would restrict tort liability of state and municipal officials where adopted standards are applied even though they may represent departure from national or other previously accepted standards.

ISSUE #7: Deficiency of one-dimensional functional highway classification system.

AOT presently classifies highways by traffic demand and service type. Transportation planning would be significantly enhanced if the classification system were supplemented by taking into account the scenic character of the corridor, the travel experience provided, promotion of growth centered economic development and other pertinent concerns.

RECOMMENDATION:

- ** AOT, in partnership with other stakeholders, should develop an enhanced roadway classification system which integrates and takes into consideration scenic and economic values and local or regional goals.

ISSUE #8: Acquisition and maintenance of lands for conservation purposes.

AOT is not structured to acquire and maintain lands necessary for mitigation of natural resource losses associated with agency projects. Although the management of such lands falls much more in line with natural resource management rather than transportation system maintenance, ANR is little better equipped with available resources.

Traditionally, statewide conservation organizations have little or no interest in acquiring or holding small acreages typical of mitigation projects.

RECOMMENDATIONS:

- ** Draft legislation for consideration by the general assembly which would provide statutory authority to AOT to take, by necessity judgment, lands to accomplish transportation project natural resource mitigation purposes.
- ** RPC's should encourage interest by local conservation commissions and regional land trusts in the ownership and maintenance of small mitigation parcels. In the purchase and transfer of such lands to local or regional conservation organizations, consideration should be made to providing an endowment to finance management in perpetuity for pertinent conservation goals.
- ** Seek potential alternative funding sources for mitigation lands management.

ISSUE #9: Indicators, Planning and Comparative Risk Assessment

In the context of AOT and ANR planning, indicators are measures of environmental resource or transportation system quality. They are useful to show the condition of a resource or system component and, if measured and recorded over time, indicators are a useful tool for a results-oriented planning and management process.

Comparative risk provides a framework for presenting information about a wide range of environmental or transportation system problems. That framework is a set of criteria, designed around the concept of risk, against which problems can be evaluated and quantified. The concept of risk may be broadly defined as the possibility of harm to things people value.

ANR and many agencies in other states have begun to use comparative risk assessment to gain a better understanding of environmental conditions as a first step in setting policy priorities and to assess the effectiveness of programs and policies.

Indicators can describe how current conditions do or do not match the desired state for any given resource or system component. Any discrepancy may become the basis for goal setting. Further, continuous or periodic monitoring of indicators serves to measure progress toward the goal. The trends established provide a powerful communication tool to facilitate public involvement in policy debate.

Three broad categories of criteria relating to transportation system problems might be:

- * human health and safety
- * transportation efficiency
- * quality of travel experience

The comparative risk analysis made in conjunction with the indicators, seeks to quantify the causes and effects of system stressors and provide a basis to weigh alternative solutions to specific problems.

RECOMMENDATIONS:

- ** AOT should seek to learn more about and explore the possibility of indicators Na ocmparative risk assessment
- ** AOT should consider establishing an indicator and comparative risk assessment system similar to the ANR program.

APPENDIX B
DATA MANAGEMENT TASK FORCE VAOT/ANR

DEFINITION: The term data applies to all information collected by either agency using public funds and subject to the federal freedom of information act.

OVERALL GOALS:

1. To minimize the duplication of data collection efforts by both agencies.
2. To ensure that both agencies have the most up to date and reliable information when making decisions.
3. To ensure, that to the extent possible, data is collected and stored in compatible electronic formats.
4. To reduce the time and manpower expended on exchanging information.

LEGAL BASIS: All information collected through the use of public funds is public information and should be available to both the public and other state or federal agencies. There is currently no requirement that data be provided to the public or other state agencies in any format requested.

MECHANICS:

1. Acting in coordination with the State office of Computer Information Technology (CIT), the Governors Chief Information Officer (CIO), and the VAOT Chief Information Officer (CIO), the agencies will seek to ensure that all hardware and software is compatible. This should include, but is not limited to, E-Mail, spreadsheets, word processing, global positions systems, PC databases, etc.
2. The agencies should seek to develop "data catalogs", that will describe the data available, the collection cycle, the format and the point of contact for the data.
3. When either agency intends to initiate a project/plan that will require significant data collection, they will notify the other agency so that they may be able to support or benefit from the data being collected.

Examples: 1. When a new State Air Quality Plan is required, ANR should alert AOT so that the traffic information necessary to support the plan can be collected.

2. When AOT is conducting public surveys on

transportation alternatives, ANR should be advised to see if they may be able to benefit from the information being collected.

4. Any reports or publications to be released by either agency which contain significant data collected by the other, shall ensure that the sister agency has sufficient opportunity to review the report for accuracy prior to the public release of the report. Examples include: the State Clean Air Implementation Plan or the AOT's Long Range Transportation Plan.

5. The Agencies, in cooperation with the CIO shall seek to implement on line access to each others databases.

RESPECTIVE ROLES:

Both agencies shall work towards the seamless exchange of data between the agencies and to ensure that all data is made available.

ANR: The Agency of Natural Resources shall make available to the AOT information on the location of sensitive natural areas that may be impacted by changes to the state's transportation infrastructure.

AOT: The Agency of Transportation shall provide ANR with data relative to all sensitive natural areas that have been delineated by AOT during project development.

CAPACITY: It is anticipated that there will be very little additional financial burden to either agency and that by providing on line electronic access to databases will reduce the current demand on personnel to reproduce and distribute data.

IMPEDIMENTS: Current impediments to data sharing are primarily:

1. A lack of knowledge of what data the other agency possess.
2. A lack of hardware (communication lines) to provide on line access.
3. A lack of common database software.

**MEMORANDUM OF UNDERSTANDING BETWEEN THE VERMONT
AGENCY OF NATURAL RESOURCES AND AGENCY OF TRANSPORTATION**

APPENDIX C

COORDINATION OF PROJECT SCOPING AND PERMITTING

Purpose and Background

This appendix to the Memorandum of Understanding (MOU) between the Agency of Transportation (AOT) and the Agency of Natural Resources (ANR) will help ensure that state and state-administered bridge and highway construction programs are implemented expeditiously, meet the needs of Vermonters, and protect the integrity of the Vermont environment.

The document sets forth a framework for communication and cooperation between the Agencies, and is based on the following premises. First, any issues pertaining to a project should be identified as early as possible in the project scoping process in order to foster a clearer understanding of the respective Agencies' and the public's concerns and encourage project solutions and designs satisfactory to all parties. Every attempt will be made to honor the Agencies' commitments made during project scoping. Second, communication between the Agencies must be open, and guided by mutual respect of each Agency's roles and responsibilities.

The ANR recognizes the expertise of the AOT in the design and construction of state-owned and administered bridge and highway projects. It is the responsibility of the AOT to make sure that issues including, but not limited to, functionality, structural integrity, safety, cost, regional and local involvement, the environment, and aesthetics are addressed at all stages of planning and permitting. The resulting projects must conform to all relevant Federal, State and municipal laws, rules, and regulations and represent a fair balancing of interests.

It is the responsibility of the ANR to oversee the protection of Vermont's environment and natural resources, help make sure that environmental impacts associated with AOT projects are avoided, minimized, and/or mitigated, and administer specific statutes, rules, regulations and regulatory programs for which the Agency has authority or standing.

Several recent developments make this effort imperative despite an existing working relationship that has successfully implemented numerous projects that meet the Agencies' concerns. Increasing state and local traffic and transportation maintenance demands, a decreasing state work force, increased need for bridge and highway replacement and rehabilitation, and changes in regulatory requirements have dramatically increased the need for efficient communication and coordination between the Agencies.

Affected Programs

This memorandum applies to all almost all AOT project programs except for the Bridge and Culvert, Class Two Paving Programs and several other programs where coordination of the type outlined below is not essential to the success of the program. However, the spirit of communication and collaborative effort embodied by this agreement will hopefully include these projects as well. There are numerous ANR regulatory and non-regulatory programs and programs administered by other state and federal entities of which the ANR is an important participant that are relevant to this memorandum. The most commonly applicable programs are listed below.

The 1988 amendments to Title 24, Chapter 117, Act 200: regarding the importance of interagency-coordination and planning based on commonly held goals.

401 Water Quality Certificates pursuant to Section 404 of the federal Clean Water Act

Title 19 (Stream Alterations) VSA Section 10(12): regarding construction activities in waterways and the effects on habitat and other river values.

Title 10, Chapter 47: regarding stormwater protection.

The Vermont Wetland Rules of 1990, Title 10 VSA Chapter 37

Vermont Endangered Species Law, Title 10 VSA Chapter 123, and Act 250, Title 10 VSA Chapter 151 (criterion 8 (rare and irreplaceable natural areas) and 8A (endangered species): regarding rare, threatened and endangered species and significant natural communities of outstanding significance.

Management of Lakes and Ponds, Title 29 VSA Chapter 11

Act 250, Title 10 VSA Chapter 151

Project Scoping: Consultation and Review Procedure

The attached flow chart outlines the AOT's project scoping procedure. It includes various contacts and consultation with federal, state, regional, and local interests. Contacts with the ANR are indicated in green.¹ All ANR contacts represented on the chart are made through the ANR Planning Division, Regulatory Review Coordinator. All AOT contacts are made through the AOT Planning Division, Project Planning Engineer.

Portions of the flow chart relevant to this memorandum are summarized below. The headings within the boxes correspond to the various icons in the flow chart.

PROJECT ADDED TO VAOT SCOPING LIST	<ul style="list-style-type: none">• The list of transportation problems identified during Statewide Candidate Selection as having a high priority are added to the AOT Scoping List.• The AOT Planning Division distributes the annual Scoping List to all state regulatory agencies (i.e. the ANR, the Division for Historic Preservation (DHP), the Department of Agriculture (Dept. of Ag.), the Land Water and Conservation Fund (LWCF), the Federal Highway Administration (FHWA), the Army Corps of Engineers (COE). (A portion of this Scoping List may not become viable projects.)
INVESTIGATE LOCAL & REGIONAL CONCERNS	<ul style="list-style-type: none">• The AOT Planning Division circulates a notice informing the interested parties of an informal on-site meeting to occur in three weeks. Parties include the AOT, the Regional Planning Commission (RPC), Town officials, local citizens, the ANR, the DHP, the Dept. of Ag., the LWCF, the FHWA, and the COE.• Information in the meeting notification includes preliminary information the AOT has available regarding the project.• The meeting's purpose is to gather general information and determine the initial concerns and expectations of all parties.
IDENTIFY CONSTRAINTS/ RESOURCES	<ul style="list-style-type: none">• This next step includes staff level interaction between state agencies. AOT resource personnel identify potential issues regarding environmental, historic and archaeological resources and relay this information to the appropriate agencies including DHP personnel, ANR contact people, with copies sent to the ANR Regulatory Review Coordinator.• The AOT solicits formal comments during this step and the agencies have four weeks to comment.

¹ The flow chart shows many potential natural resources issues but is not an all inclusive list. There are other ANR concerns that may arise during project scoping associated with such matters as hazardous waste, groundwater and river protection, state lands and recreation.

EVALUATION
MATRIX

- The AOT creates a matrix outlining all alignments with associated resource impacts, cost, project benefits, drawbacks, and other relevant issues.
 - This is primarily a staff level interaction to make sure appropriate significance is given to the affected resources.
-

LOCAL &
REGIONAL
MEETING

- The AOT hosts an evening meeting with Municipalities and the RPC. State regulatory agencies are invited to the meeting. Four week notice is given for the meeting.
 - The purpose of the meeting is to present recommended alignments, solicit comments and ascertain the degree of local support.
 - The introduction to the project details the "Purpose and Need."
 - This is the first formal discussion of the project matrix. Resource maps are available for viewing.
-

REGULATORY
AGENCY
COORDINATION

- This step includes staff coordination with the Federal Regulatory Agencies as needed. It may take place at the bimonthly COE meetings.
 - Resource impacts are available for the discussion.
-

ISR
REVIEW

- The Initial Scoping Report (ISR) contains the project Purpose and Need, project description/background and discussion of principal issues. An evaluation matrix of alternates studied with the recommended alternative is also included. To support the recommended alternative, the following information is included: location maps, plans with typical and critical sections as needed, photographs, traffic and accident data, level of service analysis, sufficiency ratings, bridge inspection report and hydraulic report (if bridge project) as well as all correspondence with the state regulatory agencies.
 - Efforts to avoid and minimize resource impacts are documented in the report.
 - The ISR is distributed for review and comment to the AOT, the RPC, the Municipality, the COE, and the state regulatory agencies.
 - The reviewers have three weeks to respond with their comments.
-

PUBLIC
INFORMATIONAL
MEETING

- An optional meeting is scheduled if requested by the town and/or the RPC.
- The state regulatory agencies are invited to attend.

Project Design and Permitting: Consultation and Review Procedure

The attached flow chart outlines the AOT's project design and permitting procedure. The process includes various contacts and consultation with federal, state, regional, and local interests. Contacts with the ANR are indicated in green.² All ANR contacts represented on the chart should be made through the ANR Planning Division, Regulatory Review Coordinator and directed to the AOT Planning Division, Project Planning Engineer.

Most ANR permit decisions and Conditional Use Determinations will be based on AOT preliminary plans. The ANR and the AOT agree that no changes which affect the environmental aspects of a project will be made by either Agency following issuance of any permit or Conditional Use Determination without mutual consent. If either Agency discovers new information regarding the environmental impacts which was not available during the initial review or permitting phase of the project, the other Agency will be notified and appropriate steps will be taken.

Portions of the flow chart relevant to this memorandum are summarized below. The headings within the boxes correspond to the various icons in the flow chart.

CONCEPTUAL
PLANS
REVIEWED
BY
REGULATORY
AGENCIES

- The AOT distributes Conceptual Plans to in-house resource personnel, municipalities, and all affected regulatory agencies.
- The purpose of this review is to verify that issues identified during the Scoping Process have been adequately addressed in the project design as developed thus far.
- Municipalities and regulatory agencies have 4 weeks to comment.

ACT 250 PERMIT
REQUEST
(IF REQUIRED)

- Conceptual Plans are reviewed by the AOT to determine the likelihood of Act 250 jurisdiction. A permit application is then filed with the appropriate District Commission and includes all relevant regulatory agency review comments.

STATE APPROVALS
AND
PERMIT REQUESTS

- The AOT submits the Preliminary Plans along with permit applications and requests for approval to the ANR, the DHP, and the Dept. of Ag. These permits and approvals are required for impacts relating to issues such as Section 4(f) or 106 properties, Stream Alterations, Water Quality, Wetland Conditional Uses, Storm Water Discharge, Lakes and Ponds, Threatened and Endangered Species, Hazardous Wastes, critical habitats and prime agricultural soils.
- This process is based on the positions identified during the Scoping Process.

² The flow chart shows many potential natural resources issues but is not an all inclusive list. There are other ANR concerns that may arise during project scoping associated with such matters as hazardous waste, groundwater and river protection, state lands and recreation.

ALL STATE
AND FEDERAL
ENVIRONMENTAL
PERMITS IN HAND

- Final determinations are made and all state permits, except Act 250, are issued to the AOT. These permits accompany the National Environmental Policy (NEPA) document submitted to the FHWA for concurrence.
- The NEPA process is completed and the AOT Final Plans design commences.

OBTAIN
CLEARANCES

- The final Act 250 hearing is held and the Land Use Permit is issued conditional on Final Plans review.

FINAL PLAN
REVIEW
ACT 250

- The Act 250 Commission reviews the Final Plans and finds compliance with any conditions.

Living Document

Staff will meet upon request to evaluate the review process and consider changes that improve its efficiency. Periodic assessment of ANR-AOT interaction, communication, and operating procedures will be made.

Special Considerations

This appendix to the MOU will become effective as soon as signed by all parties and will continue until terminated by one party after thirty (30) days notice in writing to the other party of the intention to end the Memorandum of Understanding. Attempts will be made to incorporate some aspects of the process for projects that are currently in or beyond the scoping process.

IN WITNESS THEREOF, the Secretary of the Agency of Natural Resources and the Secretary of the Agency of Transportation execute this document on this _____ day of _____, 1995.

AGENCY OF NATURAL RESOURCES

AGENCY OF TRANSPORTATION

BY: _____
Barbara Ripley
Secretary

BY: _____
Patrick Garahan
Secretary

APPENDIX D

Air Quality and Transportation

The Agency of Transportation and the Agency of Natural Resources are resolved to work collaboratively toward the goal of air quality protection and improvement while providing a safe and efficient transportation system for Vermont now and in the future.

Transportation is an important aspect of air pollution in Vermont. Current estimates by ANR indicate that sixty percent of the air pollution created in Vermont is related to Transportation. These pollutants contribute to such environmental and human threats as global warming, acid rain, smog formation, visibility impairment, and toxic and carcinogenic air pollutants. For Vermont to protect and improve air quality, measures to prevent pollution and a better understanding of emissions from the Transportation sector are important.

A Memorandum of Understanding (MOU) has existed between the Agencies on the matter of air pollution control since 1979. The 1979 MOU describes a series of technical analyses performed by both staffs relative to a transportation project's impact at the micro-scale level. In addition, the MOU describes an information sharing protocol. While cooperation has been good, the 1979 MOU is expanded in light of the federal legislation on clean air and transportation. As a result of this federal legislation, both agencies see fit to expand their cooperative efforts beyond the project impact assessment level.

Specific Actions

Both Agencies have enabling authorities under state law to carry out their assigned responsibilities. Federal legislation (Clean Air Act and Intermodal Surface Transportation and Efficiency Act, ISTEA) have made the linkage between transportation and air quality more explicit.

Following are specific actions intended to achieve the goal of this MOU. Implementation of these measures will prevent air pollution, and thereby enhance and maintain air quality in Vermont below national air quality standards while maintaining an effective and convenient transportation system.

Auto Emission Check Program. Since the 1970's, federal law has required devices on individual automobiles to reduce the amount of air pollution from their use. These devices are effective in abating motor vehicle emissions when operating properly. However, vehicles with malfunctioning devices can emit pollution at levels which exceed the pre-1970 levels. Estimates are that 30% of the vehicles on the road are in

need of repair of their air pollution control system. As the growth of both the number of motor vehicles on the road and the use of the motor vehicles overall continues to increase, the proper functioning of these air pollution control devices becomes increasingly important to maintaining air quality. The Agencies of Natural Resources and Transportation agree to work cooperatively for the adoption of an appropriate motor vehicle emission check program.

Mechanics Training. Currently no comprehensive training is offered to automotive mechanics on the diagnostic and repair of motor vehicle air pollution control systems. In part, this is due to the fact that a comprehensive auto emission check program does not exist in Vermont. The Agencies of Natural Resources and Transportation agree to work to develop the capability within a regional vocational educational institution to comprehensively train automotive mechanics in the diagnostics and repair of auto emission control systems. The Agency of Transportation agrees to seek federal financial assistance to support the acquisition of test equipment to be placed in a technical school which will be used as a teaching tool.

Alternative Motor Vehicle Fuels. Fuels for transportation alternatives to gasoline have many attributes. Everyone of them emits less air pollution, and all are more domestic in origin, and some are renewable. Given the public policy implications of these forms of energy, efforts to explore and understand these technologies are appropriate. The Agency of Natural Resources and Transportation agree to work cooperatively between themselves and with other partners both in the public and private sector to explore transportation technology alternative to gasoline powered vehicles. As a first initiative, the Agencies of Natural Resources and Transportation will participate in an electric vehicle demonstration project.

Pollution Prevention. A number of activities within the function of roadway construction and maintenance results in the creation of air pollution. Examples of this would include drilling and blasting of roadway and ledge, painting and coatings used on highways and bridges, sandblasting of bridges and structures, open burning in clearing rights of way. In order to prevent the creation of pollution, the Agencies of Natural Resources and Transportation agree to work cooperatively to explore means and methods to eliminate if feasible, or minimize to greatest degree practicable, the creation of air contaminants from the following:

Areas For Potentially Preventing Air Pollution

Process	Air Quality Issues	Activities
Paints/Coatings	Toxics, Metals, VOC's	Roadway, Bridges/Structures
Drilling/Blasting	Particulate Matter/Fugitive Dust	Roadway Construction/Maintenance, Ledge Removal
Asphalt Plants	Particulate Matter, Combustion Emissions, Toxics	General Operations, Baghouse Fines, Use of Recycled Material
Sandblasting	Particulate Matter Toxics	Sandblasting bridges and other metal structures
Stone/Gravel Operations Open Burning	Particulate Matter, Fugitive Dust, Toxics, Particulate Matter	Crushing operations on roadway projects. Burning waste materials in barrels and the open.
Waste Oil Disposal	Toxics, Particulate Matter, Combustion emissions	Burning of waste oil

Indirect Source Permitting. The Agency of Natural Resources operates a permitting program which requires permits of large developments which may threaten air quality by attracting large amounts of traffic in concentrated areas. While the Agency of Natural Resources possesses the necessary technical expertise to perform and review the air pollution impact aspects of the technical analysis, such analysis is predicated upon data submitted by a permit applicant describing both the current traffic activity as well as projection of future conditions. In order for the Agency of Natural Resources to objectively review the complete application and to ensure that traffic analysis and projection methods are consistent with Agency of Transportation acceptable methods, the Agency of Transportation agrees to provide technical support to the Natural Resources Agency in the review of traffic data and analysis in support of an indirect

Source Permit.

Program, Planning, Coordination and Analysis. To address the interface of air quality and transportation issues there is an ongoing need for data collection, analysis, and program review. To facilitate this, the Agency of Natural Resources and Agency of Transportation agree to the following;

Data Collection--The Agency of Transportation will support the collection of motor vehicle related toxic air pollutant data by the Air Pollution Control Division.

Transportation/Air Quality--The Agency of Transportation will work together with the Air Pollution Control Division to review the issues of transportation and air quality as they evolve and affect the State of Vermont from the provisions of the federal Clean Air Act and ISTEPA, and make appropriate recommendations for public policy in Vermont regarding this relationship. The Agency of Natural Resources will provide meeting notice and outcome briefings to the Agency of Transportation with respect to the activities of the Northeast Ozone Transport Commission (OTC).

Heavy Duty Motor Vehicles. Air pollution from heavy duty motor vehicles are of increasing concern to the public and the Agency of Natural Resources. This source category contributes significantly to emissions of nitrogen oxides, particulate matter, toxic air pollutants and is of concern for visible smoke and odor. More data is needed, and analyses needs to be performed, to better understand the issues and potential strategies to abate this source of air pollution. The Agency of Natural Resources and the Agency of Transportation agree to work cooperatively to collect such data and perform such analyses regarding this source of air pollution.

Public Outreach and Education. There is a continuing need to inform and educate the public on the health and environmental threats of transportation related air pollution and the programs to mitigate these effects. Joint opportunities to accomplish this goal will be sought by the Agencies of Natural Resources and Transportation.

Progress Reports and Periodic Updates. Implementation of the above actions will require coordination and ongoing collaboration by members of the Air Pollution Control Division and the Agency of Transportation. Specific work elements will developed and implemented. In order to track progress on these matters and amend this agreement as may be necessary, the Air Pollution Control Division and Transportation will report on the progress made and the actions intended on a reasonable and acceptable

APPENDIX F

AOT/ANR MEMORANDUM OF UNDERSTANDING

WHITE PAPER FOR MAINTENANCE OPERATIONS

GOAL: TO PRESERVE AND MAINTAIN THE TRANSPORTATION INFRASTRUCTURE TO MEET THE NEEDS AND SAFETY OF THE TRAVELLING PUBLIC, AND TO ENSURE THAT FULL CONSIDERATION IS GIVEN TO VERMONT'S ENVIRONMENTAL QUALITY.

ISSUES AND NEED ACTIONS:

- A. COMMUNICATION - Annual meetings shall be held between representatives of AOT and ANR to review concerns about maintenance operations that may impact environmental quality and that may be regulated activities.
- B. POLICY REVIEW - AOT Policy and guidelines on various maintenance programs shall be reviewed annually to insure compliance with the above goal. All policies, memoranda of understanding and other agreements between both agencies should be compiled in a handbook, available at all AOT/ANR offices. Both agencies need to insure that agreements reached are communicated throughout their respective agencies and that they represent the policy of the Agency.
- C. RESEARCH AND TRAINING - AOT and ANR shall conduct continuing review and investigation on all activities, procedures and materials aimed at minimizing the impact to air and ground water quality, stream bank vegetation, stream, fisheries and wildlife management programs, hazardous materials management programs, maintenance of scenic vistas, roadside safety and aesthetics. Technical support should be provided by ANR to assist AOT in developing new procedures. Technical workshops and other training programs should be open to both agencies where programs overlap.
- D. MANAGEMENT STRATEGIES - AOT should develop management strategies for all off site mitigation lands and easements. These strategies should include the permit process requiring long term management responsibilities.